



National Institute of Technology Calicut

Volume 01 | Issue 01

COMMUNIQUE

January - April 2022



DIAMOND JUBILEE REUNION

Innovations and Inventions

MoU with NIF-India
Mentor-Mentee Programme (IIC)
Solar Smart Stove

Design in Discussion

Master Plan for CHC Mukkam
Green Amphitheater at NIT Calicut
Kuttichira Pond Revitalisation



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Dear Readers

As National Institute of Technology Calicut is basking in the glory of its Diamond Jubilee, we bring forth Communiqué, the first ever attempt to compile the academic, research and innovative practices of the institute as a newsletter. Communiqué will be published quarterly, catering to the needs of the time, to showcase our achievements and activities, and as souvenirs for the future. A newsletter is crucial to an institute to take stock of things on a regular basis, and reflect on avenues to improve upon.

The current issue of Communiqué attempts to give a summary of the various activities conducted as part of NIT Calicut's Diamond Jubilee celebrations, the institute's performance in national rankings, innovations by faculty members and research scholars, the placement record of our students, various collaborations NIT Calicut has ventured into under multiple schemes, the new centres that have been initiated on campus, various training programmes conducted, awards won by members of the NIT Calicut fraternity, plans for social outreach and collaborative activities, campus development initiatives, student activities and various celebrations that were held on campus. Communiqué also highlights the creative side of the campus by focusing on various fests and activities of the student clubs we have in campus.

Communiqué wishes to thank the editorial team of the newsletter, the design team, Media Cell as well as the administration of NIT Calicut for their continued support. Let's hope Communiqué captures effectively the flavours of NIT Calicut's vibrant campus life for posterity!

Team Communiqué

Editorial



Prof Prasad Krishna

The art of communication is critical to the success or failure of any Institution. It becomes vital in the context of academic institutions where open young minds are constantly in conversation with their peers and faculties members. Recognising this, the Institute has been instrumental in taking the next step in fostering a strong connection with its stakeholders, through an exclusive newsletter. The publication aims to form new connects between the institution and its patrons through a steady stream of inputs from its various departments and multi-disciplinary centres.

The expansion and exploration of trans-disciplinary research and the launch of new courses have marked a new chapter in our history. It is expected that this would entail a steady stream of exchange of ideas and an awareness about the developments. Further, these interactions are oft found to be the ground for new innovations, inventions and groundbreaking technologies. This needs an impetus, a significant one, and a newsletter becomes an ideal platform towards this direction.

I believe that the publication 'Communiqué' will become the 'messenger' for this Institute, spreading its progress across a wider audience. The efforts of the Editorial team and the contributions have been laudable, covering the wide spectrum of activities which have marked the milestones in the journey of this Institute. I wish the best to the team and present the first edition of Communiqué to you with hopes that the progress of our journey will see many such initiatives.

Prasad Krishna

Message from the Deputy Director



Dr Sathidevi P. S.

It is indeed a pleasure to see the release of the First edition of the Institute Newsletter 'Communiqué', while the institute celebrates its Diamond Jubilee year. In the last two years, pandemic has tested our resilience in a novel way. We found new ways to build connections, even while maintaining them, when the virtual mode of interaction became the norm. Despite the difficult circumstances, we were able to overcome the challenges and could concentrate on teaching, learning, research and publications. I am happy that our interactions with the people in the Institute and with those in the world over remain as productive as ever.

An effective and efficient internal and external communication is pivotal for sustaining the growth of any institution. NIT Calicut has always been committed in delivering excellence and sustaining the mode of engagements and communications. This newsletter is a humble attempt which gives information about the Institute's most innovative and successful initiatives. It is an ensemble of career milestones, collaborations, publications, research and consultancy grants received by students and faculty. These remarkable achievements would not have been possible without the collective effort of students, faculty and staff of the institute.

I congratulate all the members of the NITC fraternity for their continued commitment in achieving the spirit of an institute with their combined thoughts and hard work. I am sure, the NITC community will continue to work towards achieving the goals envisaged for the Institute, even while fulfilling our responsibilities, towards the society at large.

I wish that you all stay safe and well to enjoy the good that the coming years will surely bring.



Dr Sameer S. M.
Dean (Academic)

Winter 2021-22 semester was an eventful one for the faculty and students of the Institute as we started witnessing the end of the pandemic, which forced us to move to a completely online mode of teaching and learning for two years apart from several other challenges in the professional and personal fronts. Though the route map was not clear, we had initially started with offline classes selectively for some batches and later brought all other students into the campus in a phased manner. Faculty had to switch from online to offline in the middle of the semester, but the presence of students in the campus and classrooms after a long time boosted their energy to all-time high levels. For the first and second-year B.Tech students, it was their first experience in the campus and hostels, and they grabbed the opportunity with both hands. The final year students were reluctant to come back to the campus for the first time for last 2-3 months as they were already adapted to the learn-from-home environment. However, they unanimously agreed at the end of the semester that they would have missed these days in their life had they not gotten this final opportunity. Co-curricular and extra-curricular activities on the campus have also witnessed significant momentum with Ragam, the intercollegiate arts festival, which happened offline after two years. It was an extremely challenging time for the office of the Dean (Academic) to manage this transition phase with several uncertainties always looming around with predictions on new waves of Covid, organising classes and examinations in multiple modes and dealing with the issues experienced by students in the transition phase. But we could manage to complete all academic activities of B.Tech students on time other than for first-years going to an accelerated semester system which will end in August. Academic activities of PG and PhD students are all running on track, and we are now all set to begin the next academic cycle in the first week of August 2022.



Dr V. Madhusudhanan Pillai
Dean (Research & Consultancy)

National Institute of Technology Calicut has been promoting Research & Consultancy activities among its research community. The Institute has nearly 272 funded projects; out of that, the Institute has received sanctions for 25 external funded projects/fellowships with a sanctioned amount of around 8.1 crores during the window of January 2022 to May 2022. The R&C office also provides administrative support for the consultancy services of various departments. The Institute has consultancy services to the tune of 75 lakhs in this period.

In addition to the sponsored projects sanctioned by the external agencies, our Institute has funded project proposals of 42 newly joined faculty members (joined in 2020) under FRG scheme 2022. The total amount of funding is around Rs 2.0 crores for two years. As part of strengthening the R&D related activities in our Institute toward the defence sector, we are planning to conduct a research conclave to present research concept notes to DRDO Labs. In this regard, we have contacted 76 labs/establishments under DRDO and are in the process of deciding the way forward. In addition to all these, 17 student projects were sanctioned under the innovative project scheme 2021 with a total amount of around 12.5 Lakhs, and they are in the process of developing deliverables. The R&C office also provided administrative support for organising various FDP, STTP, and International and National Conferences. During this period, four FDPs/STTPs and two International conferences were conducted at the Institute.

Dean Speaks.....



Dr P. P. Anilkumar
Dean (Alumni & Corporate Relations)

As the campus life started returning to normalcy post COVID-19, the office of the Dean of Alumni and Corporate Relations in association with NIT Calicut Alumni Association (NITCAA) launched several initiatives to strengthen the alumni-institute bond. The year 2022 began with the remarkable reunion of the first batch (1961 admission) of faculty members, staff and students of the institute, formerly Regional Engineering College (REC), as a part of the Diamond Jubilee celebrations. The event was conducted on 31st December 2021 and 1st January 2022 in campus. Seven faculty members, seven staff members and eleven students belonging to the first batch along with their families participated. They planted a sapling in 'Smrithi Vanam' and instituted an ever-rolling trophy to be awarded to the best graduating B.Tech student with all-round credentials. The interactive session of the oldest batch and the current generation students proved to be a memorable event as well.

The construction of a 'Green Amphitheatre' with a nature-friendly ambience, sponsored by NITCAA, was inaugurated by the Director Prof. Prasad Krishna on 17th February 2022. Located in the quadrangle between the Main Building and the Old Library Building in campus, the Green Amphitheatre designed by Dr. Anjana Bhagyanathan, Department of Architecture and Planning, uses only natural materials for its construction and preserves the existing trees and diagonal pathways. The symmetric design revolves around a banyan tree and a pipal tree planted by Dr. Paul Joseph, former Professor of Electrical Engineering and a renowned nature-lover. This estimated project cost of Rs. 22 Lakhs has been met with contributions from the 1993 Batch and Mr. Suresh Chand Jain of 1972 Batch. Once completed, this central structure would be a standing testimony of the commitment and affection of our alumni towards the institute, the students and nature.

The Winter 2021-22 semester ended on a happy note, with NITCAA obtaining 12A and 80G tax exemption certificates on 9th May 2022. 12A registration makes NITCAA a tax-exempt non-profit organization, while 80G registration permits NITCAA to issue tax exemption/deduction certificates on 50% of the donated amount to all donors in India, which will be a huge motivation for our alumni to come forward and contribute for more such laudable projects.

We look forward to a truly eventful year ahead...



Dr Rajanikant G. K.
Dean (Student Welfare)

Academic year 2022 began with continuing the online mode of teaching and learning due to the uncertainties of Covid Pandemic. Though the students missed the realization of campus life in online mode the extra-curricular activities continued online more or less with the same spirit and energy pre-pandemic. Even with the partial resumption of offline activities, the year 2022 began with a "Surya Namaskar Demonstration Programme" on January 14 as a part of "Azadi ka Amrit Mahotsav" celebrations in the campus in which nearly 100 students and faculty participated. Surya Namaskar is a salutation to the Sun in which we express our gratitude for each of his rays that nourish all living beings, according to the Ministry of AYUSH. Furthermore, the mass Surya Namaskar demonstration is expected to convey a positive message about climate change and global warming. Annual Techno - Management Fest of NIT Calicut Tathva was successfully conducted online during the months of January, February, and March 2022 and concluded in April. Various lectures, workshops, and other events were conducted online as part of our foray into this futuristic theme of 'Metaverse'. The statistics tells that the website and Instagram page have garnered over 1.89 lakh views in total. 23,768 people have been registered as users on the Tathva website. 1032 people had attended the lectures hosted by the Tathva Lecture Committee, which included various eminent scientists and professionals including 2 Nobel Laureates Dr Adam Reiss and Dr David J Wineland along with personalities like Evelyn Mora, Binoj Kalayil, Dr Thomas Kailath. The online workshops were attended by 2300 students. The extra-curricular activities took the momentum when the offline activities resumed in March 2022. Ragam, the annual inter college cultural fest was conducted from 30 April to May 1, 2022, with great enthusiasm with a blend of cultural and technical events. Later on, Office of Dean Student Welfare in association with the Department of Physical Education conducted an inter branch sports tournament for games like Football, Volleyball, Basketball, Handball, Kabaddi, Kho-Kho, Chess, Badminton and Table Tennis starting from 24/03/2022 to 02/04/2022. Badminton and Volleyball Tournaments for Faculty/Staff were also conducted by the office. The various technical as well as non-technical clubs in the institute also continued their activities online as well as offline by carrying forward the path set by the predecessors.



