

ANNUAL REPORT
&
ANNUAL ACCOUNTS
2018 - 2019



National Institute of Technology Calicut

Kerala, India

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ANNUAL REPORT

2018-19

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ANNUAL REPORT 2018 - 19

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1.0 INTRODUCTION

1.1 MISSION STATEMENT

To develop high quality technical education and personnel with a sound footing on basic engineering principles, technical and managerial skills, innovative research capabilities and exemplary professional conduct to lead and to use technology for the progress of mankind, adapting themselves to changing technological environment with the highest ethical values as the inner strength.

1.2 VISION

International standing of the highest calibre.

1.3 EDUCATION SYSTEM

Institute offers technical education based on a state-of-the-art-curriculum. The syllabi are designed and continuously updated in consultation with the experts and with the approval of the Senate. To meet with national requirement of high quality manpower, Institute is not keeping any fixed number of the Ph.D. scholarships but proactively encourage the enrollment. All undergraduate and postgraduate programmes have been designed in line with the IIT System, giving appropriate weightages for the theory and practice.

1.4 NEW INITIATIVES

From 2002 admissions onwards, the curriculum & syllabi of the various programmes offered in the institute are framed internally and vetted by experts in the relevant area. The institute senate finalizes the curriculum, syllabi, ordinances rules & regulations of various programmes. Major initiatives include the commencement of interdisciplinary and multidisciplinary programmes in cutting edge technology fronts.

2.0 AN OVERVIEW

2.1 HISTORICAL BACKGROUND

The National Institute of Technology Calicut (NITC), originally established in 1961 as a Regional Engineering College and got transformed to NIT on 26th June 2002, is one of the 31 similar institutions in the country. It is fully funded by the Government of India. It is an Institute of National Importance under NIT Act 2007. This Institute mentored NIT Sikkim, which is one among the 10 new NITs added in the year 2010.

2.2 LOCATION

The institute is located at Chathamangalam, 22 km east of Calicut city, along the Kunnamangalam-Mukkam road and covers an area of over 120 hectares, at the foot of the Western Ghats. The Calicut Railway Station and Airport are respectively 22 km and 45 km away from the Campus.

2.3 CAMPUS

The institute campus has all the essential amenities required. The library, computer centre and laboratories of the institute are well equipped. There is a campus school managed by a society formed by faculty members, a branch of State Bank of India, a Post Office, a Telephone exchange and canteens functioning within the institute campus. The institute has a Health centre to look after the medical needs of the students, employees and their families. The Institute has adequate facilities for indoor and outdoor games, recreation and co-curricular activities. There are ten hostels and 45 apartments for the boys. One hostel with four blocks with an attached recreational centre and a mega hostel with 500 rooms are available for girls. One International hostel with twenty semi-furnished rooms is also available. The institute has a good number of staff quarters and a guest house with 20 rooms.

2.4 ADMINISTRATION

2.4.1 GOVERNANCE

Institute is governed by the NIT Act 2007 and the statutes. Board of Governors and the Senate are the authority of the Institute. Hon'ble President of India is the Visitor of the Institute. Chairperson of the Board of Governors is nominated by the Visitor.

2.4.2 Institute follows multi-tier hierarchical administrative structure, with proper delegation from top to bottom. Director appointed by the Government of India is at the helm of the affairs. Six Deans spearhead the consultative mechanism that assists the Director in administration and management. The academic units of Departments and Schools are headed by faculty and the administrative sections are headed by officers of appropriate rank.

2.5 ACADEMIC PROGRAMME

The Institute imparts technical education at the degree and postgraduate levels viz., (1) Undergraduate (UG) programme of four years duration leading to B.Tech Degree, (2) UG programme of five years duration leading to B.Arch. degree, (3) Postgraduate (PG) programme of two years duration leading to M.Tech degree, (4) PG programme of two years duration leading to M.Sc degree (5) a programme of three years duration leading to the Master of Computer Applications (MCA) degree and (6) a two year MBA programme. All the programmes are offered in credit-semester pattern. In addition, Ph.D programmes in all disciplines are also offered.

2.6 PROGRAMMES OFFERED

(a) Bachelor of Architecture (B. Arch)

(b) Bachelor of Technology (B. Tech) in the following disciplines:

- Biotechnology
- Chemical Engineering
- Civil Engineering
- Computer Science and Engineering
- Electronics and Communication Engineering
- Electrical and Electronics Engineering
- Engineering Physics
- Mechanical Engineering
- Production Engineering

(c) Master of Technology (M. Tech) Programmes

Department/School	Department/ School code	M. Tech Programmes	Programme Code
Civil Engineering	CE	Structural Engineering	CE61
		Traffic and Transportation Planning	CE62
		Offshore Structures	CE63
		Environmental Geotechnology	CE64
		Water Resources Engineering	CE65
Computer Science & Engineering	CS	Computer Science and Engineering	CS61
		Computer Science & Engineering (Information Security)	CS62
Electrical Engineering	EE	Instrumentation and Control Systems	EE61
		Power Systems	EE62
		Power Electronics	EE63
		Industrial Power and Automation	EE64
		High Voltage Engineering	EE65

Electronics and Communication Engineering	EC	Electronics Design and Technology	EC61
		Microelectronics and VLSI Design	EC62
		Telecommunication	EC63
		Signal Processing	EC64
Mechanical Engineering	ME	Industrial Engineering and Management	ME61
		Thermal Sciences	ME62
		Manufacturing Technology	ME63
		Energy Engineering and Management	ME64
		Material Science and Technology	ME65
		Machine Design	ME66
Nano Science and Technology	NST	Nanotechnology	NS61
Chemical Engineering	CH	Chemical Engineering	CH61

(d) Master of Science

M.Sc. programmes are offered in the following disciplines:

1. Chemistry
2. Mathematics
3. Physics

(f) Master of Computer Applications (MCA)

M.C.A. Programme is offered by the Department of Computer Science and Engineering.

(g) Master of Business Administration (MBA)

M.B.A. Programme is offered by the School of Management Studies.

(h) Doctor of Philosophy (Ph. D)

Ph.D. programmes are offered by all the departments/schools.

2.7 ADMISSION PROCEDURE

Admission to B.Tech /B. Arch. programmes offered at NIT Calicut is made under the following categories:

Sl. No.	Category	Basis of Admission	Sanctioned Intake
1	Candidates from Kerala state (Home State Quota) †	*JEE Rank	478
2	Candidates from Other State (Other State Quota) †	*JEE Rank	478
3	Candidates from Lakshadweep & Khandvi (Home State Quota) †	*JEE Rank	33
4	Foreign Nationals \$	Marks in the Qualifying Examination	16
5	MEA Welfare Scheme #	Marks in the Qualifying Examination	02
6	Direct Admission of Students from Abroad (DASA) scheme	SAT II Score	141
		Total	1148

- † Reservations as per Rules of Government of India (GoI).
- * Joint Entrance Examination (Main), conducted by the Central Board of Secondary Education (CBSE), New Delhi.
- \$ Nominated by the Ministry of External Affairs (Students Cell), GoI, through Indian Council for Cultural Relations (ICCR).
- # Nominated by the Ministry of External Affairs, GoI

PG Programmes

- The admission to PG programmes in Engineering and Technology with fellowship is based on GATE score.
- The admission to PG sponsored seats are based on the written test/interview conducted by the respective department.
- The admission to PG programmes of M.Sc and MBA without fellowship is based on Institute's Criteria

Ph. D. Programmes

Admission to Ph. D programmes are based on merit and the written test/interview conducted by the Institute.

2.8 STUDENTS

The Students' Affairs Council (SAC) 2018-19 was elected and constituted with 64 branch councilors and 12 executive council members. The annual techno-management festival Tathva '18 was successfully conducted in October 2018. The event witnessed an all-time high registration count of 2000 external participation. "Avishkaar" was conducted as a social initiative of Tathva '18. The annual cultural festival RAGAM 2018 was organized in March 2018. Sneharagam was organized this year also as a Pre-Ragam event, exclusively for physically challenged students of different schools of northern Kerala which witnessed excellent participation. The event marked an all-time record in terms of registration with above 2000 external participation.

2.9 EXAMINATION & EVALUATION

All academic programmes of the Institute follow the credit-semester system. Minimum credits to be earned for the award of various degrees are specified in the respective curricula. The modalities for continuous evaluation of various courses being offered by the departments/schools are decided by the Institute Senate from time to time and are followed scrupulously. Slow learners are given adequate chances to pursue the studies.

2.10 PLACEMENT

During the session 2018-19, 145 companies visited the campus for recruitment. Together they made a total of 640 offers. The details are shown in Annexure I.

B.Tech Programme: 472 out of 530 eligible B.Tech students (89.06%) got placed.

M.Tech Programme: 168 out of 269 eligible M.Tech students (62.69%) got placed.

The highest salary (CTC) offered for B Tech is 50 lakhs.

The highest salary (CTC) offered for M Tech is 31.5 lakhs.

The institute average salary is 9.76L.

For the 2020 graduands, 27 firms visited for internship drives. The details are shown in Annexure II

DETAILS OF PLACEMENT 2018-19

Programme	Total Placed*	Total Registered	Percentage	Min Salary [in lakhs INR]	Max Salary [in lakhs INR]	Avg. Salary [in lakhs INR]	Median Salary [in lakhs INR]
UG [B.Tech+B.Arch]	472	530	89.06	3	50	9.76	8
PG [M.Tech+MCA+MBA+M.Sc.]	168	269	62.69	3.6	31.5	10.39	9
TOTAL [UG+PG]	640	799	80.20	3	50	10.01	8

* Indicates total number of students placed [double offers not counted]

** Includes students with CGPA ≥ 6.5 and who participated in all T&P registrations. If a company has offered a job to a student having CGPA < 6.5 , it is included in both placed as well registered counts

2.11 GAMES AND SPORTS

PHYSICAL EDUCATION OBJECTIVES

To achieve our objective of “FITNESS FOR ALL”, Physical Education is a compulsory entity in the NITC Curriculum and target the fresher’s so that he/she inculcates awareness of the need to be physically fit on the campus and off it.

As has been the practice, Programs for 2018-19 were planned and executed giving due importance to the new comers to the Institute. More than 100 days during July to November 2018 were spent on fresher orientation program in order to acclimatize them to the NITC environment and to inculcate awareness on the need to pursue activities to keep themselves fit and healthy with in campus and to follow-up in the post-campus life.

The senior-graduate and the post graduate students on their part have thronged the Physical Education activity centers in big numbers on a voluntary basis. The shortage of Playfields continued to haunt and every attempt was made to provide them to meet the student demand. One systematic and successful method adopted was to provide floodlights on small area games like Tennis, Basketball and Volley ball. However, the existing infrastructure has been utilized to the full and equipment purchased has been exhausted due to the overwhelming use.

2.12 STAFF POSITION

Teaching Staff

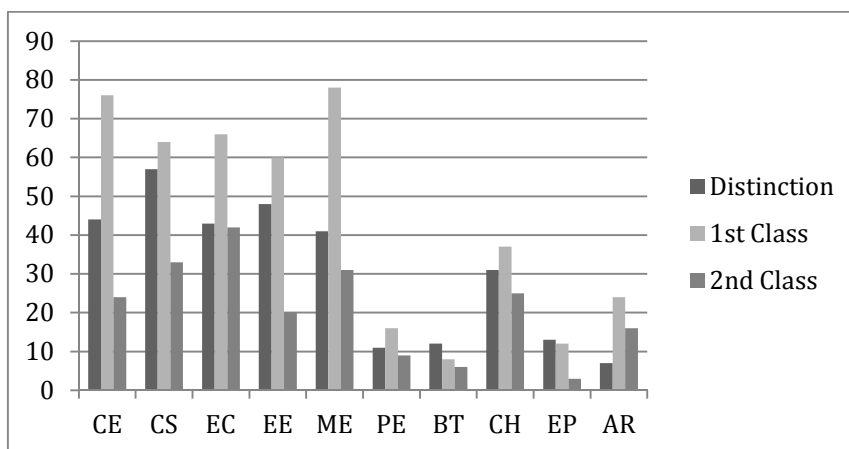
The sanctioned strength of teaching staff is 483. The department wise break-up of the sanctioned and in position strength of faculty is given below.

Department/School	Sanctioned	In position as on 31.03.2019
Architecture	23	9
Chemical Engineering	27	16
Civil Engineering	64	30

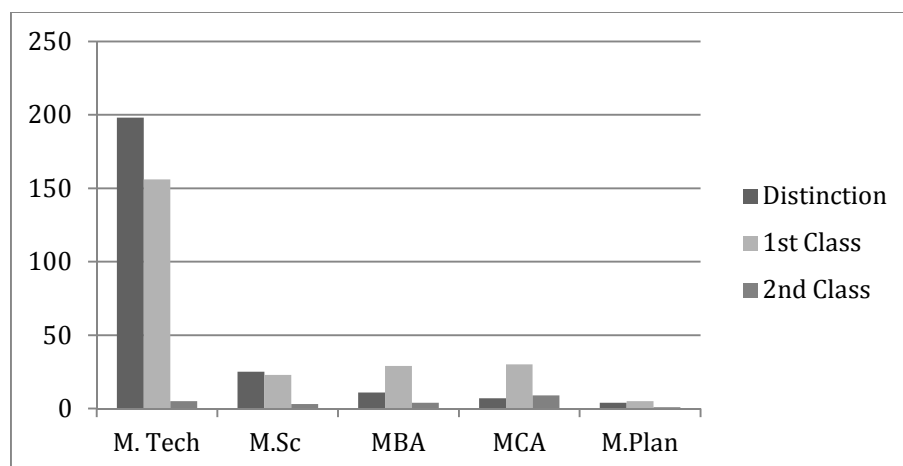
Computer Science & Engineering	58	26
Electrical & Electronics Engineering	62	27
Electronics & Communication Engineering	60	28
Mechanical Engineering	81	36
Mathematics	25	14
Physics, Chemistry and Humanities	42	24
Physical Education	3	1
Biotechnology	16	8
School of Management Studies	16	9
School of Nanoscience & Technology	6	6
Total	483	234

2.13 NOTABLE ACHIEVEMENTS (using Graphs, Charts, Diagrams)

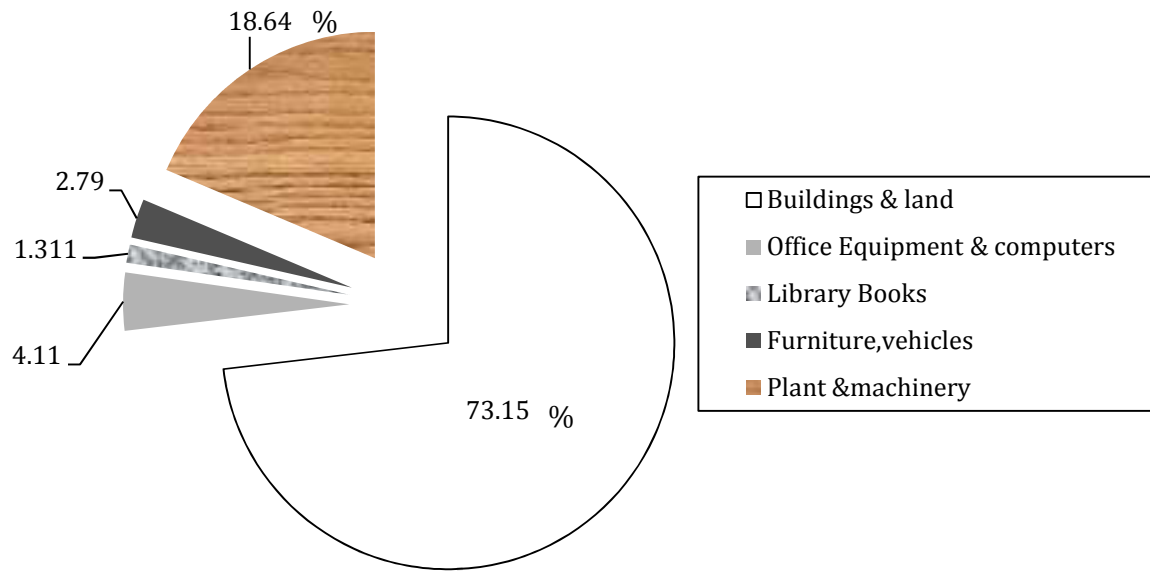
(i) Details of B. Tech & B. Arch students passed out in 2018-2019



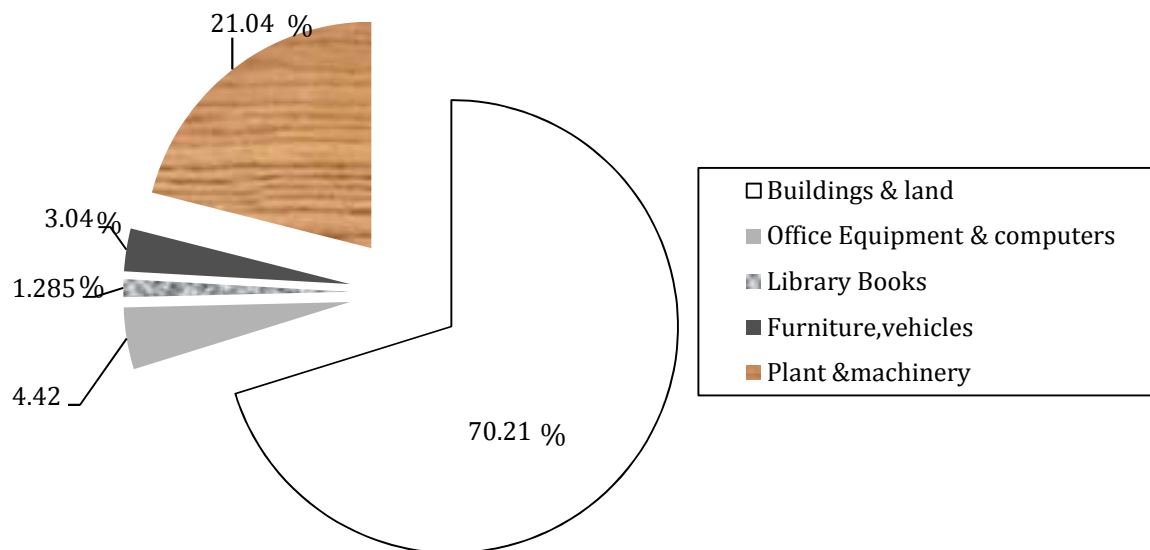
(ii) Details of M.Tech, M. Sc, MBA, MCA & M. Plan Students passed out in 2018-2019



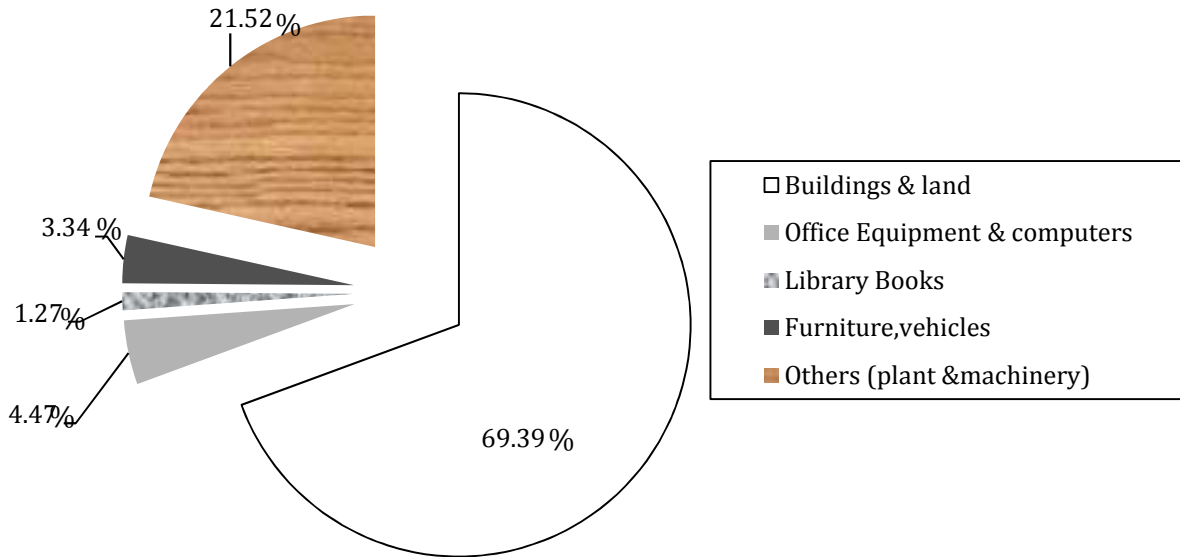
(iii) Details of Assets as on 31.03.2016



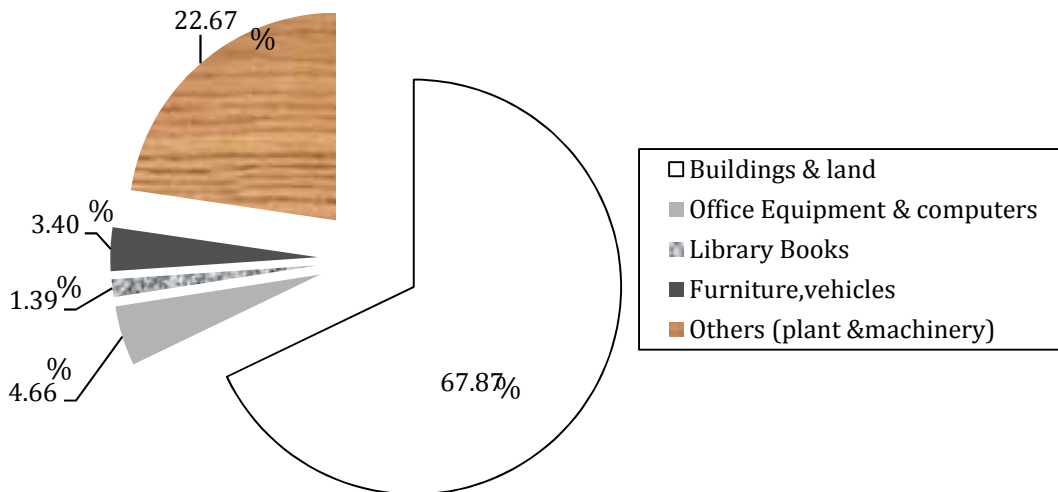
(iv) Details of Assets as on 31.03.2017



(v) Details of Assets as on 31.03.2018



(vi) Details of Assets as on 31.03.2019

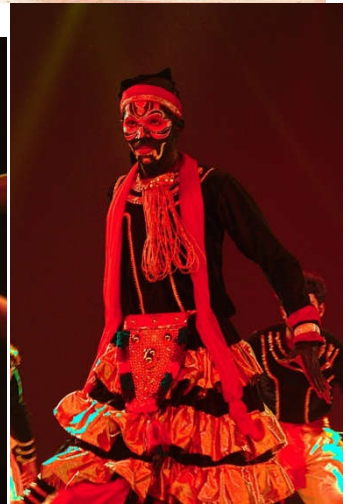


2.14 VISUALS OF MAJOR STUDENT ACTIVITIES

i) Technical Festival – Tathva 2018



ii) Cultural Festival – Ragam 2018



iii) Annual sports day 2018



3.0. THE STAFF

DIRECTOR: Dr. Sivaji Chakravorti

REGISTRAR: Lt. Col. Pankajakshan K (Retd)

DEANS

Dr. P.S. Sathidevi	:	Academic
Dr. M.V.L.R. Anjaneyulu	:	Planning & Development
Dr. Ashok S	:	Research & Consultancy
Dr. T.M. Madhavan Pillai	:	Faculty Welfare
Dr. S D Madhu Kumar	:	Students Welfare
Dr. C.B. Sobhan	:	Alumni Affairs & International Relations

ASSOCIATE DEANS

Dr. Harikrishna M	:	Academic
Dr. Subhasree M	:	Academic
Dr. K Krishnamurthy	:	Planning & Development
Dr. G Gopakumar	:	Planning & Development
Dr. Arun P	:	Research & Consultancy
Dr. P K Madhavan Unni	:	Faculty Welfare
Dr. C Mohammed Firoz	:	Students Welfare
Dr. Vinod Pathari	:	Alumni Affairs & International Relations

3.1 ACADEMIC STAFF (Teaching)**DEPARTMENT OF ARCHITECTURE & PLANNING**

Sl. No	Name	Designation	Qualification	Specialization
1.	Dr. P.P Anil Kumar.	Professor & Head	B. Tech, MCP, Ph. D	Building Technology, Architectural Conservation
2.	Dr. Kasthurba A. K	Professor	B. Arch, M. Tech, Ph. D	Architectural Engg., City Planning
3.	Dr. Naseer M.A	Professor	B. Tech, MCP, Ph. D	Architectural Engg., City Planning
4.	Dr. Mohammed Firoz C	Assistant Professor	B. Arch, MURP, Ph. D	Architecture, Urban and Regional Planning
5.	Dr. Chithra .K	Assistant Professor	B. Arch, M Planning	Architecture, Town Planning
6.	Dr. Shyni	Assistant Professor	B. Tech, M Planning	Architectural Eng., Housing
7.	Dr. Bimal P	Assistant Professor	B. Arch, MCP	Architecture, City Planning
8.	Dr. Deepthi Bendi	Assistant Professor	B.arch, M.Arch, PhD	Construction Management
9.	Dr. Anjana Bagyanath	Assistant Professor	B.Arch., M.Arch., PhD	Landscape Architecture

DEPARTMENT OF CHEMICAL ENGINEERING

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. Lity Alen Varghese	Associate Professor & Head	Ph.D	Polymer Technology
2	Dr. V Sivasubramanian	Professor	M. Tech, MBA, Ph.D	Fluidization Engineering
3	Dr. Shiny Joseph	Professor	Ph.D	Mass Transfer and Hydrodynamics
4	Dr. Aparna K	Assistant Professor	Ph.D	Heat Transfer
5	Dr. Malladi V Pavan Kumar	Assistant Professor	Ph.D	Process Control

6	Dr. S Bhuvaneshwari	Assistant Professor	Ph.D	Bio Separation Technology
7	Dr. Vineesh Ravi	Assistant Professor	Ph.D	Fuel Cell
8	Dr. Haribabu k	Assistant Professor	Ph.D	Separation and Water treatment technology
9	Dr. Chandra Shekar Besta	Assistant Professor	Ph.D	Process Control
10	Dr. Noel Jacob Kaleekkal	Assistant Professor	Ph.D	Membrane Technology
11	Dr. Sudev Das	Assistant Professor	Ph.D	Phase Change Heat Transfer
12	Dr. Teja Reddy Vakamalla	Assistant Professor	Ph.D	CFD and Mineral Processing
13	Dr. Susmita Das	Assistant Professor	Ph.D	Fracture of Soft Gel
14	Dr. Prasanna Kumar S Mural	Assistant Professor	Ph.D	Polymer Technology
15	Dr. Panneerselvam Ranganathan	Assistant Professor	Ph.D	Chemical Reactor Engineering
16	Dr. Dhanya Ram V	Assistant Professor	Ph.D	Process Control System Identification

DEPARTMENT OF CIVIL ENGINEERING

Sl. No.	Name	Designation	Qualification	Specialisation
1	Dr. A.P.Shashikala	Professor	M.Sc (Engg), Ph.D	Structural Engg.
2	Dr. J.Sudhakumar (Head)	Professor	M.Tech., Ph.D	Building Technology
3	Dr. M.V.L.R. Anjaneyulu	Professor	M.Tech, Ph.D	Transportation Engg.
4	Dr. Mohammed Ameen	Professor	M.E., Ph.D	Structural Engg.
5	Dr. N.Sankar	Professor	M.Tech. Ph.D	Geotechnical Engg
6	Dr. P.V.Indira	Professor	M.Tech, Ph. D	Structural Engg.
7	Dr. S.Chandrakaran	Professor	M.E., Ph.D	Geotechnical Engg
8	Dr. Santosh.G. Thampi	Professor	M.Tech., Ph.D	Environmental Hydrology
9	Dr. T.M.Madhavan Pillai	Professor	M.Tech., Ph.D	Structural Engg.
10	Dr. K. Krishna Murthy	Associate Professor	M.E., Ph.D	Transportation Engg.
11	Mr. K. Saseendran	Associate Professor	B.Sc.(Geo.), M.Tech.	Geology
12	Dr. K. Sasikumar	Associate Professor	M.Tech., Ph.D	Water Resources Engg.
13	Dr. Praveen Nagarajan	Associate Professor	M.Tech., Ph.D	Structural Engg.
14	Dr. Sajith A S	Asst. Professor	M.E., Ph.D	Structural Engg.

15	Dr. Agilan V	Asst. Professor	M.Tech., Ph.D	Remote Sensing & GIS, Hydrology
16	Dr. Anjana Bhasi	Asst. Professor	M.S., Ph.D	Geotechnical Engg
17	Dr. Arun Kumar	Asst. Professor	M.Tech., Ph.D	Water Resources Engg
18	Dr. Aswathy E.V.	Asst. Professor	M.Tech., Ph.D	Environmental Engg.
19	Dr. Chitra N R	Asst. Professor	M.Tech., Ph.D	Hydraulics & Water Resources Engg
20	Dr. George K Varghese	Asst. Professor	M.Tech., Ph.D	Environmental Engg.
21	Dr. Harikrishna M	Asst. Professor	M.Tech., Ph.D	Transportation Engg.
22	Dr. K.V. Anand	Asst. Professor	M.S., Ph.D	Ocean Engineering
23	Dr. Kodi Ranga Swamy	Asst. Professor	M.Tech., Ph.D	Geotechnical Engg
24	Mr. M. Sivakumar	Asst. Professor	M.E.	Transportation Engg.
25	Dr. Mini Remanan	Asst. Professor	M.Tech., Ph.D	Structural Engg.
26	Dr. Pramada S K	Asst. Professor	M.Tech., Ph.D	Water Resources Engg
27	Ms. Reesha Bharath K	Asst. Professor	M.Tech.	Construction Technology
28	Dr. Renjitha Mary Varghese	Asst. Professor	M.Tech., Ph.D	Geotechnical Engg
29	Dr. Robin Davis	Asst. Professor	M.E., Ph.D	Structural Engg.
30	Dr. Sathish Kumar D	Asst. Professor	M.Tech., Ph.D	Remote Sensing & GIS, Hydrology

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Sl. No.	Name	Designation	Qualification	Specialisation
1	Dr. Vineeth Kumar Paleri	Professor	Ph. D.	Programming Languages & Compilers.
2	Dr. Priya Chandran	Professor	Ph. D	Computer Architecture, Algorithms
3	Dr. S.D Madhu Kumar	Professor	Ph. D	Cloud Computing, Big Data Analytics, DBMS, Software Engineering
4	Dr. Abdul Nazeer K A	Professor	Ph. D	Database Systems, Bioinformatics
5	Dr. Murali Krishnan K	Associate Professor	Ph. D	Algorithms and Complexity, Coding Theory
6	Dr. Vinod P	Associate Professor	Ph. D	Information Security Management
7	Dr. Saidalavi Kalady	Associate Professor	Ph.D	Computational Intelligence, Data Mining, Operating Systems
8	Dr. Saleena N	Associate Professor	Ph. D	Program Analysis, Compilers

		and Head		
9	Dr. Subhasree M	Associate Professor	Ph. D	Computational Geometry
10	Dr. Subashini R	Associate Professor	Ph. D	Design and analysis of Algorithms
11	Mr. Sumesh T A	Assistant Professor	M. Tech.	Computer Networks, Computer Vision
12	Mr. Sreenivasa T M	Assistant Professor	M. Tech.	DNA Computing
13	Mr. Sreenu Naik Bhukya	Assistant Professor	M. Tech	Computer Networks, WSNS
14	Dr. Lijiya A	Assistant Professor	Ph. D	Image Processing, Pattern Recognition
15	Dr. Jimmy Jose	Associate Professor	Ph. D	Cryptography and Security
16	Dr. Anu Mary Chacko	Assistant Professor	Ph. D	Computer Security
17	Dr. Pournami P.N.	Assistant Professor	ph.D	Computer vision, Machine Learning
18	Dr. Jayaraj P B	Assistant Professor	Ph. D	High Performance Computing, Parallel computing, Machine Learning
19	Dr. Sudeep K.S	Assistant Professor	Ph. D	Algorithms, Graph Theory
20	Dr. Gopakumar G	Assistant Professor	Ph. D	Bioinformatics, data Mining
21	Dr. Arun Raj Kumar P	Assistant Professor	Ph. D	Computer Networks and Security, Vehicular Adhoc Networks (VANET), Internet of Things (IoTs), Machine Learning
22	Dr. Hiran V Nath	Assistant Professor	Ph. D	Cyber Security and Digital Forensics
23	Dr. Jay Prakash	Assistant Professor	Ph. D	Machine Learning, Computational Intelligence, Data & Text Mining, Multi-Objective Optimization
24	Dr. M Prabu	Assistant Professor	Ph. D	Image Processing, Acoustic Classification, Fuzzy Logic, Network Security
25	Dr. T. Veni	Assistant Professor	Ph. D	Operating systems, Cloud computing, Fog Computing and Internet of Things (IoTs).
26	Dr. Vasudevan A R	Assistant Professor	Ph. D	Computer Networks, Network Security and Internet of Things (IoTs).

DEPARTMENT OF ELECTRICAL ENGINEERING

Sl. No	Name	Designation	Qualification	Specialization
1	Dr. Saly George	Professor & Head	Ph.D. (REC Calicut)	Power Electronics
2	Dr Sivaji Chakravorti	Director	Ph.D. Jadavpur University	High Voltage Technique
3	Dr. Ashok S	Professor (HAG Scale)	Ph.D. (IIT Bombay)	Power & Energy Systems
4	Dr. Paul K. Joseph	Professor (HAG Scale)	Ph.D. (IIT Madras)	Biomedical Instrumentation
5	Dr. Abraham T Mathew	Professor	Ph.D. (IIT Delhi)	Instrumentation & Control
6	Dr. Elizabeth P. Cheriyian	Professor	Ph.D. (IIT Bombay)	Power Systems
7	Dr. Jeevamma Jacob	Professor	Ph.D. (IIT Bombay)	Control Systems
8	Dr. Susy Thomas	Professor	Ph.D. (IIT Bombay)	Control Systems
9	Mr. P. Ananthkrishnan	Associate Professor	M.Tech. (IIT Madras)	Power Electronics & Drives
10	Dr. Jagadanand G	Associate Professor	Ph.D. (NIT Calicut)	Signal Processing
11	Dr. Mukti Barai	Associate Professor	Ph.D. (IIT Kharagpur)	Power Electronics
12	Dr. Preetha. P.	Associate Professor	Ph.D. (IISc Bangalore)	High Voltage Engg.
13	Dr. Rijil Ramchand	Associate Professor	Ph.D. (IISc, Bangalore)	Power Electronics
14	Dr. Sindhu T K	Associate Professor	Ph.D. (IIT Madras)	Power Systems & High Voltage Engg.
15	Dr. Subha. D.P	Associate Professor	Ph.D (NIT Calicut)	Biomedical Engineering
16	Dr. Sunitha K	Associate Professor	Ph.D. (IISc,Bangalore)	High Voltage Engg.

17	Dr. Sunitha R	Associate Professor	Ph.D (NIT Calicut)	Power Systems
18	Mr. K. S. Suresh Kumar	Associate Professor	M.Tech. (IIT Madras)	Power Electronics
19	Dr. Gopakumar P	Assistant Professor	Ph.D (NIT Trichy)	Power System
20	Ms. Hema Rani.P	Assistant Professor	M.Tech (IIT Kanpur)	Power Electronics
21	Dr. Kanagalakshmi S	Assistant Professor	Ph.D (Anna University)	Process Control
22	Dr. Karthikeyan V	Assistant Professor	Ph.D (NIT Allahabad)	Power Electronics
23	Dr. Kumaravel S	Assistant Professor	Ph.D. (NIT Calicut)	Power Systems
24	Dr. Mija S J	Assistant Professor	Ph.D (NIT Calicut)	Control Systems
25	Dr. Nikhil Sasidharan	Assistant Professor	Ph.D (Asian Institute of technology, Bangkok, Tailand)	Energy systems
26	Dr. Sanjay M	Assistant Professor	Ph.D (Sree Chitra Institute for Medical Sciences & Technology, Trivandrum)	Bioengineering
27	Mr. Subhash K.M.	Assistant Professor	M.Tech (NIT Calicut)	Instrumentation & Control
28	Dr. T K Sunil Kumar	Assistant Professor	Ph.D. (IIT Kharagpur)	Power Systems

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Sl · N o.	Name	Designation	Qualification	Specialization/Areas of Interest
1	Dr. A V Babu	Professor (HOD)	PhD	Wireless Networks
2	Dr. Elizabeth Elias (retired from service on 31 December 2018)	Professor (HAG)	PhD	Multirate Signal Processing, Speech Processing
3	Dr. Lillykutty Jacob	Professor (HAG)	PhD	Communication & Networks
4	Dr. P.S. Sathidevi	Professor (HAG)	PhD	Signal Processing
5	Dr. C. K. Ali	Professor	PhD	Digital Communication
6	Dr. P. C. Subramaniam	Professor	PhD	Optical Communication, Nonlinear Dynamics and Chaos
7	Dr. Deepthi P.P.	Professor	PhD	Communication, Signal Processing and Cryptography
8	Dr. Sameer S. M.	Professor	PhD	Wireless Communication
9	Dr. G. Abhilash	Associate Professor	PhD	Signal Processing
10	Dr. G. Sreelekha	Associate Professor	PhD	Image & Video Compression
11	Smt. Lyla B Das	Associate Professor	PhD	Embedded Systems
12	Sri. Jaikumar M G	Associate Professor	M. Tech	Microelectronics
13	Sri. Suresh Rangan	Associate Professor	M.Tech	Digital Electronics
14	Dr. Dhanaraj. K.J	Assistant Professor Gr. I	PhD	Low Power Analog IC Design, VLSI Architectures for Signal Processing, Neuromorphic Chip Design
15	Dr. Praveen Shankaran	Assistant Professor Gr. I	PhD	Statistical pattern analysis, image processing, biometrics
16	Dr. Sudhish N George	Assistant Professor, Gr. I	PhD	Signal Processing, Computer Vision
17	Dr. Ameer. P. M.	Assistant Professor Gr. II	PhD	Wireless Networks
18	Sri. B. Bhuvan	Assistant Professor Gr. II	M.Tech.	Integrated circuit design and CMOS image sensors

19	Dr. Bindiya T. S.	Assistant Professor Gr. II	PhD	VLSI, Digital Signal Processing
20	Dr. Gopi Krishna Saramekala	Assistant Professor Gr. II	PhD	Semiconductor Devices
21	Dr. Jayakumar E.P.	Assistant Professor Gr. II	PhD	VLSI Design
22	Dr. Lintu Rajan	Assistant Professor Gr. II	PhD	VLSI
23	Raghu.C.V	Assistant Professor Gr. II	M.Tech (Pursuing PhD)	Electronic System Design, Control, Electronic Circuits, Electronic Packaging, EMI/EMC
24	Dr. Sakthivel V.	Assistant Professor Gr. II	PhD	Multirate Signal Processing
25	Dr. Sudeep P.V.	Assistant Professor Gr. II	PhD	Medical Image Analysis, Machine Learning, Deep Learning
26	Dr. Surya Prakash M.	Assistant Professor Gr. II	PhD	Signal Processing algorithms and VLSI Architectures
27	Dr Suja K.J.	Assistant Professor Gr. II	PhD	MEMS
28	Dr. Venu Anand	Assistant Professor Gr II	PhD	Microelectronics
29	Dr. Waquar Ahmad	Assistant Professor Gr. II	PhD	Speaker Recognition/Verification Automatic Speech Recognition Detection

DEPARTMENT OF MECHANICAL ENGINEERING

SI. No	Faculty Name	Designation	Qualification	Specialization
1	Dr. Rajendra Kumar P K	Professor and Head	PhD.	Machine Design & Tribology
2	Dr. Jose Mathew	Professor	PhD.	Manufacturing Science
3	Dr. Jayaraj S	Professor (HAG)	PhD.	Computational Fluid Dynamics
4	Dr. Sridharan R	Professor (HAG)	PhD.	Industrial Engineering
5	Dr. C Muraleedharan	Professor	PhD.	Refrigeration & Air Conditioning
6	Dr. Ghulam Jilani	Professor	PhD.	CFD and Heat Transfer
7	Dr. Joseph M A	Professor	PhD.	Production Engineering
8	Dr. Joy M L	Professor	PhD.	Machine Design & Tribology

9	Dr. K Prabhakaran Nair	Professor (Retired after superannuation on 30 th April 2018)	PhD.	Machine Design & Tribology
10	Dr. Madhusudanan Pillai V	Professor	PhD.	Industrial Engineering
11	Dr. Shaija A	Professor	PhD.	CFD and Heat Transfer
12	Dr. Biju T. Kuzhiveli	Professor	PhD.	Cryogenics
13	Dr. Narayanan M D	Associate Professor	PhD.	Vibration and Nonlinear Dynamics
14	Dr. Manu R	Associate Professor	PhD.	Manufacturing Engineering
15	Dr. Dhanish P B	Associate Professor	PhD.	Production Engineering
16	Dr. Arun P	Assistant Professor	PhD.	Energy Engineering
17	Dr. Sekar K	Assistant Professor Gr I	PhD.	Manufacturing Technology
18	Dr. Sudheer A P	Assistant Professor Gr I	PhD.	Manufacturing Engineering / Robotics
19	Dr. Jagadeesha T	Assistant Professor Gr I	PhD.	Manufacturing Technology
20	Dr. Jayadeep U B	Assistant Professor Gr I	PhD.	Solid Mechanics & Design
21	Dr. Varaprasad G	Assistant Professor Gr I	PhD	Industrial Engineering & Management
22	Dr. Srinivas M	Assistant Professor Gr I	Ph.D.	Energy Engineering
23	Dr. Sarvoththama Jothi T J	Assistant Professor Gr I	Ph.D.	Thermal and Fluids Engineering
24	Dr. Vinay V. Panicker	Assistant Professor Gr I	PhD	Industrial Engineering
25	Dr. Ratnakumar K	Assistant Professor	PhD.	Industrial Management
26	Dr. Rohini Kumar B	Assistant Professor	PhD	Thermal Engineering
27	Dr. Gangadhara Kiran	Assistant	PhD	Fluids and Thermal Sciences

	Kumar L	Professor		
28	Sri. Manu P V	Assistant Professor	M. Tech.	Propulsion Engineering
29	Sri. Sreenath A M	Assistant Professor	M. Tech.	Machine Design
30	Dr. K.P. Murali	Assistant Professor Gr I	Ph.D.	Materials Science
31	Dr. Saleel Ismail	Assistant Professor Gr I	Ph.D.	Thermal Engineering
32	Dr. Sujith Kumar C S	Assistant Professor Gr II	Ph.D.	Thermal Engineering
33	Dr. Gangolu Srinu	Assistant Professor Gr II	Ph.D.	Materials Science
34	Dr. Ashesh Saha	Assistant Professor Gr II	Ph.D.	Nonlinear Dynamics, Vibration Control
35	Dr. Simon Peter	Assistant Professor Gr II	Ph.D.	Computational Fluid Dynamics
36	Dr. Deepak Lawrence K	Assistant Professor Gr II	Ph.D.	Manufacturing Engineering
37	Dr. Vineesh K P	Assistant Professor Gr II	Ph.D.	Mechanical systems design

DEPARTMENT OF MATHEMATICS

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. M.J. Jacob	Professor	M.Sc., Ph.D.	Stochastic Processes, Insurance Risk and Ruin
2	Dr. Jessy John C	Professor	M.Sc., Ph.D.	Time Series Modelling and Applied Statistics
3	Dr. M.S. Sunitha	Professor	M.Sc., M.Phil., Ph.D.	Fuzzy Graph Theory
4	Dr. Chithra. A.V.	Associate Professor	M.Sc., Ph.D.	Operator Theory, Graph Theory
5	Dr. Sunil Jacob John	Associate Professor	M.Sc., M.Phil., Ph.D.	Generalized Set Theory, Topology
6	Dr. C. M. Sushama	Associate Professor	M.Sc., Ph.D.	Fuzzy Optimization
7	Dr. Satyananda Panda	Associate Professor	M.Sc., Ph.D.	Computational Fluid Dynamics, Modeling &

				Scientific Computing
8	Dr. Lineesh. M.C.	Asst. Professor	M.Sc., Ph.D.	Time Series Modelling and Wavelet Theory
9	Dr. Sanjay. P.K.	Asst. Professor	M.Sc., Ph.D.	Harmonic Analysis
10	Dr. Krishnan Paramasivam	Asst. Professor	M.Sc., Ph.D.	Algebraic Graph Theory, Algorithms & Complexity
11	Dr. Sunil Mathew	Asst. Professor	M.Sc., Ph.D.	Fuzzy Graph Theory, Bio Computational Modeling, Fractal Geometry
12	Dr. Mahesh Kumar	Asst. Professor	M.Sc., Ph.D.	Applied Statistics, Reliability of Systems
13	Dr. Suresh Kumar Nadupuri	Asst. Professor	M. Sc., M. Tech., Ph. D.	Numerical Methods and Scientific Computing.
14	Dr. Ashish Awasthi	Asst. Professor	M.Sc., Ph.D.	Numerical Analysis, Singular Perturbation

DEPARTMENT OF CHEMISTRY

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. G. Unnikrishnan	Professor	M. Sc., Ph.D.	Polymer Science & Technology
2	Dr. Lisa Sreejith	Professor	M. Sc., M Phil, Ph.D.	Surface Chemistry
3	Dr. Lakshmi C.	Associate Professor	M. Sc., Ph.D.	Bio-organic Chemistry
4	Dr. Parameswaran Pattiyil	Associate Professor & Head	M. Sc., Ph.D.	Theoretical & Computational Chemistry
5	Dr. Sujith A	Associate Professor	M. Sc., Ph.D.	Polymer Technology
6	Dr. Suni Vasudevan	Assistant Professor	M. Sc., Ph.D.	Inorganic Chemistry
7	Dr. Mini Mol M	Assistant Professor	M. Sc., Ph.D.	Material Science
8	Dr. Janardhan Banothu	Assistant Professor	M. Sc., Ph.D.	Heterocyclic Chemistry
9	Dr. Muniyandi Sankaralingam	Assistant Professor	M. Sc., Ph.D.	Bio-inorganic & Biomimetic Chemistry
10	Dr. Raju Dey	Assistant Professor	M. Sc., Ph.D.	Organic & Organometallic Chemistry

DEPARTMENT OF PHYSICS

Sl. No	Name	Designation	Qualification	Specialization
1.	Dr. P Predeep	Professor	Ph.D.	Organic Electronics and Photonics (Plastic Solar Cells, OFET, Polymer Memories, Green Organic Semiconductors.), High Tc Superconducting devices
2.	Dr. Chandrasekharan. K	Professor	Ph.D.	Laser Physics and Non-linear optics
3.	Dr. M.K Ravi Varma	Professor	Ph.D.	Spectroscopy
4.	Dr. Raghu Chatanathodi	Associate Professor	Ph.D.	Computational Methods in Condensed Matter Physics, Materials Modeling, Electronic Structure Computation, Surface Phenomena and Catalysis
5.	Dr. Aji A Anappara	Associate Professor	Ph.D.	Nanotechnology
6.	Dr. P.K Madhavan Unni	Assistant Professor	Ph.D.	Soft-Condensed Matter Physics and Nonlinear Dynamics
7.	Dr. Vari Sivaji Reddy	Assistant Professor	Ph.D.	Organic/Polymer solar cells
8	Dr .Suchand Sangeeth	Assistant Professor	Ph.D.	<i>Organic Electronics</i>
9	Dr .Ram Ajor Maurya	Assistant Professor	Ph.D.	Solar Astrophysics
10	Dr .Aswathi G	Assistant Professor	Ph.D.	Multifunctional nanostructured materials
11	Dr.Subramanyan Namboodiri Varanakkottu	Assistant Professor	Ph.D.	Optofluidics, all-optical systems and light actuated soft matter physics.
12	Dr.Maneesh Chandran	Assistant Professor	Ph.D.	physical/chemical properties of diamond and related materials for various applications
13	Dr Goutam Kumar Chandra	Assistant Professor	Ph. D.	Raman Spectroscopy and its various applications in the field of biological science, material science, sensor & detection, etc.
14	Dr .Saurabh Gupta	Assistant Professor	Ph.D.	Supersymmetries and BRST Symmetries,

				Higher-form Gauge Theories, (Topologically) Massive Gauge Theories, Neutrino Physics: Mixing and Oscillations
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DEPARTMENT OF TRAINING & PLACEMENT

Sl. No	Name	Designation	Qualification	Specialization
1.	Dr.S.M Sameer	Professor	Ph.D	Wireless Communication

DEPARTMENT OF PHYSICAL EDUCATION

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. A.M. Najeeb	Professor & Head	M.A.M.P.Ed. Ph.D.	Exercise Physiology
2	Mr. Sunil M. S	Assistant Professor	M.P.Ed.,M.P hil. (Ph.D)	Sports Physiology, Fitness & Yoga Football

SCHOOL OF MATERIALS SCIENCE & ENGINEERING

Sl. No.	Name	Designation	Qualification	Specialization
1	C.B. Sobhan	Professor (HAG)	Ph.D.	Micro and Nanoscale heat transfer
2	N. Sandhyarani	Professor & Head	Ph.D.	Nanoscience, spectroscopy, Energy materials
3	Sajith V.	Assoc. Professor	Ph.D.	Optical Measurements, Nanofluids, Automobile Engineering
4	Soney Varghese	Assoc. Professor	Ph.D.	Nano Materials and Devices
5	Shijo Thomas	Asst. Professor	Ph.D.	Nanofluids,Heat Transfer,IC Engines
6	Hanas T.	Asst. Professor	Ph.D	Materials Science, Medical materials
7	Lakshmi V Nair	Inspire Faculty	Ph.D.	Nanomaterials and Nano bio interface

SCHOOL OF MANAGEMENT STUDIES

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. T K Suresh Babu	Professor	PhD	Finance Management
2	Dr. T Radha Ramanan	Associate Professor and Head	PhD	Operations Management
3	Dr. K Muhammad Shafi	Assistant Professor	Ph.D.	Finance & General Management
4	Dr. S Sunitha	Assistant Professor	Ph.D.	Economics
5	Dr. Preeti Navaneeth	Assistant Professor	Ph.D.	Communications
6	Dr. Sreejith S S	Assistant Professor	PhD	Human Resource Management
7	Dr. Althaf S	Assistant Professor	PhD	Economics and Public Policy
8	Dr. Reju George Mathew	Assistant Professor	PhD	Communications
9	Dr. Nithya M	Assistant Professor	PhD	Marketing Management

SCHOOL OF BIOTECHNOLOGY

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. Rajanikant.G.K	Professor & Head of the Department	Ph.D	Radiation biology Neuroscience
2	Dr. Md. Anaul Kabir	Professor	Ph.D	Molecular Genetics, Genetic Engineering
3	Dr. Santhiagu. A	Professor	Ph.D	Bioprocess Technology, Recombinant Technology, Enzymology
4	Dr. Suchithra T.V.	Associate Professor	Ph.D	Microbiology, Enzymology, Biofuels
5	Dr. Rathinasamy K.	Associate Professor	Ph.D	Cell biology, Cancer research, Apoptosis
6	Dr. Prem Raj P	Assistant Professor	Ph.D	Pathogenesis of Airborne Microbes
7	Dr. Suresh .PS	Assistant Professor	Ph. D	Endocrine cancers and signal transduction
8	Dr. Baiju G Nair	Assistant Professor	Dr. Eng.	Bio-nanotechnology, Tissue engineering, Stem cell technology

CENTRE FOR BIOMECHANICS**FACULTY**

Dr. Mohammed Ameen, Professor of Civil Engineering
 Dr. T. M. Madhavan Pillai (Head), Professor of Civil Engineering
 Dr. P.K. Rajendrakumar, Professor of Mechanical Engineering
 Dr. G. Abhilash, Associate Professor of Electronics Engineering

ADJUNCT FACULTY

Dr T.S. Gopakumar, Professor & Head, Department of Orthopaedics, Medical College, Trivandrum.
 Dr George Joseph, (Retd.) Professor & Head, Department of Physical Medicine & Rehabilitation,

Medical College, Calicut.

Sri. M. Sreekumar, (Retd.) Prosthetic & Orthotic Engineer, Department of Physical Medicine & Rehabilitation, Medical College, Calicut.

3.2. NON-ACADEMIC STAFF

SL No.	NAME	DESIGNATION	DEPARTMENT
1	Pradeep Kumar K K	Instructor	MED
2	Shibu K	Instructor	CED
3	Rajendran M K	Instructor	MED
4	Mohan Kumar A K	Asst. Engineer	ENGG. UNIT
5	Thomas T E	Asst. Engineer	ENGG. UNIT
6	Venugopalan K P	Instructor Asst. Engineer (Electrical i/c)	MAINTENANCE. UNIT
7	Ajayachandran V R	Computer Operator	CSED
8	Sasidharan Pillai G	Computer Technician	CSED
9	Chandramohan M K	Graphic Artist (Hr.Gr.)	LIBRARY
10	Prakash Peter	Lab Assistant	PHYSICS
11	Anwar Sadath C	LD Steward	HOSTEL OFFICE
12	Latha C	Libraian Gr.IV Hr.Gr.	LIBRARY
13	Sobhana J	Libraian Gr.IV.Hr.Gr	LIBRARY
14	Jayarajan T	Librarian Gr. IV(Hr.Gr.)	LIBRARY
15	Sweety Mathew	Librarian Gr.III (Hr.Gr.)	LIBRARY
16	Shaju K P	Librarian Gr.IV	LIBRARY
17	Jayaraman K	Offset Mechnine Operator (Hr.Gr)	LIBRARY
18	Abraham P	Pharmacist	HEALTH CENTER
19	Hariharan C P	Programmer	MED
20	Venugopal.B	Sr.Mechanic (Sl.Gr.)	MAINTENANCE UNIT
21	Biju Francis	Sr. Mechanic	CSED
22	Sreeja. V	Sr. Mechanic	CSED

23	Praveen H Babu	Sr. Mechanic	ECED
24	Climson C R	Sr. Mechanic	MAINTENANCE UNIT
25	Mahesan K A	Sr. Mechanic	MAINTENANCE UNIT
26	Radhakrishan M K	Sr. Mechanic	MAINTENANCE UNIT
27	Raju K P	Sr. Mechanic	MAINTENANCE UNIT
28	Santhosh Kumar M V	Sr. Mechanic	MAINTENANCE UNIT
29	Jayesh Kumar P	Sr. Mechanic	ENGG. UNIT
30	Eldho. P. Varghese	Sr. Mechanic	MED
31	Manoj. K. G	Sr. Mechanic	MED
32	Divakaran P	Sr.Mechanic (Sl.Gr.)	ENGG. UNIT
33	Sasi K K	Sr.Mechanic (Sl.Gr.)	MED
34	Anandan K R	Sr.Mechanic (Sl.Gr.)	ECED
35	Sasesh A R	Sr.Mechanic (Sl.Gr.)	EED
36	Alavikutty K	Sr.Mechanic (Sl.Gr.)	ENGG. UNIT
37	Ajayakumar. R	Sr.Mechanic	CED
38	Noushad. K.K	Sr.Mechanic	CED
39	Abdulsathar V M	Sr.Mechanic	CSED
40	Beljith. P	Sr.Mechanic	CSED
41	Jayan V S	Sr.Mechanic	EED
42	Nandakumar K	Sr.Mechanic	EED
43	Prajith. P	Sr.Mechanic	ENGG. UNIT
44	Abdulsidheek P K	Sr.Mechanic	ENGG. UNIT
45	Mathew Varghese	Sr.Mechanic	ENGG. UNIT
46	Narayanalal M	Sr.Mechanic	MED
47	Prasad Moochikkal Variath	Sr.Mechanic	MED
48	Shaly Joseph. K	Sr.Mechanic	MED

49	Unnikrishnan R	Sr.Mechanic	MED
50	Sudheer.P.R	Sr.Mechanic	MED
51	Sreenivasan P	Sr.Mechanic (Sl.Gr.)	CED
52	Suresh Kumar G	Sr.Mechanic (Sl.Gr.)	ECED
53	AsokaKumar. P. T	Sr.Mechanic (Sl.Gr.)	EED
54	Anandan P	Sr.Mechanic (Sl.Gr.)	MED
55	Velayudhan Kutty N P	Sr.Mechanic (Sl.Gr.)	MED
56	Mohanlal D	Sr.Mechanic (Sl.Gr.)	CED
57	Sathiyam P K	Sr.Mechanic (Sl.Gr.)	CED
58	Krishnan kutty V	Sr.Mechanic (Sl.Gr.)	ECED
59	Mohammed Sali N K	Sr.Mechanic (Sl.Gr.)	EED
60	Somanath K A	Sr.Mechanic (Sl.Gr.)	EED
61	Abhilash. A	Sr.Mechanic (Sl.Gr.)	MED
62	Ajayan A	Sr.Mechanic (Sl.Gr.)	MED
63	George T M	Sr.Mechanic (Sl.Gr.)	MED
64	Raghu P V	Sr.Mechanic (Sl.Gr.)	MED
65	Sanal P R	Sr.Mechanic (Sl.Gr.)	MED
66	Surendran P K	Sr.Mechanic (Sl.Gr.)	MED
67	Suresh.K.C.	Sr.Mechanic (Sl.Gr.)	MED
68	Vasu.T.C.	Sr.Mechanic (Sl.Gr.)	MED
69	AnilKumar P	Supervisor	MED
70	Pradeep Kumar E	Supervisor	MED
71	Rajagopalan A	System Analyst	CSED
72	Santhosh Kumar S	System Programmer	CSED
73	Narayanan Kutty P	UD Steward	HOSTEL OFFICE

MINISTERIAL STAFFS

SL.NO.	NAME	DESIGNATION	DEPARTMENT
	Gejo C V	Deputy Registrar	Finance
	Dr. Raghunadhan T	Deputy Registrar	Academic
	Praveen Kumar.P	UD Clerk	Engg. Unit
	Sethumadhavan Mechery	UD Clerk	Accounts
	S.M.Shafi	UD Clerk	Accounts
	Purushothaman Pillai K N	UD Clerk	Purchase
	K.T. Sasikumar	UD Clerk	Dean R & C
1.	P. Muraleedharan	JS	Establishment
2.	K. Unnikrishnan	UD Clerk	Academic
3.	M.Reejish Kumar	JS	Hostel Office
4.	Petson Andrew	UD Clerk	Admission
5.	M.V. Prasad	DA	Engg. Unit
6.	Ashok Kumar Dev	AR (Finance)	Accounts
7.	S.Saravanan	AR (Admn.)	Administration
8.	Dr.A.A.Celine	RMO	Health Center
9.	C Veluthaki	CA Gr.II (Hr.Gr.)	ECED
10.	Stella.V.C	Fair Copy Superintendent	CED
11.	Sindu .P	UD Clerk	Academic
12.	Sobhana.T	UD Clerk	Academic
13.	G. Chandrika	UD Clerk	Academic
14.	J.L. Soosykutty	UD Clerk	Establishment
15.	Smera K.S	UD Clerk	Establishment
16.	P.D.Juliet Das	UD Clerk	Establishment
17.	Mereena John	U D Clerk	Accounts
18.	K. Mini	JS	Accounts
19.	P. Prama	UD Clerk	Accounts
20.	C.P. Rugmini	SS	Accounts
21.	S.Sreedha	AR Estt.)	Establishment
22.	Asha Gopalan	AR (S&P)	Stores & Purchase

SUPPORTING STAFF

SL.NO.	NAME	DESIGNATION	DEPARTMENT
1	A.Sumathi	Peon Hr. Gr.	ECED
2	Abdurahiman P	Bearer cum Room boy	Guest House

3	C Preman	Watchman cum Gardner	Director Office
4	C.Geetha	Sweeper Cum Sanitation	First Year Cordinator Office
5	C.Unnikrishnan	Vehicle Cleaner	MED/CED
6	Devi Poolakkal	Sanitation Worker	Accounts
7	E.Vishalakshi	Sanitation Worker	Architecture
8	Jameela. A.K	Sweeper Cum Sanitation	Dean R&C, FW
9	K Bhaskaran	Watchman cum Gardner	Physics
10	K P Devi	Sanitation Worker	Dean Academic/ Dean P&D
11	K Thankamani	Sanitation Worker	Engineering Unit
12	K V Chandu	Peon	Hostel Office
13	L. Sasikala	Sweeper Cum Sanitation	Health Center
14	M.K.Rajan	Watchman cum Gardner	EED
15	M.M.Sadanandan	Watchman cum Gardner	Guest House
16	M.Mamukoya	Watchman cum Gardner	Guest House
17	M.Rajan	Watchman	T&P
18	N.K.Ummerkutty	Watchman	Purchase
19	Narayanan .T	Watchman cum Gardner	Registrar Office
20	P.Abdul Razack	Watchman cum Gardner	Sergeant Office
21	P.K.Sangeeta	Peon	Establishment
22	P.V.Bhagianathan	Watchman cum Gardner	Sergeant Office
23	Saroja. T M	Sanitation Worker	Chemistry
24	T.Janardhanan	Watchman cum Gardner	Accounts
25	T.P.Ravia	Peon	Maths

26	Thanka.C	Sweeper Cum Sanitation	CSED
27	V.Pushpavalli	Sanitation Worker	Academic, Admission office
28	Vinod. K.P	Watchman cum Gardner	Library

3.3 TRAINING STATUS DEPARTMENT OF ARCHITECTURE

Sl. No	Name of Faculty members	Details of Training programme
1	Dr. Bimal P	Seminar on 'Sustainable Smart Cities India' by Swacha Bharath Abhiyan, Smart Cities India Foundation and NISPANA.
2	Dr. Shyni K	4 th World congress on disaster management
3	Dr.Anil lkumar P P	34th National Convention of Architectural Engineers and National Seminar on Architectural Engineering for Socio-Economic Development organized by the Institution of Engineers (India)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Sl. No	Name of Faculty members	Details of Training programme
1	Dr. Jimmy Jose	Participated and presented a paper - CARPenter: A Cellular Automata Based Resilient Pentavalent Stream Cipher" ACRI 2018, 13th International Conference on Cellular Automata for Research and Industry Como, Italy, 20th September, 2018.
2	Dr. Murali Krishnan K	Participated in the Conference: ICLA 2019. (Eighth Indian Conference on Logic and its Applications 2019, March 1-5, IIT Delhi.
3	Dr. Vineeth Paleri	Participated in Eighth Indian Conference on Logic and its Applications 2019, March 1-5, IIT Delhi
4	Dr. Jay Prakash	<ol style="list-style-type: none"> 1. Attended a Workshop On Outcome Based Education & Institutional Academic Quality Assurance on 13 Dec 2018 2. Attended in FDP On "Security and Privacy of Big Data Analytics on 18th -23rd June 2018 at NIT Calicut
5	Dr. Sudeep K.S.	Participation in the Summer School on Signal Processing, Communications, and Networks, conducted

		jointly by the Joint Telematics Group (JTG) and the Information Theory Society. July 2nd - July 5th, 2018. Venue: IIT Bombay.
6	Dr. P. Arun Raj Kumar	Attended MHRD-TEQIP III Sponsored Faculty Development Programme on “Security and Privacy in Big Data Analytics”, NIT Calicut, 18-23, June 2018
7	Dr.Pournami P N	<ol style="list-style-type: none"> 1. Presented a paper titled "Feature Based Image Registration using Heuristic Nearest Neighbour Search, " at 22nd International Computer Science and Engineering Conference (ICSEC) Conference at Chiang Mai, Thailand, 21st to 24th November 2018 2. Presented a paper titled "Characterizing EMG Signals using Aggregated CENSUS Transform " at 11th Biomedical Engineering International Conference (BMEiCON 2018), Chiang Mai, Thailand, 21st to 24th November 2018 3. Attended SPCOM 2018 at IISc bangalore from 16th to 19th July 2018 4. Presented a paper titled "Bi-Histogram Equalization with Adaptive Multi-Plateau Limits for Enhancing Magnetic Resonance Images" at International Conference on Advances in Computing, Communications and Informatics ICACCI2018. 5. Presented a paper titled " Highly Repeatable Feature Point Detection in Images Using Laplacian Graph Centrality" at International Conference on 2018 ISMAC - CVB in Computational Vision and Bio-Engineering (2018 ISMAC - CVB) is being organized on 16-17 May 2018. 6. Attended “Advanced Pedagogy Training Programme” on 21st to 23rd March 2019 at IIT Madras
8	Dr. M. Prabu	Attended Advanced Pedagogy Training Programme on 21 st to 23 rd March 2019 at IIT Madras
9	Dr. T. Veni	Attended Advanced Pedagogy Training Programme on 21 st to 23 rd March 2019 at IIT Madras

DEPARTMENT OF CIVIL ENGINEERING DEPARTMENT

Name of Faculty	Members of the Faculty
Dr. Anjana Bhasi	Continuing Education Programme on Recent Advances in Pile Foundation Design, Construction and Testing during June 24-28, 2019 at IIT Bombay
Dr. George K. Varghese	Treviso Forensics, Venice, Italy, 26 th -28 th September 2018 (Conference)
Dr. Mini Remanan	Continuing Education Programme on Recent Advances in Pile Foundation Design, Construction and Testing during June 24-28, 2019 at IIT Bombay

Dr. Arunkumar, R	Attended three days 'Advanced Pedagogy Training Programme' organized by Teaching Learning Centre, IIT Madras sponsored under TEQIP-III during 21 st – 23 rd March, 2019 at IIT Madras.
Dr. Sajith A.S.	Attended five day Management training program "Professional Development Training(PDT)" from January 28 – February 01, 2019 at IIM Calicut
Dr. Pramada S.K.	One day Symposium on "Innovations in Water & Wastewater Management: Supporting India's Smart City Initiative" IWA, Chennai (05.06.2018)
Dr. Santosh. G. Thampi	International Dam Safety Conference 2019 CWC, OWRD and others, Bhubaneswar (13.02.2019 & 14.02.2019) International Conference on Industrial Water, Energy, and Environment CODISSIA with IWA and others Coimbatore (25.01.2019 & 26.01.2019) IWA India Membership Symposium International Water Association (IWA), Chennai (23.10.2018) Symposium on Innovations in Water & Wastewater Management: Supporting India's Smart City Initiative International Water Association (IWA), Chennai (05.06.2018) Workshop on Flooding in Cities, Warning, and Dissemination DHI (India) Water and Environment Pvt. Ltd. NIOT, Chennai, (30.05.2018 & 31.05.2018)
Dr. Sathish Kumar D	International Dam Safety Conference 2019 CWC, OWRD and others, Bhubaneswar (13.02.2019 & 14.02.2019)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Sl. No	Name of Faculty	Details of Training programme
1	Dr. Lillykutty Jacob	Workshop on Academic Quality Assurance & NBA Accreditation on 13 th December 2018 at NITC Orientation Workshop on Outcome Based Education and Accreditation on 24 th October, 2018 at Delhi
2	Dr. P.S. Sathidevi	Int. conference on Vision, Image and Signal Processing, LAS VEGAS, USA August 27-29, 2018
3	Dr. Sreelekha G	Visited i2i Telesolutions and Telemedicine Pvt. Ltd. Bangalore and Narayana Netralaya Hospital, Bangalore for research discussions as part of the MOU between i2i and NITC
4	Dr. G Abhilash	Winter School on Speech and Audio Processing 2019

		(WISSAP-2019) From 27 to 29 January 2019 at College of Engineering Trivandrum (Organized by the IISc Bangalore)
5	Dr. Dhanraj K J	Sponsored to attend IEEE Conference Recent Advances in Intelligent Computational Systems (RAICS) 2018 at Thiruvananthapuram, during December 6-8, 2018 Sponsored to attend an FDP on Student Induction Programme organized by AICTE, to be held at college of Engineering, Munnar from 11 – 13 June 2018.
6	Dr. Sudhish N George	Attended 3rd IEEE Int. Conf. Computing Communication and Security (ICCCS 2018), Kathmandu, Nepal, October 2018
7	Dr.Lintu Rajan	Attended workshop on “MEMS&NEMS: Fundamentals, Design and Fabrication”, 17 th -22 nd December, IIT Hyderabad Attended workshop on “Pedagogy “Training” 21 st -23 rd March 2019 at Teaching Learning Centre, IIT Madras
8	Dr. Venu Anand	Attended FDP on Pedagogy at IITM during 21 st – 23 rd March, 2019
9	Dr. Gopi Krishna Saramekala	Attended CEP Course on Introduction to Machine Learning and Deep Learning at IIT Bombay
10	Dr. Sudeep P V	Attended CEP Course on Introduction to Machine learning and Deep learning at IIT Bombay Attended Summer School on Deep learning at NIT Suratkal Karnataka Attended workshop on Outcome based education and institutional academic quality assurance at NIT Calicut Attended one day workshop on Deep learning for computer vision by NVIDIA DLI at NIT Calicut
11	Dr. Waquar Ahmad	Attended CEP program on Introduction to Machine Learning and Deep Learning at IIT Bombay Attended FDP on Pedagogy at IITM during 21 st – 23 rd March, 2019

DEPARTMENT OF ELECTRICAL ENGINEERING

Sl.No	Name of faculty member	Details of Training programme
1	Dr. Abraham T Mathew	Training in IPR at Gujarat Council of Science and Technology

2	Dr Nikhil Sasidharan	1. Pedagogical Training at Teaching and Learning Centre, IIT Madras March 2019 2. MIS Training, Jadavpur University, Kolkata, 3rd July 2018
3	Dr. S.Kanagalakshmi	Pedagogical Training at Teaching and Learning Centre, IIT Madras 21 st -23 rd March 2019
4	Mr. Subhash K.M.	Pedagogical Training at Teaching and Learning Centre, IIT Madras 21 st -23 rd March 2019
5	Dr. Karthikeyan	Pedagogical Training at Teaching and Learning Centre, IIT Madras 21 st -23 rd March 2019

DEPARTMENT OF MATHEMATICS

Sl.No	Name	Detail of Training Programme
1.	Dr. Ashish Awasthi Dr. Mhesh Kumar Dr. Sunil Mathew Dr. Lineesh M C	Pedagogy training programme at IITM, during March 2019

DEPARTMENT OF PHYSICS

Sl. No	Name of Faculty	Details of Training programme
1.	Dr.Maneesh Chandran Dr Goutam Kumar Chandra Dr .Ram Ajoy Maurya	Faculty Development Programme at IITM, during March 2019

DEPARTMENT OF CHEMICAL ENGINEERING

Sl.No	Name of faculty member	Details of Training programme
1.	Dr. V Sivasubramanian	Heterogeneous Catalysis for Chemical Engineers, IIT Khargpur, 10th December 2018 to 14th December 2018
2.	Dr.K Haribabu	Heterogeneous Catalysis for Chemical Engineers, IIT Khargpur, 10th December 2018 to 14th December 2018
3.	Dr. Sudev Das	Professional Development training at IIM Indore during 28 th Jan to Feb.01,2019, Attended FDP on "Advanced Pedagogy Training Programme" at IIT Madras from March 21 st to 23 rd
5.	Dr. Prasanna Kumar S Mural	Attended FDP on "Advanced Pedagogy Training Programme" at IIT Madras from March 21 st to 23 rd .

6.	Dr.Susmita Das	Oral presentation in international conference Compflu 2018, IIT Roorkee, 6-9 TH December, 2018, Attended Indo-US workshop on soft matter, IIT-Roorkee,9 th to 11 th December,2018
8.	Dr. Dhanya Ram V	5-day Continuing Education Programme (TEQIP III sponsored) “Introduction to Machine Learning and Deep Learning” from 13 th – 17 th May 2019 at Indian Institute of Technology Bombay (IITB)
9.	Dr. Noel Jacob Kaleekkal	Oral presentation at 6th International Water Association-Regional Membrane Technology Conference (IWA-RMTC) held MS University Baroda on 10 th -13 th December, Presented paper at SESTEC 2018 organized by ASSET at BITS, Goa held on 23 rd -26 th May 2018. Attended FDP on “Advanced Pedagogy Training Programme” at IIT Madras from March 21 st to 23 rd
10.	Dr. Teja Reddy Vakamalla	Attended FDP on“Advanced Pedagogy Training Programme” at IIT Madras from March 21 st to 23 rd
11.	Dr. Aparna K	International Conference on Innovative Applied Energy 14–15 March 2019 Oxford, United Kingdom
12.	Dr. Chandra Shekar Besta	5-day Continuing Education Programme (TEQIP III sponsored) “Introduction to Machine Learning and Deep Learning” from 13 th – 17 th May 2019 at Indian Institute of Technology Bombay (IITB)

3.4 PLACEMENT OF STAFF FOR ACADEMIC EXCELLENCE

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Sl. No.	Name	Academic Excellence
1	Jayakumar E. P.	Awarded Ph. D from NIT Calicut
2	V. Sakthivel	Awarded Ph. D from NIT Calicut
3	Jaikumar M.G.	Pursuing Ph. D under QIP Scheme at IIT Madras
4	Raghu C.V.	Pursuing Ph. D under QIP Scheme at IISc Bangalore
5	Bhuvan B.	Pursuing Ph. D under QIP Scheme at IIT Delhi

DEPARTMENT OF ELECTRICAL ENGINEERING

Sl. No.	Name	Academic Excellence
1	Mr. Subhash K M	Undergoing Ph.D in Biosignal Processing at NIT Calicut
2	Ms. Hemarani P	Undergoing Ph.D in Industrial Converters at NIT Calicut

SCHOOL OF MATERIALS SCIENCE AND ENGINEERING

Sl. No	Name	Academic Excellence
1.	Dr.C.B. Sobhan	Visiting Faculty at the Department of Mechanical Engineering, Georgia Tech University, US during June-July 2018

DEPARTMENT OF CHEMICAL ENGINEERING

Sl. No.	Name	Academic Excellence
1	Mr. Vineesh Ravi	Acquired Ph. D from NIT Calicut

4.0 TEACHING PROGRAMMES

4.1 Programmes Offered

DEPARTMENT OF ARCHITECTURE

- i) B.Arch.
- ii) M. Plan
- iii) Ph.D.

DEPARTMENT OF BIOTECHNOLOGY

- i) B.Tech. (Biotechnology)
- ii) Ph.D. in Biotechnology

DEPARTMENT OF CHEMICAL ENGINEERING

- i) B.Tech. (Chemical Engineering)
- ii) M.Tech (Chemical Engineering)
- iii) Ph.D. (Chemical Engineering)

DEPARTMENT OF CHEMISTRY

1	M.Sc.	Chemistry
2	Ph.D.	Organic, Inorganic, Physical, Polymer, Theoretical, Bio-Organic and Bio-inorganic Chemistry

DEPARTMENT OF CIVIL ENGINEERING

SI No	Course	Year of starting
1	B.Tech. (Civil Engineering)	1961
2	M.Tech (Structural Engineering)	1971
3	M.Tech (Traffic and Transportation Planning)	1985
4	M.Tech (Offshore Structures)	1987
5	M.Tech (Environmental Geotechnology)	2006
6	M.Tech (Water Resources Engineering)	2014
7	Ph.D	1985

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

- i) B.Tech. (Computer Science & Engineering)

- ii) MCA
- iii) M.Tech. (Computer Science & Engineering)
- iv) M.Tech. (Computer Science & Engineering (Information Security))
- v) Ph.D.

DEPARTMENT OF ELECTRICAL ENGINEERING

Sl. No.	Courses	Branch/Discipline
1	B.Tech.	Electrical and Electronics Engineering
2	M. Tech.	Instrumentation and Control Systems
3		Power Systems
4		Power Electronics
5		Industrial Power and Automation
6		High Voltage Engineering
7		Ph. D.
	Electrical Machines & Power Electronics	
	Control and Signal Processing	
	Industrial Power & Automation	
	High Voltage Engineering	
	Biomedical & Signal Processing	

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

- i) B. Tech. (Electronics and Communication Engineering)
- ii) M.Tech. (Electronics Design and Technology)
- iii) M.Tech. (Microelectronics and VLSI Design)
- iv) M. Tech. (Telecommunication)
- v) M.Tech. (Signal Processing)
- vi) Ph. D (Full-time, Part-time, QIP and Visvesaraya scheme)

DEPARTMENT OF MATHEMATICS

- i) M.Sc (Mathematics)
- iii) Ph. D

DEPARTMENT OF MECHANICAL ENGINEERING

- i) B.Tech. (Mechanical Engineering)
- ii) B.Tech. (Production Engineering)
- iii) M.Tech.(Industrial Engineering and Management)
- iv) M. Tech. (Thermal Sciences)
- v) M.Tech. (Manufacturing Technology)
- vi) M. Tech (Energy Engineering and Management)
- vii) M.Tech (Materials Science and Technology)
- viii) M.Tech. (Machine Design)
- ix) Ph. D

SCHOOL OF NANO SCIENCE AND TECHNOLOGY

- i) M.Tech (Nanotechnology)
- ii) Ph.D

DEPARTMENT OF PHYSICS

- 1. B.Tech (Engineering Physics)
- 2. M.Sc (Physics)
- 3. Ph.D

SCHOOL OF MANAGEMENT STUDIES

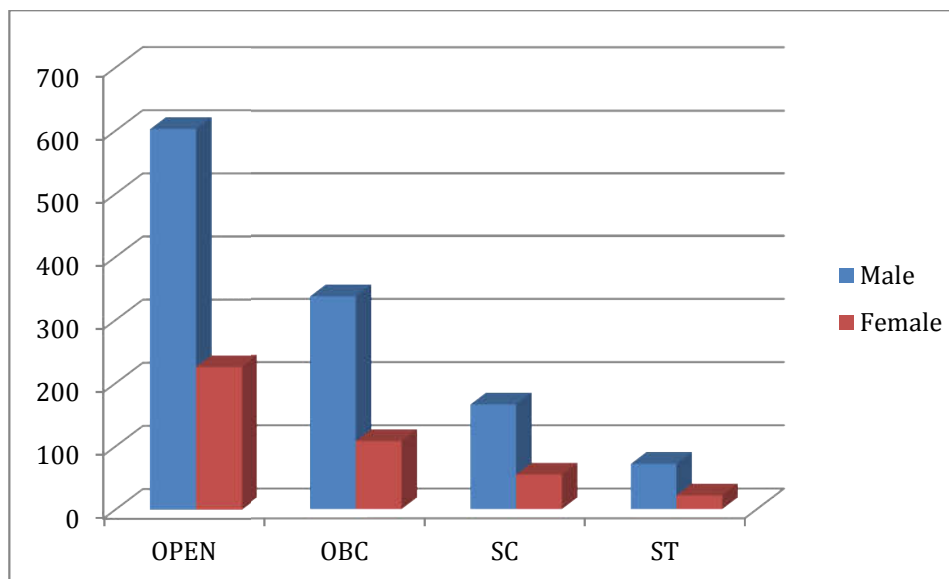
- i) MBA
- ii) Ph.D.

DEPARTMENT OF PHYSICAL EDUCATION

One-credit course in Physical Education (ZZ1093D) for the First year B.Tech and B. Arch students during I & II semesters.

4.2 COURSE-WISE ENROLMENT WITH SEX, CASTE, BREAK UP: 2018-2019

Course	Open		OBC		SC		ST		TOTAL
	Male	Female	Male	Female	Male	Female	Male	Female	
B.Tech./B.Arch.	377	104	210	48	102	42	54	18	955
M.Tech.	160	55	85	26	47	7	14	3	397
MCA	18	5	9	4	5	2	3	0	46
M.Sc.Tech.	13	16	12	4	5	3	1	1	55
Ph.D.	35	46	21	26	7	1	0	0	136
Total	603	226	337	108	166	55	72	22	1589



4.3. Admission Statistics-UG/PG Programmes, Course-wise

4.3.1. 1st semester B.Tech/B.Arch Admission 2018 -19

SPECIALISA TION	OP	OP(PH)	OP(OB)	OP(OB)PH	OP(SC)	OP(SC)PH	OB	OB(PH)	SC	SC(PH)	ST	ST(PH)	NRI	DASA	FOREIGN	MEA(WELF)	TOTAL	MALE	FEMALE	TOTAL
Architecture	15	0	7	0	0	0	12	1	8	0	4	0	0	2	0	0	49	29	20	49
Bio Technology	10	0	5	0	0	0	7	1	5	0	2	0	0	2	0	0	32	21	11	32
Civil	53	2	14	1	0	0	36	1	21	0	9	1	0	7	1	0	146	110	36	146
Chemical	41	0	4	1	0	0	1	0	14	0	7	0	0	9	0	0	101	75	26	101
Computer	62	2	7	2	0	0	35	2	21	0	10	0	0	21	0	1	163	134	29	163
Electrical	65	3	3	0	0	0	36	1	20	0	10	0	0	17	0	0	155	108	47	155
Electronics & Communication	62	4	4	0	0	0	35	2	20	0	11	0	0	21	0	0	159	124	35	159
Engineering Physics	13	1	1	0	0	0	8	0	5	0	2	0	0	1	0	0	31	24	7	31
Mechanical	65	2	12	1	0	0	40	2	22	1	12	1	0	19	0	0	177	153	24	177
Production	18	0	4	1	0	0	13	0	7	0	3	0	0	3	0	0	49	40	9	49
Total	404	14	61	6	0	0	247	10	143	1	70	2	0	102	1	1	1062	818	244	1062

4.3.2. 1st Semester M.Tech. 2018 -2019

Course	Branch	OP	OP-PH	OBC	OBC-PH	SC	SC-PH	ST	ST-PH	QIP	QIP(PO LY)	NRI	SP	TOTAL	MALE	FEMALE	TOTAL
Civil	CEA(CE61)	9	1	5	0	3	0	1	0	0	0	0	0	19	11	8	19
	CEB(CE62)	10	0	5	1	3	0	1	0	0	0	1	0	21	15	6	21
	CEC(CE63)	9	0	6	0	2	0	0	0	0	0	0	0	17	9	8	17
	CED(CD64)	10	0	5	0	3	0	0	0	0	0	0	0	18	8	10	18
	CE65	6	0	3	0	1	0	1	0	0	0	0	0	11	6	5	11
Computer	CSA(CS61)	10	0	5	0	3	0	1	0	0	0	0	0	19	15	4	19
	CSB(CS62)	9	0	5	0	2	0	1	0	0	0	0	0	17	13	4	17
Electronics & Communication	ECB(EC61)	9	0	6	0	3	0	0	0	0	0	0	0	18	15	3	18
	ECC(EC62)	10	0	4	0	3	0	2	0	0	0	0	0	19	16	3	19
	ECD(EC63)	6	0	3	0	0	0	0	0	0	0	0	0	9	6	3	9
	ECE(EC64)	6	0	4	0	1	0	0	0	0	0	0	0	11	5	6	11
Electrical	EEA(EE61)	10	0	5	0	1	0	1	0	0	0	0	0	17	11	6	17
	EEB(EE62)	10	0	5	0	3	0	1	0	0	0	0	0	19	14	5	19
	EEC(EE63)	10	0	5	0	3	0	1	0	0	0	0	0	19	16	3	19
	EED(EE64)	9	1	5	0	3	0	1	0	0	0	0	0	19	14	5	19
	EE65	4	0	2	0	2	0	1	0	0	0	0	0	9	7	2	9
Mechanical	MEA(ME61)	10	0	4	0	3	0	1	0	0	0	0	0	18	17	1	18
	MEB(ME62)	10	0	6	0	2	0	1	0	0	0	0	0	19	19	0	19
	MEC(ME63)	9	0	6	0	3	0	1	0	0	0	0	0	19	19	0	19
	MED(ME64)	10	0	5	0	2	0	0	0	0	0	0	0	17	17	0	17
	MEE(ME65)	9	0	6	0	3	0	0	0	0	0	0	0	18	19	0	19
	ME 66	6	1	3	0	1	0	1	0	0	0	0	0	12	11	1	12
Nano Science & Technology	NSA	7	0	3	0	0	0	0	0	0	0	0	0	10	10	0	10

4.3.3. M.Sc., MCA & Ph.D. 2018 - 2019

DEPARTMENT	COURSE	OPEN	OBC	OBC-PH	SC	ST	TOTAL	MALE	FEMALE	TOTAL	QIP	QIP(P)	F.TIME	P.TIME	EXTERNAL	TOTAL	
Mathematics(MMA)	M. Sc	9	5	0	2	1	17	11	6	17	0	0	17	0	0	17	
Physics(PHA)		10	5	0	3	0	18	12	6	18	0	0	18	0	0	18	
Chemistry(CYA)		10	6	0	3	1	20	8	12	20	0	0	20	0	0	20	
Computer	MCA	23	13	0	7	3	46	35	11	46	0	0	46	0	0	46	
Architecture	Ph. D	4	1	0	0	0	5	2	3	5	0	0	4	1	0	5	
Biotechnology		3	0	0	1	0	4	1	3	4	0	0	4	0	0	4	
Chemical		3	3	3	0	0	9	6	3	9	0	0	9	0	0	9	
Civil		13	3	0	1	0	17	5	12	17	0	0	15	1	0	16	
Computer Science		8	9	0	2	0	19	5	14	19	0	0	19	0	0	19	
Chemistry		3	1	0	0	0	4	3	1	4	0	0	13	0	1	14	
Electronics		13	4	0	0	0	17	8	9	17	2	0	13	1	0	14	
Electrical		5	5	1	0	0	11	3	8	11	0	0	11	0	0	11	
Mathematics		10	7	0	0	0	17	4	13	17	0	0	15	2	0	17	
Mechanical		10	6	0	0	0	16	16	0	16	1	0	15	2	0	17	
Nano Science & Tech.		1	3	0	0	0	4	3	1	4	0	0	4	0	0	4	
Physcis		7	7	0	0	0	14	6	8	14	0	0	12	2	0	14	
School of Management Studies		1	0	0	0	0	1	1	0	1	0	0	1	0	0	1	
Total			104	62	4	11	3	184	98	86	184	3	0	180	9	1	193

4.4. Student Intake 2018-19

4.4.1 B.Tech. /B.Arch.

BRANC H	OP			OP(PH)			OP(OB)			OP(OB)PH			OP (SC)			OP (SC)PH			OB			OB(PH)		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	Total	M	F	Total
AR	9	6	15	0	0	0	6	1	7	0	0	0	0	0	0	0	0	0	5	7	12	1	0	1
BT	5	5	10	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	5	2	7	1	0	1
CE	41	12	53	1	1	2	14	0	14	0	1	1	0	0	0	0	0	0	29	7	36	1	0	1
CH	32	9	41	0	0	0	3	1	4	0	1	1	0	0	0	0	0	0	22	3	25	0	0	0
CS	52	10	62	2	0	2	7	0	7	0	2	2	0	0	0	0	0	0	31	4	35	1	1	2
EE	43	22	65	2	1	3	2	1	3	0	0	0	0	0	0	0	0	0	29	7	36	1	0	1
EC	52	10	62	2	2	4	4	0	4	0	0	0	0	0	0	0	0	0	29	6	35	1	1	2
EP	11	2	13	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	6	2	8	0	0	0
ME	54	11	65	2	0	2	12	0	12	0	1	1	0	0	0	0	0	0	34	6	40	2	0	2
PE	14	4	18	0	0	0	4	0	4	1	0	1	0	0	0	0	0	0	11	2	13	0	0	0
Total	313	91	404	10	4	14	57	4	61	1	5	6	0	0	0	0	0	0	201	46	247	8	2	10

BRAN CH	SC			SC (PH)			ST			ST (PH)			NRI			DASA			FOREIGN			SII			TOTAL		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
AR	6	2	8	0	0	0	2	2	4	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	29	20	49
BT	3	2	5	0	0	0	2	0	2	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	21	11	32
CE	13	8	21	0	0	0	4	5	9	1	0	1	0	0	0	5	2	7	1	0	1	0	0	0	110	36	146
CH	9	5	14	0	0	0	5	2	7	0	0	0	0	0	0	4	5	9	0	0	0	0	0	0	75	26	101
CS	17	4	21	0	0	0	8	2	10	0	0	0	0	0	0	15	6	21	0	0	0	1	0	1	134	29	163
EE	12	8	20	0	0	0	8	2	10	0	0	0	0	0	0	11	6	17	0	0	0	0	0	0	108	47	155
EC	14	6	20	0	0	0	9	2	11	0	0	0	0	0	0	13	8	21	0	0	0	0	0	0	124	35	159
EP	3	2	5	0	0	0	2	0	2	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	24	7	31
ME	19	3	22	1	0	1	10	2	12	1	0	1	0	0	0	18	1	19	0	0	0	0	0	0	153	24	177
PE	5	2	7	0	0	0	2	1	3	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	40	9	49
Total	101	42	143	1	0	1	52	18	70	2	0	2	0	0	0	70	32	102	1	0	1	1	0	1	818	244	1062

4.4.2. 1st Semester M.Tech

Sl.No	BRANCH	2018 Batch																							
		OPEN		OP-PC		OBC		OB-PC		SC		ST		QIP		QIP (POLY)		FN		SP		TOTAL			
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
1	CEA(CE61)	7	2	0	1	2	3	0	0	2	1	0	1	0	0	0	0	0	0	0	11	8			
2	CEB(CE62)	8	2	0	0	4	1	0	1	3	0	0	1	0	0	0	0	1	0	0	15	6			
3	CEC(CE63)	5	4	0	0	2	4	0	0	2	0	0	0	0	0	0	0	0	0	0	9	8			
4	CED(CE64)	3	7	0	0	4	1	0	0	1	2	0	0	0	0	0	0	0	0	0	8	8			
5	CE65	3	3	0	0	1	2	0	0	1	0	1	0	0	0	0	0	0	0	0	6	5			
1	CH61	3	3	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	4	5			
1	CSA(CS 61)	8	2	0	0	4	1	0	0	3	0	1	0	0	0	0	0	0	0	0	16	3			
2	CSB(CS 62)	7	2	0	0	4	1	0	0	1	1	1	0	0	0	0	0	0	0	0	13	4			
1	ECB (EC61)	9	0	0	0	3	3	0	0	3	0	0	0	0	0	0	0	0	0	0	15	3			
2	ECC(EC62)	8	2	0	0	4	0	0	0	3	0	1	1	0	0	0	0	0	0	0	16	3			
3	ECD(EC63)	3	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	3			
4	ECE(EC64)	4	2	0	0	1	3	0	0	0	1	0	0	0	0	0	0	0	0	0	5	6			
1	EEA(EE 61)	4	6	0	0	5	0	0	0	1	0	1	0	0	0	0	0	0	0	0	11	6			
2	EEB(EE 62)	7	3	0	0	4	1	0	0	2	1	1	0	0	0	0	0	0	0	0	14	5			
3	EEC(EE 63)	9	1	0	0	3	2	0	0	3	0	1	0	0	0	0	0	0	0	0	16	3			
4	EED(EE 64)	7	2	1	0	3	2	0	0	2	1	1	0	0	0	0	0	0	0	0	14	5			
5	EE 65	2	2	0	0	2	0	0	0	2	0	1	0	0	0	0	0	0	0	0	6	3			
1	MEA(ME 61)	9	1	0	0	4	0	0	0	3	0	1	0	0	0	0	0	0	0	0	17	1			
2	MEB(ME 62)	10	0	0	0	6	0	0	0	2	0	1	0	0	0	0	0	0	0	0	18	1			

3	MEC(ME 63)	9	0	0	0	6	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	19	0
4	MED(ME 64)	10	0	0	0	5	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	17	0
5	MEE(ME 65)	9	0	0	0	6	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	18	0
6	ME 66	5	1	1	0	3	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	11	1
1	NSA	7	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0

4.4.3 M.Tech., M.Sc. & Ph.D.

BRANCH	SC			ST			OPEN			OPEN-PC			OBC			OBC-PC			TOTAL			
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	
CED	10	3	13	1	2	3	26	19	45	0	1	1	13	11	24	0	1	1	50	37	87	
CSD	4	1	5	2	0	2	15	4	19	0	0	0	8	2	10	0	0	0	29	07	36	
ECD	6	1	7	1	1	2	24	7	31	0	0	0	11	6	17	0	0	0	42	15	57	
EED	10	2	12	4	0	4	29	14	43	1	0	1	17	5	22	0	0	0	61	21	82	
MED	14	0	14	4	0	4	62	2	64	1	0	0	30	0	30	0	0	0	113	0	113	
NST	0	0	0	0	0	0	7	0	7	0	0	0	6	0	6	0	0	0	13	0	13	
Total																						
MCA	5	2	7	3	0	3	18	5	23	0	0	0	9	4	13	0	0	0	35	11	46	
M. Sc	5	13	18	1	1	2	13	16	29	0	0	0	12	4	16	0	0	0	31	34	65	
Ph.D	7	1	8	0	0	0	35	46	81	0	0	0	21	28	49	0	0	0	63	75	138	

4.4.4 Total number of Students of all semesters and all courses as on 31.03.2019

Programme	2018-2019 Admission	2017-2018 Admission	2016-2017 Admission	2015-2016 Admission	2014-2015 Admission
B. Tech	1013	953	900	838	863
B. Arch	49	52	46	44	44
M. Tech	388	440	427	411	414
M.C.A	46	46	46	44	38
M. Sc	65	59	46	57	56
MBA	40	47	41	33	38
Ph.D.	193	114	97	100	117
Total	1794	1711	1603	1527	1570

4.5 THE HOSTELS

Accommodation

There are eleven hostels for the men and two hostels for the ladies. The total capacity of all hostels currently available is 5050. Present strength in the hostels is 5032, out of this 3707 are men (as on 31.03.2019). All the hostels have Common room and Recreational Centre where newspapers, magazines, TV's and indoor sports/games facilities are available. Free twenty four hour internet and computational facilities are available in almost all hostels; it is getting extended to other hostels too. Twenty four hour water and electricity (with DG power back up) is part of all the hostels. Mini canteen, Milma, Amul kiosks, DTP Centre, co-operative stores, Stitching Centre, Ctext book shop etc. are functioning in Students Amenity Centre. Two power laundry stations are functioning with collection centers at different hostels. The ladies hostel has ladies gym, stitching and tailoring centre, hostel library, fitness parlour, indoor sports centre, DTP centre and extension of co-operative stores. Guest room facilities are available in the hostels for the relatives/guests of hostel inmates on chargeable basis.

Day to day administration and management of the hostels is vested with the Council of Wardens headed by the Chief Warden appointed by the Director. Wardens' council is supported by Stewards/Caretakers/hostel staffs.

Chief Warden: Dr. A. Santhiagu

Wardens (as on 31.03.2019)

1	Dr. Lineesh M C , Office Warden	MATHS
2	Dr. K. Sekar	MED
3	Mr. K. Ratnakumar	MED
4	Dr. Malladi .V. Pavan Kumar	CHED
5	Dr. Gangadhara Kiran Kumar L	MED
6	Dr. Ashish Awasthi	MATHS
7	Dr. Aji A. Anappara	Physics
8	Dr. V Sakthivel	ECE
9	Dr. Jayaraj P. B	CSED
10	Dr. Baiju G Nair	SBT
11	Dr. Suresh Kumar N	MATHS
12	Dr. Sathish Kumar D	CED
13	Dr. K Krishnamurthy	CED
14	Dr. Jagadeesha T.	MED
15	Mr. M. Sivakumar	CED
16	Dr. M Srinivas	MED
17	Mr. B. Rohinikumar	MED
18	Dr. Vineesh Ravi	CHED
19	Dr. R. Arun Kumar	CED
20	Dr. Haribabu	CHED
21	Dr. Vari Sivaji Reddy	Physics
22	Dr. S. Bhuvaneshwari	CHED
23	Dr. P. P. Deepthi	ECED
24	Dr. Susmitha Das	CHED
25	Dr. S. Kanagalakshmi	EED

Hostel Manager (Officiating): Sri. Reejish Kumar M

Stewards:

1. Sri. Narayanankutty .P
2. Sri. Anwar Sadath

Peon: Sri.Chandu. K V

4.6 SCHOLARSHIPS/ ASSISTANTSHIPS

Financial Assistance to M.Tech Students:

Teaching Assistantship /Research Assistantship/Scholarships are awarded to eligible M.Tech students as per rules formulated by the Govt. of India and the Institute for such awards from time to time, subject to availability of funds. Currently an amount of Rs.12,400/- per month for 22 months will be given to candidates admitted through GATE score. This facility will not be available to sponsored candidates, foreign nationals and dependants of NRIs

Financial Assistance to Research Scholars:

Teaching Assistantship /Research Assistantship/Scholarships are awarded to eligible full time research scholars as per the rules formulated by the Institute for such awards from time to time. Currently the scholarships are at the rate of Rs.31,000/- per month for the first two years and Rs.35,000/-per month for another three years. This facility will not be available to UGC/CSIR Fellowship/National Doctoral Fellowship Holders, sponsored candidates, foreign nationals and dependants of NRIs

4.7 GAMES AND SPORTS

As has been the practice, Programs for 2018-19 were planned and executed giving due importance to the new comers to the Institute. More than 100 days during July to November 2018 were spent on fresher orientation program in order to acclimatize them to the NITC environment and to inculcate awareness on the need to pursue activities to keep themselves fit and healthy with in campus and to follow-up in the post-campus life.

The senior-graduate and the post graduate students on their part have thronged the physical education activity centers in big numbers on a voluntary basis. The shortage of Playfields continued to haunt and every attempt was made to provide them to meet the student demand. One systematic and successful method adopted was to provide floodlights on small area games like Tennis, Basketball and Volley ball. However, the existing infrastructure has been utilized to the full and equipment purchased has been exhausted due to the overwhelming use.

4.8. AWARDS

PHYSICAL EDUCATION

Si. No.	Discipline	Training camps	Tournaments participated	Achievements
1	FOOT BALL	01 camp	a. All India Inter NIT Games 2018-2019 held at NIT Rourkela	Semifinalist
2	HANDBALL	01 camp	a. All India Inter NIT Games 2018-2019 held at NIT Agartala Handball (W)	Runner-up

			b. . All India Inter NIT Games 2018-2019 held at NIT Agartala Handball (M)	
3	KABADDI	01 camp	a. All India Inter NIT Games 2018-2019 held at NIT Rourkela	Semifinalist
4	HOCKEY	01 camp	a. All India Inter NIT Games 2018- 2019 held at NIT Agartala.	Quarter Finalist
5	BADMINTON	01 camp	a. All India Inter NIT Games Badminton (M) 2018-2019 held at, VNIT Nagpur	Semi Finalist
			b. All India inter NIT Games Badminton (W) 2018-2019 held at VNIT Nagpur	Quarter Finalist
6	TABLE TENNIS	01 camp	a. All India Inter NIT Games Table Tennis(M) 2018-2019 held at VNIT Nagpur	Quarter Finalist
7	VOLLEY BALL	01 camp	a. All India Inter NIT Games 2018-2019 held at NIT Trichy (Men)	2 nd Runner-Up
			b. All India Inter NIT Games 2018-2019 held at NIT Trichy (Women)	Quarter finalist
8	KHO-KHO	01 camp	a. All India Inter NIT Games 2018-2019 held at NIT Rourkela (Men)	Semifinalist
			b. All India Inter NIT Games 2018-2019 held at NIT Rourkela (Women)	SemiFinalist
9			a. All India Inter NIT Games 2018-2019 held at NIT Trichy (Women)	National Champion
			b. All India Inter NIT Games 2018- 2019 held at NIT Trichy (Men)	Quarter Finalist

			c. All Kerala Inter Engineering Basketball (W) Tournament Fury Ragam 2018 - 2019 held at NIT Calicut	Champions
	BASKET BALL	01camp	d. All Kerala Inter Engineering Basketball (M) Tournament Ragam 2018 - 2019 held at NIT Calicut (Fury) e. All Kerala Inter Engineering College Ever Rolling Trophy Basketball Tournament at Viswajyothe College of Engineering and Technology Vazhakulam	2 nd Runner-Up
10	TENNIS	None	a. All India Inter NIT Games held at NIT Surathkal	Quarter Final (M)
11	CHESS	None	a. All India Inter NIT Games held at NIT Agartala	Second Runner-up

DEPARTMENT OF ELECTRICAL ENGINEERING

Sl. No	Name	Award
1.	Dr Kumaravel S	i. Kerala State Renewable Energy Award ii. Young Faculty Research Fellowship Award iii. Dr. Ramamoorthy Best Paper Award
2	Dr. Shreelakshmi M P	i. INSPIRE Faculty award
3	Dr. Tarakanath Kobaku	i. INSPIRE Faculty award
4	V. Karthikeyan	Dr. Ramamoorthy Best Paper Award in Power Electronics & Drives, 2018 in NPSC-2018 at National Institute of Technology Trichy, Dec., 14-16, 2018

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Sl. No.	Name	Award
1	Dr. Lillykutty Jacob	Outstanding Women in Engineering Volunteer 2018 Award of IEEE Kerala

DEPARTMENT OF MECHANICAL ENGINEERING

Sl No	Name	Award
1	Dr. Jose Mathew, Professor Department of Mechanical Engineering	ASME Member
2	Dr. Sekar K, Assistant Professor Department of Mechanical Engineering	International Innovation & Betterment Excellence in Technical Research Award
3	Dr. Sekar K, Assistant Professor Department of Mechanical Engineering	Best paper award from Delhi technical campus
4	Dr. Sudheer A P, Assistant Professor, Department of Mechanical Engineering	Best Paper award at IIITDM, Kanchipuram in International conference: RoSMA 2018, July 19-21, 2018.
5	Dr. Vinay V Panicker, Assistant Professor, Department of Mechanical Engineering	Indian Institution of Industrial Engineering Chairman Special Award 2018

DEPARTMENT OF MATHEMATICS

Sl. No.	Name	Award
1.	Dr. Satyananda Panda	INSA Bilateral Exchange Program to Visit Slovenia
2.	Dr. Krishnan Paramasivam	Received the South India's Most Inspiring Young Teachers (under 40) by the EDEX, The New Indian Express, South India.

DEPARTMENT OF ARCHITECTURE AND PLANNING

Sl. No	Name	Award
1	Dr. P.P. Anilkumar	Eminent engineer's Award instituted by the Institution of Engineers Calcutta, at NIT Suratkal

DEPARTMENT OF CHEMICAL ENGINEERING

Sl. No.	Name	Award
1.	Dr. Sudev Das	ICERME 2019, NIT Agartala

SCHOOL OF BIOTECHNOLOGY

Sl. No.	Name	Award
1.	Dr. Prem Raj P.	2019 Bharat Jyoti Puraskar

4.9 EXAMINATION DETAILS

A total of 1568 candidates successfully completed their programmes of study. This includes: 101 Ph. D, 359 M.Tech, 10 M. Plan, 51 M. Sc, 46 MCA, 44 MBA, 47 B. Arch. and 910 B.Tech students.

a. Result of B. Tech/B. Arch Students

Pgm. Code	Total Registered	1st class with Distinction	1st Class	2nd Class	Total Pass	Percentage
CE	151	44	76	24	144	95.36
CS	158	57	64	33	154	97.47
EC	160	43	66	42	151	94.38
EE	135	48	60	20	128	94.81
ME	154	41	78	31	150	97.40
PE	38	11	16	9	36	94.74
BT	27	12	8	6	26	96.30
CH	97	31	37	25	93	95.88
EP	29	13	12	3	28	96.55
AR	56	7	24	16	47	83.93
TOTAL	1005	307	441	209	957	95.22

b. Result of M.Tech, MCA, MBA & Ph.D Students

Pgm. Code	Total Registered	1st class with Distinction	1st Class	2nd Class	Total Pass	Percentage
CE61	16	13	3	0	16	100.00
CE62	20	12	7	0	19	95.00
CE63	18	10	7	0	17	94.44
CE64	16	6	10	0	16	100.00
CE65	11	6	5	0	11	100.00
CS61	20	11	9	0	20	100.00
CS62	20	8	11	1	20	100.00
EE61	13	9	4	0	13	100.00
EE62	17	11	6	0	17	100.00
EE63	17	11	6	0	17	100.00
EE64	17	9	7	0	16	94.12
EE65	10	2	8	0	10	100.00
EC61	16	6	10	0	16	100.00
EC62	16	10	5	1	16	100.00
EC63	11	4	7	0	11	100.00
EC64	10	6	3	1	10	100.00
ME61	18	10	8	0	18	100.00
ME62	17	11	5	0	16	94.12

ME63	20	10	9	1	20	100.00
ME64	17	7	9	1	17	100.00
ME65	17	10	6	0	16	94.12
ME66	13	5	8	0	13	100.00
NS61	6	5	1	0	6	100.00
Chemical Engg	8	6	2	0	8	100.00
TOTAL M.Tech	364	198	156	5	359	98.63
MA62	18	5	11	2	18	100.00
CY62	16	6	10	0	16	100.00
PH62	17	14	2	1	17	100.00
Total M .Sc	51	25	23	3	51	100.00
MBA	44	11	29	4	44	100.00
MCA	46	7	30	9	46	100.00
M.Plan	11	4	5	1	10	90.91
Ph.D					101	
TOTAL	516				510	98.44

4.10. TECHNOLOGY BUSINESS INCUBATOR (TBI)

National Institute of Technology Calicut has set up a Technology Business Incubator (TBI-NITC) in 2003-04 with the support of National Science & Technology Entrepreneurship Development Board (NSTEDB) Department of Science and Technology, Govt. of India to incubate startup industries in IT and Electronics. TBI is registered as a society under the society's registration Act XXI of 1860 on 16 Sep 2009. The following table shows what TBI is so far:

1	Total number of units in Technology Business Incubator	13
2	Number of units joined during 2018– 2019	2
3	Number of units graduated from TBI during 2018 - 2019	2
4	Number of units preparing to graduate	2
5	Total number of units so far assisted by TBI	61
6	Total number of employees in the incubated companies	900

Programmes conducted by TBI during 2018-19

- ENTREPRENEURSHIP DEVELOPMENT PROGRAMME conducted during 03 to 30 Oct 2018
- FACULTY DEVELOPMENT PROGRAMME ON ENTREPRENEURSHIP conducted during 03 to 15 Dec 2018
- TECHNOLOGY BASED ENTREPRENEURSHIP DEVELOPMENT PROGRAMME IN FOOD PROCESSING conducted during 28 Nov 2018 to 11 Jan 2019

- WOMEN ENTREPRENEURSHIP DEVELOPMENT PROGRAMME conducted during 29 Jan 2019 to 26 Mar 2019
- TECHNOLOGY BASED ENTREPRENEURSHIP DEVELOPMENT PROGRAMME IN Applied Electronics and Networking conducted during 20 Mar 2019 to 08 May 2019
- ENTREPRENEURSHIP DEVELOPMENT PROGRAMME conducted during 25 Feb 2019 to 23 Mar 2019
- Organized a mentoring workshop for the 15 school students selected from Kerala and Puducherry under the scheme INSPIRE AWARDS- MANAK (Million Minds Augmenting National Aspirations and Knowledge), executed by DST and National innovation Foundation – India (NIF) an autonomous body of DST aims to motivate students in the age group of 10-15 years.
- Participated 2nd Malabar innovation Festival during 14 to 15 Nov 2018
- Participated DISHA 2018, a Higher Educational Fair, organised by Govt. of Kerala, held at Alappuzha during 06 to 10 Dec 2018

SFURTI

The Technology Business Incubator has received a project from Coir Board for being the Implementing Agency (IA), for the development of Balussery Coir Cluster, under the SFURTI scheme. Coir Board is the Nodal Agency (NA) and Entrepreneurship Development Institute of India (EDI) is the Technical Agency (TA) for this project.

