

Faculty Development Programme
**Application of Systems Approach to
Water Resources Engineering**

(SAWRE 18)

May 1-6, 2018



Organized by



**Department of Civil Engineering
National Institute of Technology Calicut**

Under TWINNING WITH



Govt. Engineering College Bharatpur
Bharatpur, Rajasthan -321303

Sponsored by TEQIP –III, MHRD

About the Department

The Department of Civil Engineering is one of the oldest Departments in this Institute. It was established at the inception stage of the Calicut Regional Engineering College (CREC), which was the forerunner to the present National Institute of Technology Calicut (NITC) in 1961. At present, the Department offers an undergraduate program in Civil Engineering leading to the B.Tech degree and five graduate programs - one each in Environmental Geotechnology, Offshore Structures, Structural Engineering, Traffic and Transportation Planning and Water Resources Engineering leading to the M.Tech degree of the Institute. The water resources engineering research group carry out research in hydrological modeling, application of optimization technique in water resources engineering, GIS and remote sensing and impact of Climate change etc. In addition to the above, there are a number of students pursuing research at the Department in various fields of Civil Engineering leading to Ph.D. The Department is a recognized QIP Centre of the AICTE for both MTech and PhD programs. The Department is also actively engaged in R&D, testing and consultancy activities.

About NIT Calicut

National Institute of Technology Calicut (NITC), is fully centrally funded by MHRD and is governed by the NIT Act 2007. Institute has ten departments, three schools and nine research centers. It offers ten UG, and thirty PG programmes along with the Ph.D programme in various fields of Science, Technology and Engineering. Faculties in the various Departments have active collaborations with universities and elite institutions within and outside India for research and have active consultancy for industries. For details see the website: www.nitc.ac.in

About GEC, Bharatpur

Government Engineering College (GEC) Bharatpur is an autonomous institute under Bharatpur Society, Rajasthan, India. GECB was established in the year 2007. The college has six departments namely Mechanical Engineering, Civil Engineering, Electronics & Communication Engineering, Electrical Engineering, Computer Science & IT and Applied Science & Humanities and for details see the website <http://www.ecbharatpur.ac.in>

About TEQIP III

Technical Education Quality Improvement Programme (TEQIP) was launched in December, 2002 by the Ministry of Human Resource Development, India with the World Bank assistance. The programme was conceived and designed as a long term project to be implemented in 10-12 years in 3 phases to support excellence and transformation in Technical Education in the country Third phase of the programme namely TEQIP III was started in the year 2017 and will be ending in 2020. The main objective of TEQIP III is to improve the quality of Engineering Education in existing government institutions in the educationally backward states and also arrange for twinning them with other institutions like NITs and a few affiliating technical Universities(ATU).

About Calicut

NITC is located about 22 kilometers north-east of Calicut City. Calicut, also known as Kozhikode, is known as the city of spices. Calicut is a major knowledge hub of Kerala and is the hometown of institutions of national importance including NITC, IIMK, DOEACC, CWRDM etc. Calicut is connected by direct trains/road/air to all major cities in India. Kozhikode beach, Kappad beach where Vasco De Gama landed first, Kadalundy bird sanctuary, Tusharagiri Waterfalls. Pazhassiraja Museum, Tali Temple and Kuttichira Masjid are some of the local attractions.

Preamble

Efficient management of water resources is becoming a challenging and serious problems because of the ever-increasing demands from various sectors, impact of climate and land use changes, change in cropping pattern, etc. To address these issues and efficient management of water resources, a holistic approach is required that develops a new framework for the design, planning and management of water resources and addresses the complex socio-economic issues. The main objective of this training programme is to introduce the systems approach as the theoretical background for modern water resources management, and to focus on two main sets of tools: simulation and optimization. Special attention is given to the application of system dynamics simulation and evolutionary optimization algorithms in water resources management.

Topics to be covered

The training programme will cover the following topics:

- Introduction to Water Resources Systems
- Simulation techniques and its applications
- Optimization techniques and its applications
- Evolutionary optimization algorithms
- Hybrid evolutionary optimization algorithms
- Case studies on application of simulation and optimization in water resources
- Hands-on training on using a system dynamics simulation tool

(Participants are encouraged to bring their Laptop for the hands-on training classes)

Resource Persons

Experts of NITC, IIT, IISc and other Invited Experts from Academic/ Research Institutions. The speakers include Prof. K.P Sudheer from IIT Madras and Prof. Nagesh Kumar D from IISc Bangalore.

Eligibility

Faculty members from various AICTE approved Engineering Colleges/polytechnic Institutions can apply.

Maximum seats: 20

Working professionals and practicing engineers from various Research Organizations and Industries, and Research scholars working in water resources/environmental engineering field can also apply.

Registration Fee

- Industry/ Research Organizations: Rs. 5000+18% GST
- Academic institutions: Faculty* Rs. 2000+18% GST
- Research scholars: Rs. 2000+18% GST

This includes only registration materials. Boarding and lodging will be extra. For selected 20 faculty members the registration fee is free of charge.

For registration, fill the online form at <https://goo.gl/forms/6IMqkBfT91sc5df13> and upload the scanned copy of the signed endorsement form. The registration fee has to be paid through online transfer. The bank details are given below for online transfer.

Acc.Name: Director NIT Calicut, Continuing education programme, Account No:37618269594 ; Branch: SBI NIT Calicut, IFSC code: SBIN0002207

Last date for registration is 20 April 2018.

Travel Expenses

No TA/DA will be paid for any participant. Institutions are expected to provide the support.

Boarding & Lodging

All faculty and research scholars may be accommodated in the hostel /international hostel on payment basis if they request for it. Participants from industry /research organizations may be provided lodging in the Institute Guest house on payment basis, subject to availability

Charges : International hostel Rs. 450/Room

Ladies hostel Rs. 250/Room

Boys hostel Rs.250/Room

Guest house Rs. 350/Room

Breakfast, lunch and dinner Rs..250/day

Endorsement of the Head of the Institution/Department

Certified that Mr./ Ms./ Dr.

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is an employee of this institution and is hereby sponsored for the training programme on **Application of Systems Approach to Water Resources Engineering (SAWRE 18)** at NIT Calicut during 1st - 6th May 2018. He/she will be permitted to attend the course, if selected.

Place:

Name & Signature of the
Sponsoring Authority

Date:

(*seal of the institution*)



Scan the QR Code for online registration and upload the signed endorsement form. Last date for registration is 20 April 2018.

Co-ordinators

Dr. Pramada. S.K

Dr. R. Arunkumar

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National Institute of Technology Calicut

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Co-Coordinator

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