Diamond Jubilee Batch Reunion

The Institute honoured the first batch of faculty members, staff and students who joined in 1961 as part of its Diamond Jubilee Celebration. Among the 120 students who joined the Institute in 1961, around 30 alumni passed away; the rest are in India and abroad. Seven faculty members, seven staff and 11 students belonging to the first batch and their families were honoured in a function arranged in the auditorium of NIT Calicut on 31st December 2021. The faculty members, staff and students were taken for a campus tour after lunch with the Director. This was followed by planting a sapling in the “Smrithi Vanam” by the first batch in memory of all the departed faculty, staff and students of REC/NITC. In the evening, the Director, Deans, Registrar, HoDs, faculty members, staff and students gathered in the auditorium to honour the first members of the REC/NITC family. Dr Jeevamma Jacob, Dean Alumni Affairs and International Relations, welcomed the distinguished guests to the function. The NITC Director, Prof. Prasad Krishna, inaugurated the meeting and addressed the gathering. Director Prof. Prasad Krishna lauded

the efforts of all the alumni, former faculty and staff members, the present faculty, staff, students, and all other stakeholders of the Institute, which helped to transform the Institute into what it is today. He described the recent achievements of NITC on various fronts. He also outlined various development activities on the anvil, with the active involvement of the alumni, including setting up a satellite campus of the Institute at Kochi. He also stressed the need for chalking out an alumni engagement strategic plan and a ten-year vision document for NITC. He mentioned that NITC needs to align its curriculum and infrastructure to the needs of the country and the global community, in line with the new National Education Policy (NEP). This was followed by honouring the faculty members, staff and students who joined the Institute in 1961 by offering them a garland, shawl, fruit basket and a diamond jubilee memento. Dr Bharathan, one of the first faculty members in the Electrical and Engineering Department, wished that NITC grow to a greater height among all the institutes of India.





Diamond Jubilee Batch Reunion



Sri Sivaramakrishnan Nair belonging to the first batch expressed their gratitude for being honoured by their alma mater during its diamond jubilee celebrations. An ever-rolling trophy to be awarded to the Best All-Round Performer among the B.Tech students graduating from NIT Calicut was handed over by the alumni of the first batch to the Director, Prof. Prasad Krishna. Mr Nithyanand Kamath, Former Secretary of NITCAA and Vice President of Malabar Chamber of Commerce, delivered the felicitation and Dr Dhanraj K J, Assistant Professor, ECE, proposed the vote of thanks. The Deputy Director of NITC, Prof. P.

S. Sathidevi, Registrar in charge Prof. Jeevamma Jacob, Diamond Jubilee Coordinator Prof. Ashok S, Deans and Heads of various Departments were present. The students of NITC then amused the first batch with their scintillating cultural performance in the evening after the dinner.

On 1st January 2021, the Director, Prof. Prasad Krishna, celebrated New Year's day with the first batch of REC/NITC by cutting a cake. This was followed by an interaction between the first batch alumni and the students of NITC, where they shared their vast experience and knowledge with the current students.



All India 9th Rank in ARIIA Ranking for NITC

NIT Calicut has secured the 9th rank at the national level in the Atal Ranking of Institutions on Innovation Achievements (ARIIA-2021). ARIIA is an initiative launched by the Ministry of Education and implemented by the All India Council for Technical Education (AICTE) and Ministry's Innovation Cell (MIC), Govt. of India, to systematically rank higher education institutions and universities in India on indicators related to 'Technology transfer,

Innovation, Start-up and Entrepreneurship Development' among students and faculty. The ARIIA ranking was announced today by the Minister of State for Education, Sri. Subhas Sarkar.

NITC is positioned first among all the NITs in ARIIA ranking.

The major indicators/parameters for ARIIA are (a) Programs and Activities on IPR, Innovation, Start-up and Entrepreneurship, (b) Pre Incubation & Incubation Infrastructure & Facilities to Support Innovation and Entrepreneurship (I&E), (c) Annual Budget Spent on Promoting and Supporting I&E Activities, (d) Courses on Innovation, IPR and Entrepreneurship Development, (e) Intellectual Property (IP), Technology Transfer and Commercialisation, and, (f) Successful Innovation and Start-ups & Funding Innovation & start-ups. This year, a total of 1438 institutions (including all IITs, NITs, IISc, etc.) have participated in the rankings. The ranking is done in seven categories – (i) CFTIs, Central University, & Institute of National Importance, (ii) State University & Deemed University (Govt. & Govt. Aided), (iii) Govt. College/Institution (Govt. & Govt. Aided), (iv) University & Deemed University (Self-Finance/Private), (v) Private College/Institute (Self-Finance/Private), (vi) CFIs/ Central University/Institute of National Importance (Non-Technical) and General (Non-Technical). In the first category, NIT Calicut has also secured the first position among all the NITs in the country.

Innovation and entrepreneurship gets tremendous encouragement in the NITC Campus. To promote entrepreneurial culture among the students, the Institute Innovation council (IIC), set up with the guidance of MIC, Govt. of India, regularly conducts workshops and mentoring programmes. Many students have developed prototypes and won prizes under the guidance of IIC. NITC 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 September 2009. The TBI has extended incubation facilities to 88 startups so far. Many training programmes are conducted throughout the year for the entrepreneurs of the region to help them to set up and grow their businesses. A dedicated Fab Lab facility is being set up in the institute for the use of innovators. NIT Calicut is collaborating with a lot of public and private organisations for developing newer technologies. In the year 2020-21 alone the institute was able to secure a total funding of 7 crore for research and development. Department of Science and Technology (DST), Kerala State Council for Science Technology and Engineering (KSCSTE), Science and Engineering Research Board (SERB), Council for Scientific and Industrial Research (CSIR), Directorate of Environment and Climate Change, National Agricultural Science Fund (NASF), etc. are some of the agencies with which NITC is having research collaborations. In addition to this, NIT Calicut received around 75 lakhs as consultancy fees from National Thermal Power Corporation (NTPC), National Highway Authority of India (NHAI), Kerala State Electricity Board (KSEB), Public Works Department (PWD), etc.

Artificial Intelligence, Machine Learning, Bio-signal processing,

Bioinformatics, Health Informatics, Biomedical engineering, Robotics, Power electronics, Nanotechnology, NeuroScience, etc. are some of the areas in which research projects are undertaken by various departments of NIT Calicut. Since 2018, NITC was granted around 14 patents and 3 copy rights for the technologies developed by its researchers and around 20 patent applications are under evaluation. Recently Dr. Sudheer A P, Assistant Professor, Department of Mechanical Engineering was granted a patent for developing a 'Radial Robotic Gripper'. Dr. R Manu, Professor, Department of Mechanical Engineering was granted a Design registration (Design No. 349955-001 dated 22-09-2021) for the Disinfecting and Sterilizing Chambers (COVID 19) developed in-house. A patent entitled ' Novel Bodipty Based Reusable Test Paper Strip and Method of Colorimetric Detection of Fluoride Ion' has been granted to Dr. Parameswaran P, Associate Professor, Department of Chemistry. From around 1.64 crore research funding in 2014-15, NITC has grown to securing a research funding of 6.89 crore in 2020-21. To promote and nurture the innovations by UG and PG students the institute has initiated funding to the tune of around 25 lakhs since 2018.

“Recently, the Institution’s Innovation Council (IIC) of NIT Calicut was awarded the highest performance rating in the IIC 3.0 results announced by the Ministry of Education’s Innovation Cell (MIC) and All India Council of Technical Education (AICTE)”

Director Prof. Prasad Krishna extended hearty congratulations to all the stakeholders of NITC for the exemplary achievement. “I am grateful to the entire NITC fraternity for their sincere hard work which helped us to retain the top position among all the NITs in the country, in spite of the constraints imposed by the pandemic”, he added.

Deputy Director Prof. P. S. Sathidevi and Registrar in charge Prof. Jeevamma Jacob also congratulated the NITC community for the commendable achievement. Prof. Madhusoodanan Pillai (Dean-Research & Consultancy) told that NITC is extending all support to the students in giving shape to their innovative ideas and providing funding support also for selected innovative projects.

Institution's Innovation Council of NIT Calicut has been showcasing excellent performance with achievements like funding for the proof of concept for the student innovators from AICTE and has been graded as one of the highest performing institutes by MIC, Govt. of India. “Recently, the Institution’s Innovation Council (IIC) of National Institute of Technology Calicut was awarded the highest performance rating in the IIC 3.0 results announced by the Ministry of Education’s Innovation Cell (MIC) and All India Council of Technical Education (AICTE)”, said Prof. A. V. Babu, President, IIC. This rating reflects the efforts undertaken by the Innovation Cell of the Institute for carrying out various activities prescribed by the Ministry of Education’s Innovation Council to promote Innovation and Entrepreneurship in the NITC campus during the academic year 2020-21.



Record campus placement for 2022 graduating students

The 2022 graduating students of the National Institute of Technology Calicut could overcome the disruptions in academic activity due to Covid 19 by securing the highest ever placement figure of 1027 in the placement season 2021 -2022, by the end of April 2022.

During this session, about 247 companies took part in the placement drive and extended offers to undergraduate and postgraduate students, with an average salary of INR 13 lakhs per annum. This year, the highest CTC of INR 67.6 lakhs per year was bagged by four B.Tech students



"In line with the proverb that 'every cloud has a silver lining', the completely online

General management and IT/Analytics. Students received offers from well-known core engineering firms like Bajaj Auto, Exxon Mobil, Maruti Suzuki, Mercedes Benz, Texas Instruments, Tata Group, Larsen & Toubro, Adani Enterprises Ltd, Shapoorji Pallonji Pvt Ltd, Aditya Birla Group, J. Ray McDermott Engineering Services Pvt. Ltd., Reliance Industries, Ford Motors, Siemens, Ola Mobility, GE India, Samsung, IBM, Cisco, MRF, John Deere India Pvt. Ltd, CDAC, Robert Bosch, and Bharat Electronics, to name a few. IT/Analytics majors such as Traceable AI, D.E. Shaw India, Amazon, Arcesium, Atlassian, American Express, Goldman Sachs, JP Morgan Chase, Citi India, Accenture, Oracle, Qualcomm etc. were associated with the Institute in this placement campaign. Top-notch Consulting/ General Management/ Banking corporates such as Deloitte in India, Capgemini India, Ernst & Young India, ICICI Bank, Federal Bank, Metyis, ZS Associates etc., also recruited our students. The current third-year B.Tech students (2023 graduating batch) also have received two-month internship offers during summer vacation, with the total offers reaching 233, and a monthly Internship stipend ranging from INR 15,000 to INR 1 Lakh per month.



from the Department of Computer Science and Engineering, compared to the top offer of INR 43 lakhs in the previous year. The placement percentage rose by 70% compared to the same period during 2020-2021. Anticipating the demand from IT/ Analytics firms, a training programme spanning two months, with alumni support, was offered to the students during the summer vacation. This year, the placement and internship drives were conducted in virtual mode and will continue till June 2022.

mode of the recruitment process during the pandemic was successfully leveraged by the Institute. Moreover, the renewed thrust towards digitization of the activities by the firms during the pandemic could be one of the reasons for the higher job and internship opportunities for the students.", said Dr V Sajith, Chairman, Centre for Career Development, NITC.