There are two components in the project – Soft intervention and Hard Intervention. A dedicated account has to be opened in the name of TBI NITC for the funds related to the soft intervention (Rs. 25 lakhs) and the fee for implementing agency (i.e. TBI - NITC) which is Rs. 20 lakhs.

SFURTI PROJECT- Coir Cluster Development at Balussery

Project total funding

Total Project Cost (Rs.Lakh)	GoI - 109.03 Lakhs		130.28 Lakhs
	Beneficiary- 21.26 Lakhs		
Soft Intervention	Hard intervention	Implementing Agency Cost	Technical Agency Cost
25 Lakhs	78.69 Lakhs	20 Lakhs	6.59 Lakhs

Hard Intervention

1. Machinery Purchase

Type of Machine	Automatic Spinning Machine(6 Nos)	Defibering Unit
Manufacturer	2M Engineers Peeniya, Bangalore	Plants(india) Agro Machineries(P) Ltd,

		Kalamassery
Rate of Machinery	14,49,570/-(for 6 Nos)	20,85,000/-
Status of Machinery *	Machinery Training Started- Production will starts next week	Installation completed waiting for Electricity Connection

The project is ready for formal inauguration

TBI II Phase

TBI has got approval from the Department of Science and Technology under the scheme “Establishment of a Technology Business Incubator at National Institute of Technology Calicut”. We have received the approval from DST for a total project cost of Rs.5,28,26,000/-. Out of which, Rs. 4,74,29,000/- (Rupees Four Crore Seventy Four lakhs Twenty Nine Thousand only) will be provided by DST towards non recurring expenses of Rs.2,90,00,000/- and recurring expenses of Rs.1,84,29,000.

Student Entrepreneurship Initiatives supported by TBI NITC

TBI NITC has been supporting students in terms of technical & business mentorships, acted as an intermediary in connecting the students with industry experts in diverse domains along with other initiatives like arranging talks including both the technical as well as the business aspects. During 2018-19, the activities under student entrepreneurship were coordinated under IEDC (INNOVATION AND ENTREPRENEURSHIP DEVELOPMENT CENTRES) supported by Kerala Startup Mission (KSUM). At National Institute of Technology, Calicut, IEDC serve as a key platform for fostering innovation and entrepreneurship among students. IEDC stands for nurturing the creative and innovative ideas of students and help them transform these ideas into feasible products and services. IEDC acts as the first launch pad for a student’s entrepreneurial journey and provides them with access to cutting-edge technology, world-class infrastructure, high-quality mentorship, early risk capital and global exposure. IEDC also provide opportunities for the student community by organizing various IEDC events in association with KSUM and various other agencies like ICT Academy of Kerala (ICTAK).

IEDC Programme conducted by TBI NITC	
8 August 2018	Orientation Programme for 2 nd - Final year students of NITC
13 – 27 September 2018	Awareness Programme Orientation for the 1 st year students
5 October 2018	IEDC Workshop
10 October 2018	Mentoring Session
12 October 2018	Inauguration of Tathva Interface – Sri. R Natarajan (COO & CFO – RNT Capital Advisors)
20 November 2018	Boot Camp – Startup India Yatra
18 January 2019	Talk
11 January 2019	Bio Entrepreneurship Workshop – Sri Udayan Chandra, SIIC, IIT Kanpur
15 Feb 2019	Awareness Programme - Orientation for the 2nd year students
11 March 2019	Introduction to Artificial Intelligence- Mr. Uday Girish (Final year MED student, NITC) & Mr. Abdul Fathaah (student, NITC)

16-17 March 2019	Python Workshop-Mr. Abdul Fathaah (student, NITC)
16-17 March 2019	Design Thinking Workshop – Sri. Sabarinath K (CEO, OFB), Sri. Arjun C P (Operating Officer, OFB) and Sri. Akshay Kumar C (Technical Officer, OFB)

NATIONAL INITIATIVE FOR DEVELOPING AND HARNESSING INNOVATIONS (NIDHI) PROMOTING AND ACCELERATING YOUNG AND ASPIRING INNOVATORS & STARTUPS (PRAYAS)

NIDHI PRAYAS is a scheme for addressing the gap in the very early stage idea/proof of concept funding. The funding is given as grant for the selected ideas. The selected innovators would get access to the infrastructure, prototype grant and mentorship. TBI has got approval for a total project cost of Rs.700 Lakhs from the Project Management Unit of PRAYAS for hosting a PRAYAS Centre at NIT Calicut under the NIDHI PRAYAS Scheme of Department of Science and Technology. Out of Rs.700 lakhs, Rs. 100 Lakhs are for Capital for setting up Fab Lab, Rs.500 Lakhs for providing prototype grant to innovator over 5 years. Rs. 20 Lakhs per year for five years can be spent for annual operations, management of Fab lab. Under PRAYAS project minimum 10 innovators are expected to be supported for their prototype development by providing financial assistance of maximum 10 lakhs per project as grant.

4.11. TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME (TEQIP)

Technical Education Quality Improvement Programme Phase III

Technical Education Quality Improvement Programme (TEQIP) is a centrally sponsored scheme of the Government of India to build a strong higher technical education system for India. Institute has completed the Phase I in 2007-2008 and the Phase II in 2016-'17. Institute was selected for funding in the Phase III under the Sub Component 1.3 for which the twinning was mandatory. Institute has made the twinning arrangements with the Govt. Engineering College Bharatpur, Rajasthan. This College was selected by MHRD under Sub Component 1.1 of TEQIP-III. TEQIP Phase III was started from 1st April 2017 and would be concluded by 30th September 2020. Details of activities conducted during the year 2018-19 under this scheme as follows:

There are major heads, namely *procurement* and *academic* activities. Under procurement, the purchase of high end research equipment and the Language Lab development have been taken up. During 2018 -2019, under the Academic component, 15 members of the faculty and 30 members of the staff were sent for attending training in various Institutions. 40 members of the faculty have attended Pedagogy Training at IIT Madras during 21-23 March 2019. 2 members from the faculty and one Officer were sent for attending Professional Development training. In order to facilitate the knowledge dissemination and networking, 13 Faculty Development Programmes were conducted at the Institute under twinning with the mentee Institute. These FDPs were coordinated by the faculty of the respective departments. In order to strengthen the industry-Institute linkage and improve the student employability, 4 industry expert talks were conducted by the departments for which the logistic support was given by TEQIP. With a view to promote student innovations,

financial support for 29 UG innovation projects was given through a competitive selection process. GATE registration fee was reimbursed to 437 final year UG students who would graduate in August 2019. Financial assistance was given for representing institute in the 14th Higher Education Summit on 30.10.18 at New Delhi. Financial assistance was given for representing institute in DISHA II - Higher Education Summit 2018 of the Government of Kerala State. One Day workshop on Outcome Based Education and NBA accreditation was conducted at Institute for preparing faculty for accreditation by inviting external experts. A Discussion forum was organized towards preparing a comprehensive draft of the Institute IPR Policy. The draft was made with active inputs from experts from the Industry as well as other leading Institutions. A boot camp for the junior UG students was organized on 20th November 2018 on campus, in association with TBI and other agencies, with the intention of converting the startup dreams to a reality. This was conducted in association with the Kerala Startup Mission and the Startup India Mission. 12 Students have participated in Smart India Hackathon 2019 with TEQIP Support. Overall feedback about TEQIP-III is good.

5.0 RESEARCH AND DEVELOPMENT ACTIVITIES

5.1 Ph.D PROGRAMMES

DEPARTMENT OF ARCHITECTURE

a. Ph. D completed

b. On-going Ph. D

Sl. No.	Name	Guide	Area of Specialization	Scheme (QIP/Part Time/Full time)
1	Mrs.Sunena Abdul Huq	Dr. Bimal P.	Architectural Conservation	FT
2	Mr.Rohit Nadakuni	Dr. Bimal P.	Architectural Conservation	PT
3	Mr.Pradeep R	Dr. Anilkumar P.P.	Building regulations	PT
4	Mrs.Shine George	Dr. Anilkumar P.P.	Disaster management	PT
5	Mr.Binoy B V	Dr. Anilkumar P.P Dr.Naseer M.A	Land value	FT
6	Mr.Ajey Abey	Dr. Anil kumar P.P.	Sustainability	PT
7	Mrs.Krishnaveni K S	Dr. Anilkumar P.P.	Urban sprawl	FT
8	Mrs.Nina Lazar	Dr. Chithra K	Sustainable Architecture	FT
9	Mr.Anurup K	Dr. Chithra K	Sustainable land use planning	PT

10	Mr.Alex Jose	Dr.Kasthurba A K	Masonry Blocks for Future-ongoing	FT
10	Mrs.Sheelu Jones	Dr.Kasthurba A K, Dr.Anjana Bhagyanathan	Environmental Conservation of Western Ghats-	FT
12	Mrs.Jasna Bharghavan	Dr.Kasthurba A K	Infrastructure for water distribution	FT
13	Mr.Rahmathulla Noufal	Dr.Kasthurba A K	Utilisation of waste in replacement of fine aggregate for Concrete	PT
14	Mrs.Supriya Mahesh Patil	Dr. Kasthurba A K	A Model for UrbanHeritage Renewal	PT

DEPARTMENT OF CHEMICAL ENGINEERING

a. Ph. D completed

Sl. No	Name	Guide	Area of Specialization	Scheme (QIP/Part time/Full time)
1.	A.B.Sathya	Dr.V.Sivasubramanian, Dr.A.Santhiagu	Production of Polyhydroxy Buterate by Chlorella Pyrenoidosa and its Application in Food Packaging	Full Time
2.	Sreedha.P	Dr.V.Sivasubramanian,	Studies on the Development of A Novel Aerobic Bioreactor for Treatment of Wastewater	Full Time
3	J.Kanimozhi	Dr.V.Sivasubramanian,	Production and Characterization of Dextran from Weissella cibaria NITCSK4 and its Applications	Full Time
4	Shankar N	Dr.V.Sivasubramanian,	Design and Evaluation of Progressive Crude Oil Distillation Process using Commercial Process Simulator	Full Time
5	Mohanraj N	Dr.S Bhuvaneshwari	“Studies on removal of cationic and anionic dyes	Full Time

			from wastewater using electro-adsorption techniques".	
6	Abdul Jaleel E	Dr. Aparna. K	Identifications and control of distillation columns using optimized intelligent techniques	Full Time
7	K. Vasantharaj	Dr. V Sivasubramanian	Studies on Biological sulphates reduction.	Full Time
8	Anish K Mathew	Dr. Malladi V Pavan Kumar	Control of ideal hypothetical quaternary reactive distillation columns	Part Time

b. On-going Ph. D

Sl. No	Name	Guide	Area of Specialization	Scheme (QIP/Part time/Full time)
1.	Aswani M T	Dr. Malladi V Pavan Kumar	Adsorption	Full Time
2.	Nivedhitha Sankar	Dr. Shiny Joseph	Membrane Technology	Full Time
3.	Aswathi Ashok	Dr. K Haribabu	Dye Sensitized Solar Cells	Full Time
4.	Keerthi R	Dr. Lity Alen Varghese, Dr. N Selvaraju	Air Quality Modeling	Full Time
5.	Kavya V R	Dr. Aparna K	Modelling of Fuel cell	Full Time
6.	Sumisha A	Dr. K Haribabu	Microbial Fuel Cell	Full Time
7.	Vidhyeswari	Dr.S Bhuvaneshwari	Microbial Fuel Cell System	Full Time
8.	Ramysha Shankar	Dr. V Sivasubramanian	Waste Water Treatment using Electro Chemical Treatment	Full Time
9.	Gazliya	Dr. Aparna K	Bio Fuel	Full Time
10.	Vishnu Prasad	Dr. K Haribabu	Nano fluid and its Applications	Full Time
11.	Sinu P	Dr. V Sivasubramanian	Membranes	Full Time
12.	Nimmi C Sekhar	Dr. Lity Alen Varghese	Polymer Composites	Full Time

13.	Karthick S	Dr. K Haribabu	Microbial Fuel Cell	Full Time
14.	Nishan Ahammed V	Dr. Lity Alen Varghese	Waste Water Treatment	Full Time
15.	Aiswarya Sidharthan K	Dr. Shiny Joseph	Membranes	Full Time
16.	Abdul Samad K	Dr. Malladi V PavanKumar	Water Treatment using Adsorbent	Full Time
17.	Johsan R	Dr. Sudev Das	Pool boiling	Full Time
18.	Mona Mary Varghese	Dr. Teja Reddy Vakamalla	CFD	Full Time
19.	Jenny N	Dr. Noel Jacob	Membrane Separation	Full Time
20.	Shalini V	Dr. Susmita Das	Nano Material, Environmental applications	Full Time
21.	Janakan S Saral	Dr. Panneerselvam Ranganathan	Bio Fuel	Full Time
22.	Akash M Chandran	Dr. Prasanna Kumar S Mural	Polymer Nano composite for Energy Harvesting	Full Time
23.	Y Raju	Dr. Chandra Sekhar Besta	Process Control	Full Time
24.	Rahul Krishna B	Dr. Dhanya Ram V	Modeling and Process Control	Full Time
25.	Sonsy Heartson	Dr. Shiny Joseph	Fuel Cell Control	Full Time
26.	Suchith Chellappan	Dr. Aparna K, Dr .Sajith V	Production of bio diesel using Heterogeneous catalyst	Part Time
27.	Remya Balakrishnan	Dr. Lity Alen Varghese	Polymer Technology	Part Time
28.	Sreepriya	Dr. Aparna K	Modelling of Chemical Process Plant	Part Time
29.	Lovey Jacob	Dr. Shiny Joseph. Dr. Lity Alen Varghese	Membrane Separation	Part Time
30.	Dhanya	Dr. Aparna K	Removal of Dyes effluent	Part Time
31.	Vinila	Dr. Aparna K	Modelling of Chemical Process Plant	Part Time
32.	Habid	Dr. Lity Alen	Thermosetting polymers	Part Time

		Varghese		
33.	Surej Rajan C	Dr. Lity Alen Varghese, Dr. Shiny Joseph	Polymer Blends	Part Time
34.	Sindhu	Dr V Sivasubramanian	Energy	Part Time
35.	Haisel	Dr. Shiny Joseph	Water Treatment	Part Time
36.	Anish Thomas	Dr.Malladi V PavanKumar	Process Control	Part Time
37.	M. Sathis Kumar	Dr.Malladi V PavanKumar	Process Control	Part Time
38.	Sony George	Dr.Malladi V PavanKumar	Food Technology	Part Time
39	Eldho Abraham	Dr. S Bhuvaneshwari	Micro Fluidics	Full Time
40	Murugan P	Dr. S Bhuvaneshwari	Liquid Membranes	Full Time
41	C. Vigneshwaran	Dr V Sivasubramanian	Bio Surfactant	Full Time
42	N. Saranya	Dr V Sivasubramanian, Dr. Selvaraj	Waste water treatment	Full Time
43	Anju Sunny	Dr.Aparna K	Process control	Full Time
44	Surendar	Dr V Sivasubramanian	Microwave Drying	Full Time

DEPARTMENT OF CIVIL ENGINEERING

a. Ph. Ds completed

Sl. No.	Name	Guide	Area of Specialization	Scheme (QIP/Part Time/Full time)
1	Himasree P R	N.Ganesan & P.V.Indira	Structural Engineering	Full Time
2	Prashob P. S,	A. P Shashikala, T. P Somasundaran	Structural Engineering	Full Time
3	Manjula N K	T.M.Madhavan Pillai & Praveen Nagarajan	Structural Engineering	Part Time
4	Sabna V	S.Chandrakaran & Santosh.G.Thampi	Environmental Engineering	Part Time
5	Lila P C	M.V.L.R. Anjaneyulu	Transportation Engineering	Part Time
6	Muhanned Siddik A	George K. Varghese Babu J Allapat	Environmental Engineering	Part Time

7	Irshad Abdul Azeez P	N.Ganesan & P.V.Indira	Structural Engineering	Full Time
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Ongoing Ph. Ds

Sl. No.	Name	Guide	Area of specialization	Scheme (QIP/PT/FT)
1	M Sivakumar	M.V.L.R. Anjaneyulu	Transportation Engineering	Internal
2	Sreela P K	M.V.L.R. Anjaneyulu	Transportation Engineering	Qip
3	Sreelekha M G	M.V.L.R. Anjaneyulu/K. Krishnamurthy	Transportation Engineering	Qip
4	V S Sanjay Kumar	M.V.L.R. Anjaneyulu	Transportation Engineering	Part Time
5	Bybin Paul	M.V.L.R. Anjaneyulu	Transportation Engineering	Part Time
6	Safeer Ali Abbas Ali	K. Krishnamurthy/CA	Construction Management	Full Time
7	Shiji P	Kodi Rangaswamy/CA	Construction Management	Full Time
8	Muneera C P	K. Krishnamurthy	Transportation Engineering	Full Time
9	Anil Joseph	S. Chandrakaran/N. Sankar	Geotechnical Engineering	Part Time
10	Ansu V	M.V.L.R. Anjaneyulu	Transportation Engineering	Qip
11	Devika Babu	M.V.L.R. Anjaneyulu	Transportation Engineering	Full Time
12	Sivakumar B	K. Krishnamurthy	Transportation Engineering	Part Time
13	Sabitha N M	Santosh G Thampi/Sathish Kumar D	Water Resources Engineering	Part Time
14	Arun Baby Zacharia	M.V.L.R. Anjaneyulu/M. Harikrishna	Transportation Engineering	Full Time
15	Mandala Siva Priyanka Yadav	George K Varghese/SMK	Environmental Engineering	Full Time
16	Drisyia J	Sathish Kumar D	Water Resources Engineering	Full Time
17	Sherin K S	S. Chandrakaran/N. Sankar	Geotechnical Engineering	Part Time
18	Neena M Joseph	M.V.L.R.	Transportation Engineering	Part Time

		Anjaneyulu/M. Harikrishna		
19	Ciby Jacob Cheriyan	T.M. Madhavan Pillai/Sajith A.S.	Structural Engineering	Full Time
20	Prakash C	Santosh G Thampi	Environmental Engineering	Part Time
21	R Sathya Prakash	K. Krishnamurthy	Transportation Engineering	Full Time
22	Sukanya J Nair	K.Sajith A.S.ikumar	Water Resources Enigneering	Full Time
23	Drisy M	K. Krishnamurthy	Transportation Engineering	Full Time
24	Minu Ann Peter	Praveen Nagarajan/Sajith A.S.	Structural Engineering	Full Time
25	Sangeetha M	M.V.L.R. Anjaneyulu/M. Harikrishna	Transportation Engineering	Full Time
26	K T Vipin	N.Ganesan /P.V.Indira	Structural Engineering	Full Time
27	Rinku Varghese	S. Chandrakaran/Kodi Rangaswamy	Geotechnical Engineering	Full Time
28	Regi P Mohan	Kodi Rangaswamy	Geotechnical Engineering	Part Time
29	Poonam Mohan	A.P. Sashikala	Structural Engineering	Full Time
30	Unnikrishnan S	J Sudha Kumar	Construction Management	Part Time
31	Jisha John	N.R. Chitra/Santosh G Thampi	Water Resources Enigneering	Full Time
32	Lincy Christy D	T.M. Madhavan Pillai/Praveen Nagarajan	Structural Engineering	Full Time
33	Surya T V	Santosh G Thampi	Water Resources Enigneering	Full Time
34	Anand Raj	A.P. Sashikala/Praveen Nagarajan	Structural Engineering	Full Time
35	P Kabbilawsh	Sathish Kumar D/N.R. Chitra	Water Resources Enigneering	Full Time
36	Kannan C Bhanu	N.Ganesan /P.V.Indira	Structural Engineering	Full Time
37	Prem Mohan	George K Varghese	Environmental Engineering	Full Time

38	Krishnachandran	J Sudha Kumar	Construction Management	Part Time
39	Saranya P	A.P. Sashikala/Praveen Nagarajan	Structural Engineering	Full Time
40	Akhil K S	S. Chandrakaran/N. Sankar	Geotechnical Engineering	Full Time
41	Geethu Thomas	Kodi Rangaswamy	Geotechnical Engineering	Full Time
42	Sithara S	Santosh G Thampi/Pramada S K	Water Resources Engineering	Full Time
43	Ansa Thasneem	Santosh G Thampi/N.R. Chitra	Water Resources Engineering	Full Time
44	Mohammed Aslam	Praveen Nagarajan/MR	Structural Engineering	Full Time
45	Lekshmi Ashok	Santosh G Thampi/George K Varghese	Environmental Engineering	Full Time
46	J Chithra	Praveen Nagarajan/Sajith A.S.	Structural Engineering	Full Time
47	Ashwini S K	George K Varghese	Environmental Engineering	Full Time
48	Amal Raj	M.V.L.R. Anjaneyulu	Transportation Engineering	Full Time
49	Ashima J Catherine	S. Chandrakaran/N. Sankar	Geotechnical Engineering	Full Time
50	Jincy Rose M A	N.R. Chitra	Water Resources Engineering	Full Time
51	Abinaya S	George K Varghese	Environmental Engineering	Full Time
52	Jishnu V P	N. Sankar/S. Chandrakaran	Geotechnical Engineering	Full Time
53	B Satya Narayana Reddy	Pramada S K	Water Resources Engineering	Full Time
54	Gopika Mohan	N.Ganesan /P.V.Indira	Structural Engineering	Full Time
55	Sreedevi Lekshmi	J Sudha Kumar	Concrete Technology	Full Time
56	Bindurani P	N.Ganesan /P.V.Indira	Structural Engineering	Qip
57	Rahla Rabia	Sathish Kumar D	Water Resources Engineering	Full Time

58	Bennet A Ipe	Sajith A.S.	Structural Engineering	Full Time
59	Trupti Amit Kinjawadekar	Praveen Nagarajan/A.P. Sashikala	Structural Engineering	Part Time
60	S Smitha	Kodi Rangaswamy	Geotechnical Engineering	Full Time
61	Lakshmi Priya	George K Varghese	Environmental Engineering	Part Time
62	Abhiya Abbas Mundol	Sathish Kumar D	Water Resources Enigneering	Part Time
63	Devipriya V P	S. Chandrakaran/Kodi Rangaswamy	Geotechnical Engineering	Full Time
64	Sethulekshmi V S	K. Krishnamurthy	Transportation Engineering	Full Time
65	Sachin Ramesh V V	Santosh G Thampi	Water Resources Enigneering	Full Time
66	Rajindas K P	A.P. Sashikala	Offshore Structures	Full Time
67	Babitha Benjamin	J Sudha Kumar	Concrete Technology	Full Time
68	Prince Thanckachan	T.M. Madhavan Pillai	Structural Engineering	Full Time
69	Jiji Panicker	Praveen Nagarajan	Structural Engineering	Part Time
70	Nishanth Ha	J Sudha Kumar	Construction Management	Full Time
71	Anjana Elsa Alexander	A.P. Sashikala	Structural Engineering	Full Time
72	Nayanthara O.S	Aswathi E. V.	Environmental Engineering	Full Time
73	Jawahar Saud S	George K Varghese	Environmental Engineering	Part Time
74	Haritha P.C	M.V.L.R. Anjaneyulu	Transportation Engineering	Full Time
75	Vivek B	Santosh G Thampi/Sathish Kumar D	Water Resources Enigneering	External
76	Shireen K	Renjitha Mary Varghese	Geotechnical Engineering	Full Time
77	Apurva A.K	N. Sankar/S. Chandrakaran	Geotechnical Engineering	Full Time
78	Reshma Geordy	J Sudha Kumar	Construction Management	Full Time
79	Anjana R Menon	Anjana Bhasi	Geotechnical Engineering	Full Time

80	Megha Mohan	Pramada S K	Environmental Engineering	Full Time
81	Athira T	Agilan V	Environmental Engineering	Full Time
82	Jazeel I.S	Mini Reman	Structural Engineering	Full Time
83	Chinnu Sabu	Robin Davis P/Praveen Nagarajan	Structural Engineering	Full Time
84	Paul T Athikalam	K. V. Anand	Offshore Structures	Full Time
85	Geethu Elsa Thomas	Sajith A.S./P.V.Indira	Structural Engineering	Full Time

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

a. Ph. D completed

Sl. No	Name	Guide	Area of specialisation	Scheme (QIP/PT/FT)
1	Mr.Gylson Thomas	Dr.V K Govindan	Image Processing	PT
2	Mr. Dinesh Peter	Dr.V K Govindan	Image Registration	FT
3	Mr.K Santle Camilus	Dr.V K Govindan	Image Processing	FT
4	Mr. Prasad S M	Dr. V K Govindan , Dr. P S Sathi devi	Image Processing	QIP
5	Ms. Jyothisha J. Nair	Dr. V K Govindan	Image Processing	FT
6	Mr.A Shajin Nagarjun	Dr. M P Sebastian	Adhoc Network	PT
7	Mr. Abdul Haleem P P	Dr. M P Sebastian, Dr. S D Madhu Kumar	Mobile Networks	FT
8	Mr. Sajeev G P	Dr. M P Sebastian/ Dr.Murali Krishnan	Web Caching	PT
9	Ms. Anitha V S	Dr. M P Sebastian, Dr. S D Madhu Kumar	Adhoc and Mobile Networks	QIP
10	Mr. Abdul Nazeer K A	Dr. M P Sebastian,, Dr.S D Madhu Kumar	Bioinformatics	PT
11	Mr. Vinodu George	Dr. M P Sebastian, Dr. K Murali Krishnan	Network Security	PT
12	Mr. Manu J Pillai	Dr. M P Sebastian, Dr.S.D Madhu Kumar	Mobile Networks	PT

13	Mr. Jereesh A S	Dr.V K Govindan	Image Processing	PT
14	Ms. Saleena N	Dr. Vineeth K Paleri	Compilers	PT, Internal
15	Mr. Saidalavi Kalady	Dr. V K Govindan	Intelligent agents	PT, Internal
16	Mr. Jayaraj P B	Dr. K. Murali Krishnan, Dr. G. Gopakumar	High Performance Computing	PT, Internal
17	Ms. Lijiya A	Dr. V.K Govindan	Image Processing	PT, Internal
18	Ms. Anu Mary Chacko	Dr.S D Madhu Kumar	Network Security	PT, Internal
19	Ms. Rekha R.	Dr. Vineeth K Paleri	Compilers	FT
20	Ms. Pamela Vinita Eric	Dr. K. Murali Krishnan Dr. G. Gopakumar	DNA Compression	PT
21	Ms. Shabeera T P	Dr. S D Madhu Kumar	Cloud Computing	FT
22	Mr. Vinith R	Dr. V.K. Govindan Dr. K A Abdul Nazeer	Image Processing	FT
23	Mr . Arun K S	Dr. V.K.Govindan, Dr. S.D. Madhu Kumar	Image Processing	FT
24	Ms. Remya K Sasi	Dr. V.K Govindan Dr. K A Abdul Nazeer	Image Processing	FT
25	Mr. Pamela Vinith Eric	Dr. Murali Krishnan,Dr. Gopakumar G.	Bio-Informatics	PT
26	Mr. Shyam P Joy	Dr. Priya Chandran	Information Security	PT
27	Ms. Pournami P N	Dr. V.K. Govindan Dr. K Muralikrishnan	Image Processing	PT, Internal
28	Ms. Sreejini K S	Dr. V.K.Govindan Dr. K A Abdul Nazeer	PT, Internal	PT

b. On-going Ph. Ds

Sl. No	Name	Guide	Area of specialisation	Scheme (QIP/PT/FT)
1.	Jithin R	Dr. Priya Chandran	Information Security	PT

2.	Unnikrishnan P	Dr. V.K.Govindan Dr. S D Madhu Kumar	Pattern Recognition	PT
3.	Nishamol P H	Dr. G. Gopakumar	Bioinformatics	PT
4.	K Nagaraju	Dr.Sudeep K S	Algorithms & Graph Theory	FT
5.	Sameera Muhammed Salam	Dr. K Muralikrishnan	Graph Theory	FT
6.	Nandini J Warriar	Dr. K Muralikrishnan	Graph Theory	FT
7.	Daphna Chacko	Dr. K Muralikrishnan	Graph Theory	FT
8.	Anita Brijit Mathew	Dr. S D Madhu Kumar	Cloud Computing	FT
9.	Ojus Thomas Lee	Dr. S D Madhu Kumar, Dr.Priya Chandran	Cloud Computing	PT
10.	Sunil Kumar P V	Dr. G. Gopakumar	Bioinformatics	FT
11.	Sarang Sukumar A	Dr. G. Gopakumar	Bioinformatics	PT
12.	Gilesh M P	Dr. S D Madhu Kumar	Cloud Computing	FT
13.	Mahija K C	Dr. K A Abdul Nazeer	Bioinformatics	FT
14.	Vishak R	Dr. K A Abdul Nazeer	Bioinformatics	FT
15.	Shamna P	Dr. V.K Govindan, Dr. K A Abdul Nazeer	Image Processing	FT
16.	Jeena Kleenankandy	Dr. K A Abdul Nazeer	Natural Language Processing	FT
17.	Manu Madhavan	Dr. G. Gopakumar	Bioinformatics	FT
18.	Rani M.R	Dr. Subhashini R	Design and analysis of Fixed parameter tractable algorithms	FT
19.	Sankaranarayanan P. N	Dr. K A Abdul Nazeer	Biological Data Mining	FT
20.	Saritha Murali	Dr. Saidalavi kalady	Image Processing and Computer Vision	FT
21.	Sithara Kanakaraj	Dr. Saidalavi kalady	Image Processing and Computer Vision	FT
22.	Athira K	Dr. G.Gopakumar	Bioinformatics	FT
23.	Hridya P R	Dr. Jimmy Jose	Cryptography and	FT

			Security	
24.	Dhanyamol Antony	Dr. Subashini R	Parameterized Complexity	FT
25.	Reshma Raj R S	Dr. Saidalavi Kalady & Dr. Jayaraj P B	Chip multicore processors	FT
26.	Remi Raman	Dr. Subashini R & Dr. Subhasree M	Design and Analysis of fixed-parameter tractable algorithms for computational Geometry problems	FT
27.	Sruthi C J	Dr. Lijiya A	Image Processing	FT
28.	Neeta A Eapen	Dr. Subhasree M	Computational Geometry	FT
29.	Jasila E K	Dr. Saleena N & Dr. K A Abdul Nazeer	Bioinformatics	FT
30.	Mhatre Swapneel Chandrakant	Dr. Priya Chandran	Computer Architecture (Virtualisation)	FT
31.	Ajish Kumar K S	Dr. Sudeep K S	Graph Theory	FT
32.	Nidheesh N	Dr. K A Abdul Nazeer	Bioinformatics	FT
33.	Jaisooraj J	Dr. S D Madhu Kumar	Internet of Things	FT
34.	Merlin George	Dr. Anu Mary Chacko	Big Data Analytics	FT
35.	O K Reshma	Dr. Saleena N	Text Mining	FT
36.	Shahira K C	Dr. Lijiya A	Image Processing	FT
37.	Lubna A	Dr. Saidalavi kalady	Natural Language Processing	FT
38.	Jisna V A	Dr. Jayaraj P B	Bioinformatics	FT
39.	Anita John	Dr. Jimmy Jose	Cryptography and Security-Analysis and Design of Stream Ciphers	PT
40.	Bijoy M B	Dr. Jayaraj P B	High Performance Computing	PT
41.	Ratheesh V V	Dr. Saidalavi kalady	Image Processing	PT
42.	Anjusha I T	Dr. Saleena N	Bioinformatics	FT

43	Ankur Sharma	Dr. Veni T	Cloud	FT
44	Sarath Babu	Dr. Arun Raj Kumar P	VANET	FT
45	Suneera C M	Dr. Jay Prakash	Data Mining	FT
46	Sharon Sunny	Dr. Jayaraj P B	Bioinformatics	FT
47	Remya Krishnan P	Dr. Arun Raj Kumar P	Security in VANETS	FT
48	Reshma Roy	Dr. Vineeth Paleri	Compiler	FT
49	Sahla Habeeba M A	Dr. Lijiya A & Dr. Anu Mary Chacko	Image Processing	FT
50	Ambili K N	Dr. Jimmy Jose	IoT security	FT
51	Pedda Nagyalla Maddaiah	Dr. Pournami P N	Image Processing	FT
52	M Sreenivasan	Dr. Anu Mary Chacko	Health Informatics	FT
53	Rema M.	Dr. Subhasree M. & Dr. R. Subashini	Computational Geometry	FT
54	Archana S M	Dr. Jay Prakash	Text mining	FT
55	Prajisha C	Dr. Vasudevan A R	Network Security	FT
56	Krishnendhu S P	Dr M Prabu	Image Processing	FT
57	Abinas V	Dr. Abdul Nazeer KA Dr. Saleena N	Bioinformatics	FT
58	Shamla Beevi A	Dr. Saidalavi Kalady Dr. Pournami PN	Machine Learning	FT
59	Annie Julie Joseph	Dr. Pournami PN	Image processing	FT
60	Bijitha C V	Dr. Hiran V Nath	Cyber Security	FT

DEPARTMENT OF ELECTRICAL ENGINEERING

a. Ph. D completed

SI No	Name	Guide	Area of specialization	Scheme (QIP/PT/ FT)
1	Mary Reena K E	Abraham T Mathew,	Networked control systems	QIP

		Lillykutty Jacob		
2	Joseph Peter	Rijil Ramchand	Power Electronic Drives	FT
3	Pratheesh K J	Rijil Ramchand Jagadanand G	Power Electronics	FT
4	Sivaprasad A	Dr Kumaravel S Dr Ashok S	Development of Dual Input DC-DC Converter Topologies for the Integration of Hybrid Energy Systems	FT
5	Ashmi M	Dr. K.S. Sivanandan (EED) Dr. S. Jayaraj (MED)	Development and Implementation of an Assistive Drive Mechanism for Afflicted Human Beings	FT
6	Nithin raj	Dr. Saly George Dr. Jagadanand G	Power switch fault detection and diagnosis in voltage source inverters	FT
7	Aniruddha K.M.	Dr. Mukti Barai	Design, Architecture and Real Time Distributed Maximum Power Point Tracking (DMPPT) method for PV Systems	PT
8	M Pala Prasad Reddy	Dr. Jeevamma Jacob	Investigations on Modeling and Vibration Suppression Techniques of Flexible Link Flexible Joint Manipulator	FT
9	Parthish Kumar Paul	Dr. Jeevamma Jacob	Robust Control Techniques for Stabilization of Twin Rotor MIMO System(TRMS) in the Non-	FT

			linear Regime	
10	Shijoh V	Dr. M. V. Vaidyan	Control Systems	FT

b. Ongoing Ph. Ds

Sl. No	Reg.No	Name	Guide	Area of specialization	Scheme (QIP/PT/ FT)
1	P100011EE	NISHA.P.V	Dr. Sindhu T K & Dr. Elizabeth P Cheriyan	Power Systems	PT
2	P100029EE	SHALU GEORGE K	Dr. K S Sivanandan, Dr. K. P. Mohandas	Control Systems	QIP
3	P100034EE	FEBINA BEEVI P	Dr. Sunilkumar TK & Dr. Jeevamma Jacob	Control Systems	FT
4	P100043EE	RINU ALICE KOSHY	Dr. Susy Thomas	Control Systems	PT
5	P120003EE	SURESH K. DAMODARAN	Dr. T. K. Sunil Kumar	Power Systems	QIP
6	P120004EE	MINI V	Dr. T. K. Sunil Kumar	Power Systems	QIP
7	P120016EE	PRIYA.N	Dr. T. K. Sunil Kumar	Control Systems	FT
8	P120030EE	SUJO. P. GEORGE	Dr. Ashok S	Power Systems	FT
9	P120049EE	BIJU K	Dr. Rijil Ramchand	Power Electronics	PT
10	P120055EE	DHEERAJ K	Dr. Jeevamma Jacob Dr. M P Nandakumar,	Control Systems /Power Systems	FT
11	P120078EE	SHINGARE DEVDATTA YESHAVANT	Dr. T. K. Sunil Kumar	Power Systems	QIP (Poly)
12	P120102EE	G VIVEK	Dr. Mukti Barai	Power Electronics	FT
13	P130003EE	ABHILASH T VIJAYAN	Dr. Ashok S	Power Systems.	QIP
14	P130005EE	RAJASHREE RAGHAVAN	Dr. Susy Thomas	Control Systems	PT
15	P130006EE	M J LALY	Dr. Elizabeth P Cheriyan & Dr.	Control Systems /power system	QIP

			Abraham T Mathew		
16	P130029EE	DEEPTHI S NAIR	Dr. Saly George & Dr. Jagadanand G	Power Electronics	FT
17	P130060EE	JINO M PATTERY	Dr. Elizabeth P. Cheriyan & Dr. Rijil Ramchand	Power Systems	PT
18	P130069EE	ROHIT K. MATHEW	Dr. Ashok S & Dr. Kumarvel S.	Power Systems	FT
19	P130070EE	SANDEEP J	Dr. Rijil Ramchand & Dr. S Ashok	Power Electronics	FT
20	P130072EE	JAYA C K	Dr. Sunitha R & Dr. Abraham T Mathew	Power Systems	FT
21	P130074EE	SURAJ DAMODARAN	Dr. T. K. Sunil Kumar & Dr. A. P. Sudheer	Control Systems	FT
22	P130079EE	PARVATHY P	Dr. Jeevamma Jacob & Dr. M. P. Nandakumar	Control Systems	FT
23	P130081EE	HASEENA K A	Dr. Jeevamma Jacob & Dr. Abraham T Mathew	Control Systems /Power Systems	FT
24	P140003EE	SIGI C JOSEPH	Dr. Ashok S.	Power Systems	EXTERNAL
25	P140004EE	NIMMY JOHN T	Dr. Subha D.P.	Biomedical Engineering	FT
26	P140005EE	VINU THOMAS	Dr. Kumaravel S & Dr. S Ashok	Power Systems	FT
27	P140006EE	AKHIL VINAYAK B	Dr. Jagadanand G	Power Electronics	FT
28	P140020EE	JINEETH JOSEPH	Dr. Sindhu T K	Power Systems	PT
29	P140029EE	ANJANA K G	Dr. Mukti Barai	Power Electronics	FT
30	P140036EE	RETHEEP RAJ	Dr. K S Sivanandan	Biomedical engineering	QIP
31	P140049EE	JOSEPH P VARGHESE	Dr. Ashok S. & Dr. Kumaravel S.	Power Systems	PT
32	P140062EE	ROHIKAA MICKY R	Dr. Sunitha R & Dr. Ashok. S	Power Systems	FT
33	P140064EE	ANJALI ANAND K	Dr. Saly George & Dr. Jagadanand G	Power Electronics	FT
34	P140071EE	MUTHAVARAPU ASWINI KUMAR	Dr. Mukti Barai	Power Electronics	FT
35	P140089EE	JAYAKRISHNA N S R	Dr. Elizabeth P Cheriyan & Dr.	Power Systems	FT

			Sindhu T K		
36	P140090EE	AVINASH NELSON. A	Dr. Preetha P & Dr. Sunitha K	High Voltage Engineering	FT
37	P140112EE	AHAMMED MUNEER. K. V	Dr. Paul Joseph K.	Biomedical engineering	PT
38	P150026EE	ATHIRA RAJU	Dr. Elizabeth P Cheriyar, Dr. Rijil Ramchand	Power System	FT
39	P150056EE	SUBHASH K M	Dr. Paul Joseph K	Biomedical Signal Processing	Internal
40	P150062EE	BINU KRISHNAN U	Dr. Mija S. J. & Dr. Elizabeth P. Cheriyar	Power System Control	FT
41	P150073EE	RAVISHANKAR A N	Dr. Ashok S. & Dr. Kumaravel S	Power System	FT
42	P150089EE	GOWRISHANK AR S	Dr. Sunitha K	High Voltage Engineering	FT
43	P150090EE	NIDYA M V	Dr. Jeevamma Jacob & Dr. Mija S J	Control systems	FT
44	P150099EE	GRACE SADHANA S	Dr. Ashok S. & Dr. Kumaravel S	Power System	FT
45	P160004EE	MOHAMMED SHAFI K P	Dr. Rijil Ramachand	Power Electronics	FT
46	P160007EE	MEGHA G KRISHNAN	Dr. Ashok S	Industrial Automation	FT
47	P160017EE	HEMA RANI P	Dr. Saly George & Dr. Ashok S	Power Electronics	Internal
48	P160019EE	FEMI THOMAS	Dr. Mija S J.	Control systems	FT
49	P160030EE	SMITHA B	Dr. Paul K. Joseph	Biomedical Signal Processing	QIP
50	P160032EE	LEKSHMI MOHAN	Dr. Sunitha K & Dr. Sindhu T K	High Voltage Engineering	QIP
51	P160045EE	VIDYA.M.S	Dr. Sunitha K & Dr. Ashok S	High Voltage Engineering	FT
52	P160065EE	JANESH N. M	Dr. Ashok S & Dr. Kumaravel S	Power System	PT
53	P160069EE	SUBIN KOSHY	Dr. Sunitha R	Power System	FT
54	P160070EE	HARITHA G	Dr. Ashok S & Dr. Kumaravel S	Power System	FT
55	P160071EE	PRAVIKA M	Dr. Paul Joseph K & Dr. Jeevamma Jacob	Control systems/ Biomedical Engineering	FT
56	P160084EE	EMMANUEL BABU PUKKUNNEN	Dr. Kumaravel S	Power System	PT
57	P160085EE	PRIYALAKSHM I S	Dr. Subha D P	Bio Signal Processing	FT
58	P160086EE	BISWAJIT	Dr. Mija S J	Control systems	FT

		DEBNATH			
59	P160087EE	SAUGATO DEY	Dr. Sunil Kumar T K & Dr. Ashok S	Control systems	Internal
60	P160093EE	GANGAVARAP U GURU KUMAR	Dr. Kumaravel S	Power Electronics	FT
61	P160098EE	JOYCE JACOB	Dr. Preetha P & Dr. Sindhu T K	High Voltage Engineering	FT
62	P170050EE	RAHUL S	Dr. Sunitha R	Power System	FT
63	P170056EE	SURYA D	Dr. Subha D P	Biomedical engineering	FT
64	P170071EE	JACOB P VARGHESE	Dr. Preetha P, Dr. Sunitha R	High Voltage Engineering	FT
65	P170078EE	EMIL NINAN SKARIAH	Dr. Sindhu T. K	High Voltage Engineering	FT
66	P170098EE	RINSHA V	Dr. G. Jagadanand	Power Electronics	FT
67	P180006EE	T S BHEEMRAJ	Dr. V. Karthikeyan, Dr. Kumaravel S	Power Electronics / Powers systems	FT
68	P180050EE	PRIYANKA C P	Dr. Jagadanand G	Power Electronics	FT
69	P180063EE	LAKSHMI THARAMAL	Dr. Preetha P, Dr. Sindhu T K	High Voltage Engineering	FT
70	P180064EE	NAJDA V M	Dr. Gopakumar P, Dr. Sunitha R,	Power Systems	FT
71	P180070EE	ANJITHA V	Dr. Sunitha K	Powers systems / Biomedical engineering	FT
72	P180073EE	RENUKA V. S.	Dr. Nikhil S	Power Electronics /Control systems	FT
73	P180077EE	NITHIN S. NAIR	Dr. Mukti Barai	Power Electronics	FT
74	P180079EE	REEMA. N	Dr. Jagadanand G, Dr. Nikhil S	Power Electronics	FT
75	P180098EE	SANILA P	Dr. Rijil Ramchand, Dr. Jeevamma Jacob	Control systems	FT
76	P180112EE	MUTHUKUMAR I S	Dr. S. Kanagalakshmi, Dr.T.K.Sunil Kumar	Power Systems	FT

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

a. Ph. Ds completed:

Sl. No.	Name	Guide	Area of Specialization	Scheme (QIP/ PT/ FT)
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1	Geethu K.S.	Dr. A V Babu	Wireless Networks	Full Time
2	Katla Rambabu	Dr. A V Babu	Wireless Networks	Full Time
3	Amir A	Dr. Elizabeth Elias & Dr. Bindiya T.S.	Multirate signal Processing	Full Time
4	Namitha A. S.	Dr. Sameer S. M.	Wireless Communications	Full Time
5	Baburaj M	Dr. Sudhish N George	Computer Vision	Part Time
6	Sameera V Mohd Sagheer	Dr. Sudhish N George	Medical Image Denoising	Full Time
7	Abdu Rahiman V	Dr. Sudhish N George	Image Super Resolution	Part Time
8	Mridula K M	Dr. Ameer P M	Underwater Communication	Full Time
9	Deepak P M	Dr. C. K. Ali	Wireless Communications	Full Time
10	Shamna H R	Dr. Lillykutty Jacob	Cooperative Networks	QIP
11	Deepthi Sasidharan	Dr. Lillykutty Jacob	Wireless Networks	QIP
12	Finto Raphel	Dr. Sameer S. M.	Wireless Communications	Full Time
13	I Raghu	Dr Elizabeth Elias	Signal Processing	Full Time
14	Gilesh M P	Dr. Lillykutty Jacob and Dr. S D Madhukumar	Cloud Computing	QIP
15	Susan Dominic	Dr. Lillykutty Jacob	Device to Device Networks	Full Time
16	Shahnaz K V	Dr.C.Ali	Multiuser detection for OFDM/SDMA	Full time

b. Ongoing Ph. D

Sl. No.	Name	Guide	Area of Specialization	Scheme (QIP/PT/FT)
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1	Upama Rajan M.N.	Dr. A V Babu	Wireless Networks	QIP
2	Poornima S	Dr. A V Babu	Wireless Networks	Full-Time
3	Sangeetha U	Dr. A V Babu	Wireless Networks	QIP
4	Aswathi V	Dr. A V Babu	Wireless Networks	Full-Time
5	Sudhi Sudharman	Dr. Bindiya T S	Multirate Signal Processing	Full Time
6	Hareesh	Dr. Bindiya T S	Multirate Signal Processing	Full Time
7	Sreelekha K. R.	Dr. Bindiya T S	Multirate Signal Processing	Full Time
8	Nisha K L	Sreelekha G	Retinal Image Analysis	Full Time
9	Arun Varghese	Sreelekha G	Video Analytics	QIP
10	Supriya Unnikrishnan	Sreelekha G	Algorithms and architectures for multimedia data processing	Full Time
11	MAYANK KUMAR SINGH	Dr. Bindiya T.S. Dr. Jayakumar E.P.	VLSI architecture for digital signal processing	Full Time
12	Sanoop Kumar P. S.	Dr. Sameer S. M.	Wireless Communications	Part-time
13	Najlah C. P.	Dr. Sameer S. M.	Wireless Communications	Visweswar ayya Scheme (Full-time)
14	Deepak Jose	Dr. Sameer S. M.	Wireless Communications	Full-time
15	Nandakumar R.	Dr. Deepthi P. P. & Dr. Sameer S. M.	Secure Communications	Part-time
16	Nishanth Augustine	Dr. Sudhish N George	Hyper spectral Image Processing	Part Time

17	Anju Jose Tom	Dr. Sudhish N George	Moving Object Detection	Full Time
18	Baiju P S	Dr. Sudhish N George	Video Deweathering	QIP
19	Jobin Francis	Dr. Sudhish N George	Subspace Clustering	Full Time
20	Ranjith R	Dr SUJA K J	Semiconductor Device Modelling	Full Time
21	Krishnapriya S	Dr SUJA K J	MEMS	Part Time
22	M S Lekshmi M S	Dr SUJA K J	NEMS	Full Time
23	Nisanath A	Dr SUJA K J	MEMS	Full Time
24	Akshaya M V	Dr SUJA K J	NEMS	Full Time
25	Anjana Jayakumar	Dr. Venu Anand	Thinfilm Transistor	Full time
26	Ms. Parvathi A. K	Dr. V. Sakthivel	Signal Processing	Full Time
27	Roy Thankachan	Ameer P M	Image Processing	Part time
28	Reena M Roy	Ameer P M	Biomedical Image Processing	QIP
29	Deepak S	Ameer P M	Biomedical Image Processing	Full time
30	Syam Chandran	Dr.C.K,Ali	Multi-service OFDMA	Full Time
31	Emy Mariam George	Dr. Lillykutty Jacob	Coexisting WBANs	Full Time
32	Jihās Khan	Dr. Lillykutty Jacob	URLLC in 5G Cellular Network	Part Time
33	SANDEEP MOPARTHI	Dr.Gopi Krishna Saramekala	VLSI Engineering	FT
34	KOPPERUNDE V.I.P	Dr.M.surya prakash	VLSI Signal Processing	FT
35	SUKANYA	Dr. Lintu Rajan	VLSI Engineering	FT

	GHOSH			
36	Arjun Hari M	Dr. Lintu Rajan	VLSI Engineering	FT
37	Arun Sankar M.S	Dr. Sathidevi P. S.	Signal Processing	FT
38	Aneesh M Koya	Dr. Deepthi P P	Secure Communication	FT
39	Sona Alex	Dr. Deepthi P P & Dr. Dhanraj	Secure data communication	FT
40	Jesy P.	Dr. Deepthi P P	Secure Communication	FT(QIP)
41	Nithin Thomas Abraham	Dr. Dhanraj K.J.	VLSI Engineering	FT
42	Aswathi V	Dr. A.V. Babu	Wireless Networking	FT
43	Sangeetha U	Dr. A.V. Babu	Wireless Networking	PT(QIP)
44	Nabeel Koya	Dr Waquar Ahmad & Dr Sudeep P V	Digital Forensics	Part time
45	Sandeep Moparthi	Gopi Krishna Saramekala	Semiconductor Devices	Full time
46	Kalpana George	Dr. Praveen Sankaran & Dr. Paul Joseph	Image Processing	Full time
47	Shameer Faziludeen	Dr. Praveen Sankaran	Signal Processing	Full time
48	Remya Jayachandran	Dr. P.C. Subramaniam	VLSI Engineering	Part time
49	Arun Sankar M.S	Dr. Sathidevi P. S.	Signal Processing	Full time
50	Athulya M S	Dr. Sathidevi P. S.	Signal Processing	Full time
51	Nithin G	Dr. Sathidevi P. S. & Dr. Ameer P. M	Biomedical Signal Processing	Full time
52	Steffy Maria Joseph	Dr. Sathidevi P. S.	Signal Processing	Full time
53	Veena	Dr G Abhilash	Signal Processing	Full time

	Narayanan		
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DEPARTMENT OF MECHANICAL ENGINEERING

a. Ph. D completed

Sl. No.	Name	Guide	Thesis title	Scheme
1	Ratna Kumar K (P080013ME)	Dr. T. Radha Ramanan and Dr. R. Sridharan	Investigations on Integrated Production and Distribution problem in Partial Back order and Lost Sales Environment	Part Time
2	Jilse Sebastian, (P140037ME)	Dr. Muraleedharan C, Dr. A. Santhiagu	Biodiesel Production from Rubber Seed Oil by Lipase Mediated Transesterification and its use in engineoperation	Full Time (QIP)
3	B. Rohinikumar, (P090012ME)	Dr. Muraleedharan C	Modelling, Simulation and Experimental Validation of the Performance of a Solar Thermal Water Pump	Part Time
4	Pradeepmon T.G.,	Dr. R. Sridharan and Dr. Vinay V. Panicker	Evolutionary Algorithms for Quadratic Assignment Problems: Development and Analysis	Part Time
5	Vinod V (P100007ME)	Dr. M.D. Narayanan	Effect of initial conditions and configuration symmetry on the synchronization of coupled self-excited vibrations in a ring network.	Full Time
6	Jayasree N (P100033ME)	Dr. T. Radha Ramanan and Dr. R. Sridharan	Aggregate Demand Forecasting in the Context of Vector Integrated Moving Average Process	QIP
7	Midhun Paul (P120019ME)	Dr. T. Radha Ramanan and Dr. R. Sridharan	Multi-objective Scheduling of an Assembly Job Shop: Modelling and Analysis	Full Time
8	Anjana Viswanath (P130016ME)	Dr. R. Sridharan	Metaheuristics for the Multiobjective Scheduling of a Flow Shop with Sequence Dependent Setup Time: Development and Analysis	Full Time
9	Amith Aravind	Dr. K. Prabhakaran Nair and Dr. M.L.Joy	Development of bio-degradable lubricant and cutting fluid from esterified Rubber seed oil	Full Time
10	Joseph Babu.	Dr. K. Prabhakaran Nair and Dr. M.L.Joy	Development of a two stroke engine oil, grease and cutting oil from alkali esterified cocunut oil	Full Time

11	Saijal K. K.	Dr. K. Prabhakaran Nair and Dr. M.L.Joy	Design optimization of helicopter rotor with trailing- edge flaps using orthogonal array based response surface and kriging models at various flying conditions	Part Time
12	Salumuri Lingeswara Rao	Dr. A Shaija, Dr. S. Jayaraj	Investigation on the performance of PEM fuel cell and optimization of the operating parameters	QIP
13	Mubarak M (P120027ME)	Dr. A Shaija, Dr. Suchithra T. V	Combustion and emission evaluation of a stationary diesel engine using biofuel produced from Algae	Full Time
14	Srinivasa Rao. G (P130056ME)	Dr. A Shaija	Flame Acoustic Interaction applicable to Gas Turbine Combustion Instabilities	Part Time
15	Rajesh V.R.	Dr. Biju T Kuzhiveli	Study and Design Optimization of Electromagnetically Driven Miniature Moving Magnet Linear Compressor for Stirling Cryocoolers	Part Time
16	Jobin Varghese (P120112ME)	Dr. P.K. Rajendrakumar and Dr. K.S. Sivanandan (EED)	Design and Development of a rotary pneumatic actuator for the joint actuation of below-hip Exoskeleton	Full Time
17	Chacko Preno Koshy (P110058ME)	Dr. P.K. Rajendrakumar	Studies on the Tribological Behaviour of Nano-lubricants	Full Time
18	Irappa Basappa Hunagund (5VX12PMN38)	Dr. U. N. Kempaiah and Dr. V. Madhusudanan Pillai	Development and analysis of unequal area facility layout problems with flexible bays under static and dynamic environments	PT (Registered in <i>Visvesvaraya Technological University</i> , Belagavi, Karnataka (State))
19	Ms. J. Laxmi Lalitha, (P090072ME)	Dr. V. Madhusudanan Pillai	Lot streaming in flow shops with missing operations and hybrid flow shops	Part Time
20	Mr. Joby George, (P120088ME)	Dr. V. Madhusudanan Pillai	Evaluation of Inventory Control Policies and Bullwhip Effect Mitigation Strategies in Supply Chains	Full Time

b. Ongoing Ph. D

Sl. No	Name of the student	Name of guide(s)	Area of Specialization	Scheme
1	Jithin Velayhdhan, (P170020ME)	Dr. M D Narayanan and Dr. Ashesh Saha	Studies on Turbine blade Synchronization	Full Time
2	Amit Malgol, (P180103ME)	Dr. Ashesh Saha and Dr. Vineesh K P	Nonlinear Vibrations	Full Time
3	Jabir, (P130067ME)	Dr. R. Sridharan and Dr. Vinay V. Panicker	Green Logistics	Full Time
4	Ajyuk J. Raj, (P130086ME)	Dr. R. Sridharan and Dr. Vinay V. Panicker	Airline Scheduling	Part Time
5	Vishnu C. R. (P150018ME)	Dr. R. Sridharan	Supply Chain Risk Management	Full Time
6	Anil Kumar E. N. (P150004ME)	Dr. R. Sridharan	Sustainable Supply Chain Management	QIP
7	Solomon Joseph (P120076ME)	Dr. R. Sridharan	Cross Dock Transportation Problem	Full Time
8	Eldose K K (P120015ME)	Dr. R. Sridharan	Service Quality in Technical Education	Part Time
9	Anoop K P., (P140091ME)	Dr. Vinay V. Panicker	Food grain supply chain	Full Time
10	Francis J Emmatty, (P170002ME)	Dr. Vinay V. Panicker	Ergonomics	QIP
11	Alok Kumar Samanta, (P170106ME)	Dr. G. Varaprasad and Dr. R. K. Padhy, IIM Kashipur	Quality Management in service sector	Full Time
12	Vishnu Lal, (P180053ME)	Dr. G. Varaprasad	Consumer Adoption of Digital education	Full Time
13	Rakesh Jinaga Errappa (P160037ME)	Dr. Jagadeesha T	MR fluids	Full Time
14	Jacob (P170084ME.)	Dr. Jagadeesha T	Magnesium alloy	Full Time
15	Kalaiselvan (P180126ME)	Dr. Jagadeesha T	Surface engineering	Full Time
16	Gouthaman (P170099ME)	Dr. Jagadeesha T	Machining	Full Time
17	Premchand V.P,	Dr. M.D. Narayanan and	Nonlinear system design	Full Time

	(P110038ME)	Dr. A.S. Sajith		
18	Ajith Kuriakose Mani, (P120023ME)	Dr. M.D. Narayanan	Modeling of systems using fractional calculus	Full Time
19	Shruthi C.M. (P130065ME)	Dr. M.L.Joy and Dr. A.P. Sudheer	Development of an electrical transmission line traversing robot mechanism for tension and suspension towers	Full Time
20	Mervin Joe Thomas (P170047ME)	Dr. M.L.Joy and Dr. A.P. Sudheer	Development of parallel kinematic machine for precise coordinated operations. (ongoing)	Full Time
21	Navaneeth M. G (P170113ME)	Dr. M.L.Joy and Dr. A.P. Sudheer	Design, Fabrication and Control of a Humanoid Robot for Stable Locomotion with minimum knee-bend angle (ongoing)	Full Time
22	Aju Zachariah Mani (P150098ME)	Dr. U.B. Jayadeep	Studies on wear of nano-coated surfaces	Full Time
23	Sreesastha Ram T.R. (P170018ME)	Dr. U.B. Jayadeep	Computational modeling of adhesion	Full Time
24	Arun Prabhakar (P190057ME)	Dr. U.B. Jayadeep	Computational and experimental studies on nano-coated surfaces	Full Time
25	Renju Mohan (P150023ME)	Dr. R. Manu and Dr. U.B. Jayadeep	Friction Stir Welding	Full Time
26	Anoop A. Pillai (P180046ME)	Dr. U.B. Jayadeep and Dr. Vineesh K.P.	Residual stresses in welding	Full Time
27	Umar Ali (P090016ME)	Dr. T. Radha Ramanan and Dr. R. Sridharan	Development of Algorithms for Flow Shop Scheduling	Full Time
28	Vipindas K (P140041ME)	Dr. Jose Mathew	Micro Milling	Full Time
29	Deepak G Dilip (P140030ME)	Dr. Jose Mathew , Dr. Satyananda Panda	Micro EDM	Full Time
30	Jees George (P1500088ME)	Dr. R Manu and Dr. Jose Mathew,	Wire Electric Discharge Turning	Full Time
31	Anand Krishnan N(P160001ME)	Dr. Jose Mathew	Micro Milling	Full Time
32	Jiju V Elias (P160002ME)	Dr. Jose Mathew	Micro Turing	Full Time

33	Ladeesh V. G. P130014ME	Dr. R Manu	Electrochemical Discharge Machining	Full Time
34	Eby David P110030ME	Dr. R Manu	Grinding of MMCs	Part Time
35	Remil George Thomas P110056ME	Dr. R Manu and Dr. Deepak Lawrence K.	Feature Extraction from CAD models	Part Time
36	Vinod OM (P130004ME)	Dr. P B Dhanish	Measurement Uncertainty	Part Time
37	Arun P Raj (P140083ME)	Dr. P B Dhanish	Measurement of Roundness and its effect on interference fits	Part Time
38	Ashik Suresh (P170022ME)	Dr. P B Dhanish	Measurements with Articulated Arm Integrated Laser Scanner	Full Time
39	Ajith Kurian Baby (P180095ME)	Dr. P. K. Rajendrakumar and Dr. Deepak Lawrence K	Metrology and Tribology	Full Time
40	Mr. Azhagarsamy P (P180016ME)	Dr. K. Sekar, Dr. Murali K.P	Development and Characterization of Metal Matrix Composites using Additive Manufacturing Techniques	Full Time
41	Mr. Vasanthakumar P (P170064ME)	Dr. K. Sekar,	Dissimilar material joining of aluminum hybrid composite by friction stir welding	Full Time
42	Mr. Nithin Raj Panoli (P160034ME)	Dr. M A Joseph Dr. K. Sekar,	Development and characterization of hyper duplex stainless steels	Full Time
43	Mr. Vishnu Prasad (P150094ME)	Dr. M A Joseph Dr. K. Sekar,	Development of Flax fiber reinforced epoxy composites with a nano particle addition to enhance mechanical and thermal properties	Full Time
44	Bijesh R (P180008ME)	Dr. Arun P Dr. C Muraleedharan	Biomass Gasification	QIP
45	Shaiju M R (P110091ME)	Dr. Arun P, Dr. S Jayaraj	Modelling and Analysis of Gas Turbine Systems	Part Time
46	Rony Johnson (P110092ME)	Dr. Arun P, Dr. S Jayaraj	Solar Thermal integrated Combined Cycle Power Plants	Part Time
47	Rajesh Kana S	Dr. A Shaija	Investigation of Avacado oil as	Part Time

	(P130054ME)		an alternative fuel for diesel engine	
48	Muhammed Niyas M (P170049ME)	Dr. A Shaija	Investigation of Waste cooking oil as an alternative fuel for diesel engine to find a hybrid	Full Time
49	Derick Abraham (P140080 ME)	Dr. Biju T Kuzhiveli	Design and development of miniature PT cryocooler	Full Time
50	Vishnu S.B. (P150060 ME)	Dr. Biju T Kuzhiveli	Thermal stratification study and control in LOX-LH ₂ cryogenic propellant tanks during initial active pressurization and in flight	Full Time
51	Subramani Narayana Sarma (P170045 ME)	Dr. Biju T Kuzhiveli	Design and development of an alternate & energy efficient refrigeration system	Full Time
52	Unnikrishnan. K. S (P180108ME)	Dr. B. Rohini Kumar	Solar PV-PCM systems	Full Time
53	M Ijas Ahmed (P160096ME)	Dr. Gangadhara Kiran Kumar Lachireddi	Energy Efficient Building	Full Time
54	Ramesh Krishnan L (P170048ME)	Dr. Gangadhara Kiran Kumar Lachireddi	Underfloor Air Distribution System:	Full Time
55	Bakhirathan A (P170092ME)	Dr. Gangadhara Kiran Kumar Lachireddi	Micro and Nano Devices	Full Time
56	Mr. Dileep K (P120098ME)	Dr. M. Srinivas, Dr. S Jayaraj	Solar energy	Part Time
57	Lokesh Paradeshi (P130058ME)	Dr. M. Srinivas, Dr. S Jayaraj	Solar energy	FT (Converted in to PT)
58	Arun K Raj (P150025ME)	Dr. M. Srinivas, Dr. S Jayaraj	Solar energy	Full Time
59	Alosh James (P180106ME)	Dr. M. Srinivas,	Solar energy	Full Time
60	Joel George, (P140022ME)	Dr. C. Muraleedharan and Dr. Arun P	Investigations on Valorisation of Lignocellulosic Biomass through Fluidised Bed Gasification	Full-time (QIP)

61	Sajith.K.G, (P090037ME)	Dr. C. Muraleedharan	Theoretical Modelling and Experimental Studies to Predict the Performance of a Solar Hybrid Photovoltaic-Thermal System	Part Time
62	Vikas V K (P170021ME)	Dr. C. Muraleedharan	Investigations on air quality in surgical operating rooms	Full Time (QIP)
63	Milan K John (P180034ME)	Dr. C. Muraleedharan and Dr. B. Rohinikumar	Analysis of solar air heaters	Full Time
64	Javed Sikandar Shaikh, (P180137ME)	Dr. Saleel Ismail	Solar-based distillation systems	Full Time
65	Sharath Babu (P180048ME)	Dr. Srinu Gangolu, Dr. M.A. Joseph	Grain Refinement in formed parts	Full Time
67	Inbaoli A (P180102ME)	Dr. Sujith Kumar C.S., Dr. S. Jayaraj	Effect of external electrical field on quenching	Full Time
68	Rajesh TN (P100005ME)	Dr. T.J. Sarvoththama Jothi, Dr. T. Jayachandran, visiting faculty, IIT Madras	Vortex combustion chamber	Part-time
69	Rahul S Arackal (P150087ME)	Dr. T.J. Sarvoththama Jothi	Aeroacoustic studies in wall jets	Full Time
70	Sumesh CK (P160039ME)	Dr. T.J. Sarvoththama Jothi	Aeroacoustic studies in airfoils	QIP
71	Arun MG (P160073ME)	Dr. T.J. Sarvoththama Jothi	Aeroacoustic studies in cylinders	Full Time
72	Nidheesh Narayan (P180138ME)	Dr. T.J. Sarvoththama Jothi	Combustion and flame	Full Time
73	Monikandan V.V. (P110059ME)	Dr. P.K. Rajendrakumar and Dr M.A. Joseph	Experimental Studies on the Tribological Behaviour of Aluminium Matrix Composites Reinforced with Solid Lubricant Particles	Full Time
74	Sabarinath S. (P140087ME)	Dr. P.K. Rajendrakumar and Dr K. Prabhakaran Nair	Development of an Eco-Friendly Lubricant from Sesame Oil and Evaluation of its Various Properties	Full Time
75	Sajeeb A.M. (P140102ME)	Dr. P.K. Rajendrakumar	Tribological Studies on Hybrid Nanolubricants	Full Time
76	Ambika P.S.	Dr. P.K. Rajendrakumar	Signature Analysis of Rolling	Full Time

	(P140011ME)	and Dr. Rijil Ramchand (EED)	Element Bearings using Preprocessing Techniques and its Application in Machinery Fault Diagnosis	
77	Akhil V.M. (P150058ME)	Dr. P.K. Rajendrakumar and Dr. K.S. Sivanandan (EED)	On the Dynamics of a Pneumatically Activated Human Locomotion Support System	Full Time
78	Ms. Nidhi M. B., (P100077ME)	Dr. V. Madhusudanan Pillai	Modeling and Analysis of Supply Chain Networks for Sustainability under Carbon Trading Scheme	Part Time
79	Mr. Kiran Mohan, (P130030ME)	Dr. V. Madhusudanan Pillai and Dr. Arun C. Ext-Guide, NICMAR Goa	Ergonomic Evaluation of Agricultural Implements Used in MGNREGA Works	Full Time
80	Ms. Nimmy J. S. (P140026ME)	Dr. V. Madhusudanan Pillai	Analysis of Collaborative Performance of Supply Chain	Full Time
81	Mr. Dony S Kurian (P170042ME)	Dr. V. Madhusudanan Pillai	Machine Learning in Supply Chain Management	Full Time
82	Mr. Justin Sunny (P180104ME)	Dr. V. Madhusudanan Pillai	Blockchain in Supply Chain Management (proposed area of research)	Full Time

DEPARTMENTS OF MATHEMATICS

a. Ph. D completed

Sl. No.	Name	Guide	Area of Specialization	Scheme (QIP//Full time)
1	Jicy N	Dr. Sunil Mathew	Parameters and Topological Indices in Weighted Graph Structures	Part Time
2	Vijitha Mukundan	Dr. Ashish Awasthi	Numerical Schemes for Unsteady Viscous Burgers' and Burgers' Type Equations	Full Time
3	Shijina V	Dr. Sunil Jacob John	A Comprehensive Approach towards Modeling Uncertainty	Part Time
4	Jaya Paul	Dr. Sunil Jacob John	Type Two Fuzzy Multisets: Structural Properties and Applications	Part Time
5	Gayathri Varma	Dr. Sunil Jacob John	Multi Fuzzy Rough Sets: Relations, Topology and Applications	Full Time

6	Naveen P	Dr. Chithra A V	Structural and Spectral Properties of Addition Cayley Graphs	Full Time
7	Darshan Lal M Nair	Dr. Sunil Mathew	Connectivity and Domination in Weighted Graph Structures	Part Time
8	Anjali N	Dr. Sunil Mathew	A Study of Partial Blocks in Weighted Graphs	Full Time
9	Dhanyamol M V	Dr. Sunil Mathew	Transit Functions in Weighted Graphs	Full Time
10	Ratheesh KP	Dr. Sunil Jacob John	A Categorical Study of Soft Sets and Soft Graphs	Part Time
11	Lisna P C	Dr. Sunitha M S	On B-Coloring of Corona and Mycielskian of Some Special Classes of Graphs	Full Time
12	Sameeha Rehmani	Dr. Sunitha M S	On Different Types of Geodesic Numbers in Fuzzy Graphs	Full Time
13	Shija G	Dr. M J Jacob	Analysis of Some Markov Modulated Risk Models	Part Time
14	Lakshmi C	Dr. Ashish Awasthi	Numerical Study on Nonlinear Burgers' and Modified Burgers' Equations Using Splines	Full Time
15	Shinto K G	Dr. Sushama C M	Target Setting in DEA Models	Part Time

Ongoing Ph. D

Sl.N o.	Name	Guide	Area of Specialization	Scheme (QIP/Part Time/Full time)
1	Eda Suresh Reddy	Dr. Satyananda Panda	CFD	Full Time
2	Bibin Mathew	Dr. Sunil Jacob John	Generalized Set Theory	Full Time
3	Praveen M	Dr. Sunil Mathew	Fractal Theory	Full Time
5	V Dhanya Varma	Dr. Suresh Kumar Nadupuri	Numerical analysis of partial differential equations	Full Time
6	Dibu A S	Dr. M J Jacob	Stochastic Processes - Insurance Risk and Ruin	Full Time

7	Prajeesh A V	Dr. Krishnan Paramasivam	Graph theory	Full Time
8	Nitha Niralda P C	Dr. Sunil Mathew	Fractal Geometry	Full Time
9	Soorya T E	Dr. Sunil Mathew	Graph Theory	Full Time
10	Shanookha Ali	Dr. Sunil Mathew	Fuzzy graph theory	Full Time
11	Muhammed Sabeel K	Dr. Krishnan Paramasivam	Algebraic Graph Theory	Full Time
12	Yasser K T	Dr. Sanjay P K	Harmonic Analysis	Full Time
13	Riyasudheen T K	Dr. Ashish Awasthi	Computational Finance	Full Time
14	Rabeeb Ali V P	Dr. Ashish Awasthi	Theory and Numerics of Partial Differential Equations	Full Time
15	Athira T M	Dr. Sunil Jacob John	Generalized Set Theory	Full Time
16	Bhanupriya C K	Dr. Sunitha M S	Graph Theory	Full Time
17	Sreelakshmi A	Dr. Ashish Awasthi	Singular Perturbation Theory	Full Time
18	Fathima Perveen P A	Dr. Sunil Jacob John	Generalized Set Theory	Full Time
19	Aysha Hadya K	Dr. Sushama C M	Mathematical Programming	Full Time
20	Arya S	Dr. Sunil Mathew	Fuzzy Graph Theory	Full Time
21	Rosna Paul	Dr. Sunitha M S	Fuzzy Graph Theory	Full Time
21	Jose Mathew	Dr. Sunil Mathew	Fractal Geometry	Full Time
23	Sobin Thomas	Dr. Suresh Kumar Nadupuri	Numerical analysis of PDE	Full Time
24	Swathi V V	Dr. Krishnan Paramasivam	Algebra and Graph Theory	Full Time
25	Shyaman V P	Dr. Ashish Awasthi	Singular Perturbation Theory	Full Time

26	Rasmi K	Dr. M J Jacob	Stochastic Processes and its Applications	Full Time
27	Aparna R	Dr. Mahesh Kumar	Reliability Acceptance Sampling Plans	Full Time
28	Abraham Sam Varghese	Dr. Satyananda Panda	Stability Analysis of Thin non-Newtonian Liquid Film	Full Time
29	Pallavi K	Dr. Lineesh M C	Wavelet theory	Full Time
30	Sruthi K	Dr. Mahesh Kumar	Fuzzy Reliability	Full Time
31	Neena A S	Dr. Ashish Awasthi	Singular Perturbation Theory	Full Time
32	Gayathri G	Dr. Sunil Mathew	Fuzzy Graph Theory	Full Time
33	Anntreesa Josy	Dr. Sunil Mathew	Fuzzy Graph Theory	Full Time
34	Aparna M P	Dr. Chithra A V	Graph Theory	Full Time
35	Athira N	Dr. Lineesh M C	Wavelet Theory	Full Time
36	Najiya V K	Dr. Chithra A V	Graph Theory	Full Time
37	Salsabeela V	Dr. Sunil Jacob John	Generalised Set Theory	Full Time
38	Julia T Thomas	Dr. Mahesh Kumar	Network Reliability	Full Time
39	Aparna Sivadas	Dr. Sunil Jacob John	Generalised Set Theory	Full Time
40	Ashlyn Maria Mathai	Dr. Mahesh Kumar	Resilience Reliability	Full Time
41	Abdulshukoor K M	Dr. Sushama C M	Travel Demand Modelling	Part Time
42	Jahfar TK	Dr. Chithra A V	Spectral Graph Theory	Full Time (PT)
43	Deepak P	Dr. Satyananda Panda	Composite Materials	Part Time
44	Suma P	Dr. Sunil Jacob John	Generalized Set Theory	Part Time
45	Deepa V	Dr. Sunil Jacob John	Generalized Set Theory	Full Time (PT)

46	Mithun A T	Dr. Lineesh M C	Wavelet Theory	Full Time (PT)
47	Jamsheena P	Dr. Chithra A V	Algebraic Graph Theory	Full Time (PT)
48	Saleena A J	Dr. Jessy John C	Stochastic Modelling	Full Time (PT)
49	Rajish Kumar P	Dr. Sunil Jacob John	Generalized Set Theory	Part Time
50	Sherin Jose T	Dr. Satyananda Panda	Thin Liquid Film	Part Time
51	Sangeetha C	Dr. Ashish Awasthi	Singular Perturbation Theory	Part Time
52	Chithralekha K	Dr. Jessy John C	Multi Variate Time Series Analysis	Part Time
53	Sameer Poongadan	Dr. Lineesh M C	Time Series Analysis	Full Time (PT)

DEPARTMENT OF CHEMISTRY

a. Ph. Ds completed

Sl. No	Name	Guide	Area of specialisation	Scheme (QIP/PT/FT)
1	Mrs. Sheeja	Dr. A. Sujith	Bionanocomposites	FT
2	Ms. Roy K.J.	Dr. A. Sujith	Asymmetric membranes	PT
3	Mrs. Bindhu M	Dr.GUnnikrishnan	Polymer composites	FT
4	Mrs. Renu Jose	Dr. G Unnikrishnan	Polymer composites	FT
5	Ms. Dijo Prasannan	Dr. C. Arunkumar	Bio-Inorganic Chemistry	FT
6	Mr. Shebi A.	Dr. Lisa Sreejith	Bio-medical Applications	FT
7	Mr. Sabarish R.	Dr. G. Unnikrishnan	Polymer Chemistry	FT

b. On-going Ph. Ds

Sl. No.	Name	Guide	Area of Specialization	Scheme (QIP/PT/FT)
1	Divya T.T.	Dr. Lakshmi C.	Bio-Organic Chemistry	FT

2	Amritha B.	Dr. Suni Vasudevan	Bio-inorganic Chemistry	FT
3	Tesi Thomas	Dr. A. Sujith	Bio-Polymers	PT
4	Nishad K.V.	Dr. G. Unnikrishnan	Polymer Chemistry	PT
5	Amitha G.S.	Dr. Suni Vasudevan	Bio-inorganic Chemistry	FT
6	Manoj M.	Dr. A. Sujith	Polymer Chemistry	PT
7	Jithinraj T.K.	Dr. Lakshmi C.	Bio-Inorganic Chemistry	FT
8	Vintu M.	Dr. G. Unnikrishnan	Polymer Chemistry	FT
9	Manaf O.	Dr. A. Sujith	Polymer Nanocomposites	PT
10	Anitha S.	Dr. G. Unnikrishnan	Polymer Chemistry	FT
11	Sunitha K.	Dr. G. Unnikrishnan	Polymer Chemistry	PT
12	Suja P. Sundaran	Dr. A. Sujith	Water Filtration Membranes	FT
13	Muhasina P. V.	Dr. P. Parameswaran	Theoretical & Computational Chemistry	FT
14	Anjana George	Dr. P. Parameswaran	Theoretical & Computational Chemistry	FT
15	Satheesh Kumar B.	Dr. G. Unnikrishnan	Polymer Chemistry	PT
16	Saeed P. A.	Dr. A. Sujith	Material Science	PT
17	Muhammed Adnan P. K	Dr. Lisa Sreejith	Hydrogel Application	FT

18	Rarima R.	Dr. G. Unnikrishnan	Polymer Chemistry	FT
19	Sagitha P.	Dr. A. Sujith	Bio-Inorganic Chemistry	FT
20	Lashmi	Dr. G. Unnikrishnan	Polymer Chemistry	PT
21	Monisha M.	Dr. G. Unnikrishnan	Bio-Inorganic Chemistry	FT
22	Shafeeq V. H.	Dr. G. Unnikrishnan	Polymer Chemistry	FT
23	Sneha P.	Dr. P. Parameswaran	Theoretical And Computational Chemistry	FT
24	Saharuba P. M.	Dr. A. Sujith	Polymer Chemistry	EXTERNAL
25	Parvathy P.	Dr. P. Parameswaran	Theoretical & Computational Chemistry	FT
26	Diana Mathew	Dr. P. Parameswaran	Bio-Inorganic Chemistry	FT
27	Sreelaya V.	Dr. Lakshmi C.	Bio-Organic Chemistry	FT
28	Tanya Maria D' Rozario	Dr. Lisa Sreejith	Surface Chemistry	FT
29	Athulyadas	Dr. M. Sankaralingam	Bio-Inorganic Chemistry	FT
30	Rinsha C. H.	Dr. P. Parameswaran	Theoretical & Computational Chemistry	FT
31	Smitha M.	Dr. A. Sujith	Polymer Science	PT
32	Rasha Rahman	Dr. Mini Mol M.	Material Science	FT
33	Vidhya C. V.	Dr. Suni Vasudevan	Bio-Sensors	FT

34	Shahila Muhammed	Dr. P. Parameswaran	Theoretical & Computational Chemistry	FT
35	SehraShurooqueKanneth	Dr. Lakshmi C.	Bio-Inorganic Chemistry	FT
36	Subin K. C.	Dr. Mini Mol M.	Material Science	FT
37	Juraij K.	Dr. A. Sujith & Dr. Suni Vasudevan	Electro-Spinning	FT
38	Jishnu Sai G.	Dr. P. Parameswaran	Theoretical & Computational Chemistry	FT
39	Arya C.G.	Dr. Janardhan Banothu	Heterocyclic Synthesis	FT

DEPARTMENT OF PHYSICS

a. Ph.D. completed : NIL

b. Ongoing Ph.D.

Sl. No	Name	Guide	Area of specialization	Scheme
1	Jayan Manuvel	Dr. P Predeep		Full Time
2	Rosemary Davis	Dr. P Predeep	Organic solar cells	Full Time
3	Pratheek Mekkat	Dr. P Predeep	Organic electronics	Full Time
4	Saranya Babu	Dr. P Predeep		Part Time
5	Jalaja	Dr. P Predeep		Part Time
6	Kulkarni Prabhanjan	Dr. P Predeep		Part Time
7	Shiju E	Dr. Chandrasekharan	Nonlinear Optics	Full Time
8	Vasudevan	Dr. Chandrasekharan	Nonlinear Optics	Part Time
9	Vijisha M.V	Dr. Chandrasekharan	Nonlinear Optics (Photonic Crystals)	Full Time
10	Nikhil P.P	Dr. Chandrasekharan	Nonlinear Optics (Photonic Crystals)	Full Time
11	AMARNATH.K.P	Dr. Chandrasekharan		Part Time
12	Arun R	Dr . M.K.Ravi Varma	Instrumentation for Air Quality Monitoirng	Full Time

13	Aiswarya	Dr . M.K.Ravi Varma	Spectroscopic Instrumentation for optical sensing	Full Time
	Anoop P	Dr . M.K.Ravi Varma	Spectroscopic study of trace gases and aerosols	Full Time
15	Lakshmikanth K G	Dr. Raghu Chatanathodi		Full Time
16	Daughty John	Dr. Raghu Chatanathodi	Computational Material Science- 2D materials	Part Time
17	Bijoy N	Dr. Raghu Chatanathodi	Computational material sciene- Organic spintrinsics	Full Time
18	Aparna M	Dr. Raghu Chatanathodi	Computational Material Science	Full Time
19	MUHAMMED FASIL	Dr. Raghu Chatanathodi		Full Time
20	Saju .k.John	Dr.Aji A Anappara	Two-dimensional materials	Full Time
21	Nishaina Sahadev	Dr.Aji A Anappara	Photothermal studies in Nano-systems	Full Time
22	Saranjith P	Dr.Aji A Anappara		Full Time
23	Swathi V.M (UGC)	Dr.Aji A Anappara		Full Time
24	ANUPAMA M	Dr.Aji A Anappara		Part Time
25	Santhi Krishna	Dr.Madhavan Unni	Critical Point Phenomena and Phase Transitiion	Part Time
26	Naseer A P	Dr.Madhavan Unni	Critical Point Phenomena and Phase Transitiion	Full Time
27	SMITHA K M	Dr.Madhavan Unni		Full Time
28	Abhijith	Dr.Vari Sivaji Reddy	Organic Electronic Devices	Full Time
29	Shamjid P	Dr.Vari Sivaji Reddy	Plasmonic Solar Cells	Full Time
30	BASSAM.S.A	Dr .Suchand Sangeeth		Part Time
31	Jaismon Francis	Dr .Suchand Sangeeth	Organic Semiconductors	Full Time
32	Safna Banu K	Dr .Ram Ajor Maurya	Solar astrophysics	Full Time

33	JAIN JACOB P T	Dr .Ram Ajor Maurya		Full Time
34	Manjusha E	Dr.Maneesh Chandran	Diamond	Full Time
35	ABHINAV T	Dr Goutam Kumar Chandra	Condensed matter physics	Full Time
36	Anjali S	Dr .Saurabh Gupta	Quantum Field Theory	Full Time
37	DONA B GEORGE	Dr. Aswathi		Full Time
38	Lekshmi B S	Dr.Subramanyan Namboodiri Varanakkottu	Interface Science	Full Time

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Existing & proposed: Dr. A .M. Najeer has been supervising 07 scholars in outside universities: 02 submitted, 1 awarded (Karpagam University), 1 being awarded (Bharathiar University). 5 scholars being supervised.

SCHOOL OF MANAGEMENT STUDIES

a. Ph. D Completed

Sl. No	Name	Guide	Area of Specialization	Scheme(QIP/Part Time/Full Time)
1	Biplab Bhattacharjee	Dr. K Muhammad Shafi	Systems	Full Time
2	Abdul Latheef Kiliyanni	Dr. Sunitha S	Strategic Financial Management	Full Time

On-going Ph. Ds

Sl. No.	Name	Guide	Area of Specialization	Scheme (QIP/PT/FT)
1	Pratap Kumar S	Dr. K Muhammad Shafi & Dr. T Radharamanan	Strategic Management	Part Time
2	Lisbeth Mary John	Dr. K Muhammad Shafi	Human Resources Management	Full Time
3	Biju Mathew	Dr. Sunitha S	Economics	FIP (Part-Time)
4	Sreekumar P Pillai	Dr. T Radha Ramanan and Dr. Madhu Kumar S D	Systems	Part Time
5	Binesh Jose	Dr. T Radha Ramanan and Dr. Madhu Kumar S D	Strategic Management	Part Time
6	Preethi M	Dr. T Radha Ramanan	Technology Transfer	Part Time

7	Shanujas V	Dr. T Radha Ramanan	Human Resources Management	Full Time
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SCHOOL OF BIOTECHNOLOGY

Ph.D

Sl.No	Name	Guide	Area of Specialisation	Scheme(QIP/Part Time/Full time)
1	Mr. Prakash A	Dr. Rathinasamy K	Anticancer drugs	FT
2	Mr. Sinoy Sugunan	Dr. Rajanikant. G.K	Bioinformatics	FT
3	Mr. Suvanish Kumar	Dr. Rajanikant. G.K	Bioinformatics	FT
4	Ms. Sreekala Nampoothiri	Dr. Rajanikant. G.K	Bioinformatics	FT
5	Ms. NishaSalim	Dr. Santhiagu. A	A Bioprocess technology	FT
6	Ms. Anna S Kynadi	Dr. Suchithra T.V	Microbiology & Bioprospecting	FT
7	Ms. Sareena.C	Dr. Suchithra T.V	Microbiology & Bioprospecting	FT
8	Mr. Mubarak M	Dr. Suchithra T.V	Green energy	FT

a. On-going Ph. D

Sl.No	Name	Guide	Area of specialization	Scheme (QIP/PT/ FT)
1	Mr. Dileep. P	Dr. Md. Anaul Kabir	Gene Regulation	FT
2	Mr. Darshan Rajesh Dhabalia	Dr. Md. Anaul Kabir	Gene Regulation & Drug Resistance	FT
3	Mr. Udaya Prakash	Dr. Md. Anaul Kabir	Molecular Biology & Genetic Engineering	FT
4	Ms. Ankita Dube	Dr. Md. Anaul Kabir	Molecular genetics in Yeast	FT
5	Ms. Joji. K	Dr. Santhiagu. A	Bioprocess technology	FT
6	Mr. Adarsh. V.K	Dr. Santhiagu. A	Bioinformatics & Drug Discovery	FT
7	Ms. Manjusha C M	Dr. Santhiagu. A	Molecular Biology & Bioprocess Technology	PT

8	Ms. Soumiya S	Dr. Santhiagu A	Bioprocess Engineering	FT
9	Mr. Jobin Ravi	Dr. Santhiagu A	Drug Research & Development	FT
10	Mr. Arun Jyothish	Dr. Rajanikant. G.K	Bio chemistry	PT
11	Ms. Jyotirekha Das	Dr. Rajanikant. G.K	Neuroscience	FT
12	Mr. Neelakandan	Dr. Rajanikant. G.K	Network Biology	FT
13	Mr. Gokul .S	Dr. Rajanikant G K	Computational Drug design & Neuroscience	FT
14	Ms. Navami krishna	Dr. Rajanikant G K	Network Biology	FT
15	Mr. Jomon Sebastian	Dr. Rathinasamy	Cancer Research	FT
16	Mr. Darpan Raghav	Dr. Rathinasamy	Cancer biology	FT
17	Mr. Sushobhan mahanty	Dr. Rathinasamy	Cancer biology	FT
18	Ms. Shabeeba Ashraf	Dr. Rathinasamy	Cancer biology	FT
19	Ms. Princy. C.P	Dr. Aswati Nair	Plant Biotechnology	FT
20	Ms. Sharmila Raj. T	Dr. Aswati Nair	Plant Biotechnology	FT
21	Ms. Aswani T	Dr. Suchithra T.V	Microbiology & Bioprospecting	FT
22	Ms. Reshmi sasi	Dr. Suchithra T.V	Environmental Microbiology	FT
23	Mr. Ilshad Sabah	Dr. Suchithra T.V	Microbiology & Bioprospecting	FT
24	Mr. Benu George	Dr. Suchithra T.V	Microbiology & Bioprospecting	FT
25	Ms. Serin zachariah	Dr. Suchithra T.V	Microbiology & Bioprospecting	FT
26	Ms. Pooja S	Dr. Suchithra T.V	Microbiology & Bioprospecting	FT
27	Ms. Remya Raveendran	Dr. Suchithra T.V	Microbiology & Bioprospecting	PT(Ex)
28	Mr. Akash K	Dr. Baiju G nair	Environmental Biotechnology	FT

SCHOOL OF MATERIALS SCIENCE AND ENGINEERING

a. PhD's completed:

Sl. No.	Name	Guide	Area of Specialization	Scheme (QIP/PART TIME/ FT)
1	Rahul T K	N. Sandhyarani	Chemically modified titania inverse opal photocatalysts for solar light driven hydrogen production	Full time
2	Loksani Bhanu Prakash	Soney Varghese	Multiscale nanocomposite for structural applications	Full time
3	Nimmy John	N. Sandhyarani	Liquid crystal display	Full time

b. Ongoing PhD

Sl. No.	Name	Guide	Area of Specialization	Scheme (QIP//Full time)
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1	ArjunAjith Mohan	N. Sandhyarani	Development of efficient bio fuel cell	Full Time
2	Manu mohan	C. B. Sobhan	Heat transfer studies using Interferometry	Part Time
3	Anish R Nath	N. Sandhyarani	Nanomaterial based energy storage devices	Full Time
4	Vinay T V	Soney Varghese	Nanofluidics	Full time
5	Preseetha K P	Soney Varghese	Nonlinear optics	Full time
6	BiyasPosha	N. Sandhyarani	Development of sensitive biosensors using nanomaterials	Full Time
7	PanchalBhargav	Soney Varghese	MEMS	Full time
8	Radhika panicker	C. B. Sobhan	Synthesis of carbon based material for electronics application	Full time
9	Neeshma.R	C. B. Sobhan	Nano Enhanced Phase Change Materials.	Full time
10	Sreenidhi .P.R	Soney Varghese	Energy harvesting devices	Full time
11	Chinglenthomba John Chingakham	Sajith V.	Heterogeneous Catalyst for the transesterification of biodiesel	Full time
12	Nubla.k	N. Sandhyarani	Synthesis of Electro-catalysts for direct methanol fuel cell	Full time
13	Farzeena C	Subramanyan Namboodiri V and N. Sandhyarani	Optical switching using nanostructured materials	Full time
14	Mathew Joseph	Sajith V.	Nano phase change materials for heat transfer applications	Full time
15	Geo Sebastian	Shijo Thomas	Design of solar desalination system with enhanced productivity .	Full Time
16	Albin Joseph	Shijo Thomas	Investigation on concentrated parabolic solar collector using Nano fluids.	Full Time
17	Antony Joseph	Sajith V	Development of wear and	Full Time

			corrosion resistant coatings	
18	Muhammed Shafeeque Rahman	Hanas T	Neuromodulation	Full Time
19	Aruna Vijayan	N.Sandhyarani	Hydrogen production using solar water splitting	Full Time
20	Muhammad Rabeeh vp	Hanas T	Corrosion	Full Time
21	Preseetha Paul	Soney Varghese	Pyroelectric energy harvesting devices	Part Time
22	Jamsheed K	Soney Varghese	Design and Development of Curcumin Nanoparticles and Nanoconjugates to Enhance Bio-availability	Part Time
23	Arun Kumar V	Sarith P Sathian and Sajith V	Computational Studies On the Evaporation of Nanodroplets	Part Time
24	Divya D.	Shijo Thomas	CO2 adsorption in nanofluids	Part Time
25	JaisonJhon	Sajith.V	Corona discharge particulate filter	Part Time
26	Vibin Antony	Sajith.V	Convective heat transfer studies in Corona discharge systems	Part Time
27	Madhu	C. B. Sobhan	Multiscale modeling of convection in nanofluids	Part Time

5.2 PROPOSED PLAN FOR RESEARCH

DEPARTMENT OF CIVIL ENGINEERING

- The Department proposes to enhance the research activities by attracting more number of sponsored research programmes from industries, apart from taking up routine research programmes funded by funding agencies like CSIR, DST, AR & DB, MHRD etc. The Department also wishes to encourage more and more Scientists / Engineers from R & D institutions to avail the External Registration Scheme to enroll for Ph.D programmes. The Department also wishes to undertake collaborative research work leading to the award of Ph.Ds.
- The Department carries out / propose to carry out research on the following areas/topics:
 1. Environmental Forensics, Environmental Risks and Environmental Policy
 2. Optimal Design of Vertical Cellular Breakwater Based on Multi-Objective Optimization
 3. Investigation on Fibre Reinforced Polymer Strengthened Tubular Joints Subjected to Axial Compressive Load
 4. Studies on Fibre Reinforced Rubberized Concrete Deep Beams
 5. Studies on impact behaviour of rubber concrete structural elements
 6. Stability of Ship using Principle of Computational Fluid Dynamics

7. Studies on the use of Steel-Fibre Reinforced GGBS Concrete in Typical D- Regions
8. Analysis of Urban Transport Network
9. Development of Pedestrian Crash Prediction Models
10. Analysis of Time Waste in Construction Projects
11. Economic Evaluation of Urban Traffic Congestion Relief Measures
12. Prioritization Accident Black Spots for Improvement on Economic Criteria
13. Pedestrian Behaviour Analysis in Urban Area
14. Level of Service Analysis of Urban Corridor
15. Capacity and Level of Service of Roundabouts
16. Safety Evaluation of Roads
17. Capacity and Level of Service of Two Lane Two way Non-urban Roads
18. Analysis of nonlinear vibration absorbers coupled to multi-degree of freedom system
19. Structural Control using nonlinear vibration absorbers
20. Performance evaluation of diagrid structural systems
21. Strength and Behaviour of Reinforced Geopolymer Concrete Frames Under Reverse Cyclic Loading
22. Strength and Behaviour of Reinforced Concrete Multi-storied Frames with different infills
23. Sustainable Development of Bamboo Reinforced Concrete composites
24. Studies on Ferro-Geopolymer Composite sections under Flexure
25. Strength and Behaviour of Hybrid Fibre Reinforced Ternary Blend Geopolymer Concrete structural elements
26. Studies on High Performance Fibre Reinforced Cement Concrete Shear Walls with Openings
27. Studies on Development of Ferro cement as a substitute for timber and steel
28. Spatial Decision Support Systems for watershed management.
29. Urban flood modelling
30. Climate change studies
31. Application of new cementitious materials for structural applications
32. Environmental flows, Risk and Reliability Assessment Related to Dam Safety

DEPARTMENT OF CHEMICAL ENGINEERING

- Design and development of a microbial fuel cell to generate electricity and treat wastewater generated from household.
- Synthesis of novel nanomaterials for heat transfer applications
- A non-enzymatic electrochemical sensor containing molecularly imprinted polymer electrode for glucose detection
- To develop smart polymer composites
- Study on fracture of soft gel
- Identification and Control of Multi Input Multi output systems
- Development of soft sensors based on Reaction Calorimeter
- Make use of the coal rejects as a source for the growth of cyanobacteria

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Sl. No.	Name	Description of the work
1	Bioinformatics Research Lab proposal	When applied in drug research, the proposed projects under the lab can potentially lead to new and innovative ways to address the challenges of drug discovery pipelines, high rates of attrition, finding effective treatments for life-threatening diseases, predicting risks of adverse drug reactions, and reducing the health care burden by identifying novel disease genes/proteins and new drugs to prevent and manage serious

		<p>chronic diseases.</p> <p>Key outcomes that can establish the credentials of the proposed research lab and that can help the lab to sustain with more confidence and reachability can be one among the following:</p> <ol style="list-style-type: none"> 1. Identifying one key drug like molecule 2. Identifying a new therapeutic direction for an existing drug molecule 3. Characterizing various biomolecules and their interactions in whole genome or transcriptome level using the techniques of Systems Biology and Biomedical Literature Mining.
2	Research Lab on IoT and Big Data Analytics	<p>Citizen safety is a primary parameter for the quality of life, assessing the development of the nation through its capability of providing a safe society for citizens, especially vulnerable members like children, women, senior citizens, mentally challenged and physically disabled. Smart, sustainable infrastructure, to reliably provide safety to citizens can be provided through IoT based devices with a reliable cloud back-end for data storage and analysis. Smart wearable devices for data gathering and response, predictive analysis for prevention of hazardous situations, timely medical or health care provider intervention, crime detection and intervention, citizen or volunteer involvement for emergency assistance, are a few of the several different avenues for IoT involvement for citizen safety. The proposed laboratory is aimed at providing the research, and developmental infrastructure for undertaking projects which provide IoT based solutions for citizen safety. The scope includes development of human wearable smart devices, cloud based solutions for secure and fast data analytics and storage, algorithms for predictive analytics of sensor data generated by the IoT devices, security solutions for small computable devices among others.</p>

DEPARTMENT OF ELECTRICAL ENGINEERING

Department has identified six major areas for research and development and planned to enhance the research activities. There are 76 research scholars working presently in the Department under the guidance of faculty members. Department has also undertaken sponsored research activities for strengthening the areas of expertise. There are six major sponsored research projects ongoing with faculty members in the Department by DRDO, CPRI, DST, KSCSTE, SPARC etc.

Faculty members in the Department are planning research proposals to various funding agencies in the following area: Nano Dielectrics, IoT in smart grid applications, Multilevel Inverters for renewable energy integration, Electric Vehicles, Smart Grids, Deregulated Markets, Power System Stability, Synchrophasors, Biomedical Signal processing such as Electroencephalogram (EEG), Event-related potentials (ERP),

Electrocardiogram (ECG) and Electromyogram (EMG) etc, Automatic and controlled drug delivery, Automatic and robust control of Parkinsonian symptoms by drug infusion etc.

DEPARTMENT OF CHEMISTRY

The research in organic and bio-organic chemistry mainly focuses on the development of organic molecules for various applications. The heterocyclic chemistry laboratory primarily focuses on the synthesis of biologically relevant molecules for medicinal chemistry applications. The bio-organic chemistry laboratory primarily works on the synthesis of fluorescent molecules for sensing and imaging applications. Development of high performance organometallic catalysts for synthesis is the priority of another research group. The inorganic and bio-inorganic research group aims at developing biomimetic transition metal complexes for developing an understanding of various biological processes. Design and synthesis of porphyrins and metalloporphyrins for sensing, imaging and catalytic actives is the prime focus of another research group. Theoretical and computational research group works towards developing an insight into the structure, bonding and reactivity in both organic and inorganic molecules. Synthesis and evaluation of transition metal complexes that target DNA and other biologically relevant targets is undertaken by another research group. Three groups are working in the area of polymer and materials chemistry. One of the group is actively involved in the development of polymers for optoelectronic applications, development of cost-effective and efficient lubricants etc. Another group develop smart polymer membranes for selective filtration, oil-water separation and bio-medical applications. Nano-materials based electrochemical sensors are being developed in one of the materials research laboratory. A green solution to the environmental issues due to plastic accumulation is currently being addressed in soft materials research laboratory.

DEPARTMENT OF PHYSICS

In addition to the already existing research labs in the areas of Organic and Molecular Electronics, Photonics and Laser Physics, Computational modeling of materials, Soft condensed Matter, Nanotechnology, Solar astrophysics, Diamond related materials, Theoretical high energy physics, organic solar cells, Multifunctional nanostructured materials, Optofluidics, Raman spectroscopy, the department is developing an Advanced technological Laboratory with multidisciplinary thrust. This lab will promote and coordinate interdisciplinary among the department faculty in the above areas and also provide access to BTech EP students for their tryst with cutting edge technological skills. This lab will be modeled in tune with MHRD suggestion to train students for Prime Minister Research Fellowships and other employability skills.

SCHOOL OF MANAGEMENT STUDIES

Sl. No	Name of the Faculty	Proposed Plan for Research
1	Dr. T K Suresh Babu Professor	
2	Dr. T Radha Ramanan Associate Professor	Competency Based Recruitment
3	Dr. Muhammad Shafi	1. <i>Customer Oriented Pro-social Rule Breaking and</i>

	Asst. Professor	<p><i>Outcomes : A Mixed Method Investigation among Frontline Executives of Public Sector Service Organizations in Kerala (with Lisbeth Mary John)</i></p> <p>2. <i>Organizational antecedents of pro-social rule breaking behavior: A case study (with Lisbeth Mary John)</i></p> <p>3. <i>Investigation of employee coping tactics for restraining job strain: Perspectives based on leader -member relationship (with Lisbeth Mary John)</i></p> <p><i>Investigation of the Indian Equity Market Network through Topological Properties and Reduced Network Visualization (with Mr. Biplab Bhattacharjee)</i></p>
4	Dr. Sunitha S Asst. Professor	
5	Dr. Preeti Navaneeth Asst. Professor	
6	Dr. Althaf S Asst. Professor	Creating an Urban Economics Database
7	Dr. Sreejith S S Asst. Professor	Suitability and Adaptability of Contingency Workers in Startups Developing a Behavioral Science Laboratory
8	Dr. Reju George Mathew Asst. Professor	Developing a Humanities Laboratory
9	Dr. Nithya M Asst. Professor	Brand Management

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Sl.No.	Proposed Plan	Details
1	Dr. Lillikutty Jacob plans to carry out research on "5G Cellular Networks"	To address many challenges in the various key technologies of the forthcoming 5G Cellular Networks
2	Dr. Sameer S. M. in the process of setting up a research lab	Setting up a DST-FIST lab from the level 1 grant from DST Govt. of India for conducting cutting edge research in the area of 5G wireless communication and signal processing
3	Dr. Abhilash G. plans to guide one PhD student in Machine Learning for Signal Processing	Develop Algorithms for Machine Learning for signal theoretic applications of the interdisciplinary nature. The attempt is to develop new mathematical framework for machine learning invoking concepts of Hardy spaces. This work can lead to solutions of inverse problems in

		neuroscience and the development of self-learning prosthetic limbs.
4	Dr. Deepthi P.P, Dr. Sameer S. M., Dr. Dhanaraj K.J., Dr. Sreelekha G. and Dr. P.S. Sathidevi plan to do research for secure health monitoring	Awaiting the result of the project proposal on Low Cost Privacy- Preserving Remote Health Monitoring System submitted to DieTY
5	Dr. Bindiya T. S. plans to design and implement low power reconfigurable filter / filter bank architectures	Introduce new architectures, which are highly useful in portable devices and biomedical applications. Re-configurability, Power consumption, implementation complexity and area are the major requirements of any advanced portable computing systems, wireless communication applications and biomedical applications. To meet the demand of modern signal processing, emphasis is given to the development of low power reconfigurable and high performance systems with minimum hardware. The research aims to achieve these targets both at the algorithmic level and implementation level
6	Dr. Deepthi P.P., Dr. Sameer S. M., Dr. Dhanaraj K.J plan for research on hardware architectures for channel coding	Working on implementing the project on “VLSI implementation of LDPC encoder/ decoder for on-board / ground satellite applications” submitted to ISRO for funding
7	Dr. Deepthi P.P. and Dr. Dhanaraj K.J plan for research on hardware – software co-design for secure biometrics	Awaiting the result of the project proposal for the development of “Integrated Hardware- Software Biometric Authentication System Based on Privacy Preserving Machine Learning” submitted to DST under CRG scheme for funding

DEPARTMENT OF MECHANICAL ENGINEERING

- Computational studies in mechanics and related fields (Dr. U B Jayadeep)
- Studies of leakages between surfaces (Dr. P B Dhanish)
- Development of devices working on Smart materials (Dr. Jagadeesha T)
- Research on Biomass gasification, biodiesel production, and solar energy utilization (Dr. C. Muraleedharan)
- Experimental and theoretical studies on fluidized bed gasification of biomass (Dr Arun P.)

- Several software packages and experimental setups have been developed and are being used as teaching laboratory exercises for both under graduate Production Engineering and post graduate Industrial Engineering and Management programmes. It is proposed to file the copyrights and patent based on the software packages and experiments. Proposal has been submitted under IMPRINT-2 programme on the topic ‘Development of ICT Enabled Business Models and E-Learning Tools for SMEs and Academies’ (Dr V Madhusudanan Pillai).
- To establish the thermal comfort standards based on adaptive comfort theory for warm-humid climatic zone of India and later to extend the same work for other climatic zones of India (Dr Gangadhara Kiran Kumar L)
- To develop the user friendly products in consultation with farmers. Presently, the work is going on for the development of Climbot for plucking coconuts. (Dr Gangadhara Kiran Kumar L)
- DST-FIST has sanctioned an amount of Rs 2.51 Crores during November 2016 to MED for setting up a Centre for Precision Measurements and Nano-Mechanical Testing. The project is of 5 year duration. To strengthen the PG teaching & research, the following equipments have been sanctioned a) Optical Profiler, b) High Speed Camera, c) Thermal Imager and d) Nanoindenter. Using the existing laboratories like Advanced Manufacturing Centre, Sophisticated Instruments Centre and augmented the existing Labs like Metrology Laboratory, Production Engg. Laboratory, CAD-CAM Centre, etc. with many latest machines/CAD Workstations and latest CAD-CAM Software, like Siemens Nx, CATIA, Creo, Solidworks, Mastercam, Ansys, Abaqus, and MSC-Adams, the intake of Ph.D. students will be increased in coming years and new research proposals will be submitted to various funding agencies. The proposal submitted in July 2017 to DST-FIST EMR/2017/00463 on “Modeling, Simulation and Experimental Investigation of Tool Wear, Cutting Force and Surface Characteristics during Micromachining of Inconel 718 and Ti-6Al- 4V using non-textured and textured cutting tools” with proposed budget of Rs 99 Lakhs is under consideration with SERB. Already, one DST joint project in association with NIT Mizoram worth Rs 23 Lakhs has been sanctioned. Consultancy/testing services is planned to be carried out with the new sophisticated facilities. (Dr. Jose Mathew)

SCHOOL OF BIOTECHNOLOGY

Research is planned in the following areas

1. Gene Regulation
2. Molecular Genetics
3. Protein Folding
4. Protein Engineering
5. Genetic Engineering
6. Bio modeling and Drug Design
7. Plant Molecular Biology
8. Neurobiology
9. Immuno Technology
10. Enzyme Technology
11. Cell Biology
12. Cancer Research
13. Biofuel Research
14. Bioprospecting
15. Bio-nanotechnology
16. Tissue engineering
17. Stem cell technology

SCHOOL OF MATERIALS SCIENCE AND ENGINEERING

Interferometric investigations of thermal phenomena, Phase change materials for cooling, Discrete simulations of thermal phenomena, Growth of Nanomaterials and Organic thin films using CVD, Thermal Evaporation, Laser Ablation and chemical synthesis. Characterization using SEM, AFM, current-voltage

measurements, Nanofluids for Solar Thermal Applications, CO₂ adsorption in nanomaterials, Biodegradable metals, Affordable healthcare, Materials for energy generation and storage.

