## TEQIP-II SPONSORED ONE WEEK SHORT TERM COURSE ON

### ROLE OF MATHEMATICAL SCIENCES IN ENGINEERING AND TECHNOLOGY (RMSET-16)



October 19-23, 2016



# Organized by Department of Mathematics Motilal Nehru National Institute of Technology Allahabad Allahabad-211004, India

#### www.mnnit.ac.in

#### The Institute

Motilal Nehru National Institute of Technology (MNNIT) Allahabad is one of the premier National Institute of Technology (NIT) in India. It is committed to achieve quality and excellence in academic pursuits. Established in 1961, as a Regional Engineering College, a joint enterprise of Government of India (GOI) and Government of Uttar Pradesh, the institute was transformed into NIT on June 26,

2002. With the enactment of NIT Act-2007 (29 to 2007), the Institute has been granted the status of institution of national importance w.e.f. August 15, 2007. The Institute offers various undergraduate and postgraduate courses such as B.Tech, M.Tech, MCA, MBA, M.Sc., M.S.W and Ph.D. degree. It has been recognized by GOI as one of the Quality Improvement Programme (QIP) centers for the M.Tech. and Ph.D. Degrees. Also, it is a lead Institution under World Bank funded GOI Project on Technical Education Quality Improvement Programme (TEQIP) (2002-2007).

#### **Department of Mathematics**

The department of mathematics came into existence w.e.f., 1st April, 2003, prior to this it constituted a section of the Department of Applied Mathematics, Applied sciences & Humanities. The department offers core courses at undergraduate level and several advanced courses at post graduate level. The department also enrolls candidates for Ph.D programme. There is a wide spread interaction between mathematics department and various engineering departments in the field of teaching and research. The department of Mathematics started full time M.Sc. in Mathematics & Scientific Computing program since 2008. This two year programme offers an exciting opportunity to students who are interested in Mathematics and who wish to pursue courses for industry, research and teaching.

#### **Patron**

Prof. S. K. Duggal, Director MNNIT Allahabad

#### Chairman

**Dr. Pankaj Srivastava**, Head Department of Mathematics, MNNIT Allahabad Email: pankajs@mnnit.ac.in

#### Coordinator

Dr. Gorakh Nath

Department of Mathematics, MNNIT Allahabad Email: gnath@mnnit.ac.in

#### **Co-Coordinator**

Dr. Buddakkagari Vasu

Department of Mathematics, MNNIT Allahabad

Email: bvasu@mnnit.ac.in

**Resource Persons** 

Eminent experts from Central/State Universities, IITs and NITs.

#### **Local Organizing Committee**

Dr. Shiv Datt Kumar

Dr. S.N.Pandey

Dr. Manoj Kumar

Dr. Mukesh Kumar

Dr. Pitam Singh

Dr. Sahadeo Padhye

**Dr. Pramod Kumar Yadav** 

Dr. Surabhi Tiwari

#### **Objectives of the Course**

The purpose of this course is to arm the participant with the necessary ideas and methods, so that when mathematical elements appear in research, teaching and industry, one can tackle them with confidence, possibly with further independent study into specialized areas. Its major role is to summarize, crystalline, enhance and give a forward orientation to the mathematical methods taught in undergraduate, postgraduate and at research level with projections to future requirements.

#### **Course Contents**

- Ordinary and Partial Differential Equations
- Biomathematics and Soft Computing
- Fluid Mechanics
- Non-linear Waves
- Lie Group Theory
- Numerical Methods
- Theory of Relativity
- Fuzzy Theory
- Nanofluids
- Two Phase Flow
- Homotopy Method
- Variational Iteration Method
- Statistics, Operations Research
- Linear Algebra
- Mathematical Modeling
- Dynamical Systems
- Hydrodynamics and Magnetohydrodynamics
- Fourier Series and Wavelet Transform
- Information Theory and Coding
- Hyperbolic Conservation Law
- Burgers' Equation
- Other Relevant Topics of Mathematics

#### **Course Fees**

Faculty/ Research Scholars/
PG Students Rs 1000
Industry Personnel Rs 1500
(Course Fee includes registration kit, lecture notes and fooding)

Total No. Of Seats: 30

(Candidates will be selected on first come first Serve basis)

#### **How to Apply**

Those interested in attending the course are requested to fill the registration form enclosed and send the completed application with a passport size photograph and a demand draft towards the course fee in favor of "RMSET 2016" payable at Vijaya Bank, MNNIT Allahabad Branch, to the course coordinator.

#### **Contacts (Course Coordinator)**

Department of Mathematics MNNIT Allahabad Allahabad, U.P. 211004 Email: gnath@mnnit.ac.in Phone:08115020328

#### Accommodation

Accommodation may be provided on availability and payment basis, at the Executive Development Centre(EDC) of MNNIT Allahabad or nearby hotel, provided request for the same is made in the registration form.

#### **How to reach MNNIT Allahabad**

The city of Allahabad is well connected with all parts of India by daily trains, buses and flights.

#### **Important Dates**

Last date of receiving 15 Oct 2016
Registration Forms
List of Shortlisted
Candidates available 16 Oct 2016
on website

#### **REGISTRATION FORM**

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Name (Block letters):	
Designation:	Photo
Affiliation:	
Address	
Phone/Mobile No.:	
Phone/Mobile No.: Email:	
Accommodation Required: Yes/No If Yes: EDC/	' Hotel
Payment Details:	200
Amount:	S S P
Date:	
DD No.: Bank:	
Place:	
Tidee.	
Place:	
Place:	

Signature