



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

NATIONAL PROGRAMME ON DIFFERENTIAL EQUATIONS; THEORY, COMPUTATION & APPLICATIONS

NPDE-TCA 2015

(Sponsored by DST)

ADVANCED LEVEL TRAINING PROGRAMME ON DIFFERENTIAL EQUATIONS

Venue

BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI – K. K. BIRLA GOA CAMPUS

May 25th – June 14th, 2015

IIT Bombay is pleased to announce a three week Advanced Level Training Programme organized by BITS Pilani – K. K. Birla Goa campus under the auspices of National Programme on Differential Equations; Theory, Computation & Application during May 25th – June 14th, 2015.

AIM:

- To provide a sound mathematical foundation for research in Applied Mathematics specially in Partial Differential Equations (PDE) and Computational PDEs.
- To create a pool of trained manpower for academic jobs, research and development organizations and industry.
- To expose participants to scientific lab sessions with hands on computing.

TARGET AUDIENCE: Familiarity with PDE, Functional Analysis, L^2 theory and MATLAB will be assumed.

- Final year M. Sc students who will be completing or about to complete and Ph. D. students.
- Post doctoral researchers and young faculty members.
- B. Tech. / B.E. / M. Tech students who have completed NPDE post-graduate level training programme.
- Scientists from industry and research & development organizations with appropriate mathematical background.

MAIN TOPICS:

Distribution Theory; Sobolev Spaces; Elliptic PDE: weak solution, Lax-Milgram Lemma, regularity results, weak maximum principle, eigenvalue problems; Heat and Wave Equations: existence, uniqueness etc.; Semigroup theory; First Order Hyperbolic PDEs: Existence of weak solution, entropy solution; Finite Difference/Finite Volume Schemes for First Order Equations; Finite Element Methods for Elliptic and Heat Equations; optimal control for elliptic and heat equation & with hands on computation.

TENTATIVE RESOURCE PERSONS:

M. Vanninathan, K. T. Joseph, A. Adimurthi, G.D.V. Gowda, Mythily Ramaswamy (TIFR-CAM, Bangalore); M.T. Nair (IIT Madras); Amiya K. Pani, Neela Nataraj (IIT Bombay); Mohan C. Joshi (IIT Gandhinagar); K. R. Arun (IISER Trivandrum); Thirupathi Gudi, A.K. Nandakumaran (IISc, Bangalore).

CO-ORDINATORS:

P. Dhanumajaya, BITS Pilani-K. K. Birla Goa Campus (danu@goa.bits-pilani.ac.in); Amiya Kumar Pani, IIT Bombay (akp@math.iitb.ac.in)

ORGANIZING COMMITTEE:

P. Dhanumajaya, Anil Kumar, Prasanna Kumar (HOD), Tarkeshwar Singh (BITS Pilani - K. K. Birla Goa Campus)

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/ATP2015/atp2015.php> and send your recommendation letter with your application id to this email : npde.atp@gmail.com

Last date of receipt of application: 8th 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 10th April, 2015

CONTACT :

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