5.3 SPONSORED R&D PROJECTS

Total No. of Sponsored Projects	Total Amount Sanctioned (in Rs)	Funding Agencies
19	7,25,57,826/-	DST, DBT, UGC

5.4 INSTITUTE – INDUSTRY COLLABORATION

DEPARTMENT OF CIVIL ENGINEERING

Sl. No.	Name	Firm	Description of the work
1	Dr. P.V.Indira	Various agencies both private and public departments	Material testing , Concrete mix design etc
2	Dr. P.V.Indira	District Panchayath, Palakkad	Scrutiny of Structural Design of Bridge
3	Dr. P.V.Indira	Landmark Builders & Developers [India] Pvt. Ltd.	Scrutiny of Structural Design of Building
4	Dr. P.V.Indira	BSNL	Structural stability of buildings
5	Dr. Santosh G Thampi Dr. S. Chandrakaran	IIM Kozhikode	Vetting the Project Report on Construction of a Rainwater Harvesting Pond (including the structural design of the retaining structure)
6	Dr. Santosh G Thampi	Dept. of WR, GoK	Rectification of Velliyamkallu RCB at Thrithala
7	Dr. Santosh G Thampi, Dr. Sathish Kumar. D.	KIIDC Ltd. Thiruvananthapuram (Dept. of WR, GoK)	Flow Analysis Study and Design of Pumping System – Alappuzha Canal System
8	Dr. Santosh G Thampi, Dr. Chithra. N. R. Dr. Sathish Kumar. D.	KERI, Peechi, Thrissur (Dept. of WR, GoK)	Sediment Transport Modelling in the River Basins of Kerala
9	Dr. Santosh. G. Thampi, Dr. Sathish Kumar. D., Dr. Chithra. N. R.	IDRB, Dept. of WR, GoK	Hydraulic Modelling of Irrigation Structures including Providing Technical Advice to KERI for Physical Model Studies, Kuttiady and Pattissery Dams

DEPARTMENT OF ARCHITECTURE AND PLANNING

Sl. No.	Name	Firm & Description of the work
1	Dr. Shyni. Anilkumar	Dept. Of Housing, govt. of kerala Workshop cum exhibition on Housing Literacy for rebuilding kerala
2	Dr.Kasthurba A K	ULCCS -FDP on Sustainable Technologies and Environment

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Sl. No.	Name	Firm & Description of the work
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1	SD-WAN Research with Aryaka Network Solutions	Aryaka Networks, USA and NIT Calicut team up for collaborative research. An MOU has been signed between NIT Calicut and Aryaka Networks Pvt Limited (www.aryaka.com) , a California based global SD-WAN solutions company, for research collaboration in the area of Software defined Networks.
2	Memorandum of Understanding with TCS for academic collaboration (2013)	Academic Collaboration with Tata Consultancy services (TCS) as part of Academic Interface Programme (AIP) Partial delivery of the Software Engineering course, Student internships, Best Outgoing Student Award, Best Student Project Award Faculty Development Programmes Workshops for students (4 per year)
3	SAP Labs, Bangalore (2013)	CSED, NITC is a part of SAP University Alliance Programme. Invited Lectures Research collaboration (in the area of Software Testing) Student Internships
4	Part of IBM University Relations	Workshops for students Student internships Sponsoring Technical events (Tathva)
5	NITCKathon	The event was sponsored by JMR Infotech Pvt Ltd and organised by department of Computer Science and Engineering in association with Industry Institute Interaction Cell. The 2 day long hackathon provided industry relevant exposure to the students as they worked upon practical business problems, centered around Artificial Intelligence themes including ChatBots, Pattern Recognition, Machine learning, Voice Recognition and Deep Learning.

DEPARTMENT OF CHEMISTRY

Sl. No.	Name	Firm & Description of the work
1	G. Unnikrishnan	1. Choice Rubbers, Koodaranji, Calicut. 2. Hevea Rubbers, Calicut.Consultancy for Rubbers. Adhesives etc.

DEPARTMENT OF ELECTRICAL ENGINEERING

Sl. No.	Name	Firm & Description of the work
1	Hykon India Pvt. Ltd.	Planning to have Collaborative research work on improving the existing UPS topology
2	(Mathworks & Bosch)	Electric Vehicle- development of power controllers

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING.

Sl. No.	Name	Firm & Description of the work
1	Dr. SUJA K J	Indian Institute of Space Science and Technology (IIST) Doing a collaborative work on Gas Sensor
2	Dr. P.S. Sathidevi and Dr. G. Sreelekha	MOU with i2i Telesolutions and Telemedicines Pvt. Ltd Bangalore (In Progress), from 1 st March 2017. Coordinators Dr. P.S. Sathidevi and Dr. Sreelekha G.

DEPARTMENT OF PHYSICS

A new project proposal on organic solar cells in collaboration with Agilent technologies is proposed

SCHOOL OF MATERIALS SCIENCE AND ENGINEERING

Sl. No.	Name	Firm & Description of the work
1	Dr. Sajith V., Shijo Thomas and Dr. C.B. Sobhan	National Thermal Power Corporation “Development of stable nanofluids for heat exchanger for improved cooling in thermal power plants” [56.6 Lakhs]
2	Dr.Sajith V and Dr.Shijo Thomas	.”Development of nano lubricants for diesel engines”, Combat Vehicles Research and Development Establishment, (CVRDE) DRDO [42.42 lakhs]

6.0 THE COUNCIL, BOG, AND OTHER COMMITTEES

6.1 INSTITUTE’S COUNCIL

As per Section 14 of the *National Institutes of Technology, Science Education and Research Act; 2007*, the Senate is the institute council to decide upon all academic matters. The Senate of the institute consists of the following members:-

The Director, ex officio, who shall be the Chairman of the Senate;

(b) The Deputy Director, ex officio;

(c) The Professors appointed or recognised as such by the Institute for the purpose of imparting instructions in the Institute;

(d) three persons, one of whom shall be a woman, not being employees of the Institute, to be nominated by the Chairperson in consultation with the Director, from amongst educationists of repute, one each from the field of science, engineering and humanities; and

(e) Such other members of the staff as may be laid down in the Statutes.

6.2 BOARD OF GOVERNORS

As per Section 11 of the *National Institutes of Technology, Science Education and Research Act; 2007*, The Board of every *Institute mentioned* shall consist of the following members, namely:-

(a) The Chairperson to be nominated by the Visitor;

(b) The Director, ex officio;

- (c) two persons not below the rank of the Joint Secretary to the Government of India to be nominated by the Central Government from amongst persons dealing with technical education and finance;
- (d) Two persons to be nominated by the Government of the State in which the Institute is situated, from amongst persons, who, in the opinion of that Government, are technologists or industrialists of repute;
- (e) two persons, at least one of whom shall be a woman, having special knowledge or practical experience in respect of education, engineering or science to be nominated by the *Council*;
- (f) One professor and one assistant professor or a lecturer of the Institute to be nominated by the Senate.
- (g) *The Director of the Indian Institute of Technology in whose zone the Institute is located, or his nominee, not below the rank of a Professor.*

6.3 FINANCE COMMITTEE

As per Clause 10 of the First Statutes of the Institute, there shall be a Finance Committee consisting of the following members, namely:-

- (i) the Chairperson of the Board of Governors, ex-officio Chairman;
- (ii) The Director, ex-officio member;
- (iii) Joint Secretary dealing with National Institutes of Technology or his nominee and Financial Advisor (Human Resource Development) or his nominee;
- (iv) Two persons nominated by the Board from amongst its members; and
- (v) The Registrar, ex-officio, Member-Secretary:

6.4 BUILDING AND WORKS COMMITTEE

As per Clause 12 of the First Statutes of the Institute, there shall be a Building and Works Committee, consisting of following members, namely:-

- (i) The Director, ex-officio Chairperson;
- (ii) Director or Deputy Secretary or his nominee dealing with the National Institutes of Technology in the Ministry and Director or Deputy Secretary or his nominee dealing with Finance of National Institutes of Technology in the Ministry as ex-officio members of the Central Government;
- (iii) One member nominated by the Board of Governors;
- (iv) Registrar, ex-officio, Member Secretary;
- (v) Dean, planning and development or similar position - Member; and
- (vi) One expert each from Civil and Electrical Engineering Wing of Central or State Government or any autonomous body of repute - Member.

7.0 CONCESSION FOR SC, ST & HANDICAPPED STUDENTS

7.1 Concessions provided for students:

Concessions provided for students: Educational Concession to SC/ST/OEC/SEBC (under KPCR) students: Students from Kerala are eligible for educational concessions from the SC & ST development Departments as per the norms of Government of Kerala. Students from other states can apply for scholarships as per the rules of the respective states. In addition, National scholarships are also offered to persons with disabilities for pursuing technical and professional courses for recognized institutions by the National Handicapped Finance and Development Corporation (NHFDC) Faridabad on behalf of Ministry of Social Justice & Empowerment, Govt. of India subject to fulfill the conditions laid out by them.

A New Central Sector Scholarship Scheme to the first top 12 SC and 5 ST students of Top Class Education given by the Central Government (Ministry of Social Justice and Empowerment & Ministry of Tribal Affairs, respectively) [i.e. Institute Tuition Fee + Boarding charges + Books & Stationery + Cost of a PC- (P-IV Computer, UPS, Printer, Multimedia)] based on their entrance rank. Family income limit is Rs.4.5 lakhs per annum. Merit cum Means Scholarship for eligible Minority Communities in Kerala and other states given by the Ministry of Minority Affairs, Govt. of India. District Merit Scholarships to eligible students in Kerala by the Directorate of Collegiate Education, Thiruvananthapuram. Central Sector Scholarship Scheme for eligible

College & University students by the Department of Higher Education, Ministry of Human Resources Development, Govt. of India.

7.2 Concessions provided for staff: Faculty members are given concession in fee for PT

8.0 FINANCIAL STATUS

8.1 ANALYSIS OF PLAN AND NON-PLAN GRANTS (Grant Received)

Particulars	Rs. in lakhs			
	2015-2016	2016-2017	2017-2018	2018-2019
Govt. of India –Grant (Non-Plan)	-	7230	7388	18256
State Govt. Grant (Non-Plan)	-	-	-	-
Govt. of India Grant (Plan-General)	3000	4900	5952	376
Govt. of India (Plan-OSC)	-	-	-	-

8.2. EXPENDITURE POSITION

Particulars	Rs. in lakhs		
	2016-2017	2017-2018	2018-2019
Expenditure- (a) Under Plan(General)	2456.29	3483.81	1266.23
Expenditure -(b) Under Plan(OSC)	-	-	-
Expenditure-Under Non-Plan	10273.42	11029.67	13736.20

9.0 CENTRAL FACILITIES AND SERVICES

9.1 COMPUTING & IT SERVICES

9.1.1 CENTRAL COMPUTER CENTRE

Central Computer Centre (CCC) is the central facility in NIT Calicut which caters for the computing requirements of the whole community of this institution. The Centre has state of the art infrastructure with three fully operational terminals spanning over two floors of the building. Decision Support System (DSS) of the institute also operate from the Computer Centre building. The Centre has nearly 200 client machines & 30 workstations for usage. CCC hosts some of the high end servers and a parallel computing cluster machine. Servers include four DELL PowerEdge T620 which has a dual Hexa-core processor and HP ProLiant Rack server which has a dual Quad-core processor. A state of the art Super Computing Facility with 25 Tera FLOPS computing power meet the research needs of the institute. This Hybrid cluster contains 1 master node and 13 compute nodes (out of which 6 nodes are GPU enabled) are interconnected through infiniband. Each GPU compute nodes contains 2 Tesla K20 GPU cards. All Compute nodes carry dual E5-2640 Intel chip as processors. The Facility can be accessible by all the departments and schools anywhere in the campus through networking. All Post graduate, Ph. D scholars and UG students (those who have computationally intensive projects) are using this facility for research activities. Some of the computational software's and packages for the other departments run from the servers maintained in the CCC as well. The centre possesses a bundle of

software, packages for diversified applications. Centre is fully air-conditioned and has UPS power backup for the whole setup. The Centre works 16 hours a day (7am – 12am) 7 days a week except national holidays unless instructed otherwise.

9.1.2 CAMPUS NETWORKING CENTRE

The Campus Networking Centre (CNC) is the Central Facility providing the software, hardware and networking support to the entire student and staff community of NITC Campus spread around 400 acres . CNC manages the Internet connectivity (both wired and wireless), Institute website, IP Phones and also provide hardware, software and all other IT related solutions for the entire Institute. The campus is interconnected with about 30 KMs of fibre optic backbone network with 80 routed internal networks, managed by the Unified Threat Management system. The Centre is equipped with Firewall, Authentication Server, Log Analyser, Routers, Core Distribution switches, Domain Name Server, Web Server, Proxy Servers, Antivirus central server and IP Phone Server etc. Presently the network is served by 1 Gbps of Internet connectivity provided by BSNL under NKN scheme of MHRD and 20 Mbps by RELIANCE. All the hostels are served with Internet connectivity through wired mode. The Institute website is managed by CNC. CNC functions on a 24x7 basis 365 days without any holidays. IP Phones are installed in all academic and administrative sections. The IP Phones and IP Phone servers are also implemented , configured and managed by CNC. Hardware maintenance unit of CNC provides quality service support to minimize system downtime in the entire campus. The services include installation, troubleshooting and maintenance of computer and peripheral devices, software and operating system installations.

9.2 WORKSHOP

CENTRAL WORKSHOP - FACILITIES AND WORKS UNDERTAKEN

The Central Workshop under the Department of Mechanical Engineering forms a central facility and it caters to the requirements of all departments. The facilities in Central Workshop are effectively utilized for the conduct of practical class for the students of all first year undergraduate programmes. The primary motive is to impart them with the basic ideas of manufacturing. For the UG students of Mechanical Engineering and Production Engineering programmes, advanced training in various skills during the higher semesters builds up their confidence in practical fields of design and manufacturing. Workshop facilities are extended for carrying out UG/PG project works, research works requiring fabrication, assembly & testing, and consultancy related works from various departments. Apart from the regular practical classes, Institute-wide requirements involving fabrication are carried out in central workshop with the help of experienced technical staff of the workshop. This centre has ample facilities to undertake consultancy and fabrication works in all manufacturing fields. The Workshop is divided into seven sections and the equipment, tools and machines available are as follows:

- 1. Machine Shop**
 - Lathes – 36
 - Milling machine – 2
 - Shaping machine – 7
 - Vertical Slotting machine – 1
 - Grinding machine – 3
 - Tool and Cutter grinder - 1
 - Drilling machine -2
 - CNC Lathe -1
 - CNC Vertical Machine Centre - 1
- 2. Carpentry section**
 - Universal cutting machine -1
 - Wood turning lathe -3
 - Electric sander -1
 - Jig saw machine -1
- 3. Welding section**
 - MIG welding -1
 - SMAW/TIG - 1
 - Arc welding set – 3
 - Gas welding set -2
 - Grinder -1
 - Portable flame cutter – 1
 - Welding rectifier -1
- 4. Fitting section**
 - Bench grinder -1
 - Surface plate -2
 - Band saw machine -1
 - Heavy duty drill machine -1
 - All-purpose saw -1
 - Multi-purpose mini hand drill grinder - 1
- 5. Sheet metal section**
 - Bending machine -1
 - Power cutting/shear -1
 - Spot welding machine -1
 - Edge folding machine -1
 - Circle cutting machine -1
 - Fly press-1
 - Pipe bending machine -1
 - Portable electric shear -1
 - Sander -1
 - Nibbling machine -1
- 6. Black smithy**
 - Anvil – 14
 - Forges – 6
 - Universal cutting machine -1
 - Power hammer - 1
 - Blower -2
 - Pipe bending machine -01
 - Pneumatic forging power hammer -1
- 7. Foundry**

Facility for sand preparation
 Diesel fired furnace -1
 Hand tools set – 15
 Ladles – 2
 Crucibles – 2
 Aluminium stir casting -1

9.3 EDUCATIONAL TECHNOLOGY & LIBRARY

Educational Technology & Library (ETL) presently comprises of Central Library and Digital Library. Both the Library & Digital Library are working from 8 am to 11 pm on all days except Sundays and Public Holidays.

9.3.1 CENTRAL LIBRARY

CENTRAL LIBRARY offers its services to more than 8,000 users comprising of undergraduate, postgraduate students, research scholars, faculty and employees from various Departments of the Institute/ Centres/Sections. The Library uses open source software KOHA for its operations. Collection is fully RFID tagged and offers Web OPAC service throughout internet.

Current Print Holdings:-

(a) Print Books

Sl. No.	Category	Books at the end of the year 2018-19	Books added during the year 2018-19	Total books as on 31 st March 2019
1.	General books	105182	1688	106870
2.	Books for SC/ST	15408	642	16050
3.	Reference books	6462	1711	8173
	Total	127052	4041	131093

(b) Print Journals / Magazines/ Dailies

Sl. No.	Category	Print Journals / Magazines/Dailies at the end of the year 2018-19	Print Journals/ Magazines /Dailies added during the year 2018-19	Total Print Journals/ Magazines/ Dailies as on 31 st March 2019
1.	National	27	27	24
2.	International (P+O)	NIL	3784	3784
3.	Dailies/ Weekly	17	18	18
	Total	44	3829	3826

9.3.2. DIGITAL LIBRARY

The Digital Library - NALANDA- serves members of the campus in meeting their academic & research needs by providing timely and up-to-date information with value added services in all the areas of Science/Engineering/Technology. Apart from the Digital Library, members can access the Nalanda from the entire campus.

Other services:

- Web-OPAC: Allowing access from inside as well as outside the campus
 - DSpace: For the projects / theses reports of NITC students an ETD server (electronic theses and dissertations) maintained using Dspace (an open-source institutional repository package) has been initiated. All abstracts are visible for everyone within NITC and privileged access is given to the full contents. International standards (BIS and ASTM) could also be accessed from this server; access being restricted to NITC intranet.
 - NPTEL(National Program on Technology Enhanced Learning) : A local copy of all NPTEL course materials (provided by IIT Madras, already available in public domain) which could be accessed from within the Digital Library.
 - Turnitin - online plagiarism checker for the use of researchers of the institute.
 - Eduserver: An educational server on the open source moodle platform is customized for the faculty of all departments to run their courses. This server will be accessible outside NITC too. This will provide facility for faculty to offer common and additional online topics/subjects as part of the curriculum including on-line tutorials, evaluation and simulation etc.
- **EDUSERVER**
This will provide facility for faculty to offer common and additional online topics/subjects as the part of the curriculum including on-line tutorials, evaluation and simulation etc.

List of courses offered by the Eduserver during Academic year 2018-2019

Civil Engineering

CE6102 Structural dynamics
CE3001 Structural Analysis II

Chemical Engineering

CH4021 Energy Technology
CH6003 Advanced Fluid Dynamics and Heat Transfer

Chemistry

CY6304 Group Theory and Principles of Quantum mechanics

Electrical Engineering

EE2009 Electrical Measurements and Machines
EE6401 Energy Auditing & Management
EE6491 Industrial Power & Automation Laboratory
EE3006 Power Systems II
EE4093 Seminar
EE6404 Industrial Load Modelling & Control
EE6204 Digital Protection of Power systems

Electronics and Communication Engineering

EC3036 VLSI Circuits & Systems
EC3091 Electronic Circuits Lab II
EC2022 Electromagnetic Field Theory

Mathematics

MA1001 Mathematics I
MA7202 Functional Analysis

MA7266 Statistical Methods for Quality Management
 MA3028 Statistical Method for Management
 MA8001 Advanced Mathematics I
 Ma6322 measure and Probability
 MA6323 Graph Theory

Mechanical Engineering

ME1001 Introduction to mechanical Engineering
 ME6302 Metal forming
 ME6693 CAD Laboratory
 MF 6612 Materials Selection in Mechanical Design

School of Biotechnology

BT3091 Immunology Laboratory
 BT2008 BioStatistics

Current Alexa Rank of NALANDA Digital Library shows 231,228, which is the highest among NITs’.

E-Resources-subscription

Category	Total as on March 2018	Total as on 31 st March 2019
Online e-Journals (through ESS consortia)	1485	4412
E-books	2413	2432
E-Journals	3348	3178
E-Databases	3	3
Standards (ASTM, BIS)	31647	31647
NITC Resources (Faculty reports, Students’ thesis, Course notes)	2159	3368
Total	41055	45040
Journal Back Vol.s	14,411	14,411
Grand Total	55466	59451

Major Hardware / Facilities of Digital Library

3 Dell Precision T3610 Workstations
 Dell Poweredge T620 Server
 3 Dell Poweredge T320 Server
 36 Dell Optiplex 7010 Client Machines
 3 HP ProOne 400 Client Machines
 16 IP Camera, Network video recorder, 28 port Dlink switch
 Brother DCP-7065DN Laser Printer
 Datamax Barcode Printer
 30 KVA Socomec MASBC UPS
 5 Cisco SRS 2024 switches

9.3.4 Programmes organized by ETL during 2018 – 19

- EBook awareness session by Pearson on 24.08.2018
- Presentation to discuss knovel/ Engineering village by Elsevier on 01.09.2018
- Elsevier backfile collections from Elsevier on 08.09.2018

- Scopus live demo on 28.09.2018
- A workshop on Knimbus by GIST on 26.10.2018

9.3.5. Staff position

Chairperson (ETL) : Dr. Jeevamma Jacob
 Vice Chairman (ETL) : Dr. Jayadeep U B
 Librarian (Gr.I) : Vacant
 Librarian (Gr.II) : Vacant

Sweety Mathew	Librarian Gr.III (Librarian In – charge)
J Sobhana	Librarian Gr IV
T. Jayarajan	Librarian Gr IV
C Latha	Librarian Gr IV
K P Shaju	Librarian Gr IV
M K Chandramohan	Graphic Artist
K Jayaraman	Offset Machine Operator

Supporting office staff

Siamala I	Sanitary worker(Rtd. on 31.05.2017)
Vinod K P	Watchman cum Gardner

Project Digital Library Technical Assistants : 2
 Project Digital Library Computer Assistants : 3
 Adhoc Library Assistants : 12
 Adhoc Library Helpers : 7
 Adhoc Office Assistants : 2

9.4 LABORATORIES

DEPARTMENT OF ARCHITECTURE

1. Building Science Lab
2. CADD Lab
3. Creative Arts Lab
4. IMD Lab
5. Geoinformatics Lab

DEPARTMENT OF CIVIL ENGINEERING

1. Transportation Engineering Lab
2. Structural Engineering Lab
3. Concrete Lab
4. Strength of Materials Lab.
5. Geotechnical Engineering Lab.
6. Surveying Lab.
7. Offshore Structures Lab
8. Water Resources Engineering Lab
9. Environmental Engineering Lab
10. CAD Lab

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

1. Software systems laboratory
2. Network systems laboratory
3. Hardware & Embedded systems laboratory
4. Big data and Bio computing Laboratory
5. Cloud computing laboratory
6. Machine learning laboratory
7. Image processing and Multimedia laboratory
8. Secure computing laboratory

DEPARTMENT OF ELECTRICAL ENGINEERING

UG Laboratories

1. Electrical Workshop
2. Electronics Workshop
3. Electronics Laboratory
4. Electrical Measurements Laboratory
5. Electrical Machines Laboratory
6. Control Systems Laboratory
7. UG Power Electronics Laboratory

PG/Research Laboratories

1. Electrical Simulation Laboratory
2. Power Systems Laboratory
3. Power Electronics Laboratory
4. DCS Applications Laboratory
5. Process Automation Laboratory
6. Embedded Systems Applications Laboratory
7. Power Electronics Research Laboratory
8. Advanced Control Systems Laboratory
9. Power Systems & Power electronics Real-Time Simulation Laboratory
10. High Voltage Engineering Laboratory
11. Bio-Signal Processing Laboratory
12. Non-destructive testing Laboratory
13. Instrumentation Systems Laboratory
14. Centre for Testing and Consultancy

Sponsored Research Laboratories

1. LVDC Microgrid Laboratory (CDAC)
2. Distributed Energy Research Laboratory (DST-FIST)

Following new laboratory is proposed:

1. Industrial Drives Laboratory

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

1. Electronics Circuits Lab
2. Communication Lab
3. Integrated Circuits Lab
4. Digital Signal Processing Lab
5. Embedded Systems Lab
6. Electronics Workshop
7. Microelectronics and VLSI Lab
8. Telecommunication Lab

9. Research Lab I & II
10. Signal Processing and Communication (SPCom) Lab
11. R & D Lab
12. Project Lab
13. PSoC Lab

DEPARTMENT OF MECHANICAL ENGINEERING

- 1 Metrology laboratory
- 2 Industrial Engineering laboratory
- 3 Production Engineering laboratory
- 4 Heat Engines laboratory
- 5 Thermal Science laboratory
- 6 Vibration, Acoustics & Tribology laboratory
- 7 Fluid Mechanics and Fluid Machinery laboratory
- 8 Solar Energy Centre
- 9 Mechatronics and Robotics laboratory
- 10 CAD/CAM Centre
- 11 Computer Aided Graphics & Design laboratory
- 12 Material Sciences laboratory
- 13 Advanced Manufacturing Centre
- 14 Sophisticated Instruments Centre
- 15 Center for Advanced studies in Cryogenics (CASC)
- 16 Fuel Cell Laboratory
- 17 Heat Treatment Laboratory
- 18 Central Workshop
- 19 Design Innovation Centre
- 20 Energy Management Laboratory
- 21 Supply Chain and System Simulation Laboratory
- 22 Mechanisms Laboratory
- 23 Green energy laboratory
- 24 Jets and flow acoustics laboratory

DEPARTMENT OF CHEMISTRY

1. B.Tech Laboratory
2. PG Chemistry Laboratory
3. PG Instrumentation Laboratory
4. Sophisticated Instrumentation Laboratory
5. Thermal Analysis Laboratory
6. Computational laboratory (Common facility)
7. Polymer Science & Technology Research Laboratory
8. Soft Materials Research Laboratory
9. Materials Research Laboratory
10. Bio-Organic Research Laboratory
11. Bio-Inorganic Materials Research Laboratory

12. Inorganic and Bioinorganic Research Laboratory
13. Theoretical and Computational Chemistry Research Laboratory
14. Heterocyclic Chemistry Laboratory
15. Organic Synthesis and Catalysis Laboratory

DEPARTMENT OF PHYSICS

- 1) First Year b Tech Lab
- 2) Computer Lab
- 3) Electronics Lab
- 4) Optics Lab
- 5) Solid State Physics Lab
- 6) Wet chemistry lab
- 7) General Physics Lab
- 8) Laboratory for molecular Photonics and Electronics
- 9) Applied optics and Instrumentation Lab
- 10) Organic and Nano Electronics lab
- 11) Laser and Nonlinear optics lab
- 12) Critical Point phenomena and Polymer Dynamic lab
- 13) Computational material Science lab
- 14) Photonic materials and devices lab

DEPARTMENT OF CHEMICAL ENGINEERING

1. Chemical Analysis Laboratory
2. Fluid Mechanics Laboratory
3. Heat Transfer Laboratory
4. Mechanical Operations Lab
5. Mass Transfer Laboratory
6. Chemical Reaction Engineering Lab
7. Process Dynamics and Control Lab
8. Instrumentation & Research Lab
9. Computer Lab

SCHOOL OF BIOTECHNOLOGY

1. Biochemistry Laboratory
2. Microbiology Laboratory
3. Bioprocess Laboratory
4. Molecular Biology Laboratory
5. Immunology Laboratory
6. Bioinformatics Laboratory
7. Plant Biotechnology and Enzyme Kinetics Laboratory
8. Downstream Processing Laboratory

SCHOOL OF NANO SCIENCE & TECHNOLOGY

1. Microscopy centre
2. Nanotechnology Research Laboratory
3. Nano Science Research Laboratory
4. Fuels and Combustion Research Laboratory
5. Computational Nanotechnology Research Laboratory
6. Nanomaterials and Devices Research Laboratory

9.5 HOSPITAL, POST OFFICE, SHOPPING CENTRE

HOSPITAL

Institute has a Health Centre providing the medical needs of students, staff and their families.

Following are the staff details:

1. Dr. Celine.A.A. - R.M.O
2. Dr. Balasubramanian - (Physician Visiting Doctor)
3. Dr.Akhil Raj.M.P - R.M.O. (Adhoc)
4. Dr.Midhun A.R. - R.MO.(Adhoc)

Faculty-In-Charge

Dr. Anu Mary Chacko

Paramedical Staff

- a) Sri. Abraham.P. - Pharmacist
- b) Smt. Sasikala.L - Sanitation Worker

Adhoc Staff

- a) Staff Nurse -1
- b) Lab-Technician -1
- c) Nursing Assistant cum Attender -1

NIT Health centre Medical laboratory.

A newly constructed well equipped Medical Laboratory is functioning in the Health Centre from 2000 onwards.

NITC Health Centre has been actively working with the student community proactively to improve the welfare of NITC. During recent floods in Kerala, NITC health Centre provided the necessary Doxycycline tablets for all volunteers to prevent rat fever.

Two programs were conducted to improve the awareness of health care among the NITC community

1. Heart Dialogues - A day to listen for your heart - Cardiology Enclave along with Aster MIMS Calicut on April 3, 2019
2. First Responder Training- August 15, 2019

Bank, Post Office and Telephone Exchange

There is a branch of State Bank of India, an India Post Office, Telegraph Office and a BSNL Telephone exchange functioning in the Institute Campus

SHOPPING CENTRE

There is also a shopping centre run by the co-operative society of the employees of the institute staff functioning in the Campus.

9.6 PHYSICAL FACILITIES (GAMES & SPORTS)

Sl.no.	Name of the Game facility	No. of facilities
1.	25 m. Non-standard swimming pool	01
2.	25 station multi gymnasium	01
3.	Hockey field - standard	01
4.	Cricket Stadium with Turf match & practice wickets –	01
5.	Football field - standard	01
6.	Basketball - concrete outdoor - standard - Flood lighted	02
7..	Volley ball - standard- outdoor - Flood Lighted	01
8.	Tennis Complex- clay courts - standard - Flood Lighted	03
9.	Tennis Court Synthetic - standard - Flood Lighted	01
10.	Handball Court - standard	01
11.	Multi-purpose Auditorium for Indoor games (non-standard)	01

9.7. OTHER FACILITIES

9.7.1. CENTRE FOR BIOMECHANICS

The Centre for Biomechanics, inaugurated on September 10, 1998, is a unique centre in which active and useful academic interactions take place between doctors and engineers. Such centres, although essential for the benefit of society, unfortunately is not common in our country. R & D work of an interdisciplinary nature is carried out here, with Faculty drawn from various departments of this Institute and Adjunct Faculty from other institutions.

i. Proposed plan of Research

- Research interactions are going on with the Department of Physical Medicine and Rehabilitation and the Department of Orthopaedics, Calicut Medical College and a few other medical/rehabilitation centres. A few inter-disciplinary research initiatives have taken place in areas like gait analysis, deformity corrections etc.
- There are a few PhD students and PG students who have already shown interest and in working in Biomechanics related projects under the guidance of adjunct faculty in the Centre.
- The Centre plans to organise seminars, workshops/training courses in relevant fields of biomechanics so as to bring an exposure and awareness among the students and faculty about various interdisciplinary research areas in biomechanics.
- Updating the current facilities in the Centre for Biomechanics and reviving the R&D and consultancy activities are also planned.

ii. Notable Achievements

- VDS Fixator: Such a configuration, arrived at by elaborate finite element analysis, has proved to be superior to the existing ones. Clinical trials support the conclusions arrived at by detailed parametric study conducted on the computer. This invention has lead to a patent (India Patent No. 194925).

2. Dynamic Wrist Fixator: The new and improved dynamic wrist fixator aimed to solve the problem of healing unstable fractures of the wrist, with nearly complete recovery of the original mobility of the wrist joint. Multi-centred clinical trials were carried out at a number of medical college hospitals in Kerala and the device is proven to be superior to the existing ones available in the market. This invention also has lead to a patent (India Patent No. 196326).
3. Extensive finite element analyses were carried out on Ilizarov fixator used for correcting tibial fractures and in bone-lengthening procedures. Results of parametric studies gives doctors directions on how to use them more effectively.
4. Dermotaxis: This is a term coined to describe a simple and innovative method of achieving closure of skin defects and wounds through continual stretching of the skin. The Centre has developed a tool for skin closure using K-wires, which seems to be a cost effective and quicker method, compared to conventional procedures. It also has the advantage of retaining the sensation of skin in contrast to the conventional methods where it is lost. A viscoelastic model was used to study the behaviour of human skin the results from which indicates the rate at which the skin could be stretched without inducing separation of epidermis.
5. Methods to assess the goodness of healing of a fractured wrist were developed. Certain statistical methods were developed to estimate the gripping strength of the wrist before fracture from measurements of gripping strength of the other (unbroken) hand.
6. Pinch-Force Meter: A simple device to measure the pinch force has been developed. This device is useful in assessing how good the healing of a wrist injury is. A person with a wrist injury usually loses ability to exert much of pinch force.
7. Simple device to measure the viscosity of blood was fabricated. The blood viscosity measure is an easy indicator for several diseases including heart attack.
8. Simple device to prepare a blood smear has been developed. Some more studies are necessary before it can be commercialised.
9. A surgical tourniquet has been developed as part of an M.Tech project work. It is possible now, with this experience, to design a fully automatic programmable digital electronic tourniquet. Tourniquet is useful for the bloodless operation of limbs.
10. Use of LTTP in Prostheses and Orthoses: Low-temperature thermoplastics (LTTP) are extremely useful in developing orthoses such as braces. The advantage comes from the special property of LTTP that it becomes malleable at a temperature of 70° C and hardens when cooled to room temperature. Thus, it can be moulded by pressing against the patient's body. This enables doctors to provide the orthoses to the patients in the quickest possible time resulting in a faster cure of the disability. Trials carried out have demonstrated that it is possible to use LTTP in a variety of situations including the fabrication of sockets of artificial limbs. A research project funded by DST has been completed which benefited a large number of patients visiting the Physical Medicine and Rehabilitation Centre of Calicut Medical College. DST has sent a letter of appreciation regarding this work. It is planned to extend and propagate this work so that more patients from different parts of the country are able to draw the benefits from this work. This work is being extended so that complete prostheses could be made out of LTTP. This will enable the patients to get the prostheses with very little waiting.

Several tests on glues and appliances used by the dentists were carried out by postgraduate dental students. This formed part of a few postgraduate theses by students from different Medical Colleges in and around the state of Kerala.

Patents

1. Tibial External Fixator Assembly—A new biomechanical configuration for improved treatment of fractures of the tibia
2. Dynamic Wrist Fixator—A new biomechanical device to facilitate treatment of unstable fractures of the distal radius (wrist)

9.7.2 CENTRE FOR TESTING & CERTIFICATION – CTC

The centre for testing and certification was established in 1999 with financial assistance from Ministry of Industries & Commerce, Government of Kerala. The centre was established in mainly to help small scale entrepreneurs of the State of Kerala. Variety of testing equipments has been acquired for facilitating testing of electronic components, systems and gadgets.

Faculty in Charge : Dr. Sindhu T K

9.7.3 Advanced Manufacturing Centre & Sophisticated Instruments Centre

The major machines available at Advanced Manufacturing Centre/CAD-CAM Centre include, CNC Micro Machining Centre, Rapid Prototyping Machine, 4 axis CNC Vertical Machining Centre, CNC Turning Centre, CNC WEDM, CNC Die sinking EDM, Cutting Tool Dynamometers and Mini Dynamometers. Various CAD/CAM packages available are Creo, CATIA, Solidworks, Siemens NX, MSC Adams, ANSYS, ABAQUS, etc. Free training programs to our students are conducted every semester during evening hours.

The newly added DST-FIST Centre for Precision Measurements and Nanomechanical Testing which was set up at a cost of Rs 2.53 crore, housed with sophisticated machines like Optical Profiler, Nanoindenter, High Speed Camera, and Thermal Imager. Sophisticated Instruments Centre housed with 5 axes CNC CMM, Profilometers and various other measuring instruments.

9.7.4 Microscopy Centre

Microscopic Centre established in 2009 and managed by school of Nano Science and Technology. Centre is equipped with advanced microscopic equipment's like Scanning Electron Microscope (SEM) and Scanning Probe microscope (SPM). Centre is actively contributing to the research and consultancy of the institute.

Centre is equipped with Hitachi make SU 6600 Variable Pressure Field Scanning Electron Microscope having Secondary Electron Imaging (SE), Backscattered Electron Imaging (BSE) and Energy dispersive spectroscopy (Horiba EMAX.137 eV) for elemental analysis. Scanning probe microscopy includes a Park XE-100 Atomic Force Microscope (AFM) having capability of performing various analysis like Electrostatic microscopy, Magnetic force microscopy, Lateral Force microscopy, Conductive AFM, Nanolithography, Nanoindentation etc.

Centre is analyzing variety of samples from different department of the institute as well as the facility is open for consultancy service. Different academic, Industrial and R&D organizations from all over the country was using the facility under consultancy basis. Centre is always promoting the industry, R&D interactions with our institute

9.7.3 ENGINEERING UNIT FOR CIVIL AND ELECTRICAL WORKS

Civil Works

Sl. No	Name of Work	Status
1	Repair works in toilet and sewage lines in clusture 1,2,3,5 & 6 (Five floors) of Mega- hostel - I	Completed
2	Rising height of compound wall at PWD road side from Electrical PG block to BSNL building (North - West boundary of campus)	Completed
3	Construction of lab space for installation of impact test set up of Civil Engineering Department	Completed
4	Construction of work area, gas room, toilet and leach pit connected with D-	Completed

	hostel & C-hostel Kitchen	
5	Providing soak pits and drains in G1 (A&B) to G11 (A&B) quarters (22 nos)	Completed
6	Construction of a cafeteria and modification of existing toilet at Open Air Theatre	Completed
7	Construction of cafeteria near Chemical Engineering Department, East campus	Completed
8	Renovation of durability lab in Civil Engineering Department	Completed
9	Providing partition at Nano science research lab, fuel and combustion research lab & Nano Technology research lab in SNST including painting	Completed
10	Providing Gypsum board ceiling work in room no. 102 of NLHC	Completed
11	Providing distribution line for supply of reclaimed water from STP to various locations for gardening and cleaning purposes	Completed
12	Maintenance and repairs of 17 nos. of occupied apartments	Completed
13	Maintenance and repairs of 27 nos. of vacant apartments	Completed
14	Renovation of B Hostel	Completed
15	Renovation of C Hostel	Completed
16	Construction of additional floor over the existing classroom complex (Lecture Hall Complex-IV) in east campus	Completed
17	Renovation of Old ladies Hostel (Block I & II) for NIT, Calicut	Completed
18	Renovation of Boys Hostel (E) for NIT at Calicut	Completed
19	New Building for Central Library - Balance work	Completed
20	Renovation of toilet block for F Hostel	Completed

Electrical Works

Sl. No	Name of Work	Status
1	Electrification works of Supply Chain and System Simulation lab at SNST building	Completed
2	Providing electrical connections for submersible motor pump sets near Architecture building, Offshore building, IT lab complex, Swimming pool & Mega hostel - II	Completed
3	Providing additional 3phase connection at PG lab room no. 104, A/C points & power plug points at room no. 204 of SNST	Completed
4	Providing electrical connection to newly purchased CNC machines at Central workshop of MED	Completed
5	Renovation of electrical installation of testing & calibration laboratory for high voltage laboratory of EED	Completed

6	Providing Exhaust fans at Nano Science Research Lab	Completed
7	Providing light and plug points at Engine room of Fuel & Combustion Research Lab and additional plug points & UPS points at Tribology & Vibration Lab of MED at SNST building	Completed
8	Providing LED street light fittings at Architecture building and SNST building	Completed
9	Providing electric connection to class room desks in 102, 104 & 105 of MBA Academic Block	Completed
10	Repairing of motor starters and panel boards of Old & New pump houses	Completed
11	Providing electric connection to 500 kN Servo Actuator in Structure Lab of CED	Completed
12	Maintenance of existing street light poles including replacing the damaged metallic junction boxes, plinth and painting of poles towards residential area (10 Nos)	completed
13	Replacing the existing main switch boards & distribution boards of D - hostel	completed
14	Replacing the existing switch boards with modular switch boards, providing additional plug points in the rooms of the Ladies Hostel - III	completed
15	Providing additional UPS points and air conditioner points at IMD lab and CADD lab in Architecture department building	completed
16	Providing dedicated plate earthing for CNC electric discharge machine in the production engineering laboratory, MED	completed
17	Providing additional UPS plug points at Instrumentation Analysis Lab of Chemical Engineering Department	completed
18	Providing electric connection to Air conditioners & 10 KVA UPS at DIC Lab at the First floor of Main building	completed

9.7.4. CAMPUS SCHOOL

Spring Valley School

Spring Valley School is a Senior Secondary Co-educational English Medium School, functioning in the institute campus as one of the staff welfare measures. The school is affiliated to the Central Board of Secondary Education, New Delhi with code No.930100. School is being managed by REC SPECTRA (Society for Promotion of Educational, Cultural and Training Activities), a charitable society registered under the Societies' Act (1860), the members of which are the faculty members of the institute. Most of the infrastructure facilities of the school like land, buildings, laboratories, playgrounds, etc. have been made available by the institute. The School has always excelled in academics since its inception and could achieve 100% pass both in Class X and XII CBSE Examinations. Digitally enabled classroom facilities and the School Band have been provided to strengthen the academic and co-scholastic abilities of the students. The School celebrated its Silver Jubilee during the academic year 2017-18. The School celebrated its 26th Annual Day on 13th January 2019.

During the Academic Year 2018-19 Spring Valley School excelled in CBSE Class X and XII exams. The school got Cent percent results in both X and XII exams. Out of 28 students in X, 13 got above 90% and in class XII, out of 16 students 3 got above 90%.

Our high school and higher secondary school students participated in Malabar Innovation Festival-2018 conducted by Regional Science Centre and won Special award for the exhibit titled Remodeling of Calicut city. As part of COMPASS'18 conducted by Department of Mathematics and Mathematics Association of NIT Calicut for high school and higher secondary school students, our students (Anusmitha Biswas and Ashwin T Bhattathirpad) got First Prize in the InQuizitive-2018 (Quiz Competition) and our students (Kishore V and Adheena M Rajeesh) got first prize in the Poster Presentation Competition on 'Geometry and Nature'. The school has participated and won prizes in very many activities and has been projecting high academic standard and discipline right from its inception.

Office Bearers as on 31.03.2019:

- Dr. Sivaji Chakravorti, Director NITC, Chairman, REC SPECTRA NIT Calicut
- Dr. R. Manu, Vice Chairman, REC SPECTRA & President, School Managing Committee.
- Dr. A. Santhiagu, Secretary, REC SPECTRA & Manager cum Correspondent, Spring Valley School.
- Dr. George K Varghese, Vice President, School Managing Committee.
- Dr. R. Subashini, Joint Secretary cum Treasurer, REC SPECTRA
- Sri. Jayaprakasan, Senior Principal
- Smt. Shiny A., Principal

10 NOTABLE ACHIEVEMENTS

10.1 PAST ACHIEVEMENTS

DEPARTMENT OF ARCHITECTURE

- Started a new PG program in 2015 in Urban Planning
- Conducted several short term courses and summer/winter term courses sponsored by TEQIP, AICTE and IEL.
- Conducted two International Conference on Reinventing Design Pedagogy and Contextual Aesthetics in 2015 and in 2017.
- Established Geoinformatics Laboratory.
- Owns three excellent centers:
 - Building Science Laboratory.
 - CAAD Laboratory
 - Interactive Media Design Laboratory
- Carried out large number of consultancy works and also plays a major role in industry- institute interaction.
- Carried out large number of research projects.
- Published several papers in National and International Journals and National and International conferences.
- Organized several Workshops and Short Term Courses by the faculty of the Department.

DEPARTMENT OF CIVIL ENGINEERING

- The department had taken up training of local unemployed youth for self-employment under the Nehru Rozgar Yoganas (NRY) funded by Kerala Urban Development Finance Corporation. The training was given in Plumbing, Carpentry, Masonry and Landscaping. About 300 youths were trained under this programme
- The Department had four centres of excellence
 - a. Vehicle Motion Analyser Laboratory
 - b. Non Destructive Testing Laboratory
 - c. Biomechanics Laboratory
 - d. Centre for Transportation Research (CTR)
- The Department has already conducted more than 43 summer/winter schools sponsored by Indian Society for Technical Education and All India Council for Technical Education.
- The Department has organised in collaboration with Department of Training and Placement, more than 60 Short Term Courses in different fields of Civil Engineering
- The Department has already produced 32 Ph.D Scholars in different fields of specialisation
- The Department has carried out more than 41 sponsored Research Projects funded by MHRD, DST, ISCHMS, AICTE, Ministry of Water Resources etc.
- The Department has been recognized as a Centre for Scrutinizing the Design of important Public Buildings, by the Government of Kerala.
- The Department has generates on an average Rs. 25 lakhs per year through testing and consultancy
- The Faculty of the Department published papers in the National and International Journals and National and International Conferences on an average of about 40 papers per year
- The Ferro-cement technology transfer: Large scale water tank of 5,000 and 10,000 litres capacity, fabricated using Ferro-cement technology was transferred to JALANIDHI of Kerala Water Authority to be used under rain water harvesting schemes
- Developed an effective retrofitting technique using ferrocement wrapping for RCC frames under distress.
- Developed sustainable cementitious composites
- The Department had received two patents in the area of Bio-mechanics for the following:
 - § Dynamic External Wrist Fixator
 - § External Fixator Assembly for Tibial Fracture
- Community Services
 - Popularized the cost effective Ferrocement water tanks in the rural and urban sector
 - Design and Development of water conservation techniques such as rain water harvesting and construction of check dams
 - People participation programmes of Panchayats
 - Creating awareness of traffic rules and regulations in schools
 - Actively associated with the awareness building campaign in connection with the implementation of the Model Solid Waste Disposal Scheme in Calicut Corporation
 - Involved in a few biomechanics related projects which have benefited a number of patients visiting the Physical Medicine & Rehabilitation Centre of Calicut Medical College.
 - Organise special lectures on good construction practices at the Licensed Engineers and Supervisors Federation Kozhikode
 - A project under the TEQIP under the Service to Community scheme titled “IT Training and Social Surveys for Chathamangalam Grama Panchayath”, October 2007 – March 2007
 - Assists in implementing Model Solid Waste Disposal Scheme in Calicut City.
 - Skill up-gradation of rural craftsmen and women workers under TEQIP
 - Organized a 5-day Workshop on “Career Guidance and Preparation for Interview” for 80 students from colleges all over Kerala from November 29- December 3, 2007 as part of NSS activities, Conducted a 10 day special camp at Katippara Panchayat, Thamarassery, Kozhikode District from 7th December 2007 to 15th December 2007.

- Conducted “Self Enrichment programme” for a selected group of first year students of the Department of Civil Engineering, in association with Centre for Research & Education for Social Transformation (CREST), Kozhikode, 22nd December to 28th December 2012
- Ferrocement water tank for community water supply schemes
- Development of low cost precast structural elements such as walls, lintels, beams etc. For buildings in rural areas
- Guided preparation of Master Plan for Avala Kuttoth Higher secondary school Along with Dr M.A. Naseer of Department of Architecture which was taken by the Institute as a social service project by the students of NITC

DEPARTMENT OF ELECTRICAL ENGINEERING

Sl. No.	Name	Number
(a)	Publications	
	International Journals	559
	National Journals	5
	International Conferences	772
	National Conferences	53
	Books	7
	Book Chapters	8
	Patents Granted	3
	Patents Filed	8
	Proceedings	44
(b)	Community Services	<ol style="list-style-type: none"> 1. Conducted 9 Training Camp to School students in Science, Mathematics etc. 2. Feasibility Analysis of Solar power for Attapadi tribal area is done and report submitted to Govt. of Kerala. 3. Field survey is done in Wayanad Ghats for lighting Calicut-Bangalore highway and report submitted to District Administration. 4. Visited the orphanage, Sree Sadashiva Bala Sadanam, Calicut and Distributed clothes, sweets and learning materials for the children.
(c)	Other academic and administrative services	Faculty members are nominated as Technical Chair to various International Conferences, Academic Advisory Board Members of Various Universities and State level and national level Committees
(d)	Conferences/Summer/ Winter Schools/ Short term courses/ Workshops conducted	95

(e)	Expert lectures delivered in conferences/ Seminars/ Workshops by faculty	286
(f)	Details of faculty who acquired higher qualification	Dr Kumaravel S. – Post Doctoral Fellowship in Power Converter Applications in Power Systems from University College Dublin, Ireland, 2016
(g)	Consultancy and testing	Consultancy Projects:18 Testing Assignments: 423
(h)	Participation in Conferences/ Seminars/Workshops/Other training Programs	194
(i)	Sponsored R & D Projects	9 Projects are currently undergoing

DEPARTMENT OF MECHANICAL ENGINEERING

Name of the Faculty/Staff member	Details of Past achievements
Dr. T.J. Sarvoththama Jothi	JNCASR Visiting Fellowship 2013-2014 Institution of Engineers, India (IEI) Young Engineers Award 2012-2013 Awarded Indian National Science Academy (INSA) Visiting Fellowship 2012-2013 · BK 21 fellowship for pursuing post-doctoral research work at KAIST, S. Korea.
Dr. V. Madhusudanan Pillai	· Invitation received to visit the Innovation Exhibition and Interaction with the Grassroots innovators during FINE 2018 and the innovation activities submitted have been shortlisted for presentation at Rashtrapati Bhavan. Accordingly, visited the Innovation Exhibition and Interacted with the Grassroots innovators on 20th and 21st March, 2018. Research works carried out by research scholars under my guidance have been presented at West Hall, Rashtrapati Bhavan, on 20th March, 2018, New Delhi as part of Festival of Innovation and Entrepreneurship (FINE 2018).
Dr. Jose Mathew	Received a grant of Rs. 2.51 Cr from DST under FIST program to set up a centre for “Precision Measurements and Nanomechanical Testing” in 2015 Best all-round performance award among NITC faculty during 2005-06 [Instituted by NIT Calicut and was the first award winner.] Conducted International Conference on Precision, Meso, Micro and Nano Engineering (COPEN 8) at NIT Calicut during Dec. 13-15, 2013 and was the Organizing Secretary for the same. ISTE- Certificate of Achievement 2008 National award (First Prize) for having guided the Best M.Tech. Thesis in Mechanical

	<p>Engineering for the thesis titled "Theoretical and Experimental Investigations on Mechanical Micro Machining (M3)" submitted by Sooraj V.S.</p> <p>ISTE - Certificate of Achievement 2012 National award (First Prize) for having guided the Best M.Tech. Thesis in Mechanical Engineering for the thesis titled "Multi-Objective Optimization of Process Parameters in Micro drilling Using Vibration Assisted Micro EDM" submitted by Deepak G. Dilip.</p> <p>DST International Travel Support (full amount) Scheme award for attending ASME International Conference at Chicago, USA during November 2012.</p> <p>Coordinator for NITC-NITK Joint National Workshop on Strategies to Attain Excellence in Impact Making Research and Development (SAEIMRD) held at NIT Calicut during Feb. 3-4, 2012</p> <p>A new 'Sophisticated Instruments Centre' was setup in the Department of Mechanical Engineering with the financial assistance of MHRD with a total cost of about Rs 60 lakhs during 2002, which caters regular UG/PG student needs and has facilities for carrying out measurements of industrial products/undertake consultancy projects.</p> <p>Has undertaken 5 MHRD MODROB projects, 2 FRG projects</p> <p>Has contributed in a big way to the modernization of Metrology Lab, CAD/CAM Centre, Production Engineering Lab., etc. and has introduced many new experiments.</p> <p>The new machines added include, Micro Machining Centre, Rapid Prototyping Machine, Cutting Tool Dynamometers and Mini dynamometers, 4 axis CNC Vertical Machining Centre, CNC Turning Centre, etc.</p> <p>· LabVIEW Software and various CAD/CAM packages like ANSYS, ABAQUS, Pro/E, CATIA, ESPRIT, PREDATOR, Creo, Mastercam, SolidWorks, Siemens NX, MSC Adams, etc. were added to the CAD /CAM Lab</p>
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DEPARTMENT OF PHYSICS

Dr. Predeep P

- During the last 10 years 8 major sponsored projects were completed. A research lab on organic and molecular electronics and photonics with state of the art facilities has been set up. Organized 6 self-financed short term training programmes, four government sponsored training programmes, two international conferences, and One National Conferences.
- Organized one international training course on Organic Solar cells under the GIAN programe
- Published two books on Optoelectronics by an international publisher and one book chapter during this period.
- Filed six Patent applications during this period.
- Got two international fellowships from Spanish and French Govts., and an engagement as visiting professor at Institute of Materials, University of Nantes, France. Visited EPFL, Switzerland, and Tunisia as a member of the Indo-Tunisia scientific collaboration delegation of DST, and Germany.

- Invited for talks at IIT Kanpur, IISc, Bangalore, German House, Delhi, University of Cologne joint programme, Delhi University, Rajasthan University, NIT Suratkal, NIT Jaipur, NEHU, a number of Engineering Colleges, and Universities. Etc.

Dr. Chandrasekharan K

- Developed a research lab- laser and nonlinear optics lab
- Received Rs 70 lakhs through different R & D projects

SCHOOL OF NANO SCIENCE AND TECHNOLOGY

- One international text book and filed 2 patents
- The school has obtained an R&D funding of about Rs. 3.5 Crores so far through 10 major funded projects from the Government (DST, DBT, DAE, DRDO, CSIR, KSCSTE,CVRDE) and industries (HPCL, Tata Steel,NTPC)
- The Department has conducted 4 Faculty Development programmes and 1 Workshop on Nanotechnology
- Dr.Sajith. V received best Young Teacher award of NIT Calicut, for the performance during the year 2007 – 08
- Dr.Sajith V and Dr.Shijo Thomas received Dronacharya Award for the Best Faculty Advisor of the teams participated in the BAJA SAE India 2012 Competition
- Dr.Sajith V received the SDTRAE fellowship in 2015.

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Organized the International Symposium on Biocomputing (ISB 2010) at Calicut, Kerala, jointly with the Indiana University Purdue University Indianapolis (IUPUI), USA, with cooperation from the Association for Computing Machinery (ACM).

Organized the Indo-US Workshop on Biocomputing (ISB 2011) at Calicut, Kerala, jointly with the Indiana University Purdue University Indianapolis (IUPUI), USA, with cooperation from the IUSSTF and NSF.

Dr. S.D Madhu Kumar has been selected as ‘Big Data’ Track- Co-Chair for the IEEE International Conference - Recent Advances in Intelligent Computing Systems (RAICS 2013)

Dr. Muralikrishnan K won the ‘Best Ph. D Thesis Award’ from the Indian Institute of Science (IISc), Bangalore in the year 2008.

Dr. S.D Madhu Kumar has been selected as an External Examiner for evaluating the Computer Science courses offered by the colleges under Glasgow Caledonian University, UK.

Dr. S.D Madhu Kumar gave the keynote address in the International Conference on Advances in Computing, Communications and Information Science (ACCIS’14) at TKM College of Engineering Kollam.

Dr. S.D Madhu Kumar has served as Algorithms Tracks Co-Chair along with Dr.Priya Chandran and Dr.K Murali Krishnan for Seventh International Conference on Cotemporary Computing (IC3 2014)-

Dr. S.D Madhu Kumar has served as Program Chair for the International Workshop on Access Control Policies, Models and Mechanisms (ACPM-2014), Delhi.

Dr.S.D Madhu Kumar has been selected as Vice Chair- ACM Trivandrum Professional Chapter.

Dr. S.D Madhu Kumar has served as Publications and Web Support Chair for the IEEE Malabar Subsection (2014) and Vice Chairman (2016 onwards).

Dr. S.D Madhu Kumar has served as Publicity Co-Chair for the ACM DEBS 2014.

Dr. S.D Madhu Kumar has served as Cloud Computing Track co-Chair for the ACM SAC 2014.

Dr. S.D Madhu Kumar has served as TPC Member for the 3rd International Workshop on Collaborative Cloud (CollabCloud 2014) of 10th IEEE International Conference on Collaborative Computing: Networking, Applications and Worksharing, Miami, Florida, United States

A paper by titled “A Computational Method for Drug Repositioning using Publicly Available Gene Expression Data” authored by Shabana K M, Abdul Nazeer K A, Meeta Pradhan and Mathew J Palakal won the “Best paper Award” in the 4th IEEE International Conference on Computational Advances in Bio and Medical Sciences (ICCABS-2014) held at Florida, USA in June 2014.

Two of the three members of the Organizing Committee of ACM SAC-2016, Piza,Italy - Cloud Computing Track, are from this department - Dr. Priya Chandran (Professor) and Dr. Madhukumar S D (Associate Professor)

Dr. S.D Madhu Kumar has been selected as Cloud Computing Track co-Chair for the ACM SAC 2016

Dr. S.D Madhu Kumar has served as PC Member of IEEE International Conference - Recent Advances in Intelligent Computing Systems (RAICS 2015)

Dr. S.D Madhu Kumar has served as Steering Committee member of the International Conference on Computing and Network Communications (CoCoNet'15)

Dr. S.D Madhu Kumar has served as Keynote Speaker of Lecture Workshop on Internet of Things at GRD College Coimbatore- 2015

Dr. S.D Madhu Kumar had given a Keynote Speech at the International Conference on Data Science Analytics and Applications (DaSAA'16), Gunindy Engineering College, Chennai.

Dr. S.D Madhu Kumar gave a Keynote speech at ICIA 2016, Coimbatore

Dr. S.D Madhu Kumar has served as TPC Member in International Workshop on Internet-scale Clouds and Big Data (ISCBD 2016) Pittsburgh, PA, USA.

Dr. S.D Madhukumar has served as TPC Member of PerfIoT: Workshop on Performance Evaluation of IoT Applications , France

Dr. S.D Madhukumar has served as - TPC Member 2nd IEEE International Conference on Anti-Cyber Crime (ICACC)'2017 , Abha, Kingdom of Saudi Arabia

Dr. S.D Madhukumar served as - TPC Member -IEEE TenSymP 2017, Cochin

Dr. S.D Madhukumar has served as - TPC Member Symposium on Pervasive Systems, Algorithms, and Networks (IEEE I-SPAN 2017), Exeter, England

Dr. S.D Madhukumar has been selected as Secretary, CREC Silver Jubilee Endowment Trust (2016 onwards)

Dr. S.D Madhukumar and Dr. Priya Chandran have been selected as Track Chairs of ACM SAC 2017 Cloud Computing Track

Dr. Jimmy Jose has been selected as Programme Committee Member, National Workshop on Cryptology '17, Annual event of Cryptology Research Society of India organised by the Department of Computer Science & Engineering, NIT Trichy during 28-30, Aug 2017.

Dr. Anu Mary Chacko, Dr. Madhu Kumar SD, Alfredo C published a book chapter in the book Automatic Provenance Capture at Middleware in Big Data Context, University of Derby, United Kingdom: Springer Verlag Gmbh, ISBN: 9783319701011

Dr. S D Madhu Kumar Selected as TPC Member- Symposium on Pervasive Systems, Algorithms, and Networks (IEEE I-SPAN 2017), Exeter, England

Dr. S D Madhu Kumar has served as PC Member - 2nd IEEE/ACM International Workshop on Distributed Big Data Management (DBDM 2017) Madrid, Spain- In conjunction with IEEE/ACM CCGRID2017

Dr. S D Madhu Kumar has served as Track Chair-ACM SAC 2017 Cloud Computing Track

Dr. S D Madhu Kumar has served as Tutorial Speaker (Big Data Analytics Tools and Techniques) -IEEE SPICES2017

Dr. S D Madhu Kumar has served as Academic Liaison Chair-IEEE Cloud Computing for Emerging Markets, 2018.

Dr. S D Madhu Kumar has served as Program Chair- 2nd International Workshop on Internet Scale Clouds and Big Data (ISCBD) 2017, San Jose California

Dr. S D Madhu Kumar , Anu Mary Chacko have been served as co-Chairs- IEEE TENCON 2017 - Special session on Big Data Provenance

Dr. S D Madhu Kumar delivered a Keynote speech in ICETEST 2018, Government Engineering College, Thrissur

Dr. K.A. Abdul Nazeer has been selected as Member of the NIRMAN initiative, A network of institutions in Calicut for collaborative activities aimed at social development.

Dr. K.A. Abdul Nazeer has been selected as Member, Executive Committee, 'Bioinformatics Centre', Indian Institute of Spices Research, Calicut.

Dr. K.A. Abdul Nazeer has been served as Member, Advisory Committee for NBA Accreditation, Govt. Engineering College, Kannur, 2017.

Dr. K.A. Abdul Nazeer has been served as Visiting faculty at Govt. Engineering College, Wayanad, 2017. Organized the IEEE International Conference on Signal Processing, Informatics, Control and Energy Systems (IEEE SPICES) jointly with the Departments of Electrical Engineering and Electronics and Communication Engineering, NIT Calicut in February 2015

DEPARTMENT OF CHEMICAL ENGINEERING

NAME	Number/Details
International and National Journals	135
International and National Conferences	108
Books	2
Book Chapters	4
Other academic and administrative services	Faculty members are nominated as Technical Chair to various national Conferences.

Faculty members worked as reviewers for various book chapters and books

- Dr. Selvaraju received Kerala state Young scientist award 2014, Hiyoshi Think of Ecology Award 2016
- Department has bagged 4 funded research projects from KSCSTE, SERB, DST and MHRD
- The department has established sophisticated instruments lab.
- Department faculty working as technical reviewers for more than 50 international Journals
- Department faculty has been invited for delivering lectures in various FDP's conducted at different universities and colleges across the country
- Department faculty also got the invitations to review Postgraduate and PhD thesis from various government and private universities
- Department organized the following in the previous years

CONFERENCES AND WORKSHOP

- International Conference on Energy and Environment: Global Challenges-2018 March 9 & 10, 2018.
- A Five Day GIAN Course on Multidimensional Engineering Approaches for resolving complex Environmental Issues December 19-23, 2016
- Two days National workshop on “Advanced Optimization Techniques in Chemical Process industries” April 2015
- Two days National workshop on “Advanced Mathematical Approaches in Chemical and Environmental Engineering Using Matlab and Simulink” February 2015
- Two days National Conference on “Recent Trends in Alternate Energy – RTAE2011” June 2011
- Two days National Conference on “Biological Wastewater Treatment towards Green Environment – January 2011

FACULTY DEVELOPMENT PROGRAMS

- Advance Techniques in Energy and Wastewater treatment (2018)
- Theory and Applications of Adsorption Processes (TAAP 2016)
- Novel Separation Technologies NST 2015
- Emerging trends in chemical and environmental engineering (ETCEE-2014).
- Changing scenario in energy& environment (CSEE-2013).
- Recent research trends in chemical and environmental engineering in May 2013.
- Modeling and Simulation in Chemical and Environmental Engineering in 2012

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

- B.Tech ECE programme offered by Department of Electronics and Communication Engineering got accredited for 6 years by National Board of Accreditation (NBA).
- The department has conducted several workshops short term courses and summer/winter term courses.
- The department has conducted own international Conference on its own in 2011 and one international conference combined with EEE and CSE departments in 2015.
- The department has also carried out a number of research projects.
- The faculty of the department has large number of published papers in National/ International Journals and National/ International conferences.
- The department is a member of SMDP project by Government of India.
- Two M.Tech programmes offered by Department of Electronics and Communication Engineering got accredited by National Board of Accreditation (NBA). M.Tech in Signal Processing for 6 years and M.Tech in Electronics Design and Technology for 3 years

SCHOOL OF BIOTECHNOLOGY

1. Dr. Prem raj P. , member, International Committee , GCEAS, 2015, Hong Kong

Achievements took place during the year 2018-2019

1. Dr. Prem raj P. , Faculty Advisor of the Scitable Project, an online collaborative science education project of the *Nature Publishing Group*
2. Dr. Prem raj P. , whose biography listed in Marquis' whoiswho & Who's Whoin Thermal-Fluids

10.2 ACHIEVEMENTS THAT TOOK PLACE DURING THE YEAR 2018-2019

Consultancy and Testing

Si.No	Nature of Service	Organization	Revenue Earned (in Rs)
1.	Consultancy	No of Firms – 20	19,49,414/-
2.	Test	No of Firms – 174	19,15,441/-

Publications (Department wise)

Sl. No	Dept/School	Journals	International Conferences	National Conferences	Total
1	ARCH	3	7	2	12
2	CED	65	37	6	108
3	CHED	27	21	1	49
4	CHEMISTRY	51	0	0	51
5	CSED	22	40	0	62
6	ECED	65	44	2	111
7	EED	34	44	7	85
8	MATHS	43	3	0	46
9	MED	103	90	0	193
10	PHYSICS	28	1	0	29
11	SBT	10	14	0	24
12	SNST	22	0	0	22
13	SOMS	14	5	0	19
14	PHYSICAL EDN	0	0	0	0
	Total	487	306	18	811

DEPARTMENT OF ARCHITECTURE

a. Publications

i) Journals

Sl No	Name of the Author	Title of the Paper	Publications/ Journals	Vol., Year, p.p
1.	Bimal Puthuvayi and P. P. Anilkumar	“A Stochastic Approach to Estimate Distribution of Built Up Area in Regions with Thick Tree Cover”	Journal of Indian Society of Remote Sensing, Springer	46, 2018, 145-155
2.	Anjana Bhagyanathan Kasthurba A.K, Santosh.G.Thampi, Deepak Dhayanithy	Terrain attributes of sacred grove locations point towards conscious spatial delineation	Current Science	114 (5), 2018, 957-959

3.	Nina Lazar, Chithra K	Green Building Rating Systems from the Perspective of the Three Pillars of Sustainability using Point Allocation Method, International Conference on Green Buildings & Sustainable Engineering	Springer Transactions in Civil and Environmental Engineering	2018, 151-65
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ii) International Conferences

Sl. No.	Name of the Author	Title of Paper	Name of International conference	Details
1	N. Tagore, S. Priya, Bimal Puthuvayi, and Banerjee	“Measuring Urban Resilience in Indian Cities,”	Urban Sustainability: Emerging Trends, Themes, Concepts & Practices	1, 2018, p. 39.
2	Dr. Anilkumar P.P, Krishnaveni K.S.	Study of Urban Sprawl Impacts on Wetland Ecosystem Using Remote Sensing and GIS	38th INCA International Congress on “Emerging Trends in Cartography” organized by ISRO held during 29-31, 2018 at Hyderabad.	
3	Dr. Anilkumar P.P, Krishnaveni K. S	ICT as a Tool for the Structured Management of Urban Sprawl	Green Building and Sustainable Engineering International Conference organized by Rajagiri School of Engineering & Technology (RSET), Kochi, India together with Institute for Building Energetics, Thermotechnology and Energy Storage (IGTE), University of Stuttgart, Germany on February 19-20, 2019 at RSET	
4	Nina Lazar, Chithra K	Green Building Rating System and Energy Efficiency of a Building from the Building Lifecycle Perspective, ,	Green Building and Sustainable Engineering International Conference organized by Rajagiri School of Engineering & Technology (RSET), Kochi, India together with Institute for Building Energetics,	2019

			Thermotechnology and Energy Storage (IGTE), University of Stuttgart, Germany on February 19-20, 2019 at RSET	
5	Dr. Shyni. Anilkumar	Vulnerability Assessment of Coasta	4 th world congress on disaster management	2019
6	Pavatbarani. P and Shyni. Anilkumar	Flood risk management of urban areas in India: Challenges and new paradigms	4 th world congress on disaster management	2019
7	Naseer M A	Thermal Performance of Roof Coverings in Warm Humid Climate	International Conference on Sustainable Built Environment 2018	7 th to 9 th February 2018, College of Architecture, Trivandrum

iii. National Conference

Name of the Author	Title of Paper	Name of National conference	Vol, Year, p.p.
Dr. Anilkumar P.P, Krishnaveni K. S	Potential of Mixed-Use Development for Control of Urban Sprawl	34th National Convention of Architectural Engineers and National Seminar on Architectural Engineering for Socio-Economic Development organized by the Institution of Engineers (India) held at National Institute of Technology Karnataka, Surathkal on 24th and 25th November 2018.	
Naseer M A	Need for Energy Efficient Thermal Retrofitting of RCC roofs for Indoor Thermal Comfort	National Convention of Archtiectural Engineers, Institute of Engineers India	NIT Surathkal, 24 th to 25 th November 2018

b. Community Services:

Name of Project	Faculty Involved
Master Plan for Govt. U P School Neerad	Dr. Chithra K

Master Plan for Cherooppa Health Centre	Dr. Chithra K
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c. Other Academic and Administrative Services

Name of the Staff	Academic and Administrative Services
All faculty have academic and administrative services entrusted such as FA, Lab in charges, UG/PG/PhD coordination, Examination duty etc.	

d. Conferences/Summer/Winter School/Short term Courses/ Workshops conducted

Sl. No	Title	Coordinators	Duration & Period
1	DST Sponsored 21 Days Summer Term Course on "Geospatial Technologies"	Dr Naseer M A and Dr. Bimal P	10th to 30th June 2019
2	New Housing literacy for rebuilding Kerala	Dr. Deepthi Bendi Dr. Shyni Anilkumar	1 day 12 th January 2019
3	Sustainable Building Technologies and Environment	Dr. Kasthurba A.K Dr. Deepthi Bendi	5 days 12.11.2018 - 16.11.2018,

e. Expert lecturers delivered in Conferences/Seminar/workshops

Sl. No.	Name of Staff	Title of the Programme	Duration and Period	Organization
1	Anjana Bhagyanathan	FDP in building and the Environment	12.11.2018	DAP, NITC
2	Dr Kasthurba A K	Sustainable development along Transit Corridors" - Integrated Approach for Transport Corridors	25 Feb to 1 March 2019.	BMS School of Architecture, Bangalore
3	Dr Kasthurba A K	Towards Energy efficient and Sustainable Development	10-12 January 2019.	Department of Architecture, NIT Tiruchirappalli, Tamilnadu.
4	Dr. Deepthi Bendi	Disaster readiness in the built environment in India", in the "New Housing Literacy for Rebuilding Kerala" Kasargod, Kerala.	2 hours 09.03.2019	Department of Housing, Kerala state government & Nirmithi Kendra
5	Dr. Deepthi Bendi	Alternative Building Technologies for India", in the "New Housing Literacy for Rebuilding Kerala" Thalassery, Kerala.	2 hours 09.02.2019	Department of Housing, Kerala state government & Nirmithi Kendra
6	Dr. Deepthi Bendi	Panel member in The "Laurie Baker Smrithi"	4, 5 March 2019	COSTFORD and Habitat Technology Group, at Trivandrum, Kerala, India.
7.	Dr. Anjana	Sustainable management of	08.02.2019	Collectorate,

	Bhagyanathan	coastal ecosystems		Kozhikode
8	Dr.Anjana Bhagyanathan	Sustainable residential landscapes	7.10.18	Prasar Bharati, Kozhikode
9	Dr.Anjana Bhagyanathan	Sustainability and Site planning	12.12.18	Christ University, Bangalore

f. Details of Faculty, who acquired Higher Qualification

Name of the Faculty	Additional Qualification
Bimal P	PhD.

g. Consultancy and testing

h. Sl. No	Nature of Service	Organization	Revenue earned	Status
1	Providing Architectural and Structural Design for a Commercial Building	Koyilandy Municipality	Rs. 70 lakhs	Nearing completion
3	Technical Expert	PYN Heritage project for Laterite masonry at Yangoon, Mynamar; Govt of Mynmar and Hongkong Shangai group of Hotels. Sept2018	Honararium	Completed

h. Patents acquired and filed: Nil

i. Student achievements

Sl. No	Year	Name of the award	Name of the student
1	2017	NASA Trophy -2017	Labeeb and group
2	2017	Transparence 12.0 - 2017 3rd place, National winners	Sufi Abdul Hakeem, A.Aravind, Shravan
3	2018	1 st place Kerala Floods Innovative Resilient Design, Organised by the Department of Housing	A.Aravind, Pradeep R, Ajith V
4	2019	1 st Place Mathruboomi and Malabar cements Perfect Homes -Zonal winners	A.Aravind, Ajith V,Amrithavarshini E R
5	2019	Authorised Illustrator for Nagaland Text Books	Thejaseko
		1 st place	Vishruth and Group

6	2019	Poster presentation organised by the Department of Housing, Kerala and NITC	
7	2019	3 rd place Poster presentation organised by the Department of Housing, Kerala and NITC	Hilal and Group

DEPARTMENT OF CHEMICAL ENGINEERING

a. Publications

Journals

Sl. No	Name of the Author	Title of Paper	Name of Journal	Vol., Year, p.p.
1	R. Keerthi, N. Selvaraj, Lily Alen Varghese & N. Anu	Source apportionment studies of particulates (PM10) in Kozhikode, South Western India using a combined receptor model	Chemistry and Ecology	34, 2018, pp 781-787
2	AB Sathya, V Sivasubramanian, A Santhiagu, Chitra Sebastian, R Sivashankar	Production of Polyhydroxyalkanoates from Renewable Sources Using Bacteria	Journal of Polymers and the Environment	Volume 26, Issue 9, pp 3995-4012, 2018
3	Ramya Sankar M.S., V. Sivasubramanian	Kinetic, Isothermal and Thermodynamic Investigation of Electrocoagulation of Congo Red Dye Removal from Synthetic Wastewater using Aluminum Electrodes	Desalination and Water Treatment	122 (2018) 333-350
4	A.B.Sathya, R.Sivashankar, A.Santhiagu, V.Sivasubramanian	Green algae as source for polyhydroxyalkanoate synthesis from food processing wastewater	Research Journal of Chemistry and Environment	22 (12) (2018) 66-74
5	N Saranya, A Ajmani, V Sivasubramanian, N Selvaraju	Hexavalent Chromium removal from simulated and real effluent using Artocarpus heterophyllum	Journal of Molecular Liquids	265 (2018) 779-790

		peel biosorbent-Batch and continuous studies		
6	C Vigneshwaran, V Sivasubramanian, K Vasantharaj N Krishnanand, M Jerold	Potential Of Brevibacillus Sp. AVN13 Isolated From Cru Oil Contaminated Soil For Biosurfactant Production And Optimization Studies	Journal of Environmental Chemical Engineering	6 (4) (2018) 4347-4356
7	M. Jerold, V. Sivasubramanian	Box–Behnken Design Optimization of Malachite Gre dye bio sorption Using Nano Zero Valent Iron Sargassum swartzii bio composite	Particulate Science and Technology	36 (3) (2018) 386- 393
8	R Sivashankar, A Thirunavukkarasu, R Nithya, J Kanimozhi, AB Sathya, V Sivasubramanian	Sequestration of methylene blu dye from aqueous solution by magnetic bio composite: Three level Box–Behnken experimen design optimization and kineti studies	Separation Science and Technology	(2019) 1-14
9	. LA Raman, B Deepanr S Rajakumar, V Sivasubramanian	Experimental investigation on performance, combustion and emission analysis of a direct injection diesel engine fuelled with rapeseed o biodiesel	Fuel	246 (2019) 69-74
10	. A. Surendhar, V. Sivasubramanian	Energy And Exergy Analysis, Drying Kinetics, Modeling An Quality Parameters Of Microwave-Dri Turmeric Slices	Journal of Thermal Analysis and Calorimetry	136 (1) (2019) 185- 197
11	. EV Vidya Vijay, M Jerold, MS Ramya, S Lakshmanan, V Sivasubramanian	Electrocoagulation using commercial grade aluminum electrode for the removal of crystal violet from aqueous solution	Water Science and Technology	79 (4) (2019) 597- 606
12	R Selvaraj, IG Moorthy RV Kumar,	Microwave mediated productio of	Fuel	237 (2019) 40-49

	V Sivasubramanian	FAME from waste cooking oil Modeling and optimization of process parameters by RSM and ANN approach		
13	Sreedha P, Sathya A B, V. Sivasubramanian	Novel Application of High- Density Polyethylene Mesh as Self-Forming Dynamic Membrane Integrated into a Bioreactor for Wastewater Treatment	Environmental Technology	39 (1) (2018) 51- 58
14	Sreedha P, Sathya A B, V. Sivasubramanian	Pneumatically Agitated High- Density Polyethylene Mesh- Based Bioreactor Developed for Wastewater Treatment	J Environ Eng.	144 (5) (2018) 04018023, 1-9
15	Abdul Jaleel E, Aparna K	Identification of realistic distillation column using hybrid particle swarm optimization and NARX based artificial neural network	Evolving Systems	10(2):1- 18doi:10.10 07/s12530- 018-9220-5
16	Abdul Jaleel E, Aparna K	Identification of realistic distillation column using NARX based hybrid artificial neural network and artificial bee colony algorithm	Journal of Intelligent & Fuzzy Systems	Volume 34, issue 4 doi:10.3233/ JIFS-161966
17	Anju Sunny, N Gazliya, K Aparna	Optimization of degasified liquefied natural gas based reforming process for syngas production in an ammonia plant	Energy Sources, Part A: Recovery, Utilization, and Environmental Effects	doi:10.1016/ j.jngse.2016. 02.014
18	Mohanraj N, Mohanraj P S.Bhuvaneshwari	Decolorization of synthetic dye wastewater using packed bed electro-adsorption column	Chemical Engineering and Processing	2018 ,130,160- 168
19	Mohanraj P, Amala J, S.Bhuvaneshwari	Bio-composite based electrode for effective removal of Cr (VI) heavy metal via capacitive deionization	Chemical Engineering Communications Taylor and Francis	https://doi.org/10.1080/0986445.2019.1627338
20	Murugan P, Nihal V, S Bhuvaneshwari	Extraction of Cr (VI) By Pickering Emulsion Liquid Membrane Using Amphiphilic silica nanowires	Journal of Dispersion Science and Technology	2018, 40(7) 1046-1055,

		(ASNWs) as a Surfactant		
21	Vishnuprasad S, Haribabu K, Perarasu V.T	Experimental study on the convective heat transfer performance and pressure drop of functionalized graphene nanofluids in electronics cooling system	<u>Heat and Mass Transfer</u>	55, 2019, pp 2221–2234
22	Sumisha A, Jiben Ashar, Aswathy Asok, Karthi S & Haribabu K	Reduction of copper and generation of energy in double chamber microbial fuel cell using <i>Shewanella putrefaciens</i> ,	Separation Science and Technology	2019, PP 1-10
23	Veera Asha Kumari Ake Teja Reddy Vakamalla Narasimha Mangadoddy, Sreedha GE, Shiva Kumar Raparla, Rajan Kumar	Numerical simulation of near-gravity coal particle behavior in a dense medium cyclone using mixture model coupled with a discrete phase model	International Journal of Coal Preparation and Utilization	2018, https://doi.org/10.1080/19392699.2018.1491844
24	Teja Reddy Vakamalla, Narasimha Mangadoddy	The dynamic behaviour of a large-scale 250-mm hydrocyclone: A CFD study	Asia-Pacific Journal of Chemical Engineering	14 (2), 2019, e2287
25	M A Rao, R S Babu, M V Pavan Kumar	Stress corrosion cracking failure of a SS 316L high pressure heater tube	Engineering Failure Analysis	90, 2018, 14-22
26	M A Rao, M V Pavan Kumar, S S Rao, N Narasaiah	Rheological Behavior of Coal Water Slurry using Sodium Tripolyphosphate	International Journal of Coal Preparation and Utilization	DOI: 10.1080/19392699.2018.148566
27	M.A. Rao, M V Pavan Kumar, SS Rao, N Narasaiah	Rheological behaviour of coal-water slurries of Indian coals using carboxymethyl cellulose dispersant – a comparative study	International Journal of Coal Preparation and Utilization,	DOI;10.1080/19392699.2018.1518901

ii. **International Conferences**

SI. No	Name of the Author	Title of Paper	Name of International conference	Details
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1	.C.Vigneshwaran, V.Sivasubramanian,	Evaluation of Biosurfactant Potential from Brevibacillus sp AVN1 for Remediation of Hydrocarbons and Heavy Metals	International Conference on Advanced Materials and Energy Science and Technology (AMEST 2019) during February 27-28, 2019, Department of Energy Engineering, North-Eastern Hill University, Shillong-793022, Meghalaya.	2019
2	P.Ranganathan	Techno-economic analysis of microalgae based transportation fuel production from wastewater via hydrothermal liquefaction and hydroprocessing	International Conference on Biotechnological Research and Innovation for Sustainable Development (BioSD 2018), Hyderabad.	2019
3	. C.H. Sreeram, P. Ranganathan Chennai	Life cycle analysis of 2G bioethanol from rice straw in Indian scenario	4th International Conference On Recent Advancements in Chemical, Environmental and Energy Engineering (RACEEE 2019), Chennai	2019
4	D. V. Vardhan, B. Srinu; ADeepak,,B.Bharathkumar, P. Ranganthan	Techno-economic evaluation of 2G ethanol production from rice straw	4th International Conference On Recent Advancements in Chemical , Environmental and Energy Engineering (RACEEE 2019), Chennai	2019
5	. Arjun M.,Gazliya N., Harigovind A.K., Ananyanjali R., Meryl Ann, Aparna K	Recovery of lignin from agrowaste	International Conference on Next Generation Plant Production and Bioresources Utilization Technologies (NGPPBU) organized by Indian Institute of Technology Guwahati, India	2019
6	Gazliya Nazimudheen, Aparna K	Delignification of agrowaste using alkaline assisted ultrasound	4th International Conference on Recent Advancements in	2019

		process	Chemical, Environmental and Energy Engineering (RACEEE 2019) organized by SSN College of Engineering Chennai	
7	Suchith Chellappan, Vaishakh Nair, Sajith V, Aparna K	A magnetic biosorbent based bronsted acid catalyst functionalized by Remazol brilliant blue R dye for biodiese production.	IAPE'2018,Oxford university	2019
8	Arjun M., Gazliya N., Harigovind A.K., Ananyanjali R., Meryl Ann, Aparna K	Peroxide assisted a lkaline extraction of lignin from agrowaste	International Conference on Material for the Millenium (MATCON) organized by Cochin University of Science and Technology Cochin, India.	2019
9	Nimmi C.Sekhar and Lity Alen Varghese	Studies on the Effect of Phenolic Resin Modification with Intercalated Graphite Prepared Via Liquid Phase Intercalation	10 th International Conference on Advancements in Polymeric Materials (IC 2019)	2019
10	Vagini T, Nimmi C Sekhar and Lity Alen Varghese	Studies on Thermo-Mechanical and Shape Memory Properties of Epoxy Based Smart Polymers	10 th International Conference on Advancements in Polymeric Materials (IC 2019)	2019
11	Ramya Sankar M S, Dr. V Sivasubramanian, Sruthi Gupta, Dr. MV Pavan Kumar, Aswani Bairawa, Nitin Mishra	Electrocoagulation Process for the treatment of Diary Effluent: Optimization of operational Parameters.	International Conference on Advanced Materials : Energy Science and Technology 2019	2019
12	. Aiswarya Sidharthan K, Dr. Shiny Joseph	Preparation and Characterization PVA	International Conference on Advanced Materials	2019

		based Nano composite membrane for DMFC		
13	Nigam T P, Vishnuprasad, Aswathy Ashok, Dr.K Haribabu, J. Ranjitha	Bioethanol production from banana plant trunk by fermentation using Saccharomyces cervisiae for a sustainable alternate energy.	International Conference on Recent advances in Chemical, Environmental and Energy Engineering 2019	2019
14	.A.Bhise, Sameer S. Gajghate, S.Bhaumik, Sudev Das	Effect Of Graphene Coated Surface On Pool Boiling Heat Transfer By Spin Coating Method	Proceedings of the 24th National & 2nd International ISHMT-ASTFE	10.1615/IHMTC-2017.2250
15	.Bhaumik S, Bandurkar A, Gajghate S. S, Das	Effect of ZrO ₂ Nano Particle Coated Heater Surface on Heat Transfer Coefficient under Pool Boiling	International Conference on Polygeneration (ICP2019) May 15-17, 2019, Japan)	2019
16	.Suchith Chellappan, Vaishakh N, Sajith V and Dr.Aparna K	A novel magnetic biosorbent based bronsted acid catalyst functionalized by Remazol brilliant blue R dye for biodiesel production.	International Conference on Innovative Applied Energy 14–15 March 2019 Oxford, United Kingdom	2019
17	.Dr. Noel Jacob Kaleekkal	Advanced Pedagogy Training Programme	FDP at IIT Madras	2018
18	. Dr. Noel Jacob Kaleekkal	Novel Proton Exchange Membranes for Direct-Alcohol Fuel Cell	Oral presentation at 6th International Water Association-Regional Membrane Technology Conference (IWA-RMTC) held MS University Baroda on 10 th -	2018

			13 th December,2018.	
19	Dr. Noel Jacob Kaleekkal	Bio-templated titania nanoparticles incorporated PVDF electrospun membrane for wastewater treatment	SESTEC 2018 organized by ASSET at BITS, Goa held on 23 rd -26 th May 2018.	2018
20	.G Patel, S S Gajghate, A Pal, U Nath, S Bhaumik and S Das,	“Experimental investigation on nucleate pool boiling heat transfer enhancement for nano-structured copper oxide coated heating surface (Paper.ID: 193	2nd International Conference on New Frontiers in Engineering, Science & Technology (NFEST 2019), Feb 18-22, 2019, Kurukshetra, India	2019
21	.V Kumar, S S Gajghate U Nath, A Pal, S Bhaumik and S Das,	Experimental investigation on nucleate pool boiling heat transfer enhancement for nano-structured copper oxide coated heating surface (Paper.ID: 97)	2nd International Conference on New Frontiers in Engineering, Science & Technology (NFEST 2019), Feb 18-22, 2019, Kurukshetra, India	

iii. **National Conference :**

Name of the Author	Title of Paper	Name of National conference	Vol, Year, p.p.
Nishan Ahammed V, Dr.Lity Alen Varghese	Analysis and Quantification of Ecological Risk Associated with Industrial Effluent Emission in Chitrapuzha river, Kerala	Advances in Chemical and Environmental Engineering(ACEE19)	2019

iv. **Community Services :**

Sl.No	Name of the Author	Title of Book	Publisher	Year.
1.	V.Sivasubramanian,	Bioprocess Engineering for a Green Environment	CRC Press	May 2018

- **Other Academic and Administrative Services:**

Name of Staff	Academic and Administrative Services
Dr.Lity Alen Varghese	HOD ,Purchase Committee Convener, Faculty-in Charge -Chemical Technology Laboratory, Faculty Advisor, UG Project Committee Member, Department students guidance cell coordinator,, Project Guide
Dr.V Sivasubramanian	HOD till August 2018, Faculty Advisor, Purchase Committee Member, Project Guide, NBA Coordinator, UG Project coordinator
Dr.Shiny Joseph	Programme Coordinator(M.Tech), Faculty Advisor, Project Guide Faculty-in Charge – Instrumentation Laboratory, PG Project coordinator
Dr.Aparna K	PTA Coordinator, Faculty Advisor, Project Guide Faculty-in Charge – Fluid Mechanics Laboratory , UG Project Committee Member , NBA Co-coordinator, Class Committee Chairperson
Dr.S Bhuvaneswari	Liaison with main Library. Warden (LH), Faculty Advisor, Project Guide, Faculty-in Charge – Mass Transfer Laboratory , UG Project Committee Member, Class Committee Chairperson
Dr. Malladi V Pavan Kumar	Programme Coordinator(Ph.D),TEQIP Coordinator, Faculty Advisor, Project Guide, warden(MH),PG Project Committee Member, Class Committee Chairperson
Dr. Vineesh Ravi	Deputy Chairperson og PG Admission, Alumini and International Affairs, Department Library,Department Time Table Committee, Faculty Advisor, Project Guide, Faculty-incharge – Heat Transfer Laboratory, UG Project Committee Member, Class Committee Chairperson
Dr. Haribabu k	Faculty Advisor, Project Guide, DRAV_ students technical fest, In-charge of examination, Faculty-in charge – Chemical Reaction Engineering Laboratory, UG Project Committee Member, Class Committee Chairperson
Dr. Chandra Shekar Besta	CHED Representative in the placement committee, UG Project Committee Member, Faculty Advisor, Project Guide
Dr. Noel Jacob Kaleekkal	NBA Member, NIRF Coordinator, UG Project Committee Member ,Faculty Advisor, Project Guide
Dr. Sudev Das	NBA Member, UG Project Committee Member, Faculty Advisor, Project Guide
Dr. Teja Reddy Vakamalla	Department web management and in charge of information ad facilitation, NBA Member, PG Project Committee Member, Faculty Advisor, Project Guide, Class Committee Chairperson
Dr. Susmita Das	Warden (LH), Faculty Advisor, Project Guide, UG Project Committee Member, Faculty-in Charge – Mechanical operation Laboratory
Dr. Prasanna Kumar S	DCC Secretary, Faculty Advisor, Project Guide, Faculty-in Charge –

Mural	Research Laboratory, UG Project Committee Member
Dr. Panneerselvam Ranganathan	Faculty-in Charge- Class room, Seminar Hall and Conference hall Facilities, Faculty-in Charge- Computer laboratory, UG Project Committee Member
Dr. Dhanya Ram V	Employee ability training coordinator PG Project Committee Member , Faculty Advisor, Project Guide, Faculty-in Charge – Process Dynamics and Control Laboratory

● **Conferences/Summer/Winter School/Short term Courses/ Workshops conducted**

Sl.No	Title	Coordinators	Period
1	FDP on Advanced Techniques in Energy and Wastewater Treatment	Dr Lity Alen Varghese, Dr Aparna K	2/7/2018 to 7/7/2018
2	One Day Workshop on Electrochemical Solutions for Research & Education	Dr S Bhuvaneshwari	22/04/2019

● **Expert lecturers delivered in Conferences/Seminar/workshops**

Sl. No.	Name of Staff	Title of the Programme	Period	Organization
1	V.Sivasubramanian	National Level Conference on Innovations in Chemical Research (ICR-2019)	1-2 February 2019	VIVEKANANDH A COLLEGE OF ARTS AND SCIENCES FOR WOMEN (Autonomous), ELAYAMPALAYAM, TIRUCHENGODE – 637 205
2	V.Sivasubramanian	International Conference on Waste, Energy and Environment (ICWEE-2018)	September 5-7, 2018	Centre for Waste Management and Centre of Excellence for Energy Research Sathyabama Institute of Science and Technology, Chennai
3	V.Sivasubramanian	FDP on Advanced Techniques in Energy	02-07, July 2018	Dept of Chemical Eng., NITC

		and Wastewater Treatment – MHRD, NITC		
4	Dr. Prasanna Kumar S Mural	Recent Trends in Environmental Engineering	15th to 20th July 2019	TKM College Of Engineering, Kollam
5	Dr. Teja Reddy Vakamalla	Guest lecture on “Role of CFD in process industries	24-10-2018	Department of Chemical Engineering, VIT, Vellore
6	Dr. Teja Reddy Vakamalla	Turbulence Modeling of Cyclone Separators, GIAN course on “Advances in Combustion Modeling”	4 th – 9 th March 2019	Department of Mechanical Engineering, NIT Calicut
7	Dr. Prasanna Kumar S Mural	Recent Trends in Environmental Engineering	15th to 20th July 2019	TKM College Of Engineering, Kollam
8	Dr.Panneerselvam Ranganathan	MHRD sponserd FDP course on Advanced Techniques in Energy and Wastewater Treatment	Duration: 3 and half an hours; Period: 2 nd -7 th July 2018	Department of Chemical Engineering, NIT Calicut.
9	Dr.Panneerselvam Ranganathan	GIAN course in Advance in Combustion Modelling	Duration: 3 hrs Period: 4 th – 9 th March 2019	Department of Mechanical Engineering NIT Calicut.
10	Dr.Panneerselvam Ranganathan	TEQIP III sponsored Faculty Development Program on Recent Innovations and Developments in Electrochemical and Chemical Process Optimization - RIDECP-2019	Duration: 1 and half an hours Period: 17 th -22 th June 2019	Department of Chemical Engineering, NIT Calicut.
11	Dr.Panneerselvam Ranganathan	Faculty Development Workshop on "Computational Fluid Dynamics with Chemical Engineering Applications"	Duration: 1 and half an hours Period: 24 th -28 th June 2019	Department of Chemical Engineering, SRM, Chennai
12	Dr.Panneerselvam	TEQUIP –II sponsored Short Term Training	Duration: 5 hours Period: 22 nd -26 th July	Department of Chemical

	Ranganathan	Programme on Energy Efficient Technologies and Practices for Sustainable Development	2019	Engineering, Government Engineering College, Thrissur
13	Dr. Sudev Das	Advanced Techniques in Energy and Wastewater Treatment	2nd to 7th of July 2018	Ch.ED, NIT Calicut
14	Dr. Sudev Das	Fundamental of Combustion, Mechanism and its Chemical Kinetics, GIAN course on Advances in Combustion Modeling	during 4th – 9th March 2019,	MED, NIT Calicut
15	Dr. Sudev Das	TEQIP-III Five days workshop on “Computational Techniques in Heating and Cooling Systems	June 3 to 7 th June, 2019	NIT Agartala
16	Dr. Sudev Das	FDP Recent Innovations and Developments in Electrochemical and Chemical Process Optimization RIDECP0-2019	2nd to 7th of July 2019	Ch.ED, NIT Calicut

DEPARTMENT OF CIVIL ENGINEERING

(a) Publications:

i. Journals

Sl. No	Name of the Authors	Title of paper	Name of Journal/conference	Vol., Year, p.p.
1	Riya Roy and Anjana Bhasi.	Investigation of arching effect in geosynthetic-reinforced piled embankments	Iranian journal of science and technology- Transactions of civil engineering	43, 2018,1-14
2	Yadav, MS Priyanka, N. Neghi, Mathava Kumar, and George K. Varghese.	"Photocatalytic-oxidation and photo-persulfate-oxidation of sulfadiazine in a laboratory-scale reactor: Analysis of catalyst support,	Journal of environmental management .	222 (2018): 164-173

		oxidant dosage, removal-rate and degradation pathway."		
3	Siddik, A. Muhammed, Aswin Chand, George K. Varghese, and Babu J. Alappat.	"Assessment of trace metal contamination and its anthropogenic influence in the sediments of an urban water body in Kozhikode, Kerala, India."	Environmental Forensics	19, no. 4 (2018): 288-297.
4	Samad, Muhammed Siddik Abdul, Aswathi Padippingal, George K. Varghese, and Babu J. Alappat.	"An environmental forensic investigation at a bio-medical waste treatment and disposal facility in Kerala, India."	Environmental Forensics	20, no. 2 (2019): 162-170
5	Somervell L T, Thampi S G, Shashikala A P	Estimation of friction coefficient for double walled permeable vertical breakwater,	Ocean Engineering	156, 2018, 25-37
6	Sandeep MS, Praveen Nagarajan, A P Shashikala	Behaviour of steel fibre reinforced rubberized continuous beams	Material Science and Engineering	330,1, 2018 012125
7	P Saranya, Praveen Nagarajan, Shashikala A P	Eco-friendly GGBS concrete: A state of the Art review	Material Science and Engineering	330,1,2018 012057
8	Anand Raj, Praveen Nagarajan, AP Shashikala	A review on the development of new materials for the construction of prestressed concrete railway sleepers,	Material Science and Engineering	2018, 330, 1, 012125
9	Sandeep MS, Nagarajan P, A P Shashikala	Development of models for predicting strut efficiency factors for conventional and steel fibre reinforced concrete deep beams	Engineering materials	2018
10	Prashob PS, a P Shashikala, TP Somasundaran	Effect of FRP parameters in strengthening the tubular joints for offshore	Ocean Systems Engineering	2018, 8(4), 409-426

		structures		
11	Nguyen D.D., Agilan V. Jayakumar K.V.	Bivariate Flood Frequency Analysis of Nonstationary Flood Characteristics	ASCE's Journal of Hydrologic Engineering	24, 2019, 1-14
12	Binh L.T.H., Agilan V., Umamahesh N. V., Rathnam E.V.	Modelling spatial variation of extreme precipitation over Ho Chi Minh City under nonstationary conditions	Acta Geophysica	67, 2019, 849–861
13	C. G. Krishnanunni, R. Sethu Raj, Deepak Nandakumar, C. K. Midhun, A. S. Sajith, Mohammed Ameen	Sensitivity-based damage detection algorithm for structures using vibration data	Journal of Civil Structural Health Monitoring(Springer)	Published on line on 21 st Nov. 2018
14	V.P.Premchand, M.D. Natarajan, A.S.Sajith	A new cluster based harmonic balance aided optimization procedure with application to nonlinear vibration absorber	Journal of Computational and Nonlinear Dynamics(ASME)	Published online 13 May 2019, Vol. 14 / 071007-1.
15	Minu Ann Peter, Sajith A.S., Praveen Nagarajan	Comparison of the performance of concrete filled steel tubular and hollow steel diaphragm buildings	IOP Conference Series: Materials Science and Engineering,	2018, vol. 330, pp. 1-6.
16	Gerhard Lammel, Céline Degrendele, Sachin S. Gunthe, Qing Mu, Akila Muthalagu, Ondřej Auda, Chelackal V. Biju, Petr Kukucka, Marie D. Mulder, Mega Octaviani, Petra Přebilová, Pourya Shahpoury, Irene Stemmler, and Aswathy Valsan.	Revolatilisation of soil-accumulated pollutants triggered by the summer monsoon in India	Atmospheric Chemistry and Physics	18, 2018, 11031 – 11040.
17	M. Sivakumar, M.V.L.R. Anjaneyulu	Compactability and Mechanical properties of LNA modified Asphalt Concrete	ASCE Journal of Transportation Engineering Part B: Pavements	145(2), 2019, 04019007, 1-13.
18	Pramada S K, Minnu K P Roshni T	Insights into sea water intrusion due to pumping A case study of Ernakulam	ISH Journal of Hydraulic Engineering	2019

		Coast		
19	Pramada S K, Aswini A, Roshni Thendiyath	Flow modelling in saturated and unsaturated soils	International Agricultural Engineering journal	27(4), 2018
20	Muzammil, S. P., Varghese, R.M and J. Joseph	Numerical simulation of the response of geosynthetic encased stone columns under oil storage tank	International Journal of Geosynthetics and Group Engineering, Springer	Springer (ISSN: 219 9260) Vol 4(1), 4
21	K.K. Sahoo, Pradip Sarkar and Robin Davis P.	Mechanical properties of silica fume concrete designed as per construction practice	Construction Materials, Proceedings of the Institution of Civil Engineers ICE	Vol. 172(1), 2018, pp 20-28
22	P. K. Dhir, Robin Davis and Pradip Sarkar	Safety Assessment of Gravity Load-Designed Reinforced Concrete-Framed Buildings	ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering	Vol. 4(3), 2018, Vol 4(3), DOI: 10.1061/AJRUA6.000955
23	A. S. Bhosale, Robin Davis and Pradip Sarkar	Seismic Safety of Vertically Irregular Buildings – Performance of Existing Indicators	ASCE Journal of Architectural Engineering	Vol. 24(3). 2017, https://doi.org/10.1061/(ASCE)AE.1943-5568.0000319
24	A. Mistri, Pradip Sarkar and Robin Davis	Column-to-beam Moment Capacity Ratio and Seismic Risk of Framed Building	ICE Proceedings of the Institution of Civil Engineers - Structures and Buildings	Vol. 173(3), 2018, 189-196. DOI:10.1680/jstbu.1800100
25	D. Sahoo, Nishanth, P. K. Dhir, P. Sarkar R. Davis and S. Mangalathu	Seismic Response of Concrete Buildings Using High Dimensional Modal Representation	Engineering Structures	Vol. 179, 412-422
26	S. Sahoo, P.R. R. Teja, Pradip Sarkar R. and Davis	Variability in the Compressive Strength of Flyash Bricks	ASCE Journal of Materials in Civil Engineering	Vol. 31(2), 2019, https://ascelibrary.org/doi/10.1061/(ASCE)MT.1943-5533.0002592
27	A. S. Bhosale, N. Zade, Robin Davis and Pradip Sarkar	Experimental Investigation of Autoclaved Aerated Concrete Masonry	ASCE Journal of Materials in Civil Engineering	Vol. 31(7), 2019, https://doi.org/10.1061/(ASCE)MT.1943-5533.0002762
28	S Sahu, PR Ravi Teja, Pradip Sarkar, R Davis	Effect of brick pre-wetting on the masonry bond strength	ASCE Journal of Materials in Civil Engineering	Vol. 31(10), 2019, 10.1061/(ASCE)MT.1943-5533.0002866.
29	S. Sahu, P Sarkar, R Davis	Effect of Brick Pre-	Journal of Building	Vol. 26, 2019,

		Wetting on the masonry bond strength	Engineering	https://doi.org/10.1080/10770068.2019.1600843
30	Safeer Ali Abbas Ali, Arun C and K.Krishnamurthy	A case Study on Implementing NAVFA P-405 in Indian Construction Sites for Estimating Time and Cost Overrun.	NICMAR Journal of Construction Engineering and Management	Vol. XXXIII, (01), pp. 20-30, Jan-Mar; 2019
31	Safeer Ali Abbas Ali, Arun C and K.Krishnamurthy	Re-defining flow in Construction process for facilitating the identification and quantification of general overruns existing in construction industry today. .	International Journal of Construction Management	DOI: 10.1080/15623599.2019.16011236
32	Krishnamurthy K and Muneera C. P	Economic Impact of Traffic Congestion- Estimation and Challenges .	European Transport / Trasporti Europei	Issue 68, Paper no. ISSN 1825-3997.
33	Meeravali K Rangswamy K	Compressibility and permeability characteristics of nano-chemical treated kuttan soft clay	J. of emerging technologies and innovative research	Issue 3, Volume 5, 2018, pp. 615-620
34	Akhila M Rangaswamy K Sankar N	Undrained response and Liquefaction susceptibility of Silty sands	International Journal of Geotechnical and Geological Engineering (Springer)	https://doi.org/10.1007/s10706-018-00790-2 2018
35	Akhila M Rangaswamy K Sankar N	Undrained response of silty sands under static and cyclic loading	International Journal of Geomate	Vol.16(54), 2019, pp.170 – 175, DOI: https://doi.org/10.21660/2019.54.8325
36	Akhila M Rangaswamy K Sankar N	Liquefaction susceptibility of silty sands based on steady state line concept	Journal of Geotechnical Studies	Vol 4(1), 2019, pp. 32-50, DOI: http://doi.org/10.5281/zenodo.2613366
37	Akhila M Rangaswamy K Sankar N	Liquefaction susceptibility of silty sand and low-plastic clayey soils.	International Journal of Geotechnical Earthquake Engineering	Volume 10, Issue 2, Article 1, 2019.

