

Training Programme on
**Application of Operations Research to
Water Resources and Environmental
Engineering**
(OPERA-WRE 17)
July 6-8, 2017



Coordinators
Dr. S. K. Pramada
Dr. Athira P.
Organized by



DEPARTMENT OF CIVIL ENGINEERING
National Institute of Technology Calicut
NIT Campus Post, Calicut - 673601, Kerala,

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 BTech degree and five graduate programs - one each in Environmental Geotechnolgy, Offshore Structures, Structural Engineering, Traffic and Transportation Planning and Water Resources Engineering leading to the MTech degree of the Institute. In addition to the above, there are a number of students pursuing research at the Department in various fields of Civil Engineering leading to PhD. 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.

NITC and 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

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. NITC is located about 22 kilometers north-east of Calicut City. Calicut, also known as Kozhikode, is known as the city of spices. 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.

Registration Form

Training Programme on
**Application of Operations Research to
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1. (a) Name : _____
_____ ; (b) Gender: M/F
 2. Designation : _____
 3. Department : _____
 4. Address: _____

Tel (off): _____
Mobile: _____
E-mail: _____
 5. Educational Qualification : _____
 6. Area of Research : _____
 7. On campus accommodation requirement: Yes/No
 8. DD No: and date:
 9. Details of Online transfer _____
- Signature of the Applicant: _____
- Date : _____

Preamble

Water Scarcity is one of the most pressing problems that humankind faces in the foreseeable future. Hence an efficient planning and management of the natural resources are important in the current scenario. The realistic water resources systems are nonlinear and stochastic in nature. The complexity and expense of water resources projects have made optimum operation and design by computer-based techniques and has made increasing interest in recent years.

The purpose of this training programme is to give an idea about the applicability of different optimization techniques like linear programming, dynamic programming, stochastic dynamic programming, evolutionary algorithms and recent tools like fuzzy logic and neural network for planning and management of complex water resources systems.

Topics to be covered

The training programme will cover the following topics:

1. Introduction to Water Resources Systems
2. Linear Programming and its applications
3. Dynamic Programming and its applications
4. Stochastic Dynamic Programming and its applications
5. Simulation - Optimization Techniques
6. Genetic Algorithm, Fuzzy Logic and Artificial neural network

Resource Persons

Experts of NITC and Invited Experts from Academic/ Research Institutions.

Eligibility

Faculty from various AICTE approved Engineering Colleges/Institutions, Officials from various Research Organizations and Industries, and Students (PG and PhD) from NITC and other Engineering Colleges.

Registration

Participants from abroad: US \$400
Industry/ Research Organizations: Rs. 10,000/-
Academic Institutions:
1. Faculty :Rs. 6000/-
2. Research Scholars :Rs. 4000/-
3. M.Tech students :Rs. 2000/-

The fee includes access to course materials, food and accommodation.

For provisional registration, send the duly filled up registration form as per the format to the Coordinator so as to reach on or before **20th June 2016**. **Number of participants will be restricted to fifty. Early intimation on participation through e-mail is highly appreciated.** The course fee will be collected in the form of DD/ online transfer receipt. The DD shall be drawn in favor of “**OPERA-WRE17**” payable at **SBI NIT Calicut**. The bank details are given below for online transfer.
Acc.Name:OPERA-WRE17, Account No: 36753934903; Branch: SBI NIT Calicut, IFSC code: SBIN0002207

Travel Expenses:

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

Accommodation

Limited accommodation will be provided in the NITC campus for all selected participants. A request for this need to be made well in advance.

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 Operations Research to Water Resources and Environmental Engineering** at NIT Calicut during 06th - 8th July 2017. He/she will be permitted to attend the course, if selected.

Place: Name & Signature
Date: of the Sponsoring Authority
(*seal of the institution*)

Mail your Registration forms to
Dr. S. K. Pramada / Dr. Athira P.

Coordinator, OPERA-WRE17

Department of Civil Engineering
National Institute of Technology Calicut
Calicut, 673601, Kerala, India

Email: ***operawre17@gmail.com***
Phone: 9656006952, 9962388466