



National Centre for Mathematics

www.ncmath.org

(A joint centre of TIFR and IIT Bombay)

Advanced Training in Mathematics School

www.atmschools.org

Supported by National Board for Higher Mathematics



ATM Workshop on Numerical Linear Algebra

Venue : IIT Guwahati

7th - 12th January 2013

Organisers : Rafikul Alam & S. Bora

Brief description of ATM Schools

Advanced Training in Mathematics (ATM) Schools are a joint effort of a large number of mathematicians across the country, with support from the National Board of Higher Mathematics. The programmes are conducted in reputed mathematics institutions in the summer and winter every year. The emphasis in these Schools is on solving problems, and on the relations between basic areas of mathematics. The schools are intended mainly for Ph.D. Students and lecturers. Applications are now invited for participation in the following School.

Workshop on Numerical Linear Algebra

Numerical Linear Algebra is concerned with the theory and practical aspects of computing solutions of three fundamental problems which are at the core of science and engineering, viz., linear systems of equations, least-squares problems and eigenvalue problems. The theme of the workshop is 'Eigenvalue Problems.' It will give an opportunity to attend lectures on the theory, state of the art research and applications of eigenvalue problems by some of the world's leading experts. The topics to be covered in the main lectures are as follows:

- Krylov subspaces and the eigenvalue problem
- Structured eigenvalue problems
- Indefinite linear algebra
- Matrix polynomials and their eigenproblems
- Perturbation theory for eigenvalue problems

Additionally there will also be guest lectures by eminent mathematicians on topics related to the theme of the workshop.

Eligibility for participation

Ph.D. students, young faculty members pursuing research in mathematics, M.Tech. / M.Sc. and B.E. / B.Tech. students with appropriate mathematical background may apply.

Financial Support

Selected participants will be paid III-AC return train fare via the shortest route from their home institutions to the venue. The selected participants will also be provided with accommodation and local hospitality.

How to Apply

The syllabus, application form and other details of the workshop are available on the following website:

<http://www.atmschools.org/2013>

Completed application forms should reach any of the organizers at the following address on or before

8 October, 2012:

Professor Rafikul Alam / Dr. Shreemayee Bora
Department of Mathematics,
IIT Guwahati,
Guwahati 781039, Assam.

RAFIKUL ALAM <rafik@iitg.ac.in>
SHREEMAYEE BORA <shbora@iitg.ac.in>

**The names of selected applicants
will be announced in the above website
on 18th October 2012.**

Resource Persons

Prof. Volker Mehrmann, TU Berlin, GERMANY.

Prof. David Watkins, Washington State Univ., USA.

Prof. Christian Mehl, TU Berlin, GERMANY.

Prof. D. Steven Mackey, Western Michigan Univ., USA.

Prof. Ravindra B. Bapat, ISI Delhi, INDIA.

Prof. Michael Overton,

Courant Institute of Mathematical Sciences, USA.

Prof. Michael Karow, TU Berlin, GERMANY.

Prof. Rafikul Alam, IIT Guwahati, INDIA