38	Akhila M Rangaswamy K Sankar N	Pertinent approach to cyclic triaxial testing.	Electronic Journal of Geotechnical Engineering	Vol.23 [2018]/Bund. 04, 2018, pp 757-766.
39	Akhila M Rangaswamy K Sankar N	Liquefaction susceptibility central Kerala	J. of Springer Nature Applied Sciences	https://doi.org/10.1007/s42452-019-0576-3
40	Rinku Varghese Chandrakaran Rangaswamy K	Influence of type of organic substances on the strength and consolidation behavior inorganic clay soil	International Journal of Geotechnical Engineering	https://doi.org/10.1080/19386362.2019.1591739
41	Geethu Thomas Rangaswamy K	Strength Behavior of Enzymatic Cement Treated Clay	International Journal of Geotechnical Engineering	https://doi.org/10.1080/19386362.2019.1622854
42	K. T. Vipin, N. Ganesan and P. V. Indira	Ultimate Strength of Ferro-Geopolymer Composite Built-Up I-Joist	Earth and Environmental Science	Vol. 80, 2017, pp. 1-7
43	V. Sathish Kumar, N. Ganesan and P. V. Indira	Effect of Molarity of Sodium-Hydroxide and Curing Method on the Compressive Strength of Ternary Blend Geopolymer Concrete	Earth and Environmental Science	Vol. 80, 2017, pp. 1-7
44	P. R. Himasree, N. Ganesan and P. V. Indira,	Bamboo as a substitute for steel in reinforced concrete wall panels	Earth and Environmental Science	Vol. 80, 2017, pp. 1-8
45	N. Ganesan, P. V. Indira and P. Irshad	Effect of ferrocement infill on the strength and behavior of RCC frames under reverse cyclic loading	Elsevier, Engineering Structures	151, 2017, pp. 273-281
46	N. Ganesan, P. V. Indira and P. Irshad	RCC frames with ferrocement and fiber reinforced concrete infill panels under reverse cyclic loading	Advances in Concrete Construction	Vol. 5, No. 3 , 2017 pp. 183-199
47	N. Ganesan,	Effect of Alkaline	The Indian	Vol.17,

	P.V. Indira and V. Sathish Kumar	Activator to Binder Ratio on the Compressive Strength of Ternary Blend Geopolymer Concrete	Concrete Institute Journal	Jan-Mar 2017, pp.22-27
48	N. Ganesan, R. Sahana and P.V. Indira	Effect of Hybrid Fibers on Tension Stiffening of Reinforced Geopolymer Concrete	Advances in Concrete Construction	Vol. 5, No. 1 2017 pp. 75-86
49	N. Ganesan, M. Nidhi and P.V. Indira	HFRHPC Interior Beam-column-joints with Slab under Reverse cyclic loading	The Indian Concrete Journal	Vol.91, No.3 March 2017, pp.17-22
50	N. Ganesan, P. V. Indira and P. R. Himasree	Strength and behaviour of bamboo reinforced concrete wall panels under two way in plane action	Advances in Concrete Construction, Technopress	Vol. 6, No. 1, 2018, pp. 1-13.
51	N. Ganesan, P. V. Indira and P. R. Himasree	Bamboo reinforced concrete wall panels under one way in plane action	Environment Development and sustainability, Springer	September 2018, pp. 1-14
52	N. Ganesan, P. Irshad and P.V. Indira	Effect of openings on the behaviour of fibre reinforced concrete and masonry infilled RC frames	The Indian Concrete Journal,	January 2019, pp.8-15
53	Prakash Chinnaiyan, Santosh G Thampi, Mathava Kumar, Meera Balachandran	Photocatalytic treatment of Amiodarone and Levetiracetam in pharmaceutical industry effluent: Process optimization using response surface methodology	Desalination and Water Treatment	Accepted for publication 2019
54	Ansa Thasneem, N. R. Chithra, Santosh. G. Thampi	Analysis of extreme precipitation and its variability under climate change in a river basin	Natural Hazards	Accepted for publication 2019
55	Jisha John,	Prediction of land	Environmental	https://doi.org/10.1

	N. R. Chithra, Santosh. G. Thampi	use/cover change in the Bharathapuzha river basin, India using geospatial techniques	Monitoring and Assessment	007/s10661-019-7482-4 2019
56	Sabna, V., Santosh G. Thampi and S. Chandrakaran	Degradation of rhodamine B with manganese dioxide nanorods	Journal of Water and Health	16 (5), 2018 pp. 846-856
57	V. Sabna, Santosh G. Thampi and S. Chandrakaran	Adsorptive removal of cationic and anionic dyes using graphene oxide	Water Science & Technology	78 (4), 2018 pp. 732-742
58	Prakash. C., Santosh. G. Thampi, Mathava Kumar, and M. Balachandran	Photocatalytic degradation of metformin and amoxicillin in synthetic hospital wastewater: effect of classical parameters	International Journal of Environmental Science and Technology	https://doi.org/10.1007/s13762-018-1935-0 2018
59	Prakash. C., Santosh. G. Thampi, Mathava Kumar, and K. M. Mini	Pharmaceutical products as emerging contaminant in water: relevance for developing nations and identification of critical compounds for Indian environment	Environmental Monitoring and Assessment	https://doi.org/10.1007/s10661-018-6672-9 2018
60	Lamanto. T. Somervell, Santosh. G. Thampi A.P. Shashikala	Estimation of friction coefficient for double walled permeable vertical breakwater	Ocean Engineering	156, 2018 pp. 25-37
61	Anjana Bhagyanathan, A. K. Kasthurba, Santosh. G. Thampi, Deepak Dhayanithy	Terrain attributes of sacred grove locations point towards conscious spatial delineation	Current Science	114 (5), 2018 pp. 957-959
62	Ashlin Ann Alexander, Santosh G. Thampi & Chithra N. R.	Development of hybrid wavelet-ANN model for hourly flood stage forecasting	ISH Journal of Hydraulic Engineering	24 (2), 2018 pp. 266-274
63	Sukanya J Nair, and Sasikumar K	Fuzzy Reliability-based Optimization of	Journal of Hydroinformatics	Vol. 21, Issue 2, March 2019, p

		a Hydropower Reservoir		308-317
64	Mohammed Aslam, Praveen Nagarajan, Mini Remanan	Analysis of piezoelectric solids using finite element method.	IOP Conf. Series: Materials Science and Engineering.	Vol. 330, 2018 doi: 10.1088/1757-899X/330/1/012009
65	Mohammed Aslam, Praveen Nagarajan, Mini Remanan	Numerical Studies on PZT Bonded Aluminium Beam	Journal of the Institution Engineers (India):Series	Vol.100, Issue 1, pp 117-130, March 2019. doi: 10.1007/s40030-018-0340-5

Conferences

International conference

S.No.	Name of the Author	Title of Paper	Name of International conference	Vol, Year, p.p.
1	Sujana, Anjana Bhasi	Numerical Modelling of PVD with Vacuum Preloading	International Conference on Geotechnics for High Speed Corridors, Thiruvananthapuram	2019
2	Keerthana, Vibhoosha, Anjana Bhasi	Performance Analyses of Geogrid Reinforced Embankment over Cohesive Soil	International Conference on Geotechnics for High Speed Corridors, Thiruvananthapuram	2019
3	Vibhoosha, Anjana Bhasi, Sitaram Nayak	Effect of Geosynthetic Stiffness on the Behaviour of Encased Stone Columns Installed in Lithomargic Clay.	International Symposium of International Association for Computer Methods and Advances in Geomechanics, Indian Institute of Technology, Gandhinagar	2019
4	Vibhoosha, Anjana Bhasi, Sitaram Nayak	Effect of Column Configuration on the Behaviour of Stone Column Supported Ground". International conference on Green Buildings and Sustainable Engineering	International conference on Green Buildings and Sustainable Engineering (GBSE 2019).	2019
5	Ashwini S. K., George K. Varghese	Environmental Forensic Analysis of Microplastic pollution: The first report	Treviso Forensics	2018

		on "Nattika" Beach, Kerala coast, India		
6	Lakshmipriya, George K. varghese	Assessing differential responsibility of pollution for environmental forensic applications	Treviso Forensics	2018
7	Prem Mohan, Muhammed Siddik, George K. Varghese	Environmental forensic investigation on the particulate matter dispersion from a cement factory	Treviso Forensics	2018
8	P Saranya, Praveen Nagarajan and A P Shashikala	Flexural behaviour of GGB Dolomite geopolymer concrete beams under cycli loading	International conference o Recent advances in materials, mechanical and civil engineering, Hyderab	November 19-20, 2018
9	P Saranya, Praveen Nagarajan and A P Shashikala	Seismic behaviour of steel- fibre reinforced GGBS concrete beam-column join	Second International Conference On Structural Integrity, IIT Madras	December 14-17, 2018
10	Anand Raj, Praveen Nagarajan and A P Shashikala, , Second	Experimental Investigation the Fracture Behaviour of Polypropylene Fibre Reinforced Rubcrete	Second International Conference On Structural Integrity, IIT Madras	December 14-17, 2018
11	Sandeep, M. S., Praveen Nagarajan, and A. P. Shashikala,	Feasibility of ACI 318-14 strut-and-tie provisions for the analysis and design of rubcrete and steel fiber reinforced rubcrete deep beams	Second International Conference On Structural Integrity, IIT Madras	December 14-17, 2018
12	Poonam Mohan, A P Shashikala	A Comparative Study on Sloshing Behaviour of Different Forms of LNG Tanks	RINA International Conference on Computational and Experimental Marine Hydrodynamics (MARHY at Indian Institute of Technology, Chennai)	November 26-27, 2018
13	Poonam Mohan, A. P. Shashikala	An investigation into the motion and stability behaviour of a Ro-Ro Vess	International conference o Ship Building and Offshore Engineering (ICSOE 2K 18), AMET, Chennai.	2018

14	Trupti Kinjawadekar Praveen Nagarajan and A P Shashikala		International Conference on Recent Advances in Materials and Manufacturing Technologies- ICRAMMT	November 19-20, 2018
15	Minu Ann Peter, Sajith A.S., Praveen Nagarajan	Studies on the effect of shear link devices for seismic energy dissipation	International Conference on Recent Advances in Materials and Manufacturing Technologies: Challenges and Opportunities (ICRAMMT - 2018), MLRITM, Hyderabad	-
16	V P Devipriya Chandrakaran S Rangswamy K	Seepage Behavior of Fiber Reinforced Embankment F : a Review	Proceedings of International Conference ARICE'19, M Kerala, 2019	Paper Id 36
17	S Smitha Rangaswamy K	The Potential use of Biopolymers as a Sustainable Alternative for Liquefaction Mitigation- a Review	Proceedings of International Conference ARICE'19, M Kerala, 2019	Paper Id 12
18	Akhila M, K Rangaswamy and N Sankar	Liquefaction susceptibility dam foundation soils	International Dam Safety Conference – 2018	Proceedings
19	Akhila M, K Rangaswamy and N Sankar	Development of critical state line concept from hypoplastic model simulations on triaxial strength of silty sand	International Conference on Civil Engineering Advancements for Sustainable Infrastructure development and Environment (CEASIDE 2018)	Proceedings
20	Akhila M, K Rangaswamy and N Sankar	Undrained response of silty sand under static and cyclic loading	Geomate 2018, Malaysia, November 2018 (Chair of session)	Proceedings
21	P. Irshad, N. Ganesan and P.V. Indira,	Ferrocement infills for multistoried buildings	Advances in civil infrastructure and development of smart cities (ICACIDS-2K16), RIT, Rajaramnagar	Feb 2016.
22	Abhijith Sathya, Santosh G. Thampi	Flood inundation mapping of Cauvery River using HEC-RAS and GIS	ARICE 2019	13-14 June 2019 Kochi
23	Jiji Panicker K, Praveen Nagarajan, Santosh G. Thampi	Critical Review on Stress-Sensitivity and other Behavioral Aspects of Arch Dams	ARICE 2019	13-14 June 2019 Kochi

24	Prakash Chinnaiyan, S G Thampi	Optimisation of system parameters for the removal of Metformin in a photocatalytic reactor employing TiO ₂	International Conf. on Materials Science and Manufacturing Technology (ICMSMT 2019)	12-13 April 2019 Coimbatore
25	Prakash Chinnaiyan, S G Thampi	Use of TiO ₂ for removing emerging contaminant in water – Amoxicillin as a case study	International Conf. on Materials Science and Manufacturing Technology (ICMSMT 2019)	12-13 April 2019 Coimbatore
26	Sathish Kumar. D., Santosh. G. Thampi	Development of Decision Support System for Integrated Operation of Reservoirs: A Conceptual Framework	International Dam Safety Conference 2019	13-14 February 2019 Bhubaneswar
27	N. M. Sabitha, Santosh. G. Thampi, Sathish Kumar. D.	Design Flood Estimation using Geomorphological Instantaneous Unit Hydrograph Model for a Small Watershed in Kerala	International Dam Safety Conference 2019	13-14 February 2019 Bhubaneswar
28	Ansa Thasneem. S., Chithra. N. R., Santosh. G. Thampi	Impact of Climate Change on Probable Maximum Precipitation in a River Basin	International Dam Safety Conference 2019	13-14 February 2019 Bhubaneswar
29	Surya. T. V., Santosh. G. Thampi, Reeshna. V.	Performance Evaluation of Oyster Shell Bedded Constructed Wetlands in Wastewater Treatment	International Conference on Industrial Water, Energy and Environment (ICIWE)	25-26 January 2019 CODISSIA, Coimbatore
30	Prakash Chinnaiyan, Santosh G Thampi, Adarsh Nair, Abinav Shanker K	Heterogeneous photocatalytic process using TiO ₂ for removing emerging contaminant in water - experimental investigations and modelling	International Conference on Industrial Water, Energy and Environment (ICIWE)	25-26 January 2019 CODISSIA, Coimbatore
31	P.Chinnaiyan, S.G Thampi, Bharath Krishnaa A C	min - an emerging pharmaceutical contaminant - removal - experimental investigation and modelling	International Conference on Emerging Contaminants in Water and Environment (ECWE-2019)	21-23 January 2019 PSG College of Technology, Coimbatore
32	Sithara. S., Pramada. S. K., and Santosh. G. Thampi	Statistical Downscaling of Sea Level by Support Vector Machine and Regression Tree Approaches	HYDRO-2018 International	19-21 December, 2018 NIT Patna
33	Jisha John, Chithra N R, Santosh G Thampi	Assessment and Application of the Morphometric Attributes of the Bharathapuzha River Basin, India using	HYDRO-2018 International	19-21 December, 2018 NIT Patna

		Geographical Information System		
34	Kabbilawsh P, Sathish Kumar D and Chithra N R	Infilling missing monthly maximum and minimum temperature dataset by EM Algorithm followed by distribution based statistical assessment using eight absolute homogeneity tests	HYDRO-2018 International	19-21 December, 2018 NIT Patna
35	Rahlarabia M P and Sathish Kumar D	Applications of Building Information Modelling for water infrastructure development	HYDRO-2018 International	19-21 December, 2018 NIT Patna
36	Mohammed Aslam, Praveen Nagarajan, Mini Remanan	A Comparative Study of Wave Excitation in Plates using Piezoelectric Transducers Operating at Different Modes	International Conference on Recent Advances in Materials and Manufacturing Technologies (ICRAMMT)	19-20 November 2018, Hyderabad, Telengana, India.
37	Mohammed Aslam, Praveen Nagarajan, Mini Remanan	Effect of Boundary Conditions in Damage Detection of Aluminium Beams using PZT.	Second International Conference on Structural Integrity (ICONS)	14-17 December 2018, IITM, Chennai, India
	Mohammed Aslam, Praveen Nagarajan, Mini Remanan	Numerical Procedures for Simulation of wave Propagation in Plates	Advanced Research and Innovations in Civil Engineering (ARICE19),	13-14 June 2019, Muthoot Institute of Technology and Science, Ernakulam, India.

National Conferences

Sl. No	Name of the Authors	Title of paper	Name of Journal/conference	Details
1	Akhila M, K Rangaswar & N Sankar	Numerical study on cyclic loading effects on the undrained response of silty sand	Indian Geotechnical Conference 2018, IISc Bangalore	Proceedings
2	Akhila M, K Rangaswar and N Sankar	Liquefaction mitigation by preloading – an experimental study	16 th Symposium on Earthquake Engineering IIT Roorkee #	proceedings
3	Akhila M, K Rangaswar and N Sankar	Liquefaction criteria for silts and low-plastic clays: a review	Kerala State Technology Congress (KETCON) 2019, Govt. Engineering College, Thrissur	Proceedings

4	Akhila M, K Rangaswar and N Sankar	Numerical study on the undrained response of silty sands under static triaxial loading	IACMAG 2019, IIT Gandhinagar	Proceedings
5	Akhila M, K Rangaswamy and N Sankar	Liquefaction Case Histories – A Review	International Conference on Geotechnics for High Speed Corridors, CET, Trivandrum [#]	proceedings
6	Surya. T. V., Santosh. G. Thampi, Reeshna. V.	Performance Evaluation of Batch Operated Constructed Wetlands in Wastewater Treatment	National Environmental Conference (NEC 2019)	31 st Jan-2 nd Feb 2019 IIT Bombay

(b) Community services

Dr. George K. Varghese

- Vice President, Spring Valley School Managing Committee

Dr. Santosh G Thampi

- Invitee, Technical Committee, Dam Rehabilitation Improvement Project I (DRIP – I), Central Water Commission
- Executive Member & Co-coordinator (Events), International Water Association, India Chapter
- Member, Regional Technical Expert Committee (Northern Region) on Storm Water Drainage for Evaluation of DPRs under AMRUT, constituted by the Govt. of Kerala
- Reviewer for many peer reviewed journals including International Journal of Water Resources Development, Journal of Hydrology, Journal of Hydrology – Regional Studies, International Journal of Climatology, Hydrologic Processes, Transport in Porous Media, Journal of Porous Media, International Journal for Numerical Methods in Fluids, Environmental Processes, Special Topics and Reviews in Porous Media, International Research Journal of Agricultural Science and Soil Science, Agricultural Research and Reviews, Journal of the Geological Society of India, Natural Hazards, ISH Journal of Hydraulic Engineering, KSCE Journal of Civil Engineering, Theoretical and Applied Climatology, Science of the Total Environment, Environmental Technology etc

Dr. Agilan V

- Reviewer of Journal of Hydrology, Elsevier; Scientific Reports, Nature Publishing Group; Advances in Water Resources, Elsevier; Water Resources Management, Springer; International Journal of Climatology, Wiley on behalf of the Royal Meteorological Society; Ecological Indicators, Elsevier; Stochastic Environmental Research and Risk Assessment, Springer; Ecological Engineering, Elsevier; Sustainable Cities and Society, Elsevier

(c) Other Academic and administrative services

Name of Faculty	Academic and administrative services
Dr. S. Chandrakaran	<ul style="list-style-type: none"> • Expert member of TRDM to review water shed projects submitted to Govt. of Kerala • Member of Senate of NITC

	<ul style="list-style-type: none"> • Member in many of the Doctoral Committees • Reviewer of Indian Geotechnical Journal • Reviewer of Journal of structural engineering • Reviewer of International journal of geotextiles and geomembranes
Dr. J Sudhakumar	<ul style="list-style-type: none"> • Head, Department of Civil Engineering • Member of Senate of NITC • Faculty adviser for students of B.Tech (Civil) 2013 Admission
Dr. N Sankar	<ul style="list-style-type: none"> • I/C of Geotechnical Engineering Lab. • Member of Senate of NITC • Member in many of the Doctoral Committees • Coordinator of M.Tech programme in Environmental Geotechnology
Dr. M V L R Anjaneyulu	<ul style="list-style-type: none"> • Dean (Planning & Development) • Head, Centre for Transportation Research • Member of Senate of NITC • Coordinator of M.Tech programme in Traffic and Transportation planning • Coordinator, State Technical Agency, Pradhan Mantri Gram Sadak Yojana, National Rural Roads Development Agency • Member, Advisory Committee, Centre of Excellence in Transportation Engineering, National Institute of Technology, Trichy • Member, Consultative Committee, Transportation Research Centre, College of Engineering, Trivandrum
Sri K Saseendarn	<ul style="list-style-type: none"> • Department Secretary • PTA Coordinator , CED
Dr. P V Indira	<ul style="list-style-type: none"> • PhD programme coordinator • B. Tech Faculty advisor 2015 batch • Coordinator continuing education • M. Tech Structural engineering programme coordinator, Chairman class committee
Dr. A P Shashikala	<ul style="list-style-type: none"> • Presiding officer, Internal Complaints Committee • Lab in Charge Offshore Laboratory • Programme Coordinator- M Tech. Civil (Offshore Structures)-2016 Admissions • Faculty Advisor- B Tech. Civil- 2014 Admissions • President, Civil Engineering Association
Dr. T M Madhavan Pillai	<ul style="list-style-type: none"> • Dean (Faculty Welfare) • Head, Centre for Bio-Mechanics • Adviser, (WS & FS, Weaker students & Foreign Students), NITC • Coordinator SC/ST cell of the Institute, NITC • Programme co-ordinator, M.Tech (Structural Engg.), 2014 admission • Member of Senate of NITC • Departmental information facilitation in-charge for Annual Report etc • Faculty Advisor for Civil batch 2015 • Member of Building Works Technical Advisory Committee (BWTAC) of the Institute since 25/05/2012 • Member of the Board of Examiner for Evaluating Ph. D Thesis for Kerala University • Reviewer of International Journal of Structural Engineering and Mechanics, Journal of Structural Engineering, International Journal of Ocean Engineering, The Icfai University Journal of Structural Engg,

	International Journal of Construction and Building Materials
Dr. Santosh G Thampi	<ul style="list-style-type: none"> • Program Co-ordinator, M Tech (Water Resources Engineering) • Faculty I/C, Water Resources Engineering Laboratory • Member of Senate of NITC • Faculty Advisor for Civil batch 2014
Dr. K Sasikumar	<ul style="list-style-type: none"> • Faculty adviser for students of B.Tech (Civil) 2016 admissions • Member in many of the Doctoral Committees
Dr. Sajith A S	<ul style="list-style-type: none"> • Lab in charge – Structural Engineering lab • Lab in charge – CED Computational lab • Assistant coordinator – Structural consultancy • Faculty advisor – 2016 admissions • Project Manager – TEQIP - III • Convener, Water Resources Management Committee of NITC
Dr. Praveen Nagarajan	<ul style="list-style-type: none"> • Programme Cordinator – M.Tech. Structural Engineering, • I/C of examinations, • Lab I/C – Offshore Engineering, • Faculty Advisor – B.Tech. Civil Engineering, • Planning for Self Financing Courses, Lab Development
Dr. George K Varghese	<ul style="list-style-type: none"> • Dy. Chairperson, UG Admissions • Faculty Advisor (2015 Admissions) • Faculty in charge for Environmental Engineering Lab • Member, Committee for scrutiny of Tenders regarding Civil Works at NIT Calicut • Member, Committee for scrutiny of Tenders regarding Waste Disposal at NIT Calicut • TEQIP III- Environment Coordinator • Member- Internal Quality Assurance Cell
Dr. Harikrishna M	<ul style="list-style-type: none"> • SPOC (Single Point of Contact) – NPTEL Local Chapter at NIT Calicut – February 2018 – till date • Associate Dean (Academic) – • Faculty Co-ordinator – CED – Student Mentorship Programme initiated by NITCUSAAA Chapter • Faculty Advisor, 2016 Admissions batch, CED, NITC- 27-07-2016 – to date. • Faculty i/c of Time table and Room allotment – CED, NITC – 13-05-2015 till date.
Dr. Chitra N R	<ul style="list-style-type: none"> • Library Advisory Committee (LAC) member • Member in the Water Resources Management Committee • Faculty Advisor, 2017 batch, B.Tech. Civil
Dr. K Rangaswamy	<ul style="list-style-type: none"> • Faculty Advisor – 2014 admission • PG coordinator – Environmental Geotechnology • Faculty I/C of Geotechnical Engineering Lab
Dr. K Krishna Murthy	<ul style="list-style-type: none"> • Associate Dean (P&D) • Programme Coordinator, M.Tech Traffic And Transportation Planning, 2018 Batch • Faculty Advisor, B.Tech Civil, 2014 batch • Warden, F Hostel

Sri. M Sivakumar	<ul style="list-style-type: none"> • Faculty Advisor, BTech Civil Engineering, 2015-19 batch • Warden, Boys Hostel (PG II)
Dr. Mini Ramanan	<ul style="list-style-type: none"> • Faculty Advisor for Civil batch 2016 • Lab in charge of Strength of Materials Lab, Concrete Lab and Structures Lab
Dr. Sathish Kumar D	<ul style="list-style-type: none"> • Faculty Advisor for Civil batch 2015 • Faculty I/C, Surveying Lab • Warden, E Hostel • Purchase coordinator, Department of Civil Engineering • Member, Committee for scrutiny of Tenders regarding Civil Works at NIT Calicut • Member, Water Resources Management Committee
Dr. Anjana Bhasi	<ul style="list-style-type: none"> • Timetable in-charge, Department of Civil Engineering • Faculty Advisor 2018 BTech admission • CEA, Vice president • Member, BTech Project evaluation committee
Dr. Arunkumar R.	<ul style="list-style-type: none"> • Faculty Advisor, 2017 batch • Warden, International Hostel • Department Nominee for Placements and Trainings
Dr. Agilan V	<ul style="list-style-type: none"> • Faculty I/C, Seminar Library • Faculty I/C, Surveying Lab • Faculty I/C, Departmental Information/Database management • Faculty I/C, Departmental web-page management • Faculty Advisor, B.Tech Civil, 2018 batch • Member in a Doctoral Committee
Dr. Aswathy E.V.	<ul style="list-style-type: none"> • Faculty in charge for Environmental Engg Laboratory • Member in many of the Doctoral Committees • Member of Exam Vigilance team, CED.
Dr. Renjitha Mary Varghese	<ul style="list-style-type: none"> • Faculty Advisor for 2018 Admission, B.Tech. Civil • Library Advisory Committee member, Department of Civil Engineering • In-charge of Teaching aids/class rooms, Department of Civil Engineering • Member in many of the Doctoral Committees • Member of B-tech project evaluation committee • External and internal member for M-Tech project evaluation committees (Environmental geotechnology and Offshore structures) • Member of exam vigilance committee
Dr. K. V. Anand	<ul style="list-style-type: none"> • Course faculty for M Tech. Civil (Offshore Structures) • Course faculty for B Tech. Civil • Member, Project review committee for M.tech - Offshore Structures. • Member, Project review committee for M.tech - Structures. • Faculty Advisor for B Tech. Civil 2018-admissions • Member, Department information/database Committee

	<ul style="list-style-type: none"> Member, Department Committee for, database of alumni
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(d) Conferences/Summer/Winter Schools/ Short term Courses/Workshops Conducted:

Sl. No.	Title	Coordinators	Duration & Period
1	FDP on Environmental Quality Monitoring and Assessment	George K. Varghese, M. K. Ravi Varma	06/08/2018 to 11/08/2018
2	Symposium cum Lecture Series on Atmospheric Pollution- Science, Technology, Innovation and Compliance	M. K. Ravi Varma, George K. Varghese	07/08/2018 to 11/08/2018
3	FDP on Application of Systems Approach to Water Resources Engineering (SAWRE 18)	Dr. Pramada S K., Dr. Arunkumar R.	May 1 – 6, 2018
4	Workshop on Geotechnical Aspects on Dam safety Engineering	Rangaswamy K Chandrakaran S	Sept. 16-18 th 2018
5	Analysis & Design Concepts Related to Dams and Appurtenant Structures	Dr. Santosh G Thampi Dr. Praveen Nagarajan	07.01.2019 to 09.01.2019
6	Flood Peak Estimation and Flood Routing	Dr. Sathish Kumar. D. Dr. Pramada. S. K. Dr. Santosh G Thampi	12.11.2018 to 14.11.2018
7	Geotechnical Aspects of Dam Safety	Dr. Kodi Rangaswamy Dr. Santosh G Thampi	17.09.2018 to 19.09.2018

(e) Expert Lectures delivered in Conferences/Seminars/Workshops

Sl. No.	Name of Staff	Title of the Programme	Duration and Period	Organization
1	George K. Varghese	"Environmental Forensics" in the FDP on Innovative Realms in Environmental Engineering	18/06/2018	M. A. College of Engineering, Kothamangalam
2	George K. Varghese	"Sewage Sludge- Liability or Asset?" at the FDP on Advanced Techniques in Energy and Wastewater Treatment	06/07/2018	Department of Chemical Engineering, NIT Calicut
3	George K. Varghese	"Monitoring Environmental Quality- Water Environment" in the FDP on Environmental Quality	06/08/2018	NIT Calicut

		Monitoring and Assessment		
4	George K. Varghese	"Environmental Forensics" at in the Symposium cum Lecture Series on Atmospheric Pollution-Science, Technology, Innovation and Compliance	11/08/2018	NIT Calicut
5	George K. Varghese	"Collection, Conveyance and Distribution of Water" at the training programme on Planning of Water Supply and Sanitation for Domestic Use	11/12/2018	CWRDM Kozhikode
6	Dr. Arunkumar R.	Application of Systems Approach to Water Resources Engineering (SAWRE 18)	May 1 – 6, 2018	Department of Civil Engineering, NIT Calicut
7	Dr. Arunkumar R.	Contemporary Technologies for Water and Wastewater Management	7-12 January 2019	Department of Civil Engineering, T.K.M College of Engineering, Kollam
8	Dr. Agilan V	Short Term Course on Contemporary Technologies for Water and Wastewater Management	7-12 January 2019	TKM College of Engineering, Kollam
9	Dr. Agilan V	Short Term Course on Flood Peak Estimation and Flood Routing	Nov 12-14, 2018	NIT Calicut
10	Dr. Pramada.S.K	Delivered expert talk on "groundwater modeling-modflow"	16 th and 19 th April 2018	Sathyabama University, Chennai
11	Dr. Pramada.S.K	National level technical conference, PAALAM-18	18 th April 2018	MGR University, Chennai
12	Dr. Santosh G Thampi	CETA Day - Invited talk on "Water Resources Management in Kerala – A Review Based on the Kerala Floods 2018"	28 March 2019	MEA Engineering College, Pandikkad
13	Dr. Santosh G Thampi	One day seminar on "New Frontiers of Hydraulics and Water Resources Engineering"	28 December 2018	Department of Applied Mechanics and Hydraulics, NITK Surathkal
14	Dr. Santosh G Thampi	One day seminar organized by FEEC at Kozhikode on "Climate Change and the Energy Sector"	20 December 2018	FEEC at Calicut
15	Dr. Santosh G Thampi	An invited talk on "Water Management in the Context of Recent Floods in Kerala"	30.10.2018	Calicut Chapter of the Institution of Engineers (India)

16	Dr. Santosh G Thampi	One day Workshop on “Sustainable Solutions to Flood Management towards “Climate Resilient Kerala”	25.10.2018	Hindustan Institute of Technology and Science, Chennai
17	Dr. Santosh G Thampi	An invited presentation on “Development of a Real Time Flood Forecasting System for Reservoirs in the Periyar River Basin”	27.09.2018	Before the Joint Team of the NPMU of the NHP, MoWR, RD & GR and CWC on a visit to Kerala to explore the feasibility of development of flood forecasting/ early warning system and reservoir operation rules at Aluva
18	Dr. Santosh G Thampi	Key note lecture titled “Water Resources Management in Kerala: Challenges and the Way Forward” at the International Conference on Infrastructure Development: Issues, Innovations, and the Way Forward	21-23 June 2018	Mar Baselios College of Engineering and Technology, Thiruvananthapuram

(f) Details of Faculty, who acquired Higher Qualification: NIL

(g) Consultancy and testing

Sl. No	Nature of Service	Organization	Revenue earned (Rs)	Status
1	Stability assessment of various buildings of Malabar Cancer Centre, Thalassery	BSNL	Rs. 34.0 Lakhs	Completed
2	Inspection of steel building at Solar hotel, Pavaratty	Floreat, Calicut	Rs. 35,000/-	Completed
3	Upgradation and conversion of 13.5km Kaniyambetta-Kuthumunda 66KV SC line to 110 KV DC line-Soil investigation report	Kerala State Electricity Board Ltd Kaniyambetta, Kerala	Rs. 3,50,696/-	Ongoing
4	Soil testing	PWD, Building Section, Manathavadi	Rs. 5310/-	Completed

5	Landslide characterisation	NCESS	Rs. 11 Lakhs	Ongoing
6	Material testing , Concrete mix design etc	Various agencies both private and public organisations	Rs. 3 Lakhs	completed
7	Scrutiny of Structural Design of Bridge	District Panchayath, Palakkad	Rs. 2 Lakhs	completed
8	Scrutiny of Structural Design of Building	Landmark Builders & Developers [India] Pvt. Ltd.	Rs. 1.5 Lakhs	completed
9	Approval of drawings of the retaining wall to be constructed at Highlands Villa Project at Methottuthazham, Kozhikode.	Calicut Landmark Builders and Developers [India] Pvt. Ltd.	Rs, 29,500/-	Completed

h. Patents acquired and filed

i. Student achievements:

B.Tech Project group guided by Dr. Sajith A.S. has bagged the 1st prize in the Best B. Tech project award instituted by Association of Engineers Kerala.

Project Title: **Studies on isolators for sensitive systems housed in Structures subjected to vibration**

Students : Abhinav R Krishnan, Shameem Shajahan, Shripad Malakarjun Patil, Suhail Ishack and Varada Vinod Nambiar

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

a. Publications

i. Journals

Name of the Author	Title of Paper	Name of Journal	Vol, Year, p.p.
P. Shamna, V.K. Govindan, Abdul Nazeer K A	Content-based medical image retrieval b spatial matching of visual words.	Elsevier Journal of King Saud University –Computer and Information Sciences.	2019
Shamna, P., Govindan, V. K., Abdul Nazeer K A	Content based medical image retrieval using topic and location model.	Journal of biomedical informatics	2019
Visakh, R,	DEEPAligner:. Deep	Elsevier International Journal Computational	2019

Abdul Nazeer K A.	encoding of pathw to align epigenetic signatures.	Biology and Chemistry	
Visakh, R, Abdul Nazeer K A. .	Multi-network approach to identify differentially methylated gene communities in cancer	Elsevier International Journal Computational Biology and Chemistry	2019
Sunil Kumar P. V, Manju M, Gopakumar G.	Function Prediction of Cancer-related LncRNAsUsingHeteroge eousInformation Network Model.	Int. J. Data Mining and Bioinformatics	vol. 21, no. 4, 2018.
Sunil Kumar P. V., Gopakumar G.	Inferring Disease and Pathway Associations of Long Non Coding RNAs using Heterogeneous Information Network Model	Journal of Bioinformatics and Computational Biology,	2019
S. Sreena, A. Lijiya,	Survey on Skin Lesion Analysis towards Melanoma Detection.	International Journal of Computer Sciences and Engineering,	Vol.6, Issue.5, pp.602-615, 2018.
Athira, P. K., C. J. Sruthi, A. Lijiya.	A Signer Independent Sign Language Recognition with Co- articulation Elimination from Live Videos: An Indian Scenario.	Journal of King Saud University- Computer and Information Sciences	2019
J. Prakash, P. K. Singh A. Kishore	Integrating Fitness Predator Optimizer with Multi-objective PSO for Dynamic Partitional Clustering Progress in Artificial Intelligence.	SCI	2019
Unnikrishnan, P., Govindan, V.K., Madhu Kumar, S.D.,	Enhanced sparse representation classifier for text classification.	Expert Systems with Applications, 129	2019

K S Arun, V K Govindan, S D Madhu Kumar,	Enhanced bag of visual words representations for content based image retrieval: a comparative study.	Artificial Intelligence Review, Springer.	2019
M. P. Giles, S. D. Madhu Kumar, Lillykutty Jacob.	Resource Availability- Aware Adaptive Provisioning of Virtual Data Center Networks.	International Journal of Network Management.	2019
Jeethu V Devasia, Priya Chandran,	Inferring disease causing genes and their pathways:GpRr method.	Journal of Computational Science,	Elsevier 26, 2018, 108-117
Ojus Thomas Lee, Akash AGJ, Madhu Kumar SD, Priya Chandran	Storage Node Allocation Methods for Erasure Code based Cloud Storage Systems.	Arabian Journal for Science and Engineering.	2019
Ojus Thomas Lee, Vijay Sharma, S D Madhu Kumar, and Priya Chandran.	Modelling Multi-level consistency in Erasure Code Based Storage System	ACM SAC	2019
Jeethu V Devasia, Priya Chandran,	Graph pruning based approach for inferring disease causing genes and associated pathways	Int'l Journal of Bioinformatics Research and Applications, Inter science	2018
R, J. Chandran, P.	Secure and Dynamic Memory Management Architecture for Virtualization Technologies in IoT Devices.	Future Internet 2018	2018, 10, 119.

Saritha Murali, VK Govindan, Saidalavi Kalady.	A Survey on Shadow Detection Techniques in a Single Image.	Information Technology and Control	Vol. 47, No. 1, pp. 75-92, 2018.
Saritha Murali, Govindan V.K, and Saidalavi Kalady.	Shadow removal from uniform- textured images using iterative thresholding of shearlet coefficients.	Multimedia Tools and Applications,	2019
Sithara Kanakaraj, Madhu S Nair, Saidalavi Kalady.	SAR Image Super Resolution using Importance Sampling Unscented Kalman Filter.	IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing.	2018
Amal Dev Parakkat, Subhasree Methirumangalath, and Ramanathan Muthuganapathy,	Peeling the longest: A simple generalized curve reconstruction algorithm	Computers & Graphics	2018
Dhanaraj, J.S.A, M prabhu, Gao, Mohandas	Artificial Neural Network based Smart and Energy Efficient Street Lighting System: A Case Study for Residential area in Hosur. Sustainable Cities and Society.	Artificial Neural Network	2019
K. Nagaraju, K.S. Sudeep, and M.P Kurhekar,	A cellular automaton model to find the risk of developing autism through gut-mediated effects.	Computers in Biology and Medicine,	2019

ii. International Conferences

Name of the Author	Title of Paper	Name of International conference	Place /Year /pp Duration
Das Priyojit, and	A novel clustering method to identify cell types from single cell	International Conference on Computational Intelligence and	April 2018

K A Abdul Nazeer.	transcriptional profiles.	Data Science , NorthCap University, Gurugram, India	
Anu B, Nazeer KA	An Improved Clustering Algorithm Based on k-Means and Artificial Bee Colony Optimization for Datasets that contain Outliers.	International Conference on Computing, Power and Communication Technologies (GUCON) . , Noida, India	September 2018.
Ankita, Nazeer K A A. 2018. September 2018.	Part-of-speech Tagging and Named Entity Recognition Using Improved Hidden Markov Model and Bloom Filter.	International Conference on Computing, Power and Communication Technologies (GUCON) . , Noida, India	September 2018.
Kaur J, Nazeer K A.	An improved Clustering Algorithm based on Fuzzy C-means and Artificial Bee Colony Optimization	International Conference on Computing, Power and Communication Technologies (GUCON) . , Noida, India	September 2018.
Lavanya, S, Nazeer K A	An Improved Computational Linguistic Approach for Fine-Grained Sentiment Analysis of Textual Review.	International Conference on Computing, Power and Communication Technologies (GUCON) Noida, India	September 2018.
Sreeshma C, Manu Madhavan, Gopakumar G.	Identification of lncRNAs from inherent features using machine learning techniques.	Int Conference on Bioinformatics and System Biology (BSB2018). , IIT Allahabad	October 2018
P. V. Sunil Kumar and G. Gopakumar.	Relrank: An algorithm for relevance-based ranking of meta-paths in a heterogeneous information network.	IEEE Recent Advances in Intelligent Computational Systems (RAICS).	pp. 98-102, Dec 2018
Anu Mary Chacko	AdultSwine: A case study	International Conference on Advances in Computing, Communications and	July 2018

		Informatics (ICACCI), Bangalore India,	
George, Merlin, Anu Chacko, and Sudeep Koshy Kurien.	Proactive diabetes management: research directions	20th International Conference on Distributed Computing and Networking,	2019
Manu Madhavan , Gopakumar G	A tf-idf based Topic, Model for identifying, lncRNAs from genomic background.	ACM/SIGAPP Symposium on Applied Computing (SAC 2018) Pau, France.	2018, pp38- 44
Sruthi C J and Lijiya A	Signet: A Deep Learning based Indian Sign Language Recognition System	International Conference on Communication and Signal Processing (ICCSP),Chennai, India.	2019
Avinash kumar, M. B Bijoy, P. B Jayaraj,	Early Detection of breast cancer using SVM with SMO algorithm	3rd International Conference on Advanced Computing and Intelligent , Engineering	Springer, Bubhaneswa r, India, 22- 24
Reshma Raj R. S., Gayathri C., Saidalavi Kalady, Jayaraj P. B.	Odd-Even Based Adaptive Two-way Routing in Mesh NoCs for Hotspot Mitigation,	International Conference on Distributed Computing and Net-working (ICDCN '19),	2019
M. B Bijoy, Vaibhav Silimkar, P. B Jayaraj,	Detecting Cervix Type Using Deep Learning and GPU	6th IEEE Region 10 Humanitarian Technology Conference 2018, IEEE SriLanka Section, Colombo, Sri Lanka	6th – 8th December 2018
Jisna Antony, V. Sreenivas, P. B. Jayaraj.	Recent Advances in Intelligent Computational Systems (RAICS),	IEEE	2018
Jaisooraj J and	Ensuring Seamless Connectivity in Internet		

S D Madhu Kumar	ofThings: The Role of Low Power Lossy Networks	IEEE R10 HTC	2018.
Lee, Ojus , Porwal, Rajat , Kumar, S D Madhu Kumar, and Priya, Chandran	ECSim-2: A Performance Evaluator for Erasure Code based Storage Systems".	ICSCCC.2018	496-501. 10.1109/ICSCCC.2018.8703273 2018
M. P. Gilesh, Subham Jain, S. D. Madhu Kumar, Lillykutty Jacob	On the Necessity of Right Optimizations for Live Migration of Virtual Machines	IEEE Region 10 Symposium (TENSYMP) 2018, Sydney, Australia, July 2018.	July 2018
Ojus Thomas Lee, Vijay Sharma, S D Madhu Kumar, and Priya Chandran.	Modelling Multi-level consistency in Erasure Code Based Storage System,	ACM SAC	2019.
M. P. Gilesh, Sanjay Satheesh, Athul Chandran, S. D. Madhu Kumar, Lillykutty Jacob	Parallel Schedule of Live Migrations for Virtual Machine Placements	The 4 th IEEE International Conference on Collaboration and Internet Computing (CIC 2018), Philadelphia, PA, USA.	Oct 2018
Gilesh, MP, MadhuKumar SD, Jacob.	Bounding the Cost of Virtual Machine Migrations for Resource Allocation in Cloud Data Centers.	ACM SAC Cloud Computing Track Pau.	April 2018

Howlader, P, Pal KK, MadhuKumar SD, Cuzzocrea A.	Predicting Facebook-Users' Personality based on Status and Linguistic Features via Flexible Regression Analysis Techniques April 2018.	ACM SAC 2018 Cognitive Computing Track. , Pau, France	2018
Pratima, HV, Lee OT, MadhuKumar SD, ChandranPriya..	Improved Epoch expiry and Load handling mechanism for RAPID - The Fast Data update Protocol in Erasure Coded StorageSystems	International Conference on Data Science and Engineering (ICDSE 2018). , Cochin University: IEEE explore	2018
Jain, S, MP G, MadhuKumar SD, Jacob L	On the Necessity of Right Optimizations for Live Migration of Virtual Machines”.	IEEE TENSYP. , Sydney, Australia: IEEE Explore	2018
Anita Brigit Mathew, S. D. Madhu Kumar, K. Murali Krishnan, Sameera Muhamed Salam	Efficient query retrieval in Neo4jHA using metaheuristic social data allocation scheme.	Computers & Electrical Engineering	2018 67: 425-440
S. T. Vijay and P. N. Pournami	Feature Based Image Registration using Heuristic Nearest Neighbour Search	IEEE 2018 22nd International Computer Science and Engineering Conference (ICSEC), Chiang Mai, Thailand	2018, pp.1-3.
K. M. Subhash, P. N. Pournami and P. K. Joseph	Characterizing EMG Signals using Aggregated CENSUS Transform	IEEE 11th Biomedical Engineering International Conference (BMEiCON), Chiang Mai.	2018, pp. 301-304.

S. Societydoruge and P. N. Pournami.	Bi-Histogram Equalization with Adaptive Multi-Plateau Limits for Enhancing Magnetic Resonance Images	IEEE 2018 International Conference on Advances in Computing, Communications and Informatics (ICACCI), Bangalore,.	2018, pp. 1027-1032
Pournami P.N., Govindan V.K.	Highly Repeatable Feature Point Detection in Images Using Laplacian Graph Centrality	Proceedings of the International Conference on ISMAC in Computational Vision and Bio-Engineering 2018 (ISMAC-CVB). ISMAC 2018. Lecture Notes in Computational Vision and Biomechanics,	vol 30. Springer, Cham. 2018
Swapneel C. Mhatre, Dr. Priya Chandran and Jithin R.	On the Simulation of Processors Enhanced for Security in Virtualization', 9 th ACM/SPEC	International Conference on Performance Engineering (ICPE) https://doi.org/10.1145/3185768.3185774	2018, pp. 51 - 52, 9 - 13 April 2018.
Lee, Ojus & Porwal, Rajat & Kumar, S D Madhu Kumar, & Priya, Chandran. (2018).	ECSim-2: A Performance Evaluator for Erasure Code based Storage Systems.	ICSCCC.2018	496-501. 2018 10.1109/ICSCCC.2018.8703273.
Pratima H V, Lee O T, Madhu Kumar S D, Chandran Priya.	Improved Epoch expiry and Load handling mechanism for RAPID - The Fast Data update Protocol in Erasure Coded Storage Systems	International Conference on Data Science and Engineering (ICDSE2018) ,Cochin University: IEEE explore 2018.	2018

Amal Dev Parakkat, Subhasree Methirumangalath, and Ramanathan Muthuganapathy.	Peeling the longest: A simple generalized curve reconstruction algorithm.	IEEE Shape Modeling international, 2018, Lisbon	June 6-8 2018
Simran Kanodia, Rachna Sasheendran, Vinod Pathari.	A Novel Approach for Youtube Video Spam Detection using Markov Decision Process. ICACC.	ICACCI	2018: 60-66
Arjun Krishnamoorthy, Akshay Kishor Patil, N. Vasudevan, Vinod Pathari	News Article Classification with Clustering using Semi-Supervised Learning.	ICACCI 2018	2018: 86-91
Venkatesh Seetha, Vinod Pathari.	A Data Science - Centered Approach to Studying International Relations and Foreign Policies.	ICACCI 2018	2018: 495-501
R. S. Reshma Raj, C. Gayathri, Saidalavi Kalady, and P.	Odd-even based adaptive two-way routing in mesh NoCs for hotspot mitigation.	International Conference on Distributed Computing and Networking (ICDCN '19).	2019

B. Jayaraj.			
Ankit, Saleena N.	An Ensemble Classification System for Twitter Sentiment Analysis.	International Conference on Computational Intelligence and Data Science	2018
Rani M. R, Mohith Jagalmo hanan, R. Subashini.	Classical Complexity and Fixed-Parameter Tractability of Simultaneous Consecutive Ones Submatrix and Editing Problems.	International Frontiers of Algorithmics Workshop.	2018
Jasine Babu, Karunakaran Murali Krishnan, and Vineeth Paleri.	A fix-point characterization of Herbrand equivalence of expressions in data flow frameworks.	Khan M., Manuel A. (eds), Logic and Its Applications, ICLA.	2019
SM Salam, D Chacko, NJ Warriar, KM Krishnan, KS Sudeep.	On chordal and perfect plane triangulations.	Conference on Algorithms and Discrete Applied Mathematics (CALDAM 2019).	2019
Hema Sai Desu, Phalani Paladugu, Santhoshi Sameera Adibhatla, Sushma Swaroopa Sorda, KS Sudeep.	Personalized Web Search.	Springer 3rd International Conference on Advanced Computing and Intelligent Engineering (ICACIE 2018),	2019

iii. National Conference : Nil

b. Community Services

The Department of Computer Science & Engineering of NIT Calicut has developed an Online Mess Management System for the CISF Unit of Calicut Airport. The software development project was initiated by Prof. Sivaji Chakravorti, Director NIT Calicut based on the request from Sri. Daniel Dhanaraj, Deputy Commandant of CISF Karipur Unit. Sri.Daniel informed the gathering that he has informed the CISF Head Quarters at New Delhi about this software, and they can potentially utilize this for all the 3000 plus CISF units across the country. The project was successfully carried out by four MCA students of NIT Calicut - Mr Rishabh Arora, Mr Sarvesh Ambrish, Gaurav Singh and John C A under the guidance of Dr. S .D Madhu Kumar and Sri. M Pandiyanathan. This software was delivered as part of the outreach activities of NIT Calicut. Dr. Sivaji Chakravorti handed over the software package including the source code and user manual to Sri Daniel, CISF, in a function held at NIT Calicut campus on 25-01-2018.

C. Other Academic and Administrative Services

Name of Staff	Academic and Administrative Services
Dr. Saleena N	<ul style="list-style-type: none"> (i) Head of the Department (ii) Administrative responsibility of CNC/CCC (as HoD, CSED) (iii) S1 B.Tech. Class Committee Chairperson (iv) Faculty-in-charge of maintenance of CSED Office
Dr. Vineeth Paleri	Institute Level: i. Central Library- LAC Member Dept. Level : i.Faculty in charge Examinations ii.Programme Coordinator Ph.D. iii.Faculty in charge of CSED Website iv.Central Library- LAC Member v.Faculty Advisor – Ph.D. vi.S7 B,Tech Calss Committee Chairperson
Dr Priya Chandran	Institute Level: i. Member of Senate ii. Chairperson/ Member of several doctoral committees. iii. Chair Person Exam vigilance committee Dept. Level : i. Faculty in charge Secure Computing Lab ii. Programme Coordinator M. Tech (CS) and CS(IS) iii. In-charge of Faculty research iv. Faculty in charge of Academic calendar Monitor v. Faculty in charge of Technical Report Publishing vi. Faculty in charge of Dept. PTA Coordination vii. Faculty Advisor of M. Tech CS(IS) -2017& 2018 Admissions viii. S4B.Tech Class Committee Chairperson

	ix. Faculty in charge of Aryaka Networks
Dr. S.D Madhu Kumar	<p>National/ International/ Professional Bodies:</p> <ul style="list-style-type: none"> i. TPC Member- Symposium on Pervasive Systems, Algorithms, and Networks (IEEE I-SPAN 2017), Exeter, England. ii. PC Member - 2nd IEEE/ACM International Workshop on Distributed Big Data Management (DBDM 2017) Madrid, Spain- In conjunction with IEEE/ACM CCGRID2017. iii. Track Chair-ACM SAC 2017 Cloud Computing Track iv. Keynote Speaker- National Conference- PRABANDT H'17-Trivandrum <ul style="list-style-type: none"> ii. Tutorial Speaker (Big Data Analytics Tools and Techniques) -IEEE SPICES2017 iii. Academic Liaison Chair-IEEE Cloud Computing for Emerging Markets iv. Program Chair- 2nd International Workshop on InternetScale Clouds and Big Data (ISCBD) 2017, San Jose California Chair- IEEE TENCON 2017 - Special session on BigData Provenance ix. Keynote Speaker- ICETEST 2018, GEC Thrissur x. Track Chair- ACM SAC 2018 Track on Cloud Computing xi. Co-ordinator-Collaborative Project with Airport Authority of India- CISF Calicut Airport Unit. Member of the Board of Studies (M.Tech) in Computer Science & Engineering, Amrita Viswa Vidya Peedham, 2018. xii. Member of the Board of Studies In Computer Science (Under the faculty of Technology), Cochin University of Science & Technology (CUSAT) (2015 onwards) xiii. Research Collaboration / Consultancy with M/s Aryaka Systems, California. <p>Institute Level:</p> <ul style="list-style-type: none"> I. Dean Student Welfare II. Faculty Convenor- Alumni Meet- Loopback'17 III. Secretary, CREC Silver Jubilee Endowment Trust (2016 onwards) <p>Dept. Level:</p> <ul style="list-style-type: none"> i. Faculty in charge of CSEA ii. Faculty in charge of Cloud Computing Lab iii. Faculty Advisor of M. Tech CS(CSE) -2017&2018 Admissions iv. Faculty in charge of Big Data & Bio-computing(BDBC)Lab v. Consultancy & sponsored Research vi. Liaison with industries/JMR Infotech vii. Faculty in charge of Aryaka Networks <p>S6 B.Tech Class Committee Chairperson</p>

Dr. K A Abdul Nazeer	<p>National/ International/ Professional Bodies:</p> <ul style="list-style-type: none"> (i) External Examiner for Ph.D Defense, JNTU Hyderabad, January 2018 (ii) Member, Doctoral Committee, VIT Vellur (iii) External Examiner for PG Viva Voce Exam, NIT Surathkal <p>Institute Level:</p> <ul style="list-style-type: none"> (i) Convener, Screening Committee for Student Research Projects (for the award of financial assistance under TEQIP) (ii) Member, Anti Ragging Committee (iii) Member, BOAC (iv) Invitee to the Senate <p>UG Admission chairman</p> <p>Dept. Level :</p> <ul style="list-style-type: none"> (i) Faculty in charge of Purchase Matters (ii) Faculty in charge, Machine Learning Lab (iii) Faculty in charge, Big Data and Biocomputing Laboratories. (iv) Faculty in Charge of Dept. Information Cell/ RTI (v) Faculty Adviser, , B. Tech 2016 Admissions) (vi) S3 MCA Class Committee Chairperson <p>Faculty in charge of MVRCCRI</p>
Mr. Saidalavi Kalady	<ul style="list-style-type: none"> i. Faculty Advisor of B.Tech 2017 Admissions ii. Faculty in charge, Hardware and Embedded Systems Lab iii. S1 MCA Class Committee Chairperson iv. Faculty in charge of Examinations M.tech 2018 admission class committee chairperson
Dr. Muralikrishnan K	<ul style="list-style-type: none"> i. Faculty Adviser, B. Tech (2013 Admissions) ii. Faculty in charge, Examinations iii. B. Tech Programme Coordinator iv. S1 M.Tech Class Committee Chairperson
Dr. Vinod Pathari	<p>Institute Level:</p> <p>Vice Chairman, Education Technology and Library (till Oct 2016)</p> <p>Dept. Level:</p> <ul style="list-style-type: none"> (i) Faculty Adviser, B. Tech (2015 Admissions) (ii) Faculty in charge, Technical Report Publishing (iii) Liaison with industries ULCCS (iv) Faculty in Charge of Stock update & clearance (v) Faculty in Charge of IP camera, Finger print management system (vi) S4 MCA Class Committee Chairperson
Ms. Subhasree M.	<p>Institute Level:</p> <ul style="list-style-type: none"> (i) Associate Dean Academic <p>Dept. Level:</p> <ul style="list-style-type: none"> (ii) Faculty Adviser, , B. Tech 2016 Admissions (iii) Faculty in Charge of dept. Computing facilities

Dr. Subashini R	<ul style="list-style-type: none"> (i) Faculty Adviser, B. Tech 2018 Admissions (ii) Faculty in charge, NITC-TCS Academic Interface Programme (iii) Faculty in charge, Dept. Time Table, DSS (iv) Liaison with Industries/ TCS
Mr. Srinivasa T M	<ul style="list-style-type: none"> (i) Faculty Adviser, B.Tech 2017 Admission) (ii) Faculty in charge, Hardware and Embedded Systems Lab
Dr. Lijiya.A	<ul style="list-style-type: none"> (i) Faculty Adviser of B. Tech 2015 (ii) Faculty in charge of Class Rooms Amenities (iii) Faculty In-Charge of Short Term Courses (iv) Faculty in charge of CSEA (v) Faculty in Charge of CSE Eduserver
Dr. Jimmy Jose	<ul style="list-style-type: none"> (i) Faculty in charge, Institute. Time Table, Class committee. (ii) Faculty Adviser, , B. Tech 2015 (iii) Faculty in charge of Software systems lab (iv) Faculty in charge of SCTIMST (v) Faculty in charge of NITCAA USA Mentoring Programme (vi) Placement Committee Representative 2018-2019
Ms. Anu Mary Chacko	<ul style="list-style-type: none"> (i) Faculty Adviser, B. Tech 2017 Admissions (ii) Faculty in charge of CSED Library (iii) Secretary, Department Consultative Committee (iv) Liaison with Industries/ TCS AIP (v) Faculty in charge of JMR Infotech <p>Coordinator of Institute-Industry Programme</p>
Dr. Pournami P.N.	<ul style="list-style-type: none"> (i) Faculty Adviser, MCA 2016 Admission (ii) Faculty-in charge of Image Processing and Multimedia Lab. (iii) Faculty in Charge of Dept. Information Cell/ RTI/Ranking
Dr. Jayaraj P B	<ul style="list-style-type: none"> (i) Faculty in Charge of Central Computer Centre (ii) Faculty in Charge of Network Systems Lab (iii) Faculty Adviser B. Tech 2016 Admissions (iv) Faculty in Charge of Consultancy and Sponsored Research
Dr. Sudeep K S	<ul style="list-style-type: none"> (i) Faculty Adviser, MCA 2017 Admission (ii) Programme Co-ordinator MCA (iii) In-charge of Faculty research (iv) Faculty in charge of Technical Report Publishing
	<ul style="list-style-type: none"> (i) Faculty Adviser, B. Tech 2014 Admissions (ii) Faculty in charge, Big Data and Biocomputing

Dr. Gopakumar G	Laboratories. (iii) Faculty in charge of Purchase Matters (iv) Faculty in charge of MVRCCRI (v) Coordinator of TEQIP Stock maintenance , Twinning Activities
Dr. Jay Prakash	(i). Faculty Adviser, MCA 2018 Admissions (ii). Faculty in charge TEQIP Stock maintenance , Twinning Activities (iii). Faculty in charge, Examinations
Dr. Arun Raj Kumar P	(i) Faculty Adviser, B.Tech. 2018 Admissions (ii) Faculty in charge of NBA Accreditation
Dr. Hiran V Nath	(i). Faculty Adviser, B.Tech. 2018 Admissions (ii). Faculty in charge of Software Systems Lab (iii). Faculty in charge of Wi-fi
Dr, T . Veni	(i) Faculty Adviser, B.Tech. 2018 Admissions (ii) Faculty in charge of NBA Accreditation (iii) Faculty in Charge of Dept. Information Cell/ RTI/Ranking
Dr. Vasudevan A R	(i) Faculty in charge of Time Table, Class Committee (ii) Faculty in Charge of dept. Computing facilities
Dr. M Prabhu	(i). Faculty in Charge of Consultancy and Sponsored Research (ii). Faculty in charge of Purchase Matters (iii). Faculty in charge TEQIP Stock maintenance , Twinning Activities

i. Conferences/Summer/Winter School/Short term Courses/ Workshops conducted

Sl. No	Title	Coordinators	Duration & Period
1	FDP On "Security and Privacy of Big Data Analytics	Dr. Madhukumar S D and Dr. Anu Mary Chacko	6 days, 18th -23rd June 2018
2	TCS Workshop on Blockchain Technology was taken by Mr. Linesh John, a business consultant, and Mr. Ateet Yadav	Dr.Subashini R	26-10- 2018
3	JMR Hackathon	Dr. Anu Mary Chacko and Dr. S D Madhu Kumar.	October 4 to 5, 2018
4	GIAN COURSE ON HIGH PERFORMANCE	Dr.Jayaraj P B	8 -10-18 TO 13-10-18

	COMPUTING CONCEPTS AND PRACTICE		
5	MINI POCO 2018 at IEEE Kerala Section	Dr. S D Madhu Kumar	10th November 2018
6	Program Chair for Workshop I-CAPCHA 2018, held in conjunction with IEEE CIC 2018 at Pittsburg, USA .	Dr. S D Madhu Kumar	October 2018
7	Program Chair for 3rd International workshop on Internet-Scale Clouds and Big Data (ISCBD 2018), Pennsylvania, USA	Dr. S D Madhu Kumar	October 18, 2018
8	Program Chair for 3ICT 2018- Special session on Intelligent Resource Management in Cloud based Data Centres (IRMCDC 2018) at University of Bahrain.	Dr. S D Madhu Kumar	November 18-20, 2018

j. Expert lecturers delivered in Conferences/Seminar/workshops

Sl. No.	Name of Staff	Title of the Programme	Duration and Period	Organization
1	Dr. S D Madhu Kumar	Presented a paper titled ECSim-2: A Performance Evaluator for Erasure Code based Storage Systems in the conference ICSCCC 2018,	December 2018	NIT JALANDHAR
2	Dr. S D Madhu Kumar	Invited Talk on “ <i>Research Topics in Data Analytics</i> ” as a part of FDP on Research Challenges in Data Analytics	6th December 2018	SCT Engg. College, Pappanamcode, Thiruvananthapuram
3	Jaisooraj J and Dr S D Madhu Kumar	Presented the paper- "Ensuring Seamless Connectivity in Internet of Things: The Role of Low Power Lossy Networks" (IEEE R10 Humanitarian Technology Conference	December 2018	Sri Lanka Institute of Information Technology, Colombo.

		2018 (HTC 2018))		
4	Jaisooraj J, S D Madhu Kumar, and Aindrila Ghosh	Presented the paper- "Resource Management in Internet of Things: A Routing Perspective". (IEEE International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies 2018 (3ICT 2018))	November 2018	University of Bahrain
5	Dr. Vineeth Paleri	Provided Lectures on: 1. The Discipline of Computing. 2. Programming Methodology. Refresher Course in Computer Applications for College/University teachers,	November 11, 2018	UGC Human Resource Centre, University of Calicut,
6	Dr. Saleena N	Talk on Turing Machines	08.11.2018	GEC, Kannur
7	Dr. Gopakumar G	FDP lecture on “ Neural Networks to Deep Neural Network”	13-12-18	Dept. of Maths, NITC
8	Dr. Anu Mary Chacko.	FDP lecture on Analytic in Health informatics	15-1-19	GEC Trichur
9	Dr. K A Abdul Nazeer.	A session on ‘Bioinformatics’	8th November 2018	Govt. College of Engineering, Kannur
10	Dr. Pournami P N	A talk on Information Technology for Rebuilding Kerala	6th October 2018	SOMS, NITC
11	Dr. Pournami P N	Presented a paper “Feature Based Image Registration using Heuristic Nearest Neighbour Search” in 22nd International Computer Science and Engineering Conference (ICSEC 2018)	November 2018	ICSEC 2018, Chiang Mai, Thailand
12	Dr. Pournami P N	Presented a paper	November 2018	BMEiCON

		“Characterizing EMG Signals using Aggregated CENSUS Transform” in 11th Biomedical Engineering International Conference (BMEiCON),		Chiang Mai, Thailand, Thailand.
13	Dr. Saidalavi Kalady	A session on <i>Cache Coherence and Synchronization Mechanisms</i>	12th November 2018	GEC Kannur
14	Dr. Priya Chandran	Talk on <i>Information Technology for Rebuilding Kerala</i>	6th October 2018	SOMS, NITC
15	Dr. Priya Chandran	Lecture and workshop on <i>Handling disaster management with Information Technology ("AMALGAM")</i>	2 nd November 2018	Department of Computer Science, Dayapuram Arts and Science College for Women
16	Dr. Priya Chandran	Talk on <i>Research Scope in Blockchain Technology</i> , as a part of FDP on Research Challenges in Data Analytics	6th December 2018	SCT, Pappanamcode, Thiruvananthapuram
17	Dr. Jimmy Jose	CARPenter: A Cellular Automata Based Resilient Pentavalent Stream Cipher	20th September 2018	13th International Conference on Cellular Automata for Research and Industry Como, Italy
18	Dr. Arun Raj Kumar P	A Keynote Speech on “Big Data Privacy” at EAI International Conference on Big Data Innovation for Sustainable Cognitive Computing	14th December 2018	EAI International Conference, Coimbatore
19	Dr. Anu Mary Chacko.	Big Data Security Challenges Research Challenges in Data Analytics	7th December 2018	SCT College of Engineering, Trivandrum
20	Dr. Jay prakash	FDP on Evolutionary	13th to 15th	Department of CSE in

		& Swarm Intelligence Algorithm	December 2018	MEA Engineering College, Perinthalmanna
21	Dr. Hiran V Nath	Vulnerability Assessment and Penetration Testing	29 th October - 02 nd November 2018	IDRBT
22	Dr. Hiran V Nath	Cyber Security Drills	30 th July - 1 st August, 2018	IDRBT

(f) Details of Faculty, who acquired Higher Qualification:

Smt. Pournami P N, Assistant Professor, CSED, received Ph.D for her thesis titled 'IMAGE REGISTRATION: IMPROVED TECHNIQUES THROUGH ACCELERATED OPTIMISATION AND A NEW FEATURE- BASED APPROACH: september 2018

(g) Consultancy and testing

Sl. No	Nature of Service	Organization	Revenue earned	Status
1	Research and Consultancy	Aryaka Network Solutions, California	3.45 Lakhs	On-Going

(h) Patents acquired and filed:

- a. **Hiran V Nath**, B. M. Mehtre, Patent Title : **A System and Method for Detection and Prevention of Data Breach and Ransomware Attacks**. US Patent Office NPA Application No 15/821902, Filed on 24/11/2017.
- b. **Hiran V Nath**, B. M. Mehtre, Patent Title : **A System and Method for Detecting Zero-Day Privilege Escalation Malware**. Indian Patent Office Provisional Patent Application Reference No 6477/CHE/2015, Filed on 02/12/2015. US Patent Office NPA Application No 15093690, Filed on 07/04/2016;
URL:<https://patents.google.com/patent/US20170161495> .

(i) Student achievements

Sl. No	Name of Student	Title	Year
1	Ms. Jaspreet Kaur	Best paper award in the IEEE INTERNATIONAL CONFERENCE ON COMPUTING, POWER AND	2018

		COMMUNICATION TECHNOLOGIES 2018 (GUCON 2018)	
2	Ms.Devika S	TCS Best Outgoing Student award.	2018-19

DEPARTMENT OF ELECTRICAL ENGINEERING

a. Publications

i. Journals

Sl. No.	Name of the Author	Title of Paper	Name of International Journal	Vol, PP, Year
1.	S. Tamilselvi, L. Baskar, A.Padmanaban, V.Karthikeyan and S. Rajasekar	Multi-objective evolutionary algorithm for designing energy efficient distribution transformers	Swarm and Evolutionary Computation, Elsevier	Vol - 42, pp. 10-124 October 2018
2.	Gowrishankar S and Sunitha K	Influence of the insulator geometry on the streamer propagation characteristics in polymeric insulators under positive polarity lightning impulse voltages	IET Science, Measurement & Tecgnology/ DOI:10.1049/iet-smt.2018.5028	Vol. 12 Iss. 8, pp. 1082-1088, November 2018,
3.	Nithin Raj.Tushar Kale, Anjali Anand, Jagadanand G, Saly George	Switch fault detection and diagnosis in space vector modulated cascaded H-bridge multilevel inverter	International Journal of Electronics, Taylor and Francis doi.org/10.1080/00207217.2018.1494327	05:12, 1977-1992 28 Jun 2018
4.	Haseena K A , Jeevamma Jacob, Abraham T mathew	Fractional-Order Lead-Lag Compensator Based Multi-Band Power System Stabilizer Design Using a Hybrid Dynamic GA-PSO Algorithm	IET Generation, Transmission & Distribution DOI: 10.1049/iet-gtd.2017.1087	2018, Vol. 12 Iss. 13, pp. 248-3260 Jul 19, 2018
5.	K E Mary Reena, Abraham T Mathew, and Lillykutty Jacob	A flexible control strategy for energy and comfort aware HVAC in large buildings	<i>Building and Environment</i> DOI: 10.1016/j.buildenv.2018.09.016	Volume 145, November 2018, Pages 330-342.
6.	M Sreekanth, Abraham T Mathew, R Vijayakumar	A novel model-based approach for resistance estimation using rise time and sensorless position control of sub-millimetre shape memory	Journal of Intelligent Material Systems and Structures https://doi.org/10.1177/1045389X1773091	April 1, 2018 Vol. 29(6) 1050–1064

		alloy helical spring actuator	<u>1</u>	
7.	Anirudh K, Jayanta Biswas, Anjana K and M. Barai	A Simple Real-Time DMPPT Algorithm for PV Systems Operating Under Mismatch Conditions	Journal of Power Electronics (JPE),	Vol. 18, No. 3, pp. 826-840, May 2018.
8.	D.Mishra A.K.Pradhan A.Baral S.Chakravorti	Reduction of Time Domain Insulation Response Measurement Duration for Fast and Effective Diagnosis of Power Transformer	IEEE Trans. on Dielectrics and Electrical Insulation.,	Vol.25, No.5, pp 1932-1940 Oct. 2018
9.	S.Chatterjee S.Dalai S.Chakravorti B.Chatterjee	Use of Chirp Excitations for Frequency Domain Spectroscopy Measurement of Oil-paper Insulation	IEEE Trans. on Dielectrics and Electrical Insulation.,	Vol.25, No.3, pp 1103-1111 June 2018
10.	Joseph Peter, K P Mohammed Shafi, Lakshmi R and Rijil Ramchand	Nearly Constant Switching Space Vector based Hysteresis Controller for VSI fed IM Drive	IEEE Transactions on Industrial Applications DOI: 10.1109/TIA.2018.281656	July-August 2018.
11	Sivaprasad A, G. G. Kumar, Kumaravel S, Ashok S	Performance Analysis of a Positive Output Voltage Dual Input DC-DC Converter for Hybrid Energy Application	Journal of Circuits, Systems and Computers https://doi.org/10.1142/S0218126618501591	Vol. 27, September 2018 , 1850159.1-22
12	Rohit. K. Mathew, Ashok S., Kumaravel S, Anuranj N. J	An Improved Algorithm for Power Distribution System Restoration using Microgrids for Enhancing Grid Resiliency	Electric Power Components and Systems https://doi.org/10.1080/15325008.2018.1527868	Vo. 46, 13 Nov 2018, pp. 1731-1743
13	Devika K B Susy Thomas	Sliding Mode Controller Design for MIMO Nonlinear Systems : A Novel Power Rate Reaching Law Approach for Improved Performance	Journal of the Franklin Institute, Elsevier https://doi.org/10.1016/j.jfranklin.2018.05.034	355 (August 2018), 5082-5098
14	Munshi, A.H., Sasidharan, N., Pinkayan, S., Barth, Kurt L., Sampath,	Thin-film CdTe photovoltaics – The technology for utility scale sustainable energy	Solar Energy	Volume 173, October 2018, Pages 511-516

	W.S., Ongsakul, W.	generation		
15	Sujo P George and Ashok S	Adaptive differential protection for transformers in grid connected wind farms	International Transactions on Electrical Energy Systems https://doi.org/10.1002/etep.2594 .	vol. 28, no. 9, 07 May 2018
16.	K. Sunitha and M. Joy Thomas	Effect of Soil Conditions on the Electromagnetic Field From an Impulse Radiating Antenna and on the Induced Voltage in a Buried Cable	IEEE Transactions On Electromagnetic Compatibility (10.1109/TEM.2018.2844205)	27 June 2018 Page: 1 - 8
17	Jineeth Joseph, Shilpa Mohan and Sindhu T.K	Numerical modeling, simulation and experimental validation of partial discharges in XLPE cable	IET Science Measurement and Technology (DOI: 10.1049/iet-smt.2018.5248)	Vol. 13, Issue 2, Pages 309 to 317 , November 2018
18	V. Karthikeyan, Kumaravel S., G. Guru Kumar	High Step-Up Gain DC-DC Converter with Switched Capacitor and Regenerative Boost Configuration for Solar PV Applications	IEEE Transactions on Circuits and Systems II: Express Briefs https://doi.org/10.1109/TCSII.2019.2892144	10 January 2019
19	Mishra, Deepak, Saurabh Dutta, Arijit Baral, Nasirul Haque, and Sivaji Chakravorti	Use of Interfacial Charge for Diagnosis and Activation Energy Prediction of Oil-paper Insulation used in Power Transformer	<i>IEEE Transactions on Power Delivery</i> Volume: 34 , Issue: 4 10.1109/TPWRD.2019.2892739	14 January 2019
20	Chatterjee, S., A. K. Pradhan, S. Dalai, S. Chakravorti, and B. Chatterjee	A Non-Linear Model for Sensing Moisture Content in Transformers at Reduced Time	<i>IEEE Sensors Journal</i> 19, no. 12 10.1109/JSEN.2019.2902641	04 March 2019 Pages 4639-4646.
21	Das S, Pradhan AK, Kedia A, Dalai S, Chatterjee B, Chakravorti S.	Diagnosis of Power Quality Events Based on Detrended Fluctuation Analysis..	IEEE Transactions on Industrial Electronics.	2018 Jan 22; 65(9):7322-31
22	Kumaravel S., Vinu Thomas, Terence O'Donnell and Ashok S	Virtual synchronous machine control of grid connected power electronic converters for power system applications	Journal of Engineering Research	vol. 7, no. 2, 2019, pp. 196-209
23	Ahammed Muneer K.V, V.R. Rajendran and Paul	Glioma Tumor Grade Identification Using Artificial Intelligent	Journal of Medical Systems	Vol. 12, No. 1, 21 March 2019

	Joseph K.	Techniques		
24	B.Smitha & K. Paul Joseph	A new approach for classification of Atherosclerosis of common carotid Artery from ultrasound images	Journal of Mechanics in Medicine and Biology	Vol. 19, No. 1 (February 2019);1-18
25	K.V. Ahammed Muneer, K. Paul Joseph	Automation of MR Brain Image Classification for Malignancy Detection	Journal of Mechanics in Medicine & Biology	Vol. 19, No. 1, (February 2019), 1940002.
26	Parvathy P, Jeevamma Jacob, M. P. Nandakumar	Inverse optimal control of a class of affine nonlinear systems	Transactions of the Institute of Measurement and Control	vol. 41, no. 9, 2019
27	K. Dheeraj, Jeevamma Jacob, M. P. Nandakumar	Direct Adaptive Neural Control Design for a Class of Nonlinear Multi Input Multi Output Systems	IEEE Access DOI: 10.1109/ACCESS.2019.2892460	Vol. 7, February 20, 2019, 15424-15435
28	Suraj Damodaran, T. K. Sunil Kumar	Model-Matching Fractional-Order Controller Design Using AGTM/AGMP Matching Technique for SISO/MIMO Linear Systems	IEEE Access DOI:10.1109/ACCESS.2019.2907569	Vol. 7, 26 March 2019 , pp. 41715-
29	Biju K, Rijil Ramchand	Control strategy for single phase cascaded nine level inverter with sinusoidal pulse width modulation using LPC 1769 ARM Cortex-M3 microcontroller	International Journal of Power Electronics	vol. 9, no. 4, 4 October 2018
30	U. Rajendra Acharya, Shu LihOh, Yuki Hagiwara, Jen HongTan, Hojjat Adeli, D. P. Subha	Automated EEG-based screening of depression using deep convolutional neural network	Computer Methods and Programs in Biomedicine	Vol 161, July 2018. 103-113
	Priyalakshmi S, Dr.Subha D.P	Event related potential analysis techniques for autism spectrum disorders: A review	International Journal of Developmental Neuroscience	Vol.68, 2018 Aug pp.72-82,
31	Devika K. B. Susy	Improved Reaching Law	International Journal	Volume 12,

	Thomas	Based Sliding Mode Controller for Free Flight Autopilot System	of Automation and Control, Inderscience Publications https://doi.org/10.1504/ijaac.2018.10012526	No.3, 20 Apr 2018, 361-380.
32	Pathirikkat Gopakumar, Balimidi Mallikajuna Maddikara, Jaya Bharata Reddy and Dusmanta Kumar Mohanta	Remote monitoring system for real time detection and classification of transmission line faults in a power grid using PMU measurements	Protection and Control of Modern Power Systems, Springer DOI:10.1186/s41601-018-0089-x	3:16, December 2018
33	Kumaravel S., Vinu Thomas, Terence O'Donnell and Ashok S.,	Transient Frequency Response Improvement of Microgrid using Virtual Synchronous Machine	Journal of The Institution of Engineers (India): Series B https://doi.org/10.1007/s40031-019-00380-5	07 February 2019
34	Nidya M. V. Jeevamma Jacob Mija S. J.	Stabilisation of Ball and Beam Module Using Relatively Optimal Control	International Journal of Mechanical Engineering and Robotics Research	Vol. 8, No. 2, March 2019 265-272

ii. National Journals:- NIL

iii. International Conferences

Sl.No	Authors	Title of the Paper	Name of the Conference	Venue and Date
1	Sreehari Venugopal, Sunitha R.	Robust Dynamic State Estimation During Missing of PMU Data	4th International Conference for Convergence in Technology (I2CT) , 2018	May 2018
2	Subin Koshy, Sunitha R, Elizabeth P Cheriyan	A PMU model for Dynamic state estimation of power systems	2nd IEEE International Conference on Energy, Power, Environment,	NIT Shillong, June 2018.
3	KM Subhash, PN Pournami, PK Joseph	Characterizing EMG Signals using Aggregated CENSUS Transform	BMEiCON 2018 - 11th Biomedical Engineering International	Chaing Mai, Thailand, Novemb

			Conference	er 21-24, 2018
4	P.Hema Rani , S Navasree, Saly George, S.Ashok.	Closed Loop control of Multi input Dc to Dc converter for Microgrid	International Conference on Current Trend towards converter Technologies	Mumbai Feb 24,2018
5	Nidya M. V. Jeevamma Jacob Mija S. J.	Stabilisation of Ball and Beam Module Using Relatively Optimal Control	International Conference on Control, Robotics and Informatics (ICCRI 2018), Kuala Lumpur, Malaysia.	April 7-9, 2018.
6	Keerthana Sunil ; Jeevamma Jacob	LMI Based design approach for the Stabilization and Tracking of a 3-DOF Remote Controlled Helicopter, Modeled in TP form	2018 International Conference on Advances in Computing, Communications and Informatics (ICACCI) DOI: 10.1109/ICACCI.2018.8554595	Bangalore, India, 19-22 Sept. 2018
7	Meenu D Nair , Jayanta Biswas , G Vivek , Mukti Barai	“ An Optimum Hybrid SVPWM Technique for Three level Inverter”,	IEEE 3rd International Conference for Convergence in Technology (I2CT),	Pune. 7-8 April 2018
8	Partha sarathi Behera,G Vivek,Dr. Mukti Barai	“ Common Mode Voltage (CMV) in Three level NPC VSI using Advanced Bus clamping methods: A Study,”	IEEE International conference on International Conference on 9Recent Innovations in Electrical, Electronics & Communication Engineering - (ICRIEECE-2018)	School of Electrical Engineering, Kalinga Institute of Industrial Technology (KIIT), Bhubaneswar July 2018
10	Femi Thomas Dr. Mija S.J.	Modelling of Hovering Helicopter and its Stability analysis using Participation factor	Third International Conference on Advances in Control and Optimization Of Dynamical Systems (ACODS)/	Hyderabad, 2018.

			https://doi.org/10.1016/j.ifacol.2018.05.085	
11	D.Mishra A.Baral N.Haque S.Chakravorti	Feasibility of using Normalized De-trapped Charge for Diagnosis of Power Transformer Insulation	10th IEEE PES Asia-Pacific Power and Energy Engineering Conference (APPEEC),	Kota Kinabalu, Malayasia, pp. 555-558 7-10 Oct. 2018
12	R. Verma D.Mishra A.Baral S.Chakravorti	Effect of Measurement Temperature of Insulation Poles Used for Assessment of Oil-paper Insulation	1st IEEE Applied Signal Processing Conference (ASPCON),	Kolkata, pp. 351-355 7-9 Dec. 2018
13	J. Sandeep, D. S. Nair, S. George, S. Ashok, G. Jagadan and R. Ramchand	Performance Comparison of Direct Torque Controlled Permanent Magnet Machines	IECON 2018 - 44th Annual Conference of the IEEE Industrial Electronics Society, doi: 10.1109/IECON.2018.8591665	Washington, DC, Oct. 2018
14	A. Anand, V. B. Akhil, N. Raj, G. Jagadanand, and S. George	An Open Switch Fault Detection Strategy using Mean Voltage Prediction for Cascaded H-Bridge Multilevel Inverters	IEEE International Conference on Power Electronics, Drives and Energy Systems. (PEDES 2018) DOI:10.1109/PED ES.2018.8707768},	IIT madras, Chennai, India Dec. 2018
15	Binu K Baby ; Saly George	Influence of Maximum Current Control Strategy on Torque Ripple in BLDC Motor	2018 IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES) DOI: 10.1109/PEDES.2018.8707680	IIT madras, Chennai, India Dec. 2018
16	K. Biju and Rijil Ramchand	A new control strategy for single phase cascaded H bridge multilevel inverter in stationary reference frame with nonlinear loads	International Conference on Power Electronics, Drives and Energy Systems (PEDES) DOI: 10.1109/PEDES.2018.8707708	Chennai, India, 2018

17	Pratheesh. K J, G. Jagadanand, Rijil Ramchand and K. Biju,	Generalized Charge Balancing Scheme for Symmetrical CHB Multilevel Inverters	International Conference on Power Electronics, Drives and Energy Systems (PEDES) DOI: 10.1109/PEDES.2018.8707512	Chennai, India, 2018
18	Sreekar Krishnatheeram, Joseph Peter, K P Mohammed Shafi, Rijil Ramchand	Current error boundary analysis of constant switching frequency voltage controlled three level VSI Fed IM drive	PICC 2018 DOI: 10.1109/PICC.2018.8384817	18-20 Januray 2018, Thrissur.
19	Vinu Thomas, Kumaravel S., Ashok S.	Virtual Synchronous Generator and its Comparison to Droop Control in Microgrids	International Conference on Power, Instrumentation, Control and Computing (PICC) https://doi.org/10.1109/PICC.2018.8384798	Thrissur, India 18-20 January 2018
20	Hemant Khare, Vinu Thomas, Kumaravel S., Ashok S.	Small Signal State Space Analysis of Virtual Synchronous Machine with Cascaded Voltage and Current Control Loops	International conference on Power And Energy System: Towards Sustainable Energy	Bangalore, India 18-20 January 2018
21	T. Vijayakumar, Vinu Thomas, Kumaravel S, Ashok S	Performance of Virtual Synchronous Machine in Autonomous Mode of Operation	5th International Conference on Renewable Energy: Generation and Applications (ICREGA) https://doi.org/10.1109/ICREGA.2018.8337612	Al Ain, UAE 25-28 February 2018
22	Haritha G, Kumaravel S and Ashok S	Performance Comparison of PI, PID and Fuzzy Logic Controllers In Solid State Transformers for Wind Power Interfacing	2nd International Conference on Green Energy and Applications (ICGEA) https://doi.org/10.1109/ICGEA.2018.8356290	Singapore, 24-26 March 2018
23	Kumaravel S, Arun Sarathi, Guru Kumar G., and	Three inputs and Two Outputs Boost DC-DC Converter for DC	2 nd International Conference on Power Electronics,	Delhi, India 22-24 October 2018

	Sivaprasad A	Microgrid Applications	Intelligent Control and Energy Systems (ICPEICES)	
24	Vinu Thomas, Sandeep Kumar Tripathy, Kumaravel S. and Ashok S	Performance Analysis of an Z-Source Inverter with Controller for Autonomous System Application	IEEE 7th International Conference on Power and Energy (PECon) https://doi.org/10.1109/PECON.2018.8684183	Kuala Lumpur, Malaysia 3-4 December 2018
25	Kumaravel S. , V. Karthikeyan ,Gangavarapu Guru Kumar , T. J. Jithin, V. Seshagiri Rao	Dual-Input Dual-Output DC-DC Converter for DC Microgrid Applications	IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES) https://doi.org/10.1109/PEDES.2018.8707726	Chennai, India 18-21 December 2018
26	Anagha, E.R., Nisha, P.V., Sindhu, T.K	Design of an active EMI filter for bearing current elimination in VFD	IEEE International Symposium on Electromagnetic Compatibility and 2018 IEEE Asia-Pacific Symposium on Electromagnetic Compatibility, EMC/APEMC 2018 (DOI: 10.1109/ISEMC.2018.8393753)	14-18 May 2018, Singapore
27	Lekshmi Mohan, Sunitha, K., Sindhu, T.K.	Modelling of electrical percolation and conductivity of carbon nanotube based polymer nanocomposites	IEEE International Symposium on Electromagnetic Compatibility and 2018 IEEE Asia-Pacific Symposium on Electromagnetic Compatibility, EMC/APEMC 2018 (DOI: 10.1109/ISEMC.2018.8393916)	14-18 May 2018, Singapore
28	Jineeth Joseph, Malleppally Raju and Sindhu T.K	Classification of partial discharge sources in XLPE cables by artificial neural	IEEE Electrical Insulation Conference (EIC),	June 2018, 407-411

		network and support vector machine	San Antonio, Texas, USA (DOI: 10.1109/EIC.2018.8481124)	
29	Anagha E R, Jineeth Joseph and Sindhu T.K	A Finite Element Method Based Approach For Modeling Of Partial Discharge in HVDC Cables	IEEE Electrical Insulation Conference (EIC), San Antonio, Texas, USA (DOI: 10.1109/EIC.2018.8481089)	June 2018, 533-537
30	Ladani Mithalkumar, Nisha P V, Sindhu T K.	Design of a Modified Three Phase Line Impedance Stabilization Network for Conducted Emission Test	PEDES 2018	2018
31	Sasidharan, N., Ongsakul, W., Varghese, M.P., Anooja, V.S., Akhila, R.	Efficient improvement of solar photo voltaic system using artificial cooling methods	4th International Conference on Power, Signals, Control and Computation, EPSCICON 2018;	Thrissur; India; 6 January 2018 through 10 January 2018
32	Laopaiboon, T., Ongsakul, W., Panyainkaew, P., Sasidharan, N.	Hour-Ahead Solar Forecasting Program Using Back Propagation Artificial Neural Network	2018 International Conference on Green Energy for Sustainable Development, ICUE 2018;	Phuket; Thailand; 24 October 2018 through 26 October 2018
33	V. Karthikeyan, S. Rajasekar, S. Pragaspathy and Frede Blaabjerg	A High Efficient DAB Converter under Heavy Load Conditions Using Inner Phase Shift Control	IEEE International Conference on Power Electronics, Drives and Energy Systems. (PEDES 2018)	IIT madras, Chennai, India, Dec. 2018
34	V. Karthikeyan, S. Rajasekar, S. Pragaspathy and Frede Blaabjerg	Core Loss Estimation of Magnetic Links in DAB Converter Operated in High-Frequency Non-Sinusoidal Flux Waveforms	IEEE International Conference on Power Electronics, Drives and Energy Systems. (PEDES 2018)	IIT madras, Chennai, India, Dec. 2018
35	Lavanya Pradeep, Avinash Nelson and	Effect of interphase permittivity on the electric	International Conference On	Coimbatore, March 23-

	Preetha.P	field distribution of epoxy nanocomposites	Inventive Research In Material Science And Technology (ICIRMCT) 2018,	25,2018.
36	Afseena A, Joyce Jacob, and Preetha P	Temperature Dielectric Spectrum Analysis of Soybean Ester Nanofluid, Mineral Oil and Soybean Ester Impregnated-Papers	IEEE International Conference on Control, Power Communication and Computing Technologies (ICPCCT – 2018),	Kannur, March 23-25,2018
37	V. Karthikeyan, S. Rajasekar, S. Pragaspathy and Frede Blaabjerg	A High Efficient DAB Converter under Heavy Load Conditions Using Inner Phase Shift Control	IEEE International Conference on Power Electronics, Drives and Energy Systems. (PEDES 2018)	IIT madras, Chennai, India, Dec. 2018
38	Rani P Hema ; S Navasree ; Saly George ; S Ashok	Closed Loop Control of Multi Input DC to DC Converter for DC Micro grid	2018 International Conference on Current Trends towards Converging Technologies (ICCTCT) DOI: 10.1109/ICCTCT.2018.8551140	Coimbatore, India 1-3 March 2018
39	V. Karthikeyan, Vipin Das and Frede Blaabjerg	Implementation of MPPT Control in Fuel Cell Fed High Step-up Ratio DC-DC Converter	ICPEICES – 2018	Delhi Technological University, Oct 2018
40	Rahul Sharma, Vivek Kumar, Shweta Sharma, V. Karthikeyan and Kumaravel S	High Efficient Solar PV fed Grid Connected system	IEEE International Conference on Power Electronics, Drives and Energy Systems. (PEDES 2018)	IIT madras, Chennai, India, Dec. 2018
41	Gowrishankar S, Gourav Samajdar and Sunitha K	Surface Charging and its Influence on Lightning Impulse Flashover Characteristics of Polymeric Insulator	Third IEEE International conference on Electrical, Computer &	SVS College of Engineering, Coimbatore. Feb 20-22,

			Communication Technologies-2019	2019.
42	Akhil G Augustine, OD Naidu, Vedanta Pradhan, Sunitha R	Improvement in fault location accuracy using prony based phasor estimation techniques	ICEES 2019	SSN College of Engineering Chennai 21st Feb 2019
43	Rahul S, Dr.Sunitha R	Nonlinear nonstationary analysis techniques for mode shape estimation in power systems	I-PACT 2019	VIT Vellore 22-23 March,2019
44	Najda V. M., Gopakumar P. and Sunitha R.	PMU based Voltage Angular Dynamic Monitoring and Supervision System for Emerging Deregulated Power Grids	2019 International Conference on Computer Communication and Informatics (ICCCI - 2019)	Srisakthi Institute of Engineering and Technology Coimbatore 23-25 January2019

National Conferences :-

Sl.No.	Authors	Title of the Paper	Name of the Conference	Venue and Date
1.	Femi Thomas Dr. Mija S.J.	Stabilization of an Unmanned Aerial Helicopter using a Static State Feedback Controller	National Systems Conference-2018	Trivandrum, 2018.
2.	D.Dey A.Sarkar S.Pal A.Kumar D.Mishra A.Baral N.Haque S. Chakravorti	Effect of Measurement Temperature on Interfacial Charge Freed from Deep Traps Located at the Interface of Oil-Paper Insulation	1st IEEE Applied Signal Processing Conference (ASPCON), Kolkata,	2018 pp. 346-350 7-9 Dec. 2018
3.	Biswajit Debnath, Dr. Mija S. J.	Level Control of Quadruple Tank System Using Particle Swarm Optimized SOSMC	National Systems Conference-2018	Trivandrum, 2018.

4.	Nidya M. V. Dr. Jeevamma Jacob, Dr. Mija S. J.	Stabilization of 3DOF Laboratory Helicopter at Hovering Position Using Relatively Optimal Control	National Systems Conference-2018	Trivandrum, 2018.
5.	S. Rajasekar, V. Karthikeyan and N. Kumaresan	Experimental Validation of CCM and DCM Operations of Semi-Bridgeless Boost Rectifier for Power Quality Improvement in UPS System	20th National Power Systems Conference (NPSC)	Tiruchirappalli, India 14-16 December 2018
6.	P. Gopakumar, B. Mallikarjuna, M. J. B. Reddy	Recent Trends on Performance Analysis of Latency on Wide Area Technologies in Smart Grids	20th National Power Systems Conference- NPSC 2018	December 2018
7.	Femi Thomas Dr. Mija S.J.	Stability Augmentation System for Hovering Helicopter: A Preliminary Design	Proceedings of the Fifth Indian Control Conference	Jan 9, 2019, pp. 154-159, New Delhi, 2019.

b. Community Services

Sl. No	Name of faculty / Group	Services
1.	Dr. Abraham T Mathew	1) Nodal Officer: Unnat Bharat- Abhiyan 2) Nodal Officer: Rashtriya Avishkar Abhiyan
2.	Dr. Paul K Joseph	i. Associate editor of Journal of Health Management and Informatics (JHMI) ii. Member of the academic council of Sahrdaya College of Engineering and Technology Trissur.
3.	Dr. Susy Thomas	i. Expert Member for Ph. D selection in APJ Abdul Kalam Technological University.

4.	Department of Electrical Engineering	<ul style="list-style-type: none"> i. Supplied beddings for the flood affected tribal people near Kodanchery ii. Supplied kits as prescribed by district authorities to flood affected areas in Chathamangalam Panchayat through Akshaya Kendra. iii. M.Tech and B.Tech students took the initiative to visit the flood relief camp at Chathamangalam and distribute relief materials. They were active in volunteering for the proper functioning of the camp. iv. Prepared a detailed report and submitted to state administration to contribute/participate in flood relief/ rehabilitation/ retrofitting/ reconstruction activities.
5.	M.Tech (IPA)	<ul style="list-style-type: none"> i. M.Tech students of IPA celebrated Diwali, 2018 at Balasadanam Orphanage, Poolakode. Sweets were distributed to the children and the students spent time with them celebrating Diwali by bursting crackers and lighting diyas. A music program was also arranged

c. Other Academic and Administrative services

Sl. No	Name of faculty	Academic and Administrative Services
1.	Dr. Jeevamma Jacob	<ul style="list-style-type: none"> i. Chairperson ETL ii. Dean: Alumni Affairs and International Relations
2.	Dr. Abraham T Mathew	<ul style="list-style-type: none"> i. TEQIP Coordinator
3	Dr. S Ashok	<ul style="list-style-type: none"> i. Dean :Research & Consultancy ii. Chairman, Technology Business Incubator NITC
4	Dr. Paul Joseph K.	<ul style="list-style-type: none"> i. Dean: Alumni Affairs and International Relations
5	Dr. Rijil Ramchand	<ul style="list-style-type: none"> i. Chairperson PG Admissions (till November 2018)
6	Dr. Kumaravel S.	<ul style="list-style-type: none"> i. Electrical maintenance in charge ii. IEEE NITC chapter Branch counsellor
7	Dr. Sindhu T. K	<ul style="list-style-type: none"> i. Internal Complaints committee member ii. Convocation registration committee convener
8	Dr. Sunitha K	<ul style="list-style-type: none"> i. Coordinator, catering Committee, Convocation 2018
9	Dr. M. Sanjay	<ul style="list-style-type: none"> i. Faculty representative to Training and Placement Cell from EED
10	Dr Nikhil Sasidharan	<ul style="list-style-type: none"> i. Co-chair, Promotion of innovation and Entrepreneurship, IEEE Malabar Sub-section Kerala ii. TEQIP MIS Coordinator iii. NBA coordinator of EED
11	Dr.	<ul style="list-style-type: none"> i. Ladies Hostel warden

	S.Kanagalakshmi	
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d. Conferences/Summer/Winter School/Short term Courses/Workshops conducted

Sl. No.	Title	Coordinators	Duration and Period
1.	TEQIP III- MHRD sponsored FDP on "School on systems and control"	Dr. Jeevamma Jacob Dr. Mija S.J.	6 days 3 rd to 8 th December 2018
2	Advanced Condition Monitoring Methods for Power Equipment	Dr. Preetha P, Dr. Sindhu T K	09 July to 14 July 2018
3.	Two Days National Level Workshop on Delve into the Future Electric Vehicle – 2019 (DFEV-2019)	Dr. Ashok S, Dr. Kumaravel S Dr. Karthikeyan V	15th - 16th, March 2019
4	Distinguished Lecture Programme on "Condition Monitoring of Oil-Paper Insulation of Transformers"	Dr. Kumaravel S., Dr. Ashok S.	1 day, 30-Nov-18
5	FDP on Real Time Monitoring, Protection and Control of Power System (RTMPC 2018)	Dr. Sunitha R Dr. Elizabeth P Cheriyar	May 21-26, 2018
6	National Workshop on " Large Scale Renewable Integration: a Perspective on Power System Stability (LSRI PPS 2019)	Dr. Sunitha R Dr. Gopakumar P Dr. Deepak M	April 8-12, 2019
7	National workshop on Advancements in Biomedical Engineering and Research organized by IEEE PES NITC Chapter in association with Department of Electrical Engineering	Dr. Sanjay M & Dr. Ashok S	21 December, 2018
8	National workshop IoT and its Applications organized by IEEE PES NITC Chapter in association with	Dr. Ashok S and Dr. Kumaravel S	9-10 November 2018

	Department of Electrical Engineering		
9	Distinguished Lecturer Program on AC and DC Gas Insulated Transmission Lines organized by IEEE PES NITC Chapter in association with IEEE PES Kerala Chapter	Dr. Ashok S and Dr. Kumaravel S	6 th Feb, 2018.
10.	Technology workshop on DCS and PLC organized by IEEE PES NITC Chapter	Dr. Ashok S, Dr. Kumaravel S	26-27 October 2018

e. Expert lectures delivered in Conferences/ Seminars/ workshops

Sl.No	Name of faculty	Title of the expert lectures delivered	Duration and Period	Organization
1.	Dr Ashok S	i. Expert lecture on ‘Adaptive Protection of Power Systems’ in National Workshop on Large Scale Renewable Integration: A perspective on Power System Stability”	April 8-12, 2019	NIT Calicut.
		ii. Expert lecture on ‘Lightning Protection to ATC units in Airports’ in the All-India Workshop on Surge Protection devices, Lightning, Earthing of Airports	11th Sep. 2018	Airports Authority of India.
		iii. Expert lecture on IOT Applications in Smart Grid in FDP organized by Department of Electrical	11 th – 13 th January 2018	MBCET Trivandrum

		Engineering		
2.	Dr. Jeevamma Jacob	An introduction to non linear systems and control in FDP: School on systems and control	2 hours 5 th December 2018	EED, NITC
3	Dr. Preetha P	Application of nanotechnology in the development of High Voltage Insulation	13 July 2018 11:00AM-1:00PM	NIT Calicut
4	Dr. Kumaravel S.	Converters for Electric Vehicle Applications	12-Jul-19, 1 day	Rajagiri School of Engineering and Technology, Cochin
5	Dr. Sunitha K	<ul style="list-style-type: none"> i. An introduction Numerical Field Computation ii. Recent developments in GIS/GIL 	2 hours (11/07/2018) 2 hours (12/07/2018)	NITC NITC
6	Dr. Sunitha R	<ul style="list-style-type: none"> i. “Power System State Estimation”, for FDP on “Real Time Monitoring, Protection and Control of Power System”. ii. “ An Introduction to Power System Stability”, for National Workshop on “ Large Scale Renewable Integration: a Perspective on Power System Stability 	May 21, 2018 April 8, 2019	NITC NITC

7	Dr Nikhil Sasidharan	<ul style="list-style-type: none"> i. Recent Advances in Electric Vehicle ii. EV Charging Station - Latest Advances iii. Design of community Microgrids iv. Current Trends in Smart grid 	<p>2-hour session</p> <p>1-hour session</p> <p>3-hour session</p> <p>3-hour session</p>	<p>Government Engineering College, Kannur</p> <p>Vidya Academy of Science and Technology, Thrissur</p> <p>College of Engineering, Trivandrum</p> <p>NIE Mysore</p>
8	Dr. S.Kanagala kshmi	Adaptive control	3 hours,	FDP on School on systems and control SSC 2018.3 rd to 8 th dec 2018. EED,NIT calicut
9	Dr. Shreelakshmi M P	High voltage gain and high efficiency DC-DC converters	3 hours	Faculty Development Programme, Govt.Engg College Thrissur. (2018)
		Speed control of Induction motor	2 hours	Virtual Seminar,

				Atharva college of Engineering, Mumbai (2018)
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f. Consultancy and Testing :
Consultancy

Sl. No.	Ref. No. & item	Receipt No. & Date
1.	Energy Utilization Analysis of Sreekala Oxygen Plant, Chelari Calicut.	01/07/2019
2.	Energy Utilization Analysis of Cyber Park Kozhikode- Rs 1, 50, 000/-	17/09/2018
3.	Energy Utilization Analysis of Sreeshan plant, Chathamangalam, Calicut- Rs 6000/-	05/10/2018

Testing :

Sl No	Item	Firm	Investigators
1	10kVA True –Online Double Conversion UPS System	MJ Power Solutions	Dr. Ashok S
2	LT 100A 415 V Rewireable Fuse Unit	1.KSEB, Shornur 2.KSEB, Kozhikode	Dr. Ashok S
3	LED Street Light Fitting	1.Mukkam Municipality 2.Chokli Grama Panchayath 3. Guruvayur Municipality 4. Koduvally Municipality 5. Sinelab Technologies Pvt.Ltd 6. ATA Technologies	Dr. Ashok S
4	11 kV HT Pin Insulator	KSEB Kozhikode	Dr. Ashok S, Dr.TK Sindhu
5	Fence Energiser	Electrical Inspectorate	Dr. Ashok S
6	PVC Conduit	ULCCS Ltd	Dr. Ashok S
7	PVC Insulated Copper Conductor	1.CPWD 2. ULCCS Ltd 3. V-GUARD Industries Pvt.Ltd 4. KEI Industries Ltd.	Dr. Ashok S
8	11 KV HT Disc Insulator,	KSEB Kozhikode	Dr. Ashok S Dr.TK Sindhu
9	30HP Submersible Motor	NITC Engineering Unit	Dr. Ashok S
10	400A 33kV AB Switch	KSEB Irinjalakuda	Dr. Ashok S Dr.TK Sindhu
11	9kVA ,5kA Lightning Arrestor	KSEB Vatakara	Dr. Ashok S Dr.TK Sindhu
12	LT Shackle Insulator	KSEB Kozhikode	Dr. Ashok S

		Dr.TK Sindhu
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Expert Talks Organized

Sl. No.	Details of Expert Talks
1.	Organized (as coordinator) an Expert Technical Session on “Internet of Things for Smart Grid Applications”, organized by IEEE PES NITC Chapter in association with Industrial Power Group Department of Electrical Engineering NIT Calicut during 17 th November, 2017.
2.	Distinguished Lecturer Program organized by IEEE PES NITC Chapter in association with IEEE PES Kerala Chapter on 6th Feb, 2018.

h. Participation in Conferences/Seminars/Workshops/Other training Programmes

Sl.No.	Name of faculty	Programme
1.	Dr. Jeevamma Jacob	i. IEEE women in Engineering International Leadership summit Kochi 2018, 7-8 September 2018
2.	Dr. Saly George	ii. IEEE women in Engineering International Leadership summit Kochi 2018, 7-8 September 2018
3.	Dr. M. Sanjay	i. Workshop on Outcome based Education & Institutional Academic Quality Assurance, sponsored by TEQIP III at National Institute of Technology Calicut on 13th December 2018
4.	Dr Nikhil Sasidharan	i. Workshop on Outcome based Education & Institutional Academic Quality Assurance, sponsored by TEQIP III at National Institute of Technology Calicut on 13th December 2018
5.	Mr. Subhash K.M.	i. Summer School on Deep Learning 17 – 21st May 2019 , NIT Surathkal

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Accreditation:

Two M.Tech programmes offered by Department of Electronics and Communication Engineering got accredited by National Board of Accreditation (NBA). M.Tech in Signal Processing for 6 years and M.Tech in Electronics Design and Technology for 3 years.

a. Publications

(i) Book chapters:

1. Sudeep, P.V., Palanisamy, P. and Rajan, J., 2019. Advances in Ultrasound Despeckling: An Overview. In *Advanced Classification Techniques for Healthcare Analysis* (pp. 311-335). IGI Global.
2. Anoop, B.N., Girish, G.N., Sudeep, P.V. and Rajan, J., 2019. Despeckling Algorithms for Optical Coherence Tomography Images: A Review. In *Advanced Classification Techniques for Healthcare Analysis* (pp. 286-310). IGI Global.

i. Journals

Sl. No.	Author (s)	Title of the Paper	Name of the Journal	Vol., Year & Pages
1	<i>S. Poornima and A.V. Babu</i>	Performance Analysis of Energy Harvesting Cognitive Relay Networks with Primary Interference	Telecommunications Systems (Springer)	July 2018, Volume 68, Issue 3, pp. 445-459
2	K.S. Deepak and A.V. Babu	Improving Reliability of Emergency Data Frame Transmission in IEEE 802.15.6 Wireless Body Area Networks	IEEE Systems Journal	Volume: 12, Issue 3, Sept. 2018, pp. 2082-2093
3	Upama Rajan M.N. and A.V. Babu	Improving the Performance of Hybrid Multiple Access Scheme in Millimeter Wave Wireless Personal Area Networks	Computer Communications (Elsevier)	Volume 127, September 2018, Pages 158-171
4	Rambabu Katla and A.V. Babu	Outage Probability Analysis and Optimal Transmit Power Allocation for Multi-hop Full Duplex Relay Network over Nakagami-m Fading Channels	EURASIP Journal on Wireless Communications and Networking (Springer)	2018, 2018:192
5	Rambabu Katla and A.V. Babu	Dual-hop Full Duplex Relay Networks over Composite Fading Channels: Power	Physical Communications (Elsevier)	Volume 30, October 2018, pp. 1-14

		and Location Optimization		
6	Rambabu Katla and A.V. Babu	Optimization of Decode- and-Forward Multihop Full Duplex Relay Networks under Residual-Self- Interference	Ad Hoc Networks (Elsevier)	Volume 80, November 2018, Pages 81-94
7	S. Poornima and A V Babu	Selection of optimal transmit power in multi-hop underlay cognitive full-duplex relay networks	EURASIP Journal on Wireless Communications and Networking (Springer)	2018:283, Dec 2018
8	U. Sangeetha and A.V. Babu	Performance analysis of IEEE 802.11ah wireless local area network under the restricted access window-based mechanism	International journal of Communication Systems (Wiley)	Volume 32, Issue 4, March 2019
9	JAIKUMAR M G Akshay K Dr. S. Karmalkar	An algorithm to design floating field rings in SiC and Si power diodes and MOSFETs	Solid State Electronics	156,2019, 73-78
10	Susan Dominic and Lillykutty Jacob	Learning Algorithms for Joint Resource Block and Power Allocation in Underlay D2D Networks	Telecommunication Systems, Springer	(2018) 69:285– 301
11	Deepthi Sasidharan and Lillykutty Jacob	Improving Network Lifetime and Reliability for Machine Type Communications based on LOADng Routing	Ad Hoc Networks Journal, Elsevier	Volume 73, 1 May 2018, Pages 27-39
12	M P Giles, Sanjay Satheesh, MadhuKumar S D, Lillykutty Jacob	Selecting Suitable Virtual Machine Migrations for Optimal Provisioning of Virtual	SIGAPP Applied Computing Review, ACM	Volume 12, Issue 19, 04 December 2018, p.
13	Susan Dominic and	Data Centers	IET	2393 – 2400

	Lillykutty Jacob	Fully Distributed Joint Resource Allocation in Ultra-Dense D2D Networks: A Utility-based Learning	Communications 2018	
14	Mary Reena, Abraham T Mathew, and Lillykutty Jacob	Approach A Flexible Control Strategy for Energy and Comfort Aware HVAC in Large Buildings	Building and Environment, Elsevier	Volume 145, November 2018, Pages 330-342
15	M. P. Giles, S. D. Madhu Kumar, and Lillykutty Jacob	Resource Availability-Aware Adaptive Provisioning of Virtual Data Center Networks	International Journal of Network Management, Wiley	https://doi.org/10.1002/nem.2066
16	Venu Anand	Wetting characteristics of vertically aligned graphene nanosheets	Nanotechnology	29,2018, 385703
17	Venu Anand	Estimating the number density and energy distribution of electrons in a cold atmospheric plasma using optical emission spectroscopy	Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films	36,2018
18	Venu Anand	Plasma-Induced Polymeric Coatings	Non-Thermal Plasma Technology for Polymeric Materials (Book Chapter); Publisher Elsevier	2019, 129-157
19	Lintu Rajan	An In-Depth Study on Electrical and Hydrogen Sensing Characteristics of ZnO Thin Film With Radio Frequency Sputtered Gold Schottky Contacts	IEEE Sensors Journal	2019
20	Sudharman S,	Design of Power Efficient	IEEE Transactions	2018 Dec 20,

	Bindiya T. S.	Variable Bandwidth Non-maximally Decimated FRM Filters for Wideband Channelizer.	on Circuits and Systems II: Express Briefs.	DOI: https://doi.org/10.1109/TCSII.2018.2888897
21	Sudhi Sudharman, Athul D. Rajan, T. S. Bindiya	Design of a Power-Efficient Low-Complexity Reconfigurable Non-maximally Decimated Filter Bank for High-Resolution Wideband Channels	Springer - <i>Circuits, Systems, and Signal Processing</i>	DOI: https://doi.org/10.1007/s00034-018-0988-0
22	Amir, A., Bindiya, T. S. and Elias, E.,	Low-complexity implementation of efficient reconfigurable structure for cost-effective hearing aids using fractional interpolation	Elsevier - <i>Computers & Electrical Engineering</i>	2019, 74, pp.391-412.
23	A Amir, J Pragadeeshwaran, T. S. Bindiya, E Elias	Reconfigurable filter bank structures for low complexity digital channelizer using fractional interpolation and MFIR filters with cosine modulation	AEU-International Journal of Electronics and Communications (Elsevier)	2018, 94, pp. 262-276
24	Amir A., Bindiya T. S. and Elizabeth Elias	Design and Implementation of Reconfigurable Filter Bank Structure for Low Complexity Hearing Aids using 2-level Sound Wave Decomposition	Biomedical Signal Processing and Control (Elsevier)	2018, 43, pp. 96-109
25	Krishnapriya S, Rama S Komaragiri, Suja K J,	Fabrication, Characterization, and Modelling of a Novel via-less Single Metal Level Magnetic Microcoil Sensor for Biosensing Applications	Sensors and Actuators A: Physical, Elsevier, 2019 (SCI indexed).	vol. 290, pp. 190-197, 2019, (SCI indexed)
26	Ranjith R., Suja K. J and Rama S.	An analytical model for a reconfigurable tunnel field	Superlattices and Microstructures	Vol. 131, pp. 40-52, Jul. 2019.