The students were offered various roles in different sectors and domains, such as profiles in Core Engineering, Consulting/



Smart Solar Stove

**Smart Solar Stove
Designed and Developed
by Dr. V. Karthikeyan
Funded by BIRAC's
Innovation Challenge –
SoCH, DBT, Govt. of India**

In the present day scenario, LPG prices are increasing at a high pace and the use of electricity for cooking is becoming uneconomical which also causes additional burden to the power grid. In this context, the 'Smart Solar Stove' developed by Dr. V. Karthikeyan at National Institute of Technology Calicut (NITC) appears highly promising.

An excellent alternative cooking system, Smart Solar Stove, is developed and tested successfully by Dr. V. Karthikeyan at the Electrical Engineering Department of NIT Calicut. This smart solar stove is working on solar energy and is user friendly with zero running cost. It is a clean cooking product for a variety of customers. NITC Director Prof. Prasad Krishna launched the product at the NITC Campus. In the Industrial Power Research Laboratories of NIT Calicut, the product has been

validated. It has been tested at various places like domestic houses and roadside Food Stalls (Thattukada) too for checking the practical feasibility. It is working fine and now it is ready to launch in the market at an affordable price with multiple versions.

This stove is smokeless, there is no exhaust gas and it does not produce carbon monoxide. The customer need not depend on conventional LPG gas at all and approximately Rs. 12,000 per year can be saved by every family by implementing 'Smart Solar Stove'. There are two models of the solar stove. In the first model, the single stove products can be used directly under the sun without any electric supply. The second model is well suited for domestic cooking to avoid LPG cost and harmful gaseous environment. The product has been tested successfully for domestic use.





Smart Solar Stove - Akka Street food stall (Thattukada) at Coimbatore

Model 1: The roadside Food Stall, (Thattukada) people can make use of this product for all types of cooking purposes, keeping the solar panel just above the roof of the thattukada. In places where there is no electricity, this product has a provision to connect an LED lamp for getting sufficient illumination, so that the vendors can extend their business operating hours during night time. During long journey/tour visiting time, they can cook independently by carrying this stove unit along with flexible (Foldable or MAT type) solar panel. It can be accommodated in the boot of a vehicle. This product can also be used by travellers. During long journeys by tourists, they can cook

independently by carrying this 'smart solar stove' unit along with a flexible (Foldable or MAT type) solar panel in their vehicle. It is also very useful for military and forest officials during their duty at remote places. The overall cost for the single stove with solar panel is around Rs. 10,000 and for the double stove, cost is around Rs. 15,000.

Model 2: In Model 2, it has double stove unit and well suited for domestic cooking purposes to avoid LPG cost and harmful gaseous environment. During non-sunny hours or rainy times, the battery can supply to stove unit and even if battery becomes empty, the product consumes the power from EB. It

ensures the clean cooking throughout the day without interruption. It means the reliability of the product is impressive in model 2.

The user trails has been installed in various locations (various HHS in three different districts) to test the performances.

This project is funded by the Department of Biotechnology, Govt. of India, and is mentored by Prof. Ashok S, Chairman of the Centre for Innovation and Entrepreneurship, NIT Calicut. "The good numbers of industries are interested to get the technology for commercial manufacturing of the Smart Solar Stove".





Smart Solar Stove - KEY FEATURES

1. Different Levels of Power Adjustment for temperature setting.
2. The surface temperature is always less than 60 ° C.
3. The cooling time after shutdown is about 6 minutes, whereas in gas cooking is 24 minutes.
4. Inflammable and higher temperature resisted materials for housing.
5. Auto mode enabled power from either solar PV or battery or EB (Hybrid mode)
6. Auto charge of battery from EB when no solar PV power production.
7. Battery does not get charged from EB in solar PV mode.
8. Breakers connected at every stage which provides double layer protection.
9. System never gets affected with small metals such as knives, fork and etc.
10. Good water resistance status.
11. Auto cut off when abnormal conditions.
12. Over voltage and under voltage protection.





Discovery against multi-drug resistant bacterial infections by NITC Research group



Dr Suchithra T.V.



Dr Sareena C

Researchers at the School of Biotechnology, NIT Calicut have come one step closer to managing drug resistant bacterial infections. A novel antibacterial compound from *Nigella sativa* seeds has been discovered by Dr. Suchithra T. V. and Dr. Sareena C. and the compound can be used for the effective management of multi-drug resistant *Staphylococcus aureus* (*S. aureus*) bacteria, isolated from diabetic foot ulcers. The discovery was granted the patent (No. 394801) by the Patent Office, Govt of India. Dr. Suchithra is an Associate Professor at School of Biotechnology, National Institute of Technology (NIT) Calicut and Dr. Sareena is currently doing her post-doctoral research at Weill Cornell University, Qatar. The discovery was a part of doctoral thesis work done by Dr. Sareena under the guidance of Dr. Suchithra at NIT Calicut.

Antibiotic resistance of bacteria is a rising issue today with indiscriminate and overuse of antibiotics. *S. aureus* is a deadly pathogen because of its ability to acquire resistance rapidly against multiple antibiotics. Multidrug resistant *S. aureus* pose great challenges in all communities, especially during vulnerable conditions like post-surgery infections, diabetic foot ulcers etc. As per the population-based statistics, more than two-thirds of the patients with diabetes were susceptible to diabetic foot infections, with 9% prevalent ulcers and 20.2% requiring foot amputation. These trends have been documented in India since 1985, where the microbial infection was determined to be the primary

cause of amputation in 90% of cases. MRSA (Methicillin Resistant *S.aureus*) is the common causative agent for such infections. These infections, if not managed properly, can lead not only to amputation also even to death. The notorious MRSA has also been identified as the leading cause of nosocomial infections worldwide since 1970s. Despite the availability of antibiotics for nearly 80 years, the increased incidence of antibiotic resistance, especially to common drugs such as methicillin and vancomycin, has made therapy difficult for clinicians. Mortality due to *S. aureus* bacteria remains approximately 20-40% despite the availability of effective antimicrobials and this has led to the search for new compounds active against this pathogen. In this backdrop, the researchers' discovery serves as a breakthrough in the field of antimicrobial therapy against MDR pathogens.

The researchers isolated 4-diphenylamino 3-iodo coumarin, a potent antibacterial compound from *Nigella sativa* seeds. Commonly called Kalonji seeds, Karinjeerakam etc., these are widely used in Ayurvedic and Unani formulations as a wound healing agent. Taking a lead from there, Dr. Sareena and Dr. Suchithra were able to isolate and purify the aminocoumarin compound that is responsible for this antibacterial property. The compound is proved to inhibit DNA gyrase B of MRSA by in silico and in vitro methods. This plant derived compound has been found to be more efficient at combating drug

resistant *S. aureus* than similar compounds from microbial sources. The patent has reported the isolation methodology for the compound and also its mode of action. This invention has given the scientific world a potential lead for an advanced antibacterial drug to treat multi-drug resistant bacterial infections. The study has also unraveled the importance of Kalonji seed oil as a wound healing agent in traditional medicine. India has a well-established traditional medical system mainly under three streams namely, Ayurveda, Unani and Siddha. Many drug formulations from these streams are available in local market. Drugs used by traditional practitioners have good therapeutic efficacy but lack scientific validity regarding the identity and mechanism of action of active principle. Most studies on medicinal plants or drug formulations are still confined to screening of activity against different pathogens with no further advancement in research. In view of the above observations, the present study succeeded to isolate and identify antibacterial principle from one traditional drug formulation. The discovery will open our eyes to unexplored drug sources, such as herbal formulations, which have been successfully used in traditional medicine for a long time. The patent was applied in 2018 and granted in 2022. The National Institute of Technology Calicut takes pride in the discovery of a novel antibacterial compound, 4-diphenylamino 3-iodo coumarin from Kalonji seed oil and proudly adds a feather to its cap with the patent granted.



Implementation of 'Unnat Bharat Abhiyan' Scheme at Govt. LP School, Chenoth

National Institute of Technology Calicut has launched a project to develop the Chenoth Government LP School in Chathamangalam Panchayath in Kozhikode district as a model village school under the central government project 'Unnat Bharat Abhiyan (UBA)-2022'. The mission of Unnat Bharat Abhiyan is to enable higher educational institutions to work with the people of rural India in identifying development challenges and evolving appropriate solutions for accelerating sustainable growth. It also aims to upgrade the capabilities of both the public and



the private sectors in responding to the development needs of rural India. The Chenoth School is a 50 years old lower primary school located in the rural area of Chathamangalam Panchayath in the vicinity of NIT Calicut. The school primarily caters to educating children belonging to families from nearby settlements, mostly of low-income communities and weaker sections of society. The school has been experiencing issues related to dilapidated physical infrastructure, lack of a children-friendly learning environment, lack of

appropriate supporting systems to facilitate quality teaching, and skill development of the children. The UBA cell established at NIT Calicut has suggested proposals to upgrade the Chenoth LP School to ensure quality education to the children from the nearby rural community. The project initiated in March 2022 proposes to develop an academic Master plan for transforming the school into a centre of excellence at the village level fostering the holistic development of the children and the community. The scheme envisages

mainstreaming the children to formal schooling by exposing them to the nuances of science and technology with the help of human as well as technical resources of NIT Calicut. Developing children friendly learning environment, setting up of science clinic, conducting workshops and training programs to enhance the learning levels of children, offering technical solutions and support systems to improve the scientific and technical knowledge of the children and providing computer education to bridge the digital divide are the immediate priorities being identified by the Unnat Bharat Abhiyan cell. Strengthening the capacity of teachers by introducing advanced teaching and learning systems and empowering the parents of the children for better community development are also identified as the project's long-term goals. The director of NIT Calicut, Prof. Prasad Krishna, launched the project activities of the UBA cell on the school premises on March 30, 2022 by releasing the project brochure .



NIT Calicut tie-up with NIF-India to promote grassroots innovation from Kerala

National Institute of Technology Calicut (NITC) has signed a Memorandum of Understanding (MoU) with the National Innovation Foundation-India (NIF-India) to promote grassroots-level technological innovations. NIF is India's national initiative functioning under the Department of Science and Technology, Government of India, to strengthen the grassroots technological innovations and outstanding traditional knowledge. Its mission is to help India become a creative and knowledge-based society by expanding policy and institutional space for grassroots technological innovators.

The MoU was signed on Friday, 4th February 2022, by Prof. Prasad Krishna, Director of NIT Calicut, and Dr Vipin Kumar, Director, NIF India, in a meeting held at NIT Calicut. NITC, an Institute of National importance that constantly strives to impart world-class

education and research in the respective fields of Engineering, Science and Management, has been gathering its technological expertise and experiences in promoting entrepreneurship. Through this MoU, NITC is joining with NIF to support grassroots innovations developed by individuals and local communities in any technical field, helping in human survival without any help from the formal sector. NITC will be the nodal centre and technology hub for this activity in Kerala.

The association of NITC with NIF is intended to support the students and the public in identifying and providing innovative solutions to the problems faced by the society, mentor and support the grassroots-level Innovators, and document creative ideas and technologies gathered from the region. The selected innovative technologies/ideas that fall into the

chosen criteria will be validated for compliance with the quality standards and industry specifications with the expertise of NITC. The selected entrepreneurs will have an opportunity to access the infrastructure facilities like the Technology Business Incubator (TBI) in NITC.

