

NATIONAL PROGRAMME ON DIFFERENTIAL EQUATIONS: THEORY, COMPUTATION & APPLICATIONS NPDE-TCA 2013 (Sponsored by DST)



MODELLING WEEK AND STUDY GROUP MEETING ON INDUSTRIAL PROBLEMS (MWSGMIP-2013)

Modelling Week: 2nd – 7th December, 2013 Study Group Meeting: 9th –14th December, 2013

Venue: Department of Mathematics, National Institute of Technology Calicut, Kerala

The Department of Mathematics at NIT, Calicut in collaboration with Industrial Mathematics Group at IITB will be hosting Modelling Week (MW) during December $2^{nd} - 7^{th}$ and Study Group Meeting (SGM) during $9^{th} - 14^{th}$ December, 2013 at NIT Calicut under the National Programme on Differential Equations: Theory, Computation & Applications (NPDE-TCA 2013)

One of the objectives of the MW & SGM is to give exposure to research scholars and young faculty members to study industrial problems requiring mathematical solutions. This can be achieved through

- MW Modelling of some sample case studies from industrial problems emphasizing its importance in real life problems
- SGM Problem solving activity pertaining to specific raw problems coming from industries

PLAN FOR THE MEETING

Scientists, Engineers, Economists, Managers, Financial Analysts and other user community will be invited to present their technical problems. It will be the endeavour of the participants to provide useful directions toward viable solutions for problems through intense sessions of brainstorming. **There will be emphasis on**

- Generating ideas which will eventually lead to a tangible methodology for problem solving as a short term objective
- Evolving long term interaction between academic and industry with respect to research & development perspective
- Developing a network of mathematicians and computational scientists dealing with industrial problems

PROBLEMS ON

Optimal electrode distribution in tumour electrotherapy, optimal shape design of a miniaturised thruster for micro and nano satellites, modelling temperature dependence of open circuit voltage in organic solar cells, modelling and control of an unmanned flying light weight vehicle, data modelling, modelling of volumetric air receiver for solar technology etc.

PROGRAMMME

Problem presentation by industry participants, formation of working groups, problem solving sessions, preparation of mid-term progress report by each group, feedback analysis, presentation of final solution

We, therefore, invite all those who are interested, to apply for participation in these important academic events. Efforts will be made to provide financial support for travel, boarding and lodging for all selected participants from Academics.

TARGET AUDIENCE

Post-graduate (Mathematics) Students, Research Scholars, Young Researchers and final year B.Tech Students from Academic Institutes and Universities. Engineers and Scientists from Research and Development organizations and Industry.

RESOURCE PERSONS

Keijo Ruotsalainen (University of Oulu, Finland) ; M K Abeyratne (University of Ruhuna, Srilanka) ; A Grm (C3M, Slovenia) ; Amiya Kumar Pani (IITB) ; N G A Karunathilake (University of Kelaniya, Srilanka) ; Neela Nataraj (IITB) ; Mohan C Joshi (IITB) ; S Sundar (IITM) ; Raju K George (IIST, Trivandrum) ; L Chandra (IIT, Rajasthan) ; Dhanesh Patel (MS University, Baroda) ; S Panda (NIT, Calicut); Jagadeesha T (NIT Calicut); Suresh Kumar Nadupuri (NIT, Calicut)

LOCAL ORGANISING COMMITTEE:

M N Bandyopadhyay (Director, NIT Calicut), V Narayanan (HOD Maths), Jose Mathew (Dean, R&C), V Mustafa (Dean, P&D), Biju T Kuzhiveli, S Jayaraj, K Krishna Murthy, M J Jacob, Jessy John C, P Predeep, K Prabhakaran Nair, G Unnikrishnan, Santhosh Kumar S M, S Panda, Suresh Kumar Nadupuri

CO-ORDINATORS

Satyananda Panda (satyanand@nitc.ac.in, +91 495 2285210), NIT Calicut; Suresh Kumar Nadupuri (nsk@nitc.ac.in, +91 495 2285215), NIT Calicut; Amiya K. Pani (akp@math.iitb.ac.in, (O):+91– (022) 576 7481), IMG, IITB

PARTICIPATION

To participate in this program, fill in the required registration form which can be downloaded from the website: <u>http://nitc.ac.in/modelling/</u> OR <u>http://www.math.iitb.ac.in/~npde-tca/</u> and email to: <u>npde.2012@gmail.com</u>. You can also mail the form by post to the following contact address

CONTACT

Convener, NPDE-TCA, Department of Mathematics, Industrial Mathematics Group, IIT Bombay, Powai, Mumbai – 400 076. E-mail: npde.2012@gmail.com.

Phone: 022-25767481 / 4765.

REGISTRATION

Registration fee : Participants from Industry and R & D organisations: Rs. 10,000/- or GBP 100 or EURO 130 or USD 160 Participants from Academic Institutions, Research Scholars and Students – Nil

Payment Mode: Draft should be send in the name of "MWSGMIP2013" payable at SBI, CREC Chathamangalam, Kozhikode, Branch Code: 2207

Last Date of Receipt of Application: October 25th, 2013. Selection of participants will be based on academic record and recommendation letters.

List of Selected Participants will be put on the web page: October 28th , 2013.

Details can be found on the MWSGMIP 2013 website: http://www.math.iitb.ac.in/~npde-tca. Contact at NIT, Calicut: Satyananda Panda (<u>satyanand@nitc.ac.in</u>, +91 495 2285210), OR Suresh Kumar Nadupuri (<u>nsk@nitc.ac.in</u>, +91 495 2285215).