	Komaragiri.	effect transistor	(Elsevier),	
27	Krishnapriya S, Rama S Komaragiri, Suja K J	Performance Analysis of Planar Microcoils For Biomedical Wireless Power Transfer Links	Sadhana, Springer [accepted] (SCI indexed).	In press
28	Krishnapriya, S., Komaragiri, R. and Suja, K.J.,.	Design and analysis of non-spiral planar microcoil-based electromagnetic microactuator”	Arabian Journal for Science and Engineering,	vol.44, pp. 6805–6811, 2018 (SCI Indexed)
29	Amit S. Unde , P.P. Deepthi	Fast BCS-FOCUSS and DBCS-FOCUSS with augmented Lagrangian and minimum residual methods	Journal of Visual Communication and Image Representation (Elsevier)	Volume 52, pp 92-100, April 2018
30	Aneesh M Koya, Deepthi P.P.	Anonymous Hybrid Mutual Authentication and Key Agreement Scheme for Wireless Body Area Network	Computer Networks (Elsevier)	<u>Volume 40</u> , July 2018, pp. 138-151
31	V.S. Lakshmi, P.P. Deepthi	A secure channel code-based scheme for privacy preserving data aggregation in wireless sensor networks	International Journal of Communication Systems, Wiley	Vol. 32, Issue 1, Jan. 2019
32	V.S. Lakshmi, P.P. Deepthi	An Efficient Scheme for Secure Domain Medical Image Fusion over Cloud	International Journal of Multimedia Tools and Applications, Springer	Feb 2019 https://doi.org/10.1007/s11042-019-7378-x
33	Amit S. Unde, P.P. Deepthi	Design and Analysis of Compressive Sensing Based Lightweight Encryption Scheme for Multimedia IoT	IEEE Transactions on Circuits and Systems II: Express Briefs	Feb 2019 10.1109/TCSII.2019.2897839
34	V. Sakthivel & Elizabeth Elias	Design of hardware efficient digital hearing aids using	Signal, Image and Video Processing,	vol.12, Nov. 2018, 1429-1436

		non-uniform MDFT filter banks	Springer	
35	V. Sakthivel & Elizabeth Elias	Low complexity reconfigurable channelizers using non-uniform filter banks.	Computers and Electrical Engineering, Elsevier	Vol.68, May 2018, 389-403.
36	Abdu Rahiman V, Sudhish N George	Robust Single Image Super Resolution using Neighbor Embedding and Fusion in Wavelet Domain	Computers & Electrical Engineering (Elsevier)	Vol. 70, August 2018, pp 674-689
37	Hawazin S Khaleel, Sameera Mhd Sagheer V, Baburaj M, Sudhish N George	Denoising of Rician corrupted 3D Magnetic Resonance Images using Tensor-SVD	Biomedical Signal Processing and Control, (Elsevier)	Vol. 44, July 2018, pp. 82-95
38	Shijila B, Anju Jose Tom, Sudhish N George	Moving Object Detection by Low Rank Approximation and l1-TV Regularization on RPCA framework	Journal of Visual Communication and Image Representation (Elsevier)	Vol. 56, October 2018, pp. 188-200.
39	Baburaj M, Sudhish N George	DCT based Weighted Adaptive Multi-linear Data Completion and Denoising	Neurocomputing (Elsevier)	Vol. 318, November 2018, pp. 120-136.
40	Baburaj M, Sudhish N George	Tensor based Approach for Inpainting of Video Containing Sparse Text",	Multimedia Tools & Applications (Springer)	Vol. 78, No. 2, January 2019, pp. 1805–1829.
41	Shijila B, Anju Jose Tom, Sudhish N George,	Simultaneous Denoising and Moving Object Detection using Low-Rank Approximation	Future Generation Computer Systems (Elsevier)	Vol. 90, January 2019, pp. 198-210
42	Sameera Mohd Sagheer V, Sudhish N George	Denoising of Low-dose CT Images via Low-Rank Tensor Modeling and Total Variation Regularization	Artificial Intelligence in Medicine (Elsevier)	Vol. 94, March 2019, pp. 1-17.
43	Geona Mary P D,	Entropy-based Reweighted	IEEE Transactions	January 2019,

	Baburaj M, Sudhish N George	Tensor Completion Technique for Video Recovery	on Circuits, Systems and Video Technology	DOI: 10.1109/TCSVT.2019.2892848.
44	Baburaj M, Sudhish N George,	Simultaneous Reconstruction and Anomaly Detection of Subsampled Hyperspectral Images using $l_{1/2}$ Regularized Joint Sparse and Low Rank Recovery	IEEE Transactions on Geoscience and Remote Sensing	Vol.57, No. 7, July 2019 pp. 5190-5197.
45	Anju Jose Tom, Sudhish N George	Video Completion and Simultaneous Moving Object Detection for Extreme Surveillance Environments	IEEE Signal Processing Letters	Vol. 26, No. 4, April 2019, pp. 577-581.
46	Anju Jose Tom, Sudhish N George	A Three-Way Optimization Technique for Noise Robust Moving Object Detection using Tensor Low Rank Approximation, $l_{1/2}$ and TTV Regularizations	IEEE Transactions on Cybernetics	July 2019 Digital Object Identifier 10.1109/TCYB.2019.2921827
47	Sameera Mohd Sagheer V, Sudhish N George	Despeckling of 3D Ultrasound Image using Tensor Low Rank Approximation	Biomedical Signal Processing and Control, (Elsevier),	June 2019.
48	Gayatri Parthasarathy, G Abhilash	Entropy-Based Transform Learning Algorithms	IET Signal Processing	Vol.12.,issue 4,june 2018, pp 439-446
49	V. Meena, G Abhilash	HRE : A new Information Theoretic Measure of Sparsity	Electronics Letters	Vol.54, No.16, August 2018, pp 977-978
50	Gayatri Parthasarathy, G Abhilash	Entropy-Based Learning of Sensing Matrices	IET Signal Processing	Mar 2019

51	Jayakumar, E. P., & Sathidevi, P. S.	An integrated acoustic echo and noise cancellation system using cross-band adaptive filters and wavelet thresholding of multitaper spectrum	Applied Acoustics, Elsevier	141, 2018, pp 9-18
52	Raghu C V, N S Dinesh	Development of Experience Mapping based Prediction Controller for Type-0 systems	International Journal of Dynamics and Control	7(2),2019, 577-594
53	Mridula K M and P M Ameer	On the fundamental limit to the use of cognitive radio in underwater acoustic sensor networks	Telecommunication Systems (Springer)	Vol 71, 2019, 303-308
54	Mridula K M, Nafisur Rahman, and P M Ameer	Sound velocity profile estimation using ray tracing and nature inspired metaheuristic algorithms in underwater sensor networks	IET Communications	Vol 13, 2018 pp 528-538
55	Mridula K M, P M Ameer	Three dimensional sensor network connectivity considering border effects and channel randomness with application to underwater networks	IET Communications	Vol 12, 2018, pp 994-1002
56	Deepak P M, C.K.Ali	Filter bank SCFDMA: An efficient uplink strategy for future communication systems	Springer: Telecommunication systems	Vol 69, No 4, pp 529-43, April 2018.
57	Deepak P M, C.K.Ali	Sensitivity of filter bank 58SCFDMA to carrier frequency offset and its compensation using firefly algorithm	Wiley: International Journal on communication system	Vol 31, No 14, dac3743, July 2018
58	Shahnaz K V and Ali C K	A signal power adaptive regularized sphere decoding algorithm based multiuser	Wiley: International Journal on communication	32, e3838, 2019

		detection technique for under determined OFDM/SDMA uplink system	systems	
59	Manazhy Rashmi, Praveen Sankaran	Optimal Landmark Point Selection Using Clustering for Manifold Modeling and Data Classification	Journal of Classification	Volume 36, Issue 1, pp 94–112
60	Yamanappa, W., Sudeep, P.V., Sabu, M.K. and Rajan, J.	Non-local means image denoising using Shapiro-Wilk similarity measure	IEEE Access	6, 2018, pp.66914-66922.
61	S Shahnawazuddin, N Adiga, BT Sai, Waquar Ahmad, HK Kathania	Developing speaker independent ASR system using limited data through prosody modification based on fuzzy classification of spectral bins	Digital Signal Processing	Mar 2019
62	HK Kathania, S Shahnawazuddin, Waquar Ahmad, N Adiga	Role of Linear, Mel and Inverse-Mel Filterbanks in Automatic Recognition of Speech from High-Pitched Speakers	Circuits, Systems, and Signal Processing	Mar 2019
63	S Shahnawazuddin, C Singh, HK Kathania, W Ahmad, G Pradhan	An Experimental Study on the Significance of Variable Frame-Length and Overlap in the Context of Children's Speech Recognition	Circuits, Systems, and Signal Processing	37 (12), 2018, 5540-5553
64	HK Kathania, W Ahmad, S Shahnawazuddin, AB Samaddar	Explicit pitch mapping for improved children's speech recognition	Circuits, Systems, and Signal Processing	37 (5), 2018, 2021-2044
65	Unnikrishnan Supriya, G. Sreelekha	Video stabilization performance enhancement for low-texture videos	Journal of Real-Time Image Processing, Springer-Verlag,	pp 1-18 March 2019

i. International Conference

Sl No	Name of the Author	Title of the paper	Name of International Conference	Details
1	Gilesh, MP, MadhuKumar SD, Jacob L	Bounding the Cost of Virtual Machine Migrations for Resource Allocation in Cloud Data Centers	ACM Symposium on Applied Computing Cloud Computing SAC'18	France, April 2018
2	Emy Mariam George and Lillykutty Jacob.	Distributed Learning Algorithm for Interference Avoidance in Coexisting WBANs	2018 International Conference on Signal Processing and Communications (SPCOM)	16-19 July 2018, IISc Bangalore
3	Subham Jain, M P Gilesh, S D MadhuKumar, and Lillykutty Jacob	On the Necessity Right Optimization for Live Migration of Virtual Machines	2018 IEEE Region 10 Symposium (TENSYMP)	Sydney, July 2018
4	Shamna H R and Lillykutty Jacob	End-to-end delay and energy efficiency of multihop wireless networks with cooperative MAC	2018 International Conference on Advances in Computing, Communications and Informatics (ICACCI)	Bangalore, Sept. 2018
5	Sherin Naseema M and Lillykutty Jacob	Cell Association and Resource Partitioning in 5G Heterogeneous Networks	2018 International Conference on Advances in Computing, Communications and Informatics (ICACCI)	Bangalore, Sept. 2018
6	Aravind M T and Lillykutty Jacob	Energy Efficient And Reliable Communication in IEEE 802.15.6 IR-UWB WBAN	2018 International Conference on Advances in Computing,	Bangalore, Sept. 2018

			Communications and Informatics (ICACCI)	
7	M P Giles, Sanjay Satheesh, Athul Chandran, S D Madhu Kumar and Lillykutty Jacob,	Parallel Schedule of Live Migrations for Virtual Machine Placements	The 4th IEEE International Conference on Collaboration and Internet Computing (CIC 2018)	Philadelphia, Pennsylvania, USA, Oct 2018.
8	Arun C, John K. Sunny, Lyla B Das	Big Data Forex Analysis using GPU Computing	3rd IEEE Int. Conf. Computing Communication and Security (ICCCS 2018),	Kathmandu, Nepal, October 2018
9	Krishna Tej Rao, P. Srinivas ,Dency Daniel ,Gautham Nagireddy k, Sravani L. Lyla B. Das, Raghu C. V	Determination Of Microlocation Using the BLE Protocol, and Wireless Sensor Networks	3rd IEEE Int. Conf. Computing Communication and Security (ICCCS 2018),	Kathmandu, Nepal, October 2018
10	Vijay Anandh K, K Subash Chandra, M Narendra Reddy, B Yaswant, A Vivek,Lyla B Das, Jagadanand G , Jayakumar E.P	Multipurpose Unmanned Rover in WiFi Wireless Sensor Network	3rd IEEE Int. Conf. Computing Communication and Security (ICCCS 2018)	Kathmandu, Nepal, October 2018
11	D. Rahul Naik,Lyla B. Das,Bindiya T.	Wireless Sensor networks with Zigbee and WiFi for Environment Monitoring, Traffic Management and Vehicle Monitoring in Smart Cities	3rd IEEE Int. Conf. Computing Communication and Security (ICCCS 2018),	Kathmandu, Nepal, October 2018
12	Nasreen, M., Iyer,	Automobile Safety and	IEEE 3rd	2018, pp. 51-55

	M., Jayakumar, E.P. and Bindiya, T.S.	Automatic Parking System using Sensors and Conventional Wireless Networks.	International Conference on Computing, Communication and Security (ICCCS), Katmandu, Nepal	
13	Naik DR, Das LB, Bindiya TS	Wireless Sensor networks with Zigbee and WiFi for Environment Monitoring, Traffic Management and Vehicle Monitoring in Smart Cities	IEEE 3rd International Conference on Computing, Communication and Security (ICCCS), Katmandu, Nepal	2018, pp. 46-50
14	Krishnapriya.S, Rama Komaragiri, Suja K J	Performance Analysis of Non-spiral Planar Microcoils for Biomedical Electromagnetic Microactuators	International conference on Microelectronics, Signals & Systems (ICMSS 2019)	Mar 2019
15	Krishnapriya S, Komaragiri RS, Suja KJ	Detection of Magnetic Particles Using Induction-balance Microsensor Based On Non-spiral Planar Microcoils	IEEE SENSORS 2018, Oct 28 th -31 st 2018, Pullman aero city, New Delhi, India (Scopus indexed)	pp.1-4, 2018
16	Nisanth, A., K. J. Suja, and V. Seenaa	Design and Simulation of MEMS AIN Piezoelectric Vibration Energy Harvester Array for Improved Power Densitypp..	IEEE SENSORS 2018, Oct 28 th -31 st 2018, Pullman aero city, New Delhi, India (Scopus indexed)	pp. 1-4, 2018
17	Krishnapriya S, Rama Komaragiri, Suja K J:	Microfabrication and Electrical Characterization of Non-spiral Planar Microcoils for Biomedical Applications	10 th International Conference on Robotics, Vision, Signal Processing and Power Applications, Malaysia, Lecture notes in Electrical	pp. 123-129, 2018

			Engineering, Springer (Scopus indexed), August 2018	
18	Ranjith R., Suja K. J and Rama S. Komaragiri	Analysis of reconfigurable tunnel field effect transistor for improved current characteristics,	Proc. 7th International Symposium on Next Generation Electronics (ISNE), Taipei, Taiwan, Jun. 2018	pp. 4-8, 2018
19	Nisanth, A., K. J. Suja, and V. Seená	Design and Simulation of MEMS AlN Piezoelectric Vibration Energy Harvester Array for Improved Power Densitypp..	IEEE SENSORS 2018, Oct 28 th -31 st , 2018, Pullman aero city, New Delhi, India (Scopus indexed)	pp. 1-4.
20	Krishnapriya, S., Himanshu Chandrakar, Rama S. Komaragiri, and K. J. Suja	.Electromagnetic Microactuators using Non- spiral Planar Microcoils for Robotic Applications.	International Conference on Robotics and Smart Manufacturing, RosMA (2018)	pp. 545-552, 2018
21	E. Devi, Deepthi P.P.,	Iris Based Privacy- Preserving Biometric Authentication Using NTRU Homomorphic Encryption	Int. Conf. on Machine Learning, Image Processing, Network Security and Data Sciences(MIND- 2019)	NIT Kurukshetra 3-4 March, 2019
22	M. S. Yadav, V. Sharma, P. Srivastava, S. Moparthi and G. K. Saramekala	Impact Of Halogen Passivation On Zigzag Graphene Nanoribbon	IEEE ICESIP 2019	Mar 2019
23	Y. N. Kumar, M. K. Rao, Ch. Haswanth, R. Raj, P. A.	Automated Seed Sowing Agribot	IEEE ICESIP 2019	Mar 2019

	Chakrobarty, M. H. Kiran, G. K. Saramekala			
24	Najlah C. P, Nithya Rajendran and Sameer S. M.	A Novel Solution for the CFO Induced Interference in Device-to-Device (D2D) Communication System Using Cognitive Radio	2018 IEEE Region- 10 International Conference, TENCON 2018, Jeju, South Korea	2018
25	Anju Jose Tom, Sudhish N George	Tensor Total Variation Regularized Moving Object Detection for Surveillance Videos	IEEE Int. Conf. Signal Processing & Communication (SPCOM-2018), IISc, Bangalore	July 2018
26	Abdu Rahiman V, Sudhish N George	Robust Single Image Super Resolution Employing ADMM with Plug and Play Prior	Third Int. Conf. on Computer Vision & Image Processing (CVIP-2018), IITDM, Jabalpur.	October 2018
27	Nishanth Augustine, Sudhish N George	Sparse Regularization based Fusion Technique for Hyperspectral and Multispectral Images using Non-linear Mixing Model	3rd IEEE Int. Conf. Computing Communication and Security (ICCCS 2018), Kathmandu, Nepal	Oct 2018
28	C. Hima, Baburaj M, Sudhish N George,	A Novel Technique to Remove Marked Dynamic Object from Video Based on Re-weighted Low Rank Tensor Completion	3rd IEEE Int. Conf. Computing Communication and Security (ICCCS 2018), Kathmandu, Nepal	Oct 2018
29	Rajitha M R, Sudhish N George	An Unsupervised Abnormal Crowd Behavior Detection Technique using Farneback Algorithm	IEEE International Conference on Electronics, Computing and Communication Technologies (IEEE CONECCT-2019),	Mar 2019

			Bangalore	
30	Mashooda Nasreen, Madhooshri Iyer, E P Jayakumar, T S Bindiya	Automobile Safety and Automatic Parking System using Sensors and Conventional Wireless Networks	2018 IEEE 3rd International Conference on Computing, Communication and Security (ICCCS), Kathmandu, Nepal.	2018, pp 51-55.
31	Lyla B Das, G Jagadanand, EP Jayakumar, K Subash Chandra, M Narendra Reddy, B Yaswant, A Vivek	Multipurpose Unmanned Rover in WiFi Wireless Sensor Network	2018 IEEE 3rd International Conference on Computing, Communication and Security (ICCCS), Kathmandu, Nepal.	2018, pp 20-24.
32	Lyla B Das, CV Raghu, Krishna Tej Rao, P Srinivas, Dency Daniel, Gautham Nagireddy, L Sravani	Determination Of Microlocation Using the BLE Protocol, and Wireless Sensor Networks	2018 IEEE 3rd International Conference on Computing, Communication and Security (ICCCS)	Oct 2018
33	Gautham Manoharan, Febin Thomas, Eldho K Joseph, Jayadevan M, Amaljith K, Raghu C V	Design and Implementation of microcontroller training kit with GUI support	15 th IEEE India Council International Conference (Indicon 2018)	Dec 2018
34	Manjula Kumari, CV Hari, Praveen Sankaran	Driver Distraction Analysis Using Convolutional Neural Networks	2018 International Conference on Data Science and Engineering (ICDSE)	August 2018
35	Amala Sonny, Deepa Nair, Praveen Sankaran	A Novel Localized Approach to Single Image Dehazing Based on Haze- Lines	2018 International Conference on Data Science and Engineering (ICDSE)	August 2018
36	A. T. Pullan, A. Sasi,	High Resolution Touch	2018 IEEE Recent	Thiruvananthapu

	D. Krishnan, I. M. Baby, M. Krishnan and Dhanaraj. K. J	Screen Module	Advances in Intelligent Computational Systems (RAICS),	ram, India, 2018, pp. 168-171.
37	<u>K Akshay</u> , Parvathy R Pillai and <u>B. Bhuvan</u>	Analytical Modeling of Response Time and Full Well Capacity of a Pinned Photo Diode	13 th International Conference on Design and Technology of Integrated Systems in Nanoscale Era (DTIS)	2018
38	U. Khan, B. Bhuvan and M. Sarkar	A low power readout mechanism with improved low light performance in CMOS image sensors	IEEE Sensors	2018
39	Harshavardhan, G, Sri Venkat, G., Pratyusha, M.G., Kunal Gupta, Volam Priyanka and Sudeep, P.V.,	Hardware Implementation of Sign Language to Text Converter using Deep Neural Networks.	International Conference on “Advances in Electronics, Electrical & Computational Intelligence” (ICAEEC 19)	Mar 2019
40	Yamanappa, W, Sudeep, P.V. and Rajan, J.	An improved multi-stage multiple image based non-local means image denoising	International Conference on Machine Learning, Image Processing, Network Security and Data Sciences (MIND 19)	Mar 2019
41	S Shahnawazuddin, HK Kathania, C Singh, W Ahmad, G Pradhan	Exploring the Role of Speaking-Rate Adaptation on Children's Speech Recognition	International Conference on Signal Processing and Communications	2018

			(SPCOM)	
42	Hemant K Kathania, S Shahnawazuddin, Waquar Ahmad, Nagraj Adiga, SK Jana, AB Samaddar	Improving Children's Speech Recognition Through Time Scale Modification Based Speaking Rate Adaptation	International Conference on Signal Processing and Communications (SPCOM)	2018
43	Hemant K Kathania, Syed Shahnawazuddin, Nagaraj Adiga, Waquar Ahmad	Role of Prosodic Features on Children's Speech Recognition	IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)	2018
44	Musarath, T., Unnikrishnan K. Supriya, G. Sreelekha	Sub-Block Based Global Motion Estimation for Affine Motion Model	2018 IEEE International Conference on Advances in Computing, Communications and Informatics (ICACCI)	pp. 665-670, 2018

National Conference

Sl No	Name of the Author	Title of Paper	Name of National conference	Vol, Year, p.p.
1	HK Kathania, S Shahnawazuddin, W Ahmad, N Adiga	On the Role of Linear, Mel and Inverse-Mel Filterbank in the Context of Automatic Speech Recognition	National Conference on Communications (NCC)	2019
2	S Shahnawazuddin, W Ahmad, HK Kathania, N Adiga, BT Sai	Speaking-Rate Adaptation of Automatic Speech Recognition System through Fuzzy Classification based Time-Scale Modification	National Conference on Communications (NCC)	2019

Sl. No	Name of the Authors, Title of the book, Publisher, Year
1	Lyla b.Das, "Architecture, Programming, and Interfacing of Low-power Processors — ARM7, Cortex-M", Cengage Learning India, 2017

b. Community Services

- Dr G Abhilash - Reviewer to Journals: Elsevier Signal Processing, Springer (Sadhana), IET Signal Processing, IET Image Processing, Electronics letters
- Dr G Abhilash - Faculty Advisor to IEEE Signal Processing Society (SB) Chapter NIT Calicut
- Dr G Abhilash - Green Volunteer
- Dr V Sakthivel - Acted as Session Chair in the IEEE International Conference ViTECoN 2019, held at VIT University, Vellore, Tamilnadu during 30th March to 31st March, 2019
- Dr V Sakthivel - Appointed as Examiner for the B.Tech (ECE) Project Viva Voce, at VIT University, Vellore, Tamilnadu on 11th April 2019
- Dr V Sakthivel - Appointed as Observer for the JEE Main Exam, April 2018 conducted by CBSE, MHRD, India
- Dr V Sakthivel - Appointed as Observer for the UGC NET Exam, July 2018 conducted by CBSE, MHRD, India
- Dr V Sakthivel - Appointed as Observer for the UGC NET Exam, Dec 2018 conducted by NTA, MHRD, India during 17-12-2018 to 22-12-2018
- Dr V Sakthivel - Appointed as Observer for the CMAT/GPAT Exam, Jan 2019 conducted by NTA, MHRD, India
 - Bhuvan B - Branch Counselor, IEEE EDS Chapter, NIT Calicut
- Sudeep P V - Resource person of career planning class for Highersecondary students at GVHSS (THS), Cheruvathur, Kasaragod, Kerala
- Sudeep P V - One of the coordinator for value education class for B.Tech 2017 batch.

C. Other Academic and Administrative services

Name of Staff	Academic and Administrative Services
Dr. Sathidevi P S	Serving as Dean (Academic)
Dr.C K.Ali	Engaged theory classes for M.Tech and lab classes for B.Tech. Guiding three Ph.D scholars.Ph.D co-ordinator of the Department
Dr. Sameer S. M.	Professor & Head, Centre for Training and Placement, NIT Calicut
Dr. G Abhilash	Teaching 10 credits (UG and PG), Coordinator of B.Tech Seminar, Member of M.Tech (SP) Project evaluation Panel, Research Guidance, PG and UG Project Guidance, DC Member in CSE, EEE, ECE, MED, Maths, External examiner/subject expert for Comprehensive Exam in Maths dept, Served as Member of Library Advisory Committee, Served as Member of Design Innovation Center NITC, Organized External Lectures under IEEE SPS, Organized and Offered a course of Lectures for 15days (From 12 to 27 June 2019) under IEEE SPS jointly with the ECE Dept.
Mr. Suresh Rangan	Convener: Audio Visual Committee, Convocation 2018
Dr. G Sreelekha	Programme Co-coordinator, M.Tech (Signal Processing) Class Committee Chairperson - M.Tech (Electronics Design and Technology) Faculty in charge of DSP Lab

	Chairman, Project evaluation Committee, M. Tech Signal Processing Convener, Reception & Hospitality Committee, 14 th Convocation
Dr. Dhanaraj K. J.	First Year B.Tech Coordinator Chairman of First/Second Semester B.Tech class committee Faculty in charge of ECE Association Faculty adviser - Final year B.Tech Member of purchase committees in ECED, EED, MED and T&P Member: PG project evaluation committee (Microelectronics and VLSI Design)
Dr. Sudhish N George	Department Examination Coordinator Faculty in Charge, Electronics Circuits Lab Class Chairperson, 3 rd Year B. Tech ECE PTA, Joint Secretary cum Treasurer IQAC Member
Dr. V.Sakthivel	Warden B Hostel, From Dec 2018 to till date Course Coordinator of Basic Electrical Sciences SPCOM Lab Faculty-in-charge Faculty Advisor for B.Tech ECE 2017 batch Member in ECED Exam Vigilance committee One of the Time Table Incharge (ECED) Member in Institute Antiragging committee DC member in EED and CSED
Dr. Bindiya T. S.	ECED Time Table in Charge Purchase Coordinator Faculty advisor of 2017-2021 ECE B. Tech Batch
B. Bhuvan	Co-PI, SMDP-C2SD Faculty-in-charge, Staff and department amenities Faculty-in-charge, Microelectronics & VLSI Lab Faculty adviser, 3 rd year B.Tech ECE B.Tech project evaluation committee member (Embedded System/VLSI)
Dr. Ameer P M	In Charge – Communication Engineering Lab Information facilitator/Liaison Officer for Department PhD Guidance UG and PG project guidance Faculty Advisor – 2018 admission ECE BTech students
Dr.Jayakumar E.P.	Faculty Advisor for B.Tech 2015-19 batch Faculty in charge – Integrated Circuits Lab

	Faculty in charge – Department amenities
Dr. Venu Anand	Faculty Advisor: 2018 BTech ECE Member: Exam Vigilance Committee – ECED Member: M-Tech EDT Evaluation committee - ECED Member: Adhoc Technical Staff selection committee
Dr. Sudeep P V	Faculty Advisor for B. Tech 2017 batch Dept. library in charge Coordinator for PhD/M.Tech interview In charge of purchase of signal generator, DSO, printers and workstation Annual sports meet 2019 committee member Convocation 2018 committee member Stock verification M.Tech evaluation at NIELT and NITK Examiner for comprehensive viva of a PhD student Reviewer for IEEE TENCON 2019 conference
Dr. Waquar Ahmad	Faculty Advisor(1st Year), B.Tech Major Project evaluation (SP/Comm), B.Tech Mini Project Evaluation, Stock Verification, Convocation Catering Committee member, Annual Sports Day First Aid Committee member
Dr. A.V. Babu	HOD, ECED & Senate Nominee to BoG and FC, NITC

(d). Conferences/Summer/Winter School/Short term Courses/Workshops conducted

Sl. No	Title	Coordinators	Duration and Period
1.	'FDP on ARM Based Embedded System Development	Lyla B.Das & Jagadanand G	17-23 June, 2018
2.	Five Day Workshop on "Recent Trends in Semiconductor Devices and MEMS/NEMS"	Dr.Lintu Rajan, Dr.Suja K.J, Dr. Gopikrishna Saramekala	10 th June to 14 th June 2019
3.	Lecture Series on Multi-Resolution Analysis and Wavelet Design.	G Abhilash Ph.D (Coordinated and served as Course faculty)	15days; From 12 to 27 June 2019 under IEEE SPS jointly with the ECE Dept.,

		Ms. Athulya M S, IEEE SPS (SB) Chapter Coordinator	
4	FDP on Analog and Mixed Signal Circuits for CMOS Intelligent Sensors (AMCCIS)	Mr. Bhuvan B. and Dr. Dhanaraj K. J.	09 - 14 July 2018
5	Five-day workshop (Institute Industry Interaction Program) on Deep learning	Dr. Sudeep PV and Dr. Waquar Ahmad	18-22 December 2018

(e). Expert lectures delivered in Conferences/ Seminars/ workshops

Sl. No.	Name of Staff	Title of the Programme	Duration & Period	Organization
1	Dr.A V Babu	FDP on Emerging networking technologies and tools – Research perspective	7 th June 2019	PSG College of Technology, Coimbatore
2	Dr. Sameer S. M.	Faculty Development Program on “Recent Advances in Optical Wireless Technologies”	14-th to 19-th January 2019	College of Engineering, Trivandrum, Kerala
3	Dr.Deepthi P.P.	IEEE INDICON	Keynote speech on 16/12/ 2018	Amrita University, Coimbatore
4	Dr.Deepthi P.P.	Research Trends in Multimedia and Multirate Signal Processing	Lecture for 1.5 hours on 28/ 06/2019	NIT Calicut
5	Dr.G Abhilash	Lecture Series on Multi-Resolution Analysis and Wavelet Design.	15days; From 12 to 27 June 2019 under IEEE SPS jointly with the ECE Dept.,	IEEE SPS (SB) Chapter NIT Calicut and ECE Department
6	Dr. Dhanaraj K. J.	Talks on “Biasing of CMOS Circuits”, “Analog Filters” and “Bio inspired Sensor Circuits” in FDP on “Analog and Mixed Signal Circuits for CMOS Intelligent	09 - 14 July 2018	NIT Calicut

		Sensors (AMCCIS)”		
7	Dr. Dhanaraj K. J.	Talk on “Design of Bandgap reference and biasing and circuits” in FDP on “Analog and Digital Integrated Circuit Design using EDA tools”	21-25 January 2019	GEC Kannur
8	Dr. Sudhish N George	Mathematical Foundations to Machine Learning	Dec. 2018	NIT Calicut
9	Dr. Sudhish N George	An Introduction to Medical Image Denoising	Jan. 2019	TKM College of Engineering, Kollam
10	Dr. Sudhish N George	Mathematical Foundations to Machine Learning	Jan. 2019	TKM College of Engineering, Kollam
11	Dr. Sudhish N George	Introduction to Sparse Signal Processing	May 2019	Muthoot Institute of Technology, Ernakulam
12	Dr. Sudhish N George	Introduction to Computer Vision	June 2019	Adisankara Institute of Technology, Ernakulam
13	Dr. Sudhish N George	Introduction to Sparse Signal Processing	June 2019	NIT Calicut
14	Dr Suja K J	Recent trends in Semiconductor devices and MEMS/NEMS RTSDM’ 19	June 10- 14, 2019	NIT Calicut
15	Dr. V. Sakthivel	FDP on “Digital Signal Processing” sponsored by APJ Abdul Kalam Technological University	13-12-2018, (9.00AM to 12.45 PM)	Ahalia School of Engineering & Technology.
16	Mr. Raghu C V	FDP on Analog and Digital Integrated Circuit Design using EDA Tools: Talk on ‘Digital Design	5 days program (21 st Jan – 25 th Jan, 2019)	Govt. College of Engineering Kannur

		Issues'		
17	Mr. Raghu C V	Invited talk on 'Electronic System Design aspects'	15 th March 2019	TKM College of Engineering, Kollam
18	Mr. B. Bhuvan	Lectures on 'Amplifiers, single/two stage op amps, comparator, switched capacitor circuits and CMOS image sensors' at FDP on Analog and Mixed Signal Circuits for CMOS Intelligent Sensors	09-07-2018 to 14-07-2018	NIT Calicut
19	Mr. B. Bhuvan	Lectures on 'Differential amplifiers and Operational amplifiers at FDP on Analog and Digital Integrated Circuit Design Using EDA Tools	21-01-2019 to 25-01-2019	GCE Kannur
20	Mr. B. Bhuvan	Lecture on CMOS Intelligent Sensors at one day national seminar on CMOS Intelligent Sensors	18-02_2019	Sri Ramakrishna Engineering College, Coimbatore
21	Dr. Lintu Rajan	Workshop on "Recent Trends in Semiconductor Devices and MEMS/NEMS"	10 th June to 14 th June 2019	ECED, NITC
22	Dr. Lintu Rajan	"Smart Nanomaterials: Fundamentals to Application"	25 th March to 29 th March 2019	SNST, NITC
23	Dr. Venu Anand	Smart Nanomaterials: Fundamentals to Applications (SNFA-2019)	25 th – 29 th March 2019	NITC
24	Venu Anand	Recent Trends in	10 th – 14 th June 2019	NITC

		Semiconductor Devices and MEMS/NEMS (RTSDM '19)		
25	Dr. Gopi Krishna Saramekala	Analog and Mixed Signal Circuits for CMOS Intelligent Sensors (AMCCIS – 18)	09- 14 July 2018	NIT Calicut
26	Sudeep P V	Research and Application Perspectives of Artificial Intelligence and Machine Learning	8 th July 2019	MES College of Engineering Kuttippuram, Kerala
27	Sudeep P V	Career Planning	16 th February 2019	GVHSS (THS), Cheruvathur, Kasaragod, Kerala

(f). Details of Faculty, who acquired Higher Qualification

Dr. V. Sakthivel, acquired PhD in June 2018.

(g) Patents acquired and filed : Nil

(h) Participation in Conferences/Seminars/Workshops/other Training programmes

Sl. No	Name of Faculty	Title of the Programme	Venue	Duration of the Programme
1	Dr. P.S. Sathidevi	2017 IEEE 30th Canadian Conference on Electrical and Computer Engineering (CCECE)	Windsor, Canada	30 Apr – 03 May, 2017
2	Mr. B. Bhuvan	IEEE International conference on Electron Devices and Solid-state circuits	Hsinchu, Taiwan	18 – 20 Oct, 2017
3	Mr. B. Bhuvan	Zopp Workshop	IIT Guwahati	27-28 Oct, 2017
4	Dr. Lillykutty Jacob	The Sixteenth International Conference on Networks (ICN 2017)	Venice, Italy,	23 - 27 Apr, 2017
5	Dr. Dhanaraj K. J.	IEEE Region 10 Conference TENCON 2017	Penang, Malaysia	5-8 Nov, 2017
6	Dr. Ameer P. M.	IEEE Region 10 Conference TENCON 2017	Penang, Malaysia	5-8 Nov, 2017
7	Mr. Raghu C. V.	3rd International Conference on		22 – 24 Apr, 2017

		Control, Automation and Robotics, ICCAR 2017	Nagoya, Japan	
8	Mr. Raghu C. V.	3rd international symposium in Robotics and Manufacturing Automation (ROMA), 2017	Malaysia	19-21 Sept 2017

(i) Student Achievements

- (ii) Harshavardhan, G, Sri Venkat, G., Pratyusha, M.G., Kunal Gupta, Volam Priyanka and Sudeep, P.V., 2019, May. Hardware Implementation of Sign Language to Text Converter using Deep Neural Networks. In International Conference on “Advances in Electronics, Electrical & Computational Intelligence” (ICAEEC 19)
- (iii) B Tech 2017 batch students visited different old age homes nearby and spent time with inmates as part of the value education course.
- (iv) Mr. Krishnan Namboodiri, Mr. Prashobh and Ms. Elizabeth peter, B.Tech students of 2015-19 batch secured Admission for Direct Ph.D. at IISc Bengaluru

DEPARTMENT OF MECHANICAL ENGINEERING

a. Publications

i. Journals

Sl. No	Name of the Authors	Title of paper	Journal name	Vol., Page Nos., Year of publication
1	Gowda, T., Jagadeesha, T., Dhinakaran, V	Optimization of design parameters of aircraft wing structure with large cut outs using damage tolerant design and finite element analysis approach	International Journal of Advanced Manufacturing	Vol. 8, No. 1, pp. 122-127, 2019.
2	Narayana, J.D., Soumya, S., Subhash, N., Jagadeesha	Estimation of fatigue strength of crank shaft with and without flywheel	International Journal of Advanced Manufacturing	Vol. 8, No. 1, pp. 128-132, 2019.
3	Sriram, G., Dhinakaran, V., Jagadeesha, T., Ramgopal, R	Finite element simulation of temperature distribution and residual stress in single bead on plate weld trial using double ellipsoidal heat source model	International Journal of Advanced Manufacturing	Vol. 8, No. 1, pp. 133-138, 2019.
4	John, S.T., Sridharan, R., Ram Kumar, P.N., Krishnamoorthy, M.	Multi-period reverse logistics network design for used refrigerators	Applied Mathematical Modelling	54, pp. 311-331, 2018
5	Narayanan,	Analyzing the interactions	Journal of	Not assigned

	A.E., Sridharan, R., Ram Kumar, P.N.	among barriers of sustainable supply chain management practices: A case study	Manufacturing Technology Management	
6	Paul, M., Radha Ramanan, T., Sridharan, R.	Simulation modelling and analysis of dispatching rules in an assembly job shop production system with machine breakdowns	International Journal of Advanced Operations Management	10(3), pp. 234-251, 2018
7	Anish, M.N., Dhanish, P.B., Sridharan, R.	Instrument for measuring service quality and dimensions of service quality affecting image, value and trust in medical tourism area	International Journal of Services and Operations Management	30(4), pp. 419-446, 2018
8	Vishnu, C.R., Sridharan, R., Kumar, P.N.R.	Supply chain risk management: Models and methods	International Journal of Management and Decision Making	18(1), pp. 31-75, 2019
9	Hong, J., Diabat, A., Panicker, V.V., Sridharan, R.,	A two-stage supply chain problem with fixed costs: An ant colony optimization approach	International Journal of Production Economics	Vol. 204, pp. 214-226, 2018
10	Anoop, K.P., Panicker, V.V., Narayanan, M., Kumar C.T.S.,	A mathematical model and solution methods for rail freight transportation planning in an Indian food grain supply chain	Sādhanā,	Vol. 43: 200, pp. 01-20, 2018
11	Pradeepmon, T.G., Sridharan, R., Panicker, V.V.,	Development of modified discrete particle swarm optimization algorithm for quadratic assignment problems	International Journal of Industrial Engineering Computations	Vol. 9, No. 4, pp. 491-508, 2018
12	Pradeepmon, T.G., Panicker, V.V., Sridharan, R.,	A heuristic algorithm enhanced with probability-based incremental learning and local search for dynamic facility layout problems	International Journal of Applied Decision Sciences	Vol. 11, No. 4, pp. 352-389, 2018
13	Pradeepmon, T.G., Panicker, V.V., Sridharan, R.	Hybrid estimation of distribution algorithms for solving a keyboard layout problem	Journal of Industrial and Production Engineering	Vol. 35, No. 6, pp. 352-367, 2018
14	Panicker V.V., Reddy M. V. and Sridharan, R.	Development of an ant colony optimisation-based heuristic for a location-routing problem in a two-stage supply chain	International Journal of Value Chain Management	Vol. 9, No. 1, pp. 38-69, 2018

15	Saha A.	Time-delayed control of friction-induced vibrations in a continuous system	International Journal of Mechanical and Production Engineering Research and Development	Special Issue, 111 – 118, 2018
16	Ajith Kuriakose Mani, M. D. Narayanan, Mihir Sen	Parametric identification of fractional-order nonlinear systems	Nonlinear Dynamics	Vol.93, No. 2, pp. 945-960, 2018.
17	Vipindas Kizhakken and Jose Mathew	Modeling of burr thickness in micro-end milling of Ti6Al4V	Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture	Vol. 233(4), Page.1087-1102, Year. 2018
18	Vipindas K, Anand K N and Jose Mathew	Effect of cutting edge radius on micro end milling: force analysis, surface roughness, and chip formation	International Journal of Advanced Manufacturing Technology	Vol. 97, Page.711-722, Year. 2018
19	Rhinithaa PT, Selvakumar P, Nikhil Sudhakaran, Vysyaraju Anirudh DeepakLawrence and Jose Mathew	Comparative study of roundness evaluation algorithms for coordinate measurement and form data	Precision Engineering	Vol. 51, Page.458-467, Year. 2018
20	Ladeesh V. G. and R. Manu	Machining of fluidic channels on borosilicate glass using grinding-aided electrochemical discharge engraving (G-ECDE) and process optimization	Journal of the Brazilian Society of Mechanical Sciences and Engineering	Vol 40 Issue 6, Pages 1 – 19, 2018
21	Ladeesh V. G. and R. Manu	Performance Evaluation and Multi-Response Optimization of Grinding Aided Electro-Chemical Discharge Drilling (G-ECDD) of Borosilicate Glass	Journal of the Brazilian Society of Mechanical Sciences and Engineering	Vol 40 Issue 12, Pages 1 – 19, 2018
22	Ladeesh V. G. and R. Manu	“Performance study and mathematical modeling of grinding aided electro-chemical discharge drilling (G-ECDD)	Materials Today Proceedings	Vol 5, pages 3618–3628, 2018

		of soda- lime-silica glass.”		
23	Ladeesh V. G. and R. Manu	Study on the Effect of Machining Parameters on Edge-chipping during Drilling of Glass using Grinding Aided Electrochemical Discharge Machining (G-ECDM)	Advances in Manufacturing	Vol 5 Issue 2, pages 215-224, 2018
24	Arun P. Raj, Avneesh Kumar Ravi, P. B. Dhanish	Factors influencing the performance of a roundness measuring instrument - Development of an empirical model	Measurement	Aug 2018
25	Rhithaa PT, Selvakumar P, Nikhil Sudhakaran, Vysyaraju Anirudh, Deepak Lawrence K, Jose Mathew,	Comparative Study of Roundness Evaluation Algorithms for Coordinate Measurement and Form Data	Precision Engineering	2018, Vol 51, pp.458-467
26	Prasad V., Joseph M.A., Sekar K.	Investigation of mechanical, thermal and water absorption properties of flax fibre reinforced epoxy composite with nano TiO ₂ addition	Composites Part A: Applied Science and Manufacturing	115,360-370,2018
27	Kalaiselvan K., Elango A., Nagarajan N.M., Sekar K.	Influence of LBW parameters on properties of Ti6Al4V/AA2024 dissimilar alloy joint	Indian Journal of Engineering and Materials Sciences	25,445-449,2018
28	Kalaiselvan K., Elango A., Nagarajan N.M., Sekar K.	Experimental Investigation on Mechanical and Distortion Characteristics of Titanium/Aluminium Dissimilar Metal Joint Using Laser Beam Welding	Journal of Advanced Manufacturing Systems	17, 569-579,2018
29	Sekar K., Jayachandra G., Aravindan S.	Mechanical and Welding Properties of A6082-SiC-ZrO ₂ Hybrid Composite Fabricated by Stir and Squeeze Casting	Materials Today: Proceedings	5, 20268-20277, 2018
30	Prasad V., Joseph M.A., Sekar K., Ali M.	Flexural and impact properties of flax fibre reinforced epoxy composite with nano TiO ₂ addition	Materials Today: Proceedings	5, 24862-24870,2018
31	Prasad V., Suresh	Development of Flax Fibre	Materials Today:	5,11569-

	D., Joseph M.A., Sekar K., Ali M.	Reinforced Epoxy Composite with Nano Tio2 Addition into Matrix to Enhance Mechanical Properties	Proceedings	11575,2018
32	Vijayan, A.T., Sankar, A. and Sudheer A. P	A comparative study on the performance of neural networks in visual guidance and feedback applications	Automatika Journal for Control, Measurement, Electronics, Computing and Communications; Taylor & Francis online	Vol. 58(3), pp.336-346, 2018
33	Vipindas K and Jose Mathew	Wear Behavior of TiAlN Coated WC Tool during Micro End Milling of Ti-6Al-4V and Analysis of Surface Roughness	Wear	Vol. 424- 425, Page. 165- 182 Year. 2019
34	Deepak G. Dilip, S. P. Ananthan, Satyananda Panda and Jose Mathew	Numerical Simulation of the Influence of Fluid Motion in Mushy Zone during Micro EDM on the Crater Surface Profile of Inconel 718 Alloy	Journal of the Brazilian Society of Mechanical Sciences and Engineering	Vol. 41 Page. 107 Year. 2019
35	George, J. Mathew, B.G. Manu, R. Deepak Lawrence, K.	Bio-modelling, design, analyses and prototyping of patient-specific medical implants using CT scan data	Proceedings of IEEE Recent Advances in Intelligent Computational Systems, RAICS 2018 8635093, pp. 224-229	pp. 224-229, 2019
36	Ladeesh V. G. and R. Manu	Grinding-aided electrochemical discharge drilling in the light of electrochemistry	Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science	Vol 233 Issue 6, pages 1896-1909, 2019
37	Arun P. Raj, Avneesh Kumar Ravi, P. B. Dhanish	Factors influencing the performance of a roundness measuring instrument - Development of an empirical model	Measurement	Vol 131, 2019, 193- 203
38	Sekar K.	Mechanical and tribological properties of Al7475-SiC p composites by stir casting method and wear rate modeling using RSM	Sadhana - Academy Proceedings in Engineering Sciences	44, 2019
39	Sekar K., Manohar M.,	Mechanical and Tribological Properties of	Lecture Notes in Mechanical	115-125, 2019

	Jayakumar K.	A356/Al ₂ O ₃ /MoS ₂ Hybrid Composites Synthesized Through Combined Stir and Squeeze Casting	Engineering	
40	Prasad V., Muhammed Hunize C.V., Abhiraj R.I., Joseph M.A., Sekar K., Ali M.	Mechanical properties of flax fiber reinforced composites manufactured using hand layup and compression molding—A comparison	Lecture Notes in Mechanical Engineering	781-789,2019
41	Damodaran S., Kumar T.K.S., Sudheer A.P.	Model-Matching Fractional-Order Controller Design Using AGTM/AGMP Matching Technique for SISO/MIMO Linear Systems	IEEE Access	Vol.7, pp. 41715 – 41728, 2019
42	Ratna Kumar K., T. Radha Ramanan and R. Sridharan	A Study on the Impact of Backorder Sales on an Integrated Supply Chain	International Journal of Services and Operations Management	May, 2018 Accepted for publication
43	K. Ratna Kumar; T. Radha Ramanan; Anand Abraham; R. Sridharan	Integrated production distribution problem in a partial backorder and order refusal environment	International Journal of Management Concepts and Philosophy	Volume 12, 296 – 311, 2019
44	George J, Arun P, Muraleedharan C,	Assessment of producer gas composition in air gasification of biomass using artificial neural network model	International Journal of Hydrogen Energy	43(20), 9558-9568, 2018.
45	George J, Arun P, Muraleedharan C,	Experimental investigation on co-gasification of coffee husk and sawdust in a bubbling fluidised bed gasifier	Journal of the Energy Institute	2018. DOI:10.1016/j.joei.2018.10.014
46	Santhosh T., Kuzhiveli B.T.	Heat transfer aspects and analysis of regenerative cooling in semi-cryogenic thrust chamber with fixed and variable aspect ratio coolant channels	IOP Conference Series: Materials Science and Engineering	502 (1), 2019
47	Abraham D., Kuzhiveli B.T.	Effect of induced pressure fluctuation in reservoir of a	IOP Conference Series: Materials Science and	502 (1), 2019

		pulse tube cryocooler	Engineering	
48	Vishnu S.B., Kuzhiveli B.T.	Evolution of stratification in a cryogenic propellant tank at reduced gravity environment	IOP Conference Series: Materials Science and Engineering	502 (1), 2019
49	Bisht A.S., Kuzhiveli B.T.	Design and development of miniature free piston free displacer dual opposed Stirling cryocooler	IOP Conference Series: Materials Science and Engineering	502 (1), 2019
50	Jineesh M.R., Kuzhiveli B.T.	Design and analysis of miniature free piston Stirling engine (FPSE) for on-board power production	IOP Conference Series: Materials Science and Engineering	502 (1), 2019
51	Vishnu S.B., Kuzhiveli B.T.	Effect of micro- and elevated gravity condition on the evolution of stratification and self-pressurization in a cryogenic propellant tank	Sadhana - Academy Proceedings in Engineering Sciences	44 (3), 2019
52	Biju T Kuzhiveli	Modeling combined heat transfer in an all solid state optical cryocooler	IOP Conference Series: Materials Science and Engineering	502 (1), 2019
53	Paradeshi, L., Srinivas, M., Jayaraj, S	Performance studies of R433A in a direct expansion solar-assisted heat pump	<u>International Journal of Ambient Energy</u>	pp. 1-12 (Article in press), 2018
54	Paradeshi, L., Mohanraj, M., Srinivas, M., Jayaraj, S	Exergy analysis of direct-expansion solar-assisted heat pumps working with R22 and R433A	<u>Journal of Thermal Analysis and Calorimetry</u>	134(3), pp. 2223-2237, 2018
55	Raj, A.K., Srinivas, M., Jayaraj	A cost-effective method to improve the performance of solar air heaters using discrete macro-encapsulated PCM capsules for drying applications	<u>Applied Thermal Engineering</u>	146, pp. 910-920, 2019
56	Paradeshi, L., Srinivas, M., Jayaraj, S.	Performance of hydrocarbon mixture in a direct expansion solar assisted heat pump system	Heat and Mass Transfer	55 (4), pp. 965-977, 2019
57	Raj, A.K., Kunal, G., Srinivas, M., Jayaraj, S	Performance analysis of a double-pass solar air heater system with asymmetric channel flow passages	<u>Journal of Thermal Analysis and Calorimetry</u>	136 (1), pp. 21-38, 2019
58	Paradeshi, L., Srinivas, M.,	Thermodynamic analysis of a direct expansion solar-assisted	<u>Journal of Thermal Analysis and</u>	136 (1), pp. 63-78, 2019

	Jayaraj, S	heat pump system working with R290 as a drop-in substitute for R22	<u>Calorimetry</u>	
59	Raj, A.K., Srinivas, M., Jayaraj, S	CFD modeling of macro-encapsulated latent heat storage system used for solar heating applications	<u>International Journal of Thermal Sciences</u>	139, pp. 88-104, 2019
60	Arun, K.R., Srinivas, M., Saleel, C.A., Jayaraj, S	Active drying of unripened bananas (Musa Nendra) in a multi-tray mixed-mode solar cabinet dryer with backup energy storage	<u>Solar Energy</u>	188, pp. 1002-1012, 2019
61	Arun, K.R., Srinivas, M., Saleel, C.A., Jayaraj, S	Influence of the location of discrete macro-encapsulated thermal energy storage on the performance of a double pass solar plate collector system	<u>Renewable Energy</u>	146, pp. 675-686, 2019
62	Bandaru R., Muraleedharan C., M.V. Pavan umar	Modelling and dynamic simulation of solar-thermal energy conversion in an unconventional solar thermal water pump	Renewable Energy	134, 292-305, 2019
63	P.V. Manu, S. Jayaraj and A. Ramaraju	CI engine performance analysis in dual fuel mode with HHO gas induction	International Journal of Mechanical Engineering and Technology	9 (9), 2018, p 1156 – 1172
64	Sankaralingam R.K., Ferroskhan, Ismail S., Venugopal T.	Experimental studies on premixed charge compression ignition (PCCI) engine using port injection of heated diesel	Journal of Engineering Science and Technology	13(11), 3457-3472, 2018
65	Subramanian B., Ismail S.	Production and use of HHO gas in IC engines	International Journal of Hydrogen Energy	43(14), 7140-7154, 2018
66	Feroskhan M., Ismail S., Reddy M.G., Sai Teja A.	Effects of charge preheating on the performance of a biogas-diesel dual fuel CI engine	Engineering Science and Technology, an International Journal	21(3), 330-337, 2018
67	Feroskhan M., Ismail S., Gosavi S., Tankhiwale P., Khan Y.	Optimization of performance and emissions in a biogas-diesel dual fuel engine with cerium oxide nanoparticle addition	Proceedings of the Institution of Mechanical Engineers (IMEchE), Part D: Journal of Automobile Engineering	233(5), 1178-1193, 2019
68	S. Gangolu, T.	Hot Working Flow Behavior of	Materials Performance	(doi:10.1520/N

	Kitashima, M. Hagiwara, S. Emura, K. Iida	Ti-6242S Alloy	and Characterization, ASTM	C 20180156 Accepted Manuscript) 20
69	Sujith Kumar C.S, Yao Wen Chang, Mario R. Mata Arenales, Long-Sheng Kuo , Yu Hsuan Chuang, Ping-Hei Chen	Experimental Investigation on the Effect of Size and Pitch of Hydrophobic Square Patterns on the Pool Boiling Heat Transfer Performance of Cylindrical Copper Surface	Inventions	3, 1-15 (2018)
70	Sujith Kumar C.S, G. Udaya Kumar, Mario R. Mata Arenales, Chin-Chi Hsu, S. Suresh, and Ping-Hei Chen	Elucidating the Mechanisms Behind the Boiling Heat Transfer Enhancement using the Nano-Structured Surface Coatings	Applied Thermal Engineering	127 868-891
71	AlbinJoseph, SreejithMohan, Sujith Kumar C. S, ArunMathew, ShijoThomas, B.R.Vishnu, S.P.Sivapirakasa m	An experimental investigation on pool boiling heat transfer enhancement using sol-gel derived nano-CuO porous coating	Experimental Thermal and Fluid Science	103, 37-50 (2019)
72	Karthick K., Suresh S., Hussain M.M.M.D., Ali H.M., Kumar C.S.Sujith Kumar	Evaluation of solar thermal system configurations for thermoelectric generator applications: A critical review	Solar Energy	188, 111-142 (2019)
73	Sundar R. Nath, M. Mubarak, A. Bhowmik, A. Shaija	Effect of photolimitation on growth of microalgae in Tubular photobioreactor	Journal of Advanced Engineering Research	Volume 5, Issue 1, 2018, pp.1-5
74	Rao S S L, Shaija A., Jayaraj S	Performance analysis of a transparent PEM fuel cell at the optimized clamping pressure applied on its bolts	Materials Today: Proceedings	Vol 5 (2018) 58-65
75	Gupta, P., Protim Das, P., Mubarak, M., Shaija, A.	Performance and emission analysis of single cylinder SI engine using bioethanol- gasoline blend produced from Salvinia Molesta	Materials Science and Engineering	297 (1), 012005

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77	Gurrala Srinivasa Rao, A Shaija	Computational Analysis of Reacting Flows in Afterburner	Heat Transfer Engineering	Volume 41, Issues 5-6, November/December 2018
78	Srinivasa Rao, G., Shaija, A.	Computational Analysis of Reacting Flows in Afterburner	Heat Transfer Engineering	10.1080/01457632.2018.1546946
79	J. Lijin and T.J.S. Jothi	Aerodynamic Characteristics of an Ogive-Nose Spinning Projectile	Sādhanā	Vol. 43:63, no. 4, pp 1-8, 2018
80	K.T. Ijas Hussain and T.J.S. Jothi	Vortex Ring Propagation and Interactions Studies,	Sādhanā	Vol. 43:99, no. 7, pp 1-11, 2018.
81	Dora Nagaraju and T.J.S. Jothi	Emission Studies in CI Engine Using LPG and Palm Kernel Methyl Ester as Fuels and Di-Ethyl Ether as an Additive	Journal of The Institution of Engineers (India): Series C	2018
82	Rajesh T.N., Sarvoththama Jothi T.J. and Jayachandran T.	Hot Test Studies in a Spark Ignited Vortex Combustion Chamber	Chemical Engineering Transactions	Vol. 71, pp. 1345-1350, 2018
83	Kuan M., Shakir Y., Mohanraj M., Belyayev Y., Jayaraj S., Kaltayev A.	Numerical simulation of a heat pump assisted solar dryer for continental climates	Renewable Energy	214-225, 2019
84	Manu P.V., Jayaraj S., Ramaraju A.	CI engine performance analysis in dual fuel mode with hho gas induction	International Journal of Mechanical Engineering and Technology	9 (9), 1156-1172, 2018
85	Belyayev Y., Mohanraj M., Jayaraj S., Kaltayev A.	Thermal Performance Simulation of a Heat Pump Assisted Solar Desalination System for Kazakhstan Climatic Conditions	Heat Transfer Engineering	1-13, 2018
86	Mohanraj M., Belyayev Y., Jayaraj S.,	Research and developments on solar assisted compression heat pump systems – A	Renewable and Sustainable Energy Reviews	83, 124-155, 2018

	Kaltayev A.	comprehensive review (Part-B: Applications)		
87	Mohanraj M., Belyayev Y., Jayaraj S., Kaltayev A.	Research and developments on solar assisted compression heat pump systems – A comprehensive review (Part A: Modeling and modifications)	Renewable and Sustainable Energy Reviews	83, 90-123, 2018
88	Rao S.S.L., Shaija A., Jayaraj S.	Performance analysis of a transparent PEM fuel cell at the optimized clamping pressure applied on its bolts	Materials Today: Proceedings	5 (1), 58-65, 2018
89	Sabarinath, S., Prabhakaran Nair, K., Rajendrakumar, P.K. and Parameswaran P.	Styrene butadiene rubber as a viscosity improver: Experimental investigations and quantum chemical studies	Proceedings of the Institution of Mechanical Engineers Part J- Journal of Engineering Tribology	Vol. 232 (4), pp.427-436, (2018)
90	Sabarinath, S., Prabhakaran Nair, K., Rajendrakumar, P.K. and Parameswaran P.	Micro & Nano Particles Blended Sesame Oil Bio-lubricant: Study of Its Tribological and Rheological Properties	Micro & Nano Letters	Vol.13, No.12, pp.1-4, 2018
91	Sabarinath, S., Prabhakaran Nair, K., Rajendrakumar, P.K. and Parameswaran P.	Experimental and quantum chemical investigations on the oxidative stability of sesame oil base stock with synthetic antioxidant additives	Lubrication Science	Vol.31, Issue 5, pp.1-15, 2018
92	Jobin Varghese, Akhil, V.M., Rajendrakumar, P.K. and Sivanandan, K.S.	Effect of body mass index and chair height on the torque developed at the knee joint during back-to-sit and sit-to-stand movements	International Journal of Bioinformatics Research and Applications	Vol.14, No.1/2 (2018) pp.131-143
93	Sajeeb, A.M. and Rajendrakumar, P.K.	Investigation on the rheological behavior of coconut oil based hybrid CeO ₂ /CuO nanolubricants	Proceedings of the Institution of Mechanical Engineers Part J- Journal of Engineering Tribology	Vol.233, No.1, pp.170-177, 2019
94	Akhil, V.M., Jobin Varghese, Rajendrakumar, P.K. and Sivanandan, K.S.	Investigation of gait cycle deviation over surface irregularities utilizing muscle activities	Bio-Medical Materials and Engineering	Vol.30, No.3, pp.267-277, 2019

95	Sabarinath, S., Prabhakaran Nair, K. and Rajendrakumar, P.K.	Evaluation of tribological properties of sesame oil as biolubricant with SiO ₂ nanoparticles and imidazolium-based ionic liquid as hybrid additives	Proceedings of the Institution of Mechanical Engineers Part J- Journal of Engineering Tribology	Vol.208-210, pp. 1-12, 2019
96	Abdul Nazar K.P., Madhusudanan Pillai V.	Mixed-model sequencing problem under capacity and machine idle time constraints in JIT production systems	Computers and Industrial Engineering	Vol. 118, 226-236, 2018
97	Hunagund I.B., Madhusudanan Pillai V., Kempaiah U.N.	A simulated annealing algorithm for unequal area dynamic facility layout problems with flexible bay structure	International Journal of Industrial Engineering Computations	Vol. 9, Issue 3, 307-330, 2018
98	Nidhi M.B., Madhusudanan Pillai V.	Product disposal penalty: Analysing carbon sensitive sustainable supply chains	Computers and Industrial Engineering	Vol. 128, Issue 1, 8-23, 2019
99	J.S N., Chilkapure A., Madhusudanan Pillai V.	Literature review on supply chain collaboration: comparison of various collaborative techniques	Journal of Advances in Management Research	Published in emerald earlyCite on 22-Mar-2018)
100	Kuan M., Shakir Y., Mohanraj M., Belyayev Y., Jayaraj S., Kaltayev A.	Numerical simulation of a heat pump assisted solar dryer for continental climates	Renewable Energy	214-225, 2019
101	Belyayev Y., Mohanraj M., Jayaraj S., Kaltayev A.	Thermal Performance Simulation of a Heat Pump Assisted Solar Desalination System for Kazakhstan Climatic Conditions	Heat Transfer Engineering	1-13, 2018
102	Mohanraj M., Belyayev Y., Jayaraj S., Kaltayev A.	Research and developments on solar assisted compression heat pump systems – A comprehensive review (Part-B: Applications)	Renewable and Sustainable Energy Reviews	124-155, 2018
103	Mohanraj M., Belyayev Y., Jayaraj S., Kaltayev A.	Research and developments on solar assisted compression heat pump systems – A comprehensive review (Part A: Modeling and modifications)	Renewable and Sustainable Energy Reviews	90-123, 2018

ii. International and National Conference

Sl. No	Name of the Author	Title of Paper	Name of National/Inter.conference	Organising Institute, Date(s)
1	Umar Farook N, Parthasarathy R, Murshid P K, Anikesh Kumar Rathod, Naveen Raghava Krishnan S B, Anoop Kumar Verma, K P Vineesh, Sreenath A.M	A Novel Methodology to Optimise Design Parameters of an Asymmetric Gear	International Conference on Mechanical Power Transmission (ICMPT 2019) held at IIT Madras	Vol -1 Pp 314-319
2	Vishnu, C.R., Sangeeth P. Das, Sridharan, R.	Reliable Supplier Selection and Order Allocation Model for Managing Risks: A Simulation-based Optimization Approach	IEEE Sponsored Second International Conference on Systems, Computation, Automation and Networking – 2019, at Pondicherry	Not Assigned
3	Sambrekar, A.A., Vishnu, C.R., Sridharan, R.	Maintenance strategies for realizing industry 4.0: An overview	International Conference in Emerging Trends in Engineering, Science and Technology, ICETEST 2018	Emerging Trends in Engineering, Science and Technology for Society, Energy and Environment -pp. 341-348
4	Patil, P., Vishnu, C.R., Sridharan, R.	Reliable supply chain network design model: Development and analysis	International Conference on Advances in Materials & Manufacture Applications (IConAMMA)	Materials Today: Proceedings 5(11), pp. 23549-23558
5	Vishnu, A. A., Siddaveeraiah, K.S., Rahul, K.V., Nirmal S., Thalor, P., Sultana, S., Emmatty, F.J. and Panicker, V.V.,	Observation-based Postural Assessment of Waste Sorting Tasks	2nd International Conference on Systems, Computation, Automation and Networking (ICSCAN 2019)	2019
6	Karande, A., Krishna, A., Ragupathi, J., Gopan, G.,	Performance Analysis of Storage Warehouses in a Food Grain Supply Chain using Data Envelopment Analysis	2nd International Conference on Systems, Computation, Automation and	2019

	Gopinath, M.V., Kumar, S., Anoop K P, Panicker, V.V., and Varaprasad, G.,		Networking (ICSCAN 2019)	
7	Emmatty, F.J. and Panicker, V.V.,	Posture assessment among waste loading workers in India	International Conference on Intelligent Manufacturing and Automation 2018	Lecture Notes in Mechanical Engineering, Springer Nature, Singapore, pp. 229-237, 2018`
8	Panicker, V.V., Aryadutt C.S., and Anoop K.P.,	Elitist Non-dominated Sorting Genetic Algorithm-Based Heuristic for Optimizing Rail Freight Transportation	International Conference on Intelligent Manufacturing and Automation 2018	Lecture Notes in Mechanical Engineering, Springer Nature, Singapore, pp. 623-630, 2018`
9	Emmatty, F.J. and Panicker, V.V.,	Assessment of waste loading tasks and implications of waste container size	International Conference on Humanizing Work and Work Environment	2018
10	Baradwaj K.C., Emmatty, F.J. and Panicker, V.V.,	Assessment of occupational health among waste sorting workers and ergonomic interventions: a systematic review	International Conference on Humanizing Work and Work Environment	2018
11	Vishnu, A. A., Siddaveeraiah, K.S., Rahul, K.V., Nirmal S., Thakor, P., Sultana, S., Emmatty, F.J. and Panicker, V.V.,	Digital Human Modelling and Ergonomic assessment of handedness in street sweeping	International Conference on Humanizing Work and Work Environment	2018
12	Panicker, V.V. and Arun P.P.,	Simulation model for the analysis of Patient Scheduling Process in Radio Diagnosis Department	2018 IEEE International Conference on System, Computation, Automation and Networking (ICSCA)	2018
13	Panicker, V.V.	Solving a Heterogeneous Fleet	2018 IEEE	2018

	and Ihsan M. O.,	Vehicle Routing Model - A practical approach	International Conference on System, Computation, Automation and Networking (ICSCA)	
14	Soumya Jagadeesha T	Experimental Study on Surface Roughness and Optimization of Process Parameters Using ANN-GA in Milling of Super-Duplex Stainless Steel Under Dry and Wet Conditions	International Conference on advances in material science and manufacturing	Aug 2018
15	Subhash Jagadeesha T	Experimental Study on Tool Wear and Optimization of Process Parameters Using ANN-GA in Turning of Super-Duplex Stainless Steel Under Dry and Wet Condition	International Conference on advances in material science and manufacturing	Aug 2018.
16	Alok Kumar Samanta and Varaprasad, G.,	TQM Approach of resolving issues related to Customer and In-House Complaints-A case study	Proceedings of Second International Conference on Innovative Trends in engineering, Applied Science and Management (ICITEASM-2018). Osmania University, Hyderabad	pp. 23-29 May 20, 2018,
17	Alok Kumar Samanta, Varaprasad, G. and Ramakrushna Padhy,	Application of Lean and Six Sigma Quality Improvement Methodology in Paediatrics: A Systematic Literature Review	Proceedings of International Conference on Global Health & Medical Tourism (GloHMT-2019), IIM Kozhikode	March 7-10, 2019
18	Deepak G Dilip, Satyananda Panda, Jose Mathew	Evaluation of Side Wall Roughness and Material Removal Rate in Vibration Assisted Powder Mixed Micro-EDM Drilling	7th International And 28th All India Manufacturing Technology, Design And Research Conference 2018 (AIMTDR 2018)	Will be published as springer book chapter
19	Rahul Yadav, Vipindas K, Muni Sekhar Kattari, Jose Mathew	Modeling of Mechanical Residual Stresses in Micro End Milling of Ti-6Al-4V Alloy	7th International And 28th All India Manufacturing Technology, Design And Research Conference 2018 (AIMTDR 2018)	Will be published as springer book chapter

20	Vipindas K., Jose Mathew	Machining Of Borosilicate Glass Using Micro End Milling	7th International And 28th All India Manufacturing Technology, Design And Research Conference 2018 (AIMTDR 2018)	Will be published as springer book chapter
21	Anand Krishnan N, G. Venkitesh, Jose Mathew	Investigations on the Influence of Size Effect on Surface Characteristics during Micro Endmilling of Inconel 718	7th International And 28th All India Manufacturing Technology, Design And Research Conference 2018 (AIMTDR 2018)	Will be published as springer book chapter
22	Ankit Awasthi, Anand Krishnan N, Jose Mathew	Analysis of Effect of Heat Treatment on Machining Characteristics during Micro Endmilling of Inconel 718	7th International And 28th All India Manufacturing Technology, Design And Research Conference 2018 (AIMTDR 2018)	Will be published as springer book chapter
23	Anand Krishnan N, G. Venkitesh, Jose Mathew	Investigations on the Influence of Size Effect on Surface Characteristics during Micro Endmilling of Inconel 718	7th International And 28th All India Manufacturing Technology, Design And Research Conference 2018 (AIMTDR 2018)	Will be published as springer book chapter
24	Jiju V Elias, Asams S, Jose Mathew	Finite Element Simulation and Experimental Investigations to Predict Tool Flank Wear Rate during Micro Turning on Ti-6Al-4V Alloy	7th International And 28th All India Manufacturing Technology, Design And Research Conference 2018 (AIMTDR 2018)	Will be published as springer book chapter
25	Jees George, Ravi Chandan, R.Manu, Jose Mathew	Modeling of Areal Surface Roughness using Soft Computing Based ANN and Genetic Algorithm to Estimate Optimal Process Parameters during Wire Electrical Discharge Turning (WEDT) of Inconel 825	7th International And 28th All India Manufacturing Technology, Design And Research Conference 2018 (AIMTDR 2018)	Will be published as springer book chapter
26	Sowjanya N.S, Ladeesh V.G, Manu R, Jose Mathew	Comparative Study on the Performance of Different Drill Bits for Drilling CFRP	7th International And 28th All India Manufacturing Technology, Design	Will be published as springer book chapter

			And Research Conference 2018 (AIMTDR 2018)	
27	Ashik Suresh, Dhanish P B	Measurement of Bores Using Scanning Mode of Articulated Arm Coordinate Measuring Machines	7 th International and 8 th All India Manufacturing Technology, Design and Research Conference 2018	Proceedings yet to be published
28	Soumya Jagadeesha T	Experimental Study on Surface Roughness and Optimization of Process Parameters Using ANN-GA in Milling of Super-Duplex Stainless Steel Under Dry and Wet Conditions	International Conference on advances in material sc and manufacturing	CIT, Aug 2018
29	Subhash Jagadeesha T	Experimental Study on Tool Wear and Optimization of Process Parameters Using ANN-GA in Turning of Super-Duplex Stainless Steel Under Dry and Wet Condition	International Conference on advances in material sc and manufacturing	CIT, Aug 2018.
30	Jomy George, Bivin G Mathew, Manu. R, Deepak Lawrence K	Bio-modelling, Design, Analyses, and Prototyping of Patient-specific Medical Implants Using CT Scan Data	IEEE 4th International Conference on Recent Advances in Intelligent Computational Systems (IEEE RAICS 2018)	2018, Page(s): 224 – 229 DOI: 10.1109/RAICS.2018.8635093
31	Raha B., Nithin Raj P., Sekar K.	Study on properties of Hyper Duplex Stainless Steel 7A of ASTM A-890 (CD3MWN)	73rd World Foundry Congress "Creative Foundry", WFC 2018 - Proceedings	437-438,2018
32	ShifaSulaiman, A P Sudheer	Kinematic and Dynamic analysis of a tree type Humanoid upperbody by using screw theory	Indian conference on Applied Mechanics (INCAM 2019), IISc, Bangalore	In Press (Scopus)
33	Mervin Joe Thomas, Sooraj Sukumar K, Sudheer A.P, Joy M.L	Mathematical modelling of a novel 3 PPSS Parallel Manipulator	Indian conference on Applied Mechanics (INCAM 2019), IISc, Bangalore	In Press (Scopus)
34	Nihal Saji, Abhey Sujith, A P Sudheer	Controlling a Robotic Manipulator Using an Augmented Reality Interface	Indian conference on Applied Mechanics (INCAM 2019), IISc,	In Press (Scopus)

			Bangalore	
35	GaliAmoolya , KL Lavanya , A P Sudheer	WiFi RSSI based optimal path planning and collision avoidance in a multi robot environment	IEEE INCOS'19, Srivilliputur,Tamilnadu	In Press (Scopus)
36	Rohith K.K., Navaneeth Varma, A.P. Sudheer, M.L. Joy	Mathematical modeling and comparative study of 12-DoF biped robot using Screw Theory and Denavit-Hartenberg convention	1st International Conference on Innovative Product Design and Intelligent Manufacturing System, NIT Rourkela	In Press (Scopus)
37	Arunima B Krishna, Meghana Hari, A P Sudheer	Word Based Text Extraction Algorithm Implementation In Wearable Assistive Device for the Blind	IEEE INCOS'19, Srivilliputur,Tamilnadu	In Press (Scopus)
38	Neil Rodriguez, Arun M Pillai, A P Sudheer	Design, Modelling and Fabrication of Railway track Cleaning Bot	International Conference on Robotics and Smart Manufacturing, IITDM, Kancheepuram	Procedia Computer Science, Volume 133, 2018, Pages 526-536
39	Amarnath H, Umamaheswaran S, Sagar S Eligar, Kiran G Krishnan.,A P Sudheer	Design Analysis and Fabrication of Five Degrees of Freedom Autonomous Underwater Vehicle	International Conference on Automation and Computational Engineering, Amity University	IEEE, DOI: 10.1109/ICA CE.2018.868 7113
40	Mervin Joe Thomas, M L Joy, Gaurav M, A P Sudheer	Modelling and Analysis of 3- PSS Parallel Kinematic Mechanism	IFTtoMM Asian Mechanism and Machine Science, IISc, Bangalore	In Press (Scopus)
41	Sakthivel P, Amudhan A N, Sunil Kumar T K, A P Sudheer	Controller design and experimental validation of error reduction due to unactuated Omni wheels of four wheeled mobile robot	2nd International Conference on Advancements in Automation, Robotics and Sensing, PSG College of Technology, Coimbatore	In Press (Scopus)
42	Dhage Mayureshwar, K. Ratna Kumar, Eldhose K K, R Sridharan	Markovian Analysis of academic performance in higher educational Institutions	XXII Annual International Conference of the Society of Operations Management 2018	2018

43	G. Balakrishna reddy and K. Ratna Kumar	Quality improvement in organic food supply chain using Blockchain Technology	Innovative product design and intelligent manufacturing system (ICIPDIMS-19)	1,PP: 86, 2019
44	A Madhay, N C M Reddy, K Ratna Kumar and R Sridharan	Modified Savings Algorithm For Capacitated Vehicle Routing Problem: Development And Analysis	6th International Conference on Production and Industrial Engineering	2019
45	Karthik. R, Ramesh Krishnan. L and Gangadhara Kiran Kumar. L	Computational study on the performance of personalized ventilation assisted with conventional air conditioning system applied to an office room environment	Second International conference on Sustainable Energy Resources, Materials and Technologies (ISERMAT-2019).	March 2019
46	Ijas AhmedM, L.Gangadhara Kiran Kumar	An energy efficient building model for warm and humid climatic condition of India	International Conference on Recent Developments in Mechanical Engineering, ICRDME 2019.	March 2019
47	Akshat Srivastava, Arun P, C Muraleedharan,	Modelling of a downdraft biomass gasifier with reaction kinetics”	ICAME2019, International Conference on Advancements in Mechanical Engineering, Jyothi Engineering College, Thrissur	2019
48	Suraj P, Arun P, Muraleedharan C,	Development of systematic design procedure for circulating fluidized bed gasifier,	International conference on Green Building and Sustainable Engineering, RSET, Ernakulam	2019
49	Suraj P, Arun P, Muraleedharan C	A gasification model with ground nutshell as biomass and it experimental validation,	International Conference on Advancements in Mechanical Engineering, JEC, Thrissur.	2019
50	Rinjesh, Vikas, Muraleedharan,	A study of air distribution in operating room,	International conference on Green Building and Sustainable Engineering, RSET,	2019

			Ernakulam,	
51	Vikas V. K., C. Muraleedharan, B. Hariprasad	Condensation and associated microbial growth in air-conditioned healthcare facilities in a tropical climate – A case study	International conference on Green Building and Sustainable Engineering, RSET, Ernakulam,	2019
52	Vishnu S.B, Biju T. Kuzhiveli	Evolution of stratification in a cryogenic propellant tank at reduced gravity environment. 2018	27 th International Cryogenic Engineering Conference/International Cryogenic Material Conference	Oxford, England. September 3-7,2018
53	Derick Abraham, Biju T. Kuzhiveli	Effect of induced pressure fluctuation in reservoir of a pulse tube cryocooler. 2018	27 th International Cryogenic Engineering Conference/International Cryogenic Material Conference	Oxford, England. September 3-7,2018
54	Ajay Singh Bisht, Biju T Kuzhiveli	Design and development of miniature free piston free displacer dual opposed Stirling cryocooler. 2018	27 th International Cryogenic Engineering Conference/International Cryogenic Material Conference	Oxford, England. September 3-7,2018
55	Jineesh M R, Biju T Kuzhiveli	Design and analysis of miniature free piston Stirling engine (FPSE) for on-board power production.2018	27 th International Cryogenic Engineering Conference/International Cryogenic Material Conference	Oxford, England. September 3-7,2018
56	Thomas Santhosh Biju T Kuzhiveli	Heat transfer aspects and analysis of regenerative cooling in semicryogenic thrust chamber with fixed and variable aspect ratio coolant channels.2018	27 th International Cryogenic Engineering Conference/International Cryogenic Material Conference	Oxford, England. September3-7,2018
57	Gurralla Srinivasa Rao, A. Shaija	Acoustic Analysis of Reacting Flows in Afterburner	Proceedings of the fifth international conferences on Computational Methods for Thermal Problems (Therma Comp 2018), Indian Institute of Science, Bangalore, India.	July 9-11, 2018.
58	Gurralla Srinivasa Rao, A. Shaija	Acoustic Analysis of Non-Reacting and Reacting flows in Afterburner	MSC Software Simulating Reality Conference, ITC Grand	September 4-5, 2018

			Chola, Chennai	
59	Gurrala Srinivasa Rao, A. Shaija	Acoustic Analysis of Non-Reacting Flows in Afterburner	Proceedings of 7 th International and 45 th National Conference on Fluid Mechanics and Fluid Power (FMFP), IIT Bombay	December 10-12, 2018
60	Sachan D., Raj A.K., Jayaraj S.	Prediction of melting and solidification characteristics of macro-encapsulated PCM capsules using openFOAM®	International Conference on Computational Methods for Thermal Problems	223309, 63-66, 2018
61	Kunal G., Raj A.K., Jayaraj S.	Prediction of thermal characteristics of double pass solar air heater (DPSAH) using artificial neural network (ANN) and validated by analytical method	International Conference on Computational Methods for Thermal Problems	223309, 442-446, 2018
62	Kunal G., Raj A.K., Jayaraj S.	Estimation of approximate temperature distribution in annular fins of hyperbolic profile by power series method and comparison of it with exact solution by modified bessel function	International Conference on Computational Methods for Thermal Problems	223309, 447-451, 2018
63	Sumesh CK and T.J.S, Jothi,	Experimental Investigation on the Effect of Airfoil Thickness on Aeroacoustic Characteristics of Symmetric Airfoils	Western Pacific Acoustic Conference, (WESPAC 2018)	New Delhi, India, November 11-15, 2018
64	Rahul S Arackal and T.J.S, Jothi,	Effect of Length Variation In Wall Jets on Noise Emissions	Western Pacific Acoustic Conference, (WESPAC 2018)	New Delhi, India, November 11-15, 2018
65	Monikandan, V.V., Joseph, M.A. and Rajendrakumar, P.K.	Application of full factorial design to study the tribological properties of AA6061-B4C and AA6061-B4C-MoS2 composites	6th Asia International Conference on Tribology (ASIATRIB2018)	pp.31-32, 2018
66	Chacko P.K. and Rajendrakumar P.K.	Studies on Thermo-physical and Tribological Properties of Nano-lubricants Formulated with Surfactant-modified CeO2 Nanoparticles in 500N Base oil – A Response Surface	6th Asia International Conference on Tribology (ASIATRIB2018)	pp.427-429, 2018

		Methodology Approach		
67	Joby George and V. Madhusudanan Pillai	A study of factors affecting supply chain performance	International Conference on Aerospace & Mechanical Engineering (ICAME-2018), December 17-19, 2018, TKM College of Engineering, Kollam, Kerala	2018
68	Kiran Mohan, V Madhusudanan Pillai, Abhinav S, Amal Sunny, Vishu V Kumar, Rohith Raj O R, Abishek S and Vahid Mohammad	Modelling of work-related health disorders among women agricultural workers	16th International Conference on Humanizing Work and Work Environment (HWWE-18), December 14-16, 2018, CET School of Management, College of Engineering Trivandrum, Kerala,	2018
69	Abdul Nazar K P, V Madhusudanan Pillai and Irappa Basappa Hunagund	A heuristic approach for mixed-model production sequencing problem	12th Indian Subcontinent Decision Sciences Institute (ISDSI) International Conference, December 27-30, 2018, S P Jain Institute of Management & Research (SPJIMR), Mumbai,	2018
70	J. Laxmi Lalitha and V Madhusudanan Pillai	Effect of lot streaming and dispatching rules in a dynamic flowshop with missing operations	12th Indian Subcontinent Decision Sciences Institute (ISDSI) International Conference, December 27-30, 2018, S P Jain Institute of Management & Research (SPJIMR), Mumbai	2018
71	Irappa Basappa Hunagund, V. Madhusudanan Pillai, U. N. Kempaiah	Solving unequal area facility layout problems with flexible bay structure by simulated annealing algorithm	12th Indian Subcontinent Decision Sciences Institute (ISDSI) International Conference, December 27-30, 2018, S P Jain	2018

			Institute of Management & Research (SPJIMR), Mumbai	
72	Dony S Kurian, C.R. Maneesh and V Madhusudanan Pillai	Predicting inventory stockouts in a supply chain using machine learning classifiers	12th Indian Subcontinent Decision Sciences Institute (ISDSI) International Conference, December 27-30, 2018, S P Jain Institute of Management & Research (SPJIMR), Mumbai	2018
73	Suraj P, George J, Arun P, Muraleedharan C,	Development of a systematic design procedure for circulating fluidized bed gasifier	Green Buildings & Sustainable Engineering, Rajagiri School of Engineering and Technology, Ernakulam	February 2019
74	Krishna Kumar, Arun P	Transient thermal simulation of packed bed thermocline thermal energy storage system for solar thermal power generation	Fourth Kerala Technological Congress-KETCON 2019, Govt. Engineering College, Thrissur	February 2019
75	Nadeem Abdul Hameed, Arun P, Muraleedharan C,	Analysis of dynamic behavior of fluidized bed gasifier using CFD	Green Buildings & Sustainable Engineering, Rajagiri School of Engineering and Technology, Ernakulam	February 2019
76	Akshat Srivatsav, Arun P, Muraleedharan C	Mathematical modeling of reduction zone of a downdraft biomass gasifier	National Conference on Advances in Mechanical Engineering, NIT Delhi	March 2019
77	Mrinal Purushothaman, Arun P, Muraleedharan C	Aspen Plus modeling and experimental validation of air-steam gasification in fluidized bed reactor	National Conference on Advances in Mechanical Engineering, NIT Delhi	March 2019
78	Mrinal Prushothaman, Muraleedharan C, Arun P,	Aspen plus modeling and experimental validation of air steam gasification in fluidized bed reactor	NCAME2019, National Conference on Advances in Mechanical Engineering, NIT Delhi	March 16, 2019

79	Akshat Srivastava, Arun P, Muraleedharan C,	Mathematical Modeling of reduction zone of a downdraft biomass gasifier	NCAME2019, National Conference on Advances in Mechanical Engineering, NIT Delhi	March 16, 2019
80	Rahul Narayanan C, T.J.S. Jothi and C.K. Sumesh	Flow and Acoustic Characteristics of NACA 0012 Airfoil	1st National Conference on Advances in Mechanical Engineering (NCAME – 2019), NIT Delhi	March 16, 2019
81	Avadesh Kumar and T.J.S. Jothi	Experimental Investigation of Flow-Induced Vibration in Two-Phase Flow	1st National Conference on Advances in Mechanical Engineering (NCAME – 2019), NIT Delhi	March 16, 2019
82	Vikash Kumar Dubey and T.J.S. Jothi	Flame Propagation studies of LPG-Air Mixture in a varying area Tube	1st National Conference on Advances in Mechanical Engineering (NCAME – 2019), NIT Delhi	March 16, 2019
83	Vikash Kumar Dubey and T.J.S. Jothi	Experimental Investigations of premixed flame characteristics of LPG-Air Mixture in Varying Area Cross-Section Tube	International Conference on Advancements in Mechanical Engineering (ICAME – 2019), Jyothi Engineering College Cheruthuruthy, Thrissur	April 10-11, 2019
84	Derick Abraham, Biju T. Kuzhiveli	Development of a Compact Stirling Pulse Tube Cryocooler.	27 th National Symposium on Cryogenics and Super conductivity 2019	IIT Bombay January 16- 18,2019
85	Vishnu S B, Biju T. Kuzhiveli	Experimental Investigation of Stratification and Self Pressurisation in a High Pressure Liquid Nitrogen Storage Tank.	27 th National Symposium on Cryogenics and Super conductivity 2019	IIT Bombay January 16- 18,2019
86	Soumyajit Bhowmick, Biju T. Kuzhiveli	Effect of wall roughness elements on thermal stratification and self-	27 th National Symposium on Cryogenics and Super	IIT Bombay January 16- 18,2019

		pressurisation inside LH ₂ storage tanks.	conductivity 2019	
87	Kiran Kenchavvagol, Biju T Kuzhiveli	Design and development of free piston dual purpose linear compressor for application at 80K and 250K.	27 th National Symposium on Cryogenics and Super conductivity 2019	IIT Bombay January 16-18,2019
88	Bibek Kumar, Biju T. Kuzhiveli	Analysis and design of an electromagnetically driven dual mode cooler.	27 th National Symposium on Cryogenics and Super conductivity 2019	IIT Bombay January 16-18,2019
89	Muhammed Niyas M, A. Shaija	Effect of repeated heating of Coconut oil, Sunflower oil, and Palm oil on property of biodiesel produced from it	3 rd National Symposium on Shaping the Energy Future: Challenges & Opportunities (SEFCO 2019)	May 2019
90	Chaitanya Ponnana, A. Shaija	Design and fabrication of compact retro-fittable diesel exhaust after-treatment system for reduction of PM and NOx	3 rd National Symposium on Shaping the Energy Future: Challenges & Opportunities (SEFCO 2019)	May 2019

b. **Community Services:**

Dr. M.L. Joy being the President of the NITC Faculty association provides services to the Faculty community of NIT Calicut

Dr. Gangadhara Kiran Kumar Lachireddi Career guidance to first year students, Classes for weaker students.

c. **Other Academic and Administrative Service**

SL. No	Name of Staff	Academic and Administrative Services
1	Dr M L Joy, Professor, Department of Mechanical Engineering	<ul style="list-style-type: none"> Department Time table in charge Faculty Advisor
2	Dr. R. Sridharan, Professor, Department of Mechanical Engineering	<ul style="list-style-type: none"> Faculty Advisor, M. Tech Industrial Engineering & Management, Department of Mechanical Engineering
3	Dr. Muraleedharan C, Professor, Department of Mechanical Engineering	Chairman, IQAC, NIT Calicut
4	Dr. Jose Mathew,	<ul style="list-style-type: none"> Faculty in Charge, CAD-CAM Centre,

	Professor, Department of Mechanical Engineering	<p>Advanced Manufacturing Centre, DST –FIST Centre for Precision Measurements and Nanomechanical Testing</p> <ul style="list-style-type: none"> • HOD MED (from 22-07-2019 onwards) • Coordinator: M.Tech Manufacturing Technology
5	Dr. S Jayaraj	Faculty Advisor and Class Committee Chairman
6	Dr. Ghulam Jilani, Professor, Department of Mechanical Engineering	PhD Coordinator, Course Coordinator for Engineering Graphics.
7	Dr. V. Madhusudanan Pillai, Professor, Department of Mechanical Engineering	<ul style="list-style-type: none"> • Head, School of Management Studies, August 2017 – October 2018 • Faculty-in-charge Industrial Engg. Lab & Supply Chain and System Simulation Laboratory • Faculty Advisor of B.Tech. PE students (2015 Admission) • Member - Campus Accommodation Allocation Committee
8	Dr. A.Shaija, Professor, Department of Mechanical Engineering	<ul style="list-style-type: none"> • B.Tech Project Co-ordinator since 2015 • Secretary, PTA, NIT Calicut since July 2016 • Faculty Advisor, Final Year Mechanical Engg. students • PG (Energy Engg. & Mangt) - Program Coordinator since 2018 • Lab In Charge- Green Energy Lab & Fuel Cell research lab. • Thermal Sciences Lab-Oveall Incharge
9	Dr. Biju T Kuzhiveli, Professor, Department of Mechanical Engineering	<ul style="list-style-type: none"> • PG Co-ordinator, M.Tech Thermal sciences ME62 • Handled 2 UG projects, 2 innovative projects, 3 M.Tech projects and 3 PhD projects • Handled 2 sponsored projects & 3 consultancy projects, 3 TEQIP projects
10	Dr. Arun P., Associate Professor, Department of Mechanical Engineering	<ul style="list-style-type: none"> • NSS Program Officer, Associate Dean (R&C)
11	Dr. Jagadeesha T, Assistant Professor, Department of Mechanical Engineering	<ul style="list-style-type: none"> • Warden – G hostel
12	Dr. G. Varaprasad, Assistant Professor, Department of Mechanical Engineering	<ul style="list-style-type: none"> • Class Committee Chairman, PE 2016 Admission • In-charge of MED Computers • Convener, Project Evaluation Committee of B.Tech (Industrial Engg Stream)

	<p>Dr. Vinay V. Panicker, Assistant Professor, Department of Mechanical Engineering</p>	<ul style="list-style-type: none"> • Convener of Internal Quality Assurance Cell, NIT Calicut (December 2018 onwards) • Member, NIRF Committee (June 2018 onwards) • Faculty in-charge, Industrial and Planning Forum (September 2015 onwards) • Chairperson, Semester VIII Production Engineering Class Committee (December 2018 – May 2019) • Information Facilitation and Department Website in-charge (September 2017 onwards) • Faculty-in-charge Industrial Engg. Lab & Supply Chain and System Simulation Laboratory
	<p>Dr.M.D. Narayanan, Associate Professor, Department of Mechanical Engineering</p>	<ul style="list-style-type: none"> • Programme coordinator, M. Tech (Machine Design) • Member of the curriculum revision committee at the Institute level
	<p>Dr. Jayadeep U.B., Assistant Professor, Department of Mechanical Engineering</p>	<ul style="list-style-type: none"> • Vice-chairman, ETL, NIT Calicut
	<p>Dr. K. Sekar, Assistant Professor, Department of Mechanical Engineering</p>	<ul style="list-style-type: none"> • External Examiner of Various University for M.Tech /Ph.D Thesis Evaluation & Viva-Voce, 2016 to till date. • Chairman of II Year B.Tech Mechanical Engineering 2017 to till date. • Department Time Table Committee for B.Tech & M.Tech/Ph.D,2017 to till date. • Faculty-in-charge, Production Engineering Laboratory MED, NITC, 2017 to till date • Faculty Advisor - 2008 to till date • Faculty-in-charge, Materials Science Laboratory, MED, NITC, 2010 to till date • Member of Central Instrumentation Facility at National Institute of Technology Calicut. • Warden (A- Hostel) - 2018 to till date
	<p>Dr Sudheer A.P., Assistant Professor, Department of Mechanical Engineering</p>	<ul style="list-style-type: none"> • Faculty Advisor • Class committee Chairman • PG Project Evaluation Committee member • Robotics Laboratory In-Charge • Faculty In Charge of RIG-NITC • Member of various doctoral committees of PhD scholars in other depts. • Member in Institute Purchase committee • Member in Department Purchase Committee
	<p>Dr. Vineesh K P., Assistant Professor, Department</p>	<ul style="list-style-type: none"> • Faculty Advisor, M Batch, 2018 Admission

	of Mechanical Engineering	<ul style="list-style-type: none"> • CAD/CAM Lab in Charge • B. Tech Project Evaluation committee
	Dr. Murali K P., Assistant Professor, Department of Mechanical Engineering	<ul style="list-style-type: none"> • Faculty Advisor, ME B Batch, 2016 admission • Lab in-charge - Central Workshop and Materials Science • B. Tech & M Tech Project Evaluation committee member • DC committee member
	Dr. Ratna Kumar K Assistant Professor, Department of Mechanical Engineering	<ul style="list-style-type: none"> • Warden G and A Hostels • Faculty Advisor • Dept PTA Coordinator • Dept Time table • Liason with main library • PG Project Evaluation • B.Tech Project Evaluation member
	Dr. Rohinikumar.B., Assistant Professor, Department of Mechanical Engineering	<p><u>Academic Services:</u></p> <ul style="list-style-type: none"> • Faculty Advisor for B.Tech Mechanical students (2017-21 batch) • Heat Transfer Lab-in-Charge • Member of M.Tech Project Evaluation Committee • Doctoral Committee Member <p><u>Administrative Services:</u></p> <ul style="list-style-type: none"> • Secretary for DCC of Mechanical Engineering department • Secretary for Mechanical Engineering Association (MEA) • Warden of Mega Hostel for Boys (MHB)
	Dr. Gangadhara Kiran Kumar Lachireddi, Assistant Professor, Department of Mechanical Engineering	<ul style="list-style-type: none"> • Lab- In- Charge, Fluid Mechanics And Machinery Laboratory. • Lab- In- Charge, CFD Laboratory. • Member, M.Tech Project Evaluation Committee • Warden, NITC Hostels • Member, Industry Institute interaction Cell (IIIC) • Faculty-In-Charge, Vehicle Section • Faculty Coordinator, Engineering Graphics • Faculty Advisor, 1st year M batch (1-45)
	Dr. M. Srinivas, Assistant Professor, Department of Mechanical Engineering	<ul style="list-style-type: none"> • Warden for Mega Boys Hostel NITC Hostels • DC Member in EEE Department • DC Member in Chemical Engineering Department
	Mr. P.V. Manu, Assistant Professor, Department of Mechanical Engineering	<ul style="list-style-type: none"> • Heat Engines Laboratory In-charge • Faculty advisor for 2016 admission batch

	Dr. Saleel Ismail, Assistant Professor, Department of Mechanical Engineering	<ul style="list-style-type: none"> In-charge of Heat Engines laboratory Liaison officer for World NITCAA Meet 2018 (Aug 10-12, 2018) Co-mentor for school project as a part of DST Inspire Innovative Kids program : 17-18 Jan 2019. Member of evaluation panel for B.Tech projects and external member for M.Tech Structural Engg.
	Dr. T.J. Sarvoththama Jothi, Assistant Professor, Department of Mechanical Engineering	<ul style="list-style-type: none"> Convener for thermal stream projects evaluation for B.Tech project work groups Project evaluation committee member for M.Tech Manufacturing Technology Thermal science lab in-charge. Department timetable committee member. Faculty advisor (2018-2022 batch) Faculty in-charge for Aero Unwired -- an aero modelling club.

d Conferences/Summer/Winter School/Short term Courses/ Workshops conducted

Sl. No	Title	Coordinators	Duration & Period
1	DST-SERB Sponsored workshop on Advances in Welding and Material Processing	Dr. K. Sekar Dr. Jagadeesha T	29-30 Dec-2018
2	GIAN Course on TRIBOLOGY: Fundamentals to cutting edge at NIT Calicut	Dr K Prabhakaran Nair and Dr M L Joy	12.02.2019 to 16.02.2019
3	GIAN Course on “Advances in Combustion Modeling”	Dr. S. Jayaraj and P.V. Manu	4 th – 9 th March 2019
4	One day Workshop on Research Writing: Technical and Language Aspects	Dr. R. Sridharan Dr. K. Ratna Kumar	16 March 2019
5	FDP on Models and Methods for Supply Chain Decisions	Dr. R. Sridharan Dr. K. Ratna Kumar	21-26 May 2018
6	Faculty Development Program on Modeling and Analysis of Just-in-Time Production Systems	Dr. V. Madhusudanan Pillai	18-23 June 2018

e Expert lecturers delivered in Conferences/Seminar/workshops

Sl. No.	Name of Staff	Title of the Programme	Duration and Period	Organization
1	Dr. P B Dhanish, MED	Statistical Methods and Scientific Applications	May 14-19, 2018	NIT Calicut
2	Dr. P B Dhanish, MED	Visiting Faculty Programme	7 Nov 2018	GCE, Thrissur

3	Dr. P B Dhanish, MED	Design of Experiments with Statistical Modelling	25 Feb to 2 Mar 2019	TKM College of Engineering, Kollam, Kerala
4	Dr. K. Sekar, MED	DST-SERB Sponsored workshop on Advances in Welding and Material Processing	29-30 Dec-2019	MED,NIT, Calicut
5	Dr. Sudheer. A.P., MED	Key Note address in International conference: IFTToMM Asian Mechanism and Machine Sciences : Asian MMS 2018	December 17-20, Bengaluru, India J. N. Tata Auditorium, Indian Institute of Science (IISc), Bengaluru, India	IISc & IFTToMM: Asian Conference on Mechanism and Machine Science (Asian MMS 2018) is an international conference organized under the patronage of <u>IFTToMM</u> .
6	Dr. Murali K. P., MED	FDP on “Smart Nanomaterials: Fundamentals to Applications” (SNFA- 2019)	March 25 – 29, 2019	School of Materials Science and Engineering, NITC
7	Dr. R. Sridharan, MED	One day Workshop on Research Writing: Technical and Language Aspects	16 March 2019	MED, NITC
8	Dr. R. Sridharan, MED	IIIE Research Lecture Series	January 29, 2019	MED, NITC
9	Dr. R. Sridharan, MED	Research Methods and Associated Tools	16 January 2019	Muthoot Institute of Technology and Science, Ernakulam
10	Dr. R. Sridharan, MED	FDP on Models and Methods for Supply Chain Decisions	21 May 2018	MED, NITC in association with GEC Bharatpur
11	Dr. Arun P., MED	Advanced Techniques in Energy and Wastewater Treatment, Faculty Development Program	July 2-7, 2018	NIT Calicut
12	Dr. Arun P., MED	National Seminar on Innovations in Engineering and Technology	January 10,11, 2019	Govt. Polytechnic College Palakkad

13	Dr. Biju T Kuzhiveli, MED	Development of resonating free piston devices for space and defense applications. at 27 th International Cryogenic Engineering Conference/International Cryogenic Material Conference	7th September 2018	University of Oxford, England. During the 27 th international conference ICEC-ICMC
14	Dr. Vinay V. Panicker, MED	Statistical Tools for Research	17 January 2019	Muthoot Institute of Technology and Science, Ernakulam
15	Mr. P V Manu, MED	Lecture on “Dual Fuel Combustion” during the GIAN Course on “Advances in Combustion Modeling”	One and half hour 8 th March 2019	NIT Calicut
16	Dr. Saleel Ismail, MED	GIAN course on “Advances in Combustion Modeling” – Lecture + Lab	3 hours, 06-03-2019	NIT Calicut
17	Dr. Srinu Gangolu, MED	Advances in Welding and Materials Characterization	29.12.2018	Department of Mechanical Engineering, NIT Calicut
18	Dr. Sujith Kumar C. S., MED	Advanced Energy and Technology	02.07.2018	Sree Buddha College of Engineering, Pattor
19	Dr. Sujith Kumar C. S., MED	Application of Nanotechnology in Solar Systems	26-11-2018 to 08-12-2018	NIT Tiruchirappalli
20	Dr. Sujith Kumar C.S., MED	Smart Nanomaterials: Fundamentals to Applications	25-03-2019 to 29-03-2019	School of Materials Science and Engineering, NIT Calicut
21	Dr. Ghulam Jilani, MED	CFD	Winter 2018-19	MED NITC
22	Dr. V. Madhusudanan Pillai, MED	FDP on “Models and Methods for Supply Chain Decisions”	One Week, May 21-26, 2018	NIT Calicut
23	Dr. V. Madhusudanan Pillai, MED	Technical Talk on Evolution of production system: craft to mass to lean and inauguration Mechanical Engineering Association	One day, 17 September 2018	Viswajyothi College of Engineering and Technology, Vazhakulam, Muvattupuzha, Kerala

24	Dr. V. Madhusudanan Pillai, MED	AICTE sponsored Short Term Course on “Optimization Techniques and its Engineering Applications”	One week, December 31, 2018 to January 05, 2019	T K M College of Engineering, Kollam, Kerala
25	Dr. V. Madhusudanan Pillai, MED	AICTE-ISTE Induction programme on “Induction Training Programme for Young Teachers”	One week, February 18-22, 2019	Government Engineering College, Thrissur, Kerala
26	Dr. V. Madhusudanan Pillai, MED	Workshop on Mathematical Modelling Using LINGO for Solving OR problems	One day, March 01, 2019	Pandit Deendayal Petroleum University, Gandhinagar-382 007, Gujarat

k. Details of Faculty, who acquired Higher Qualification:

- Ratna Kumar K acquired Degree of Philosophy on June 14, 2018.
- Rohinikumar B. acquired Degree of Philosophy on September 19, 2018.

l. Consultancy and testing:

No	Nature of Service	Organization	Revenue earned (in INR)	Status
1	Brick Testing, Rail road and various materials Testing	Rail Way, PWD and Various other Institute for Research work.	3,50,000	On going
2	Conducted a Work Focus study at one of their manufacturing units, Caltech Polymers Pvt. Ltd. during January and February 2019	VKC Group-Veekey Plastomers India Pvt. Ltd.	35,000	Completed
3	Analysis of Diesel/ petrol/ Biodiesel Fuel properties	Various Academic Institutions	25,000	Completed
4	Testing of Thermal conductivity	Industries and research institutions	20,000	Completed
5	Conducted a Training using the in-house developed software package, ‘Supply Chain Role Play Game’ for	HLL Management Academy,	15,000	Completed

	the participants of an International Training Programme on “Procurement Management in Healthcare Sector”	Thiruvananthapuram		
6	Conducted a Training using the in-house developed software package, ‘Supply Chain Role Play Game’ for the Students in the Final, pre-final year B.Tech. and M.Tech students of Chemical and Industrial Engineering departments.	Pandit Deendayal Petroleum University, Gujarat	15,000	Completed
7	CDAC, 3D printing	CDAC	18,134	Completed
8	Corelaed Technologies, 3D printing	Corelaed Technologies	1,200	Completed
9	BARC Mysore, Roughness and profile measurement	BARC Mysore,	6,000	Completed
10	King Khalid University (KSA), Roughness and profile measurement	King Khalid University (KSA)	4,800	Completed
11	NIFFT, Roughness measurement	NIFFT	2,478	Completed
12	Saintgits college of engineering Kottayam, Roughness and profile measurement	Saintgits college of engineering Kottayam	1,062	Completed
13	Govt. Dental College Calicut, Roughness and profile measurement	Govt. Dental College Calicut	6,018	Completed
14	MES Dental College, Roughness and profile measurement	MES Dental College	1,062	Completed
15	KMCT Dental College, Roughness and profile measurement	KMCT Dental College	708	Completed

Patents and best paper award

Name of the faculty members	Achievement	Details
Dr. Sudheer, Dr. M. L. Joy and others	Patent	Robot for High Voltage Electrical Transmission Line Inspection Application No.201641027854 A

		Date of filing of Application: 16/08/2016 Publication Date: 23/02/2018
Dr. Manu R Dr. Jayadeep U B	Patent	Multi – Mode Friction Stir Welding Tool Indian Patent Application Number: 201741036108. Filed on 11/10/2017
Mr. Bhanupratap Gaur	M. Tech (2015 – 2017)	Got admission to PhD at IIT Bombay
Ms. Rhinithaa	B.Tech Mechanical Engineering (2013-2017)	Bagged TCS award for best outgoing student under Dr. Jose Mathew's guidance.
Mr. Dheeraj Tripathi	Final year M.Tech Machine Design	Best Paper and Presentation Award at National Conference, Energy under the supervision of Dr. K. Prabhakaran Nair and Dr. K. Sekar –MED NIT

Other departmental achievements

a) Dr. Jose Mathew

Purchased 3D optical profilometer, High speed camera and Thermal imager under DST FIST fund to MED at a total cost of Rs 1.38 crores. Purchase of Nanointender, costing about 1 crore is under process. External examiner to evaluate a PhD thesis at IIT Madras (March 2018) and NIT Trichy (Jan. 2018).

Sl No.	Item	Place and time
Subject Expert		
1	Cochin University of Science and Technology Subject Expert- Professor post	Jan 31, 2018
2	Cochin University of Science and Technology Subject Expert- Asst. Professor post	Oct. 07, 2017
PhD Examiner		
1	IIT Madras, MED	March, 2018
2	NIT Trichy, PED	Dec. 2017

- NBA- Institute Coordinator 2012 onwards
- National Advisory Committee member of International Conferences AIMTDR, 2018.
- Was MED-Coordinator for World Bank Projects, Faculty in Charge- MED Time Table, Audio Visual Club, Warden-Student Hostels, Faculty in Charge of various Labs (CAD-CAM Centre, Advanced Manufacturing Centre, Metrology Lab., Sophisticated Instruments Centre- most are continuing) Project Coordinator for various MHRD projects, Dept., Coordinator for CEP and All India Workshops, etc. Was Secretary to NITC Faculty Association, executive member, etc.

Sl.No.	Professional Society	Year
1	Fellow, IEI	2003 onwards
2	LM ,ISTE	1991 onwards
3	AM, ASME	1991

b) Dr. A. Shaija

- Editorial member of "Iraqi Journal for Mechanical and Materials Engineering"

- Reviewer - Algal Research
- Reviewer - Resource-Efficient Technologies
- Reviewer - Environmental Science and Pollution Research
- Reviewer - Waste and Biomass Valorization (WAVE)-Springer
- Reviewer - Aerosol and Air Quality Research -
- Reviewer - International Journal of Hydrogen energy
- Judging Committee member - TECHFEST 2017 jointly organized by KSCSTE, Govt.of Kerala and APJ Abdul Kalam KTU at MA College of Engg. Kothamangalam on 13 & 14 January, 2017., inaugurated by the Governor of Kerala, Shri Justice (Retd) P. Sathasivam
- Judging Committee member - TECHFEST 2018 jointly organized by KSCSTE, Govt.of Kerala and APJ Abdul Kalam KTU at Sahradaya College of Engineering & Technology on February 23 -25 February, 2018., inaugurated by the Governor of Kerala, Shri Justice (Retd) P. Sathasivam

j Books published: NIL

DEPARTMENT OF MATHEMATICS

a. Publications

i.Journals

Sl No	Name of the Author	Title of Paper	Name of Journal	Vol., year, page no.
1.	D S Malik, Sunil Mathew, J N Mordeson	Fuzzy incidence graphs: Applications Human Trafficking (SCI)	Information Sciences	447(2018) 244-255
2.	Sunil Mathew, Anjal N, J N Mordeson	Transitive blocks and their applications in fuzzy interconnection networks (SCI)	Fuzzy Sets and Systems	352(2018) 142-160.
3.	J N Mordeson , Sunil Mathew	t-norm fuzzy incidence graphs (SCI)	Mathematics	6(62)(2018) 1-12.
4.	Shanookha Ali, Sunil Mathew, J N Mordeson, H Rashmonolu	Vertex connectivity of fuzzy graphs with applications to human trafficking (Scopus indexed)	New Mathematics and Natural Computation	Vol. 14, No. 3 (2018) 457-485.
5.	J N Mordeson, J H Mordeson, Sunil Mathew	Directed graphs applied to human trafficking (Scopus indexed)	New Mathematics and Natural Computation	Vol. 14, No. 3 (2018) 445-455.