Speaking on occasion, Prof. Prasad Krishna, Director, NITC, said that with support from the NIF, NITC would strive to bring the innovations happening at the grassroots level and the local communities to the limelight, thereby fetching them the due recognition they deserve. Prof. Sathidevi P S, Deputy Director, NIT Calicut, Mr Rajive N P, Vice-chairman, NIF-India, Prof. Jeevamma Jacob, Registrar, NITC, Dr Baiju Nair, Coordinator of the programme, Deans and Heads of various departments were present during the occasion and gracefully made this event complete.





MoU between NIT Calicut & KMCH, Calicut

The National Institute of Technology Calicut (NITC) and the Govt. Medical College of Kozhikode has signed a memorandum of understanding (MoU) to strengthen the collaborative endeavours in interdisciplinary research. Dr Prasad Krishna, Director of NIT Calicut and Dr V. R. Rajendran, Principal of Medical College, Kozhikode, signed the memorandum of understanding (MoU) on the 27th of April at a function held at the NIT Calicut campus.

The MoU envisions to develop collaboration between the two institutions of repute for clinical research in various fields of Biomedical subject under areas of mutual interest and co-operative and collaborative activities which would address multidisciplinary, scientific,

technological and educational problems of relevance to the country. Areas of collaborative research include Biomedical Image processing, Telemedicine, Artificial Intelligence (AI), Bioinformatics, Robotics, 3D printing, Nanomedicine, Implants, Prosthetic devices, Ergonomic system design etc. These collaborative research works aim to build sophisticated treatment facilities that are highly beneficial to the patients and strengthen biomedical research to facilitate improved diagnosis of critical illnesses. Additionally, workshops and other related joint ventures are planned, taking advantage of the technology breakthroughs and scientific knowledge of the multidisciplinary research laboratory operating under the guidance of Indian Council of Medical research (ICMR)



Multi - Disciplinary Centres of NITC



Through the newly established multidisciplinary centres, NIT Calicut aims to foster international collaboration, multidisciplinary and trans-disciplinary research, multicultural exposure, and holistic development of the fraternity and society at large. The logos for the following centres are designed by the graphic artist, Mr. Chandramohan M.K.



Centre for QA and Enhancement
(Prof. P.S.Sathidevi)

Accreditation, Ranking, Analytics, Outcomes Assessment, All audits except fiduciary (Green Audit, Academic Audit, Energy Audit, Space Audit, Water Audit, Environmental Audit, etc.).



Centre for Sustainable Technologies
(Prof. Lisa Sreejith)

Sustainable Materials, Buildings, Waste Management, Environmental Sustainability, Renewable Energy Systems, Water Harvesting, Organic farming.



Centre for Holistic Teaching and Learning
(Prof. T.M. Madhavan Pillai)

Innovation and Research in Pedagogy, Research in STEM education, New paradigms of Learning.



Centre for Innovation, Entrepreneurship & Incubation
(Prof. Ashok S)

All activities of TBI, NISP, IIC, Start-Up, etc, under one umbrella.



Centre for Indian Knowledge Systems
(Prof. R. Sreedharan)

Education, Training, and Research in Indian Traditional Knowledge Systems (Science, Mathematics, Economics, Astronomy, Astrology).



Centre for Career Development
(Prof. Sajith V)

Formerly known as the Centre for Training and Placement, the CCD connects students with placement opportunities and empowers them to excel in their careers.

Multi - Disciplinary Centres of NITC



Centre for Yoga and Holistic Wellness
(Prof. Kasthurba A.K.)

Education, Training, and Research in Yogic Science and 360-degree wellness (Physical, Mental, Emotional, Spiritual, Social and Financial dimensions of wellness).



Centre for Information Technology, Research, and Automation
(Prof. S.D. Madhukumar)

All Activities of CCC, CNC, IT Infrastructure Management under one umbrella.



Centre for Industry – Institutional Relations
(Prof. Jose Mathew)

Collaborations/MOUs with industries, User-Oriented Programs, Adjunct Faculty Appointments, Industry Internships, CoEs, Industry-sponsored Labs, Joint Conferences, Networking with Industry associations(FICCI, CII, ASSOCHAM, Chambers of Commerce, etc.).



Centre for International Relations & Foreign Languages
(Prof. M.K. Ravivarma)

All collaborations with Academia, Research Institutions and Industries from abroad, Study in India Schemes, Exchange of Faculty and Students, Visiting faculty appointments, Visiting Researchers appointments, MoUs, Joint conferences, Twinning Programs, Joint Programs, Foreign Languages.



Centre for Cultural and Art Relations
(Prof. G.K. Rajanikant)

Education, Training, and Research in All Arts and Cultural forms (India and Foreign), ICCR activities, Indian Martial Arts (Kalaripayatu).



Centre for Public Relations, Information and Media Exchange
(Prof. K.A. Abdul Nazeer)

Coordination of all official communications of the Institute with the print, electronic and social media platforms, management of institute website, Official News Letter, etc.



Dr. S Vasudev Award 2021' for the Best Science Research Scheme



Prof Ravi Varma M K,
Professor, Dept. of Physics.

Prof Ravi Varma has received the 'Dr. S Vasudev Award 2021' for the Best Science Research Scheme project funded by Kerala State Council for Science Technology & Environment (KSCSTE). Prof. Ravi Varma received the award from the Hon'ble Chief Minister of Kerala Sri. Pinarayi Vijayan at the inaugural function of the 34th Kerala Science Congress held at Mar Ivanios College, Thiruvananthapuram, on 10th February 2022.

The project titled "A multi-wavelength integrating nephelometer for characterizing Tropospheric aerosol" is concerned with the climate effect: global warming and its effects on day-to-day life. Tiny particles in the atmosphere (aerosols) are emitted by both natural and anthropogenic sources. The amount of particulate matter and its kind present in the troposphere have significant impact on air pollution and human health, visibility, and climate. Apart from greenhouse gases, aerosols affect climate directly by scattering and

absorbing solar radiation, thereby modifying the energy from the Sun available and upsetting the temperature equilibrium state of the Earth. This project was for characterizing the optical properties of aerosols through a newly designed optical instrumentation and measurement methods. The instrument contributed to reducing specific uncertainties such as wavelength dependence of scattering and absorption by aerosols and development of appropriate, real time in situ measurement methodologies that can lead to refined comprehension of aerosol effects on climate. The project has achieved six peer-reviewed research papers, trained four Ph.D students (three awarded), three M.Sc. (Physics) students, and four B.Tech. (Engineering Physics) students, and forged and maintained two major international collaborations (Michigan Technological University, USA, and University of Shanghai for Science and Technology, China). The project has developed a new climate monitoring instrument that was demonstrated in field observation in Yangtze River delta in China. Most important of all, the technology of the newly developed instrument, "Visible Integrating Nephelometer", was transferred to Optind Solutions Pvt Ltd, a start-up firm incubated in Technology Business Incubator of NITC under the NIT Scheme of Technology Transfer, with the consent from the KSCSTE. The project was jointly executed by the researchers in National Institute of Technology Calicut and Velu Thampi Memorial Nair Service Society (VTMNSS) College Thiruvananthapuram.



Refreshment Meet of Entrepreneurship Development Programme

A refreshment meet of the participants of the entrepreneurship development programmes by the Technology Business Incubator of NIT Calicut in association with the People's Foundation was conducted at NIT Calicut Campus on Saturday, 26th March 2022. TBI had given training to more than 117 young and vibrant aspirants on Entrepreneurship development during the year 2018-20. Out of this, 57 have already started their ventures and thus give an excellent success rate. About 20 are in the process of beginning startups. Many startups are in food processing, agricultural products and technology, building materials, farming, Plastic recycling and Information Technology, which can significantly impact society. TBI of NIT Calicut has helped them set up their business in different ways like mentoring, connecting to technical experts and bridging the gap between the beginner entrepreneur and government agencies. The main objective of the refreshment programme is to identify the areas where beginner entrepreneurs need more help to establish their



business and the challenges they face. The panel discussion with experts like Sri. K.A. Ajayan, Sri. Girish (Asst. Director, DIC), Harsha Puthusseri and Sri. Anvar Sahad (the successful young entrepreneur) shared the challenges, especially in the Post Covid Scenario, and the experts provided a new outlook, solutions and opportunities. A session on Financial Management for Startups by Sri Duleep Sahadevan also were arranged as part of the programme. Understanding the success, TBI plans to conduct more of these entrepreneurship development programmes in association with District Industries Centre of Kozhikode and NGOs like

People's Foundation this year. These programmes by TBI will be necessary as the State of Kerala is celebrating the year 2022 as the year of Entrepreneurship, and it is targeted to create one lakh (Micro, Small and Medium Enterprises) MSMEs. The programme was inaugurated by Sri. Biju P Abraham, the General Manager of District Industries Centre, Kozhikode. Sri. Abdul Majeed, Secretary of the People's Foundation, gave the keynote address. Prof Ashok S Chairman TBI, Dr Nishad V. M, Project Director, People's Foundation, Dr Preethi.M (CEO, TBI NIT Calicut) and Sri. Vijith Kumar. C V (Admin. Officer TBI NITC) also participated in the discussion.





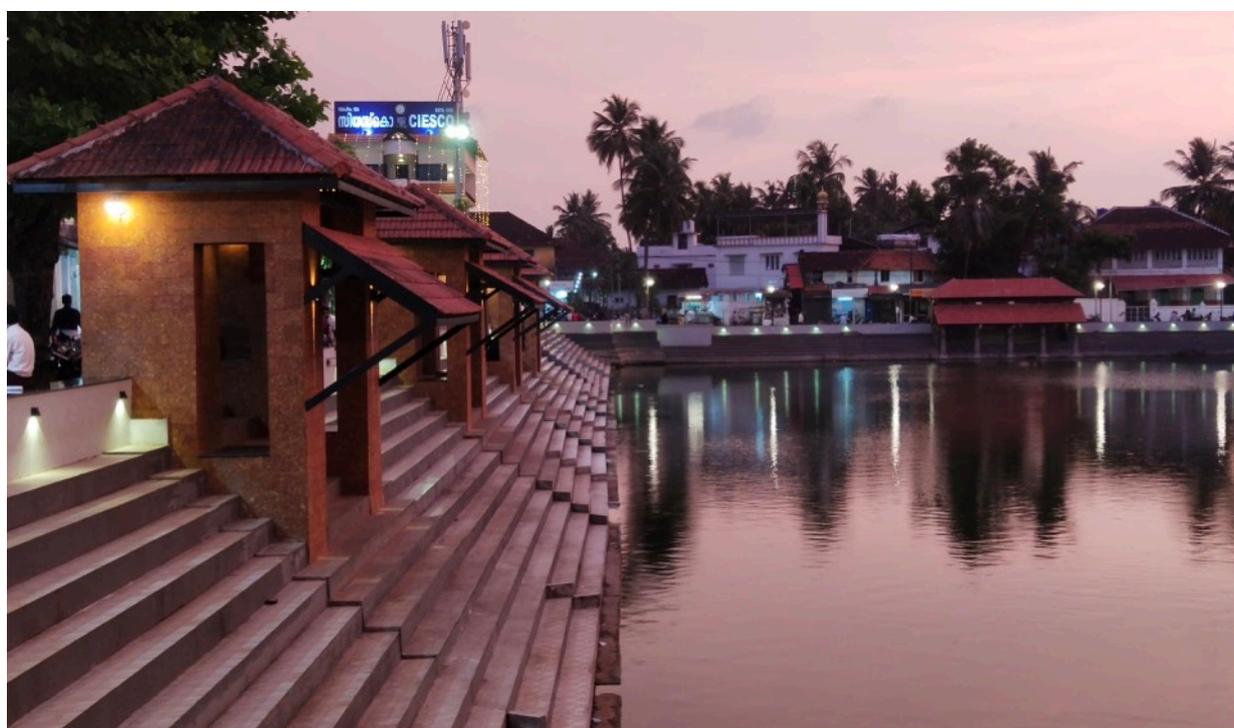
Revitalisation of Kuttichira Pond & Environs

The renowned Kuttichira pond in Calicut, rejuvenated with expertise from NIT Calicut, was inaugurated on 26th March 2022 by the Minister for Tourism and Public Works, Mr P. A. Muhammad Riyas, in the presence of Ports Minister and MLA of Kozhikode South constituency, Mr. Ahammad Devarkovil. The glorious heritage of the port city has been unveiled with the massive uplift of the

Abdurahman. The project was undertaken by the District Tourism Promotion Council (DTPC) with the support of Nirmiti Kendra.

