INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

NATIONAL PROGRAMME ON DIFFERENTIAL EQUATIONS: THEORY, COMPUTATION & APPLICATIONS

NPDE-TCA 2015

(Sponsored by DST)

POSTGRADUATE LEVEL TRAINING PROGRAMME ON DIFFERENTIAL EQUATIONS

Venue
INDIAN INSTITUTE OF TECHNOLOGY KANPUR
18th May – 5th June, 2015

IIT Bombay in collaboration with IIT Kanpur is pleased to announce Postgraduate Training Programme under the auspices of NPDE-TCA at IIT Kanpur during 18th May – 5th June, 2015.

OBJECTIVES :

- To generate manpower to pursue higher studies in Applied and Computational Mathematics.
- To provide linkage between theory and practice through real life problems.
- To expose participants to mathematical software in Scientific Lab sessions with hands on computing.
- To prepare manpower to support scientific organizations and industry by providing appropriate training.

TARGET AUDIENCE :

Students pursuing M. Sc in Mathematics (on-going or completed), Young teachers in Mathematics, a few exceptional students from B. Tech / B.E (final year) of institutes, universities and colleges, and scientists from Industry and Research & Development Organizations.

MAIN TOPICS :

Multi-variable Calculus (Implicit and Inverse function theorems, Gauss-Greens theorems), Analysis (Ascoli-Arzela theorem, elements of measure theory, L^2 space); Ordinary Differential Equations (existence theory and stability results); Partial Differential Equations (First order linear and nonlinear hyperbolic PDEs, Second order linear elliptic and parabolic PDEs (Green's function with properties, maximum principles etc.), wave equation (d'Alembert formula, reflection principle etc.)); Mathematical Modeling (basics of modeling with examples from industrial problems); Finite Difference Methods for PDEs with hands on computing (stability, consistency and convergence of numerical schemes for PDEs; iterative methods like Jacobi, Gause-Seidel and SOR).

TENTATIVE LIST OF RESOURCE PERSONS:

Sreenadh (IITD); P. C. Das (IMA Bhubaneswar); Rajen Sinha (IITG); R. K. Mohanty (SAU, Delhi); Phoolan Prasad (IISc Bangalore); C. Praveen (TIFR-CAM, Bangalore); Santhanam (IITK); S. Sundar (IITM); Sanyasiraju (IITM); Shobha Madan (IITK); Rama Rawat (IITK); D. Bahuguna (IITK); Kaushik Bal (IITK); Amiya K. Pani (IITB); M.C.Joshi (IIT Gandhinagar); Thamban Nair (IITM); Sandeep (TIFR-CAM, Bangalore)

CO-ORDINATORS :

B.V. Rathish Kumar (IIT Kanpur); S.Ghorai (IIT Kanpur)

PARTICIPATION :

To participate in the workshop, fill in the required form which can be available on the website: http://www.npde-tca.math.iitb.ac.in/PG2015/pg2015.php and send us your recommendation letter with your application id to this email: pg.npde@gmail.com

Last date for receipt of applications: 5th April, 2015
Selection of participants will be based on their academic records and recommendation letter.
List of selected participants will be put on the web page by 8th April, 2015

CONTACT :
Amiya K Pani, Convener, NPDE-TCA,
Department of Mathematics, Industrial Mathematics Group,
IIT Bombay, Powai, Mumbai – 400 076.

Email: pg.npde@gmail.com, Phone: 022-2576 4765