6.	Soorya T E, Sunil Mathew	Structural properties super strongly perfect graphs, Discrete mathematics (Scopus indexed)	Algorithms and Applications	Vol. 10, No. 4 (2018) 1850053 (11 pages).
7.	J N Mordeson, Sunil Mathew, R A Borzooei	Vulnerability and government response to human trafficking Vague Fuzzy incidence graphs (Scopus indexed)	New Mathematics and Natural Computation	14(2) (2018) 203-219.
8.	J N Mordeson, Sunil Mathew, D S Malik	Generalized fuzzy relations(Scopus indexed)	New Mathematics and Natural Computation	14(2)(2018) 187-202.
9.	J N Mordeson, Sunil Mathew, Shanthanu Aacharjee	Aggregation operators Applications to human trafficking and slave (Scopus indexed)	New Mathematics and Natural Computation	Vol. 14, No. 3 (2018) 403–421
10.	Anjali N, Sunil Mathew	A generalization of block structures in undirected interconnection networks (Scopus indexed)	Journal of Interconnection Networks	18(2-3), (2018) 185000
11.	J N Mordeson, Sunil Mathew	t-norm fuzzy graphs (Scopus indexed)	New Mathematics and Natural Computation	14(1)(2018) 129-143.
12.	Jill K Mathew, Sunil Mathew	On monophonic convexity in weighted graphs (Scopus indexed)	Discrete mathematics, Algorithms and Applications	10(1)(2018) 1850010 (Pages).
13.	Sunil Mathew, Hai Long Yang, Jill K Mathew	Saturation in fuzzy graphs(Scopus indexed)	New Mathematics and Natural Computation	14(1)(2018)113-128.
14.	Sameeha Rehmani, M S Sunitha	Perfect geodesic fuzzy graphs (Scopus indexed)	International Journal of Pure and Applied Mathematics	Volume 120 No. 6 (2018), 6243-6251
15.	Jeffrey Simon, Sushama.C M,	Digital Radio over Fiber	Journal of Telecommunication,	Vol.10 No.1 (2018),89-

	Shinoy George,Dhar	System with OFDM &ACI reduction and Performance Evaluation Journal of Telecommunication(opus indexed)	Electronic and Computer Engineering (JTEC)	
16.	R. Manivannan, S.Panda, Kil To Chong and Jinde Cao	An Arcak-type state estimation design for time-delayed static neural networks with leakage term based on unified criteria (SCI)	Neural Networks	106, (2018), 110-126
17.	S.Panda, K. K Patra and M. Sellier	Free surface dynamics of thin second-grade fluid over an unsteady stretching sheet(SCI)	The ANZIAM Journal	1-20, 2018
18.	K. P. Priyadarsan and S. Panda	Effect of variable fluid properties on MHD mixed convection flow of second-grade fluid over a linear heated stretching sheet with convective boundary condition(SCI)	Proceedings of the National Academy of Sciences, India Section A: Physical Sciences	1-13, 2018
19.	Aswathy R K, Sunil Mathew	Separation properties of finite products of hyperbolic iterated function systems(SCI)	Communications in Non Linear Science and Numerical Simulation	67(2019) 594-599
20.	Binu M, Sunil Mathew J N Mordeson	Connectivity index of fuzzy graph and its applications to human	Fuzzy Sets and Systems	360(2019) 117-136

		trafficking(SCI)		
21.	Binu M, Sunil Mathew, J N Mordeson	Wiener index of a fuzzy graph and application to illegal immigration networks(SCI)	Fuzzy Sets and Systems	DOI: 10.1016/j.fss.2019.01.022, 2019 (To appear)
22.	Nicolae Adrian Secelean, Sunil Mathew, Dariusz Wardowski	New fixed point results in quasi-metric spaces and applications in Fractal Theory(SCI)	Advances in Difference Equations	019(1) 177, DOI: 10.1186/s13662-019-2119-z
23.	Sunil Mathew, J N Mordeson, Hai Long Yang	Incidence cuts and connectivity in fuzzy incidence graphs(SCI)	Iranian Journal of Fuzzy Systems	Vol.16, No.2 (2019) pp 31-43
24.	J N Mordeson, Aimee S McCoy, Sunil Mathew, Binu	Fuzzy Indices with Applications to Human Trafficking (Scopus indexed)	New Mathematics and Natural Computation	2019 (To appear)
25.	Jessica R. Robinson, N Mordeson, Sunil Mathew	Oster Care Deficiencies and Human Trafficking(Scopus indexed)	New Mathematics and Natural Computation	Vol. 15, No. 2 (2019) (In Press), DOI: 10.1142/S1793005719500224
26.	J N Mordeson, Sunil Mathew, Binu	Dialectic Synthesis: Application to Human Trafficking(Scopus indexed)	New Mathematics and Natural Computation	Vol. 15, No. 2 (2019) (In Press), DOI: 10.1142/S1793005719500224.
27.	J. N. Mordeson, Aimee Schwab-McCoy, Sunil Mathew	New directions in fuzzy mathematics (Scopus indexed)	New Mathematics and Natural Computation	2019 (To appear)
28.	D Deepak, B Mathew, SJ John, H Garg	A topological structure involving hesitant fuzzy sets(SCI)	Journal of Intelligent & Fuzzy Systems	36 (6), 6401-6412, 2019
29.	T M Athira, SJ John, H Garg	Entropy and distance measures of	Journal of Intelligent & Fuzzy Systems	DOI:10.3233/JIFS-190217

		Pythagorean fuzzy soft sets and their applications(SCI)		
30.	Manjusha O T M S Sunitha	Coverings, Matching and Paired Domination in Fuzzy Graphs using Strong arcs(SCI)	Iranian Journal of Fuzzy Systems	Volume 16, Number 1, (2019), pp. 145-157
31.	G. D. Deepak, P. Ananthan, S. S. Panda and J. Mathew	Numerical simulation of the influence of flow motion in mushy zone during micro-EDM on the crater surface profile(SCI)	Journal of the Brazilian Society of Mechanical Sciences and Engineering	41, 2019, doi:10.1007/s40430-011595-0
32.	Mayur B, Ashish, Vijitha, Lakshmi, Aswin	A Systematic Literature Review of Burgers' Equation with Recent Advances(SCI)	PRAMANA Journal of Physics	(2018), 90:69.
33.	Aswin & Ashish Awasthi	Iterative Differential Quadrature Algorithm for Modified Burgers Equation(SCI)	Engineering Computations	Vol. 35, pp. 235-250, 2018.
34.	Lakshmi C & Ashish Awasthi	Robust Numerical Scheme for Non- linear Modified Burgers Equation(SCI)	International Journal of Computer Mathematics	Vol. 95, pp. 1910-1926 2018
35.	Vijitha Mukundan & Ashish Awasthi	Numerical Treatment of the Modified Burgers' Equation via Backward Differentiation Formulas of Orders Two and Three(SCI)	International Journal of Non- linear Sciences and Numerical Simulation	Volume 19, Issue 7-8, Pages 669–680, 2018
36.	M. K. Kadalbajoo & Awasthi	Parameter Free Hybrid Numerical Method for Solving Modified	Asian European Journal of Mathematics	Vol.10, No. 02, 2017

		Burgers' Equations on a Nonuniform Mesh(Scopus Indexed)		
37.	Vijitha & Ashish Awasthi	Numerical Techniques for Unsteady Nonlinear Burgers Equation Based on Backward Differentiation Formulas(Scopus Indexed)	Nonlinear Engineering	Vol. 7, issue 3, 2018
38.	Lakshmi & Ashish Awasthi	Quintic Trigonometric Spline based Numerical Scheme for Nonlinear Modified Burgers' Equation (SCI)	Numerical Methods for Partial Differential Equations	published online on 21st January 2019
39.	N Kamatchi, K Paramasivam, A V Prajeesh, S Arumugam	On group vertex mag Graphs (SCI)	AKCE International Journal of Graphs and Combinatorics	(available online 8 May 2019) DOI:10.1016/j.akcej.2019.04.001
40.	A V Prajeesh, K Paramasivam, N Kamatchi	A Note on Handicap Incomplete Tournaments (SCI)	Combinatorial Algorithm IWOCA 2019, Lecture Notes in Computer Science (Springer)s	11638, pages1-9, 2019 DOI: 10.1007/978-3-0325005-8
41.	Aswin & Ashish Awasthi	A Robust Numerical Scheme for the Simulation of Nonlinear Convection-Diffusion Reaction Equation (Scopus Indexed)	International Journal of Computational Methods in Engineering Science and Mechanics	published online 24 April 2019.
42.	Vijitha, Ashish, Aswin	Multistep Methods for the Numerical Simulation of Two-Dimensional Burgers' Equation(Scopus Indexed)	Differential Equations and Dynamical System	published online 04 April 2019

43.	P.Naveen, Chithra.A	Energy and Laplacian energy of Unitary Addition Cayley Graphs(SCI)	Filomat	To appear
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ii. International Conferences

Sl. No.	Name of the Author	Title of Paper	Name of International conference	Details
1	Deepak G Dilip, Dr. S Panda and J. Mathew	Evaluation of sidewall roughness and material removal rate in vibration assisted powder mixed micro-edm drilling on inconel718	Proc. of the 7th Int. and 28th All India manufacturing Technology Design and Research Con. Dec, 13-15, 2018	2018
2	Karthik S, Krishnan Paramasivam	Star Super Edge-magic Deficiency of Disjoint Union of Graphs	International Conference on Theoretical Computer Science and Discrete Mathematics (ICTCSDM 2018), SSN College of Engineering, December 03 – 05, 2018.	2018
3	N Kamatchi, Krishnan Paramasivam, AV Prajeesh, M.Sabeel K	On group vertex magic graphs,	International Conference on Theoretical Computer Science and Discrete Mathematics (ICTCSDM 2018), SSN College of Engineering, December 03 – 05, 2018.	2018

b.Community Services

Sl. No.	Name of Staff	Details
1	Dr. M S Sunitha	1) Subject Expert, Board of Studies, Dept. of Mathematics, MES Mampad College(Autonomous)
2	Dr. Satyananda Panda	1) Expert member for the faculty selection committee, BTKIT, Govt. of Uttarakhand 2) Resource person, Modeling for school children, Regional

		<p>Planetarium Calicut</p> <p>3) Member Research Committee Mathematics, GTU, Ahmedabad</p> <p>4) Advisor of one Research Project, KSU, Fukuoka, Japan</p> <p>5) Research Committee Member, VIT Vellore</p> <p>6) PhD Adjudicator SOA University, Bhubaneswar,</p> <p>7) NITC nominee--BoG , Technical Education Department, Govt. of Rajasthan</p>
3	Dr. Sanjay P. K.	<p>1) Member, Board of Studies, Mathematics, St. Joseph College, Devagiri.</p> <p>2) Member, Board of Studies, Mathematics, St. Joseph College, Irinjalakuda.</p> <p>3) Member, Steering Committee, Kerala School of Mathematics Talent Nurture programme.</p>
4	Dr. Sunil Jacob John	<p>1) PhD Adjudicator/External Examiner of NIT Trichy , VIT vellore, Viswabharathy Santhiniketan Calcutta, JNU Hyderabad, Osmania University, CUSAT, MG University , Calicut University, Kerala University, Kannur University, Bhatathiar University , Madurai Kamaraj University , Bharathidasan University and Madras University</p> <p>2) Member, Board of Studies, Mathematics, Christ College, Irinjalakuda</p> <p>3) Member, Board of Studies, Mathematics, Assumption College, Changanassery</p> <p>4) Vice chancellor nominee for selection committee panel for aided colleges under Kannur University</p> <p>5) Member, Board of Studies, Mathematics, St. Josephs' College, Irinjalakuda</p> <p>6) External Member, Doctoral Advisory committee, MIT Manipal</p> <p>7) Faculty selection committee member Bishop Moore college Mavelikara, Madayi College Kannur and Payyannur College</p> <p>8) Organising committee member, International Workshop and Conference on Topology and Applications, IWCTA-2018, Cochin</p> <p>9) Reviewer of AMS Mathematical Reviews, Various journals of Springer, Elsevier and Wiley</p>
5	Dr. Ashish Awasthi	<p>1) Delivered lecture series on Engineering Mathematics at GEC Bharatpur, Dec. 2018,</p> <p>2) Delivered Lectures on Mathematics on Management at IITM Kozhikode, June 2018</p> <p>3) Reviewer of AMC, JCAM, IEE Transactions.</p>
6	Dr. Krishnan Paramasivam	<p>1) Reviewer of OPSEARCH (Springer)</p> <p>2) Ph.D. Adjudicator/External Examiner of Madurai Kamaraj University, Madras University, Sathyabama Deemed University</p>

		Chennai
7	Dr. Lineesh M C	<ol style="list-style-type: none"> 1) Reviewer of the journals :(1) IEEE-Systems, Man and Cybernetics (2) Applied Mathematical Modeling (3) Neurocomputing (4) Neural Processing letters 2) Delivered invited lecture at GEC Calicut and NIT Calicut 3) Member of the Institutional Ethics Committee of MVR Cancer Centre and Research Institute 4) Coordinator of FDP on Time Series Analysis using ANN during 10 - 15 December 2018 5) Faculty incharge of club Mathematica 6) Member of Library Purchase Committee from MAT 7) Office Warder of NITC hostels 8) Member of IQAC from MAT.
8	Dr. Chithra.A. V	<ol style="list-style-type: none"> 1) Ph.d Adjudicator/External Examiner - Calicut University, MG University, Manonmaniam Sundaranar University

c. Other Academic and Administrative Services

Name of Staff	Academic and Administrative Services
Dr. Satyananda Panda	<ol style="list-style-type: none"> 1) Associate Dean Faculty Welfare 2) HoD Mathematics (since 2/2019 3) Member, Institute level Ant-Ragging Comiitee
Dr. Ashish Awasthi	<ol style="list-style-type: none"> 1) Warden, NITC Hostel 2) Institute Twinning Coordinator-TEQIP-III 3) Time Table In-charge of Department of Mathematics 4) Doctoral Committee Member 5) Coordintor of Class Room Furniture Sotck Verification
Dr. Sunil Jacob John	<ol style="list-style-type: none"> 1) HoD Maths, 01-04-2018 to 14-2-2019
Dr. Lineesh M C	<ol style="list-style-type: none"> 1) Office Warden of NITC Hostels 2) DC member of Various Departments

d. Conferences/Summer/Winter School/Short term Courses/ Workshops conducted

Sl. No	Title	Coordinators	Duration & Period
1	COMPASS '18 – A Mathematics Awareness Event in Associartion with NMD 2018	Dr. Sunil Jacob John	August 8, 2018, One day
2	International pi-day celebrations	Dr. Jessy John C, Dr. Sunil Jacob John	3/14/2018, One day
3	Six days- TEQIP - III Sponsored FDP - Statistical Methods and	Dr. Jessy John C	Six days, May 14-19, 2018

	Scientific Applications (SMASA-18), May 14-19, 2018, Twinning with Govt. Engg. College Bharatpur		
4	TEQIP-III & MHRD sponsored FDP - Time Series Analysis using Artificial Neural Networks(TSANN-18) under twinning with GEC Bharatpur	Dr. Lineesh M C	December 10 - 15,2018
5	One Day workshop on Mathematics and Its Engineering Application	Dr. M J Jacob, Dr. Chithra A V, Dr. Ashish Awasthi	October 26, 2018

e. Expert lecturers delivered in Conferences/Seminar/workshops

Sl. No	Name of Staff	Title of the Programme	Duration and Period	Organization
1	Dr. Sunil Jacob John	2nd International Conference on Current Scenario in Pure and Applied Mathematics (ICCSPAM – 2019)	02-0 January 2019,	Kongunadu Arts and Science College, Coimbatore
2	Dr. Sunil Jacob John	International Conference on Recent Trends in Topology and Applications	13-14 Dec 2018	St. Josephs Collrge, Irinjalakuda
3	Dr. Sunil Jacob John	International Workshop and Conference on Topology and Applications	5-11 Dec 2018	Rajagiri School of Engg. and Tech., Cochin
4	Dr. Mahesh Kumar	3rd International Conference on Mathematical Techniques in Engineering Applications-ICMTEA-2018	Dec 7-8, 2018	Graphic Era University, Dehradun, Uttarakhand, India.
5	Dr. Sunil Mathew	National conference on Recent trends in Fuzzy Logic	July 26-28, 2018	Kongu College of Arts and Science, Karur, Tamil Nadu.
6	Dr. Sunil Mathew	National Conference on Recent advances in	Oct. 2-6, 2018	Bharathi Woman's College Chennai,

		Mathematics		Tamil Nadu
7	Dr. Sunil Mathew	FDP on Trajectory into Computer Science with Mathematics	Jan 2-7, 2019	TKM College of Engineering, Kollam, Kerala.
8	Dr. Sunil Mathew	Albertian Knowledge Summit 2019	Jan 23, 2019	St. Albert's College, Cochin.
9	Dr. Sunil Mathew	International Conference on Emerging Trends in Graph Theory	Feb. 27-28, 2019	Chriest University Bangalore, India.
10	Dr. Sunil Mathew	National Symposium on Recent Trends in Advances in Mathematics.	Dec.10-14, 2018	Ethiraj College for Woman, Chennai
11	Dr. Satyananda Panda	Seminar at Faculty of Maritime studies and transportation, Portorose, University of Ljubljana, Slovenia	May 23,2018	University of Ljubljana, Slovenia
12	Dr. Satyananda Panda	International Conference on Applied and Computational Mathematics, ICACM-2018	Nov, 23-25, 2018	IIT Kharagpur
13	Dr. Satyananda Panda	Workshop on Meshfree and Multigrid Methods	Nov. 27, 2018	ITER, SOA University Bhubaneswar
14	Dr. Satyananda Panda	KSU Workshop Fukuoka, Japan	Sept. 14-16, 2018	Kyushu Sangyo University, Fukuoka, Japan
15	Dr. Satyananda Panda	Workshop on Mathematical Modeling and Computational Thinking	Dec. 14, 2018	Regional Planetarium Calicut
16	Dr. M S Sunitha	MESMAC International Conference	Jan 15 - 17, 2019	MES Mampad College, Arekode, Kerala
17	Dr. Ashish Awasthi	Instructional School on Emerging Trends in	Fe. 11-12, 2019	St. Marry College Thoothukudi, TN

		Advanced Mathematics		
18	Dr. Ashish Awasthi	Workshop on Interdisciplinary Research in Environment	Sept. 14, 2018	Government Brennen College Thalassery, Kerala
19	Lineesh M C	FDP on Mathematical Methods in Engineering	11 - 16, February 2019	Government Engineering College, Calicut
20	Lineesh M C	FDP on Statistical Methods and Scientific Applications	14 - 19, May 2018	NIT Calicut
21	Lineesh M C	FDP on Time Series Analysis using ANN	10-15, December 2018	NIT Calicut

DEPARTMENT OF CHEMISTRY

a. Publications

Journal

Name of the Author	Title of Paper	Name of Journal	Vol.,p.p, year.
M. Vintu, Vijisha K. Rajan, G. Unnikrishnan, K. Muraleedharan	Suzuki coupling derived indolocarbazole based macromolecule as a solidphase/solution phase sensor for Hg ²⁺ : Experimental and theoretical explorations	European Polymer Journal	114, 287–297, 2019
C. Sangeetha, G. Unnikrishnan, S. Thomas, S. S. Narine	Novel ethylene diamine functionalised nanocellulose/poly(ethylene-co-acrylic acid) composites for biomedical applications, cellulose	Cellulose	26, 1795-1809, 2019
M. Vintu and G. Unnikrishnan	Diode characteristics and metal ion sensing features of a conjugated macromolecular system based on indolocarbazole-thiophene	Material Science and Engineering B	236, 170-178, 2018
M. Vintu, G. Unnikrishnan, E. Shiju, K. Chandrasekharan	Indolo[3,2-b]carbazole-based poly(aryleneethynylene)s through Sonogashira coupling for optoelectronic and sensing applications	Journal of Applied polymer Science	136, 46940-46952, 2018
K. Sunitha, G. Unnikrishnan, C.P. Reghunadhan Nair	Azide telechelics chain extended by click reaction: Synthesis, characterization, and cross-linking	Journal of Applied polymer Science	30, 435-446, 2018
R. Sabarish, G.	Novel biopolymer templated hierarchical	Journal of	272, 919-

Unnikrishnan,	silicalite-1 as an adsorbent for the removal of rhodamine B	Molecular liquids	929,2018
J. Janisha, G. Unnikrishnan	Novel membranes from physic-chemically modified deproteinized natural rubber latex development, characterization and drug permeation	New Journal of Chemistry	42, 14179-14187, 2018
R. Sabarish, G. Unnikrishnan	Polyvinyl alcohol/carboxymethyl cellulose/ZSM-5 zeolite biocomposite membranes for dye adsorption applications	Carbohydrate Polymer	199, 129-140, 2018
R. Sabarish, G. Unnikrishnan	PVA/PDADMAC/ZSM-5 zeolite hybrid matrix membranes for dye adsorption: Fabrication, characterization, adsorption, kinetics and antimicrobial properties	Journal of Environmental Chemical Engineering	6, 3860-3873, 2018
Satheesh Kumar, Dona Mathew, G. Unnikrishnan, Tushar Jana, Santhoshkumar	Polybenzimidazole - nanocompositemembranes: Enhanced proton conductivity with low content of amine-functionalized nanoparticles	Polymer	145, 434-446, 2018
R. Rarima, R. Asaletha, G. Unnikrishnan	Schiff base-assisted surface patterning of polylactide-zinc oxide films: generation, characterization and biocompatibility evaluation	Journal of Material Science	53, 9943-9957, 2018
M. Bindu, G. Unnikrishnan	Modulation of dielectric and viscoelastic features of silicone rubber (SR) by nano-hydroxylapatite (n-HA) embedding	New Journal of Chemistry	42, 6441-6448, 2018
S. S. Harmalkar, R. J. Butcher, V. V. Gobre, S. K. Gaonkar, L. R. D'Souza, M. Sankaralingam, I. Furtado, S. N. Dhuri	Synthesis, Characterization and Antimicrobial Properties of Mononuclear Copper(II) Compounds of N,N'-di(quinolin-8-yl)cyclohexane-1,2-diamine	InorganicaChimica Acta	Accepted, 2019
D. S. Harmalkar, G. Santosh, S. B. Shetgaonkar, M.Sankaralingam, S. N. Dhuri	A putative heme manganese(V)-oxo species in the C-H activation and epoxidation reactions in an aqueous buffer	New Journal of Chemistry	DOI:10.1039/C9NJ01381D
C.-M. Lee, [#] M. Sankaralingam, [#] C.-H. Chuo, T.-H. Tseng, P. P.-Y. Chen, M.-H. Chiang, X.-X. Lee,	Mn(IV)-Peroxo complex in the reactions with proton donors	Dalton Transactions	48, 5203-5213, 2019

Y.-M. Lee, W. Nam (#equally Contributed)			
M. Sankaralingam, Y.-M. Lee, Y. Pineda-Galven, D. G. Karmalkar, M. S. Seo, S. H. Jeon, Y. N. Pushkar, S. Fukuzumi, W. Nam	Redox Reactivity of a Mononuclear Manganese-Oxo Complex Binding Calcium Ion and Other Redox-Inactive Metal Ions	Journal of the American Chemical Society	141, 1324-1336, 2019
M. Sankaralingam, Y.-M. Lee, D. G. Karmalkar, W. Nam, S. Fukuzumi	A Mn(III)-Aqua Complex as a New Active Oxidant in Hydrogen Atom Transfer Reactions	Journal of the American Chemical Society	140, 12695-12699, 2018
D. G. Karmalkar, X.-X. Li, M. S. Seo, M. Sankaralingam, T. Ohta, R. Sarangi, S. Hong, W. Nam	A Manganese(V)-Oxo TAML Cation Radical Complex: Synthesis, Characterization, and Reactivity Studies	Chemistry A European Journal	24, 17927-17931, 2018
C. Saracini, D. D. Malik, M. Sankaralingam, Y.-M. Lee, W. Nam, S. Fukuzumi	Enhanced electron-transfer reactivity of a long-lived photoexcited state of cobalt-oxygen complex	Inorganic Chemistry	57, 10945-10952, 2018
Ziwei Hu, Janardhan Bantho, Mallesh Beesu, Collin J. Gustafson, Michael J. H. Brush, Kathryn L. Trautman, Alex C. D. Salyer, Balaji Pathakumari, and Sunil A. David*	Identification of Human Toll-like Receptor 2-Agonistic Activity in Dihydropyridine-Quinolone Carboxamides	ACS Medicinal Chemistry Letters	10, 132-136, 2019
S. K. Chondath, R. R. Poolakkandy, R. Kottayintavida, A. Thekkangil, N. K. Gopalan, S. T. Vasu, S. Athiyathil,	Water-Chloroform Interface Assisted Microstructure Tuning of Polypyrrole-Silver Sheets.	ACS Applied Materials & Interfaces,	74, 2999-3006, 2018.

and M. M. Menamparambath *			
Thottiparambil, A., Purushothaman, I., De, S., Parameswaran, P., Beegum, P. S., Antharjanam, P. K. S., Chakkumkumarath, L.	Differential reactivity of 3H-indole styrylcyanines: Intermolecular $[4\pi + 2\pi]$ cycloaddition vs. proton - Shift coupled six - Electron electrocyclization	Tetrahedron	74, 2999-3006, 2018
T. T. Divya, K. Ramshad, V. C. Saheer, and L. Chakkumkumarath	Self-reversible Mechanochromism and Aggregation Induced Emission in Neutral Triarylmethanes and their Application in Water Sensing	New J. Chem	144, 4210–4218, 2019
R. Kalluruttimmal, D. T. Thattariyil, A. P. Parambil, A. K. Sen, L. Chakkumkumarath *, and K. M. Muraleedharan	Electronically-tuned Triarylmethine Scaffold for Fast and Continuous Monitoring of H ₂ S Levels in Biological Samples	Analyst	144, 4210–4218, 2019
R. Dey, J. C. Mohandas, M. K. Samantaray, A. Hamieh, S. Kavitate, Y. Chen, E. A-Hamad, L. Cavallo, A. Poater, and J-M	Synthesis and Characterization of Cationic Tetramethyl Tantalum (V) Complex.	Catalysts	8, 507, 2018
Rijin K.K., Sagitha P., Amitha G.S., SuniVasudevan, A. Sujith	4,4-Fluoresceinoxy bisphthalonitrile (FPN) incorporated polycaprolactoneelectrospun membranes: A portable sensor strip for detection of Fe ³⁺ ions	Journal of Material Science	54,13433,2019
K.M. Muhammed Ismayil, O. Manaf, A. Sujith, Rosy Antony	Polymer Thin films for chromatographic separation of plant pigments	Material Letters	252, 321, 2019

Sagitha P, Reshmi C.R, A. Sujith	In-vitro evaluation on drug release kinetics and antibacterial activity of dextran modified polyurethane fibrous membrane	International Journal of Biological Macromolecules	126, 717, 2019
KaladiChondath, Subin; Rahman Poolakkandy, Rasha; Kottayintavida, Roshima; Thekkangil, Aswani; Gopalan, Nishanth; Tharamel Vasu, Suchithra; Athiyanathil, Sujith; Menampara mbath, Mini Mol	Water-Chloroform Interface Assisted Microstructure Tuning of Polypyrrole-Silver Sheets	ACS Applied Materials & Interfaces	11, 1723, 2019
Manaf O, A. Sujith	Effect of EVA Additive on Mechanical Properties of Maleic anhydride Grafted ABS for Coating Applications	Journal of Vinyl & Additive Technology	2018 (Published online)
Reshmi C R, Suja P Sundaran, Subija T, SujithAthiyanathil,	Nano in Micro" Architecture Composite Membranes for Controlled Drug Delivery	Applied Clay Sciences	166, 262, 2018
Sagitha P, Reshmi C.R., Suja P. Sundaran, A. Sujith	Recent Advances in Post-modification Strategies of Polymeric Electrospun Membranes	European Polymer Journal	105, 227, 2018
Suja P. Sundaran, Reshmi C.R., A. Sujith	Tailored designing of Polyurethane based fouling-tolerant nanofibrous membrane for water treatment	New Journal of Chemistry	42, 1958, 2018
Reshmi C.R., Manaf O., Suja P. Sundaran, A. Sujith	Nanochitosan Enriched Electrospun Wound Dressing Membranes: A Fine Tuning of Hemocompatibility and Curcumin Release Profile	International Journal of Biological Macromolecules	108, 1261, 2018
Sheeja, Manaf, Juraij, A. Sujith	Polyethylene-g-Starch Nanoparticle Biocomposites: Physico-Chemical Properties and Biodegradation Studies	Polymer Composites	39, E426, 2018
Shebi.A , and Lisa Sreejith	Pectin mediated synthesis of nano hydroxyapatite decorated PLA honeycomb membranes for tissue engineering	<u>Carbohydrate Polymers</u>	201, 39-47, 2018
Shebi.A , and Lisa Sreejith	Pectin mediated synthesis of curcumin loaded PLA nanocapsules for cancer	J. Drug Delivery Sci. & Tech	48, 66-74, 2018

	treatment		
Shebi.A , and Lisa Sreejith	Green synthesized PLA/silver nanoparticle probe for sensing of hydrogen peroxide in biological samples.	Mat. Letters	217, 33-38, 2018
Shebi.A , and Lisa Sreejith	Evaluation of biocompatibility and bactericidal activity of hierarchically porous PLA-TiO ₂ nanocomposite films fabricated by breath figure method	Mat. Chem. Phys.	230, 308-318, 2019
GS Amitha, VK Rajan, B Amritha, K Muraleedharan, S Vasudevan	Betti base and its modified phthalonitrile derivative for the turn on fluorimetric detection of Hg ²⁺ and Cr ³⁺ ions	Journal of Photochemistry and Photobiology A: Chemistry	11,1904,2019
GS Amitha, MY Ameen, VS Reddy, S Vasudevan	Synthesis of peripherally tetra substituted neutral azophenoxy zinc phthalocyanine and its application in bulk hetero junction solar cells	Journal of Molecular Structure	1185, 425-431, 2019
GS Amitha, VK Rajan, K Muraleedharan, S Vasudevan	Novel 4,4'-Fluoresceinoxy Bisphthalonitrile Showing Aggregation-Induced Enhanced Emission and Fluorescence Turn off Behavior to Fe ³⁺ Ions	Journal of fluorescence 29 (1)	279-291, 29, 2019
KK Rijin, P Sagitha, GS Amitha, S Vasudevan, A Sujith	4,4'-Fluoresceinoxy bisphthalonitrile (FPN)-incorporated polycaprolactoneelectrospun membranes: a portable sensor strip for detection of Fe ³⁺ ions	Journal of Materials Science	4, 13433, 2019
Purushothaman, I., De, S. and Parameswaran, P	Different Donor-Acceptor Interactions of Carbene Ligands in Heteroleptic Divalent Group-14 Compounds, LEL' (E = C-Sn; L = N-heterocyclic Carbene; L' = Cyclic Alkyl(Amino) Carbene)	Chem. Eur. J.	24, 3816-3824, 2018
Anusha, C., De, S. and Parameswaran , P.	Effect of Transition Metal Fragments on the Reverse Fritsch-Buttenberg-Wiechell Type Ring Contraction Reaction of Metallabenzynes to Metal-Carbene Complexes	J. Phys. Chem. A	122, 2160-2167, 2018
Jayashree K. , Gorantla N. V. T. , Roy S., Paesch A. N., Irmer R. H., Prof. Dr. Stalke D., Anusha, C., De, S., Parameswaran, P., Prof. Dr. H. W.	A Dicobalt Coordination Complex with a Short Cobalt-Cobalt Distance	ChemistrySelect	3, 8221-8228, 2018

Roesky, Dr. K. C. Mondal.			
Rajeev, S. P., Sabarinath, S., Subash, C. K., Valiyaneerilakkal, U., Parameswaran, P., Varghese, S.,	α - & β -crystalline phases in polyvinylidene fluoride as tribo-piezo active layer for nanoenergy harvester	High Performance Polymers	31, 785–799, 2019
Kathewad, N., Anagha, M. C., Parvin, N., Parambath, S., Parameswaran, P., Khan, S.	Facile Buchwald–Hartwig coupling of sterically encumbered substrates effected by PNP ligands	Dalton Trans	48, 2730-2734, 2019
Tejender, S., Anjana, G., Bharatam, P. V., Parameswaran, P.	Enols, Diamino enols and Breslow Intermediates A Comparative Quantum Chemical Analysis	Eur. J. Org. Chem	2481-2489, 2019
M. Jaccob, M. Sankaralingam, N. J. Britto	Activation of small molecules by transition-metal complexes	Royal Society of Chemistry, UK	Accepted
R. Suresh, M. Pandiaraj, M. Sankaralingam, K. Giribabu	Graphene-metal chalcogenides modified electrochemical sensors	Elsevier	139-153, 2019

b) Community Services: Nil

c) Other Academic and Administrative Services

Sl. No.	Name of Staff	Academic and Administrative Services
1	Dr. G. Unnikrishnan	Dean (SW) Exam Cell In -charge
2	Dr. Lisa Sreejith	I M.Sc. Faculty Advisor
3	Dr. Lakshmi C.	B.Tech Theory Coordinator, Department level purchase coordinator, Internal quality assurance monitoring committee member
4	Dr. Parameswaran Pattiyil	Head of the Department, II M.Sc. Faculty Advisor
5	Dr. Sujith A	Programme Coordinator, Rashtriya Avishkar Abhiyan Faculty in Charge, ISTE NIT Calicut Chapter Governing Body Member, IHRD Kerala

6	Dr. Suni Vasudevan	PhD Coordinator, Faculty-in-charge (Instruments)
7	Dr. Mini Mol M	Time Table In-charge
8	Dr. Janardhan Banothu	B.Tech Chemistry Laboratory In-charge (from 27.12.2018 - To date), Library In-charge (from 25.07.2018 to 27.12.2018), Time table In-charge (from 25.07.2018-27.12.2018), Security and Safety Committee member of 14 th Convocation (September 29, 2018), Anti-ragging squad member (18.09.2018), Annual sports day organizing committee member (29.08.2018), Ad-hoc staff skill test invigilation duty (18.09.2018).
9	Dr. Muniyandi Sankaralingam	Department Level: Project Coordinator, Seminar In-Charge, Website Maintenance, Inorganic Chemistry Lab In Charge Institute Level: Anti Ragging Squad, Stock Verification, Ad-hoc Staff selection and sports day (as a judge), Subject expert for the Viva voice examination
10	Dr. Raju Dey	Stock Verification, Sports day (as a judge)

d) Conferences/Summer/Winter School/Short term Courses/ Workshops conducted

Sl. No	Title	Coordinators	Duration & Period
1	TEQIP-III Faculty Development Programme 'Functional Materials & Devices'	Dr. A. Sujith, Dr. Suni Vasudevan	10-15, September 2018

e) Expert lectures delivered in conferences/seminars/workshops:

Sl. No.	Name of Staff	Title of the Programme	Duration and Period	Organization
1.	Dr. A. Sujith	Special Post Graduate Lecture Series	15-16 March 2019	Vijayanagara Sri Krishnadevaraya University, Ballari, Karnataka
2.	Dr. A. Sujith	Faculty development programme (Novel Strategies and Applications in Organic Chemistry)	17-22 June 2019	Department of Chemistry, NIT Calicut
3	Dr. A. Sujith	World Food Day Seminar	4 th July 2019	Commissioner of Food Safety, Kerala
4	Dr. A. Sujith	National Seminar on Soft Materials	11 January 2019	Zamorin's Guruvayurappan College, Kozhikode, Kerala
5	Dr. A. Sujith	A seminar on Spectroscopy	25 th February 2019	MES Keveeyam College Valanchery, Kerala

6	Dr. A. Sujith	National Seminar on Recent trends in Chemistry	13-14th November 2018	Govt. College, Kattappana, Kerala
7	Dr. A. Sujith	Two day seminar on Recent Advances in Chemistry	15-16th November 2018	Govt. Brennen College, Thalassery, Kerala
8	Dr. A. Sujith	Faculty Development Programme	2-7 July 2018	Department of Chemical Engineering, NIT Calicut NIT Calicut
9	Dr. A. Sujith	Green Approach to Chemistry Research (GACR-18),	27 th February 2018	MAMO College Mukkam, Kerala
10	Dr. A. Sujith	seminar QUIMICA-18	18 December 2018	Govt. Arts & Science College Calicut, Kerala
11	Dr. Muniyandi Sankaralingam	Faculty development program on Novel Strategies and Applications in Organic Chemistry	June 17-22, 2019	Department of Chemistry, NIT Calicut
12	Dr. Muniyandi Sankaralingam	Faculty development program on Recent Innovations and Developments in Electrochemical and Chemical Process Optimization	June 17-22, 2019	Department of Chemical Engineering, NIT Calicut
13	Dr. Muniyandi Sankaralingam	International conference on advanced chemical and structural biology-ICACSB-2019	February 19-21, 2019	PRIST University, Chennai
14	Dr. Muniyandi Sankaralingam	International seminar on recent trends in bioinorganic chemistry	February 18, 2019	Loyola College, Chennai

f) Details of faculty who acquired higher qualification:

Sl. No	Name of Staff	Title	Year
1	Lisa Sreejith, Sudheesh P.	A novel method for the preparation of chitin/PVA/PEG cross-linked hydrogel for biomedical application,	Patent No. 312609, 2019
2	Dr. Lisa Sreejith	An Ecofriendly Method For Total Conversion of Plastic Waste to Power Generation”	Patent Application No. 201641006399 “2019
3	Dr. Janardhan Banothu	Therapeutic compounds and methods of use thereof.	Submitted non Provisional USpatent for finalconversion.
4	Dr. Lakshmi C	A method for the selective and sensitive quantification of hydrogen sulfide (H ₂ S) using malachite green derivatives	Indian Patent, 201741043637, 2017

g) Consultancy and Testing: Nil

h) Participation in conferences / seminars / workshops / other training programmes

Sl. No	Title	Title of the program	Duration & Period
1	Fabrication of PLA/Ag Nanofibers by Green Synthesis Method for Wound Dressing Applications	POLYCON-2017 Dept. of polymer science & technology, SJCE college, Mysuru	15 th & 16 th September 2017
2	Green synthesized PLA/Ag nanoparticle probe for sensing of H ₂ O ₂ in biological samples	EFFCS-2017 Farook college, Kozhikode, Kerala	23 th & 25 th September 2017
3	Preparation and characterization of Gelatin/SDS/ Alginate Hydrogel film for controlled drug delivery	EFFCS-2017 Farook college, Kozhikode, Kerala	23 th & 25 th September 2017
4	Science Academics Lecture Workshop on Computational Quantum Chemistry	Indian Academy of Sciences in association with Post Graduate and Research, Department of Chemistry, Sacred Heart College (Autonomous), Thevara	5 th -7 th January, 2017
5	Emerging Frontiers in Chemical Sciences	Farook College	23 rd -25 th September, 2017
6	Eighth Asia Pacific Conference on Theoretical and Computational Chemistry	IIT Bombay	15 th -17 th December, 2017
7	Electrospun polyurethane/graphene oxide nanofibrous membranes for water purification	SRM University (ICONN 2017)	9/8/17-11/8/17
8	Water Mediated Approach To Conductive Poly(methylmethacrylate)-Polypyrrole (PMMA-PPy) Composites	SRM University (ICONN 2017)	9/8/17-11/8/17
9	Synthesis of Hierarchical 3D ZnO Nanostructures Through Simple Precipitation Method	SRM University (ICONN 2017)	9/8/17-11/8/17

10	Blood Compatibility Evaluation of PU/Dextran Nanofibrous Membrane for wound dressing applications	Department of Chemistry Farook college, International Conference on Emerging Frontiers in Chemical Science (EFCS)	23/9/17-25/9/17
11	Graphene oxide modified Polyurethane nanofibrous membrane as efficient dye adsorbent	Department of Chemistry Farook college, International Conference on Emerging Frontiers in Chemical Science (EFCS)	23/9/17-25/9/17
12	A Facile In situ Approach to Conductive Poly(methylmethacrylate)-Polypyrrole (PMMA-PPy) nanocomposites	Department of Chemistry Farook college, International Conference on Emerging Frontiers in Chemical Science (EFCS)	23/9/17-25/9/17
13	Development of MA-g-ABS/ZnO Polymer Nanocomposite for Antimicrobial Materials	APM	2/2/18-4/2/18
14	Fabrication of PLA/Ag Nanofibers by Green Synthesis Method for Wound Dressing Applications	POLYCON-2017 Dept. of polymer science & technology, SJCE college, Mysuru	15 th & 16 th September 2017
15	Green synthesized PLA/Ag nanoparticle probe for sensing of H ₂ O ₂ in biological samples	EFFCS-2017 Farook college, Kozhikode, Kerala	23 th & 25 th September 2017
16	Preparation and characterization of Gelatin/SDS/ Alginate Hydrogel film for controlled drug delivery	EFFCS-2017 Farook college, Kozhikode, Kerala	23 th & 25 th September 2017
17	Science Academics Lecture Workshop on Computational Quantum Chemistry	Indian Academy of Sciences in association with Post Graduate and Research, Department of Chemistry, Sacred Heart College (Autonomous), Thevara	5 th -7 th January, 2017
18	Emerging Frontiers in Chemical Sciences	Farook College	23 rd -25 th September, 2017
19	Eighth Asia Pacific Conference on Theoretical and Computational Chemistry	IIT Bombay	15 th -17 th December, 2017

20	Silicone Rubber/Nano-Hydroxylapatite Systems: A Promising Candidate For Biomedical Applications	30 th Kerala Science congress	28-30 th January 2018
21	Conducting polymer nanocomposites opportunities in bulk hetero junction photovoltaics: A review	SRM University, Chennai	9-11 th August, 2017
22	Synthesis of ZSM-5 Zeolite Using Surfactant as Mesoporous Structuring Agents and its Catalytic Activity Studies	30 th Kerala Science congress	28-30 th January 2018
23	Structural, electronic, and optical properties of a novel indolocarbazole-thiophene based conjugated polymer	EFFCS-2017 Farook college, Kozhikode, Kerala	23 rd -25 th September, 2017
24	Conduction mechanism of a novel indolocarbazole-thiophene based conjugated polymer diode	30 th Kerala Science congress	28-30 th January 2018
25	Enhancement in fluorescent and thermal property of novel copper complexes by doping into PMMA film	POLYCON 2017	15-16 September 2017

DEPARTMENT OF PHYSICS

a. Publications

i. Journals

SI. No	Name of the Author	Title of Paper	Name of Journal	Vol., Year, p-p
1	Pratik.M and P.Predeep	Hybrid perovskite single crystal with extended absorption edge and environmental stability: Towards a simple and easy synthesis procedure,)	<i>Materials Chemistry and Physics,</i>	DOI: https://doi.org/10.1016/j.matphys.2019.1224 (2019)
2	T. Kannan and P.Predeep	High T _c Superconducting Cuprates: Chasing the elusive monophasic,.	(Book Chapter) Innovations in Physics Chemistry, Monograph Series: Engineering Models, Material and Methods with Applications, Edited	ISBN: 978-977188-643-7 CRC Press, Taylor and Francis Group (2019)

			Reza Haghi et al	
3	P.Kulkarni, P.Predeep et al	Reduction in magnetic exchange bias in CoFe/FeMn/CoFe trilayers due to reduced pinned uncompensated moments in AFM layer,	Journal of Magnetism and Magnetic Materials	472-477 114 (2019)
4	Fekri, P.Predeep et al	Effect of Nanoclay on the Corrosion Protection Efficiency of UP/CuEDA2-MMT Nanocomposite Coatings Assessed by EIS Measurements ,	Protection of Metals and Physical Chemistry of Surfaces	54 (3), 541(2018)
5	C. S. Suchand Sangeeth	Bottom-electrode induced defects in self-assembled monolayer (SAM)-based tunnel junctions affect only the SA resistance, not the contact resistance or SAM capacitance	RSC advances	vol 36, year 2018 page 19939
6	V. N. John, S. N. Varanakkottu and S. Varghese	Flexible, ferroelectric nanoparticle doped polymer dispersed liquid crystal devices for lower switching voltage and nanoenergy generation	Optical Materials	Vol. 80, 2018, pp 233–240.
7	Cunjing LV, Subramanyan Namboodiri Varanakkottu, Tobias Baier, Steffen Hardt	Controlling the trajectories of nano-/micro particles using light-actuated Marangoni flow	Nano Letters	Vol.18, 2018,pp.6924-6930
8	F. Chalikkara, P. Singha, and S. N. Varanakkottu	Dual functional optofluidic platform based on light-actuated air plug	Sensors and Actuators A: Physical	vol. 285, 2019, pp 659–665
9	A. Mozhi Devan Padmanathan, A. Sneha Ravi, H. Choudhary, S. N. Varanakkottu and S. V. Dalvi	Predictive Framework for the Spreading of Liquid Drops and the Formation of Liquid Marbles on Hydrophobic Particle Bed	Langmuir	vol. 35, 2019, pp 6657-6668.
10	P. Singha, S. Swaminathan, A. S. Yadav and S. N. Varanakkottu	Surfactant mediated collapse of liquid marbles and directed assembly of particles at the liquid surface	Langmuir	vol. 35, 2019, pp 4566-4576.
11	T V Vinay, S. N. Varanakkottu	<u>Separation of floating oil droplets based on drop-liquid substrate interfacial tension</u>	Langmuir	Just accepted
12	M. R. Benzigar, S. Jose A. V. Baskar, D. –H. Pa G. Chandra, S. Umapati	Ordered Mesoporous C ₇₀ with Highly Crystalline Pore Walls for Energy	<i>Adv. Funct. Mater.</i>	28, 2018, 18037 (9 pp).

	S. N. Talapaneni, Ajay Vinu	Applications		
13	A. K. Pal, S. Pagal, K. Prashanth, G. K. Chandra, S. Umapathy, D. B. Mohan	Ag/ZnO/Au 3D hybrid structured reusable SE substrate as highly sensitive platform for DNA detection	<i>Sensors and Actuators B: Chemical</i>	279, 2019, 157.
14	I. Y. Kim, S. Kim, X. J. S. Premkumar, Chandra, N. S. Lee, G. Mane, S. -J. Hwang, Umapathy, Ajayan Vinu	Ordered Mesoporous C ₃ N ₅ with a Combined Triazole and Triazine Framework and Graphene Hybrids for Oxygen Reduction Reaction (ORR)	<i>Angew. Chem. Int. Ed.</i>	57, 2018, 17135
15	Abhijith Thazhathe Nair, Shamjid Palappa and V Reddy	Multi-positional silver nanostructures for high absorption enhancement in polymer solar cells	<i>Organic Electronics</i>	73, 311-316 (2019)
16	G. S. Amitha, M. Yoosuf Ameen, V. Sivaji Reddy, Suni Vasudevan	Synthesis of peripherally tetra substituted neutral azophenox zinc phthalocyanine and its application in bulk hetero junction solar cells	<i>Journal of Molecular Structure</i>	1185, 425-431 (2019).
17	P Shamjid, T Abhijith, P Vivek, C S Joel, V S Reddy	Plasmonic effects of Ag nanoparticles for absorption enhancement in polymer solar cells with MoO ₃ passivation layer	<i>Physica B: Condensed Matter</i>	560, 174-184 (2019).
18	Abhijith T, Shamjid P, V Reddy	Influence of Ag Nanostructure Location on the Absorption Enhancement in Polymer Solar Cells	<i>ACS Appl. Mater. Interfaces</i>	10, 32483–3249 (2018).
19	M Yoosuf Ameen, P Shamjid, T Abhijith, VS Reddy	Solution processed transition metal oxide anode buffer layer for efficiency and stability enhancement of polymer solar cells	<i>Optical Materials</i>	75, 491(2018).
20	P Karadan, S Aggarwal, AA Anappara, C Narayana, HC Barshilia	Tailored periodic Si nanopillar based architectures as highly sensitive universal SERS biosensing platform	<i>Sensors and Actuators B: Chemical</i>	254, 264-271
21	N Sahadev, AA Anappara	Photothermal effect in solid-state MWCNT: Possible signatures of thermal anisotropy	<i>Journal of Applied Physics</i>	124 (14), 145104
22		Aqueous dispersions of	<i>New J. Chem.</i>	

	SK John, AA Anappara	highly luminescent boron-rich nanosheets by the exfoliation of polycrystalline titanium diboride		
23	U. Santhi Krishna, P. K. Madhavan Unni	Critical Behavior in the System Cyclopentanone + Water + Secondary Butyl Alcohol	2 nd International Conference on Condensed Matter and Applied Physics	AIP Conference Proceedings, Vol. 1953, 040009 (2018)
24	V. N. John, S. N. Varanakkottu, and S. Varghese	Flexible, ferroelectric nanoparticle doped polymer dispersed liquid crystal device for lower switching voltage and nanoenergy generation	<i>Optical Materials</i>	vol. 80, pp. 233–240, 2018
25	C. Lv, S. N. Varanakkottu, T. Baier, and S. Hardt	Controlling the Trajectories of Nano/Micro Particles Using Light-Actuated Marangoni Flow	<i>Nano Lett</i>	vol. 18, no. 11, pp. 6924–6930, 2018
26	F. Chalikkara, P. Singha, and S. N. Varanakkottu	Dual functional optofluidic platform based on light-actuated air plug,” <i>Sensors and Actuators</i>	<i>A: Physical</i>	vol. 285, pp. 659–665, 2019
27	P. Singha, S. Swaminathan, A. S. Yadav, and S. N. Varanakkottu	Surfactant-Mediated Collapse of Liquid Marbles and Directed Assembly of Particles at the Liquid Surface	<i>Langmuir</i> ,	vol. 35, no. 13, pp. 4566–4576, 2019
28	Mozhi Devan Padmanathan, A. Sneha Ravi, H. Choudhary, S. N. Varanakkottu, and S. V. Dalvi	Predictive Framework for the Spreading of Liquid Drops and the Formation of Liquid Marbles on Hydrophobic Particle Bed	<i>Langmuir</i>	vol. 35, no. 20, pp. 6657–6668, 2019

(ii). **International Conference**

SI. No	Name of the Authors	Title of Paper	Name of International Conference	Vol., Year, p-p
1	C. S. Suchand Sangeeth	Temperature Dependent Charge Transport in Polymer-Carbon Nanotube and Polymer-Reduced Graphene Oxide Composites: A Comparison	International Conference on Advanced Materials (ICAM2019)	Accepted for publication in AIP conference proceedings

b. Community Services:- Nil

C. Other Academic and Administrative Services

Sl. No.	Name of Staff	Academic and Administrative Services
1	Dr. P Predeep	Head of the Department of Physics
2	Dr. Saurabh Gupta	1. First year B. Tech. Physics laboratory coordinator. 2. Class committee chairman B. Tech. (EP) S5 & S6, 2018-19. 3. Faculty in-charge Official Language Unit (OLU), NITC. 4. Member of department level representatives for overseeing induction program of B. Tech. (Ist year, 2018-19). 5. Member of NBA committee of Physics Department. 6. Member of space committee of Physics Department.
3	Dr. Goutam Kumar Chandra	1. First Year B. Tech. Co-coordinator, NITC. 2. Class Committee Chairman M. Sc. (Physics) S3 & S4, 2018-19. 3. Optics Lab In-Charge, Department of Physics, NITC. 4. Colloquium Coordinator, Department of Physics, NITC. 5. Member of Project Implementation Group (DST-FIST), Department of Physics, NITC. 6. Chairman, Physics Association (CYGNUS), Department of Physics, NITC.
4	Dr. Maneesh Chandran	Ph .D Co-Ordinator
5	Dr. Aji A Anappara	Faculty advisor B Tech 2019-2023 batch
6	Dr .Ram Ajor Maurya	Faculty advisor M Sc 2019-2021 batch

d). Conferences/Summer/Winter School/Short term Courses/ Workshops conducted - Nil

e). Expert lecturers delivered in Conferences/Seminar/workshops

Sl. No.	Name of Staff	Title of the Programme	Duration and Period	Organization
1	Prof. P.Predeep	Expert lecture Industry-academia workshop at NIT Silchar.	4th to 8th February, 2019	NIT Silchar
2	Prof. P.Predeep	International Conference on Materials for Energy Applications (ICME-18) during held at Jaipur, India.	December, 6th to 8th, 2018	University of Rajsathan
3	Dr. Goutam Kumar Chandra	National Science Day-2019	28 th February, 2019	Regional Science Centre & Planetarium, Calicut
4	Dr. Goutam Kumar Chandra	FDP on SNFA-2019	25 th - 29 th March, 2019	School of Materials Science & Engineering, NIT Calicut
5	Dr. Saurabh Gupta	International Conference on “New Trends in Field Theories-6”	November 25 - 30, 2018	Banaras Hindu University, Varanasi, India
6	C. S. Suchand Sangeet	National Seminar on ‘Frontiers of Research in Physics’	1hr 30 min, 12-14 Dec 2018	Govt College Madappalli, Calicut

7	C. S. Suchand Sangeet	National Photonics Symposium (NPS2019)	1 hr, 27 Feb-1 March 2019	International School of Photonics, Cochin University of Science and Technology, Kochi
8	C. S. Suchand Sangeet	FDP on Smart Nanomaterials: Fundamentals to Applications (SNFA 2019)	1 hr, 25-29 March 2019	School of Material Science and Engineering, NIT Calicut

f).Details of Faculty, who acquired Higher Qualification: Nil

g).Consultancy and testing – Nil

h). Patents acquired and filed

Sl. No	Name of Staff	Title	Year
1	Prof. P.Predeep	Organic light emitting structure using a novel elastomer composite as transparent conducting anode replacing transparent conducting oxides (tcos)., no. Patent granted 18che/2011	2018
2	Prof. P.Predeep	Transparent conducting hole-injecting (hil) polymer-elastomer compositematerial for organic electronic applications Patent granted No.19CHE/2011	2018
3	Prof. P.Predeep	Flexible and printable elastomeric memory nano device structure from elastomer fullrene derivative : Filed and published in the patent office journal no. 26/2018 dated	2018
4	Prof. P.Predeep	Development of fullerene derivatives from elastomers for organic electronic device applications: filed jan. 2018 and published	2018

i) Student achievements

1. Mr. H Jagdish Kumar Panda, an Engineering Physics graduate student, has developed a start-up firm, QUILTECH Pvt. Ltd.
2. Aditi Pradeep, BTech EP, is selected for the PM research fellowship (PMRF) fellowship (only one of such kind received by NITC students ..
3. Aditi Pradeep, BTech EP, is selected for the Canda PhD Ms Antara Paul, B160276EP, B.Tech(Engineering Physics)- got MITACS INDIA Internship at Canada under TEQIP-III to work with Prof. Christopher Bidinosti, University of Winnipeg, Canada (one among the two fellowship to NITC)

SCHOOL OF MATERIALS SCIENCE AND ENGINEERING

a. Publications

i.Journals

Sl. No.	Name of the Author	Title of Paper	Name of Journal	Vol, Year, pp.
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1	Shijo Thomas., & Sobhan, C. B.	Stability and transient performance of vertical heater vertical cooling natural circulation loops with metal oxide nanoparticle suspensions	<i>Heat Transfer Engineering</i>	2018, 39(10), 861-873
2	Paul, J., Madhu, A. K., Jayadeep, U. B., Sobhan, C. B., & Peterson, G.P	molecular dynamics study of liquid layering and thermal conductivity enhancement in nanoparticle suspensions	<i>Heat and Mass Transfer</i>	2018, 54(3), 785-791.
3	Shrivastava, S., Shijo Thomas., Sobhan, C. B., & Peterson, G. P	. An experimental investigation of the CO2 adsorption performance of graphene oxide forms.	<i>International Journal of Refrigeration</i>	2018, 96, 179-190.
4	Robin Augustine, Yogesh B. Dalvi, Pan Dan, Nebu George, Debora Helle, Ruby Varghese, Sabu Thomas, Patrick Menu, and N Sandhyarani	Nanocerria Can Act as the Cues for Angiogenesis in Tissue-Engineering Scaffolds: Toward Next-Generation in Situ Tissue Engineering,	<i>ACS Biomaterials Science and Engineering,</i>	2018,4,12, 4338-4353
5	Sreenidhi P. R, Subash C. K., Bhanuprakash, L., & Soney Varghese	Flexible nanoenergy harvester using piezo-tribo functional polymer and carbon fibre as electrodes	<i>Materials Research Express</i>	2018, 5(7), 075509
6	Sreenidhi P, R, Sabarinath, S., Subash, C. K., Valiyaneerilakkal, U., Parameswaran, P., & Soney Varghese	α -& β -crystalline phases in polyvinylidene fluoride as tribo-piezo active layer for nanoenergy harvester	<i>High Performance Polymers</i>	2018, 09540083 18796141
7	Joyce, R., Panwar, D. K., Shakil, M., Soney Varghese, & Akhtar, J.	Single layer thin photoresist soft etch mask for MEMS applications	<i>Microsystem Technologies</i>	2018, 24(5), 2277-2285.
8	Joyce, R., George, M., Bhanuprakash, L., Panwar, D. K., Bhatia, R. R., Soney Varghese., & Akhtar, J.	Investigation on the effects of low-temperature anodic bonding and its reliability for MEMS packaging using destructive and non-destructive techniques	<i>Journal of Materials Science: Materials in Electronics</i>	2018 ,29(1), 217-231.
9	Nimmy John, V. N., Varanakkottu, S. N., & Soney Varghese.	Flexible, ferroelectric nanoparticle doped polymer dispersed liquid crystal devices for lower switching voltage and	<i>Optical Materials</i>	2018,80, 233-240.

		nanoenergy generation		
10	Dhairya R. Vyas, C. B. Sobhan, G. P. Peterson	An Investigation of Marangoni-Benard Convection in water based nanofluids	<i>Heat and Mass Transfer</i>	<i>Springer Verlag, 55, pp. 791-809, 2019</i>
11	Anish Reghu Nath, Aswathi Jayachandran and N Sandhyarani	Nanosheets of nickel, cobalt and manganese triple hydroxides/oxyhydroxides as efficient electrode materials for asymmetrical supercapacitors	<i>Dalton Transactions</i>	2019, 48(13), 4211-4217
12	Thulasi Radhakrishnan and N. Sandhyarani	Pt-Ag nanostructured 3D architectures: A tunable catalyst for methanol oxidation reaction	<i>Electrochimica Acta,</i>	2019, 298, 835-843.9.
13	Karuvatta Nubla, Thulasi Radhakrishnan and N. Sandhyarani .	A graphitic carbon nitride–titania nanocomposite as a promising catalyst support for electro-oxidation of methanol.	<i>New Journal of Chemistry</i>	2019, , 43(8), 3273-3279
14	Chingakham, C., David, A., & Sajith, V.	Fe3O4 nanoparticles impregnated eggshell as a novel catalyst for enhanced biodiesel production	Chinese Journal of Chemical Engineering.	<u>2019.02.022</u>
15	Chingakham, C., Tiwary, C., & Sajith, V..	Waste Animal Bone as a Novel Layered Heterogeneous Catalyst for the Transesterification of Biodiesel	<i>Catalysis Letters</i>	2019, 149(4), 1100-1110.
16	Joseph, M., & Sajith, V.	An investigation on heat transfer performance of polystyrene encapsulated n-octadecane based nanofluid in square channel	<i>Applied Thermal Engineering</i>	2019, 147, 756-769
17	Chellappan, S., Aparna, Chingakham, C., Sajith, V., K., & Nair, V.	Microwave assisted biodiesel production using a novel Bronsted acid catalyst on nanomagnetic biocomposite	<i>Fuel</i>	2019, 246, 268-276
18	Nimmy John V, N., Sreenidhi P. R, & Soney Varghese	Ferroelectric polymer nanocomposite alignment layer in twisted nematic liquid crystal devices for reducing switching	<i>Liquid Crystals</i>	2019,46(5), 736-742.

		voltage		
19	Praseetha, K. P., Divyasree, M. C., Nimmy John V, Chandrasekharan, K., & Soney Varghese.	Enhanced optical nonlinearity in nematic liquid crystal on doping with CdSe quantum dot	<i>Journal of Molecular Liquids</i>	2019, 273, 497-503
20	Joseph, A., Mohan, S., Kumar, C. S., Mathew, A., Shijo Thomas., Vishnu, B. R., & Sivapirakasam, S. P.	An experimental investigation on pool boiling heat transfer enhancement using sol-gel derived nano-CuO porous coating	<i>Experimental Thermal and Fluid Science</i>	2019, 103, 37
21	Nannuri, S. H., Samal, A. R., Subash, C. K., Santhosh, C., & George, S. D..	Tuning of structural, laser power-dependent and temperature dependent luminescence properties of NaYF ₄ : Yb, Er (Y: 88%, Yb: 10 and Er: 2%) submicron crystals using Cr ³⁺ ion doping.	<i>Journal of Alloys and Compounds</i>	2019, 777, 894-901
22	Nannuri, S. H., Kulkarni, S. D., Subash, C. K., Chidangil, S., & George, S. D	Post annealing induced manipulation of phase and upconversion luminescence of Cr ³⁺ doped NaYF ₄ : Yb, Er crystals	<i>RSC advances</i>	2019, 9(17), 9364-9372

b. Other academic and administrative services:

Sl. No.	Name of Staff	Academic and Administrative Services
1	N. Sandhyarani	1.Head, SNST 2.Exam in charge – SNST 3.Member, Purchase Committee, SNST Lab-In-Charge - Nanoscience Research Laboratory
2	C. B. Sobhan	1.Dean (Alumni Affairs & International Relations) 2.Member, Purchase Committee, SNST
3	Sajith V.	1.Associate Dean(Planning & Development) 2. Faculty Advisor, SAE Collegiate Club, NITC 3.Time table in charge, SNST 4. Member, Purchase Committee, SNST 5. Lab-in-Charge, Applied Nano Engineering Laboratory
4	Soney Varghese	1.SEM and SPM Manager 2. Lab-In-Charge -Nano Materials And Devices Research Laboratory 2.Member, Purchase Committee, SNST
5	Hanas T.	1.Program Cordinator - M.Tech Nanotechnology 2.Lab-In-Charge - Nanomaterials Research Laboratory

		3.Lab-In-Charge- PG Laboratory, SNST 4.Faculty Advisor - School of Nano Science and Technology Association 5.Member - Library Advisory Committee, SNST Nominee 6.Secretary - DCC, SNST 7.Member - TEQIP III Phase Purchase committee
6	Shijo Thomas	1.Faculty Advisor, SAE India Collegiate Club,NITC 2.Laboratory in Charge, Nanotechnology Research Laboratory 3.Member, Purchase Committee, SNST

d. Conferences/Summer/Winter School/Short term Courses/ Workshops conducted

Sl. No	Title	Coordinators	Duration & Period
1	Nanotechnology - Basics & Applications	Dr.Sajith V, Dr.C.B.Sobhan ,Dr.S.Jayaraj	25th to 30th July 2016

f. Details of Faculty, who acquired Higher Qualification

- Hanas.T , PhD, IIT Madras, March-2018

SCHOOL OF MANAGEMENT STUDIES(SOMS)

a. Publications

i. Journals

Sl. No.	Name of the Author	Title of Paper	Name of Journal	Vol, Year, p.p.
1	Jayasree, N, Radha Ramanan, T, Sridharan R	Analysis of the performance of competing models for aggregate demand forecasting using observable data characteristics	2019	International Journal of Industrial and Systems Engineering
2	K. Ratna Kumar, T. Radha Ramanan, Anand Abraham and R. Sridharan	Integrated production distribution problem in a partial backorder and order refusal environment	2019	International Journal of Management Concepts and Philosophy
3	Vishnu M, Jayakrishnan D, and T. Radha Ramanan	A DEA Approach for Evaluation of Operational Efficiency: Case Study of a Logistics Firm	2019	International Journal of Logistics Systems and Management
4	Lithiya Paul and T. Radha Ramanan	An RFM and CLV Analysis for Customer Retention and Customer Relationship Management of a Logistics Firm	2019	International Journal of Applied Management Science
5	K. Ratna Kumar, T. Radha Ramanan, and R. Sridharan	A Study on the Impact of Backorder Sales on an Integrated Supply Chain	2019	International Journal of Services and Operations

				Management
6	Midhun Paul, Sridharan R, Radha Ramanan T	Scheduling an Assembly Job Shop Production System with Multiple Objectives: A Simulation Study”,	2018	International Journal of Industrial and Systems Engineering
7	Midhun Paul, Sridharan R, Radha Ramanan T	Simulation Modeling and Analysis of Dispatching Rules in an Assembly Job Shop Production System with Machine Breakdowns	2018	International Journal of Advanced Operations Management
8	Ratna Kumar K., T. Radha Ramanan and R. Sridharan	A study on the impact of backorder sales on an integrated supply chain	2018	International Journal of Services and Operations Management
9	Muhammad Shafi, Radha Ramanan, Biplab Bhattacharjee and Animesh Acharjee	Elucidation of the backbone structure of cross-market dependency network of world market indices: A global threshold filtering approach	2018	Fuzzy Systems and Data Mining
10	Muhammad Shafi, Lisbeth Mary John	Investigation of Employee Coping Tactics For Restraining Job Strain: Perspectives Based on LMX	2018	Proceedings of the 6th International Conference on Management, Leadership and Governance ICMLG 2018
11	Visakh Sakthidharan & Sunitha S	Impact of operating costs components on airline efficiency in India: A DEA approach	2018	Asia Pacific Journal of Management
12	Abdul Latheef Kiliyanni & Sunitha S	A predictive model for financial literacy among the educated youth in Kerala,	2018	Journal of Social Services Research
13	Biju Mathew,Sunitha S	Financial sector development and life insurance inclusion in India: An ARDL Bounds Testing Approach	2019	International Journal of Social Economics
14	Nithya Murugan and Jayanth Jacob	A brand view on the user acceptance of mobile apps: an evidence from India in the multi-channel context	2018	International Journal Electronic Marketing and Retailing

ii. International Conference

Sl.	Name of the	Title of Paper	Name of	Vol, Year, p.p.
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No.	Author		International conference	
1	Ganesh M R, Rijas, B M and T. Radha Ramanan	Development of an MILP Model for a Novel PDS Procurement System	XXII Annual International Conference of the Society of Operations Management 2018 IIM Kozhikode, December 20-22, 2018	
2	Sreejith B J, T Radha Ramanan	Modelling of a three-echelon production-inventory supply chain model for a perishable product	XXII Annual International Conference of the Society of Operations Management 2018 IIM Kozhikode, December 20-22, 2018	
3	Biplab B, T. Radha Ramanan, Muhammad Shafi and Animesh Acharjee	Elucidation of Backbone structure of cross-market dependency Network of World Market Indices: A Global Threshold Filtering Approach	The 4th International Conference on Fuzzy Systems and Data Mining (FSDM 2018) Nov. 16-18, 2018 Bangkok, Thailand	
4	Shanujas. V and T. Radha Ramanan	Development of employee competency – job performance grid for the employees of Malappuram District Cooperative Bank in Kerala.	International Conference on ‘Co-operatives in the Changing World of Work’ ,IIM Kozhikode, 1 st April 2018	
5	Shaima C and T Radha Ramanan	Assessment of Impact of Implementing Green Human Resource Management Practices at The Organizational Level	International Conference on Emerging Paradigms in Management Research: Prospects and Challenges, ICBM-SBE Hyderabad.	

b. Community Services:

Sl. No.	Title	Coordinators	Duration & Period
1	Symposium on Rebuild Kerala	Dr. Althaf S	5-6 Oct 2018.
2	Tarang (Annual Management Fest)	Dr. Althaf S	5-7 Oct 2018
3	Invited Lecture on ‘Future of Patent Law in India’	Dr. Muhammad Shafi	26 Feb 2019
5	Panel Discussion on Interim Budget 2019	Students Association	4 Feb 2019
5	Mex talk Series: Mr. T P Sreenivasan IFS (Retd)	Students Association	6 Nov 2018
6.	Member, Screening Committee for UGC XII Plan Innovative Research Activities, Calicut University	Dr. Muhammad Shafi	Dec 2015 till date
7.	Member , Board of Studies, Department of Management Studies, Jamia Hamdard University	Dr. Muhammad Shafi	March 2014 till date
8	Member, Board of Studies, St. Teresa’s College,	Dr. Sunitha S	June 2015 till date

	Ernakulam (Autonomous)		
9	Member, Board of Studies, Department of Management Studies, Nandha College of Engineering, Erode, Tamil Nadu	Dr. Sreejith S S	Oct 2018 till date

c. Other Academic and Administrative Services:

Name of Staff	Academic and Administrative Services
Dr. Muhammad Shafi	Faculty-in-charge (Adventure Club), 2015 till date
Dr. Sunitha S	Faculty-in-charge (Student Guidance Cell), Faculty-in-charge (IPR Cell) 09 August 2017 till 25 July 2019

d. Conferences/Summer/Winter School/Short term Courses/ Workshops conducted

Sl. No	Title	Coordinators	Duration & Period
1	Five days National Workshop on Applied Data Science and Business Analytics with Python and R	Dr. K Muhammad Shafi and Dr. Biplab Bhattacharjee	5 days (21-25 Nov 2018)
2	10 days Research Methodology Workshop for Research Scholars in Social Sciences	Dr. Nithya M and Dr. Vijay Vardhan	10 days (11-20 Mar 2019)

d. Expert lecturers delivered in Conferences/Seminar/workshops

Sl. No.	Name of Staff	Title of the Programme	Duration and Period	Organization
1	Dr. T Radha Ramanan	International Conference on Sustainable in Civil and Mechanical Engineering (ICSICM-2019),	May 2019	Mangalam College of Engineering, Ettumanoor, Kottayam, Kerala
2	Dr. T Radha Ramanan	FDP on Modeling and Analysis of Just-in-Time Production Systems	June 2018	NITC
3	Dr. T Radha Ramanan	FDP on Models and Methods for Supply Chain Decisions	May 2018	NITC
5	Dr. Muhammad Shafi	Monetary Economic in Islamic perspective	23 Dec 2018	MES Kalladi College Mannarkad, Palakkad
6	Dr. Muhammad Shafi	Keynote Address : National Seminar Contemporary Developments in Management "Crypto Currency: The Hidden Facts and Challenges	12th September, 2018	Farook Institute of Management Studies,
7	Dr. Sreejith S S	Analytics in HR and Recruitment	1 day; March 2019	University of Calicut

SCHOOL OF BIO TECHNOLOGY

a) Journal

Sl	Name of the	Title of the Paper	Author(s)	Vol.,year, page
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No:	Journal		Name	no.
1	Raghav D, Mahanty S, Rathinasamy K	Biochemical and toxicological investigation of karanjin, a bio-pesticide isolated from Pongamia seed oil.	<i>Pestic Biochem Physiol.</i>	(2019) 157, 108-121
2	Chinnu S, Raghav D, Jijitha US, Mufeedhaa P, Naseef PP, Rathinasamy K, Pramod K	Bioinspired oral insulin delivery system using yeast microcapsules,	Materials Science and Engineering	(2019) doi.org/10.1016/j.msc.2019.109753.
3	Jaleel JA, Ashraf SM, Rathinasamy K, Pramod K	Carbon dot festooned and surface passivated graphene-reinforced chitosan construct for tumor-targeted delivery of TNF- α gene.	Int J Biol Macromol.	(2019), 127, 628-636.
4	Ashraf SM, Sebastian J, Rathinasamy K	Zerumbone, a cyclic sesquiterpene exerts antimitotic activity in HeLa cells through tubulin binding and exhibits synergistic activity with vinblastine and paclitaxel.	<i>Cell Prolif.</i>	(2018), e12558. doi: 10.1111/cpr.12558
5	Mohan L, Raghav D, Ashraf SM, Sebastian J, Rathinasamy K.	Indirubin, a bis-indole alkaloid binds to tubulin and exhibits antimitotic activity against HeLa cells in synergism with vinblastine.	Biomed Pharmacother.	(2018), 105, 506-511
6	Raghav D, Sebastian J, Rathinasamy K	Biochemical and Biophysical characterization of curcumin binding to human mitotic kinesin Eg5: Insights into the inhibitory mechanism of curcumin on Eg5.	<i>Int J Biol Macromol.</i>	(2018), 109, 1189–1208.
7	M Ashraf S, Rathinasamy K.	Antibacterial and anticancer activity of the purified cashew nut shell liquid: implications in cancer chemotherapy and wound healing.	Nat Prod Res.	(2018) 32, 2856-2862
8	MubarakaA.Shaijab T.VSuchithra	Flocculation: An effective way to harvest microalgae for biodiesel production	Environmental Chemical Engineering,	Volume 7, Issue 4,1 June 2019 online. August 2019,

9	Dijo Prasannanan, Chennakkandathil Sareena, Chellaiah Arunkumarar and Suchithra Tharamel Vasu	Synthesis, structure, photophysical, electrochemical properties and antibacterial activity of brominated BODIPYs as an inhibitor of DNA gyrase B of <i>S. aureus</i>	Porphyrins and Phthalocyanines	Feb 2019; 23: 1–10 DOI: 10.1142/S10884246500433
10	Subin Kaladi Chondath, Rasha Rahman Poolakkandy, Roshima Kottayintavida, Aswani Thekkangil, Nishanth Karimbintherikkal Gopalan, Suchithra Tharamel Vasu, Sujith Athiyanathil, Mini Mol Menamparambath	Water–Chloroform Interface Assisted Microstructure Tuning of Polypyrrole–Silver Sheets	ACS Applied Materials & Interfaces	28 Dec 2018, DOI: 10.1021/acsami.8b18943

International Conferences

Sl. No.	Name of the Authors	Title of Paper	Name of International Conference	Vol., Year, p.p
1	Nampoothiri SS, Rajanikant GK.	miR-9 upregulation integrates post-ischemic neuronal survival and regeneration <i>in vitro</i> .	Cellular and Molecular Neurobiology	2019;39;223-40.
2	Charles K. Davis, Saurabh A. Jain, Ok-Na Bae, Arshad Majid, Rajanikant GK.	Hypoxia mimetic agent for ischemic stroke.	Frontiers in Cell Developmental Biology - Cellular Biochemistry	2019;6:1-12.
3	Salian SR, Nayak G, Kumari S, Patel S, Gowda S, Shenoy Y, Sugunan S, Rajanikant GK, Managuli RS, Mutalik S, Dahiya V, P S, Adiga SK, Kalthur C	Supplementation of biotin to sperm preparation medium enhances fertilizing ability of spermatozoa and improves preimplantation embryo development.	Journal of Assisted Reproduction and Genetics	2018;Oct 4. doi: 10.1007/s10815-018-1323-1.
4	Suvanish Kumar VS, Pretorius E, Rajanikant GK.	The synergistic combination of Everolimus and Paroxetine exerts post-ischemic neuroprotection <i>in vitro</i> .	Cellular and Molecular Neurobiology	2018;38:1383-97.
5	Gopalakrishnan A,	Hydrogel scaffolds:	Translational Stroke Research	2018 doi:

	Shankarappa SA, Rajanikant GK.	Towards restitution of ischemic stroke injured brain.		10.1007/s12975-018-0655-6.
6	Das J, Rajanikant GK.	Post-stroke depression: The sequelae of ischemic stroke.	Neuroscience & Biobehavioral Reviews	2018;90:104-14
7	Kim KA, Shin D, Kim JH, Shin YJ, Rajanikant GK, Majid A, Baek SH, Bae ON.	Role of autophagy in endothelial damage and blood-brain barrier disruption in ischemic stroke.	Stroke	2018;49:1571-79.
8	Charles K. Davis, Nasir K., Anjana AK, Rajanikant GK.	Taxifolin as dual inhibitor of Mtb DNA gyrase and isoleucyl-tRNA synthetase: In silico molecular docking dynamics simulation and in vitro assays	In Silico Pharmacology	2018:6:1-11.
9	Nampoothiri SS, Fayaz SM, Rajanikant GK.	A novel 5-node feed-forward loop unravels miRNA-Gene-TF regulatory relationships in ischemic stroke.	Molecular Neurobiology	2018:55;8251-62.
10	Charles K. Davis, Sreekala S. Nampoothiri, Rajanikant GK.	Folic acid exerts post-ischemic neuroprotection in vitro through HIF-1 α stabilization.	Molecular Neurobiology	2018:55;8328-45.
11	Neelakandan AR, Rajanikant GK.	Commentary: Endophenotypes as disease modifiers: Decoding the biology of Alzheimer disease by genome-wide association studies.	CNS & Neurological Disorders - Drug Targets	2018;17:1-3.
12	Darshan Rajesh Dhabalia, Wasim Uddin, Dileep Pullepu, Ankita Dube, M Anaul Kabir	Identification of novel drug resistant gene(s) on the left arm of chromosome 4 in opportunistic fungal pathogen <i>Candida albicans</i> .	87th Conference of the Society of Biological Chemists (India).	November 25-27, 2018, pp 76
13	S M Udaya Prakash, M Anaul Kabir	Structural insights into <i>Candida glabrata</i> MSH protein mutations and drug resistance using In-silico homology modeling and molecular dynamics simulation	87th Conference of the Society of Biological Chemists (India).	November 25-27, 2018, pp103
14	Ankita Dube, M. Anaul Kabir	A systematic mutational study of conserved motifs in Cct1p and Cct3p to understand incongruent	87th Conference of the Society of Biological Chemists (India).	November 25-27, 2018, pp64

		ATP binding affinity of different subunits	
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c. Community Services:

- d. Dr. Prem raj P.** , Active advocate of raising awareness on kidney diseases, marine fish species conservation & Sustainable tourism

c. Other Academic and administrative services :

Name of Staff	Academic and Administrative Services
Dr. Rajanikant G. K.	HOD
Dr. Md. Anaul Kabir	PhD Coordinator
Dr. Santhiagu. A	Faculty Adviser
Dr. Suchithra T.V	Faculty Adviser
Dr. Rathinasamy K	Department Time table coordinator
Dr. Suresh PS	Faculty Adviser
Dr. Baiju G Nair	First year coordinator

b. Expert lecturers delivered in Conferences/Seminar/workshops

Sl. No.	Name of Staff	Title of the Programme	Duration and Period	Organization
1	Dr. Rajanikant G. K.	International Conference of Toxicology and Clinical Pharmacology	Rome, Italy, December 14-16, 2017	---
2	Dr. Rathinasamy K	Recent Trends and Future Perspectives of Animal Cell culture Techniques	One day	K.S.Rangasamy College of Technology, Tiruchengode

PHYSICAL EDUCATION DEPARTMENT

a) Publications

i. International Conference

Name of the Author	Title of Paper	Name of International conference	Vol, Year, p.p.
Dr. A M Najeeb	“Olympic Values Education Programme for Good Governance”	12 th International Session for Educators of Higher Institutes of Physical education, conducted by	May- June - 2017.

		International Olympic Academy Athens Greece.	
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Achievements

Games and Sports:

The academic constraints did prevent lots of our proficient squads from participating in important tournaments outside the campus. Yet during the year 2018-'19, the following NITC teams underwent specialist training including by professional coaches and brought home the following laurels.

No.	Discipline	Tournaments participated	Achievements	Names of Sports stars
01	HOCKEY	a. All India Inter NIT Games held at NIT Agartala	Best Attacker	Sarojkumar ME
02	HANDBALL	a. All India Inter NIT Games held at NIT Agartala	Best Defender	Rahul Raju PE
03	KABADDI	a. All India Inter NIT Games 2018-2019 held at NIT Rourkela	Best Rider	RajKumar
04	POWER LIFTING & WEIGHT LIFTING	a. All India Inter NIT Weight Lifting 2018- 2019 held at NITK Surathkal	Gold Medal	Himanshu Raj CSE
		b. All India Inter NIT Power Lifting 2018-2019 held at NITK Surathkal	Silver Medal	Chinmay Sarkar
		c. All India Inter NIT Power Lifting 2018-2019 held at NITK Surathkal	Bronze Medal	Vishnu Santhosh
05	BODY BUILDING	All India Inter NIT Games Body Building held	Silver Medal	Abdul Ghafor

		at NITK Surathkal 2018- 2019		
06	SWIMMING	All India Inter NIT Games at NITK Surathkal 2018-12019 1. 50M Back Stroke 2. 400M Individual Medlay 3. 4x 50M Mixed Relay 4. 4x 50M Mixed Relay 5. 4x50 M Mixed Relay 6. 4x50M Mixed Relay	Bronze Medal Bronze Medal Bronze Medal Bronze Medal Bronze Medal Bronze Medal	Midhlaj Kapilashan S. Shubham Agarwal Rashmika Shijon Joy Parvathy
07	ATHLETICS	All India Inter NIT Athletics 2018-2019 held at NIT Warangal Long Jump (M) 100 M Dash Sprint (M) 200M Dash Sprint (W) High Jump (M)	Gold Medal Bronze Medal Bronze Medal Bronze Medal	Rajendra Nali Rajendra Nali Anna Meri Argha Pratim Mandal

08	BASKETBALL ALL	a. All Kerala Inter Engineering Basketball Tournament Fury Ragam 2018 at NIT Calicut (Men)	Best Player	Athul Nair
		b. All Kerala Inter Engineering Basketball Tournament Fury Ragam 2018 at NIT Calicut (Women)	Best Player	Gayathri B.
		c. All Kerala Inter Engineering College Ever Rolling Trophy Basketball Tournament at Viswajyothi College of Engineering and Technology Vazhakulam	Best Emerging Player	Moin Subair

Individual Glories brought by NIT Calicut Students during 2018- 2019

1. Mr. Abdul Ghafur was adjudged Runner - Up in "Mr. All India Inter NIT "title held at NITK Surathkal - 2018-2019.
2. Mr. Abdul Ghafur was adjudged "Mr. NIT Calicut- 2018 - 2019 - Winner.

II. In-Campus Mass participation program:

1. The campus "Willow Cup" cricket tournament on Twenty 20 format was organized during March 2018-'19 in which over 300 students participated.
2. The campus 'Nano Cup' cricket tournament was organized during March 2018-'19.
3. The Forz Football Tournament was organized in the campus 2018-'19.
4. The NIT Calicut Annual Athletic Meet 2018-2019 was organized in 2018-19'.
5. The Inter Branch Games Sports was organized in campus 2018-2019.

III .Research & development in Physical Education

1. Dr. A.M. Najeeb, M.A., M.P.Ed., M.Phil., Ph.D. Associate Professor
2. Sri. Sunil M.S., B.Sc., B.P.Ed., M.P.Ed., M.Phil., (Ph.D.), TTC in Yoga, CTP in Football.

Assistant Professor & HOD Physical Education

- a) Undergoing Ph.D. study under Tamil Nadu Physical Education & Sports University, Chennai.
- b) Organizing Secretary, Annual Athletic Meet 2018- 2019 of NIT Calicut.
- c) Around 200 Physical Education & Sports Dissertations project were Guided in 2018- 2019 academic year for the One Credit Course in Physical Education for the fulfillment of requirements for the first year B.Tech. Students of 13 batches having 16 groups and each group having 5 Students for the award of Degree of Bachelor of Technology in various Engineering discipline.
- d) Team Manager of the NIT Calicut Team in the All India Inter NIT Football, Kho- Kho., & Kabaddi Championship 2018- 19 held at NIT Rourkela.
- e) Team Manager of the NIT Calicut Team in the All India Inter NIT Hockey, Handball. Kabaddi, Championship 2018-19 held at NIT Agartala.
- f) Team Manager of the NIT Calicut Team in the All India Inter NIT Athletic Championship 2018-19 held at NIT Warangal.
- g) Convener of the Security & Safety Committee of 14th Convocation- NIT Calicut held at Open Air Theatre.
- h) Organizing Secretary of Inter Branch Games & Sports 2018-2019 of NIT Calicut
- i) Organizing Secretary of Inter National Day of Yoga in NIT Calicut.2018-2019.
- j) Team Manager of NIT Calicut Team in the All India Inter NIT Aquatics, Tennis, Power Lifting, Weight Lifting, Body Building 2018-19 held at NITK Surathkal.
- k). Team Manager of NIT Calicut Team in the All India Inter NIT Basketball, Volleyball & Cricket held at NIT Trichy.
- l). Team Manager of NIT Calicut Team in the All India Inter NIT Badminton & Table Tennis held at VNIT Nagpur.

11.0 ANNEXURES

11.1 INSTITUTE'S SENATE

Dr.Sivaji Chakravorti, Director & Chairman, Ex-Officio
Dr. Sathi Devi P S, Dean (Academics)
Dr. M V L R Anjaneyulu, Dean (P&D)
Dr. T M Madhavan Pillai, Dean (FW)
Dr. Unnikrishnan, Dean (SW)
Dr. Ashok S, Dean (R&C)

Dr. C B Sobhan, Dean (AA&IR)
Prof. Srinivasan Natarajan, SSCU, IISc., Bangalore – External member
Prof. Rajat Acharyya, Dean & Professor, Jadavpur University – External Member
Dr. Ligy Philip, Professor, CED, IIT Madras – External Member
Dr. Anil Kumar P P, Professor, DAP
Dr. Naseer M A, Professor, DAP
Dr. Kasturba A K, Professor, DAP
Dr. J.Sudha Kumar, Professor, CED
Dr. Chandrakaran S, Professor (HAG), CED
Dr. Indira P V, Professor (HAG), CED
Dr. Mohammed Ameen A M, Professor, CED
Dr. Sankar N, Professor, CED
Dr. Santhosh G Thambi, Professor (HAG), CED
Dr. Shashikala A P, Professor, CED
Dr. Shiny Joseph, Professor, CHED
Dr. Sivasubramanian V, Professor, CHED
Dr. Abdul Nazeer K A, Professor, CSED
Dr. Madhu Kumar S D, Professor, CSED
Dr. Priya Chandran, Professor, CSED
Dr. Vineeth Kumar P, Professor, CSED
Dr. Lisa Sreejith, Professor, CY
Dr. Ali C.K, Professor, ECED
Dr. Babu A V, Professor, ECED
Dr. Deepthi P P, Professor, ECED
Dr. Elizabeth Elias, Professor (HAG), ECED
Dr. Lillykutty Jacob, Professor (HAG), ECED
Dr. P C Subramanian, Professor, ECED
Dr. Sameer S M, Professor, T&P
Dr. Abraham T Mathew, Professor, EED
Dr. Elizabeth P Cheriyan, Professor, EED
Dr. Jeevama Jacob, Professor, EED
Dr. Paul Joseph K, Professor (HAG), EED
Dr. Saly George, Professor, EED
Dr. Susy Thomas, Professor, EED
Dr. M S Sunitha, Professor, Maths
Dr. Jacob M J, Professor, Maths
Dr. Jessy John C, Professor, Maths
Dr. A Shaija, Professor, MED
Dr. Biju T Kuzhiveli, Professor, MED
Dr. Ghulam Jilani, Professor, MED
Dr. Jayaraj S, Professor (HAG), MED
Dr. Jose Mathew, Professor (HAG), MED
Dr. Joseph M A, Professor, MED
Dr. Joy M L, Professor, MED
Dr. Madhusudanan Pillai V, Professor, MED

Dr. Muraleedharan C, Professor (HAG), MED
Dr. P K Rajendra Kumar, Professor, MED
Dr. R Sridharan, Professor (HAG), MED
Dr. Ravi Varma Mundakkara Kovilakam, Professor, PHY
Dr. Chandrasekharan K, Professor, PHY

Dr. Predeep P, Professor (HAG), PHY
 Dr. A Santhiagu, Professor, SBT
 Dr. Md. Anaul Kabir, Professor, SBT
 Dr. Rajanikant G Krishnamurthy, Professor, SBT
 Dr. N Sandhyarani, Professor, SNST
 Dr. T K Suresh Babu, Professor, SoMS
 Lt Col Pankajakshan.K (Retd) Registrar & Secretary

11.2 BOARD OF GOVERNORS

Chairperson	Director (Chairperson I/c)
Ex. Officio Member	Dr.Sivaji Chakravorti, Director, National Institute of Technology, Calicut
Member	Special Secretary or Additional Secretary or Joint Secretary dealing with Technical Education, Department of Higher Education, Ministry of Human Resource Development
Member	Financial Advisor, Department of Higher Education, Ministry of Human Resource Development
Member	Prof. Manju Bansal, Professor, IISc, Bangalore; Founder Institute of Bioinformatics and Applied Biotechnology <i>NIT Council Nominee</i>
Member	Prof. Mythili Ramaswamy, Dean, TIFR Centre for Applied Mathematics, Bangalore <i>NIT Council Nominee</i>
Member	Dr. J.Sudhakumar, Professor & Head, Department of Civil Engineering, NIT Calicut. <i>Nominee of Senate</i>
Member	Dr.A.V.Babu, Professor & Head , Department of Electronics & Communication Engineering, NIT Calicut. <i>Nominee of Senate</i>
Member	Adv.P.M.Suresh Babu ‘Matha’ Kuthravattom.P.O, Calicut

	Nominee of Government of Kerala (Up to 27/10/2018)
Member	Dr.P.M.Abdul Majeed “Grace Villa”, NITC Campus.P.O, Calicut Nominee of Government of Kerala (Up to 27/10/2018)
Member	Shri.Raveendran Kasturi, Group CEO, Uralungal Labour Contract Co-Operative Society & UL Cyber Park & UL Technology Solutions (ULTS), Madappalli College.P.O., Vadakara, Kozhikode Nominee of Government of Kerala (from 29/10/2018)
Member	Shri.V.Naushad, Senior Vice President, Confederation of Indian Footwear Industries & MD, VKC,VKC Group Calicut. Nominee of Government of Kerala (from 29/10/2018)
Secretary	Lt Col Pankajakshan.K, Registrar, National Institute of Technology Calicut

11.3 FINANCE, BUILDING AND WORKS AND OTHER COMMITTEES

Finance Committee:

Chairperson	Director (Chairperson I/c)
Ex. Officio Member	Dr.Sivaji Chakravorti, Director, National Institute of Technology, Calicut
Member	Special Secretary or Additional Secretary or Joint Secretary dealing with Technical Education, Department of Higher Education, Ministry of Human Resource Development
Member	Financial Advisor, Department of Higher Education, Ministry of Human Resource Development
Member	Prof. Manju Bansal, Professor, IISc, Bangalore; Founder Institute of Bioinformatics and Applied Biotechnology Nominee of BoG
Member	Dr.A.V.Babu,

	Professor & Head , Department of Electronics & Communication Engineering, NIT Calicut. <i>Nominee of BoG</i>
Secretary	Lt Col Pankajakshan.K, Registrar, National Institute of Technology Calicut

Building & Works Committee:

Ex. Officio Chairman
1. <u>Dr. Sivaji Chakravorti,</u> Director, National Institute of Technology Calicut (Kerala)
Members :
2 . Nominated by the Central government not below the rank of Director /Deputy Secretary
3. Dr. M.V.L.R.Anjaneyulu , Dean (Planning & Development)
4 . Mr.A.Mohammed, (Deputy Superintending Engineer, PWD Roads & Bridges, North Circle, Calicut)
5. Mr.K.B.Swaminathan, (Deputy Chief Engineer, KSEB, Electrical Circle, Calicut)
6 . Dr.J.Sudhakumar, Professor & Head Department of Civil Engineering, NIT Calicut (Representing Board of Governors)
Secretary
7. Lt Col Pankajakshan K (Retd), Registrar, National Institute of Technology Calicut

11.4. RESEARCH PROJECTS AND CONSULTATION JOBS

DEPARTMENT OF ARCHITECTURE AND PLANNING

Sl. No	Title of the Project	Investigators	Sponsoring agency	Year of starting	Amount (Rs)	Status
1	Designing a poropriate housing for tribal	Dr. Shyni. Anilkumar,	UNDP	2019 july		Inception

	community of Wayanad district, kerala	Dr. Chithra K, Dr. Deepthi Bendi			3.96 lakhs	
2.	Attitudes towards the environment: study in Kerala, post 2018 floods	Anjana Bhagyanathan, Deepak Dhayanithy	ICSSR-MHRD	2019	6 Lakhs	Ongoing
3.	Renovation of Kandamkulam Jubilee Hall, Calicut	Dr Kasthurba A K Deepthi Bendi	Corporation of Calicut	2018	Rs 8.25 Lakhs	Ongoing
4	Renovation and retrofitting of the kandamkulam jubilee hall, Calicut	Dr. Kasthurba.A.k Dr. Deepthi Bendi	Kozhikode Municipal Corporation	2019	8,00,000	Ongoing

DEPARTMENT OF CHEMICAL ENGINEERING

Sl. No.	Title of the Project	Investigators	Sponsoring agency	Year of starting	Amount (Rs)	Status
1	A highly flexible Piezo-tribo nanogenerator based on electrospun PVDF nanofibers containing the modified and decorated carbonaceous nanoparticles for capturing human kinematics	Dr. Prasanna Kumar S Mural	DST - SERB	2018	2289500	Ongoing
2	Developing Softsensors for Copolymerization monitoring and control based on Reaction Calorimetry	Dr. Dhanya Ram V	SERB	2018	3779600	Ongoing
3	Development of hydrothermal liquefaction of microalgae for bio-oil production	Dr.Paneerselvam Ranganathan	DST India	2015-20	3,500,000	Ongoing
4	Process Intensification of Post-Combustion CO ₂ capture using Rotating Packed Bed Reactor Concept	Dr.Paneerselvam Ranganathan	DST SERB	2019	3,055,800	Ongoing
5	Tuning the Performance of Thin-Film Composite Membranes on Electrospun Support for Engineered Osmosis in water remediation	Dr. Noel Jacob Kaleekkal, Dr. Prasanna Kumar S Mural & Dr. Lity Alen Varghese	SPARC	2018	4989600	Ongoing

6	Development of Bio-modified carbon paste electrode for the detection and removal of heavy metals from wastewater	Dr. S. Bhuvaneshwari	DST-SERB	2018	4264000	Ongoing
7	Simultaneous Removal of Organic and Inorganic Pollutants from Textile Wastewater using Bio - Electrochemical Cell	Dr. S. Bhuvaneshwari & Prof. V. Sivasubramanian	KSCSTE	2017	1440000	Ongoing

DEPARTMENT OF MECHANICAL ENGINEERING

Sl. No.	Title of the Project	Investigators	Sponsoring agency	Year of starting	Amount (Lakhs)	Status
1.	Effect of wall surface roughness and trailing vortices on acoustic emissions in wall jets	Mr. Rahul S Arackal and T.J.S. Jothi	KSCSTE, Kerala	2018	4,40,000	ongoing
2	Investigation on bio-hydrogen production by thermo-chemical method in fluidized bed gasifier under catalytic support and its utilization	C Muraleedharan, Arun P	Ministry of New and Renewable Energy	2013	37,73,450	Project completed and report submitted in May 2017
3	Development and analysis of model for green operations in supply chain management	Dr. V Madhusudanan Pillai	KSCSTE	2014	9.3 Lakhs	Ongoing

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Sl. No	Title of the Project	Investigators	Sponsoring agency	Year of starting	Amount (Rs)	Status
1.	CARTRAC: Collaborative Trusted Anonymous Communication in Vehicular Networks	Principal Investigator (PI) Dr. P. Arun Raj Kumar	Department of Science & Technology - Core Research Grant (DST-CRG), Govt. of INDIA.	October 2017	Rs.44.76 Lakhs	On-Going

2.	A long term solution: Fuzzy logic based Image-acoustic Classification to detect the Elephant Movement patterns	Principal Investigator (PI) Dr. M. Prabu	Department of Science and Technology- Science and Engineering Research Board (DST-SERB)	June 2018	Rs.35.02 Lakhs	On-Going
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DEPARTMENT OF CIVIL ENGINEERING

SIN o	Title of the Project	Investigators	Sponsoring agency	Year of starting	Amount (₹)	Status
1	Development of steel fibre reinforced GGBS concrete and its applications in seismic resistant design	Saranya P, A P Shashikala, Praveen Nagarajan	KSCSTE	2017	5.00lakhs	ongoing
2	Design and performance of encased stone column supported embankments	Anjana Bhasi	SERB, DST	2017	39 Lakhs	Ongoing
3	Wall panels using Flyash	Robin Davis P, Pradip Sarkar, Sajith AS	DST	2019	90 Lakhs	Shortlisted in first level
4	Capacity Building In Dam Safety Related Areas	Principal Co-ordinator Dr. Santosh G Thampi Co-coordinator Dr. Sathish Kumar. D. Participating Faculty Dr. Chithra. N. R. Dr. Pramada. S.K. Dr. Praveen Nagarajan Dr. Kodi Rangaswamy Dr. S. Chandrakaran Consultants Dr. V. Mustafa Dr. P. Syamala	Central Water Commission, Ministry of Water Resources, River Development, and Ganga Rejuvenation	2017	250 lakhs	Ongoing

DEPARTMENT OF ELECTRICAL ENGINEERING

(a) Sponsored R & D Projects

Sl	Title of the Project	Investigators	Sponsoring Agency	Year of Starting	Amount (Lakhs)	Status
1	Development of an alternative fluid to transform mineral oil	Dr. Preetha P, Dr. Sindhu T.K	KSCSTE	2018	5,70,000	On going
2	Stator Fault Diagnosis	Dr.Rijil	KSCSTE	2018	6.7	On going

	Through Wavelet based MCSA of Inverter fed Induction Motor	Dr.Ramchand Jagadanand G			Lakhs	
3	A Resilient DC Community Grid for the Provision of Ancillary Services to Local Grid	Dr Nikhil Sasidharan Prof. Asok S. Prof. Saifur Rahman Dr. Manisa Pipattanasomporn	SPARC, MHRD	2019	64,79,841	Ongoing
4	Development of Smart Controller for Switched Reluctance Motor	Dr Ashok S	KSCSTE	2016	15 lakhs	ongoing
5	A clean and sustainable campus transport system	Dr. Shreelakshmi M P	DST	2019	35,00,000	Ongoing
6	Experimental Investigation on Fault tolerant control of energy storage systems	Dr. Tarakanath Kobaku	DST	2019	35,00,000	Ongoing

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Sl. No.	Title of the Project	Investigators	Sponsoring Agency	Year of Starting	Amount (Rs)	Status
1	An Intelligent System for Retinopathy of Prematurity (ROP) Screening & Diagnosis	PI: Dr. Sreelekha G Co-PIs: Dr. Sathidevi P. S. Dr. Subashini R Dr. Subhasree M. Dr. Poornima Mohanachandran & Dr. Anand Vinekar	SERB, DST	2019	30.90 Lakhs	Ongoing
2	Augmentation of Post Graduate Teaching & Research Facilities of ECE Department	Dr. Sameer S. M. Dr. P. S. Sathidevi Dr. Babu A. V. Dr. Dhanaraj K. J.	DST	2018	216 Lakhs	On-going
3	Design and Implementation of breath analyser for diabetes detection	Dr Suja K J	DST - SERB	2019	51.65	Ongoing

4	SMDP-C2SD	Dr. PCSubramaniam & Mr. Bhuvan B.	MeitY	2015	150 L	Ongoing
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DEPARTMENT OF MECHANICAL ENGINEERING

Sl. No	Title of the Project	Investigators	Sponsoring agency	Year of starting	Amount (Lakhs)	Status
1	Numerical modeling, simulations and experimental investigations to improve the surface tribological properties of Ti-6Al4V through developing wire electrical discharge alloying	Dr. Jose Mathew (NIT Calicut) Dr. Basil Kuriachen (NIT Mizoram)	DST-SERB	2017	25,00,000	On going
2	DST- FIST Centre for Precision Measurements and Nanomechanical Testing	Dr Jose Mathew	DST-FIST	2016	2,51,00,000	All equipment installed, (duration 2016-2021)
3	Setting up of Design Innovation Centre	Dr. P.K. Rajendrakumar and Dr U.B. Jayadeep	MHRD	2015	75,00,000	On going
4	Investigation into the influence of 3-D surface topographic parameters and cross-hatch angle of cylinder liner surface on the friction and wear of piston ring-cylinder liner assembly	Dr. Deepak Lawrence K	SERB-DST	2017	41,09,580	On going
5	Development and analysis of model for green operations in supply chain management	Dr. V Madhusudanan Pillai	KSCSTE	2014	9,30,000	Ongoing
6	Development, testing standardization of heat pump water heaters using solar photo voltaic Thermal Hybrid Evaporator.,	Dr. S Jayaraj & Dr. M Mohanraj	DST	2016	38,36,800/-	On going
7	Design and fabrication of retrofittable Diesel	Vipul Sehgal Dr. A Shaija	KSCSTE	2018	5,55,000/-	On going

	Particulate Filter with regeneration attributes					
8	Effect of wall surface roughness and trailing vortices on acoustic emissions in wall jets	Rahul S Arackal And Dr. T.J. Sarvoththama Jothi	KSCSTE-TDAP	2018	4,40,000/-	On going

DEPARTMENT OF PHYSICS

Sl. No.	Title of the project	Investigators	Sponsoring Agency	Year of starting	Amount (Lakhs)	Status
1.	Stimuli responsive Microfluidics	Dr. Subramanyan Namboodiri Varanakkottu	DST INSPIRE	2016	35,00,000	On-going
2.	Opto-fluidic platform for controlled droplet manipulation	Dr. Subramanyan Namboodiri Varanakkottu	SERB	2018	47,00,000-	On going

DEPARTMENT OF CHEMISTRY

Sl. No	Title of the Project	Investigators	Sponsoring agency	Year of starting	Amount (Lakhs)	Status
1	Design, synthesis and evaluation of solid-emissive far red- near IR fluorophores	Dr. Lakshmi C	DST-SERB	2017	39.996 Lakhs	ongoing
2	Plastic to Fuel Pilot plant at NITC campus	Dr. Lisa Sreejith	MHRD-SAP	2018	75Lakhs	Ongoing
3	Synthesis and Reactivity Studies of Rare Mononuclear High-Spin Manganese(V)-oxo (S = 1) Complexes	Dr. M.Sankaralingam	DST-Inspire Faculty Award	2018	35Lakhs	ongoing
4	Nanomaterial-polymer composites for Printable electronics, sensors and also for energy related applications	Dr. Mini Mol M	DST-INSPIRE Faculty Program	2016	35 Lakhs	Ongoing
5	Naked Carbon as a Bridging Ligand in Bimetallic Ruthenium Complexes - A Theoretical Study on the	Dr. Parameswaran P.	DST-SERB	2017	34.01 Lakhs	Ongoing

	Formation, Stability, Bonding and Reactivity					
6	Novel triazole bridged metlloporphyrins formed via click chemistry; Comparitive DNA Binding and cleavage studies	Dr. Sujatha (DST-Women Scientist)	DST-SERB	2017	23.6 Lakhs	Ongoing
7	High Valent <i>Trans</i> -metalloporphyrins with Glycosidic Linkages: Synthesis, Photophysical, Electrochemical Studies, Cellular Targeting and bio imaging applications	Late Dr. C. Arunkumar	DST-SERB	2017	44 Lakhs	Ongoing

DEPARTMENT OF MATHEMATICS

Sl. No	Title of the Project	Investigators	Sponsoring agency	Year of starting	Amount (Rs)	Status
1	Design of optimal reliability acceptance sampling plans based on multi-stage process, inliers, and accelerated tests	Dr. Mahesh Kumar	DST-SERB	2018	7,42,500/-	On-going
2	Development of similarity measure based techniques using multiple sets for pattern recognition and medical diagnosis	Dr. Sunil Jacob John (PI)/Adithya Unni (SI)	KSCSTE	2018	7000/-	On going
3	Modeling and Simulation of Fluid Motion on the surface profile generation in micro-EDM	Dr. Satyananda Panda	DsT-SERB	2018	660000	on-going

SCHOOL OF MATERIALS SCIENCE & ENGINEERING

Sl. No	Title of the project	Investigators	Sponsoring agency	Year of starting	Amount (Lakhs.)	Status
1	Synthesis of novel electrocatalytic nanoparticles and nanocomposites for fuelcell applications	Dr N.Sandhyarani	Kerala state council for Science, Technology and enviornment (KSCSTE)	2015	31.4 Lakhs	Completed

2	Development of stable nanofluids for heat exchanger for improved cooling in thermal power plants	Dr.SajithV, Dr.Shijo Thomas, Dr.C.B.Sobhan	NTPC Energy Technology Research Alliance (NETRA)	2016	56.6 lakhs	Completed
3	Development of nano lubricants for diesel engines”,	Dr.SajithV, Dr. Shijo Thomas,	Combat Vehicles Research and Development Establishment (CVRDE), DRDO	2016	42.42 lakhs	Ongoing
4	Advanced Fibre Reinforced Polymer Nano Composites	Dr.Soney Varghese	KSCSTE	2016	15.07 Lakhs	Ongoing
5	Precise synthesis and purification of platinum nano cluster as anti-cancer agent-A new approach for cancer diagnosis and treatment	Dr Lakshmi V Nair Dr Hanas. T	Department of Science and Technology- Inspire Faculty award	2018	35 lakhs	Ongoing
6	Design and Development of a low cost, rapid and sensitive sensor for the on-site detection of Endotoxin	Dr N.Sandhyarani	Department of Science and Technology, Nanomission	2019	43.84Lakhs	Ongoing

SCHOOL OF BIOTECHNOLOGY

Sl. No	Title of the Project	Investigators	Sponsoring agency	Year of starting	Amount (Rs)	Status
1	Transcript profiling of differentially expressed gene(s) involved in the downstream step(s) leading to artemisinin biosynthesis on GA3 induction	Dr. Aswati R Nair	KSCSTE	2012	16.00 lakhs	Completed
2	Characterizing the interactions of chlorpromazine with the mitotic kinesin Eg5 and tubulin: Implications in cancer chemotherapy	Dr. Rathinasamy. K	DST (SERC) SR/SO/BB-13 /2009	started in2014 3 Years	38,05,068	Completed
3	Design and In vitro evaluation of the neuroprotective effects of HIF-prolyl hydroxylase inhibitors against ischemic stroke	Dr. Rajanikant.G.K	DBT	3 years	50.19 Lakhs	Ongoing

4	Bioinformatics Infrastructure Facility	Centre Coordinator	DBT	N.A.	27 Lakhs	Ongoing
5	Inhibition of mitochondrial Dynamin related protein-1 activity confers neuroprotection against ischemia	Dr. Rajanikant.G.K	DBT	3 years	35.14 Lakhs	Ongoing
6	Micro RNA-9 regulation of neuroregeneration: a potential therapeutic strategy for ischemic stroke	Dr. Rajanikant.G.K	KSCSTE	starting is 2018	19,70,000	Ongoing
7	Development of recombinant sphingomonas paucimobilis for gellan gum production: Characterization and application of recombinant gellan gum in nanoparticle based drug delivery systems	Dr. Santhiagu. A	KSCSTE	3yrs	24,25,600	Ongoing
8	A genetic approach towards understanding the function of chaperonin CCT complex using yeast Saccharomyces cerevisiae as a model system	Dr. Md. Anaul Kabir	CSIR	3 Yrs	12.00 Lakhs	Completed
9	Regulation of L-sorbose utilization in human fungal pathogen <i>Candida albicans</i>	Dr. Md. Anaul Kabir	DST	3 Yrs	32.32 lakhs	Completed
10	Unravelling molecular mechanisms of estradiol and leptin cross talk in endometrial cancer	Dr. Suresh .PS	DST-SERB		26, 00, 000	2019-Completed
11	Exploration of diagnostic potential of non-coding RNA-PTPH1-uPAR	Dr. Suresh .PS	DBT	3 Yrs	56,1 43, 200	2018-Ongoing

11.5 FACULTY POSITION (As on 31.03.2019)

		<i>Professor</i>	<i>Asso. Professor</i>	<i>Asst.Professor</i>	
<i>Total</i>					
<i>Architecture</i>					
Sanctioned					23
In Position	3	0	6		9

Vacant				14
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Chemical

Sanctioned				27
In Position	2	1	13	16
Vacant				11

Civil

Sanctioned				64
In Position	9	5	16	30
Vacant				34

Computer

Sanctioned				58
In Position	4	7	15	26
Vacant				32

Electrical Engineering

Sanctioned				62
In Position	7	10	10	27
Vacant				35

Electronics & Communication

Sanctioned				60
In Position	7	5	16	28
Vacant				32

Mathematics

Sanctioned				25
In Position	3	4	7	14
Vacant				11

Mechanical

Sanctioned				81
In Position	11	4	21	36
Vacant				45

Physics & Chemistry

Sanctioned				42
In Position	5	5	14	24
Vacant				18

School of Bio Technology

Sanctioned				16
In Position	3	2	3	8
Vacant				8

School of Management Studies

Sanctioned				16
In Position	1	1	7	9
Vacant				7

School of Nano Science and Technology

Sanctioned				6
In Position	2	2	2	6
Vacant				0

Physical Education

Sanctioned				3
In Position	0	0	1	1
Vacant				2

Total

Sanctioned	69	138	276	483
In Position	57	46	131	234
Vacant	12	92	145	249

**11.6 ADMINISTRATIVE AND OTHER STAFF
ADMINISTRATIVE STAFF-OFFICERS**

Sl. No.	Designation	Name
INSTITUTE OFFICE		
1	Registrar	Lt. Col. Pankajakshan K (Retd) 17.10.2016 to till date

2	Dy Registrar (Estt.)	Sri. Bharat Singh Rawat, from 08.02.2017 to 11.01.2019
3	Dy Registrar (Finance)	. Sri.Gejo. C V from 28.03.2017 to 31.07.2019
4	Officer on Special Duty (S & P)	Sri. K M Muralikrishnan from 01.04.2017 to till date
5	Dy Registrar (Academic)	Dr. Raghunadhan T – 11.01.2016 to 31.07.2019
6	Officer on Special Duty (Audit)	Sri. E K Cyril 06.11.2017 to till date
7	Asst. Registrar	Sri. Ashok Kumar Dev (Finance) 21.08.2017 to till date Dr. Asha Gopalan (Stores & Purchase) 16.08.2017. to till date Sri. Saravanan S (Administration) 16.08.2017 to till date Smt. Sreedha S (Estt.) 18.08.2017 to till date
8	Financial Assistant	Vacant
9	Senior Superintendent	Vacant
10	Senior Superintendent	Smt. Rugmini.C.P
LIBRARY		
11	Librarian	Vacant
12	Librarian (Gr.II)	Vacant
HOSPITAL		
13	Lady Medical Officer	Vacant
14	Resident Medical Officer	Dr. (Smt.) A.A. Celine
ENGINEERING UNIT		
15	Asst. Exe. Engineer	Vacant
	Divisional Accountant	Prasad M V
HOSTEL OFFICE		
16	Hostel Manager	Reejish Kumar M (in-charge) 01.04.2017 to till date
TPL		

NON TEACHING STAFF STRENGTH

Sl. No	Designation	Sanctioned
COLLEGE & DEPARTMENTAL OFFICES		
1	Junior Superintendent	3
2	P.A. to Director	vacant
3	U.D. Clerk	20
4	L.D. Clerk	19

5	Fair Copy Superintendent	1
6	Typist/Data Entry Operator	5
7	Confidential Assistant	9
8	Duplicating Machine Operator	1
9	Store Keeper	4
10	Duffedar	1
11	Peon	18
ENGINEERING UNIT		
1	Assistant Executive Engineer	Vacant
2	Assistant Engineer (Electrical)	1
3	Assistant Engineer (Civil)	2
4	Overseer Gr.I /Sr. Mechanic	2
5	Draftsman Gr. I.	1
6	Overseer Grade III	2
7	Mechanic (Water supply), Plumber/ Mason Trade	6
8	Mechanic (EMU)	5
9	Senior Mechanic (Engg. Unit)	9
10	Senior Mechanic (EMU)	5
i. LIBRARY		
1	Librarian Gr. III	1
2	Librarian Gr. IV	9
3	Attender, Library	6
4	Bookbinder	1
5	Graphic Artist	1
6	Offset Machine Operator	1
7	Digital Library Technician	1
ii. HOSPITAL		
1	Staff nurse	2
2	Pharmacist	1
3	Attender Hospital	1
iii. HOSTEL		
1	Stewards	5
2	Matron-Ladies Hostel	1
iv. GUEST HOUSE		
1	Guest House Manager	1
2	Cook-cum-butler	1
3	Bearers-cum-Room boy	2
v. COLLEGE VEHICLES SECTION		
1	Driver	4
2	Vehicle Cleaner	2
vi. WATCH AND WARD STAFF		
1	Sergeant	1
2	Watchmen	6
3	Watchman-cum-Gardener	16
4	Gardener	1
vii. SANITATION		
1	Sanitation Worker	16
2	Sweeper-cum-Sanitation	6

	worker	
3	Part-time Sweeper	25

11.7 STAFF MEMBERS DEPUTED/SPONSORED FOR TRAINING, LEARNING

Staff members deputed/sponsored for Training, Learning

Name of the Staff	Title of the Programme	Duration and Period	Organization
Ashok Kumar Dev Assistant Registrar (Finance)	1.Introduction to EAT Module of PFMS. 2.PFMS EAT Module training.	14 th May 2018 10 th – 11 th Sep 2018	INGAF Chennai NIT - Karnataka
Asha Gopalan Assistant Registrar (Stores & Purchase)	Workshop on public procurement under general financial rules 2017.	16 th – 18 th May 2018	ISTM – New Delhi
Gejo C V Deputy Registrar(Finance)	Introduction to EAT Module of PFMS.	14 th May 2018	INGAF Chennai
Asoka Kumar P T Sr.Mechanic(Sl.Gr.), EED	Operation and Maintanance of Electronics Test Equipments.	4 th Feb 2019 – 15 th Feb 2019	Advanced Training Institute, Ludhiana
Beljith P Sr.Mechanic, CSED	Operation and Maintanance of Electronics Test Equipments	4 th Feb 2019 – 15 th Feb 2019	Advanced Training Institute, Ludhiana
Prajith P Sr.Mechanic, Engg. Unit	Operation and Maintanance of Electronics Test Equipments	4 th Feb 2019 – 15 th Feb 2019	Advanced Training Institute, Ludhiana
Praveen H Babu Sr.Mechanic,ECED	Operation and Maintanance of Electronics Test Equipments	4 th Feb 2019 – 15 th Feb 2019	Advanced Training Institute, Ludhiana
Santhosh Kumar M V Sr.Mechanic, Engg. Unit	Operation and Maintanance of Electronics Test Equipments	4 th Feb 2019 – 15 th Feb 2019	Advanced Training Institute , Ludhiana
Muraleedharan P Junior superintendent	Accounts and Administration.	7 th Feb 2019 – 9 th Feb 2019	Integrated Training and Policy Research (Training

			Division) New Delhi
Sasi Kumar K T U D Clerk, Dean R&C	Accounts and Administration	7 th Feb 2019 – 9 th Feb 2019	Integrated Training and Policy Research (Training Division) New Delhi
Sethumadhavan Mechery U D Clerk, Accounts	Accounts and Administration	7 th Feb 2019 – 9 th Feb 2019	Integrated Training and Policy Research (Training Division) New Delhi
Purushothaman pillai K N U D Clerk, Purchase	Accounts and Administration	7 th Feb 2019 – 9 th Feb 2019	Integrated Training and Policy Research (Training Division) New Delhi
Abdulsathar V M Sr.Mechanic, CSED	Management issues for Laboratory and Workshop classes	11 th Feb 2019 – 15 th Feb 2019	National Institute of Technical teachers training and Research Kolkata
AjayaChandran V R Computer Operator, CSED	Management issues for Laboratory and Workshop classes	11 th Feb 2019 – 15 th Feb 2019	National Institute of Technical teachers training and Research Kolkata
George T M Sr.Mechanic(Sl.Gr.), MED	Management issues for Laboratory and Workshop classes	11 th Feb 2019 – 15 th Feb 2019	National Institute of Technical teachers training and Research Kolkata
Nanda Kumar K Sr.Mechanic, EED	Management issues for Laboratory and Workshop classes	11 th Feb 2019 – 15 th Feb 2019	National Institute of Technical teachers training and Research Kolkata
Petson Andrew U D Clerk, Admission	Management issues for Laboratory and Workshop classes	11 th Feb 2019 – 15 th Feb 2019	National Institute of Technical teachers training and Research Kolkata

Prasad M V Divisional Accountant, Engg. Unit	Management issues for Laboratory and Workshop classes	11 th Feb 2019 – 15 th Feb 2019	National Institute of Technical teachers training and Research Kolkata
Rajendran M K Instructor ,MED	Management issues for Laboratory and Workshop classes	11 th Feb 2019 – 15 th Feb 2019	National Institute of Technical teachers training and Research Kolkata
Noushad K K Sr.Mechanic, CED	Internet Security.	4 th March 2019-8 th March 2019	National Skill Training Institute, Dehradun
Sadanandan T K Sr.Mechanic(Sl.Gr.), Engg. Unit	Internet Security.	4 th March 2019-8 th March 2019	National Skill Training Institute, Dehradun
Sasi K K Sr.Mechanic(Sl.Gr.), MED	Internet Security.	4 th March 2019-8 th March 2019	National Skill Training Institute, Dehradun
Sathyan P K Sr.Mechanic(Sl.Gr.), CED	Internet Security.	4 th March 2019-8 th March 2019	National Skill Training Institute, Dehradun
Suresh K C Sr.Mechanic (Sl.Gr.), MED	Internet Security.	4 th March 2019-8 th March 2019	National Skill Training Institute, Dehradun
Abhilash A Sr.Mechanic (Sl.Gr.), MED	Resistance spot welding.	18 th March 2019 - 22 nd March 2019	Advanced Training Institute, Ludhiana
Anil Kumar P Supervisor, MED	Resistance spot welding.	18 th March 2019 - 22 nd March 2019	Advanced Training Institute, Ludhiana
Pradeep Kumar E Supervisor, MED	Resistance spot welding.	18 th March 2019 - 22 nd March 2019	Advanced Training Institute, Ludhiana
Pradeep Kumar K K Instructor, MED	Resistance spot welding.	18 th March 2019 - 22 nd March 2019	Advanced Training Institute, Ludhiana
Mohan T.P Sr.Mechanic(Sl.Gr.), MED	Resistance spot welding.	18 th March 2019 - 22 nd March 2019	Advanced Training Institute, Ludhiana
Venugopal B Sr.Mechanic(Sl.Gr.),	Internet Security.	4 th March 2019 -8 th March 2019	National Skill Training Institute,

Maintenance Unit			Dehradun
Raju K P Sr.Mechanic, Engg. Unit	Internet Security.	4 th March 2019 -8 th March 2019	National Skill Training Institute, Dehradun
Sasesh A R Sr.Mechanic(Sl.Gr.), EED	1. Internet Security. 2.The Recent Trends in Harnessing and Renewable Energy.	4 th March 2019 -8 th March 2019 10 th Dec 2018-13 th & 15 th Dec 2018	National Skill Training Institute, Dehradun Govt. Engg. College Trichur
Shafi S.M U D Clerk, Account Section	Internet Security	4 th March 2019 -8 th March 2019	National Skill Training Institute, Dehradun
Divakaran P Sr.Mechanic(Sl.Gr.), Engg.Unit	Internet Security	4 th March 2019 -8 th March 2019	National Skill Training Institute, Dehradun

11.8. SCHOLARSHIPS & AWARDS

CREC Silver Jubilee Endowment Trust Scholarships

CREC Silver Jubilee Endowment Trust (SJET) of the Institute, a registered body with the Director as Chairman, Deans & Heads of Departments as ex-officio and other nominated members as Trustees, currently awarded 93 scholarships worth Rs. 5000 to 10000/- each per annum to the students. The number and the value of the scholarships for a year will vary depending on the availability of funds and the sponsors. The SJET invites applications from the students and Heads of the departments/ a sub-committee will scrutinize the applications, and verifies the data with the students and others. The scholarships are awarded to the deserving students based on their academic merits, economic backwardness and other performance parameters. The SJET scholarships include.