This renovation has preserved the natural heritage and brought in a living museum to highlight the rich and unique culture of the region, which adds quality to this public open space. This area with the new 'Ibn Batuata walkway' will impact

powerful Zamorins. The travel notes of Ibn Batuta revealed that Calicut was a vital port of the Malabar Coast governed by the Zamorins and explained large-scale houses with rich Architecture in the Kuttichira region. The Zamorin Raja of Kozhikode allotted the southwest part of Calicut known as Thekkepuram (the area around Kuttichira) for the settlement of trading



Kuttichira pond and its surrounding environs. Respected Mayor of Kozhikode, Dr Beena Philip, and Prof Prasad Krishna, Director of NIT Calicut, also were present at the inaugural function.

The project was conceptualized and designed by the faculty members and research scholars from the Department of Architecture and Planning, National Institute of Technology Calicut. The team of experts led by the Head of the Department, Prof. Kasthurba A.K, consisted of Ar. Shereena Anwar, and Ar. Shahim

the tourism potential in the district. The Kuttichira pond is spread over two acres and has been renovated under the heritage conservation project at the cost of ₹ two crores.

The District Tourism Promotion Council (DTPC) has contributed ₹1.25 crores to the project, and ₹ 75 Lakhs was given from the MLA fund. The theme for the renovation intertwines with the cultural heritage and history of the port city of Calicut. The historic city of Calicut, situated on the southwest coast of India with its natural shores, was the capital of the

communities. The Kuttichira region developed as a unified Muslim community settlement with unique culture, rituals, festivals and traditions. The Arabian Sea bounds the settlement on the west, Big Bazaar on the north and Kallai River on the south. The central tank (chira) acts as the public zone's focal point and represents the settlement's heart. The main road around the pond divides into narrow streets, which lead to the residential units. The street network has been designed to incorporate the division of the public domain with a private domain.



The settlement at Kuttichira predominantly follows a unique character that blends Islamic and traditional Kerala styles. The architectural character and identity of the region are well preserved in the mosques and the large timber houses consisting of many rooms. The revitalization design consisted of open pavilions on the north and east sides of the Kuttichira pond near the Mishkal Mosque. It is a sheltered pavilion with seating that offers shelter from sun and rain overlooking the water body.

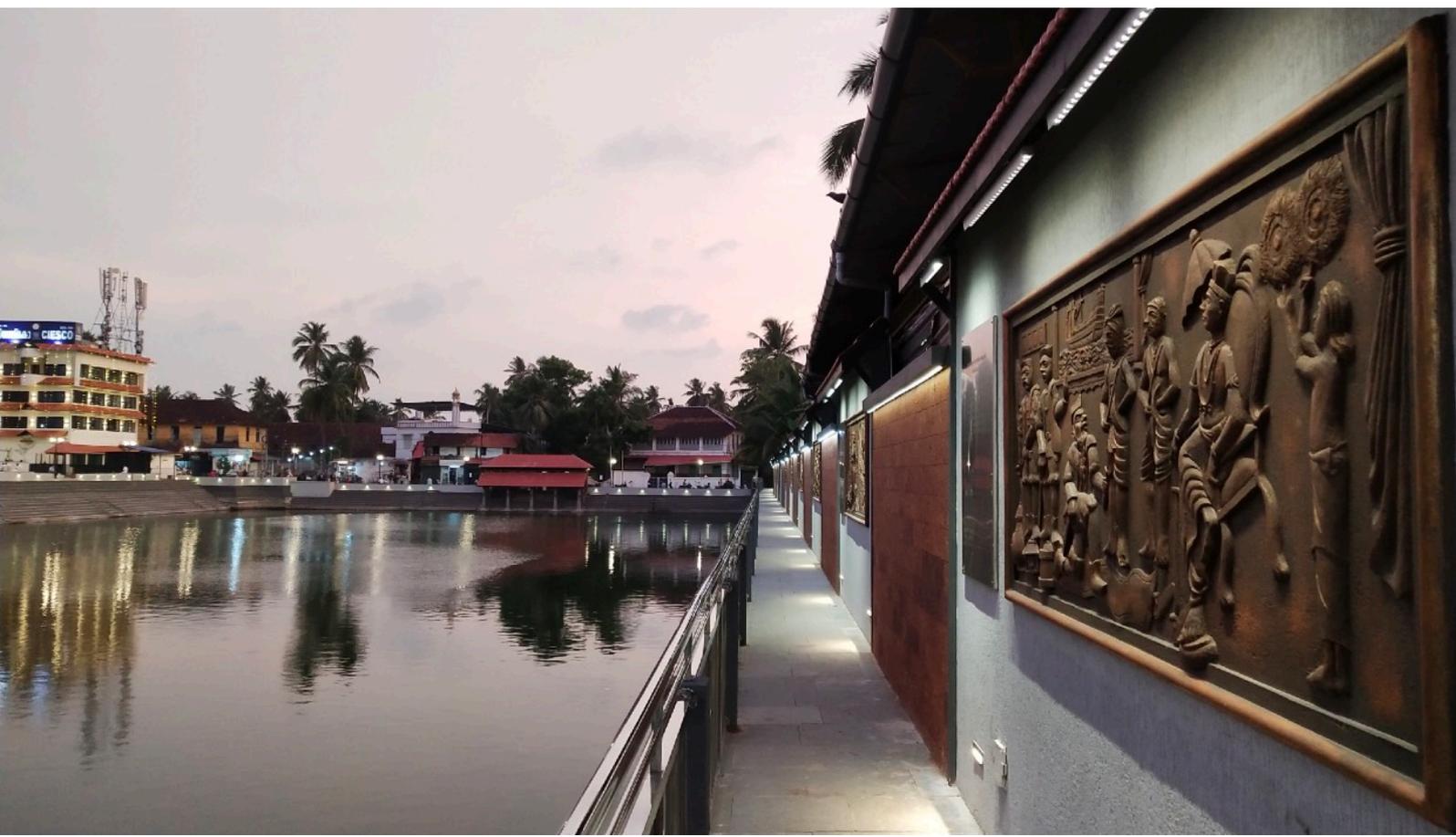
Kerala-style sheltered bathhouse has been incorporated in the south side, with simple sloping roofs supported on exposed laterite walls. It also serves as secure access to the tank to restrict children's entry and ensure safety. The open structures on the east side have been incorporated with sloping canopies that merge with the area's character. The park



adjacent to the cultural center CIESCO building behind the stage has been upgraded as a children's play area with exciting landscape and play fixtures. The walkway was paved using granite on the east and north sides of the tank.

The most significant addition to the area is the 'Ibn Batuta walkway', located on the west side of the tank. Other works and design interventions were the renovations

of existing drainage, paving of pathways and steps leading to the tank, providing lighting, signage and waste disposal all around the pond, and improving the quality of urban public space meant for the communities to engage at any time. Kuttichira has become an urban heritage core in the Kozhikode district and serves as a potential national and international tourism node and will stay as an important landmark in the future.





Master Plan for CHC, Mukkam Municipality Architectural Consultancy Project

The Department of Architecture and Planning of the National Institute of Technology Calicut prepared a master plan for the comprehensive development of the Community Health Centre of Mukkam Municipality. The master plan was presented to the Chairman of Mukkam Municipality Sri. P.T. Babu by Prof. Prasad Krishna, Director, NIT Calicut, in the presence of the honourable Thiruvambadi MLA, Sri. Linto Joseph in a meeting held at NIT Calicut. A team led by Dr Chithra K and comprised of Dr Amritha. P.K., Dr Deepthi Bendi and faculty members of the Department of Architecture and Planning NITC designed and prepared the master plan.

The proposed Master Plan of the Community Health Centre, Mukkam, aims to provide comprehensive healthcare in an integrated campus with a universal approach. Thus, all the health services would be accessible despite disabilities. It will cater as a one hub facility for accelerating universal access to public health services such as Women's health, child health, immunisation, and Nutrition. The

proposed redevelopment would accommodate outpatient consultation rooms, One Minor Operation Theatre, three Major Operation Theatres, and intensive care beds. It also has an emergency wing to cater to critical care needs. The women and child ward would consist of a labour room complex, gynaecology, and Neonatal care wards. The new building also houses essential diagnostic facilities such as laboratories, X-ray, USG and C.T. scans in one place.

The project teams considered the feedback from the current users and have provided palliative care, physiotherapy, and vaccination facilities in the most accessible locations. The community's needs, such as the dialysis unit, pharmacy and isolation ward, are also addressed in the proposed plan. The new design for the CHC-Mukkam presents facilities to accommodate state-of-the-art diagnostic and clinical facilities to provide best-in-class treatment to Mukkam - the local community. Sri. Linto Joseph MLA and other members who took part in this event admired and appreciated this design.





Mentor-Mentee Programme of Institute Innovation Council

The Institute Innovation Council of National Institute of Technology Calicut organised a two-day Innovation and Entrepreneurship exposure visit cum training program in collaboration with the Ministry of Education's Innovation cell (MIC) to mentor IIC member institutions to promote innovation and entrepreneurship. The objective of the Mentor-Mentee scheme for IIC institutions is to engage high-performing IIC institutions to act as a mentor to the IIC institutions that require guidance and support. This twinning program will help IIC institutions to facilitate knowledge exchange and resource mobilisation between institutions by offering inter-institutional collaborations. The president of IIC-NITC, Director NITC- Dr Prasad Krishna inaugurated the event. In his inaugural address, Prof. Prasad Krishna re-emphasised the need to encourage more entrepreneurial and innovative activities in academic institutions. He said, "The world is looking towards us, the future belongs to India, and India's



future is in the hands of our youth". He urged all the attendees to encourage the young brains and talents to aspire for innovative solutions and advanced technologies that solve real-world problems. As part of the event, the director has also interacted with the attendees and expressed his greetings and support to the new IIC units in various institutes in Kerala. The programme coordinator, Dr Baiju G. Nair, has presented the workshop brief.