Sl.No.	SCHOLARSHIPS
1.	Prof. A. O. Kunjipaulo Endowment Scholarship
2.	Class of 1992 Computer Engineering Alumni Scholarship
3.	RECCAA, Singapore Scholarship
4.	RECCAA, USA Scholarship
5.	RECCAA, Bahrain Scholarship
6.	REC 1 st Batch Scholarship
7.	RECCAA, Mumbai Scholarships (2 Nos.)
8.	CSAI (Class of 2000) Scholarships (4 Nos.)
9.	REC 76 – 81 Batch Scholarships (2 Nos.)
10.	10 years of XXXII nd Batch (CREC 96) Scholarship
11.	REC Calicut 1982 Batch Scholarship
12.	NITC (REC) 1983 Batch Scholarship
13.	REC Calicut, Class of '84 Trust Scholarship
14.	CREC 80-85 Batch Scholarship
15.	Padmanabhan Scholarship in Memory of All Departed Souls of 77 Batch, CREC
16.	Capt. Mohammed Memorial Endowment Scholarship

17.	Nitin Sharma Memorial Scholarship
18.	1997 – 2001 CSE B. Tech. Batch Scholarship
19.	Josephus M T, John Sebastian & Luthufi K T Memorial Scholarship 2004-08 Batch
20.	Mariveetil Raghunath Memorial Endowment Scholarship
21.	1984-88 Batch of REC/NITC Scholarship

11.9 THE PARENT TEACHER ASSOCIATION

During the year 2018-19, PTA provided financial assistance to many needy students of NITC and co-ordinated parent teacher meetings at department level and institute level. Some of the major activities are listed below:

1. Cash awards (Rs.5,000/- each) were given to all the branch toppers during the Convocation day of the Institute. An amount of Rs. 202000/- was utilized for this purpose.
2. Scholarships were given to financially needy students under SJET Trust scholarship scheme. An amount of Rs. 93000/- was utilized for this purpose.
3. Travel fellowships were given to several students for presenting papers in international conferences held in India. Total amount of Rs. 16200/- was awarded as PTA Travel Fellowship.
4. PTA assisted the student volunteers of the Central Library on duty in the study room by paying a honorarium of Rs. 88770/-
5. The PTA gave financial assistance to needy students. An amount of Rs.105702 /- was spent for this purpose.
6. Cash awards (Rs. 1000/- each) were given to the best B. Tech/B.Arch projects. An amount of Rs. 9,000/- was utilized for this purpose.
7. The Annual General Body meeting held was held on 10-02-2019 and the meeting was well attended and served as a platform for useful discussion between parents and the faculty members. Department level meetings were also conducted on the same day in the respective Departments. Departments received many constructive suggestions and feedback from the parents

11.10 NATIONAL SERVICE SCHEME

- The National Service Scheme (NSS) Cell of National Institute of Technology Calicut (NITC) provided abundant opportunities for its volunteers to participate in the various events and activities for the greater good of the community. Through its drives and fundraisers, NSS Cell has provided for the needy, while through its events, NSS has fostered creativity and fun for school Children, be it through cultural activities or promoting knowledge.
- The NSS Cell at NIT Calicut has four units working under it. Participation in NSS activities is mandatory for the completion of B Tech. credit requirements in NIT Calicut. All students Enrolled for the B Tech. programme of the Institute shall register for and complete the course requirements of NSS before they enter their third year of study, normally. The course requirement includes completion of minimum 15 hours of socially relevant activities in a semester. This, they are allowed to undertake within the campus, surrounding area of the campus or even near their home-town. The registered students keep an 'NSS Diary' along with them in which these activities are recorded and got endorsed by authorized persons. At the end of the registration period, grades are awarded after the evaluation of the diary. Apart from this mandatory component, there are a lot of voluntary activities from students even after their period of registration in NSS.
- The flood relief activities were coordinated in manifold avenues both inside and outside the campus. A minimum of 20 flood relief campus across the state were visited and the need was met to the best of the capability of the NSS Cell. The mentioned camps include all the seven relief campus under the Chathamangalam Grama Panchayath, which is also the host Panchayath of NITC. All of these camps were visited multiple times and the basic amenities and goods were supplied according to their needs. More than 500 volunteers from the campus were also part of the relief activities. Around 6 lakh rupees was collected from the student community and was utilised for the relief activities. Apart from this an

amount of Rs. 40,000/- was collected and sent to the State NSS Cell for contribution to the Chief Minister's Disaster Relief Fund.

- Rescue operations carried out by the NSS Cell mainly includes relocation of the affected people to the nearby camps. A collection centre with the support of more than 100 volunteers was set up college. Food kits (800 no.s), cleaning kits (200 no.s), other amenities like food items, blanket (100+), sheets (150+), dresses (200+), soap, napkins, brushes etc was collected and transported from the collection point. 2000L of surface disinfectants were made in the campus and was sent to different parts of Kerala for free of cost along with cleaning kits and medicines. Post flood relief activities include cleaning of schools, houses, libraries, public roads in the locality and as well as at the native places of different volunteers. A class followed by a medical camp was conducted in AUPS Koozhakode in which awareness about various diseases like dengue, leptospirosis was given. 85 local people were tested in the camp for various diseases. Preventive medicines were also distributed in the medical camp.
- As part of International Day of Non-Violence, the National Service Scheme of NITC conducted an event to commemorate Mahatma Gandhi. Held on 2nd October 2019, the programme gave insights about Mahatma Gandhi and his principles. Presentations on non-violence in scriptures were read out by the NSS Junior Executives. The program was taken forward by a presentation, Walk with Gandhi. Furthermore, the winners of the online quiz conducted by NSS on the occasion of Gandhi Jayanti were awarded. To honour the father of our nation on Gandhi Jayanthi, NSS also organized a mass campus cleaning drive on 2nd of October.
- A medical camp was set up by the NSS volunteers in the campus on 3rd October for all the employees of NITC. The camp witnessed a large number of people including lab assistants, security guards, janitors, etc. It was set up at 9am and continued till afternoon. Various check-ups were conducted that included blood test, urine test, blood pressure check-up, etc. Furthermore, the people whose health were found to be outside the normal ranges were taken to doctors for consultation as well.
- A blood donation drive was set up in the Institute Auditorium on 4th of October, 2018 from 9:30am to 12 noon This camp was held in coordination with Kozhikode Medical College and Beach Hospital Calicut. 95 units of blood was donated in the Blood Donation camp. It was made sure that blood was collected safely and hygienically from volunteers fit to donate blood.
- A talk on 'Waste Management ' was organised on 18th September 2018, which was helpful to raise awareness on waste management and understand how waste is disposed and other alternatives to it.
- In collaboration with iLab, the volunteers of NSS NITC Unit set up a stall during our college Technical Festival, Tathva. The stall was put up on all three days of Tathva, from 12th to 14th October. A large variety of colourful handmade stationaries were made and exhibited at the stall for sale. In addition to this, there was also a 5-minutes caricature making stall open to all.
- As part of Tathva '18, Aavishkar organized a talk on awareness on cancer. The talk was held on 14th October and was presented by the MVR Cancer Center and Research Institute Calicut. Various types of cancer like oral cancer, lung cancer, and breast cancer were explained. Furthermore, effect and hazards of smoking and tobacco consumption was also spoken about. At the end, there was also a question & answer session for the audience and the event ended on a successful note.
- The NSS Annual Camp for the academic year 2018-19 began on December 5, 2018. The camp site was Government Lower Primary School, Pallikkal in Wayanad district. Cleaning activities in and around Mutteri colony were taken up and successfully completed. The play area of G.L.P.S. Pallikkal was renovated and given a fresh and welcoming look. The school premises were also cleaned and a pit

was also taken to dump the organic wastes. The screening of the film ‘Amma Karayaruthu’ was also made to the camp volunteers. The NSS annual camp ended on a happy note on December 11, 2018.

- NSS also conducted ‘Sneharagam’, an event that invited specially-abled children from various schools to participate and enjoy a variety of cultural activities. The cultural activities included dancing and singing, and interactive activities. NSS volunteers were a part of the event and helped in the organisation of the events. Moreover, they also helped in the preparation of food for the children. Moreover, it was a kind-hearted activity that brought the volunteers and children closer to each other. In addition, gifts were also given to the children at the end of the programme, as a souvenir for the fun and frolic they had at ‘Sneharagam’.
- A well-known aspect of NSS Cell of NITC is the ‘Special project’ initiative. Several activities are done under this initiative during every year. In the previous academic year, projects mainly included recycling of plastic bottles, beautification of the walls of nearby government schools, visits and conducting classes at various orphanages etc.
- Classes on a weekly are conducted by the NSS volunteers to the students of Government AUPS, Puthoor, Kozhikode, which is situated near to the campus under the ‘Let’s Teach’ initiative. Basic science, Mathematics and English are taught to the students during every weekends as per their request. Classes are mainly aimed at improving the academic skills of the students of the school.
- The most well-known aspect of NSS is farm work. During the months of February, March and April tomatoes, brinjals and lady’s fingers were planted, in addition to tapioca, banana plantain and papayas.

11.11 Training & Placement statistics

Placement Statistics 2018-'19

UG Program Details	Total Placed*	Total Registered**	Min Salary [in lakhs INR]	Max Salary [in lakhs INR]	Avg. Salary [in lakhs INR]
B.Arch	3	9	3	18.24	9.08
B.Tech Bio Technology	9	11	4.8	10.5	7.01
B.Tech Civil	45	55	3.62	17.3	7.34
B.Tech Chemical	38	45	3.5	17.3	7.69
B.Tech Computer Science	120	121	5	50	14.98
B.Tech Electrical & Electronics	69	77	3.6	15.7	7.32
B.Tech Electronics & Commn.	95	99	4.38	30	9.07
B.Tech Mechanical	73	89	3.25	17.3	7.22
B.Tech Production	13	14	3.6	7.5	6.09
B.Tech Engg. Physics	7	10	4.4	10.5	6.74
Total UG	472	530			

* Indicates total number of students placed [double offers not counted]

** Includes students with CGPA \geq 6.5 and who participated in all T&P registrations.

If a company has offered a job to a student having CGPA $<$ 6.5,

it is included in both placed as well registered counts

Placement Statistics 2018-'19

PG Program Details	Total Placed*	Total Registered**	Min Salary [in lakhs INR]	Max Salary [in lakhs INR]	Avg. Salary [in lakhs INR]
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			INR]	INR]	[in lakhs INR]
AR - M.Plan	0	4	0		0
CE - M.Tech Environmental GeoTech	2	8	4.46	6.25	5.35
CE - M.Tech Offshore Structures	6	12	5	9	7
CE - M.Tech Structural Engineering	9	13	5	6.25	6.08
CE - M.Tech Traffic & Transportation Planning	5	18	4.2	7.8	5.49
CE - M.Tech Water Resources Engineering	0	7	0	0	0
CH - M.Tech Chemical	1	2	3.6	3.6	3.6
CS - M.Tech Computer Science	17	17	7	31.5	15.99
CS - M.Tech Computer Science (Information Security)	16	17	6.5	17.7	12.12
CS - MCA	22	28	4.8	25.91	9.78
EE - M.Tech Power Systems	5	10	4.2	16.35	7.94
EE - M.Tech High Voltage Engineering	4	6	3.6	16.35	8.3
EE - M.Tech Instrumentation and Control Systems	3	4	4.8	16.35	12.5
EE - M.Tech Industrial Power and Automation	3	4	3.6	18.24	11.79
EE - M.Tech Power Electronics	4	7	3.6	16.35	7.64
EC - M.Tech Electronics Design Technology	7	9	10.1	17.15	15.34
EC - M.Tech Signal Processing	4	4	6	16.35	9.99
EC - M.Tech Telecommunication	8	9	6	13	10.33
EC - M.Tech Micro Electronics & VLSI Design	11	12	17.15	17.7	17.25
ME - M.Tech Energy Engg. & Management	2	8	9	9.57	9.29
ME - M.Tech Industrial Engg. & Management	3	13	7.31	11.8	8.81
ME - M.Tech Machine Design	2	4	4.2	7.5	5.85

ME - M.Tech Material Science & Technology	2	4	7	11.8	9.4
ME - M.Tech Manufacturing Technology	4	11	6	9.57	7.71
ME - M.Tech Thermal Engineering	7	11	6.25	16.35	9.86
NS - M.Tech Nano Technology	1	1	9.57	9.57	9.57
MS - MBA	19	25	4.5	9.57	7.01
PH - M.Sc. Physics	0	0	0	0	0
CY - M.Sc. Chemistry	1	1	6.6	6.6	6.6
MA - M.Sc. Mathematics	0	0	0	0	0
Total PG	168	269			

* Indicates total number of students placed [double offers not counted]

** Includes students with CGPA \geq 6.5 and who participated in all T&P registrations.

If a company has offered a job to a student having CGPA < 6.5, it is included in both placed as well registered counts

Details of companies visited for placement and offers 2018-'19

Annexure I

Sl.No.	COMPANY	OFFERS
1	ABB	2
2	Adobe	3
3	ADP	3
4	AFFIRMED NETWORKS	2
5	AMADEUS	7
6	AMDOCS	20
7	Anora Labs	3
8	Anristu	1
9	App Dynamics	1
10	ARCESIUM(onlyinterns)	0
11	ARISTA NW(OnlyInterns)	0
12	Artefact	1
13	ARVIND INTERNET	2
14	ASHOK LEYLAND	4
15	ATKINS	2
16	AXXELA	0
17	Bajaj Auto	5
18	Bel	3
19	BestDoc	2
20	BIGBASKET	3
21	Bizense	3
22	BYJUS	12
23	C Dot	4

24	Cadence	1
25	CAPGEMINI	20
26	CapitalAim Financial Advisory Pvt. Ltd.	3
27	Carborundum Murugappa	0
28	CERNER	3
29	CGI	7
30	CISCO	12
31	CITI BANK	3
32	COGNICOR	0
33	Cognizant	1
34	Creative Group	1
35	Daikin	1
36	DBOI	8
37	DELL	12
38	DELOIT	17
39	DELTA POWER	1
40	DELTA X	0
41	DQuotient	4
42	Edgistry	2
43	Etap	2
44	EXXON MOBIL	9
45	FACTSET	5
46	Federal Bank	8
47	FIITJEE	10
48	First Bench	6
49	FLYTXT	1
50	FORD	6
51	GE	10
52	GILBARCO	2
53	Goldman Sachs	1
54	Happay	1
55	Helium	2
56	Hinduja Tech	2
57	HONEYWELL	3
58	HSBC	0
59	INDIGO PAINTS	1
60	INFORMATICA	1
61	INFOSYS	1
62	INTEL	12
63	IOCL	8
64	IQVIA	7
65	Itd Cem	4
66	ITRON	3
67	John Deere	2
68	JP MORGAN	11
69	KLA 10	3
70	KPIT	1
71	L&T ECC	32
72	L&T Infotech	1
73	L&T Infra	0

74	L&T LTD	10
75	LICIOUS	1
76	MARUTHI	8
77	McDermott	5
78	McDermott	3
79	MIC College	3
80	MICROFOCUS	7
81	MONSANTO	0
82	Morgan Stanley	3
83	MRF	20
84	Multiplex	2
85	Neutanix	1
86	NRIDA	1
87	NVIDIA (OnlyInterns)	0
88	OFSS	10
89	ONECONVERGENCE	4
90	Onix Capital	2
91	Oracle App	10
92	Oracle ST	6
93	Ormae	0
94	OYO	3
95	PATH PARTNER	7
96	PAYTM	1
97	Perfect Academy	3
98	PHILIPS CARBON	4
99	PHILIPS IC	5
100	PHILIPS PREETHI	2
101	PRDC	2
102	Presidency	3
103	Qualcomm	12
104	QUANTIPHI	5
105	RADISYS	6
106	RamGroup	4
107	RELIANCEJIO	2
108	RENATA	1
109	RIL(RELIANCE INDUSTRIES LIMITED)	17
110	Sahrdaya	3
111	Saint Gobain (Internship)	0
112	SANDVINE	5
113	SAP	5
114	SAPIENT	4
115	Sasken	5
116	Sids Farm	3
117	SOBHA	3
118	TARGET	21
119	Tata Hitachi	1
120	TATA MOTORS	6
121	Tavant	5
122	Tcs (MBA)	6
123	TCS DIGITAL	2

124	TEKTRONIX	4
125	Tektronix	4
126	TESCO	4
127	Texas Instruments	0
128	THERMAX	4
129	THERMOFISHER	6
130	Thermofisher (Internship)	0
131	TIME	4
132	Uber	1
133	UDAAN	0
134	Umas (Internship)	0
135	UTC	8
136	VEDANTA	8
137	VEDANTA CAIRNS	5
138	Venper Academy	2
139	VisualIQ (Internship)	0
140	VKC	1
141	WABCO	2
142	Wafer Space	1
143	WIPRO TURBO	6
144	Xoxoday	3
145	ZS ASSOCIATES	1
Total		640

Details of companies visited for internship and offers 2018-'19

Annexure II

No	Company Name	Internship Offers
1	ANALOG DEVICES	1
2	AppDynamics	2
3	Appdynamics	2
4	Arcesium	2
5	Arista Net	2
6	ARISTA NETWORKS	2
7	Arvind Internet	3
8	Bajaj Auto	7
9	BOSCH	9
10	Cisco	6
11	Dell	1
12	Deloitte	2
13	DFoE	1
14	Ford	4
15	Goldman Sachs	3
16	JpMorgan	8
17	Licious	4
18	Medicento	4
19	MICROSOFT	3
20	Monsanto	5
21	Morgan stanley	1
22	Qualcomm	4

23	Sandvine	2
24	Sap	4
25	Texas Instrument	3
26	Vedanta	3
27	Visual IQ	4

NATIONAL INSTITUTE OF TECHNOLOGY, CALICUT

ANNUAL ACCOUNTS 2018-19

NATIONAL INSTITUTE OF TECHNOLOGY, CALICUT
BALANCE SHEET AS AT 31.03.2019

(Amount in Rupees)

SOURCES OF FUNDS	Schedule	Current Year	Previous Year
CAPITAL FUND	1	6,48,66,24,366.75	5,81,36,31,023.76
DESIGNATED/EARMARKED/ENDOWMENT FUNDS	2	1,49,68,37,665.85	1,36,44,67,299.85
CURRENT LIABILITIES & PROVISIONS	3	94,92,48,507.16	79,77,88,117.91
RESERVES AND SURPLUS		7,69,000.00	7,69,000.00
TOTAL		8,93,34,79,539.28	7,97,66,55,441.52
APPLICATION OF FUNDS			
FIXED ASSETS			
Tangible Assets		1,79,56,35,591.96	1,87,31,74,315.50
Intangible Assets	4	17,91,075.32	29,70,937.30
Capital Work-In-Progress		1,59,38,01,304.52	1,55,98,52,538.00
INVESTMENTS FROM EARMARKED/ENDOWMENT FUNDS			
Long Term		18,63,53,119.00	18,63,53,119.00
Short term	5	1,35,69,53,627.40	1,32,94,26,330.40
INVESTMENTS- OTHERS	6	-	-
CURRENT ASSETS	7	2,15,73,01,855.74	1,52,36,07,101.23
LOANS, ADVANCES & DEPOSITS	8	1,84,16,42,965.34	1,50,12,71,100.09
TOTAL		8,93,34,79,539.28	7,97,66,55,441.52

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NATIONAL INSTITUTE OF TECHNOLOGY, CALICUT

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31.03.2019

(Amount in Rupees)

PARTICULARS	Schedule	Current Year	Previous Year
INCOME			
Academic Receipts	9	34,38,60,290.16	37,73,18,884.23
Grants/Donations/Subsidies	10	1,82,56,00,000.00	56,38,00,000.00
Income from investments	11	3,17,45,183.00	2,32,40,023.00
Interest earned	12	76,17,077.00	42,79,297.00
Other Incomes	13	2,98,37,053.35	3,05,96,618.34
Prior Period Income	14	(2,13,34,989.00)	4,68,73,713.47
TOTAL (A)		2,21,73,24,614.51	1,04,61,08,536.04
EXPENDITURE			
Staff Payments & Benefits (Establishment expenses)	15	98,94,84,850.00	69,29,35,301.00
Academic Expenses	16	24,64,10,452.00	24,88,15,437.00
Administrative and General Expenses	17	6,98,20,494.00	7,86,37,395.00
Transportation Expenses	18	15,05,260.00	17,54,546.41
Repairs & Maintenance	19	6,62,45,621.00	8,06,86,237.00
Finance costs	20	1,53,356.52	1,38,505.00
Depreciation/Amortization	4	16,93,77,704.00	17,97,96,675.20
Other Expenses	21	4,76,48,802.00	5,88,83,399.00
Prior Period Expenses	22	2,44,794.00	4,00,97,661.00
TOTAL (B)		1,59,08,91,333.52	1,38,17,45,156.61
Balance being excess of Income over Expenditure (A-B)		62,64,33,280.99	(33,56,36,620.57)
Less/(Add): Unitilised Non Plan Grant transferred to Liabilities/ (Assets)	3C		
Foreign Exchange gain/ loss			
Add:Transfers from Capital Grants		16,93,77,705.27	17,97,96,675.45
Balance Being Surplus / (Deficit) Carried to Capital Fund		79,58,10,986.26	(15,58,39,945.12)

SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2019

SCHEDULE -1 CAPITAL FUND

(Amount in Rupees)

Particulars	Current Year	Previous Year
Balance at the beginning of the year	5,81,36,31,023.76	5,62,69,69,546.26
Add: Contributions towards Capital Fund	-	-
Add: Grants from UGC, GOI & State Govt. to the extent utilized for capital expenditure	3,76,00,000.00	77,02,00,000.00
Add: Assets purchased out of earmarked funds	-	-
Add: Assets purchased out of Sponsored Projects, where ownership vests in the institution	97,42,200.00	1,27,72,390.00
Add: Assets donated/Gifts received	-	-
Add: Interest on Term Deposits and Savings account	-7,80,610.00	4,36,70,598.10
Less: Bank charges	1,528.00	2,986.00
Less: Transfer to earmarked funds - TEQIP	-	-
Add/(Less): Excess/(Deficit) of Income over Expenditure transferred from Income and Expenditure account	79,58,10,986.26	(15,58,39,945.12)
Total	6,65,60,02,072.02	6,29,77,69,603.24
Less/ (Add): Unspent Plan Fund transferred to Liabilites	-	-
Less: Transfers from Capital Fund	16,93,77,705.27	48,41,38,579.48
Balance at the year end	6,48,66,24,366.75	5,81,36,31,023.76

SCHEDULE 2 – DESIGNATED/EARMARKED/ENDOWMENT FUNDS

(Amount in Rupees)

Particulars															TOTAL	
	TEQIP	TEQIP-II	TEQIP-II (Equipment Modernisation Grant)	TEQIP-II Reserves	TEQIP-III	GPF	CPF	FBS	GROWTH FUND	STUDENTS FUND	GYMKHANA	TBI	TBI-II	H.W.D	Current Year	Previous Year
A.																
a) Opening balance of the funds	22,83,089.00	38,57,975.50	(4,55,776.00)	1,01,49,540.00	-	29,61,17,141.72	1,14,26,309.63	62,624.00	1,07,42,67,529.00	3,15,12,593.00	(1,60,881.00)	1,45,81,341.00	-	26,63,324.00	1,44,63,04,809.85	1,21,67,23,758.50
b) Additions during the year	71,743.00	(1,01,93,298.00)	5,57,824.00	-	61,12,608.00	4,76,56,579.00	4,89,19,730.00	-	9,09,51,628.00	1,69,38,261.00	2,46,400.00	99,52,647.00	48,56,194.00	3,87,112.00	21,58,57,428.00	21,89,82,787.00
c) Income from investments made out of funds	-	-	-	-	-	79,10,874.00	2,56,263.00	-	1,76,68,741.00	1,99,847.00	-	7,66,422.00	-	-	2,68,02,147.00	5,25,77,065.35
d) Accrued interest on investments/Advances	-	-	-	-	-	22,17,174.00	2,14,808.00	-	75,30,134.00	-	-	(79,241.00)	-	-	98,82,875.00	8,18,37,510.00
e) Interest on Savings Bank A/c	-	-	-	-	-	18,464.00	12,771.00	-	457.00	-	-	-	-	-	31,692.00	(7,78,871.00)
f) Other additions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,000.00
Total(A)	23,54,832.00	(63,35,322.50)	1,02,048.00	1,01,49,540.00	61,12,608.00	35,39,20,232.72	6,08,29,881.63	62,624.00	1,19,04,18,489.00	4,86,50,701.00	85,519.00	2,46,21,169.00	48,56,194.00	30,50,436.00	1,69,88,78,951.85	1,56,93,52,249.85
B.																
Utilisation/Expenditure towards objectives funds																
i) Capital Expenditure	-	30,49,076.00	-	-	40,240.00	-	-	-	-	-	-	-	-	-	30,89,316.00	1,89,33,486.00
ii) Revenue Expenditure	-	(98,80,270.00)	-	-	67,00,351.00	5,23,14,004.00	3,95,92,676.00	-	1,90,025.00	1,72,51,212.00	1,26,567.00	1,04,61,410.00	-	3,58,485.00	11,71,14,460.00	10,41,13,954.00
Total(B)	-	(68,31,194.00)	-	-	67,40,591.00	5,23,14,004.00	3,95,92,676.00	-	1,90,025.00	1,72,51,212.00	1,26,567.00	1,04,61,410.00	-	3,58,485.00	12,02,03,776.00	12,30,47,440.00
Closing balance at the year end (A-B)	23,54,832.00	4,95,871.50	1,02,048.00	1,01,49,540.00	(6,27,983.00)	30,16,06,228.72	2,12,37,205.63	62,624.00	1,19,02,28,464.00	3,13,99,489.00	(41,048.00)	1,41,59,759.00	48,56,194.00	26,91,951.00	1,49,68,37,665.85	1,44,63,04,809.85

SCHEDULE 3 - CURRENT LIABILITIES & PROVISIONS

(Amount in Rupees)

Particulars	Current Year	Previous Year
A. CURRENT LIABILITIES		
1. Deposits from staff		
2. Deposits from students	2,51,90,714.00	2,24,39,714.00
3. Sundry Creditors		
a) For Goods & Services	40,963.00	39,413.00
b) Others	7,81,663.00	6,90,801.00
4. Deposits - Others (including EMD, Security Deposit)	6,30,04,606.70	2,14,97,192.70
5. Statutory Liabilities (GPF,TDS,WC TAX,CPF,GIS,NPS):		
a) Overdue		
b) Others	73,58,097.83	7,41,083.83
6. Other current Liabilities		
a) Salaries	1,65,64,486.00	1,88,37,298.00
b) Receipts against sponsored projects	12,69,51,651.50	10,65,51,197.50
c) Receipts against sponsored fellowships & scholarships	4,04,65,252.50	2,87,31,311.25
d) Unutilised Grants	51,84,217.00	-
e) Grants in advance	-	-
f) Tuition fee	46,22,604.53	46,22,604.53
g) Other liabilities	19,99,60,734.10	17,59,66,723.10
Total (A)	49,01,24,990.16	38,01,17,338.91
B. PROVISIONS		
1. For Taxation	-	-
2. Gratuity	20,81,48,561.00	17,70,58,715.00
3. Superannuation/Pension	0.00	1,85,380.00
4. Accumulated Leave Encashment	21,50,79,824.00	19,85,20,868.00
5. Expenses payable	3,58,95,132.00	4,19,05,816.00
6. Trade Warranties/Claims	-	-
7. Others	-	-
Total (B)	45,91,23,517.00	41,76,70,779.00
Total (A+B)	94,92,48,507.16	79,77,88,117.91

SCHEDULE 3A- SPONSORED PROJECTS

(Amount in Rupees)

1.Sr. No	2. Name of the Project	Opening Balance		5. Receipts during the year	6. Total	7. Expenditure during the year	Closing Balance	
		3. Credit	4. Debit				8. Credit	9. Debit
1	Linear & Non Linear Optical (Dst)	-	11,153.00	1,08,455.00	97,302.00	1,08,455.00	-	11,153.00
2	Stable Isotopic Investigation	1,98,524.00	-	-	1,98,524.00	-	1,98,524.00	-
3	Experimental Investigation	2,60,895.00	-	-	2,60,895.00	-	2,60,895.00	-
4	Development Of Transparent Conducting Polymer Films For Electrode	3,03,928.00	-	-	3,03,928.00	-	3,03,928.00	-
5	Information Security Education	5,09,237.00	-	-	5,09,237.00	-	5,09,237.00	-
6	Multifunctional Plasmonic Nanoparticles - Nano Composites - Targeted Drug Delivery	5,429.00	-	-	5,429.00	-	5,429.00	-
7	Strengthen The Research Facilities In Networking And Security Area	100.00	-	-	100.00	-	100.00	-
8	Enhancement Of The Sensivity Of Peptide Nanotube Based Biosensors ...	18,808.00	-	-	18,808.00	-	18,808.00	-
9	Developemnt Of An Interoperable Spatial Database Of Road Network For Cit	15,08,674.00	-	-	15,08,674.00	-	15,08,674.00	-
10	Fast Development Of Chitosan Reinforced Polymer Nanocomposites	8,914.00	-	-	8,914.00	-	8,914.00	-
11	Development Of Tools & Techniques For Modeling & Analysis	31,60,016.00	-	-	31,60,016.00	-	31,60,016.00	-
12	Strengthen The Research And Post Graduate In Area Power Quality	14,03,213.00	-	-	14,03,213.00	-	14,03,213.00	-
13	Thermo Responsive Ion Track Membrane	2,168.00	-	-	2,168.00	-	2,168.00	-
14	Fast Track Project Treatment Of Effluent Using Biomembran Techniques	-	2,640.00	-	(2,640.00)	-	-	2,640.00
15	Synthesis And Grafting Of Thermo Responsive Hydrogels On Nano Porous Memberanes- Iradication-Drug	1,18,522.00	-	-	1,18,522.00	28,174.00	90,348.00	-
16	Design Development And Optimization Of Miniature And Micro	5,14,936.00	-	-	5,14,936.00	-	5,14,936.00	-
17	Fast Track Development Of An Extractive Fermentation Process For Enhanced Alkline Phosphatase	12,863.00	-	-	12,863.00	-	12,863.00	-
18	Molecular And Functional Charactarization Of Putative-Zingiber Zerumbt-Ginger	95,417.00	-	-	95,417.00	-	95,417.00	-
19	Regulation Of L- Sorbose Utilization In Human Fungal Pathogen Candida Albicans	11,66,075.00	-	-	11,66,075.00	-	11,66,075.00	-
20	Molecular Cloning And Characterization Of Terpene Synthas-Zingiber Zerumbet	1,00,990.00	-	-	1,00,990.00	-	1,00,990.00	-
21	Simulation Of Solid Rocket Exhaust Plumes			-				
22	Devlmpmt. Of Activity Based Models For Forecasting Of Travel Demand	-	1,950.00	-	(1,950.00)	-	-	1,950.00
23	Developmet Of A Toolbox For Evaluation And Identification Of Urban Road Safty Improvement Measures	1,950.00	-	-	1,950.00	-	1,950.00	-

SCHEDULE 3A- SPONSORED PROJECTS

(Amount in Rupees)

1.Sr. No	2. Name of the Project	Opening Balance		5. Receipts during the year	6. Total	7. Expenditure during the year	Closing Balance	
		3. Credit	4. Debit				8. Credit	9. Debit
24	Investigation Of Distributed Generation Stm. Integration	-	-	-	-	-	-	-
25	Identification And Characterization Of Phytochemicals From Indian Medicinal Herbs	-	-	-	-	-	-	-
26	Design & Devlp. Of Electro-Magnatically Driven Miniature-Ir Sensor Array Phase I	236.00	-	-	236.00	-	236.00	-
27	Development Of Pro-Fluorophore Scaffolds To Probe Peptide Aggregation And-Transition	7,64,854.00	-	8.00	7,64,862.00	43.00	7,64,819.00	-
28	Study On Long Term Performance Pavements With Coir Geotextiles	20,76,251.00	-	73,629.00	21,49,880.00	-	21,49,880.00	-
29	Use Of Coir Pith For Airport Soft Ground Arrestor System	41,20,423.00	-	79,930.00	42,00,353.00	41,56,430.00	43,923.00	-
30	Pufa Therapy Ameliorates Cognitive Impairment And Mitochondrial Dysfunction In Caeno	-	-	-	-	-	-	-
31	Productivity Monitoring And Wage Analysis For Nreg Works	-	22,530.00	24,200.00	1,670.00	-	1,670.00	-
32	Production Management System	4,16,900.00	-	-	4,16,900.00	-	4,16,900.00	-
33	Establishment Of Bif - Btbi	9,737.00	-	-	9,737.00	-	9,737.00	-
34	Electron C Structure Studies Of Adsorption Of Unsaturated Hydrocarbons	-	-	-	-	-	-	-
35	Combination Of Therapy In Ischmic	30,039.00	-	-	30,039.00	-	30,039.00	-
36	Cavity - Enhanced Absorbtion Spectroscopy For Trace Gas Pollutant Monitoring	2,122.00	-	-	2,122.00	-	2,122.00	-
37	Novel Functionalized Porphyrinic Coordination Arrays,Polymers And Frameworks	-	13,344.00	-	(13,344.00)	-	-	13,344.00
38	Tunable Hierarchical Zeolities Using Polymer Macro-	27,65,053.00	-	-	27,65,053.00	-	27,65,053.00	-
39	Theoretical Study Onysis By Methane Mono-Oxygenase The Enzymatic Castal	-	-	-	-	-	-	-
40	Noval Triazole Vridged Metalloporphyrins Formed Via Click Chem.	-	40,792.00	-	(40,792.00)	-	-	40,792.00
41	Nonlinear Analysis Of Eeg Signals Of Patients With Alzheimers Disease	14,01,259.00	-	-	14,01,259.00	-	14,01,259.00	-
42	Design Uranium Based Catalist For Activation And Functionaliation A Computational Quantum	27,636.00	-	1,619.00	29,255.00	29,231.00	24.00	-
43	Design And In Vitro Evaluation - Hif Prolyil Hydroxilase	8,49,854.00	-	-	8,49,854.00	-	8,49,854.00	-
44	Oleamide As Novel Neuroprotectant Against Ischemic Stroke	3,73,524.00	-	-	3,73,524.00	-	3,73,524.00	-
45	Assessment Of Effectiveness Of Nh-47 Gye Pass Road In Coimbatore (Los)	1,25,295.00	-	-	1,25,295.00	-	1,25,295.00	-
46	Biodegradability Enhancement Of Low Density Polyethylene By Using Biopolymet Nano-	-	80,229.00	-	(80,229.00)	5,35,910.00	-	6,16,139.00

SCHEDULE 3A- SPONSORED PROJECTS

(Amount in Rupees)

1.Sr. No	2. Name of the Project	Opening Balance		5. Receipts during the year	6. Total	7. Expenditure during the year	Closing Balance	
		3. Credit	4. Debit				8. Credit	9. Debit
47	Nrb Project - Design And Development Of A Protocol Stack For Underwater.	17,698.00	-	-	17,698.00	-	17,698.00	-
48	Project Antibiotics Removal From Waste Water	14,35,865.00	-	-	14,35,865.00	-	14,35,865.00	-
49	A Genetic Approach Towards Understanding	4,26,645.00	-	-	4,26,645.00	-	4,26,645.00	-
50	Fast Track Project	3,04,647.00	-	-	3,04,647.00	-	3,04,647.00	-
51	Poly (3,4Ethylenediothiophene) Poly(Methyl Methacrylate)	41,352.00	-	6,146.00	47,498.00	3,35,537.00	-	2,88,039.00
52	Investigation On Bio-Hydrogen Production By Thermo-Chemical Method	1,66,938.00	-	-	1,66,938.00	-	1,66,938.00	-
53	Centre For Transportation Research	92,28,222.00	-	1,80,846.00	94,09,068.00	38,94,061.00	55,15,007.00	-
54	Development Of Bistable Memory Devices Based On Organic Semi-Conductors	5,52,686.00	-	-	5,52,686.00	-	5,52,686.00	-
55	Rational Design And Synthesis Of Metalloprophyrin-Lanthanoid Hybrid Material For Dna Binding	13,85,798.00	-	-	13,85,798.00	-	13,85,798.00	-
56	Photo Switchable K Ion Channel Blockers	1,19,552.00	-	1,520.00	1,21,072.00	1,01,100.00	19,972.00	-
57	Experimental And Deterministic Model Studies In Regeneration Of Microbial Biosorbents After Heavy Metal Desorption	19,603.50	-	-	19,603.50	-	19,603.50	-
58	Devt Of Low Cost Elastomeric Fullerene Derivatives Using Electron And Gamma Irradiation For Organic Electronic Applications	6,28,694.00	-	713.00	6,29,407.00	-	6,29,407.00	-
59	Design And Implementation Of Secure Communication System	8,069.00	-	-	8,069.00	-	8,069.00	-
60	Inhibition Of Mitochondrial Dynamins Relates Protein One	-	28,07,018.00	-	(28,07,018.00)	-	-	28,07,018.00
61	High Energy Density Photochemical Fules Based On Nanomaterial Hybrids	34,51,267.00	-	2,203.00	34,53,470.00	-	34,53,470.00	-
62	Transparent Flexible And Conducting Electrodes Based On Graphene- Nanometal Hybrids	-	6,26,770.00	4,778.00	(6,21,992.00)	-	-	6,21,992.00
63	Ruthenium (11) Osmium (11) And Gold (111)Alkaloids: Active Targets For Dna Intercalation Interactions	14,71,815.00	-	-	14,71,815.00	-	14,71,815.00	-
64	Investigation Of Optical Nonlinearity By Defect State In One Dimensional Photonic Crystals	1,09,390.00	-	1,015.00	1,10,405.00	1,23,526.00	-	13,121.00
65	Characterizing The Interactions Of Chlorpromazine With The Mitotic Kinesin Eg5 And Tublin	-	13.00	-	(13.00)	-	-	13.00
66	Design And Fabrication Of Anechoic Test Facility And Characterization Of Acoustic Emission From Airfoils In Flow Field	70,484.00	-	193.00	70,677.00	86.00	70,591.00	-
67	Ultrasensitive,Rapid & Low Cost Detection Of Cancer Biomarkers	407.00	-	13.00	420.00	43.00	377.00	-
68	Development Of Nanocomposites Ethylene	7,45,741.00	-	25,381.00	7,71,122.00	2,338.00	7,68,784.00	-

SCHEDULE 3A- SPONSORED PROJECTS

(Amount in Rupees)

1.Sr. No	2. Name of the Project	Opening Balance		5. Receipts during the year	6. Total	7. Expenditure during the year	Closing Balance	
		3. Credit	4. Debit				8. Credit	9. Debit
69	Investigation-Scrap Tyre Shreds -Cement Concrete	62,308.00	-	-	62,308.00	-	62,308.00	-
70	Investigation Of Performance	-	-	-	-	-	-	-
71	Development Of Attached Media-Treatment Of Domestic - Coir Geotextiles.	61,301.00	-	-	61,301.00	-	61,301.00	-
72	Studies On Ground Water Pollution By Heavy Metal Disch & Ex	37,247.00	-	-	37,247.00	-	37,247.00	-
73	Investigation On Power Quality Issues Of Drives	1.00	-	-	1.00	-	1.00	-
74	Mesophase Formation And Characterisation Of Organised Assemblies	13,386.00	-	-	13,386.00	-	13,386.00	-
75	Stand. Of Engi. Properties	-	9.00	-	(9.00)	-	-	9.00
76	Implementation Of Multy.	3,98,311.00	-	-	3,98,311.00	-	3,98,311.00	-
77	Seismic Evaluation Of Existing Multy - Storey Buildings In Kozhikode Dist.	3,40,941.00	-	-	3,40,941.00	-	3,40,941.00	-
78	Development Of Risk Management Tool In Green Construction Sites	-	-	-	-	-	-	-
79	Transcript Profiling Of Differentially Expr.	-	20,000.00	-	(20,000.00)	-	-	20,000.00
80	Experimental Investigation For Potential Use Of Coir Path In Making Value Added Products	-	-	-	-	-	-	-
81	Development Of Intelligent Robot For Fault Diagnosis Of Power	12,679.00	-	-	12,679.00	-	12,679.00	-
82	Low Density Polythylene / Nanochitosan Biodegradable Films For Food-	3,49,618.00	-	-	3,49,618.00	3,15,814.00	33,804.00	-
83	Development Of Low Cost Polymer Electrolyte Membranes	4,06,866.00	-	-	4,06,866.00	-	4,06,866.00	-
84	Investigation On Absorption Of Flouride From Water Using Nano Material	-	-	-	-	-	-	-
85	Comprehensive Computational Analsys Of Anti- Diabetic Phytotherapeutics	2,87,726.00	-	-	2,87,726.00	-	2,87,726.00	-
86	Flexible Nanomaterial Doped Polymer Dispersed Liquid Crystal (Pdic) Devices For Switchable Window Applications	-	9,21,624.00	-	(9,21,624.00)	76,200.00	-	9,97,824.00
87	Devt And Analysis Of Model For Green Operations In Supply Chain Management	2,13,707.00	-	6,712.00	2,20,419.00	31,774.00	1,88,645.00	-
88	Enhancement Of Third-Order Optical Nonlinearity In Photonic Crystalcavity For Optical Switching	88,268.00	-	-	88,268.00	73,268.00	15,000.00	-
89	Development Of Organic Solar Cells Based On Transition Metal Oxide Anode Buffer Layers	62,124.00	-	980.00	63,104.00	62,183.00	921.00	-
90	Temperature Dependant Optical Switch From Organized Assemblies	1,594.00	-	-	1,594.00	-	1,594.00	-
91	Investigation On The Application Of Catalitic Nanoparticles As Diesel	25,89,291.00	-	-	25,89,291.00	-	25,89,291.00	-

SCHEDULE 3A- SPONSORED PROJECTS

(Amount in Rupees)

1.Sr. No	2. Name of the Project	Opening Balance		5. Receipts during the year	6. Total	7. Expenditure during the year	Closing Balance	
		3. Credit	4. Debit				8. Credit	9. Debit
92	Devt Of A Model Framework For Land Use Based Estimation And Prediction Of Solid Waste Generation	1,660.00	-	59.00	1,719.00	27.00	1,692.00	-
93	Implimentation Of Habitat Devt. Prgrme. Of Three Oorus In Attapadi	-	-	-	-	-	-	-
94	Investigation Over The Experimental And Mathematical Modelling Of Novel Plant Based Biosorbents For The Sequestration Of Hexavalent Chromium	7,930.00	-	-	7,930.00	-	7,930.00	-
95	Development Of A Hybridelectrochemical Discharge Machine And Itsperformance Analysis	2,675.00	-	-	2,675.00	-	2,675.00	-
96	Securityassessment Of Microgrids In Isolated Andin Grid Connected Mode	2,57,340.00	-	-	2,57,340.00	-	2,57,340.00	-
97	Setting Up Design Innovationcentre	24,14,451.00	-	22,623.00	24,37,074.00	17,15,264.00	7,21,810.00	-
98	Special Manpowerdevelopment-Chip To Systemdesign(Snmdp-C2Sd)-Department Ofelectronics And Information Technology Mit	14,31,254.00	-	2,39,387.00	16,70,641.00	9,01,166.00	7,69,475.00	-
99	Synthesis Of Novelectrocatalytic Nanoparticles Andnanocomposites For Fuel Cell Application	19,399.00	-	1,47,789.00	1,67,188.00	1,53,796.00	13,392.00	-
100	Development Of Recombinantsphingomonas Paucimobilis Ofr Gellan Gumproduction.....Delvery System	2,30,627.00	-	5,22,203.00	7,52,830.00	7,19,040.00	33,790.00	-
101	Power Electronics For Grid Connectedrenewable Energy System Under Nampetphase li	2,99,884.00	-	-	2,99,884.00	-	2,99,884.00	-
102	Production Of Bil Diesel Fromchlorella Vulagris	-	6,511.00	8,500.00	1,989.00	679.00	1,310.00	-
103	Investigation Over The Experimentaland Mathematical Modelling Of Aerosols Inthe Kde.Dist.	4,63,722.00	-	12,020.00	4,75,742.00		4,75,742.00	-
104	Development Of Cost Effective 3-Axisintelligent Platform Stabilization System"	3,46,217.00	-	8,36,635.00	11,82,852.00	9,22,426.00	2,60,426.00	-
105	Inspire Faculty,Ced - Inspire Research Project	-	2,257.00	204.00	(2,053.00)		-	2,053.00
106	Strength Improvement Of Locallyavailable Soft Clays In Construction Ofhighways Using Lime-Enzymatic	21,397.00	-	2,761.00	24,158.00	33,229.00	-	9,071.00
107	Development Of Advanced Fibrereinforced Polymer Nanocomposites For	21,882.00	-	680.00	22,562.00	20,276.00	2,286.00	-
108	DEVELOPMENT OF STABLE NANOFLUIDS.....THERMAL POWER PLANTS	39,56,894.00	-	8,38,201.00	47,95,095.00	12,00,295.00	35,94,800.00	-
109	DEVELOPMENT OF SMART CONTROLLER FOR SWITCHED RELUCTANCE MOTOR	1,23,945.00	-	1,531.00	1,25,476.00	1,24,490.00	986.00	-
110	FIST PROGRAM-2015 IF DST TO STRENGTHEN THEMED	97,72,367.00	-	3,58,917.00	1,01,31,284.00	-	1,01,31,284.00	-
111	DEVELOPMT. OF SOLID STATE TRANSORMER AS....INTERFACING DEVICE	6,49,489.00	-	4,37,188.00	10,86,677.00	10,12,398.00	74,279.00	-

SCHEDULE 3A- SPONSORED PROJECTS

(Amount in Rupees)

1.Sr. No	2. Name of the Project	Opening Balance		5. Receipts during the year	6. Total	7. Expenditure during the year	Closing Balance	
		3. Credit	4. Debit				8. Credit	9. Debit
112	DEVLMT.OF NANO LUBRICANT FOR DIESEL ENGINE	10,91,967.00	-	27,67,789.00	38,59,756.00	21,25,876.00	17,33,880.00	-
113	HIGH VALENT TRANS-METALLOPORPHYRINS WITH GLYCODIC LINKAGES	25,60,388.00	-	3,21,601.00	28,81,989.00	28,63,324.00	18,665.00	-
114	SYNTHESIS,CHARACTERIZATION AND APPLICATION OF NOVEL MAGNETICALLY.	5,57,935.00	-	22,222.00	5,80,157.00	5,77,318.00	-	(2,839.00)
115	DESIGN,SYNTHESIS AND EVALUATION OF SOLID-EMMISSIVE	12,33,153.00	-	7,13,792.00	19,46,945.00	11,42,542.00	8,04,403.00	-
116	SERB (DST) PROJ. "NAKED CARBON AS A BRIDGING	23,22,358.00	-	96,982.00	24,19,340.00	21,54,609.00	2,64,731.00	-
117	A MULTI-WAVE LENGTH INTEGRATING NEPHELOMETER	-	-	-	-	-	-	-
118	STUDENT PEOJECT (GEORGE K.V)	5,640.00	-	-	-	-	-	-
119	A MULTI-WAVE LENGTH INTEGRATING NEPHELOMETER	8,438.00	-	61,081.00	69,519.00	-	69,519.00	-
120	DEVELOPMENT OF STEEL FIBRE REINFORCED...SEISMIC RESISTANT DESIGN	1,79,162.00	-	1,732.00	1,80,894.00	1,78,898.00	1,996.00	-
121	POLYMER AND HYBRID ELECTRONICS... APPLICATIONS	4,77,089.00	-	-	4,77,089.00	1,298.00	4,75,791.00	-
122	SIMULTANEOUS REMOVAL OF ORGANIC... BIO-ELECTRO CHEMICAL CELL	-	2,06,790.00	12,53,379.00	10,46,589.00	10,19,176.00	27,413.00	-
123	MICRO-RNA-9 REGULATION OF NEURO...FOR ISCHEMIC STROKE	25,000.00	-	5,618.00	30,618.00	89.00	30,529.00	-
124	MS.SREEJA M "CHETAS"	5,85,919.00	-	11,450.00	5,97,369.00	5,12,730.00	84,639.00	-
125	MODEL FOR PART BASED...TRAFFIC OPERATION IN INDIA	5,10,587.00	-	7,436.00	5,18,023.00	5,01,519.00	16,504.00	-
126	DEVELOPMENT,TESTING AND STANDARDISATION OF HEAT PUMP.....THERMAL HYBRID EVAPORATORS	24,93,384.00	-	2,01,174.00	26,94,558.00	3,98,881.00	22,95,677.00	-
127	CAPACITY BUILDING IN DAM...REHABILITATION & IMPROVEMENT	2,27,35,927.00	-	10,00,884.00	2,37,36,811.00	60,02,865.00	1,77,33,946.00	-
128	CATIONIC MESOTHIENYLPORPHYRINS...DNA INTERACTION	8,20,102.00	-	12,607.00	8,32,709.00	7,97,913.00	34,796.00	-
129	TECHNOLOGICAL INNOVATION UNDER THE BANNER "BRIDGING THE INNOVATION GAP"	-	1,25,221.00	10,892.00	(1,14,329.00)	-	-	1,14,329.00
130	DR.LISA SREEJITH "MHRD SWACCHATA ACTION PLAN"	34,58,932.00	-	15,47,156.00	50,06,088.00	5,55,909.00	44,50,179.00	-
131	MHRD GIAN COURSE DR.A V BABU "KEY ENABLING	-	-	66,588.00	66,588.00	1,90,962.00	-	1,24,374.00
132	OTHER PROJ.DR.SAMEER S M "FIST PROGR OF	-	-	2,06,04,343.00	2,06,04,343.00	-	2,06,04,343.00	-
133	OTHER PROJ.DR.SANJAY P K SERB PROJ."A STUDY	-	-	2,22,476.00	2,22,476.00	1,91,904.00	30,572.00	-
134	OTHER PROJ.(SERB) DR.M PRABHU"A LONG TERM	-	-	5,86,460.00	5,86,460.00	2,76,332.00	3,10,128.00	-

SCHEDULE 3A- SPONSORED PROJECTS

(Amount in Rupees)

1.Sr. No	2. Name of the Project	Opening Balance		5. Receipts during the year	6. Total	7. Expenditure during the year	Closing Balance	
		3. Credit	4. Debit				8. Credit	9. Debit
135	MHRD GIAN COURSE DR.SATYANANDA PANDA "A	-	-	-	-	21,298.00	-	21,298.00
136	OTHER PROJ.DR.SUBRAMANIAN NAMBOODIRI SERB	-	-	33,74,675.00	33,74,675.00	4,25,412.00	29,49,263.00	-
137	OTHER PROJ.DR.RAMYA K (UNDER MENTORSHIP OF	-	-	1,26,033.00	1,26,033.00	99,732.00	26,301.00	-
138	OTHER PROJ. MS.ATHULYA DAS "INSPIRE	-	-	3,72,379.00	3,72,379.00	3,19,332.00	53,047.00	-
139	OTHER PROJ.DR.DHANYA RAM V SERB	-	-	26,26,322.00	26,26,322.00	73,387.00	25,52,935.00	-
140	OTHER PROJ.DR.ARUN RAJ KUMAR PARTHIBAN	-	-	32,14,632.00	32,14,632.00	96,222.00	31,18,410.00	-
141	OTHER PROJ.DR.MAHESH KUMAR SERB	-	-	4,68,725.00	4,68,725.00	1,58,500.00	3,10,225.00	-
142	OTHER PROJ.DR.ANJANA BHASI SERB	-	-	28,90,611.00	28,90,611.00	12,02,596.00	16,88,015.00	-
143	OTHER PROJ.DR.DEEPAK LAWRENCE K SERB	-	-	18,98,219.00	18,98,219.00	2,13,226.00	16,84,993.00	-
144	OTHER PROJ. DR.SURESH P S DBT	-	-	41,15,047.00	41,15,047.00	1,81,452.00	39,33,595.00	-
145	INSPIRE FACULTY AWARD TO DR.MUNIYANDI	-	-	7,04,162.00	7,04,162.00	-	7,04,162.00	-
146	OTHER PROJ.DR.N SANDHYARANI DST	-	-	30,20,000.00	30,20,000.00	-	30,20,000.00	-
147	OTHER PROJ.DR.PANNEERSELVAM RANGANATHAN	-	-	7,06,984.00	7,06,984.00	74,073.00	6,32,911.00	-
148	OTHER PROJ.MS.AKSHAYA M V DST (WOS-B)	-	-	12,35,000.00	12,35,000.00	93,871.00	11,41,129.00	-
149	OTHER PROJ.DR.M A NASEER DST TRAINING	-	-	5,00,000.00	5,00,000.00	-	5,00,000.00	-
150	STUDENT PEOJECT (GEORGE K.V)	5,640.00	-	-	5,640.00	-	5,640.00	-
151	REFUNDABLE FOR WORKSHOP FROM KSEB HRM	-	-	3,54,560.00	3,54,560.00	3,59,521.00	-	4,961.00
	Total	10,65,51,197.50	48,88,851.00	5,90,70,050.00	16,07,32,396.50	3,94,88,026.00	12,69,51,651.50	57,07,281.00

SCHEDULE 3B- SPONSORED FELLOWSHIPS AND SCHOLARSHIPS

(Amount in Rupees)

1.Sr. No	2. Name of Sponsor	Opening Balance		Transactions during the year		Closing Balance	
		3. Credit	4. Debit	5. Credit	6. Debit	7. Credit	8. Debit
1	University Grants Commission	83,87,310.00	-	4,51,213.00	4,51,213.00	83,87,310.00	-
	Ministry (Central Govt.)						
2	Director of College Education	-	4,000.00	-	-	-	4,000.00
3	Cultural Scholarship	11,59,559.00	-	1,61,97,615.00	1,60,09,855.00	13,47,319.00	-
4	NCERT	23,013.00	-	-	-	23,013.00	-
5	SC/ST Scholarship	5,09,344.00	-	-	-	5,09,344.00	-
6	NIMCET	-	1,04,207.00	-	-	-	1,04,207.00
7	Summer Course	33,96,955.00	-	50,000.00	-	34,46,955.00	-
8	Zonasa 2003	46,685.00	-	10,400.00	-	57,085.00	-
9	Minority Scholarship	6,70,487.00	-	-	-	6,70,487.00	-
10	Top Class Education Scholarship for SC Students	22,31,513.00	-	47,57,543.00	50,16,641.00	19,72,415.00	-
11	Merit Cum Means Scholarship for Minorities	-	3,46,467.00	-	-	-	3,46,467.00
12	NBHM Fellowship	61,915.00	-	-	-	61,915.00	-
13	SPDC Scholarship	5,32,337.00	-	1,05,61,089.00	1,03,01,089.00	7,92,337.00	-
14	Inspire Fellowship	-	57,962.00	-	-	-	57,962.00
15	AIEE-CCB	-	-	-	-	-	-
16	Visweswarayya Scheme	2,20,536.00	-	23,15,803.00	22,39,790.00	2,96,549.00	-
17	Inspire Fellowship - Dr. Subrahmanian Nampoothiri	4,43,541.00	-	48,01,122.00	4,98,131.00	47,46,532.00	-
18	Inspire Fellowship - Dr. Mini Mol	8,06,879.00	-	4,47,853.00	6,33,302.00	6,21,430.00	-
19	Post Doctoral Fellowship - Dr. Robin	2,28,018.00	-	855.00	-	2,28,873.00	-
20	OBC Scholarship	-	-	-	-	-	-
	Kerala Government						
21	KSCSTE Fellowship	2,74,532.00	-	29,87,684.00	25,83,823.00	6,78,393.00	-
22	E- Grants (For Backward Castes)	39,42,664.50	-	2,90,14,323.00	2,76,75,034.00	52,81,953.50	-
23	Minorties Scholarship	-	41,595.00	-	-	-	41,595.00
	Other State Governments						
24	Andhra Pradesh	-	34,692.00	-	-	-	34,692.00
25	Bihar	2,19,432.00	-	1,31,000.00	1,31,000.00	2,19,432.00	-
26	Karnataka	1,080.00	-	-	-	1,080.00	-
27	Lakshadweep	-	-	-	-	-	-
28	Madhya Pradesh	55,375.00	-	-	-	55,375.00	-
29	Maharashtra	-	4,675.00	-	-	-	4,675.00
30	Tamil Nadu	1,000.00	-	-	-	1,000.00	-
31	Chattisgarh	-	-	77,640.00	-	77,640.00	-
	Others						
32	E- Remittance (other States)	28,56,863.00	-	44,91,517.00	38,45,315.00	35,03,065.00	-
33	Vishakhapatnam Steel Plant Scholarship	-	-	-	-	-	-
34	NIT - Kharakpur - GIAN	-	11,88,977.25	28,13,375.00	19,12,278.00	-	2,87,880.25
35	QIP - Poly Grant	38,51,250.00	-	70,16,500.00	33,82,000.00	74,85,750.00	-
	Total	2,87,31,311.25	5,93,598.00	8,61,25,532.00	7,46,79,471.00	4,04,65,252.50	8,81,478.25

SCHEDULE -3C UNUTILISED GRANTS FROM UGC, GOVT. OF INDIA AND STATE GOVERNMENTS

(Amount in Rupees)

Particulars	Current Year	Previous Year
A. Plan grants: Government of India		
Balance B/F	65,10,22,764.00	24,22,02,760.00
Add: Receipts during the year	3,76,00,000.00	77,02,00,000.00
Total (a)	68,86,22,764.00	1,01,24,02,760.00
Less: Refunds	-	-
Less: Utilized for Revenue Expenditure	-	-
Less: Utilized for Capital Expenditure	12,66,23,862.00	34,83,80,896.00
Total (b)	12,66,23,862.00	34,83,80,896.00
(Deficit)/Unitized carried forward (a-b)	56,19,98,902.00	66,40,21,864.00
B. Plan: UGC grants		
Balance B/F	-	-
Add: Receipts during the year	-	-
Total (c)	-	-
Less: Refunds	-	-
Less: Utilized for Revenue Expenditure	-	-
Less: Utilized for Capital Expenditure	-	-
Total (d)	-	-
Unitized carried forward (c-d)	-	-

Contd..

C. Non Plan: Government of India		
Balance B/F	(2,19,48,98,056.16)	(1,65,57,30,634.75)
Add: Receipts during the year	1,82,56,00,000.00	56,38,00,000.00
Total (e)	(36,92,98,056.16)	(1,09,19,30,634.75)
Less: Refunds	-	-
Less: Utilized for Revenue Expenditure	1,37,36,20,033.52	1,10,29,67,421.41
Less: Utilized for Capital Expenditure	-	-
Total (f)	1,37,36,20,033.52	1,10,29,67,421.41
(Deficit)/Unitized carried forward (e-f)	(1,74,29,18,089.68)	(2,19,48,98,056.16)
D. Non Plan: UGC grants		
Balance B/F	-	-
Add: Receipts during the year	-	-
Total (g)	-	-
Less: Refunds	-	-
Less: Utilized for Revenue Expenditure	-	-
Less: Utilized for Capital Expenditure	-	-
Total (h)	-	-
Unitized carried forward (g-h)	-	-
Grand Total (A+B+C+D)	(1,18,09,19,187.68)	(1,53,08,76,192.16)

SCHEDULE 4 –FIXED ASSETS

(Amount in Rupees)

S. No	DESCRIPTION	GROSS BLOCK				DEPRECIATION					NET BLOCK	
		Opening Balance 01/04/2018	Additions during the year	Deductions/ Reclassification during the year	Closing Balance	Dep.r ates	Depreciation Opening Balance	Depreciation for the year	Deductions/Adjustment	Total Depreciation	31-03-19	31-03-18
1	Land:											
	a) Freehold	7,69,000.00	-	-	7,69,000.00	Nil	-	-	-	-	7,69,000.00	7,69,000.00
	b) Leasehold	-	-	-	-	-	-	-	-	-	-	-
2	Buildings:											
	a) On Freehold Land											
	i. Residential	1,60,11,23,775.00	27,71,882.00	-	1,60,38,95,657.00	5%	48,15,34,096.55	5,60,48,780.97	-	53,75,82,877.52	1,06,63,12,779.48	1,11,95,89,678.45
	ii. Non Residential	92,68,87,981.00	24,74,999.00	58,683.00	92,93,04,297.00	10%	56,83,33,400.30	3,59,78,816.27	-	60,43,12,216.57	32,49,92,080.43	35,85,54,580.70
	b) On Leasehold Land	-	-	-	-	-	-	-	-	-	-	-
	c) Ownership Flats/ Premises	-	-	-	-	-	-	-	-	-	-	-
	d) Superstructures on Land not belonging to educational institutions	-	-	-	-	-	-	-	-	-	-	-
3	Tube wells & water supply	-	-	-	-	-	-	-	-	-	-	-
4	Sewerage & Drainage	-	-	-	-	-	-	-	-	-	-	-
5	Furniture & fixtures	11,55,37,609.00	45,16,054.00	1,88,682.00	11,98,64,981.00	10%	5,41,38,745.85	64,54,520.37	-	6,05,93,266.22	5,92,71,714.79	6,13,98,863.15
6	Electrical Installations	4,17,90,206.00	1,88,027.00	1,504.00	4,19,76,729.00	10%	2,56,30,738.75	16,27,192.53	-	2,72,57,931.28	1,47,18,797.73	1,61,59,467.25
7	Plants, machinery & equipment	78,41,44,681.00	6,23,50,083.00	-	84,64,94,764.00	15%	48,25,76,002.00	5,24,59,147.65	-	53,50,35,149.65	31,14,59,614.35	30,15,68,679.00
8	Office Equipment	47,09,771.00	45,960.00	-	47,55,731.00	15%	44,03,028.95	49,458.31	-	44,52,487.26	3,03,243.74	3,06,742.05
9	Computer & Peripherals	15,80,36,347.00	1,12,97,560.00	-	16,93,33,907.00	60%	14,53,67,988.80	1,21,98,945.42	-	15,75,66,934.22	1,17,66,972.78	1,26,68,358.20
10	Vehicles	63,51,166.00	6,47,743.00	-	69,98,909.00	15%	50,20,160.35	2,96,812.30	-	53,16,972.65	16,81,936.35	13,31,005.65
11	Library books	4,63,06,761.00	75,18,222.00	17,63,542.00	5,20,61,441.00	60%	4,54,78,820.20	22,23,168.48	-	4,77,01,988.68	43,59,452.32	8,27,940.80
	Total (A)	3,68,56,57,297.00	9,18,10,530.00	20,12,411.00	3,77,54,55,416.00		1,81,24,82,981.75	16,73,36,842.29	-	1,97,98,19,824.04	1,79,56,35,591.96	1,87,31,74,315.25
12	Capital Work-in-progress (B)	1,55,98,52,538.00	3,39,52,332.00	3,566.00	1,59,38,01,304.00		-	-	-	-	1,59,38,01,304.52	1,55,98,52,538.00
S. No	INTANGIBLE ASSETS	Opening Balance	Additions during the year	Deductions during the year	Closing Balance		Total Depreciation	Depreciation/ Amortizations for the year	Deductions/Adjustment	Total Depreciation	31/03/2019	31/03/2018
13	Computer Software	1,89,93,263.00	8,61,000.00	-	1,98,54,263.00	60%	1,60,22,324.70	20,40,862.98	-	1,80,63,187.68	17,91,075.32	29,70,937.30
14	E-journals	-	-	-	-	-	-	-	-	-	-	-
15	Patents and Copyrights	-	-	-	-	-	-	-	-	-	-	-
	Total (C)	1,89,93,263.00	8,61,000.00	-	1,98,54,263.00		1,60,22,324.70	20,40,862.98	-	1,80,63,187.68	17,91,075.32	29,70,937.30
	Grand Total (A+B+C)	5,26,45,03,098.00	12,66,23,862.00	20,15,977.00	5,38,91,10,983.00		1,82,85,05,307.45	16,93,77,705.27	-	1,99,78,83,012.72	3,39,12,27,971.80	3,43,59,97,790.55

SCHEDULE 5 - INVESTMENTS FROM EARMARKED/ENDOWMENT FUNDS

(Amount in Rupees)

Particulars	Current Year	Previous Year
Long term		
1. In Central Government Securities	-	-
2. In State Government Securities	-	-
3. Other approved Securities	-	-
4. Shares	-	-
5. Debentures and Bonds	-	-
6. Term Deposits with Banks	18,63,53,119.00	18,63,53,119.00
7. Others	-	-
Total (A)	18,63,53,119.00	18,63,53,119.00
Short term		
1. In Central Government Securities	-	-
2. In State Government Securities	-	-
3. Other approved Securities	-	-
4. Shares	-	-
5. Debentures and Bonds	-	-
6. Term Deposits with Banks	1,35,24,61,627.40	1,32,49,34,330.40
7. Others (Letter of Credit)	44,92,000.00	44,92,000.00
Total (B)	1,35,69,53,627.40	1,32,94,26,330.40
Grand Total (A+B)	1,54,33,06,746.40	1,51,57,79,449.40

SCHEDULE 6 - INVESTMENTS OTHERS

(Amount in Rupees)

Particulars	Current Year	Previous Year
1. In Central Government Securities	-	-
2. In State Government Securities	-	-
3. Other approved Securities	-	-
4. Shares	-	-
5. Debentures and Bonds	-	-
6. Others (to be specified)	-	-
Total	-	-

SCHEDULE 7 – CURRENT ASSETS

(Amount in Rupees)

Particulars	Current Year	Previous Year
1. Stock:		
a) Stores and Spares	26,90,029.00	26,90,029.00
b) Loose Tools		
c) Publications		
d) Laboratory chemicals, consumables and glass ware		
e) Stationary		
2. Sundry Debtors:		
a) Debts Outstanding for a period exceeding six months		-
b) Others		-
3. Cash in hand	7,90,488.50	7,30,898.50
(i) Cash in hand	2,13,542.50	2,13,542.50
(ii) Imprest	5,76,946.00	5,17,356.00
4. Cash in Bank		
a) With Scheduled Banks:		
In Current Accounts	-22,07,55,394.40	-20,54,50,361.50
In Term deposit Accounts	1,01,77,19,522.56	63,33,11,508.56
In Savings Accounts	1,35,85,17,074.99	1,08,67,19,629.63
In EEFC Accounts (USD)	-47,76,525.91	24,88,736.04
b) With non-Scheduled Banks:		
In Term deposit Accounts	-	-
In Savings Accounts	-	-
5. Post Office- Savings Accounts	-	-
6. Cash in Treasury	31,16,661.00	31,16,661.00
Total	2,15,73,01,855.74	1,52,36,07,101.23

SCHEDULE 8 – LOANS, ADVANCES & DEPOSITS

(Amount in Rupees)

Particulars	Current Year	Previous Year
1. Advances to employees: (Interest bearing)		
a) Salary		
b) Festival	(63,085.00)	(84,535.00)
c) LTC	22,15,835.00	21,13,436.00
d) Medical Advance	3,00,000.00	-
e) Travelling advance	20,34,998.67	13,05,185.67
f) Computer advance	(1,85,489.00)	(1,85,489.00)
g) Marriage advance	(66,184.00)	(66,184.00)
h) Other (Plan & Dept. advances)	1,06,29,684.50	1,65,72,979.50
2. Long Term Advances to employees: (Interest bearing)		
a) Vehicle loan	4,49,967.00	5,57,006.00
b) Home loan	(29,78,164.00)	(25,52,148.00)
c) Others (to be specified)	-	-
3. Advances and other amounts recoverable in cash or in kind or for value to be received:		
a) On Capital Account	50,52,00,468.00	17,44,56,468.00
b) To suppliers	(4,08,127.00)	(1,52,302.00)
c) Deficit Balance of Grants (Excess of expenditure)	1,14,21,85,426.00	1,14,21,85,426.00
d) TDS deducted on bank interest	1,81,05,784.00	24,45,237.00
d) Rent Receivable	24,08,084.00	11,48,090.00
e) Tuition Fee Receivable	1,82,45,946.00	-
4. Prepaid Expenses		
a) Insurance	-	36,36,047.00
b) Other expenses	-	-
5. Deposits		
a) Telephone	-	-
b) Lease Rent	-	-
c) Electricity	57,00,517.00	57,00,517.00
d) AICTE, if applicable	91,389.00	91,389.00
e) MCI, if applicable	-	-
f) Others (to be specified)	-	-
6. Income Accrued:		
a) On Investments from Earmarked/ Endowment Funds	98,82,875.00	8,18,37,510.00
b) On Investments- Term Deposits	12,10,88,707.92	6,65,64,444.92
c) On Security Deposit with KSEB	2,15,573.00	2,15,573.00
d) Others (includes income due unrealized-Rs.....)	-	-
7. Other - Current assets receivable from UGC/sponsored projects/Govt. grants		
a) Debit balances in Sponsored Projects	57,07,281.00	48,88,851.00
b) Debit balances in Sponsored Fellowships & Scholarships	8,81,478.25	5,93,598.00
c) Grants Receivable	-	-
d) Other receivables from UGC	-	-
8. Claims Receivable	-	-
Total	1,84,16,42,965.34	1,50,12,71,100.09

SCHEDULE 9 – ACADEMIC RECEIPTS

(Amount in Rupees)

Particulars	Current Year	Previous Year
FEES FROM STUDENTS		
Academic		
1. Tuition fee	32,78,84,347.41	36,04,95,170.48
2. Admission fee	5,24,500.00	5,25,500.00
3. Enrolment Fee	-	-
4. Library Admission fee	28,63,299.75	28,36,094.75
5. Laboratory fee	-	-
6. Art & Craft fee	-	-
7. Registration fee	32,05,407.00	33,25,375.00
8. Syllabus fee		
Total (A)	33,44,77,554.16	36,71,82,140.23
Examinations		
1. Admission test fee	-	-
2. Annual Examination fee	67,77,570.00	72,93,045.00
3. Mark sheet, certificate fee	3,31,526.00	4,19,224.00
4. Entrance examination fee	-	-
Total (B)	71,09,096.00	77,12,269.00
Other fees		
1. Identity card fee	51,840.00	26,950.00
2. Fine/Miscellaneous fee	15,82,725.00	16,25,700.00
3. Medical fee	-	-
4. Transportation fee	-	-
5. Convocation fee	-	-
Total (C)	16,34,565.00	16,52,650.00
Sale of publications		
1. Sale of Admission forms	6,39,075.00	7,71,825.00
2. Sale of syllabus and Question Paper, etc.	-	-
3. Sale of prospectus	-	-
Total (D)	6,39,075.00	7,71,825.00
Other Academic Receipts		
1. Registration fees for workshops, programmes	-	-
2. Registration fees (Academic Staff College)	-	-
Total (E)	-	-
GRAND TOTAL (A+B+C+D+E)	34,38,60,290.16	37,73,18,884.23

SCHEDULE 10 – GRANTS/DONATIONS/SUBSIDIES

(Amount in Rupees)

Particulars	Plan			Total Plan	Non Plan Govt. of India	Current Year Total	Previous Year Total
	Govt. of India	UGC					
		Plan	Specific Schemes				
Balance B/F	65,10,22,764.00	-	-	65,10,22,764.00	(2,19,48,98,056.16)	(1,54,38,75,292.16)	(1,42,65,26,974.75)
Add: Receipts during the year	3,76,00,000.00	-	-	3,76,00,000.00	1,82,56,00,000.00	1,86,32,00,000.00	1,33,40,00,000.00
Total	68,86,22,764.00			68,86,22,764.00	(36,92,98,056.16)	31,93,24,707.84	(9,25,26,974.75)
Less: Refund	-	-	-	-	-	-	-
Balance	68,86,22,764.00	-	-	68,86,22,764.00	(36,92,98,056.16)	31,93,24,707.84	(9,25,26,974.75)
Less: Utilised for Capital Expenditure	12,66,23,862.00	-	-	12,66,23,862.00	-	12,66,23,862.00	34,83,80,896.00
Balance	56,19,98,902.00			56,19,98,902.00	(36,92,98,056.16)	19,27,00,845.84	(44,09,07,870.75)
Less: Utilised for Revenue Expenditure	-	-	-	-	1,37,36,20,033.52	1,37,36,20,033.52	1,10,29,67,421.41
Balance C/F	56,19,98,902.00	-	-	56,19,98,902.00	(1,74,29,18,089.68)	(1,18,09,19,187.68)	(1,54,38,75,292.16)

SCHEDULE 11 -INCOME FROM INVESTMENTS

(Amount in Rupees)

Particulars	Earmarked/ Endowment Funds		Other investments	
	Current Year	Previous Year	Current Year	Previous Year
1) Interest				
a) On Govt. Securities	-	-	-	-
b) Other Bonds/Debentures	-	-	-	-
2) Interest on Term Deposits	2,68,02,147.00	5,25,77,065.35	3,17,19,528.00	2,32,12,819.00
3) Income accrued but not due on Term Deposits/ Interest bearing advances to employees	98,82,875.00	8,18,37,510.00	-	-
4) Interest on Savings Banks Accounts	31,692.00	(7,78,871.00)	-	-
5) Others	-	-	25,655.00	27,204.00
Total	3,67,16,714.00	13,36,35,704.35	3,17,45,183.00	2,32,40,023.00
Transferred to Earmarked/Endowment Funds	3,67,16,714.00	13,36,35,704.35	-	-
Balance	-	-	3,17,45,183.00	2,32,40,023.00

SCHEDULE 12 – INTEREST EARNED

(Amount in Rupees)

Particulars	Current Year	Previous Year
1. On Savings account with scheduled Banks	76,17,077.00	42,79,297.00
2. On Loans		
a. Employees/Staff	-	-
b. Others	-	-
3. On Debtors and other receivables	-	-
Total	76,17,077.00	42,79,297.00

SCHEDULE 13- OTHER INCOME

(Amount in Rupees)

Particulars	Current Year	Previous Year
A. Income from Land & Building		
1. Hostel Room Rent	16,90,925.00	29,27,454.00
2. License fee	55,77,162.35	46,83,735.00
3. Hire Charges of Auditorium/Play ground/Convention Centre, etc	-	-
4. Electricity charges recovered	1,68,42,589.00	1,19,30,810.00
5. Water charges recovered	1,03,630.00	2,15,005.00
6. Others	12,200.00	1,86,514.00
Total	2,42,26,506.35	1,99,43,518.00
B. Sale of Institute's publications	-	-
C. Income from holding events		
1. Gross Receipts from annual function/ sports carnival	-	-
Less: Direct expenditure incurred on the annual function/ sports carnival	-	-
2. Gross Receipts from fetes	-	-
Less: Direct expenditure incurred on the fetes	-	-
3. Gross Receipts for educational tours	-	-
Less: Direct expenditure incurred on the tours	-	-
4. Others (to be specified and separately disclosed)	-	-
Total	-	-
D. Others		
1. Income from consultancy	30,40,433.00	80,55,098.00
2. RTI fees	536.00	3,370.00
3. Income from Royalty	-	-
4. Sale of application form (recruitment)	-	-
5. Misc. receipts (Sale of tender form, waste paper, etc.)	19,65,528.00	25,94,632.34
6. Profit on Sale/disposal of Assets:		
a) Owned assets	-	-
b) Assets acquired out of grants, or received free of cost	-	-
7. Grants/Donations from Institutions, Welfare Bodies and International Organizations	-	-
8. Others	6,04,050.00	-
Total	56,10,547.00	1,06,53,100.34
GRAND TOTAL (A+B+C+D)	2,98,37,053.35	3,05,96,618.34

SCHEDULE 14 – PRIOR PERIOD INCOME

(Amount in Rupees)

Particulars	Current Year	Previous Year
1. Academic Receipts	-	-
2. Income from investments	-	-
3. Interest earned	-	-
4. Other Income	(2,13,34,989.00)	4,68,73,713.47
Total	(2,13,34,989.00)	4,68,73,713.47

SCHEDULE 15 – STAFF PAYMENTS & BENEFITS (ESTABLISHMENT EXPENSES)

(Amount in Rupees)

Particulars	Current Year			Previous Year		
	Plan	Non plan	Total	Plan	Non plan	Total
a) Salaries and Wages	-	70,58,97,958.00	70,58,97,958.00	-	49,63,59,789.00	49,63,59,789.00
b) Allowances and Bonus	-	1,09,19,785.00	1,09,19,785.00	-	92,67,764.00	92,67,764.00
c) Contribution to Provident Fund (CPF)	-	-	0.00	-	-	-
d) Contribution to Other Fund (Leave Salary & Pension contribution)	-	5,38,524.00	5,38,524.00	-	2,20,747.00	2,20,747.00
e) Contribution to New Pension Scheme	-	2,36,15,129.00	2,36,15,129.00	-	1,17,66,726.00	1,17,66,726.00
f) Staff Welfare Expenses	-	-	0.00	-	-	-
g) Retirement and Terminal Benefits	-	23,16,74,117.00	23,16,74,117.00	-	16,05,97,707.00	16,05,97,707.00
h) LTC facility	-	51,74,211.00	51,74,211.00	-	33,13,640.00	33,13,640.00
i) Medical facility	-	36,60,390.00	36,60,390.00	-	15,42,902.00	15,42,902.00
j) Children Education Allowance	-	35,66,161.00	35,66,161.00	-	35,34,021.00	35,34,021.00
k) Honorarium	-	14,72,044.00	14,72,044.00	-	12,23,422.00	12,23,422.00
l) Travelling Allowances	-	29,66,531.00	29,66,531.00	-	45,38,813.00	45,38,813.00
m) Others (Stipend to Trainees)	-	-	-	-	5,69,770.00	5,69,770.00
Total	-	98,94,84,850.00	98,94,84,850.00	-	69,29,35,301.00	69,29,35,301.00

SCHEDULE 15A – EMPLOYEES RETIREMENT AND TERMINAL BENEFITS

(Amount in Rupees)

Particulars	Pension	Gratuity	Leave Encashment	Total
Opening Balance as on	-	9,68,06,371.00	6,31,12,019.00	15,99,18,390.00
Addition: Capitalised value of Contributions received from other Organisations	-	-	-	-
Total (a)	-	9,68,06,371.00	6,31,12,019.00	15,99,18,390.00
Less: Actual payment during the year (b)	-	2,20,69,834.00	1,15,82,164.00	3,36,51,998.00
Balance available on 31/03/2018 (C)	-	7,47,36,537.00	5,15,29,855.00	12,62,66,392.00
Provision required as on 31/03/2018 as per Actuarial Valuation (d)	-	20,81,48,561.00	21,50,79,824.00	42,32,28,385.00
A. Provision to be made in current year (d-c)	-	13,34,12,024.00	16,35,49,969.00	29,69,61,993.00
B. Contribution to Pension scheme	-	-	-	-
C. Medical Reimbursement to Retired Employees	-	-	-	-
D. Travel to Hometown on Retirement	-	-	-	-
E. Deposit Linked Insurance Payment	-	-	-	-
Total (A+B+C+D+E)	-	13,34,12,024.00	16,35,49,969.00	29,69,61,993.00

SCHEDULE 16 – ACADEMIC EXPENSES

(Amount in Rupees)

Particulars	Current Year			Previous Year		
	Plan	Non plan	Total	Plan	Non plan	Total
a) Laboratory expenses	-	-	-	-	-	-
b) Field work/Participation in Conferences	-	1,82,776.00	1,82,776.00	-	13,310.00	13,310.00
c) Expenses on Seminars/Workshops	-		-	-		-
d) Payment to visiting faculty	-		-	-		-
e) Examination	-		-	-		-
f) Student Welfare expenses	-		-	-		-
g) Admission expenses	-	-	-	-	-	-
h) Convocation expenses	-	15,92,482.00	15,92,482.00	-	22,19,241.00	22,19,241.00
i) Publications	-	-	-	-	-	-
j) Stipend/means-cum-merit scholarship	-	19,09,14,929.00	19,09,14,929.00	-	20,17,49,671.00	20,17,49,671.00
k) Books, periodicals, journals and e-journals	-	4,39,22,362.00	4,39,22,362.00	-	3,64,07,211.00	3,64,07,211.00
l) Others (FDP,R&D,Medals & prizes)	-	97,97,903.00	97,97,903.00	-	84,26,004.00	84,26,004.00
Total	-	24,64,10,452.00	24,64,10,452.00	-	24,88,15,437.00	24,88,15,437.00

SCHEDULE 17 – ADMINISTRATIVE AND GENERAL EXPENSES

(Amount in Rupees)

Particulars	Current Year			Previous Year		
	Plan	Non plan	Total	Plan	Non plan	Total
A) Infrastructure						
a) Electricity and power	-	4,10,89,527.00	4,10,89,527.00	-	3,92,20,862.00	3,92,20,862.00
b) Water charges	-	-	-	-	-	-
c) Insurance	-	-	-	-	-	-
d) Rent, Rates and Taxes (including property tax)	-	3,54,816.00	3,54,816.00	-	-	-
B) Communication						
e) Postage & telegram	-	3,10,727.00	3,10,727.00	-	3,60,759.00	3,60,759.00
f) Telephone, Fax and Internet Charges	-	6,23,535.00	6,23,535.00	-	5,21,349.00	5,21,349.00
C) Others						
g) Printing and Stationary	-	15,09,191.00	15,09,191.00	-	15,65,999.00	15,65,999.00
h) Traveling and Conveyance Expenses	-	-	-	-	-	-
i) Hospitality	-	16,28,254.00	16,28,254.00	-	30,59,853.00	30,59,853.00
j) Auditors Remuneration	-	-	0.00	-	3,79,545.00	3,79,545.00
k) Professional Charges	-	-	-	-	-	-
l) Advertisement and Publicity	-	-2,83,137.00	-2,83,137.00	-	43,86,090.00	43,86,090.00
m) Magazines & Journals	-	-	-	-	-	-
n) Legal charges	-	6,01,591.00	6,01,591.00	-	16,88,883.00	16,88,883.00
o) Hospital contingencies	-	24,21,119.00	24,21,119.00	-	26,66,395.00	26,66,395.00
p) Department Operating Charges (DOC)	-	1,86,68,914.00	1,86,68,914.00	-	1,20,50,270.00	1,20,50,270.00
q) Others (OE&Misc.,T&P,Hindi translation)	-	28,95,957.00	28,95,957.00	-	1,27,37,390.00	1,27,37,390.00
Total	-	6,98,20,494.00	6,98,20,494.00	-	7,86,37,395.00	7,86,37,395.00

SCHEDULE 18 – TRANSPORTATION EXPENSES

(Amount in Rupees)

Particulars	Current Year			Previous Year		
	Plan	Non plan	Total	Plan	Non plan	Total
1. Vehicles (owned by educational institution)						
a) Running expenses	-	13,23,633.00	13,23,633.00	-	12,25,141.41	12,25,141.41
b) Repairs & maintenance	-	-	-	-	-	-
c) Insurance expenses	-	1,81,627.00	1,81,627.00	-	-	-
2. Vehicles taken on rent/lease						
a) Rent/lease expenses	-	-	-	-	5,29,405.00	5,29,405.00
3. Vehicle (Taxi) hiring expenses	-	-	-	-	-	-
Total	-	15,05,260.00	15,05,260.00	-	17,54,546.41	17,54,546.41

SCHEDULE 19 – REPAIRS & MAINTENANCE

(Amount in Rupees)

Particulars	Current Year			Previous Year		
	Plan	Non plan	Total	Plan	Non plan	Total
a) Building						
1. Institute building	-	72,45,456.00	72,45,456.00	-	1,01,87,154.00	1,01,87,154.00
2. Guest house	-	2,20,485.00	2,20,485.00	-	2,38,085.00	2,38,085.00
3. Hostels	-	5,20,122.00	5,20,122.00	-	7,21,906.00	7,21,906.00
4. Pump & filter house	-	5,22,784.00	5,22,784.00	-	3,29,612.00	3,29,612.00
5. Quarters	-	4,40,621.00	4,40,621.00	-	4,88,451.00	4,88,451.00
b) Furniture & Fixture	-	-	-	-	1,87,925.00	1,87,925.00
c) Plant & Machinery (Major)	-	23,59,183.00	23,59,183.00	-	22,64,689.00	22,64,689.00
d) Office Equipments	-	-	-	-	-	-
e) Computers	-	3,47,141.00	3,47,141.00	-	3,01,297.00	3,01,297.00
f) Laboratory & Scientific equipments (Minor)	-	-56,621.00	-56,621.00	-	5,38,822.00	5,38,822.00
g) Cleaning Material & Services	-	-	-	-	-	-
h) Book binding charges	-	-	-	-	-	-
i) Gardening	-	-	-	-	-	-
f) Others						
1. Campus	-	5,31,96,064.00	5,31,96,064.00	-	5,94,65,964.00	5,94,65,964.00
2. Water supply	-	9,74,371.00	9,74,371.00	-	51,82,582.00	51,82,582.00
3. Electrical installations	-	4,11,409.00	4,11,409.00	-	3,73,432.00	3,73,432.00
4. Play fields	-	-	-	-	3,72,847.00	3,72,847.00
5. Campus Road	-	64,606.00	64,606.00	-	33,471.00	33,471.00
7. Staff Club	-	-	-	-	-	-
Total	-	6,62,45,621.00	6,62,45,621.00	-	8,06,86,237.00	8,06,86,237.00

SCHEDULE 20 – FINANCE COSTS

(Amount in Rupees)

Particulars	Current Year			Previous Year		
	Plan	Non plan	Total	Plan	Non plan	Total
a) Bank charges	-	1,53,356.52	1,53,356.52	-	1,38,505.00	1,38,505.00
b) Others (specify)	-	-	-	-	-	-
Total	-	1,53,356.52	1,53,356.52	-	1,38,505.00	1,38,505.00

SCHEDULE 21 – OTHER EXPENSES

(Amount in Rupees)

Particulars	Current Year			Previous Year		
	Plan	Non plan	Total	Plan	Non plan	Total
a) Provision for Bad and Doubtful Debts/Advances	-	-	-	-	-	-
b) Irrecoverable Balances Written-off	-	-	-	-	-	-
c) Grants/Subsidies to other institutions/organizations	-	-	-	-	-	-
d) Others-Actuarial Valuation cost components						
i) Interest Costs	-	2,87,49,926.00	2,87,49,926.00	-	2,09,10,564.00	2,09,10,564.00
ii) Current Service Costs	-	2,08,49,102.00	2,08,49,102.00	-	2,55,30,254.00	2,55,30,254.00
iii) Net Actuarial Gain	-	(19,50,226.00)	(19,50,226.00)	-	1,24,42,581.00	1,24,42,581.00
	-	-	-	-	-	-
Total	-	4,76,48,802.00	4,76,48,802.00	-	5,88,83,399.00	5,88,83,399.00

SCHEDULE 22 – PRIOR PERIOD EXPENSES

(Amount in Rupees)

Particulars	Current Year			Previous Year		
	Plan	Non plan	Total	Plan	Non plan	Total
1. Establishment expenses	-	-	-	-	-	-
2. Academic expenses	-	-	-	-	-	-
3. Administrative expenses	-	-	-	-	-	-
4. Transportation expenses	-	-	-	-	-	-
5. Repairs and Maintenance	-	-	-	-	-	-
6. Others	-	2,44,794.00	2,44,794.00	-	4,00,97,661.00	4,00,97,661.00
Total	-	2,44,794.00	2,44,794.00	-	4,00,97,661.00	4,00,97,661.00

NATIONAL INSTITUTE OF TECHNOLOGY, CALICUT
Cash Flow Statement for the year ended 31.03.2019

Cash Flow from Operating Activities:	Amount(Rs.)
Increase/(Decrease) in Current Assets	34,03,71,865.25
Increase/(Decrease) in Current Liabilities	15,14,60,389.25
Net Cash from Operating Activities	(18,89,11,476.00)
Cash Flow from Investing Activities:	
(Purchase)/Sale of fixed assets	4,47,69,819.00
(Purchase)/Sale of investments	(2,75,27,297.00)
Interest received	-
Dividend received	-
Net Cash from Investing Activities	1,72,42,522.00

Cash Flow from Financing Activities:	Amount (Rs.)
Additions to general fund during the year	67,29,93,342.99
Grants/funds in nature of founders'/promoters' contribution	-
Grants/funds related to assets not requiring fulfillment of any obligation	-
Endowment fund (principal sum)	13,23,70,366.00
Proceeds from long term borrowings	-
(Repayment of long-term borrowings)	-
Interest paid on loans	-
Net Cash Flow From Financing Activities	80,53,63,708.99
Net Increase /(Decrease) in Cash equivalents	63,36,94,754.99
Cash and Cash equivalent at the beginning of the period	1,52,09,17,072.23
Cash and Cash equivalent at the end of the period	2,15,46,11,826.74

Cash and Cash equivalent represented by:-	Amount (Rs.)
Cash in Hand	7,90,488.50
Cash in Bank	
- In Current Accounts	(22,07,55,394.40)
- In Savings Accounts	1,35,85,17,074.99
- In Term Deposits	1,01,77,19,522.56
- EEFC Account	(47,76,525.91)
Cash in Treasury	31,16,661.00
Total	2,15,46,11,826.74

NATIONAL INSTITUTE OF TECHNOLOGY, CALICUT
RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR 2018-19

(Amount in Rupees)

RECEIPTS	Sch No.	Current Year	Previous Year	PAYMENTS	Sch No.	Current Year	Previous Year
I. Opening Balances				I. Expenses			
a) Cash in Hand		7,30,898.50	5,84,199.50	a) Establishment expenses	37	1,00,62,02,863.00	71,19,57,979.00
b) Bank balances				b) Academic expenses	38	24,27,74,405.00	24,88,15,437.00
i) In Current accounts		(20,54,50,361.50)	(13,20,41,725.65)	c) Administrative expenses	39	5,43,92,899.00	7,86,37,395.00
ii) In Savings accounts		1,08,67,19,629.63	61,65,70,371.11	d) Transportation expenses	40	15,05,260.00	17,54,546.41
iii) In Deposit accounts		2,14,90,90,957.96	2,06,79,59,138.86	e) Repairs and Maintenance	41	6,75,07,362.00	8,06,86,237.00
iv) EEFC Accounts		24,88,736.04	3,98,62,998.79	f) Finance Costs		1,54,884.52	1,38,505.00
c) Treasury		31,16,661.00	31,16,661.00	g) Prior period expenses		-	3,12,36,681.00
II. Grants received				II. Payment against earmarked funds	34	12,02,03,776.00	12,30,47,440.00
a) From GOI	25	1,86,32,00,000.00	1,33,40,00,000.00				
b) From State Govt.							
c) From Other sources							
III. Academic Receipts	9	34,38,60,290.16	37,73,18,884.23	III. Payment against sponsored Projects/Schemes	3A	3,94,88,026.00	4,89,36,992.00
IV. Receipts against Earmarked Endowment Funds	26	21,58,57,428.00	21,89,92,787.00	IV. Payment against sponsored Fellowships/Scholarships	3B	7,46,79,471.00	8,52,30,140.25
V. Receipts against Sponsored Projects/Schemes	3A	5,90,70,050.00	6,52,58,220.00	V. Investments and Deposits made			
				a) Out of Earmarked/ Endowment funds		-	-
				b) Out of own funds		-	-
VI. Receipts against Sponsored Fellowships and Scholarships	3B	8,61,25,532.00	9,60,89,089.00	VI. Term Deposits with Scheduled Banks		-	-
VII. Income on Investments from				VII. Expenditure on fixed Assets and Capital Works-in-Progress			
a) Earmarked/Endowment funds	27	1,27,88,314.00	(9,40,55,607.57)	a) Fixed Assets		9,06,59,119.00	9,09,79,188.00
b) Other investments				b) Capital Work-in-Progress		3,39,48,766.00	7,26,19,541.00
VIII. Interest received on				VIII. Other payments including Statutory payments	42	16,68,80,420.00	37,07,60,005.41
a) Bank Deposits	28	4,82,42,825.00	6,84,64,389.10				
b) Loans and Advances							
c) Savings Bank Accounts	29	1,88,71,138.00	19,19,454.00				
IX. Investments encashed		-	-	IX. Refund of Grants			
X. Term Deposits with Scheduled Banks encashed		-	-	X. Deposits and Advances repaid	35	93,69,151.00	87,39,594.00
XI. Other income (Including Prior Period Income)	30	(43,10,901.65)	4,15,76,266.13	XI. Deposits made (Cash Security Deposit with KSEB)			
XII. Deposits and Advances Received	31	5,36,27,565.00	1,01,48,302.20	XIII. Loans and Advances given	36	43,38,46,798.00	2,08,35,788.00
XIII. Loans and Advances given repaid	32	10,85,75,355.00	1,91,05,065.00	XII. Closing balances			
XIV. Miscellaneous Receipts including Statutory receipts	33	19,69,27,657.00	27,62,26,848.50	a) Cash in Hand		7,90,488.50	7,30,898.50
XV. Any other receipts				b) Bank balances			
				i) In Current accounts	7	(22,07,55,394.40)	(20,54,50,361.50)
				ii) In Savings accounts		1,35,85,17,074.99	1,08,67,19,629.63
				iii) In Deposit accounts		2,56,10,26,268.96	2,14,90,90,957.96
				iv) EEFC Accounts		(47,76,525.91)	24,88,736.04
				c) Treasury		31,16,661.00	31,16,661.00
TOTAL		6,03,95,31,774.14	5,01,10,95,341.20	TOTAL		6,03,95,31,774.14	5,01,10,95,341.20

NATIONAL INSTITUTE OF TECHNOLOGY CALICUT

SCHEDULES FORMING PART OF RECEIPTS & PAYMENTS ACCOUNT FOR THE YEAR 2018-19

25. GRANTS RECEIVED

(Amount in Rupees)

Particulars	Current Year	Previous Year
1. Plan	3,76,00,000.00	77,02,00,000.00
2. Non Plan	1,82,56,00,000.00	56,38,00,000.00
	1,86,32,00,000.00	1,33,40,00,000.00
Less: Current year Grants Receivable		
Plan	-	-
Non Plan	-	-
Add: Previous year Grants received		
Plan	-	-
Non Plan	-	-
Net Receipt	1,86,32,00,000.00	1,33,40,00,000.00

26. RECEIPTS AGAINST EARMARKED ENDOWMENT FUNDS

(Amount in Rupees)

Particulars	Current Year	Previous Year
1. TEQIP I	71,743.00	-
2. TEQIP II	-1,01,93,298.00	1,40,75,653.00
3. TEQIP III	61,12,608.00	10,01,488.00
4. GPF	4,76,56,579.00	3,92,92,457.00
5. CPF	4,89,19,730.00	2,26,81,321.00
6. FBS	-	-
7. Growth Fund	9,09,51,628.00	11,89,35,909.00
8. Students Fund	1,69,38,261.00	1,29,70,216.00
9. TBI	93,52,647.00	91,30,591.00
10. TBI II	48,56,194.00	-
10. TEQIP II modernisation fund	5,57,824.00	-
11. Teqip reserves	-	-
12. Gymkhana	2,46,400.00	3,57,152.00
13. HWD	3,87,112.00	5,48,000.00
Less: non cash items	-	-
Net Receipt	21,58,57,428.00	21,89,92,787.00

27. INCOME ON INVESTMENTS EARMARKED FUNDS

(Amount in Rupees)

Particulars	Current Year	Previous Year
1. TEQIP I	-	-
2. TEQIP II	-	-
3. TEQIP III	-	-
4. GPF	45,95,974.00	2,12,63,327.72
5. CPF	12,771.00	3,38,741.63
6. FBS	-	0.00
7. Growth Fund	72,92,541.00	3,05,31,465.00
8. Students Fund	1,99,847.00	1,12,524.00
9. TBI	6,87,181.00	3,31,007.00
10. TEQIP II modernisation fund	-	-
11. Teqip reserves	-	-
12. Gymkhana	-	-
13. HWD	-	-
	1,27,88,314.00	5,25,77,065.35
Add: Interest accrued in the previous year and realised in the current year		
Less: Interest accrued not yet received	-	14,66,32,672.92
Net Receipt	1,27,88,314.00	-9,40,55,607.57

28. INTEREST ON BANK DEPOSITS

(Amount in Rupees)

Particulars	Current Year	Previous Year
1. Interest on fixed deposit of Plan Fund	1,18,23,607.00	4,52,51,570.10
2. Interest on other Fixed Deposits	3,17,19,528.00	2,32,12,819.00
	4,35,43,135.00	6,84,64,389.10
Add: Interest accrued in the previous year and realised in the current year	15,12,02,083.00	
Less: Interest accrued not yet received	14,65,02,393.00	-
Net Receipt	4,82,42,825.00	6,84,64,389.10

29. INTEREST ON SAVINGS BANK DEPOSITS

(Amount in Rupees)

Particulars	Current Year	Previous Year
1. Interest on SB A/c of Plan Fund	-1,26,04,217.00	-15,80,972.00
2. Interest on other SB Accounts	3,14,75,355.00	42,79,297.00
3. Interest on SB Accounts of Earmarked Funds	-	-7,78,871.00
	1,88,71,138.00	19,19,454.00
Less: Interest accrued not yet received		-
Net Receipt	1,88,71,138.00	19,19,454.00

30. OTHER INCOME INCLUDING PRIOR PERIOD INCOME

(Amount in Rupees)

Particulars	Current Year	Previous Year
1. Prior period Income	-	2,68,73,713.47
2. Other Income	2,98,37,053.35	3,05,96,618.34
3. Interest on cash security deposit with KSEB	25,655.00	27,204.00
	2,98,62,708.35	5,74,97,535.81
Add: Interest accrued on cash security deposit with KSEB in the previous year realised		-
Less: Non Cash Items	3,41,73,610.00	11,48,890.00
Net Receipt	-43,10,901.65	5,63,48,645.81

31. DEPOSITS AND ADVANCES RECEIVED

(Amount in Rupees)

Particulars	Current Year	Previous Year
1. EMD	45,46,981.00	58,57,166.20
2. Security Deposit & Bank Guarantee	4,63,29,584.00	15,83,636.00
3. Caution Deposit	27,51,000.00	27,07,500.00
Net Receipt	5,36,27,565.00	1,01,48,302.20

32. LOANS AND ADVANCES GIVEN RECEIVED BACK

(Amount in Rupees)

Particulars	Current Year	Previous Year
1. Advances given to employees	2,55,75,004.00	1,91,00,309.00
2. Other Advances	8,30,00,351.00	4,756.00
Net Receipt	10,85,75,355.00	1,91,05,065.00

33. MISCELLANEOUS RECEIPTS INCLUDING STATUTORY RECEIPTS

(Amount in Rupees)

Particulars	Current Year	Previous Year
1. Statutory Receipts	11,38,68,168.00	11,40,739.50
2. Other Miscellaneous receipts - Sch 3	8,30,59,489.00	23,83,84,759.00
3. All other misc receipts		3,67,01,350.00
Net Receipt	19,69,27,657.00	27,62,26,848.50

NATIONAL INSTITUTE OF TECHNOLOGY CALICUT

SCHEDULES FORMING PART OF RECEIPTS & PAYMENTS ACCOUNT FOR THE YEAR 2018-19

34. PAYMENTS AGAINST EARMARKED ENDOWMENT FUNDS

(Amount in Rupees)

Particulars	Current Year	Previous Year
1. TEQIP I	-	1,89,500.00
2. TEQIP II	(68,31,194.00)	1,88,20,730.00
3. TEQIP III	67,40,591.00	10,01,488.00
4. GPF	5,23,14,004.00	3,89,56,744.00
5. CPF	3,95,92,676.00	2,40,65,606.00
6. FBS	-	-
7. Growth Fund	1,90,025.00	3,75,879.00
8. Students Fund	1,72,51,212.00	1,08,72,971.00
9. TBI	1,04,61,410.00	1,37,06,884.00
10. TEQIP II modernisation fund	-	1,38,62,657.00
11. Teqip reserves	-	-
12. Gymkhana	1,26,567.00	4,74,712.00
13. HWD	3,58,485.00	7,20,269.00
Net Payment	12,02,03,776.00	12,30,47,440.00

35. DEPOSITS REPAID

(Amount in Rupees)

Particulars	Current Year	Previous Year
1. EMD	65,43,056.00	77,22,866.00
2. Security Deposit	28,26,095.00	8,54,258.00
3. Caution Deposit	-	1,62,470.00
Net Payment	93,69,151.00	87,39,594.00

36. LOANS AND ADVANCES GIVEN

(Amount in Rupees)

Particulars	Current Year	Previous Year
1. Advances given to employees	2,01,02,798.00	1,86,18,780.00
2. Other Advances	41,37,44,000.00	22,17,008.00
Net Payment	43,38,46,798.00	2,08,35,788.00

37. ESTABLISHMENT EXPENSES

(Amount in Rupees)

Particulars	Current Year	Previous Year
Expense as per the Income and Expenditure Account	98,94,84,850.00	69,29,35,301.00
Less: Establishment expenses payable at the year end	22,15,759.00	1,90,22,678.00
Add: Establishment Expenses of previous year paid in the current year	1,89,33,772.00	-
Net Payment	1,00,62,02,863.00	71,19,57,979.00

38. ACADEMIC EXPENSES

(Amount in Rupees)

Particulars	Current Year	Previous Year
Expense as per the Income and Expenditure Account	24,64,10,452.00	24,88,15,437.00
Less: Academic expenses payable at the year end	36,36,047.00	-
Add: Academic Expenses of previous year paid in the current year	-	-
Net Payment	24,27,74,405.00	24,88,15,437.00

39. ADMINISTRATIVE EXPENSES

(Amount in Rupees)

Particulars	Current Year	Previous Year
Expense as per the Income and Expenditure Account	6,98,20,494.00	7,86,37,395.00
Less: Administrative Expenses payable at the year end	2,30,83,480.00	-
Add: Academic Expenses of previous year paid in the current year	76,55,885.00	-
Net Payment	5,43,92,899.00	7,86,37,395.00

40. TRANSPORTATION EXPENSES

(Amount in Rupees)

Particulars	Current Year	Previous Year
Expense as per the Income and Expenditure Account	15,05,260.00	17,54,546.41
Less: Transportation expense payable at the year end	-	-
Add: Transportation expense of previous year paid in the current year	-	-
Net Payment	15,05,260.00	17,54,546.41

41. REPAIRS AND MAINTENANCE

(Amount in Rupees)

Particulars	Current Year	Previous Year
Expense as per the Income and Expenditure Account	6,62,45,621.00	8,06,86,237.00
Less: Repairs & Maintenance expense payable at the year end	3,56,03,097.00	-
Add: Repairs & Maintenance expense of previous year paid in the current year	3,68,64,838.00	-
Net Payment	6,75,07,362.00	8,06,86,237.00

42. OTHER PAYMENTS INCLUDING STATUTORY PAYMENTS

(Amount in Rupees)

Particulars	Current Year	Previous Year
1. Statutory Payments	11,33,15,554.00	6,24,34,558.00
2. Other Payments	5,35,64,866.00	30,83,25,390.41
Total	16,68,80,420.00	37,07,59,948.41

NATIONAL INSTITUTE OF TECHNOLOGY CALICUT
PROVIDENT FUND ACCOUNT
BALANCE SHEET AS AT MARCH 31,2019

Amount	Liabilities	Amount	Amount	Assets	Amount
	GPF				
	Opening Balance	10,91,78,257.00		Investment	31,31,94,685.00
	Less: Subscription for March 2017			Interest accrued as on 31/03/2018	
				Subscription due for March 2018	
	Add: Subscription in the year	4,76,56,579.00		GPF	
	Add: Subscription for March 2018			CPF	
	Add: Interest credited			UC due to CPF	
	Less: Advance/Withdrawal	5,23,13,384.00		NPS II	
	Closing balance		10,45,21,452.00		
				Tax recovered from interest on	
	CPF			Investments	
	Opening Balance	44,59,441.00		pending refund from Income Tax Dept.	
	Less: Subscription for March 2017				
	Add: Subscription in the year	4,89,19,730.00		Cash at Bank	
	Add: Subscription for March 2018			SBI Branch	
	Add: Interest credited	1,80,94,448.65		Others	-
	Less: Advance/Withdrawal	3,95,92,676.00			
	Closing balance		3,18,80,943.65		
	University Contribution (CPF)				
	Opening Balance				
	Less: Subscription for March 2017				
	Add: Subscription in the year				
	Add: Subscription for March 2018				
	Add: Interest credited				
	Less: Advance/Withdrawal				
	Closing balance				
	NPS Tier-II Account				
	Opening Balance				
	Less: Subscription for March 2017				
	Add: Subscription in the year				
	Add: Subscription for March 2018				
	Add: Interest credited				
	Less: Advance/Withdrawal				
	Closing balance				
	Interest Reserve				
	Opening Balance	16,61,61,935.35			
	Add: Excess of income over expenditure	1,06,30,354.00	17,67,92,289.35		
	Closing Balance				
	Total		31,31,94,685.00	Total	31,31,94,685.00

NATIONAL INSTITUTE OF TECHNOLOGY CALICUT
PROVIDENT FUND ACCOUNT
INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31/03/2019

(Amount in Rs.)