During the two-day workshop, eminent speakers from various institutions will deliver lectures on Intellectual Property Rights (IPR), incubation facilities, and the design thinking approach. Kannur University, Sree Buddha College of engineering, Pattoor, Christ college of engineering, TKM college of engineering, Vedavyasa Institute Technology, and M. Dasan Institute of Technology are the prominent mentee institutes.



Mentor-Mentee Programme for IIC Institutions I&E visit cum training program, March 10-11 National Institute of Technology Calicut





Green Amphitheatre - A nature-friendly 'Ranch Ranch' sponsored by Alumni

The construction of a 'Green Amphitheatre' with a nature-friendly ambience commenced in campus. This project is sponsored by the 'NIT Calicut Alumni Association (NITCAA)', the organization of former students of NIT Calicut. This Amphitheatre designed by Dr. Anjana Bhagyanathan, faculty in the Department of Architecture and Planning, is aptly named as "Green Amphitheatre", since the design respects all the natural features of



the existing land and uses only natural materials for its construction. The whole concept revolves around the two existing trees, a Banyan tree and a Pipal tree that were planted by Dr. Paul Joseph, former Professor of Electrical Engineering who is popular among the alumni for his love for nature. Green Amphitheatre, the landscape insert at the Main Building Quadrangle originated from the need for a gathering place during pulse events like Ragam, an everyday place for simple joys of the campus, respect for the natural environment, and continuation of the history and spirit of the place. The main concern that guided the design was to maintain

the openness of the quadrangle, by preserving the lines of sight. Secondly, in the course of its growth, the quadrangle has developed a very strong sense of symmetry about it- starting with the Shireesh trees framing the entry, the diagonal pathways and of course the two ficus trees (Arayal and Peral) that were planted by dear Paul Sir. Third, the space should have the potential to host pulse events like Ragam or an Alumni meet, and not be seen as a reminder of emptiness on the other days of the year. Fourth, the surfacing with grass will be one that does not use pesticides and chemical fertilizers: all it will need is a sense of ownership from

the young and the young at heart who will be using the space. With these concerns as the pivotal points, the design that emerged is subtle enough to become a place to enjoy a quiet sunset, and robust enough for a full blown concert. Needless to say, utmost care is taken to leave undisturbed the way water behaves on the site, and the natural vegetation, with only the bare minimum of hard surfaces. The earth berms, cascading steps the stage framed by the ficus trees and the golden bamboo completing the circular formation is more land art than a landscape insert: a homage to the site. This Project with an estimated cost of 22 Lakhs is sponsored by the NITCAA with contribution from the 1993 Batch and Mr. Suresh Chand Jain (1972 Batch). The construction is entrusted to M/s Uralungal Labour Contract Cooperative Society Ltd., the major contractor firm in the cooperative sector in Kerala. The construction work was inaugurated by the Director of NIT Calicut, Prof. Prasad Krishna on 18th February 2022 .



IIIE Foundation Day Celebrations 2022

Indian Institution of Industrial Engineering (IIIE) Foundation Day is celebrated traditionally on January 27th every year on a relevant theme. The theme of this year is Azadi ka Amrut Mahotsav: Evolution of Industrial Engineering and its role in the Development of Industries.

IIIE Kozhikode Chapter, NIT Calicut celebrated IIIE Foundation day 2022 by organizing an Invited Expert Talk by Dr. S. Venkataramanaiah, Professor in Operations Management, IIM Lucknow, at 3.00 pm on January 27th 2022. Dr. Vinay V. Panicker, Chapter Secretary, welcomed the Chief guest of the day, Dr. S. Venkataramanaiah, IIIE Chapter Executive committee members, IIIE Chapter members and invited audience. He further welcomed Dr. R. Sridharan, Professor (HAG), Department of Mechanical

Engineering, Chairman IIIE Kozhikode Chapter, to preside over the function. Dr. R. Sridharan, Chapter Chairman, explained the IIIE and IIIE Kozhikode Chapter activities. He stated the importance and history of the IIIE foundation day. He also introduced and welcomed the chief guest Dr. S. Venkataramanaiah, a proud alumnus of NIT Calicut.

Dr. S. Venkataramanaiah started the session with the evolution of Industrial Engineering and the role of industrial engineers in the industry. He stressed the contribution of Industrial engineers to many organizations for improving the Production and Productivity levels. In his presentation, he discussed the various revolutions related to Industrial Engineering and their implications in Industry and Academics. He explained the

application of Industry 4.0 techniques in the Medical field and Health systems. He explained the Telemedicine ecosystem and the future of healthcare. Further, he indicated the Ten IT-enabled business trends for the decade ahead and digital technologies for new opportunities in the supply chain. During this interactive session, the speaker introduced a lot of real case examples in the era of Industry 4.0.

Dr Ratna Kumar K, Chapter Jt. Secretary proposed a vote of thanks and expressed wholehearted gratitude to the speaker for sharing his knowledge and experiences during the session. The event was well attended with 38 participants from teaching faculty from NIT Calicut, IIIE members, Research Scholars and M.Tech (Industrial Engineering and Management) students.

World Intellectual Property Day Celebration

Shri. N.P. Rajive, Vice-chairman, National Innovation Foundation (NIF), Govt. of India, emphasized the need to transfer the technologies developed in the laboratories to the society for the benefit of the common man. He inaugurated the 'World Intellectual Property Day celebrations at NIT Calicut on 26th April 2022. He also mentioned that a collaborative effort between NITC and NIF will be made for Kuttanad and Wayanad regions to develop sustainable housing to face natural calamities. As part of this special day's celebrations, the Institution's

Innovation Council (IIC) of NITC organized a guest lecture by Dr Lawwellman P., Professor, Govt. Law College, Kozhikode on IPR-related topics. An open house event was also hosted by the research scholars of NITC, Mrs Sija Gopinathan, Mr Seshagiri V., Mr Amudhan A. N and Mr Jubin Mathew, who already filed patents based on their research work.

During the final address, Prof. Prasad Krishna, Director of NITC, addressed the gathering on the necessity of filing patents, as novelty should not end up only in

paper publications. Also, he mentioned the contributions of ancient Indian civilization in science and technology, which were not patented but is currently in use by society. During the function, the best Innovator of the year award 2021-2022 was presented to Prof. P. Predeep, Professor (HAG), Physics Department, NITC, for his valuable contribution to Science, Technology and Innovation. Dr Kumaravel S., President and Dr Sudeep P.V., Convenor of IIC-NITC, also addressed the gathering, and was attended by the research scholars and faculties of NITC.



Students Affairs Council 2022-23



Mohammed Niyas
General Secretary



Akhil George Philip
Cultural Affairs Secretary



Sahil Sharma
Joint Secretary



Adhip Vyshak
Alumni Affairs Secretary



Ben Thomas
Science & Technical Affairs Secretary



Ujwal Karthikeya
Hostel Affairs Secretary



Dheeraj Dhammati
Academic Affairs Secretary



Vishnulal
Research Affairs Secretary



Artin Zacharias
Chief Student Editor



Irshad Ibrahim
Sports Secretary

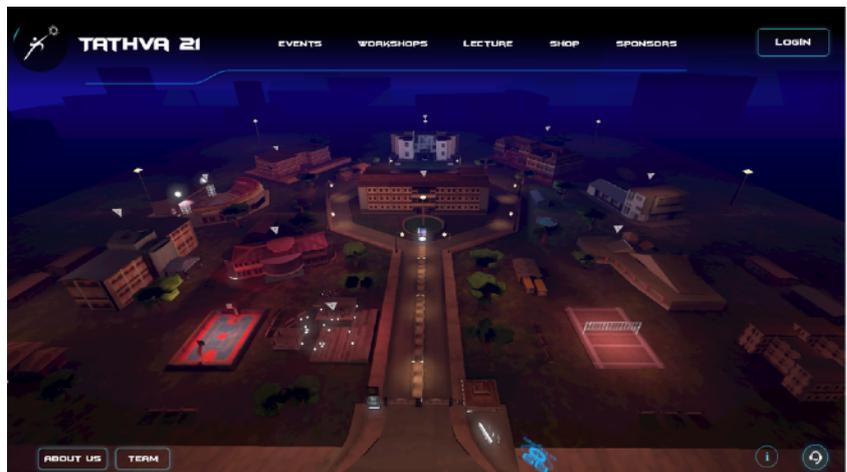


Tathva'21

The official website launch of Tathva'21, one of south India's biggest techno-management fests conducted annually by the National Institute of Technology Calicut, was held at the Institute campus on 21st January 2022. This year's Tathva website stands eccentric as the institute has transpired a virtual campus as the website user interface. Tathva'21 will be rendering 'Metaverse' as its theme, exploring versatile possibilities in the virtual world this year.



The event was commenced contemplating the Diamond Jubilee celebrations with a welcome speech delivered by the Dean (Students' Welfare), Dr. Rajanikant G.K. Director of the institute, Dr. Prasad Krishna, inaugurated the website launch. He lauded the efforts of the Tathva team for showcasing the innovative concept of creating a 3D version of the NITC campus and striving hard to keep the true spirit of Tathva alive, despite the prevailing conditions of the pandemic. Faculty convener Dr. Nikhil Sasidharan announced the Tathva dates and events. The function concluded with a vote of thanks by Mr. Archith Gopakumar, Science and Technical Affairs Secretary (2021-22). The entire event was conducted abiding by strict COVID protocols.



In the following month, Sri. Rajeev Chandrasekhar, Union Minister of State for Skill Development and Entrepreneurship and Electronics and Information Technology, formally inaugurated Tathva' 21 virtually on 21st February 2022. NITC Director Dr. Prasad Krishna gave the

presidential address and felicitation by Dr. P S Sathidevi, Deputy Director, and the Faculty Coordinator Dr. Nikhil Sasidharan. Mr. Archith Gopakumar, Science and Technical Affairs Secretary, proposed the vote of thanks.

Tathva has brought in renowned speakers, including Nobel laureates, for the lecture series in the past. In the present edition, Dr. Adam Riess, Nobel laureate for physics (American astrophysicist and Bloomberg Distinguished Professor at Johns Hopkins University and the Space Telescope Science Institute), presented the first of the five online



lectures on 18th February 2022 on the topic "The Surprising expansion history of the universe." The fest had also organised and conducted a plethora of submission events and workshops in the following months.



Student Activities

Foss Cell was inaugurated on 23rd January 2022 by Mr. Praveen Arimbrathodiyil, a Debian developer and alumni of NITC. The Foss cell was founded to strengthen the Free and Open Source Software (FOSS) ecosystem at NITC. In the inaugural event, Mr. Praveen raised awareness and cleared misconceptions about the FOSS ecosystem. This was followed by a talk by the faculty-in-charge, Dr. Sheerazuddin S, and a presentation on FOSS Cell and its events by General Secretary Aravind IM. The event concluded with the distribution of the induction form to the students.