Expenditure	Amount	Income	Amount
Interest credited to:			
GPF account	-	Interest earned on Investment Add: Interest accrued on 03/18	1,06,30,354.00
CPF account	-	Add: Tax recovered on interest- Refund to be obtained	
University Contribution (CPF)	-	Adjustment (Prior period income)	-
NPS Tier-II account	-		
Excess of Income over Expenditure	1,06,30,354.00	Excess of Expenditure over Income	
Total	1,06,30,354	Total	1,06,30,354

NATIONAL INSTITUTE OF TECHNOLOGY CALICUT
PROVIDENT FUND ACCOUNT
RECEIPTS AND PAYMENTS ACCOUNTS FOR 2018-19

(Amount in Rs.)

Receipts	Amount	Payments	Amount
Opening Balance:		GPF Adv/Withdrawal	9,30,58,004.00
Savings Bank Accounts	4,81,954.00	CPF Adv/Withdrawal	6,59,49,926.00
Term Deposits	27,08,03,256.00	NPS Tier II	-
MOD Balances	2,78,24,468.00	University Contribution Withdrawal	-
GPF Subscription	9,23,85,096.00		
CPF Subscription	6,38,74,474.00	Investments during the year	-
CPF University Contribution	-	Others	-
NPS Tier II account	-	Closing Balance	
Investments encashed	-	Savings Bank Accounts	(22,66,406.00)
Interest received	-	Term Deposits	27,86,22,271.00
Other receipts	1,68,33,367.00	MOD Balances	3,68,38,820.00
Total	47,22,02,615.00	Total	47,22,02,615.00

Schedule 23

Significant Accounting Policies

1. Basis for preparation of accounts

The annual financial statements have been prepared and presented under historical cost convention on accrual basis in accordance with the Indian Generally Accepted Accounting Principles (GAAP), which comprises of Accounting Standards issued by the Institute of Chartered Accountants of India and other guidelines notified by Central Government from time to time. The financial statements for the year ended 31 March 2019 have been prepared and presented in the **Revised Format of Accounts of Central Educational Institutions**, as approved by the Comptroller & Auditor General of India and notified by the Ministry of Human Resource Development, Government of India *vide* letter no. 29-4/2012-IFD dated 17 April 2015. The figures for previous financial year have been regrouped and recast, wherever necessary, for conformity with the revised format.

2. Use of estimates

The preparation of the financial statements in conformity with Indian GAAP requires making estimates and assumptions that affects the reported balances of assets and liabilities and disclosures relating to contingent liabilities as at the date of the financial statements and reported amounts of income and expenses during the period. Examples of such estimates include computation of percentage of completion of Capital Work-in-progress, which requires the Institute to estimate the efforts or costs expended to date as a proportion of the total efforts or costs to be expended, future obligations under employee retirement benefit plans and the useful lives of tangible and intangible assets. Accounting estimates could change over a period of time and actual results could differ from those estimates. Appropriate changes in estimates are made as the management becomes aware of changes in circumstances surrounding the estimates. Changes in estimates are reflected in the financial statements in the period in which changes are made and, if material, their effects are disclosed in the notes to the financial statements.

3. Revenue recognition

Revenue is recognized to the extent that it is probable that the economic benefits will flow to the Institute and the revenue can be reliably measured.

Revenue from Plan (Non-recurring) grants is accounted on accrual basis and Plan (Non-recurring) grant is earmarked for the acquisition of the fixed assets and capital works. Income received on these funds by way of interest on Term Deposits and Savings Bank accounts in banks are added to the Capital Fund. Interest received on the Term Deposits held as security for opening Letters of Credit for import of fixed assets is accounted as addition to the respective earmarked funds.

Non-Plan (Recurring) grant received from Government of India is recognized as income on accrual basis.

Fees received from students are accounted on cash basis. Interest on Term Deposits, Savings Bank accounts, income from land and buildings and sale of application forms, tender forms, RTI fees, breakage charges and grants from other bodies are accounted on accrual basis. Interest on advances made to employees are calculated on reducing balances of loan and recognized on accrual basis.

Electricity charges recovered in respect of staff quarters and hostels are accounted as revenue and subsequently adjusted/ netted off against the electricity charges of the Institute as a whole.

4. Government grants-in-aid

The Institute is funded by grants-in-aid received from Ministry of Human Resource Development, Government of India for meeting its annual Plan (Non-recurring) and Non-Plan (Recurring) expenditure. Government grants and other grants are accounted on realization basis. However, where a sanction order for release of grant pertaining to the financial year is received before 31 March

and the grant is actually received in the next financial year, the grant is accounted on accrual basis and an equal amount is shown as grants receivable under Loans, Advances and Deposits in Balance Sheet. Any grant becoming refundable for non-fulfillment of certain conditions for obtaining grants is treated as an Extra-ordinary Item and separately disclosed in financial statements.

Capital grants received from Government, which are related to acquisition of fixed assets, are treated as deferred income and recognized in the Income and Expenditure Account on systematic and rational basis over the useful life of the assets, *i.e.*, Capital grants are allocated to Income over a period and depreciation charged in proportion thereto.

Grants other than Capital grants from Government are treated as income of the Institute.

5. Inventory

Stationery, consumables, stores and spares are valued at cost or net realizable value, whichever is less. Net realizable value is the estimated selling price in the ordinary course of business less estimated cost necessary to make the sale.

6. Tangible assets and Capital Work-in-progress

Fixed assets are stated at historical cost less accumulated depreciation and impairment, if any. The cost comprises cost of acquisition including inward freight, duties and taxes and incidental and direct expenses related to acquisition, installation and commissioning. Security Deposit for performance of warranty services are included in the cost of assets only after the expiry of the warranty period and after a formal claim is made by the respective suppliers to release the security deposit.

Gifted/ donated assets are valued at declared value, where available; if unavailable, the value is estimated based on the present market value adjusted with reference to the physical condition of the asset.

Books received as gifts are valued at the selling price printed on books and where the price is unavailable; the value is based on assessment.

Assets created out of Earmarked funds and funds of sponsored projects, where the ownership of such assets vests in the Institute, are treated as fixed assets of the Institute.

Capital Work-in-progress comprises of the cost of fixed assets that are not yet ready for their intended use at the reporting date. Advances paid to C.P.W.D. towards completion of works/ fixed assets are shown as addition to capital work-in-progress.

Subsequent expenditure related to an item of fixed assets is added to its book value only if it increases the future benefits from the existing asset beyond its previously assessed standard of performance. All other expenses on existing fixed assets, including day-to-day repairs and maintenance and the cost of replacing parts, are charged to revenue for the period during which such expenses are incurred.

7. Intangible assets

Research costs are expensed as incurred. Development costs are expensed as incurred unless the technical and commercial feasibility of the project is demonstrated, future economic benefits are probable, the Institute has an intention and ability to complete the project, use it or sell off the project findings and the costs can be measured reliably. Expenditure incurred on obtaining patents is not shown as Intangible assets and charged to Revenue.

Electronic Journals (e-Journals) are expensed every year considering the value of benefit derived and the cost incurred therefore. The payment for e-Journals towards subscription normally expires in one year and does not qualify as Intangible assets.

Expenditure on acquisition of software is included in the cost of acquisition of computer as a whole at the time of the purchase of computers.

8. Depreciation and amortization

Depreciation on tangible assets is provided on Written Down Value method over the useful life of assets at the rates of depreciation prescribed in the Income Tax Act, 1961. Depreciation is provided for the whole year on additions made to assets during the year. Where the assets are acquired and put to use for less than six months, 50% depreciation is provided for the year. Where an asset is fully depreciated, it will be carried at a residual value of Re.1 and will not be further depreciated.

Security Deposit money released becomes part of the asset after the expiry of warranty period and claim made by the supplier. Depreciation is charged prospectively when it becomes part of the fixed assets. Depreciation is charged on assets created out of funds of sponsored projects and earmarked funds except for TEQIP - II and TBI.

No depreciation is provided on freehold land.

9. Impairment of assets

The Institute does not assess at each balance sheet date whether there is any indication that an asset including any goodwill may be impaired.

10. Leases

Leases, on which the lessor effectively retains substantially all the risks and benefits of ownership of the leased item, are classified as operating leases. Operating lease payments are recognized as an expense in the Statement of Income and Expenditure on Straight Line Method over the lease term.

11. Retirement benefits

New Pension Scheme

Employees, who joined the Institute after 2004, are eligible for New Pension Scheme of the Central Government, a defined contribution plan. Matching monthly contribution to the plan, equal to 10% of the covered employee's basic salary, grade pay and dearness allowance, are made by the Institute as well as the employees. The Institute's NPS fund is managed by National Securities Depository Ltd. (NSDL). The Institute has no obligations to the Plan beyond its monthly contributions.

General Provident Fund

Eligible employees receive benefits from a provident fund, which is a defined benefit plan as per the AS-15 (Revised) issued by ICAI. The provident fund is managed by the Institute with guarantee of minimum return/ interest as specified by the Government from time to time on similar provident fund schemes. The contribution is made by the employees only. The fund is invested in term deposits with nationalized banks in a manner to yield maximum interest to cover the minimum guaranteed return as notified. Provision for the interest shortfall is provided for in the Income and Expenditure Account.

Contributory Provident Fund

It is a defined contribution plan. The employee and the Institute each make monthly contribution to the plan equal to 10% of the covered employee's basic salary and grade pay. The Institute maintains CPF fund by investing in approved manner as specified. Provision for the shortfall in interest payable, if any, is provided in the Income and Expenditure Account.

Gratuity

The Institute provides for gratuity, covering eligible employees. Liabilities with regard to the Gratuity Plan are determined by actuarial valuation, performed by an independent actuary, at the Balance Sheet date. The Institute recognizes the net obligation of the gratuity plan in the Balance Sheet as an asset or liability, in accordance with Accounting Standard-15 (Revised) issued by the

Institute of Chartered Accountants of India. Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are recognized in the Income and Expenditure Account for the period in which they arise.

Leave Encashment

The employees of the Institute are entitled to Leave Encashment. The employees can carry forward a portion of the unutilized accrued leave and utilize it in future periods or receive cash compensation at retirement or termination of employment for the unutilized accrued leave (subject to a maximum of 300 days so earned). The Institute records an obligation for Leave encashment in the period in which the employee renders the services that increases this entitlement. Actuarial valuation is done to ascertain the expected cost of leave encashment as the additional amount that the Institute expects to pay as a result of the unused entitlement that has accumulated at the balance sheet date.

Family Benefit Scheme

The Family Benefit Scheme is a defined contribution plan for eligible employees. The contributions are made by the employees only and the Institute has no obligations for matching contribution other than repayment of employee's contribution with accumulated interest after attainment of 55 years of the age of the employees.

12. Foreign currency transactions

The Institute is exposed to currency fluctuations on foreign currency transactions. The gains or losses resulting from foreign currency denominated monetary assets and liabilities and non-monetary assets and liabilities translated at prevailing exchange rates are not included in the books of account.

Transaction gains or losses realized upon in settlement of foreign currency transactions are not included in determining surplus for the period in which the transaction is settled.

13. Provisions and contingent liabilities

The Institute creates a provision when there is a present obligation as a result of an obligating event that probably requires an outflow of resources and a reliable estimate can be made of the amount of the outflow. A disclosure for a contingent liability is made when there is a possible obligation or a present obligation that may, but probably will not, require an outflow of resources. Where there is a possible obligation or a present obligation in respect of which the likelihood of outflow of resources is remote, no provision or disclosure is made.

14. Income tax

The income of the Institute is exempt from Income Tax under Section 10(23C)(iiiab) of the Income Tax Act, 1961. Therefore, no provision is required to be made in books of accounts towards Income Tax.

15. Earmarked/ Endowment funds

The following long term funds are earmarked for specific purpose, each having a separate bank account. The income from investments is accounted on accrual basis and interests on Savings Bank Accounts are credited to respective funds and not treated as income of the Institute. The assets created out of Earmarked funds where ownership vests in the Institute are merged with the assets of the Institution except TEQIP - II and TBI.

- a. Technical Education Quality Improvement Program (TEQIP)
- b. TEQIP - II
- c. Technology Business Incubator (TBI)
- d. General Provident Fund
- e. Contributory Provident Fund
- f. Family Benefit Scheme
- g. Growth Fund (Corpus Fund)

- h. Students Fund
- i. Harijan Welfare Fund

16. Investments

Investments, which are readily realizable and intended to be held for not more than one year from 31 March of the financial year on which such investments are made, are classified as short term investments. All other investments are classified as long term investments. Long term investments are stated at cost less provision for diminution in the value of such investments. Diminution in value is provided for where the Institute is of the opinion that the diminution is of permanent nature. Short term investments are valued at lower of cost and net realizable value.

17. Sponsored projects

In respect of new projects and ongoing projects, the amount received from the sponsors and funding agencies towards the projects are credited to the respective project accounts and the expenses are recorded by debiting the project accounts. The assets purchased for the projects are accounted as fixed assets of the Institute.

18. Cash and cash equivalents

Cash and cash equivalents comprise cash and cash on deposit with banks. The Institute considers all highly liquid investments with a remaining maturity at the date of investments of three months or less and that are readily convertible to known amounts of cash to be cash equivalents.

19. Cash flow statement

Cash flows are reported using direct method, whereby surplus is adjusted for the effects of transactions of a non-cash nature and any deferrals or accruals of past or future cash receipts or payments. The cash flows from regular revenue generating, investing and financing activities of the Institute are segregated.

Schedule 24

Notes to Accounts

1. RECEIPT OF GOVERNMENT GRANTS

The opening balance of Plan (Non-recurring) grants-in-aid and Non-Plan (Recurring) grants-in-aid shown in the current financial year is adjusted for the internal revenue generated in previous financial years. The internal revenue comprises of tuition fees received, interest received on Fixed Deposits and Savings Bank accounts and other miscellaneous receipts. The internal revenue added to the unutilized balance of grants in previous financial years is not segregated. For Plan grants, the actual expenditure incurred for acquisition of fixed assets and capital work-in-progress is shown as deduction from the total of grants received during the year and the opening balance of grants consists of internal revenue of past financial years. Similar treatment is done for Non-Plan grants by deducting all the items of expenditure in the Income and Expenditure Account except for depreciation.

As mentioned above, the internal generated revenue is included in the utilization certificates submitted by the Institute for financial year 2018-19 to Ministry of HRD, therefore the utilization certificate for the financial year 2018-19 will not agree with the unspent balance of Government grants lying with the Institute as shown in the ledger accounts.

(Refer Schedule 3C- Unutilized Grants from UGC, Government of India and State Governments and Schedule 10- Grants/Donations/Subsidies).

2. CAPITAL FUND

This includes grants received from MHRD to the extent incurred for capital expenditure and assets procured out of sponsored projects. It also includes interest on Fixed Deposits and Savings Bank Accounts of Plan funds and interest received on Fixed Deposits created for opening the Letter of Credit during the current financial year. Bank charges incurred on Plan Fund Savings Bank account is deducted therefrom.

(Refer Schedule 1- Capital Fund).

3. CURRENT LIABILITIES AND PROVISIONS

These include:

- a) Deposits from students representing refundable caution deposits.
- b) Payment for stamps worth Rs.40,963/- shown under “Sundry Creditors - for goods and services”.
- c) Rs. 7,81,363/- represents amount payable to NIT Employees Multipurpose Co-operative Society and is shown under “Sundry Creditors – Others”.
- d) Deposits includes Earnest Money Deposit (EMD) of Rs.69,60,290/- and Security Deposit of Rs.1,16,51,044/- towards retention charges for the performance warranty in respect of new fixed assets. Unclaimed amounts, if any, lying as security deposits are not considered as income during the current year. It also includes the bank guarantee from ERA Infra amounting to Rs. 4,43,93,272.
- e) Statutory liabilities payable as on 31March 2019 are as:

(Amount in Rupees)

Sl. No.	Particulars	2018-19	2017-18
1	TDS payable	62,74,200	8,90,439
2	Sales Tax payable	15	15
3	Service Tax payable	(2,41,937)	(2,41,958)
4	GST Payable	7,72,438	91,337
5	Professional Tax Payable	1250	1250
	Total	68,05,966	7,41,083

*Figures in bracket indicate debit balance.

- f) Receipts against sponsored projects and sponsored fellowships and scholarships are shown in Schedule 3A and 3B. The credit balance at the end of financial year 2018-19 are shown as “other current liabilities” under *Schedule 3- Current Liabilities and Provisions* and debit balances are shown as “current assets receivable from sponsored projects and sponsored fellowships and scholarships” under *Schedule 8-Loans, Advances & Deposits*.
- g) Other Liabilities as shown below:

(Amount in Rupees)

Sl. No.	Particulars	Remarks	2018-19	2017-18
1	Pension and GPF contribution from other Institutions		36,92,706	36,92,706
2	Golden Jubilee		(2,39,853)	(2,39,853)
3	Plan Grant- Sikkim		(4,44,249)	(4,44,249)
4	Medical Exam Fees	Share payable to RMO	1,40,394	1,33,494
5	Research & Consultancy refundable monies		(1,67,327)	(3,75,327)
6	Time-barred cheques cancelled		2,93,801	2,93,801
7	Advance Money for Centre and Admissions		3,00,000	3,00,000
8	Medical claim for Students		98,74,722	1,02,93,258
9	AMTID (Advances for Materials and Techniques for Infrastructure Development)		1,17,000	1,17,000
10	MBA Programs and alumni-related activities		(15,09,058)	(15,09,058)
11	International Conference (ICCSP)		3,50,000	3,50,000
12	Refund Account No. IV	Includes	77,870	77,870

13	Suspense Account No. II	erroneous accounting entries made in past years, which could not be rectified during the reporting period	10,64,94,705	10,56,78,257
14	Suspense Account No. 1		4,96,98,820	4,97,77,070
15	Suspense Account No. 1 (NIT Sikkim)		42,50,877	42,50,877
16	Suspense Account No. II (Tuition Fees)		3,42,212	11,670
17	Transfer (Refunds)		(45,68,754)	(45,68,754)
18	Departmental suspense accounts		1,23,02,408	74,74,634
19	Convocation fee		5,61,250	4,54,100
20	Group Insurance		(2,17,332)	(2,17,452)
21	RD Commission NSO		15,533	15,533
22	PG Diploma course in construction		(34,415)	(34,415)
23	Interest on account (Refunds)		1,91,701	1,91,701
24	Other miscellaneous items		184,37,723	2,43,860
	Total		19,99,60,734	17,59,66,723

Figures in bracket indicate debit balance, *i.e.*, assets carried over from previous years.

h) Accounts Payable for other expenses for March 2019 as shown below:

(Amount in Rupees)

Sl. No.	Particulars	2018-19	2017-18
1	Salary payable	1,65,64,486	1,88,37,298
2	Pension payable	NIL	1,85,380
3	Electricity payable	NIL	39,75,016
	Total	1,65,64,486	2,29,97,694

(Refer Schedule 3- Current Liabilities and Provisions).

4. FIXED ASSETS

Total addition to the assets during the FY 2018-19 was Rs. 12,66,23,862/- which includes purchases made after September, 2018 for Rs. 4,99,60,090. Total depreciation on assets for the period 2018-19 was Rs. 199,78,83,102 and that includes depreciation for the FY 2018-19 amounted to Rs. 16,93,77,705.

(Refer Schedule 4- Fixed Assets)

5. FIXED DEPOSITS

Disclosure for Fixed Deposits with nationalized banks shown in books of accounts is as follows:

(Amount in Rupees)

Sl. No.	Particulars	2018-19	2017-18
1	Fixed Deposits made out of Earmarked/ Designated Funds ##	150,80,07,542	150,55,26,905
2	Fixed Deposits made out of Plan Funds (includes FD of Rs. 1,89,41,657 pledged with Hon'ble Additional Sub-Judge, Kozhikode)	26,55,86,821	27,21,69,130
3	Fixed Deposits from Other Funds (Revenue Funds)	50,85,46,630	36,69,02,922
4	Fixed Deposits for Letters of Credit	44,92,000	44,92,000
5	Fixed Deposits for Bank Guarantee (in favor of KSEB)	20,50,840	20,50,840
6	Fixed Deposits from ERA BG	4,43,93,272	-
	Total	233,30,77,105	215,11,41,797

(Refer Schedule 5 – Investments from Earmarked/Endowment Funds and Schedule 7- Current Assets- Cash in Bank in Term Deposits Accounts).

The details of Fixed Deposits made out of Earmarked/ Designated Funds shown hereinabove is provided below:

(Amount in Rupees)

Sl. No.	Particulars	2018-19	2017-18
1	Growth Fund	95,24,46,598	93,65,52,113
2	General Provident Fund	29,55,77,320	29,03,88,357
3	Contributory Provident Fund	1,98,83,771	82,39,367
4	Technology Business Incubator (TBI)	31,60,486	31,60,489
5	Students Fund	13,99,787	17,993
6	Refund	23,55,39,580	26,71,68,586
	Total	150,80,07,542	150,55,26,905

The fixed deposits created during the financial year 2018-19 and the fixed deposits for past financial years are shown in Balance Sheet as at 31 March 2019 at their principal value only.

The principal amount of all fixed deposits in the name of the Institute as on 31/03/2019 amounts to Rs.233,30,77,105/-.

6. CASH IN BANK

Certificate for confirmation of balances of all its bank accounts held in nationalized banks as on 31 March 2019 has been obtained from the bankers. The Institute has also obtained certificate for the interest amount accrued and received on its bank accounts from the bankers as on 31 March 2019. Bank accounts having zero balances as per the confirmation given by the bank are not incorporated in the respective annexures to the notes to accounts. Reconciliation of all major accounts (except Suspense Accounts) was undertaken and completed for the year 2018-19.

Current Accounts

The Institute has shown eight current accounts in its books including one current account for project, as compared to thirteen current accounts certified by the banks as on 31 March 2019. The balance of the seven disclosed current accounts in the Institute's books of accounts is **Rs. -22,08,15,039.9/-** while their certified bank balance as on 31 March 2019 is **Rs.1,17,99,643.48/-** [Annexure A(ii)]. Another current account in respect of a project has a balance of **Rs.8,702/-** as against the certified balance of **Rs.29,702/-**

The certified closing balance of remaining five current accounts not shown in the Institute's books of accounts as on 31 March 2019 was **Rs. 22,52,289.99/-** [Annexure C (ii)]. These accounts have not been included in the financial statements as the particulars of transactions therein are not known and no relevant documents/ details other than the bank-certified balance is available with the Institute in respect of the seven current accounts.

Savings Bank Accounts

The Institute held 41 Savings Bank accounts in nationalized banks as on 31 March 2019. Only 32 of these bank accounts are included in the books. [Annexure A (i)]. The balance of the 32 disclosed Savings accounts as per Institute's books of accounts is **Rs. 118,27,83,858.24/-** while their certified bank balance as on 31 March 2019 is **Rs. 91,99,39,397.16/-**

The certified bank balance of the remaining nine Savings Bank accounts as on 31 March 2019 was **Rs.3,42,491/-** [Annexure C (i)]. These have not been included in the books due to lack of sufficient information on the source of their creation and the particulars of transactions therein for the past periods.

Project Accounts

The Institute maintains separate bank accounts for each project funded by various government agencies. A balance confirmation certificate has been obtained for 97 project bank accounts including one current account for the financial year 2018-2019. The certified closing balance of these bank accounts as on 31 March 2019 was Rs. 10,49,92,182.17/- [**Annexure B**].

The books of accounts of the Institute shows 142 project bank accounts which are inclusive of both operative and in-operative project accounts. Of these 142 project bank accounts shown in books of accounts, Bank has confirmed the balance as on 31st March 2019 for only 97 project bank accounts. Bank certification for the remaining 45 project accounts shown in the books of accounts was not made available by the respective Bank.

Bank Reconciliation Statement in respect of project accounts has been prepared for 2018-2019. However, the existence of un-reconciled opening balances for several previous financial years renders the reconciliation of some accounts with the bank-certified balances as on 31 March 2019 difficult.

Due to lack of sufficient information on some bank accounts, which were opened in the distant past and the transaction details of which are not known (these were not shown in the books of account during the previous years), such accounts have not been included in the current financial year as well. The details of such bank accounts are disclosed in **Annexure C**.

(Refer Schedule 7- Current Assets- Cash in Bank).

7. TREASURY ACCOUNTS

The Institute held three accounts with District Treasury, Kozhikode, viz., TPA No.809, PD Account (419/1-HWD) and PD Account (419/2-NMS). The un-reconciled ledger balance of these accounts as on 31 March 2019 was Rs.10,76,413/-, Rs.20,10,398/- and Rs.29,850/- respectively. At present, the Institute operates only two of these accounts (419/1-HWD and 419/2-NMS) for receipt and disbursement of scholarship amount received from the Government of Kerala. As on 31 March 2019, the correct certified balance could not be obtained from District Treasury for want of sufficient information on old transactions for previous years (the balance

shown in Pass Book was Rs. 37,849/- as of May 2006). No grant/ aid are being received in the other account, viz., TPA No.809 since FY 2003-2004.

As per the guidelines issued by Government of Kerala, the scholarship amount should be distributed to the students at the earliest and unclaimed balance, if any, should be returned to Government of Kerala together with interest earned thereon. The un-reconciled closing balance in treasury accounts as on 31 March 2019 might comprise such unclaimed amounts for previous years.

Government of Kerala has demanded the refund of amount lying in PD Account (419/.2-NMS) vide letter no. C4/626/2015 dated 19 August 2015. However, no liability is recognized in the Balance Sheet as on 31 March 2019 for the demand raised due to non-confirmation of certified balance in the aforesaid Treasury account.

(Refer Schedule 7- Current Assets- Cash in Treasury).

8. INVENTORY

The stock purchased and issued to various departments is shown under the respective departmental operating cost ledger heads.

(Refer Schedule 7- Current Assets- Stock).

Physical verification of fixed assets for the year 2018-19 is yet to be carried out. Stock-taking of library books is conducted once in three years in accordance with Rule 215 of GFR 2017.

9. ADVANCES TO EMPLOYEES

Loans and advances include loans given to staff for various purposes, which are recovered in installments along with interest from the salary of employees. The Institute does not recognize the interest receivable on such loans and advances. The amount recovered for each loan together with interest is credited to the loan account. The advances made during the financial year 2018-19 are given below:

(Amount in Rupees)

Sl. No.	Particulars	2018-19	2017-18
1	Festival advance	(63,085)	(84,535)
2	Computer advance	(1,85,489)	(1,85,489)
3	Marriage advance	(66,184)	(66,184)
4	House Building Advance	(29,78,164)	(25,52,148)
5	Vehicle advance	4,49,967	5,57,006
6	Plan advance	(1,35,213)	(1,14,253)
7	Advance payment A/c No I	3,57,397	23,21,574
8	Advance payment A/c No II	66,91,138	65,56,411
9	LTC advance	22,15,835	21,13,436
10	Travelling allowance advance	20,34,998	13,05,186
11	Department advances	36,89,610	77,15,142
12	Other advances	69,720	69,720
13	Gymkhana	(42,967)	83,600
14	Medical advance	3,00,000	-
	Total	1,23,37,563	1,77,19,466

Figures in bracket indicate credit balance, i.e., liability carried over from previous years.

(Refer Schedule 8- Loans, Advances and Deposits)

10. INTEREST ACCRUED ON FIXED DEPOSITS

The total interest certified as accrued on fixed deposit accounts as on 31 March 2019 was Rs.98,82,875/-. Interest accrued on fixed deposits comprises of interest accrued on Earmarked Funds. Interests accrued on Plan funds are shown as additions to the Capital Fund.

(Refer Schedule 2- Designated/Earmarked/Endowment Funds- Accrued interest on Investments and Schedule 11- Income from Investments).

11. BANK GUARANTEE WITH KERALA STATE ELECTRICITY BOARD

The Institute executed a Bank Guarantee for Rs.20,50,840/- in favor of KSEB towards security deposit for its HT electric connections, by opening fixed deposit account with SBI, NIT Calicut Branch.

(Refer Schedule 8- Loans, Advances and Deposits- Income accrued on security deposit with KSEB and Schedule 14- Prior Period Income).

12. PREPAID EXPENSES

There are no prepaid expenses for the financial year 2018-19.

13. TUITION FEES AND OTHER RECEIPTS

The income earned by way of tuition fees and other receipts for the financial year 2018-19 is Rs.34,38,60,290. The tuition fees and other fees remitted by students are transferred to various ledger accounts on the basis of itemized fee structure notified by the Institute from time to time.

The remittance receipt flow directly into four designated bank accounts, viz., A/c No. 10401158082 (Non-Plan Recurring), A/c No. 10401159314 (Refunds), A/c No. 10401159802 (Growth Fund) and A/c No. 10401158106 (Students Fund). The respective tuition fee ledger accounts are credited on the income side and the aforesaid bank accounts are debited on the assets side (after obtaining confirmation from the bank) by the Institute's accounting software (NITC-DSS). The actual tuition fee bank accounts/ ledger accounts, into which the tuition fee is remitted by the students, remain untouched. Because of this, the tuition fees received directly in the bank accounts are not originally recorded in the books of accounts of the Institute. This has been followed consistently for the past several years.

Till financial year 2013-2014, there was a practice of passing an adjustment entry by debiting the respective tuition fee bank account and crediting bank A/c no. 10401158082 only on receipt of tuition fees though the amount of tuition fees was transferred initially and automatically to four different bank accounts as stated above. This distorts the actual balance of the bank accounts and has been a major reason for the difference noticed in the bank balance certified by the bankers and the bank balance shown in Institute's ledger accounts. Rectification at this stage is a challenging task in view of the number of transactions involved and the need to identify each fee component therefore.

(Refer Schedule 9- Academic Receipts).

14. INCOME FROM INVESTMENTS AND INTEREST EARNED

Income from other investments represents interest on investments made out of Non-Plan Fund, Tuition Fees, Refund (Savings Bank)

Account and Fixed Deposits (including those held as security for Bank Guarantee in favor of Kerala State Electricity Board) with nationalized banks. Interest earned represents interest received on Savings Bank accounts except for the Bank accounts held for Earmarked/Designated fund and Plan Fund.

(Refer Schedule 11- Income from investments and Schedule 12- Interest Earned).

15. LICENSE FEES RECEIPT

Disclosure relating to license fees for financial year 2018-19 is as under:

(Amount in Rupees)

Sl. No.	Particulars	2018-19	2017-18
1	Staff Quarters	39,64,243	27,54,307
2	SBI building	13,77,096	13,87,374
3	Punjab National Bank ATM room	25,237	33,701
4	Guest House	-	4,25,606
5	Service charges for the above structures	52,822	39,202
6	BSNL Building Rent	1,57,764	43,545
	Total	55,77,162	46,83,735

(Refer Schedule 13- Other Income- Income from Land and Buildings- License fee).

16. INCOME FROM CONSULTANCY

Income from consultancy services represents the Institute's share of income received by its various departments for rendering services to external parties.

(Refer Schedule 13- Other Income- Others).

17.MISCELLANEOUS RECEIPTS

The miscellaneous receipts during the financial year are shown below:

(Amount in Rupees)

Sl. No.	Particulars	2018-19	2017-18
1	Sale of tender/ registration forms	77,409	3,25,984
2	Breakage Charges	32,807	55,472
3	Conveyance receipts	2,33,100	2,53,350
4	Overhead Charges (Project Share)	15,69,049	24,606
5	Other Miscellaneous receipts	53,163	19,35,220
	Total	19,65,528	25,94,632

(Refer Schedule 13- Other Income- Others- Misc. Receipts).

18.CONTRIBUTION TO VARIOUS FUNDS

The Institute's contribution towards leave salary, Provident Fund and New Pension Scheme is shown below:

(Amount in Rupees)

Sl. No.	Particulars	2018-19	2017-18
1	Contributory Provident Fund	NIL	NIL
2	Contribution to New Pension Scheme	2,36,15,129	1,17,66,726
3	Leave Salary & Pension Contribution	5,38,524	2,20,747
	Total	2,41,53,653	1,19,87,473

(Refer Schedule 15- Staff payments and Benefits [Establishment Expenses]).

19. RETIREMENT AND TERMINAL BENEFITS

This includes pension, pension commutation and Death-cum-Retirement-Gratuity (DCRG) paid to employees, who retired from the service. The details for the financial year 2018-19 are as follows:

(Amount in Rupees)

Sl. No.	Particulars	2018-19	2017-18
1	Pension	15,56,07,336	13,00,34,905
2	Death-cum-Retirement-Gratuity (DCRG)	2,02,69,834	1,13,88,297
3	Pension Commutation	3,77,40,159	1,01,33,771
	Total	21,36,17,329	15,15,56,973

(Refer Schedule 15- Staff payments and Benefits [Establishment Expenses]).

20. PROVISION FOR EMPLOYEE BENEFITS

Defined Benefit Plan

The employees of the Institute are entitled to Pension, Gratuity and Leave Encashment benefits on their retirement/ separation in accordance with the applicable Central Government rules. Actuarial valuation for employee benefits has been done for the first time in respect of Gratuity and Leave Encashment and disclosed as per AS-15 (Revised) issued by Institute of Chartered Accountants of India. Separate disclosure has been made for teaching staff and non-teaching staff owing to differences in their retirement age, attrition rate and leave encashment regulations. The actuarial valuation for leave encashment benefit has been built upon the data available for the calendar year 2018 (1 January 2018 to 31 December 2018). Actuarial valuation has not been done for pension benefits and no provision is recognized in the Income and Expenditure Account for the financial year 2018-2019.

(Refer Schedule 15A-Employees Retirement and Terminal Benefits).

The following tables provide an abstract of the expenses recognized and the provision made for 2018-2019 based on actuarial valuation.

I. Teaching Staff

a) Expenses recognized in Income and Expenditure Account during financial year 2018-2019.

(Amount in Rupees)

Sl. No.	Particulars	Gratuity	Leave Encashment
1	Current Service Cost	90,95,126	59,62,290
2	Interest Cost	95,25,045	93,25,149
3	Expected Return on Assets	Nil	Nil
4	Curtailment Costs	Nil	Nil
5	Settlement Costs	Nil	Nil
6	Past Service Costs	Nil	Nil
7	Net Actuarial (Gain)/Loss	20,36,868	17,45,549
8	Others	Nil	Nil
9	Employee expense recognized in Income and Expenditure Account	2,06,57,039	1,70,32,989

b) Amount recognized in Balance Sheet as at 31 March 2019

(Amount in Rupees)

Sl. No.	Particulars	Gratuity	Leave Encashment
1	Present Value of Defined Benefit Obligation	13,45,34,710	13,28,64,437
2	Fair Value of Plan Assets	Nil	Nil
3	Funded Status [Surplus/ (Deficit)]	(13,45,34,710)	(13,28,64,437)
4	Unrecognized Past Service Costs	Nil	Nil
5	Net Assets/ (Liability) recognized in Balance Sheet	(13,45,34,710)	(13,28,64,437)
6	Present Value of Encashment Obligation	Not Applicable	12,24,32,278
7	Present Value of Availment Obligation	Not Applicable	1,04,32,159

c) Changes in present value of defined benefit obligations during the financial year 2018-2019.

(Amount in Rupees)

Sl. No.	Particulars	Gratuity	Leave Encashment
1	Present value of Defined Benefit Obligations (Opening)	13,25,65,919	12,54,40,191
2	Current Service Cost	90,95,126	59,62,290
3	Interest Cost	95,25,045	93,25,149
4	Plan Amendments	Nil	Nil
5	Prior Service Costs	Nil	Nil
6	Curtailments	Nil	Nil

7	Settlements	Nil	Nil
8	Actuarial (Gains)/Loss	20,36,868	17,45,549
9	Benefits Paid	(1,86,88,248)	(96,08,743)
10	Acquisition/ Divestures	Nil	Nil
11	Present Value of Defined Benefit Obligation (Closing)	13,45,34,710	13,28,64,437

d) Reconciliation of opening and closing value of Plan assets for the financial year 2018-2019.

(Amount in Rupees)

Sl. No.	Particulars	Gratuity	Leave Encashment
1	Fair value of Plan Assets (Opening)	Nil	Nil
2	Expected return on Assets	Nil	Nil
3	Employer contribution	1,86,88,248	96,08,743
4	Plan participant's contribution	Nil	Nil
5	Settlements by Fund Manager	Nil	Nil
6	Benefit payouts	(1,86,88,248)	(96,08,743)
7	Actuarial Gains/(Loss)	Nil	Nil
8	Fair Value of Assets at the End	Nil	Nil
9	Actual return on Plan Assets	Nil	Nil

e) Reconciliation of Net Assets/ (Liabilities) recognized in Balance Sheet as at 31 March 2019.

(Amount in Rupees)

Sl. No.	Particulars	Gratuity	Leave Encashment
1	Net Asset/ (Liability) recognized at the beginning of the period	(13,25,65,919)	(12,54,40,191)
2	Employer expense	(2,06,57,039)	(1,70,32,989)
3	Employer Contribution	1,86,88,248	96,08,743
4	Acquisition/ Divestures	Nil	Nil
5	Effect of the Limit in Para 59(b)	Nil	Nil
6	Net Asset/ (Liability) recognized at the end of the period	(13,45,34,710)	(13,28,64,437)

f) Components of the experience adjustments for financial year 2018-2019.

(Amount in Rupees)

Sl. No.	Particulars	Gratuity	Leave Encashment
1	Actuarial (Gains)/ Losses due to Demographic Assumption changes in DBO	(35,36,210)	(4,39,528)
2	Actuarial (Gains) and Losses On Obligation Due to Financial Assumption change in DBO	4,47,149	Nil
3	Actuarial (Gains)/ Losses due to Experience Adjustment	60,20,227	21,85,078
4	Total Gains/ Losses for the year	20,36,868	17,45,549
5	Actuarial (Gains)/ Losses recognized in the year	20,36,868	17,45,549

II. Non-Teaching Staff

g) Expenses recognized in Income and Expenditure Account during current financial year 2018-2019.

(Amount in Rupees)

Sl. No.	Particulars	Gratuity	Leave Encashment
1	Current Service Cost	27,83,546	30,08,140
2	Interest Cost	58,42,507	40,57,225
3	Expected Return on Assets	Nil	Nil
4	Curtailment Costs	Nil	Nil
5	Settlement Costs	Nil	Nil
6	Past Service Costs	(1,01,85,380)	Nil
7	Net Actuarial (Gain)/Loss	18,06,754	(75,39,397)
8	Others	Nil	Nil
9	Employee expense recognized in Income and Expenditure Account	2,47,428	(4,74,032)

h) Amount recognized in Balance Sheet as at 31 March 2019

(Amount in Rupees)

Sl. No.	Particulars	Gratuity	Leave Encashment
1	Present Value of Defined Benefit Obligation	7,54,31,733	5,19,23,792
2	Fair Value of Plan Assets	Nil	Nil
3	Funded Status [Surplus/ (Deficit)]	(7,54,31,733)	(5,19,23,792)
4	Unrecognized Past Service Costs	Nil	Nil
5	Net Assets/ (Liability) recognized in Balance Sheet	(7,54,31,733)	(5,19,23,792)
6	Present Value of Encashment Obligation	Not Applicable	4,91,14,755
7	Present Value of Availment Obligation	Not Applicable	28,09,037

i) Changes in present value of defined benefit obligations during the financial year 2018-2019.

(Amount in Rupees)

Sl. No.	Particulars	Gratuity	Leave Encashment
1	Present value of Defined Benefit Obligations (Opening)	7,85,65,891	5,43,71,246
2	Current Service Cost	27,83,546	30,08,140
3	Interest Cost	58,42,507	40,57,225
4	Plan Amendments	Nil	Nil
5	Prior Service Costs	Nil	Nil
6	Curtailments	Nil	Nil
7	Settlements	Nil	Nil
8	Actuarial (Gains)/Loss	18,06,754	(75,39,397)
9	Benefits Paid	(33,81,586)	(19,73,421)
10	Acquisition/ Divestures	Nil	Nil

11	Present Value of Defined Benefit Obligation (Closing)	7,54,31,733	5,19,23,792
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j) Reconciliation of opening and closing value of Plan assets for the financial year 2018-2019.

(Amount in Rupees)

Sl. No.	Particulars	Gratuity	Leave Encashment
1	Fair value of Plan Assets (Opening)	Nil	Nil
2	Expected return on Assets	Nil	Nil
3	Employer contribution	33,81,586	19,73,421
4	Plan participants contribution	Nil	Nil
5	Settlement by Fund Manager	Nil	Nil
6	Benefit payouts	(33,81,586)	(19,73,421)
7	Actuarial Gains/(Loss)	Nil	Nil
8	Fair Value of Assets at the End	Nil	Nil
9	Actual return on Plan Assets	Nil	Nil

k) Reconciliation of Net Assets/ (Liabilities) recognized in Balance Sheet as at 31 March 2019.

(Amount in Rupees)

Sl. No.	Particulars	Gratuity	Leave Encashment
1	Net Asset/ (Liability) recognized at the beginning of the period	(7,85,65,891)	(5,43,71,246)
2	Employer expense	(2,47,428)	4,74,033
3	Employer Contribution	33,81,586	19,73,421
4	Acquisition/ Divestures	Nil	Nil

5	Effect of the Limit in Para 59(b)	Nil	Nil
6	Net Asset/ (Liability) recognized at the end of the period	(7,54,31,733)	(5,19,23,792)

l) Components of the experience adjustments for the financial year 2018-2019

(Amount in Rupees)

Sl. No.	Particulars	Gratuity	Leave Encashment
1	Actuarial (Gains)/ Losses due to Demographic Assumption changes in DBO	(1,01,85,380)	Nil
2	Actuarial (Gains) and Losses On Obligation Due to Financial Assumption change in DBO	3,53,79,290	3,28,801
3	Actuarial (Gains)/ Losses due to Experience Adjustment	(2,33,87,155)	(78,68,198)
4	Total (Gains)/ and Losses for the year	18,06,754	(75,39,397)
5	Actuarial (Gains) / Losses recognized in the year	18,06,754	(75,39,397)

m) Actuarial Assumptions

Principal assumptions made for Actuarial valuation are:

Sl. No.	Particulars	Gratuity		Leave Encashment	
		Teaching	Non-Teaching	Teaching	Non-Teaching
1	Method Used	Projected Unit Credit Method			
2	Discount rate	7.68%	7.52%	7.68%	7.52%
3	Expected Return on Assets	0.00%	0.00%	0.00%	0.00%
4	Salary Escalation	6.00%	6.00%	6.00%	6.00%

5	Attrition Rate	3.00%	3.00%	3.00%	3.00%
	Demographic Assumptions:				
	a) Mortality	Indian assured lives Mortality (2006-08) Ultimate			
	b) Disability	5% of Mortality rates			
	c) Withdrawal	3.00%	3.00%	3.00%	3.00%
	d) Retirement age	65	60	65	60

Defined Contribution Plan

Employer's (Institute's) contribution to New Pension Scheme and Contributory Provident Fund has been recognized as an expense for the financial year 2018-19.

General Provident Fund

The Fund balance as on 31 March 2019 amounting to Rs.10,45,21,452/-. The Institute has obligation to pay the dues along with the interest notified by the Government of India from time to time. The aforesaid amount is sufficient to cover any interest shortfall during the current financial year; hence, no provision is made for interest difference, if any, in the current year's financial statements.

21.HONORARIUM

Honorarium paid to experts/faculty/ staff during the financial year 2018-19 is as follows:

(Amount in Rupees)

Sl. No.	Particulars	2018-19	2017-18
1	Faculty Recruitment	NIL	NIL
2	Thesis Evaluation	12,57,044	7,67,312
3	Others	2,15,000	4,56,110
	Total	14,72,044	12,23,422

(Refer Schedule 15- Staff payments and Benefits [Establishment Expenses]).

22.E-JOURNALS

The Institute spent Rs.4,39,22,362/- on subscription of e-journals in the financial year. As per Accounting Standard 26 issued by the Institute of Chartered Accountants of India, intangible assets on which the benefit extends beyond one year can be capitalized else the expenditure should be expensed in the year in which the benefits are derived. As the subscriptions to e-journals made in 2018-19 are valid for one year, the whole amount is written off as an expense in the current year 2018-19.

(Refer Schedule 16- Academic Expenses).

23.DEPARTMENTS OPERATING COST

The details of operating cost (DOC) for different departments are as follows:

(Amount in Rupees)

Sl. No.	Particulars (DOC)	2018-19	2017-18
1	Architecture	6,06,953	4,96,463
2	Civil Engineering	13,77,456	12,55,910
3	Computer Science & Engineering	14,39,287	3,98,145
4	Electronics & Communication Engineering	16,85,943	8,31,810
5	Electrical & Electronics Engineering	15,57,287	24,83,094
6	Hospital	1,34,970	1,79,263
7	Library	3,49,959	1,80,428
8	Mathematics	4,74,518	3,11,016
9	Mechanical Engineering	38,47,449	21,84,419

10	Physical Education	6,15,649	3,19,393
11	Chemical Engineering	12,02,341	8,23,946
12	Physics	7,99,145	7,37,886
13	Bio-Technology	10,44,223	4,41,461
14	Nano-technology	9,86,041	4,45,050
15	School of Management Studies	4,34,056	3,25,920
16	Chemistry	12,60,183	7,45,963
17	Campus Networking Centre	2,77,276	66,414
18	Training & Placement	2,11,992	1,42,097
19	General	3,64,186	(3,18,408)
	Total	1,86,68,914	1,20,50,270

(Refer Schedule 17- Administrative and General Expenses).

24. OPERATING LEASE

The details with regard to operating lease are given below:

(Amount in Rupees)

Sl. No.	Particulars	2018-19	2017-18
1	Not later than one year	NIL	NIL
2	Later than one year and not later than five years	NIL	NIL
3	Later than five years	NIL	NIL

(Refer Schedule 18- Transportation Expenses).

25. PRIOR PERIOD INCOME

Prior period income for the current financial year is Rs. (2,13,34,989).

(Refer Schedule 14-Prior Period Income).

26. PRIOR PERIOD EXPENSES

Disclosure for prior period expenses for financial year 2018-19 is as under:

(Amount in Rupees)

Sl. No.	Particulars	2018-19	2017-18
1	Depreciation	NIL	NIL
2	Others	2,44,794	4,00,97,661
	Total	2,44,794	4,00,97,661

(Refer Schedule 22-Prior Period Expenses).

27. TRANSFERS FROM CAPITAL GRANT (PLAN FUND)

As per the Income Approach of AS-12 issued by the Institute of Chartered Accountants of India, an amount equal to the proportion of the current year's depreciation on fixed assets that were purchased using Government grants has to be transferred from the Capital Grant account to Income and Expenditure Account every year.

(Refer Schedule 1- Capital Fund and Schedule 4- Fixed Assets-Total Depreciation).

28. CONTINGENT LIABILITIES AND CONTINGENT ASSETS

- i. In respect of Central Academic Block constructed in 2013-2014, the contractor has filed a suit in the court of law (Case number O.S. 611/2011), which is *sub judice*; therefore, no quantification of the claim, if any, is made as on Balance Sheet date.
- ii. In respect of Central Library Building, the contractor has filed three suits in the court of law. The first case (No. OS.839/2009) is towards claiming of extra rate for TMT steel used in construction of the building while the second suit (No. OS 805/2011) relates to revoking of penalty imposed by the Institute and the third case (No. OS.659/2012) pertains to termination of the construction contract at the risk and cost of the contractor. The amount in dispute is approx. Rs.2,50,00,000/- which is pending adjudication before Hon'ble Sub Court, Kozhikode. The Institute has not made any provision towards the possible liability that may arise on this account. The contractor has also filed two Writ Petitions (WP(C) 33865/2014 and WP(C) 12347/2015) for undertaking the balance construction work at the prevailing rate; the petitions are pending before the Hon'ble High Court of Kerala at Ernakulam.
- iii. The Institute has filed an appeal (RFA No. 435 of 2014) against the judgment in Case No. OS 259/2010 in connection with the construction of building for Chemical Engineering Department and pledged a Fixed Deposit Receipt for Rs.50,00,000/- made out of Plan Fund towards additional security before the Hon'ble First Additional Sub-Judge, Kozhikode. No provision has been made in the accounts.
- iv. As on 31 March 2019, some court cases filed against the Institute by contractors, employees, *etc.*, are *sub judice* in various

courts of law. The quantum of the claims is not ascertainable at that date and hence, no liability is recognized in the Balance Sheet.

29. Schedules 1 to 24 herein above are annexed to and form an integral part of the Balance Sheet as at 31 March 2019 and the Income and Expenditure Account for the year ended on that date.

30. Schedules 25 to 42 annexed forms an integral part of the Receipts and Payments account for the year ended on that date.

31. The General Provident Fund account is owned by the members of the fund and not by the Institute. As such, this account is disclosed separately from the Institute's accounts from 1 April 2014. A Receipt and Payment Account, an Income and Expenditure Account (on accrual basis) and a Balance Sheet of the Provident Fund account for the financial year 2018-19 have been appended to the Institute's annual accounts.

32. All subscribers of New Pension Scheme (NPS) are allotted with PRA numbers and the Institute does not maintain data regarding their subscriptions and matching contributions. Therefore, separate set of accounts are not required for NPS.

ANNEXURE A**Certified balances of Bank Accounts and Fixed Deposits shown in the Institute's books of accounts**

(i)	Savings Accounts		
S. No	Bank & Branch Details	A/c No	Amount (in Rupees)
1	PNB ,LINK ROAD	1423000105436300	45,13,850.50
2	PNB,MKV	4312000100731444	17,879.00
3	PNB,KPK MENON	4258000105056909	1,90,882.00
4	HDFC, CALICUT	12551450000070	2,07,042.00
5	UCO, CALICUT	1470100010215	6,84,407.00
6	SBI,NIT	33413466990	55,11,631.00
7	SBI,NIT	37090485326	14,48,709.00
8	SBI,NIT	10401160396	54,328.86
9	SBI,NIT	10401160578	20,45,77,868.40
10	SBI,NIT	10401159325	42,648.47
11	SBI,NIT	10401160454	2,97,51,512.48
12	SBI,NIT	30583579511	98,914.00
13	SBI,NIT	30705794534	2,11,415.00
14	SBI,NIT	30971545390	37,77,153.50
15	SBI,NIT	31064842240	558.00
16	SBI,NIT	31098052035	23,03,442.00
17	SBI,NIT	31444243085	2,91,947.00
18	SBI,NIT	31994129466	6,08,326.75
19	SBI,NIT	32399109132	15,02,950.75
20	SBI,NIT	35570283919	14,86,598.00
21	SBI,NIT	35582060998	4,57,955.00
22	SBI,NIT	35730420414	27,25,230.00
23	SBI,NIT	35730420822	27,25,230.00
24	SBI,NIT	35730421214	27,25,230.00
25	SBI,NIT	35730436537	27,25,230.00

26	SBI,NIT	35981271500	3,79,35,380.25
27	SBI,NIT	10401159303	29,430.55
28	SBI,NIT	10401159314	25,301.20
29	SBI,NIT	10401159530	4,932.91
30	SBI,NIT	10401159802	896.05
31	SBI,NIT	30261390339	40,74,02,932.39
32	SBI,NIT	37838333933	20,58,99,585.10
		Total	91,99,39,397.16
(ii)	Current Accounts		
S. No	Bank & Branch Details	A/c No	Amount (in Rupees)
1	SBI,NIT	30846292747	84,79,699.00
2	SBI,NIT	36379213387	29,08,905.65
3	SBI,NIT	36379215839	2,56,452.87
4	SBI,NIT	36379216015	43,045.00
5	SBI,NIT	10401158082	50,998.00
6	SBI,NIT	10401158106	10,000.46
7	SBI,NIT	34899799867	50,542.50
		Total	1,17,99,643.48
(iii)	Term Deposits		
S. No	Bank & Branch Details	A/c No	Amount (in Rupees)
1	SBI,NIT	35385766884	1,04,29,006.00
2	SBI,NIT	35079055642	94,34,646.00
3	SBI,NIT	35079067443	95,03,419.00
4	SBI,NIT	35079068695	95,03,419.00
5	SBI,NIT	35079069586	95,03,419.00
6	SBI,NIT	36234470190	25,91,190.00
7	SBI,NIT	36234470474	34,38,197.00
8	SBI,NIT	36234482323	36,97,238.00
9	SBI,NIT	36234499835	35,07,224.00

10	SBI,NIT	36234504405	85,41,636.00
11	SBI,NIT	36234505895	93,43,837.00
12	SBI,NIT	36234513001	58,73,525.00
13	SBI,NIT	36234515429	59,38,404.00
14	SBI,NIT	32797684133	98,74,839.00
15	SBI,NIT	32775839242	89,65,049.00
16	SBI,NIT	32808580270	89,43,561.00
17	SBI,NIT	35307800580	74,87,865.00
18	SBI,NIT	35385766396	88,72,006.00
19	SBI,NIT	35397552993	89,45,321.00
20	SBI,NIT	35420944340	74,97,486.00
21	SBI,NIT	36312000910	40,82,312.00
22	SBI,NIT	36234517379	1,07,69,902.00
23	SBI,NIT	36234519536	1,07,69,902.00
24	SBI,NIT	36234521432	1,07,69,902.00
25	SBI,NIT	36234522742	1,07,69,902.00
26	SBI,NIT	36234523348	1,07,69,902.00
27	SBI,NIT	36234523745	1,07,69,902.00
28	SBI,NIT	36234525119	1,07,69,902.00
29	SBI,NIT	36234525482	1,07,69,902.00
30	SBI,NIT	36234525674	1,07,69,902.00
31	SBI,NIT	36234525845	1,07,69,902.00
32	SBI,NIT	36234526032	1,07,69,902.00
33	SBI,NIT	36234526214	1,07,69,902.00
34	SBI,NIT	36234536506	1,07,69,902.00
35	SBI,NIT	36234536743	1,07,69,902.00
36	SBI,NIT	36234536889	1,07,69,902.00
37	SBI,NIT	36234536970	1,07,69,902.00
38	SBI,NIT	36234538694	1,07,69,902.00
39	SBI,NIT	32793896072	3,82,14,712.00
40	SBI,NIT	35211095348	2,95,19,306.00

41	SBI,NIT	36714003255	98,22,764.00
42	SBI,NIT	36714003277	98,22,764.00
43	SBI,NIT	36714290501	1,00,62,837.00
44	SBI,NIT	36714290534	1,00,62,837.00
45	SBI,NIT	36714290578	1,00,62,837.00
46	SBI,NIT	36714290737	1,00,62,837.00
47	SBI,NIT	37161046618	99,56,812.00
48	SBI,NIT	37161046969	99,56,812.00
49	SBI,NIT	37161047113	99,56,812.00
50	SBI,NIT	37161047191	99,56,812.00
51	SBI,NIT	37161047237	99,56,812.00
52	SBI,NIT	37161047282	99,56,812.00
53	SBI,NIT	37161047328	99,56,812.00
54	SBI,NIT	37161047486	99,56,812.00
55	SBI,NIT	37161047566	99,56,812.00
56	SBI,NIT	37161047634	11,06,311.00
57	SBI,NIT	36042749067	47,53,053.00
58	SBI,NIT	36043107039	1,26,29,123.00
59	SBI,NIT	36455246010	1,01,33,197.00
60	SBI,NIT	36455249667	1,01,33,197.00
61	SBI,NIT	36455249725	1,01,33,197.00
62	SBI,NIT	36455249792	47,60,165.00
63	SBI,NIT	36231766736	97,72,089.00
64	SBI,NIT	36231770152	97,72,089.00
65	SBI,NIT	36231772036	97,72,089.00
66	SBI,NIT	36231773299	97,72,089.00
67	SBI,NIT	36231774725	97,72,089.00
68	SBI,NIT	36231776007	97,72,089.00
69	SBI,NIT	36231782216	97,72,089.00
70	SBI,NIT	36231783945	97,72,089.00
71	SBI,NIT	36231785137	97,72,089.00

72	SBI,NIT	36231787269	97,72,089.00
73	SBI,NIT	36231788478	97,72,089.00
74	SBI,NIT	36231790442	97,72,089.00
75	SBI,NIT	36231792734	97,72,089.00
76	SBI,NIT	36231795407	97,72,089.00
77	SBI,NIT	36231795677	97,72,089.00
78	SBI,NIT	36231801999	97,72,089.00
79	SBI,NIT	36231803985	97,72,089.00
80	SBI,NIT	36231806192	97,72,089.00
81	SBI,NIT	36231807185	97,72,089.00
82	SBI,NIT	36231808190	97,72,089.00
83	SBI,NIT	36231819395	28,48,326.00
84	SBI,NIT	36231819703	79,88,340.00
85	SBI,NIT	36331596395	74,13,092.00
86	SBI,NIT	35791056509	91,33,863.00
87	SBI,NIT	35791081150	91,33,863.00
88	SBI,NIT	35791081229	39,77,544.00
89	SBI,NIT	36812083014	95,73,528.00
90	SBI,NIT	36812085873	95,73,528.00
91	SBI,NIT	36812086128	95,73,528.00
92	SBI,NIT	36812108053	45,06,664.00
93	SBI,NIT	36812108122	82,51,847.00
94	SBI,NIT	37158545237	95,60,228.00
95	SBI,NIT	37160987328	97,74,590.00
96	SBI,NIT	37160997937	97,74,590.00
97	SBI,NIT	37160998931	97,74,590.00
98	SBI,NIT	37160999424	97,74,590.00
99	SBI,NIT	37160999901	97,74,590.00
100	SBI,NIT	37158510893	4,68,13,703.00
101	SBI ,CLT	32457363478	88,48,511.00
102	SBI ,CLT	32457358254	88,48,511.00

103	PNB,MKV	431200PU00010677	1,02,80,712.00
104	PNB,MKV	431200PU00010686	1,02,80,712.00
105	PNB,MKV	431200PU00010695	22,84,603.00
106	PNB,MKV	431200PU00006018	11,67,981.00
107	PNB,MKV	431200PU00011861	36,86,445.00
108	PNB,MKV	431200PU00011852	99,15,501.00
109	PNB,MKV	431200PU00011834	99,15,501.00
110	PNB,MKV	431200PU00011843	99,15,501.00
111	PNB,MKV	431200PU00011816	99,15,501.00
112	PNB,MKV	431200PU00011825	99,15,501.00
113	PNB,KPK MENON	425800DP00011236	1,01,21,564.00
114	PNB,KPK MENON	425800DP00011227	1,01,21,566.00
115	PNB,KPK MENON	425800DP00011245	1,01,21,566.00
116	PNB,KPK MENON	425800DP00011254	1,01,21,550.00
117	PNB,KPK MENON	425800DP00011263	1,01,21,547.00
118	PNB,LINK ROAD	142300DP00010122	1,05,98,102.00
119	PNB,LINK ROAD	142300DP00010131	1,02,17,867.00
120	PNB,LINK ROAD	142300DP00011556	1,00,30,989.00
121	PNB,LINK ROAD	142300DP00011565	1,00,30,989.00
122	PNB,LINK ROAD	142300DP00011574	1,00,30,989.00
123	PNB,LINK ROAD	142300DP00011583	1,00,30,989.00
124	PNB,LINK ROAD	142300DP00011592	1,00,30,989.00
125	PNB,LINK ROAD	142300DP00011608	1,00,30,989.00
126	PNB ,LINK ROAD	142300DP00010353	96,01,092.00
127	PNB ,LINK ROAD	142300DP00010344	96,01,092.00
128	PNB ,LINK ROAD	142300DP00010362	57,07,657.00
129	PNB ,LINK ROAD	142300DP00009434	86,90,759.00
130	PNB ,LINK ROAD	142300PU00003336	97,76,681.00
131	PNB ,LINK ROAD	142300PU00003345	97,76,681.00
132	PNB ,LINK ROAD	142300PU00003354	97,76,681.00
133	PNB ,LINK ROAD	142300PU00003363	97,76,681.00

134	PNB ,LINK ROAD	142300PU00003372	97,76,681.00
135	PNB ,LINK ROAD	142300PU00003381	88,75,074.00
136	PNB ,LINK ROAD	142300PU00003327	97,76,681.00
137	PNB ,LINK ROAD	142300DP00003424	85,10,907.00
138	PNB,MKV	431200PU00006027	86,55,096.00
139	PNB,MKV	431200PU00009778	1,13,83,476.00
140	PNB,MKV	431200PU00005736	86,45,486.00
141	PNB,MKV	431200PU00010039	71,56,196.00
142	PNB,MKV	431200PU00009839	1,13,83,477.00
143	PNB,MKV	431200PU00009848	1,13,83,476.00
144	PNB,MKV	431200PU00009857	1,13,83,477.00
145	PNB,MKV	431200PU00009866	1,13,83,477.00
146	PNB,MKV	431200PU00009875	1,13,83,477.00
147	PNB,MKV	431200PU00009884	1,13,83,477.00
148	PNB,MKV	431200PU00006036	1,07,31,772.00
149	PNB,MKV	431200PU00009893	1,13,83,476.00
150	PNB ,LINK ROAD	142300PU00009434	82,80,490.00
151	PNB ,LINK ROAD	142300DP00011255	96,94,223.00
152	PNB ,LINK ROAD	142300DP00011264	72,65,575.00
153	PNB ,LINK ROAD	142300DP00011291	96,94,223.00
154	PNB ,LINK ROAD	142300DP00011282	96,94,223.00
155	PNB ,LINK ROAD	142300DP00011273	96,94,223.00
156	PNB ,LINK ROAD	142300DP00011307	93,70,440.00
157	PNB ,LINK ROAD	142300PU00003415	93,70,440.00
158	PNB ,LINK ROAD	142300PU00003406	93,70,440.00
159	PNB ,LINK ROAD	142300PU00003442	92,90,306.00
160	PNB,KPK MENON	425800DP00010662	91,30,826.00
161	PNB,KPK MENON	425800DP00010671	91,30,829.00
162	PNB,KPK MENON	425800DP00010680	91,30,826.00
163	PNB,KPK MENON	425800DP00010699	38,80,602.00
164	PNB ,LINK ROAD	142300DP00009337	81,57,247.00

165	PNB ,LINK ROAD	142300PU00003390	92,81,596.00
166	PNB ,LINK ROAD	142300DP00009601	49,80,841.00
167	PNB ,LINK ROAD	142300DP00009878	96,54,766.00
168	PNB ,LINK ROAD	142300DP00009887	96,54,766.00
169	PNB ,LINK ROAD	142300DP00009896	96,54,766.00
170	PNB ,LINK ROAD	142300DP00009902	96,54,766.00
171	PNB ,LINK ROAD	142300DP00009911	96,54,766.00
172	PNB ,LINK ROAD	142300DP00009920	96,54,766.00
173	PNB ,LINK ROAD	142300DP00009939	96,54,766.00
174	PNB ,LINK ROAD	142300DP00009948	25,38,442.00
175	PNB ,LINK ROAD	PU3451	18,31,577.00
176	PNB ,LINK ROAD	PU3433	32,47,387.00
177	UCO BANK	1470310049006	92,16,339.00
178	UCO BANK	1470310049037	92,14,706.00
179	UCO BANK	1470310049044	92,13,073.00
180	UCO BANK	1470310049051	92,11,440.00
181	UCO BANK	1470310049068	92,09,807.00
182	UCO BANK	1470310049082	92,06,541.00
183	UCO BANK	1470310049105	92,04,908.00
184	UCO BANK	1470310049112	92,03,276.00
185	UCO BANK	1470310049143	91,98,011.00
186	UCO BANK	1470310049136	91,99,620.00
187	UCO BANK	1470310046586	1,04,49,988.00
188	UCO BANK	1470310046630	57,84,182.00
189	UCO BANK	1470310049204	1,02,43,996.00
190	PNB ,LINK ROAD	142300DP00012360	86,48,149.00
191	PNB ,LINK ROAD	142300DP00012379	86,48,149.00
192	PNB ,LINK ROAD	142300DP00012388	86,48,149.00
193	PNB ,LINK ROAD	142300DP00012397	81,10,702.00
194	PNB ,LINK ROAD	142300PU00004052	7,09,625.00
195	PNB ,LINK ROAD	142300PU00004061	7,09,625.00

196	PNB ,LINK ROAD	142300PU00004070	7,09,625.00
197	PNB ,LINK ROAD	142300PU00004089	7,09,625.00
198	PNB ,LINK ROAD	142300PU00004098	7,09,625.00
199	PNB ,LINK ROAD	142300PU00004104	7,09,625.00
200	PNB ,LINK ROAD	142300PU00004256	6,46,181.00
201	PNB ,LINK ROAD	142300PU00004274	6,18,583.00
202	PNB ,LINK ROAD	142300PU00004283	6,81,423.00
203	PNB ,LINK ROAD	142300PU00004292	6,81,423.00
204	PNB ,LINK ROAD	142300PU00004308	6,81,423.00
205	PNB ,LINK ROAD	142300PU00004317	6,81,423.00
206	PNB ,LINK ROAD	142300PU00004326	6,81,423.00
207	PNB ,LINK ROAD	142300PU00004335	6,81,423.00
208	PNB ,LINK ROAD	142300PU0003503	39,94,327.00
209	PNB ,LINK ROAD	142300PU0003789	8,10,521.00
210	PNB ,LINK ROAD	142300PU0003831	7,06,876.00
211	PNB ,LINK ROAD	142300PU0003840	7,06,876.00
212	PNB ,LINK ROAD	142300PU0003910	7,20,206.00
213	PNB ,LINK ROAD	142300PU0003929	6,66,971.00
214	PNB ,LINK ROAD	142300PU0003938	7,20,193.00
215	PNB ,LINK ROAD	142300PU0003947	7,20,193.00
216	PNB ,LINK ROAD	142300PU0003956	7,20,193.00
217	PNB ,LINK ROAD	142300PU0003965	8,14,231.00
218	PNB ,LINK ROAD	142300PU0003974	17,38,495.00
219	PNB ,LINK ROAD	142300PU0003983	33,65,285.00
220	SBI,NIT	38195628189	90,00,000.00
221	SBI,NIT	38195628485	90,00,000.00
222	SBI,NIT	38195629080	90,00,000.00
223	SBI,NIT	38195629353	90,00,000.00
224	SBI,NIT	38195630313	90,00,000.00
225	SBI,NIT	38195630710	90,00,000.00
226	SBI,NIT	38195631011	90,00,000.00

227	SBI,NIT	38195631248	90,00,000.00
228	SBI,NIT	38195631340	90,00,000.00
229	SBI,NIT	38195631431	90,00,000.00
230	SBI,NIT	38195644713	90,00,000.00
231	SBI,NIT	38195645150	90,00,000.00
232	SBI,NIT	38195645478	90,00,000.00
233	SBI,NIT	38195645795	90,00,000.00
234	SBI,NIT	38195646153	90,00,000.00
235	SBI,NIT	38195646595	50,00,000.00
236	SBI,NIT	38195605310	90,90,153.00
237	SBI,NIT	38195605514	90,90,153.00
238	SBI,NIT	38195605604	90,90,153.00
239	SBI,NIT	38195605820	90,90,153.00
240	SBI,NIT	38195606006	90,90,153.00
241	SBI,NIT	38195606142	90,90,153.00
242	SBI,NIT	38195606222	90,90,153.00
243	SBI,NIT	38195606302	90,90,153.00
244	SBI,NIT	38195606335	90,90,153.00
245	SBI,NIT	38195606459	90,90,153.00
246	SBI,NIT	35293809903	23,24,391.00
247	SBI,NIT	38002158419	55,00,000.00
248	SBI,NIT	38002378161	3,88,93,272.00
		Total	2,13,12,46,634.00
(iv)	Forex Accounts		
S. No	Bank & Branch Details	A/c No	(Amount in USD)
1	SBI, CALICUT	35350525917	5.00
		Total	5.00

(v)	MOD Account		
S. No	Bank & Branch Details	A/c No	Amount
1	SBI,NIT	36824037290	59,72,817.00
2	SBI,NIT	36855922595	1,07,18,454.64
3	SBI,NIT	35648364532	26,632.00
4	SBI,NIT	35657446255	2,72,360.00
5	SBI,NIT	36717394642	4,13,460.00
6	SBI,NIT	37585048125	1,21,782.00
7	SBI,NIT	37599483242	10,73,400.00
8	SBI,NIT	35691632160	9,94,342.00
9	SBI,NIT	35707617079	1,96,555.00
10	SBI,NIT	35830806970	3,46,976.00
11	SBI,NIT	36824037802	16,30,691.00
12	SBI,NIT	36927599753	50,22,912.00
13	SBI,NIT	36956334156	18,082.00
14	SBI,NIT	35848347417	3,85,732.00
15	SBI,NIT	35863216431	4,83,813.00
16	SBI,NIT	35863359275	3,82,259.00
17	SBI,NIT	35887393525	2,31,273.00
18	SBI,NIT	35905412601	3,92,999.00
19	SBI,NIT	35926060640	40,34,250.00
20	SBI,NIT	35942639672	49,21,990.00
21	SBI,NIT	35987551842	17,076.00
22	SBI,NIT	36024275042	15,22,968.00
23	SBI,NIT	36024799882	50,65,080.00
24	SBI,NIT	36040904092	32,45,349.00
25	SBI,NIT	36041323971	36,93,022.00
26	SBI,NIT	36399771212	4,22,040.00
27	SBI,NIT	36428323282	5,56,535.00
28	SBI,NIT	36453595959	15,88,303.00

29	SBI,NIT	36476847539	3,17,127.00
30	SBI,NIT	36538158211	12,37,540.00
31	SBI,NIT	36574989128	80,548.00
32	SBI,NIT	36981479668	92,530.00
33	SBI,NIT	36982623680	32,14,299.00
34	SBI,NIT	36995128046	2,66,903.00
35	SBI,NIT	36995749052	12,90,608.00
36	SBI,NIT	37020696689	93,27,452.00
37	SBI,NIT	36064515487	95,87,615.00
38	SBI,NIT	37035466637	33,59,843.00
39	SBI,NIT	37050976159	4,41,890.00
40	SBI,NIT	37071414416	20,182.00
41	SBI,NIT	37135396960	24,431.00
42	SBI,NIT	37173664552	38,240.00
43	SBI,NIT	37238643472	1,07,045.00
44	SBI,NIT	37265172168	4,04,865.00
45	SBI,NIT	37295472790	13,02,856.00
46	SBI,NIT	37323099862	21,149.00
47	SBI,NIT	37353273326	15,31,753.00
48	SBI,NIT	37461347332	6,47,642.00
49	SBI,NIT	37525333043	79,315.00
50	SBI,NIT	37536296541	38,99,169.00
51	SBI,NIT	37572024812	85,130.00
52	SBI,NIT	35632181998	5,06,37,759.00
53	SBI,NIT	35558103966	8,30,50,639.00
54	SBI,NIT	37322638398	1,01,43,433.00
55	SBI,NIT	37339623745	1,37,17,609.62
56	SBI,NIT	37700223825	67,000.00
57	SBI,NIT	37700246004	1,01,000.00
58	SBI,NIT	37710731123	70,000.00
59	SBI,NIT	37746662714	75,000.00

60	SBI,NIT	37784491253	50,000.00
61	SBI,NIT	37785628507	14,000.00
62	SBI,NIT	37785736511	20,59,000.00
63	SBI,NIT	37800289317	5,47,000.00
64	SBI,NIT	37814057755	23,49,000.00
65	SBI,NIT	37814165488	47,000.00
66	SBI,NIT	37828207593	4,06,000.00
67	SBI,NIT	37828252478	12,17,000.00
68	SBI,NIT	37841482030	32,000.00
69	SBI,NIT	37859350591	2,03,000.00
70	SBI,NIT	37859419136	16,85,000.00
71	SBI,NIT	37873773575	1,84,000.00
72	SBI,NIT	37898939704	1,90,000.00
73	SBI,NIT	37948660525	9,16,000.00
74	SBI,NIT	37948790474	2,51,000.00
75	SBI,NIT	37981863682	1,60,000.00
76	SBI,NIT	37981979175	2,73,000.00
77	SBI,NIT	38023923862	3,83,000.00
78	SBI,NIT	38052969777	40,000.00
79	SBI,NIT	38063901818	16,61,000.00
80	SBI,NIT	38063902459	24,000.00
81	SBI,NIT	38077333972	18,09,000.00
82	SBI,NIT	38077334579	32,24,000.00
83	SBI,NIT	38077385886	1,15,000.00
84	SBI,NIT	38087077051	25,000.00
85	SBI,NIT	38087637458	5,36,000.00
86	SBI,NIT	38103730224	61,000.00
87	SBI,NIT	38117636125	1,77,000.00
88	SBI,NIT	38131245929	16,38,000.00
89	SBI,NIT	38131386095	3,33,000.00
90	SBI,NIT	38142818728	8,09,000.00

91	SBI,NIT	38186187937	33,49,000.00
92	SBI,NIT	38201074257	73,000.00
93	SBI,NIT	38232354636	3,65,000.00
94	SBI,NIT	38249926811	21,56,000.00
95	SBI,NIT	38266856999	4,34,000.00
96	SBI,NIT	38267548009	22,77,000.00
97	SBI,NIT	38281125700	12,000.00
98	SBI,NIT	38299303514	20,96,000.00
99	SBI,NIT	38315652799	2,31,000.00
100	SBI,NIT	38331599459	5,37,000.00
101	SBI,NIT	38331610124	38,77,000.00
102	SBI,NIT	38343772089	3,36,000.00
103	SBI,NIT	38363229800	59,61,000.00
104	SBI,NIT	37685002812	20,000.00
105	SBI,NIT	38292580857	11,33,000.00
106	SBI,NIT	38325697852	6,99,000.00
107	SBI,NIT	38343029382	41,27,000.00
108	SBI,NIT	38357250512	13,63,000.00
109	SBI,NIT	38357322613	11,03,000.00
110	SBI,NIT	38360294260	8,29,000.00
111	SBI,NIT	37626246850	6,76,15,732.50
112	SBI,NIT	37873171887	3,86,35,207.50
113	SBI,NIT	37873806933	5,02,00,796.83
114	SBI,NIT	37933265931	1,31,05,000.00
115	SBI,NIT	38036299280	3,93,99,030.00
116	SBI,NIT	38154548959	1,75,51,000.00
117	SBI,NIT	38172436211	6,62,16,000.00
118	SBI,NIT	38021404317	29,05,857.56
119	SBI,NIT	38074617313	82,68,194.20
120	SBI,NIT	37745405134	2,55,559.12
		Total	60,55,40,102.97

ANNEXURE B**Bank Accounts for Projects shown in Books of Accounts (Savings)**

S.No	Bank & Branch Details	A/c No	Amount (in Rupees)
1	SBI,NIT	32276182737	6,431.00
2	SBI,NIT	36697532901	2,64,731.00
3	SBI,NIT	36697545105	69,519.00
4	SBI,NIT	36699462861	4,20,446.50
5	SBI,NIT	30428621431	7,41,122.00
6	SBI,NIT	30458848311	16,20,362.00
7	SBI,NIT	30506640444	33,93,956.00
8	SBI,NIT	30808033649	14,377.00
9	SBI,NIT	30948537262	11,598.00
10	SBI,NIT	31091558694	1,02,481.00
11	SBI,NIT	31130641093	19,32,681.00
12	SBI,NIT	31735759406	21,882.00
13	SBI,NIT	31735764063	42,989.00
14	SBI,NIT	31762778358	202.12
15	SBI,NIT	31789866710	21,49,880.00
16	SBI,NIT	31789868139	43,584.00
17	SBI,NIT	31915181691	2,280.00
18	SBI,NIT	32015957716	4,47,764.00
19	SBI,NIT	32101535934	1,739.00
20	SBI,NIT	32246641696	4,12,235.00
21	SBI,NIT	32312778967	0.00
22	SBI,NIT	32522570991	24.36
23	SBI,NIT	32563027683	5,40,652.00

24	SBI,NIT	32579164962	10,17,040.00
25	SBI,NIT	32954434797	1,72,859.00
26	SBI,NIT	33015477472	1,692.85
27	SBI,NIT	33049806044	29,161.00
28	SBI,NIT	33067690208	42,86,659.00
29	SBI,NIT	33175087386	20,830.50
30	SBI,NIT	33187581587	19,972.00
31	SBI,NIT	33301926627	8,355.00
32	SBI,NIT	33301927326	1,01,081.00
33	SBI,NIT	33368719830	3,26,972.00
34	SBI,NIT	33368722037	1,39,504.00
35	SBI,NIT	33368731461	66,587.00
36	SBI,NIT	33627227608	377.52
37	SBI,NIT	33807577465	1,88,645.00
38	SBI,NIT	33869260955	1,879.95
39	SBI,NIT	34055770847	5,591.00
40	SBI,NIT	34059815913	921.00
41	SBI,NIT	34129367406	895.40
42	SBI,NIT	34743361812	65,442.00
43	SBI,NIT	34922458279	1,310.50
44	SBI,NIT	34984625589	7,71,975.50
45	SBI,NIT	35105587080	2,66,465.00
46	SBI,NIT	35108714120	2,95,534.75
47	SBI,NIT	35256507611	13,373.50
48	SBI,NIT	35260115754	44,299.50
49	SBI,NIT	35373645311	3,50,964.00
50	SBI,NIT	35531852511	5,947.50
51	SBI,NIT	35547110999	2,61,676.50
52	SBI,NIT	34781526032	1,37,415.00
53	SBI,NIT	35601784856	2,286.00
54	SBI,NIT	35601785146	70,925.00

55	SBI,NIT	35707855365	18,58,131.50
56	SBI,NIT	35712118085	8,186.50
57	SBI,NIT	35724132844	1,01,31,284.35
58	SBI,NIT	35760309489	14,44,215.50
59	SBI,NIT	35909407299	14,37,900.57
60	SBI,NIT	35977962286	74,280.20
61	SBI,NIT	36028528852	5,53,214.75
62	SBI,NIT	36076948949	10,53,122.25
63	SBI,NIT	36273863935	18,665.50
64	SBI,NIT	36374406306	2,840.00
65	SBI,NIT	36598636298	4,506.35
66	SBI,NIT	32785641568	66,093.00
67	SBI,NIT	32785878304	1,43,414.00
68	SBI,NIT	36826070008	27,413.50
69	SBI,NIT	37096085388	30,529.50
70	SBI,NIT	36950958352	1,996.65
71	SBI,NIT	37186010229	22,95,677.00
72	SBI,NIT	37241357431	84,639.00
73	SBI,NIT	37251562506	16,739.50
74	SBI,NIT	37286864074	1,76,86,056.50
75	SBI,NIT	37324305638	28,306.50
76	SBI,NIT	37481542974	1,10,671.00
77	SBI,NIT	37520426749	44,57,503.50
78	SBI,NIT	37618269594	5,42,711.00
79	SBI,NIT	37720597560	2,06,04,343.00
80	SBI,NIT	37747553259	15,55,623.60
81	SBI,NIT	37779456678	53,047.00
82	SBI,NIT	37814761399	30,572.00
83	SBI,NIT	37849942885	3,11,378.00
84	SBI,NIT	38017800860	25,53,535.00
85	SBI,NIT	38030653645	31,19,010.00

86	SBI,NIT	38030654242	2,97,049.00
87	SBI,NIT	38044293551	6,48,563.00
88	SBI,NIT	38103882462	16,84,993.00
89	SBI,NIT	38103882983	16,88,015.00
90	SBI,NIT	38132483430	39,33,595.00
91	SBI,NIT	38180891032	7,04,162.00
92	SBI,NIT	38276476234	30,20,000.00
93	SBI,NIT	38297555305	5,00,000.00
94	SBI,NIT	38302334688	12,35,000.00
95	SBI,NIT	36826070213	16,220.50
96	SBI,NIT	37154522972	11,702.00
		Total	10,49,62,480.17

Bank Accounts for Projects shown in Books of Accounts (Current)			
S.No	Bank & Branch Details	A/c No	Amount (in Rupees)
1	SBI,NIT	37021855472	29,702.00

ANNEXURE C			
List of Bank accounts and Fixed Deposits not shown in the Institutes books of accounts			
(i)	Savings Accounts		
S.No	Bank & Branch Details	A/c No	Amount (in Rupees)
1	31317481538	SBI,NIT	13,863.00
2	31725977448	SBI,NIT	459.00
3	32385609903	SBI,NIT	68,213.50
4	33588035836	SBI,NIT	0.00
5	33605148992	SBI,NIT	20.00
6	36826070213	SBI,NIT	16,220.50
7	38259781306	SBI,NIT	2,40,478.00
8	30013264671	SBI,NIT	3,173.00
9	30013250817	SBI,NIT	64.00
		Total	3,42,491.00

(ii)	Current Accounts		
S.No	Bank & Branch Details	A/c No	Amount (in Rupees)
1	37154522972	SBI,NIT	11,702.00
2	37217896428	SBI,NIT	1,508.00
3	33950524246	SBI,NIT	1,75,159.99
4	35725957831	SBI,NIT	18,56,152.00
5	31039642229	SBI,CLT	2,07,768.00
6	33940902517	SBI,NIT	12,568.75
		Total	22,64,858.74

(iii)	Term Deposit A/c		
S.No	Bank & Branch Details	A/c No	Amount (in Rupees)
1	32807026844	SBI,NIT	18,69,855.00
2	431200PU00004551	PNB,MKV	14,16,339.00
Total			32,86,194.00

(iii)	MOD Account		
S.No	Bank & Branch Details	A/c No	Amount (in Rupees)
1	4258004400023974	PNB,KPK MENON	1,40,000.00
2	4258004400024104	PNB,KPK MENON	10,000.00
Total			1,50,000.00

**Separate Audit Report of the Comptroller & Auditor General of India on the
Accounts of the National Institute of Technology, Calicut for the year ended 31
March 2019**

We have audited the attached Balance Sheet of the National Institute of Technology, Calicut as at 31 March 2019 and the Income & Expenditure Account and Receipts & Payments Account for the year ended on that date, under Section 19 (2) of the Comptroller & Auditor General's (Duties, Powers & Conditions of Service) Act, 1971 read with Section 22(2) of the National Institutes of Technology Act 2007. These financial statements are the responsibility of the Institute's management. Our responsibility is to express an opinion on these financial statements based on our audit.

2. This Separate Audit Report contains the comments of the Comptroller & Auditor General of India (CAG) on the accounting treatment only with regard to classification, conformity with the best accounting practices, accounting standards and disclosure norms. Audit observations on financial transactions with regard to compliance with the Law, Rules & Regulations (Propriety and Regularity) and efficiency –cum – performance aspects, etc., if any, are reported through Inspection Reports /CAG's Audit Reports separately.

3. We have conducted our audit in accordance with auditing standards generally accepted in India. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements. An audit includes examining, on a test basis, evidences supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of financial statements. We believe that our audit provides a reasonable basis for our opinion.

4. Based on our audit, we report that:

i. We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of our audit;

ii. The Balance Sheet, Income & Expenditure Account and Receipts & Payments Account dealt with by this report have been drawn up in the format approved by the Ministry of Human Resource Development, Government of India;

iii. In our opinion, proper books of accounts and other relevant records have been maintained by the National Institute of Technology, Calicut as required under Section 22(1) of National Institute of Technology Act, 2007 relating to the establishment of NIT, Calicut in so far as it appears from our examination of such books; and

iv. We further report that:

A. Balance sheet

A.1 Sources of funds

A.1.1 Capital/Corpus Fund (Schedule 1) – ₹ 648.66 crore

As per the format of Financial Statements issued by the MHRD, Plan grants to the extent utilized should be transferred to the Capital Fund and the balance should be exhibited as liability in the Balance Sheet. However, the entire amount of Plan grant was accounted as Capital Fund. This has resulted in overstatement of Capital Fund for ₹ 56.20 crore with corresponding understatement of Current Liabilities and Provisions.

This incorrect treatment was pointed out during last year also.

A.1.2 Designated/Earmarked/Endowment Fund Schedule 2 - ₹ 149.68 crore

GPF/CPF Balances

As per the formats of financial statements for Central Higher Educational Institutions issued by the MHRD, the GPF Accounts and CPF Accounts should be separated from the main Accounts of the Institute and these accounts should be shown separately but along with the Annual Accounts of the Institute. However, by clubbing the GPF and CPF accounts with the annual accounts of NITC the "Designated/Earmarked/Endowment Fund" is overstated by ₹ 32.28 crore being the GPF/CPF balances in Schedule 2 of the Annual Accounts of the NITC with corresponding overstatement of Schedule 5 - Investments from Designated/Earmarked/Endowment Fund (Application of Funds) of the Balance Sheet.

A.1.3 Current Liabilities and Provisions – Schedule 3

Other Liabilities - ₹ 20 crore

The item 'Other liabilities' coming under Schedule 3 Current Liabilities includes the items with debit balances of ₹ 1.89 crore.

These debit balances (negative values) are adjusted against the credit balances of other heads under the item 'Other liabilities' in Current Liabilities

Adjustment of debit balances against the Current Liabilities will not correct accounting. The wrong accounting procedure has resulted in understatement of Schedule 3 - Current Liabilities for ₹ 1.89 crore with corresponding understatement of Schedule 8: Loans, Advances and Deposits to the same extent.

A.2 Application of Funds

A.2.1 Loans, Advances and Deposits (Schedule 8) – ₹ 184.16 crore

(a) This includes ₹114.22 crore being deficit balance of Grant (excess of expenditure over non-plan grants received) recoverable from GOI for the period up to 31-03-2018. Excess of expenditure incurred over non-plan grants received shall be met from the Internal Resources (IRG) of the Institute and booked in the Income and Expenditure Account unless there is reasonable assurance from Government that the shortfall in Grants will be released in subsequent years. Further, MHRD vide letter F. NO. 23011/02/2012-IF.1 dated 25-10-2018 has advised not to show the negative balances corresponding to the Fund spent from IRG in the books of accounts, instead

IRG/Corpus Fund should be debited corresponding to the expenditure incurred out of it.

Due to inclusion of ₹114.22 crore being the excess of expenditure incurred over non-plan grants received, as recoverable from Government, Loans, Advances and Deposits (Application of Funds) is overstated by ₹ 114.22 crore with corresponding overstatement of Capital Fund to the same extent. Had this wrong accounting been rectified, the surplus of ₹ 79.58 crore carried to Capital Fund would have turned into a deficit of ₹ 34.64 crore.

(b) Showing the credit balance in Current Asset

The Schedule 8 – Loans Advances and Deposits contains the following credit items/ items with negative balances.

Sl. No.	Items	Amount (₹)
1	Festival	63085
2	Computer Advance	185489
3	Marriage Advance	66184
4	Home Loan	2978164
5	Suppliers	408127
		37,01,049

Adjustment of credit balances against the loans and advances will not correct accounting. The wrong accounting procedure has resulted in understatement of Schedule 8 Loans Advances and Deposits for ₹ 37.01 lakh with corresponding understatement of Schedule 3: Current Liabilities and Provisions to the same extent.

B Income and Expenditure Account

B.1 Expenditure

Depreciation (Schedule 4) - ₹ 16.94 crore

Provision for depreciation not as per MHRD guidelines

In contravention of MHRD guidelines, NITC has adopted different rates of depreciation for the Fixed Assets and followed Written Down Value method. Depreciation provided at half rates if the assets acquired and put to use for less than 6 months and otherwise at full rates.

The non-conformity with MHRD guidelines in adopting depreciation rates and method of application has resulted in difference of value of Fixed Asset in the Balance sheet and in Depreciation in Income and Expenditure Statement.

The depreciation was charged in excess for ₹ 1.48 crore on the assets acquired during 2018-19 due to incorrect calculation. Consequently, fixed assets also understated for ₹ 1.48 crore.

B.2 Income

B.2.1 Grants/Donations/Subsidies (Schedule 10) ₹ 182.56 crore

The accounting treatment for Government/ UGC grants is explained in the format of Financial Statements issued by the MHRD. It states that grants to the extent utilized should be treated as income and the unutilized grants should be exhibited as a liability in the Balance Sheet. However, the entire amount of non-plan grants of ₹ 182.56 crore received during 2018-19 was taken as income instead of treating the utilized portion of grant as income and the balance as liability. Out of the total Non-Plan grant, ₹ 137.36 crore only was utilized and hence the balance should have been shown as Current Liability.

This has resulted in overstatement of income for ₹ 45.20 crore and understatement of current liabilities and provisions to the same extent.

C General

1 Maintenance of Suspense Accounts

The irregular keeping of huge amounts under Suspense Accounts was pointed out in the previous SAR. The five Suspense Accounts commented in the previous SAR have huge balances which increased from ₹ 16.72 crore (as at 31-03-2018) to ₹ 17.31 crore (as at 31-03-2019) as shown below.

		As on 31-03-2018	As on 31-03-2019
1.	Suspense Account No. I	4,97,77,070	4,96,98,820
2.	Suspense Account No. II	10,56,78,257	10,64,94,705
3.	Suspense Account No. I (NIT Sikkim)	42,50,877	42,50,877
4.	Suspense Account No. II (Tuition Fees)	11,670	3,42,212
5.	Departmental Suspense Account	74,74,634	1,23,02,408
6.	Total	16,71,92,508	17,30,89,022

Keeping huge balance in Suspense Accounts without identifying the nature of items in suspense as income/liability or asset/expense makes it difficult to ascertain the fair picture of the Accounts of the Institute.

2 Reserve and Surplus – ₹ 7.69 lakh

Deviation from MHRD format

The Sources of funds under the Balance Sheet contain an item 'Reserve and Surplus – ₹ 7.69 lakh'. As per the MHRD format of Accounts, there is no scope for inclusion of such an item in the Balance Sheet. The deviation from the MHRD format is brought to notice.

3 Cash balance

This includes ₹ 790,489, being cash in hand (cash in hand: ₹ 213,543, Imprest as ₹ 576,946). However, physically there was no cash balance as on 31-3-19 and no certification of physical verification of cash balance recorded.

The Cash in hand for ₹ 213543 comprises of following Ledger Accounts

	Ledger A/c	Amount (₹)
0002	CASH IN HAND DR.C.ARUN KUMAR DST-SERB	2,737.00
0101	CASH IN HAND A/C NO.1 (COLLECTION)	109,907.00
0102	CASH IN HAND A/C NO.1 (GENERAL CASH)	57,930.00
0103	CASH IN HAND A/C NO.1(PETTY CASH)	(-)6,600.00
0105	CASH IN HAND PLAN (NON RECURRING)SBI	2,550.00
0108	CASH IN HAND (GR.FUND)	12,662.00
0109	CASH IN HAND (REFUNDS)	23,958.00
0110	CASH IN HAND (REFUNDS) PETTY CASH	19.00
	CASH IN HAND (STUDENTS)	11,430.00
0111		
0112	CASH IN HAND (STUDENTS)PETTY CASH	200.00
0127	CASH IN HAND PLAN GRANT-NIT, SIKKIM	(-)2,550.00
0200	CASH IN HAND GYMKHANA	1,300.00
	Total	213,543.00

Credit balance/minus value of Cash in hand noticed in the Account 'Cash in Hand A/c No.1 Petty Cash' for ₹ (-) 6,600 and in Plan Grant NIT Sikkim for ₹ (-) 2,550 indicated unrealistic depiction of balances. Management has accepted that there was no cash in hand and it was due to wrong accounting in previous year. This should be rectified.

4 Savings Account ₹ 135.85 crore.

The balance of Savings Bank Account shown under Schedule 7 - Current Assets does not show a correct picture. Savings Accounts balance as per Schedule 7 is ₹ 135.85 crore while the bank has confirmed the balance as on 31st March 2019 for ₹ 102.49 crore for 128 accounts only. Out of 182 Savings Accounts, bank has confirmed balances in 128 Accounts only. Thus, ₹ 33.36 crore was shown in excess without confirmation from bank and hence the Savings Bank Account balance does not show a true and fair view.

5 Expenditure on Government Revenue Grant in Schedule 10 differs with Expenditure as per Utilisation certificate of Grant

The details of revenue grant received from MHRD and its Utilization, made available to audit are as shown below.

	Revenue Grant (₹ in lakh)		
	General 31	Salary 36	TOTAL
Grant in aid received in 2018-19	5796.00	12460.00	17880.00
Opening balance of unspent balance as on 1-4-2018	0	851.00	851.00
Total Grant available	5796	13311	18731.00
Expenditure as per the utilization certificate	5796.00	6605.50	12025.50
Unspent balance of Grant as on 31-03-2019	0	6705.50	6705.50

However, Schedule 10 forming part of the Income and Expenditure Account, describes the opening balance of unspent balance of Grant in aid - Revenue as ₹ (-) 21948.98 lakh, Revenue Grant in aid received as ₹ 18256.00 lakh, utilization of Revenue grants as ₹ 13736.20 lakh and unspent balances as ₹ (-) 17429.18 lakh .

The reasons for the difference in opening balance, utilization and closing balance of Revenue Grant between Utilization Certificates and Schedule 10 of Income and Expenditure Account were explained as it was due to adherence on the basis of Ministry instruction not to show negative balance.

6 Non-accounting of bank deposits.

The Institute has disclosed in the 'Notes to Accounts' (Schedule 24) that the following bank balances were not included in the financial statements as on 31st March 2019 due to lack of information about the accounts opened in the distant past.

Amount in (₹)

a.	Savings Accounts (9 Nos.)	3,42,491
b.	Current Accounts (6 Nos.)	22,64,859
c.	Term Deposits (2 Nos.)	32,86,194
d.	MoD Accounts (2 Nos.)	1,50,000
	Total	60,43,544

Non-accounting of the above deposits has resulted in depiction of incorrect balance in the annual accounts.

7 Current Accounts ₹ (-) 22.08 crore.

This shows a credit balance of ₹ 22.08 crore as payable to banks. As disclosed in Schedule 24 (Notes to Account) out of thirteen current accounts certified by the banks as on 31st March 2019, for ₹ 1.41 crore the Institute has disclosed only eight current accounts having a credit balance of ₹ 22.08 crore (certified balance for these eight accounts is ₹ 1.18 crore)

The certified closing balance of remaining five current accounts was ₹ 22.52 lakh, which has not been included in the Institute's books of accounts for want of particulars of transactions.

While the bank has certified that ₹ 1.41 crore is due to NIT, at the same time, books of accounts of NIT shows a credit balance of ₹ 22.08 crore as payable to banks.

8 Cash in Treasury - ₹ 31.17 lakh

Confirmation from the treasury for the above balance has not been obtained.

9 Provident Fund Account

The GPF Accounts for 2018-19 including Balance Sheet and Income and Expenditure Account Statement is attached alongwith the Institution's Annual Accounts 2018-19.

(i) NITC discloses the details of GPF and CPF Accounts also in Schedule 2: Earmarked/Designated Fund forming part of the Source of Fund of Balance sheet of Annual Accounts 2018-19 of the Institute. There was difference between the figures mentioned in the Schedule 2 and that of Annual Accounts of the PF as shown below.

	As per the Schedule 2 of Annual Accounts of the Institute			As per the Annual Accounts of the Provident Fund		
	GPF	CPF	TOTAL	GPF	CPF	TOTAL
a) Opening balance of the funds	2961.17	114.26	3075.43	1091.78	44.59	1136.37
b) Additions during the year	476.57	489.20	965.76	476.57	489.20	965.77
c) Income from investments made out of funds	79.11	2.56	81.67			
d) Accrued interest on investments/Advances	22.17	2.15	24.32	106.30		106.30
e) Interest on Savings Bank A/c	0.18	0.13	0.31			
f) Other additions	-	-	0.00			
TOTAL	3539.20	608.30	4147.50			
Total expenditure	523.14	395.93	919.07	523.13	395.93	-919.06
Closing balance	3016.06	212.37	3228.43	1151.52	137.86	1289.38

The accrued interest depicted against GPF (₹ 22.17lakh) and CPF (₹2.15 lakh) in Schedule 2 – Designated/Earmarked/ Endowment Fund (of Annual Accounts of the Institute) is ₹ 24.32 lakh. However, accrued interest income is not shown distinctively in the Income and Expenditure statement of Provident Fund Account, which is against MHRD format of the Income in the Income and Expenditure Statement of PF Accounts. Similarly, the NITC had not shown the interest due to subscribers as expenditure in the Income & Expenditure Account and liability in the Balance Sheet.

(ii) The liability of 'Interest reserve' in the Balance Sheet of PF Account represents accumulated balances carried forward from Income and Expenditure

Account. However, on ledger verification, the item having opening balance of ₹ 1661.62 lakh is the total of the opening balances of Accounts of Interest Earned on GPF and CPF investments and not representing the accumulation of excess income carried forward from Income and Expenditure Account of previous years. This is a deviation of presentation of PF Accounts with that of MHRD format.

Though the Institute had agreed to follow the MHRD format, same was not complied with this year.

D. Grant-in Aid

The Institute received a grant-in-aid of ₹ 186.32 crore from the Government of India during 2018-19, which includes ₹ 3.76 crore as Non-Recurring Grant (Grant in aid capital) and ₹ 182.56 crore as Recurring Grant (Grant in aid General and Grant in aid Salaries). Internal Resource generated during the year was ₹ 41.77 crore. The unspent balance carried forward from previous year was ₹ 79.43 crore including Non Recurring Grant of ₹ 70.24 crore and Recurring Grant of ₹ 9.19 crore. Thus the total fund available during 2018-19 was ₹ 307.52 crore (Non recurring ₹ 74.00 crore, Recurring: ₹ 191.75 crore and Internal Resource generated ₹ 41.77 crore). The Institute utilized an amount of ₹ 166.59 crore which comprised of Non Recurring expenditure (Capital) for ₹ 12.66 crore and Recurring Expenditure for ₹ 153.93 crore. The Unspent balance as on 31-03-2019 on grant was ₹ 140.93 crore.

E Management Letter

The deficiencies which have not been included in the Audit Report have been brought to the notice of the Director, National Institute of Technology, Calicut through a Management Letter issued separately for remedial/corrective action.

v. Subject to our observations in the preceding paragraphs, we report that the Balance Sheet, Income & Expenditure Account and Receipt & Payment Account dealt with by this report are in agreement with the books of accounts.

vi. In our opinion and to the best of our information and according to the explanations given to us, because of the effects of the observations discussed above in the preceding paragraphs, the said financial statements read together with the Accounting Policies and Notes on Accounts, and other matters mentioned in Annexure I to this Audit Report and **because of significant matter discussed in the Comment no. A.1.1, A.1.2, A.2.1 (a), B.2.1 and C.1 to C. 4 and C.6, C.7 and C.9 (i) of the report**, do not give a true and fair view in conformity with accounting principles generally accepted in India.

a. In so far as it relates to the Balance Sheet, of the state of affairs of the National Institute of Technology, Calicut as at 31 March 2019 and

b. In so far as it relates to Income & Expenditure Account of the surplus for the year ended on that date



For and on behalf of the C& AG of India
Director General of Audit (Central), Chennai

Place: Chennai

Date: 22 May 2020

Annexure I

1. Adequacy of Internal Audit System:

The Internal Audit system is inadequate as the Ministry has not conducted the audit of the Institute so far. Though an Internal Audit wing is functioning with an Officer on Special Duty (Audit) and an Assistant, the duties and functions of the wing have not been defined. Now the audit is limited to pre-check of sanctions and passes orders related to works and procurements. The internal audit does not cover the activities of all the wings/departments of the Institute. A system of reporting of internal audit findings to concerned departments/wings or the Head of Institute for taking corrective measures is not in vogue.

The internal audit wing should be strengthened by providing necessary staff with clearly defined duties for effective functioning of the Institute.

2. Adequacy of Internal Control System:

Internal control system is inadequate. The Institute is having 182 Savings Bank accounts. There is no proper system of reconciliation of bank figures with that of figures in Institute's Books of Accounts. Huge difference in balance of bank accounts and Institute's Accounts still persists. Many of the Savings/Current Accounts maintained at the Banks do not find places in the Books of Accounts of the Institute.

3. System of Physical Verification of Assets:

Annual physical verification of assets has been conducted up to 31-3-19.

4. System of Physical Verification of Inventory:

Physical verification of inventory has not been conducted for the year 2018-19.

5. Regularity in Payment of Statutory Dues:

The NIT is regular in payment of statutory dues except in the case of GST.



Deputy Director (DT) II