The third edition of Aerounwired's 'Aviate' was conducted in collaboration with Tathva '21. The event was made available to the general public via the Tathva website on 9th February 2022. Aviate provides students with an excellent platform for students across the country to bolster their skills in aeromodelling. All procedures related to Aviate 2022 were completed by the first week of March.

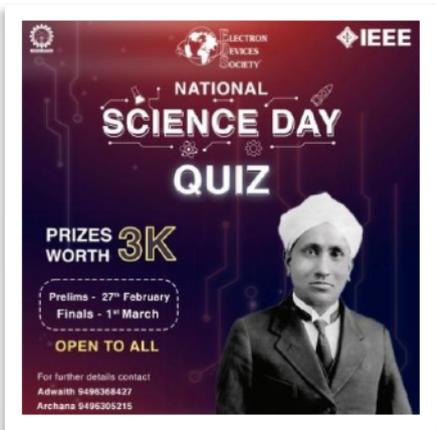
An expert talk on the topic, 'Samanantar - Largest Publicly Available Parallel Corpora Collection for 11 Indic Languages', was conducted by the A.I. club of NIT Calicut on 11th February 2022. The talk was led by Shri. Mitesh M Khapra (Assistant Professor IIT Madras). Many of our students and faculties attended this informative and fruitful session.



As a part of Ragam workshops, the Team Unwired conducted a unique 3D printing workshop named 'Additive Manufacturing Workshop' where the students got theoretical knowledge and hands-on experience in 3D printing. The workshop was conducted on behalf of Ragam workshops, by Dr. Deepak Lawrence, an esteemed professor of the Mechanical Department, along with a team of M.Tech students. This workshop was one of the finest events in the Ragam as over 80 participants attended it.



Alternato was an idea submission event conducted by the IEEE of NIT Calicut from 18th to 25th February 2022. This event mainly focused on ideas to alter a product to bring out a better form or to combine the properties of two existing products to be used more effectively. The submission event was conducted on a national level and had the contribution of students from various institutions.



As a part of National Science Day, celebrated on the 27th of February 2022, the EDS Society of IEEE NIT Calicut Student Branch conducted a science quiz competition. The objective of the National Science Day Quiz was to increase awareness about the importance of science and to instill scientific temper in youth across the country. The quiz was conducted in two stages, the preliminaries as a test and the final round as an interactive session. The competition saw a participation of over 400 students from institutes around the world.

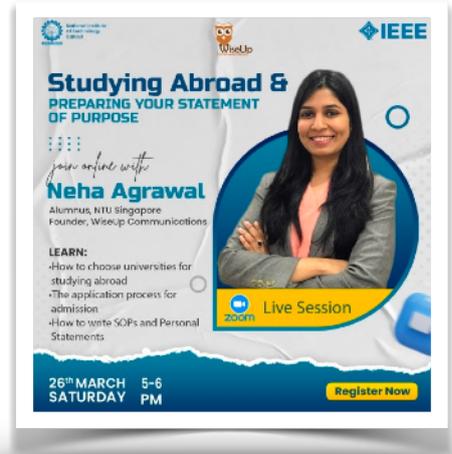
In the frame of the Science Week Celebrations, IEEE Nit Calicut Student Branch conducted "Blogathon," a blogging event on 'Sustainable Energy: Limitations and Possibilities,' from 6th to 10th of March 2022. This topic was inspired by and translated from Hermann Scheer's words, "Our dependence on fossil fuels amounts to global pyromania, and the only fire extinguisher we have at our disposal is renewable energy..."



The Women in Engineering - Affinity Group (WIE-AG) of IEEE of NIT Calicut Student Branch conducted a video submission event, 'Magister,' on International Women's Day, celebrated on 8th March 2022. The competition tested participants' oratory and worldly knowledge through a seemingly simple tutoring task. The event details were shared through various social media platforms, and the event was open to all.

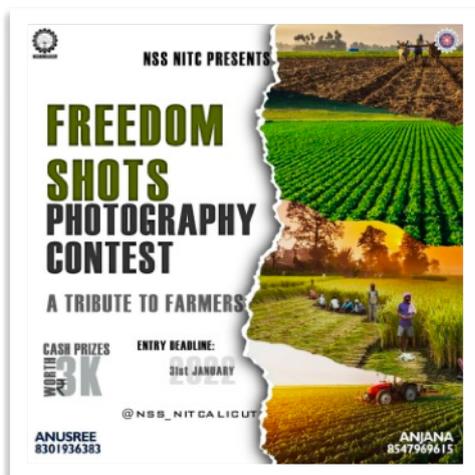
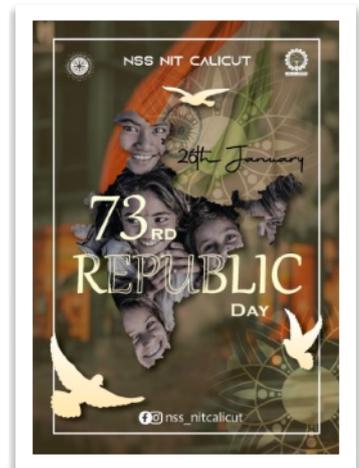


IEEE of NIT Calicut Student Branch conducted an interactive live session on 26th March 2022 on the topic of how to go about the procedures of studying abroad, how to choose universities, the application process, and how to write a detailed SOP and Personal statement and admission requirements. This session was conducted by Neha Agrawal, Founder of WiseUp Communications.

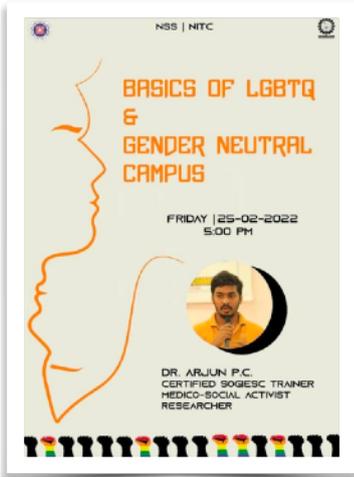


Competing in the age of AI requires us to keep up on top of things where algorithms and networks run the world. So the IEEE's Circuits and Systems(CAS) Society of NIT Calicut Student Branch conducted an enlightening webinar on the 29th of March 2022 on "Walking on AI for networking" by Dr. Oscar Mauricio Caicedo Rendon, Professor at the Department of Telematics, University of Cauca, Colombia.

On the historic 26th of January 2022, NSS NITC celebrated the 72nd Republic day. The NSS NITC volunteers made a music video on the revered National song 'Vande Mataram.' The motive was to promise to build a country that would be the ideal place to thrive for our next generation. India's patriotic songs and dances tell the story of the whole nation and its struggle in the past and present, and NSS NITC, through the dance video, tried to emphasize the significance of Republic day through a patriotic dance.

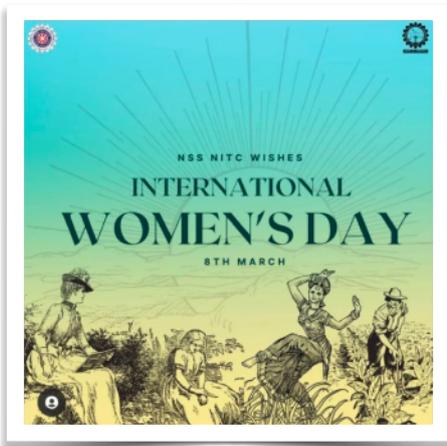


As a continuation to the Republic day celebrations, NSS NITC conducted a photography contest to zoom into the farmers of our country, to honour their struggle and faith in our constitution that kept them going. The entries were evaluated based on creativity, likes & comments. Besides, all the entries were posted on the NITC official Instagram handle. The winners were awarded with cash prizes worth INR 3000.



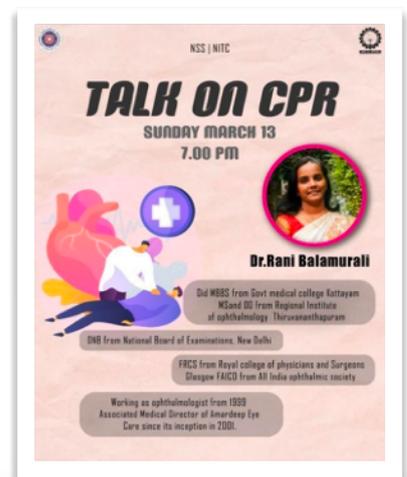
NSS NITC conducted a webinar on the 25th of February 2022 on creating awareness about LGBTQ community, hence taking the primary step to becoming a gender-neutral campus. Dr. Arjun P. C., a certified SOGIESC trainer and renowned medico-social activist headed it. Attendees were educated about the basics and given tips on how to develop a gender-neutral environment.

Aavishkaar is a social initiative undertaken by Tathva in association with the NSS of NIT Calicut every year. This initiative aims to address the problems faced by students from socially and educationally backward communities who lack proper career guidance and opens windows to the world of science beyond what the textbooks offer. In this year's Aavishkar, the event was conducted on the 27th and 28th of February 2022 at Ekalavya Govt. Model Residential School in Pookode, Wayanad and on the 19th and 20th of March 2022 at Model Residential School in Munnar, Idukki.



On International Women's day (8th March 2022), the NSS of NITC embraced the very essence of all strong, powerful, and resilient women. With the indisputable strength to shatter the shackles of patriarchy and misogyny, women are rising above the societal hurdles every single day, making themselves a more powerful force in this world.

NSS NITC organised a webinar named 'Talk on CPR' on 13th March 2022, which was headed by Dr. Rani Balamurali (MBBS, MS, FRCS), a working ophthalmologist and the Associated Medical Director of Amardeep Eye Care, to educate the crowd on how to give CPR in an emergency. This informative session was of utmost need when cardiac arrests are recently very common. The session ended with Dr. Rani clarifying various doubts of the participants.





After a gap of 2 years due to Covid, NSS NITC has restarted the blood donation camp. The program was conducted on April 6th at the campus auditorium. Kozhikode Cooperative Hospital and Beach Hospital have collaborated in this program along with Blood Donors Kerala, Kozhikode wing. The program started at 8 AM and was planned to end by 2 PM. But the program was forced to stop by 11 AM itself due to maximum limit of donations. The organisers got more than 170 donations in which students and faculties have donated blood. Refreshments were given by NSS for those who donated blood.

NSS NITC, in collaboration with Ragam, the cultural fest of NITC, conducted a beach cleaning drive at Kozhikode beach on 10th April 2022. More than 100 volunteers participated in the program. It lasted more than 2 hours, and the students were able to clean one of the crowded sides of Kozhikode beach.



NSS NITC conducted a 'stem cell donor camp' in collaboration with the HVG of NITC and Datri on April 12 at the campus. The program gave an awareness class regarding blood stem cell donation to the registered donors. Almost 500 potential donors gave samples and registered in the stem cell donation drive. Six donors from different batches have donated stem cells and saved lives.

The Robotics Interest Group (RIG-NITC) is a multi-disciplinary group of undergraduate students officiated under and working in the Mechatronics / Robotics Lab under the guidance of Dr. Sudheer A P, Assistant professor (MED). The projects done by RIG-NITC were displayed at the stall of the Ente Keralam Exhibition conducted by Kerala Govt. and Kozhikode Municipality, which was held at the Kozhikode Beach on the 23rd and 24th of April 2022.





Activities of Internal Complaints Committee of NIT Calicut

The Internal Complaints Committee for the period 2022-25 took charge on January 20, 2022, with Dr. Shajja A., Professor, Department of Mechanical Engineering as Presiding Officer, Adv. Sushama M. (practicing advocate, Calicut) as an external member, Dr. Sunitha K. (Assoc. Professor, Department of Electrical Engineering) and Dr. P. K. Madhavan Unni (Asst. Professor, Department of Physics), Mr. Abhilash A. and Ms. Sindhu P as members apart from Ph. D., PG, and UG

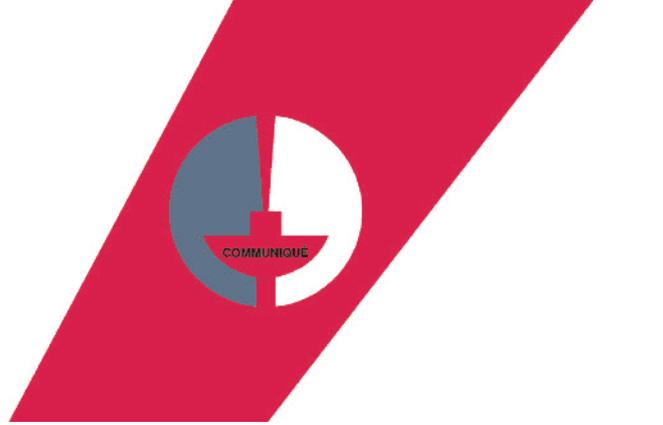


student members. ICC conducted two programs aimed at improving awareness regarding Sexual Harassment of Women at Higher Educational Institutions. 1) Talk: "Are Women in India (legal Aspects)", by Sr. Adv. P. V. Hari on 09/04/22 and 2) Address to women sanitary workers of NITC on the topic "What is Sexual Harassment? What are the legal recourses available" by Adv. Sushama M. on 26/04/22. The second talk was extremely well attended and appreciated. ICC also handled one case of Sexual Harassment during this period. The case was reported to the ICC on 23/03/22 and the final report was submitted on 11/05/22.

A Short film made by the students of National Service Scheme of NIT Calicut



NSS NITC released the short film, 'White Rabbit,' on the 6th of February 2022. Through this short film, a whole new frame is set, reminding everyone that drug consumption itself isn't a solution but is something that requires a solution. The motive behind the short film was to create awareness and remind everyone that drug consumption is dangerous and is something that requires a solution. Within a short time span, the video has crossed over 2k views on NITC youtube page. Link for the video: <https://www.youtube.com/watch?v=JEHIWgYF2cI>



Stellar show by NIT-C

It is ranked first among Centrally funded institutions in ARIIA

SPECIAL CORRESPONDENT KOZHIKODE

The National Institute of Technology Calicut (NIT-C) has secured the ninth rank at the national level in the Atal Ranking of Institutions on Innovation Achievements (ARIIA-2021).

The institute is also the first among NITs in the category of Centrally Funded Technical Institutes, Central Universities, and Institutes of National Importance (Technical).

NIT-C Director Prof. Prasad Krishna lauded the efforts of stakeholders for the achievement. The hard work of the entire NIT-C fraternity helped the institute retain the top position despite constraints due to the pandemic, he said.

To promote entrepreneurial culture among students,

the NIT-C's Institute Innovation Council (IIC), set up with the guidance of the MIC Institute of Technology, regularly conducts workshops and mentoring programmes. Many students have developed prototypes and won prizes under IIC guidance.

Besides, NIT-C had set up a Technology Business Incubator (TBI-NITC) in 2003-04 with the support of the National Science and Technology Entrepreneurship Development Board (NSTEDB), Department of Science and Technology, to incubate start-ups in IT and electronics.

TBI has extended incubation facilities to 88 start-ups so far. Many training programmes are conducted throughout the year for entrepreneurs. A dedicated Fab Lab facility is being set up at the institute for innovators. From around 12.64 crore NIT-C research funding in 2014-15, NIT-C has grown to securing a funding of ₹6.89 crore in 2020-21.

NIT-C maintains stellar placement record

Four B.Tech. students offered ₹676 lakh per annum

SPECIAL CORRESPONDENT KOZHIKODE

The National Institute of Technology, Calicut (NIT-C) has set an all-time record in campus placements this season. Nearly 950 graduates have been hired by 190 companies during the first phase of the recruitment drive. This year, four B.Tech. students of Computer Science and Engineering secured an annual package of ₹67.6 lakh. The average salary of 10 lakh to students also increased 12 lakh from the previous year's ₹11 lakh per annum.

V. Saji, Chairman, Centre for Career Development, NIT-C, said that the placement rose by 70%, as compared to the same period during 2020-21. "A significant demand from IT and Analytics firms, a training programme, spanning two months, with alumni support was offered to students during the summer vacation. The placement and internship drives were conducted in the virtual mode, and will continue till June 2022," he said.

He said the institute successfully leveraged the online mode of the recruitment process during the time of the COVID-19 pandemic. "Moreover, the renewed thrust towards digitization of activities by firms during the pandemic could be one of the reasons for higher job and internship opportunities for students," said Dr. Saji.



Changing with times, NIT-C successfully leveraged the online mode of recruitment during the pandemic, says its Centre for Career Development.

He said the current third-year B.Tech. students (2023 graduating batch) also had received two-month internship offers during summer vacation, with the total offers reaching 192, and a monthly institutional stipend ranging from ₹15,000 to ₹1 lakh per month.

Students were offered various roles in different sectors and domains, such as profiles in core engineering, consulting, general management and IT and Analytics, Dr. Saji said.

ചേനോത്ത് ഗവ. സ്കൂൾ വികസനത്തിന് എൻ.ഐ.ടി പദ്ധതി

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'പുത്തൻ കണ്ടുപിടിത്തങ്ങൾ സാധാരണക്കാർക്ക് പ്രയോജനപ്പെടണം'



പുത്തൻ കണ്ടുപിടിത്തങ്ങൾ സാധാരണക്കാർക്ക് പ്രയോജനപ്പെടണം. പുത്തൻ കണ്ടുപിടിത്തങ്ങൾ സാധാരണക്കാർക്ക് പ്രയോജനപ്പെടണം. പുത്തൻ കണ്ടുപിടിത്തങ്ങൾ സാധാരണക്കാർക്ക് പ്രയോജനപ്പെടണം.

Renovation recaptures heritage of Kuttichira pond

Region is known for its unique culture and architecture

SPECIAL CORRESPONDENT KOZHIKODE

The National Institute of Technology, Kozhikode, takes pride in its design of the renovated Kuttichira pond for the public by Minister for Ports, Inland Waterways and Seaways. The project was conceptualised and designed by the faculty members and research scholars from the Department of Architecture and Planning of the institute.

The Kuttichira pond is the centre of Thekkappuram, a predominantly Muslim settlement along the coast of Kozhikode.

The region is known for its unique culture and traditions, besides its architecture, which is a blend of traditional Kerala style and Arabic style. While renovating the pond, the NIT team has made sure that the new design was in sync with the existing layout and lifestyle of the region, preserving its natural heritage and highlighting the culture that adheres to the highest of the whole project.

The renovated pond now has open pavilions on the north and east side, besides a sheltered pavilion with



The renovated Kuttichira pond in Kozhikode.

seeing overlooking the water body. An additional Kerala style bathhouse has come up on the south side. All the above have exposed lattice walls.

The open structures on the east side have been incorporated with sloping canopies that merge with the area's character. The park adjacent to the cultural centre GIESCO building behind the stage has been upgraded as a children's play area with landscape and play features.

The walkway was paved using granite on the east and north sides of the tank. The (Iba) Bath walls, located on the west side of the tank serves as a living museum with a paved path, signage and relief works, contributing

to the historical awareness of Kuttichira with reference to Ibn Battuta's travels. Other works and design interventions were the renovations of existing drainage, paving of pathways and steps leading to the tank, the provision of lighting, signage and waste disposal all around the pond.

The design team led by Kuttiba A.K., Head of the Department, consisted of architects Sherena Anwar, Shafiq Aburshman, and Shah M.K. The project was undertaken by the District Town & Planning Council (DTTC) under its Heritage Conservation project and was implemented by NITM Kendra at a cost of ₹21 crore.

എൻ.ഐ.ടിയിലെ വിദഗ്ധ സംഘം മാസ്റ്റർ പ്ലാൻ തയ്യാറാക്കി

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NIT-Calicut honours first batch of staff, students

Event part of institute's diamond jubilee celebrations

SPECIAL CORRESPONDENT KOZHIKODE

As part of its diamond jubilee celebrations, the National Institute of Technology, Calicut (NIT-C) on Friday honoured the first batch of its faculty members, staff and students who joined the institute, formerly Regional Engineering College (REC), in 1961.

Seven faculty members, seven staff members and 11 students belonging to the first batch along with their families participated in the event held on the NIT-C cam

pus. They also planted a sapling in 'Smarithi Vanam' in memory of all the departed members. About 120 students had joined the first batch of REC.

Inaugurating the function, NIT-C Director Prasad Krishna outlined various development activities on the anvil with the active involvement of the alumni, including the setting up of a satellite campus in Kochi. Dr. Bharathan, who was one of the first faculty members in the electrical and engineering department, said that he wished NIT-C would grow to greater heights while Sivaramakrishnan Nair of the first batch expressed gratitude on being honoured by the institute.

NIT-C, Medical College sign pact for research

MOU envisions collaboration in multidisciplinary issues

SPECIAL CORRESPONDENT KOZHIKODE

The National Institute of Technology Calicut (NIT-C) and the Kozhikode Government Medical College signed a Memorandum of Understanding (MOU) for undertaking collaborative interdisciplinary research programmes.

Prasad Krishna, Director, NIT-C, and V. K. Rajendra, Principal, Medical College, signed the MOU at a function held at the NIT-C on Wednesday.

The MOU envisions developing collaboration between the two institutes in various fields to address multidisciplinary, scientific, technological, and educational issues relevant in the country.



Prasad Krishna, Director, NIT-C, and V. K. Rajendra, Principal, Medical College, Kozhikode, at the signing of the memorandum of understanding in Kozhikode on Wednesday.

The research endeavours are aimed at building sophisticated training facilities that are beneficial to the patients as well as strengthening biomedical research to facilitate improved diagnosis of critical illnesses.

The institutes will also take advantage of the latest technology breakthroughs and scientific knowledge of the multidisciplinary research laboratories operating under the guidance of Indian Council of Medical Research.

NITC conducts workshop on 'Prototype Design'

Kozhikode: The Institution's Innovation Council (IIC) of the National Institute of Technology Calicut (NITC) conducted a one-day workshop on 'Prototype/Process Design and Development - Prototyping' at the NITC campus.

The objective of this workshop is to translate the outcome of the academic research activities into product/process development, for the benefit of society.



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