

# **National Centre for Mathematics**

www.ncmath.org (A joint centre of TIFR and IIT Bombay)

# **Advanced Training in Mathematics Schools**

www.atmschools.org





# **Workshop in Riemannian Geometry**

Supported by National Board for Higher Mathematics 16 - 28 July. 2012

Conveners: C. S. Aravinda and Harish Seshadri

## **Brief description of ATM Schools**

Advanced Training in Mathematics (ATM) Schools are a joint effort of a large number of researchers across the country with support from the National Board for Higher Mathematics. The programmes are conducted in reputed mathematics departments in summer and winter each year. In these Schools, the emphasis will be on problem solving and on highlighting interrelations of basic subjects in mathematics. The schools are offered mainly for Ph.D. students and lecturers. Presently we invite applications for participation in

## **Workshop in Riemannian Geometry**

This will be a 2-week event in which first 10 days will be devoted to rigorous instructional lectures in foundational topics in Riemannian Geometry. After discussing in detail the basic setting of Riemannian Geometry leading to a proof of the Hopf-Rinow theorem, celebrated theorems of Bonnet-Myers and Cartan-Hadamard that reflect an influence of sign on the sectional curvature, on the underlying topology of the manifold, will be discussed. The workshop will essentially end with a reasonably detailed discussion of the geometry of locally symmetric spaces. Last 2 days will have a conference component in which the various invited speakers will give overview lectures on their topic of research interest and mention some possible open problems for the Ph.D. students.

#### **Eligibility for participation**

Applications are invited from graduate students in mathematics and young teachers with a background of teaching differential geometry courses, at least a first course on curves and surfaces, at a college/university. Students doing M. Phil. may also be considered.

#### **Financial Support**

Selected participants will be paid III-AC return train fare from their place of work/home town to the venue by shortest route and provided with accommodation and local hospitality.

#### **How to Apply**

The syllabus, applications form and other information about the programme is available on the website:

#### http://www.atmschools.org

Application may also be made on plain paper, giving the following information:

Name, Date of Birth, Age, Gender, Institute / Department, Areas of interest, Address for correspondence, email address, City, State, PIN code, Academic Record: B.Sc. / M.Sc. with names of the Institutes, additional information (if any). These should be attested by Head / Principal of the institute.

### Completed application forms should reach

Prof. C. S. Aravinda **TIFR Centre for Applicable Mathematics** Post Bag No. 6503, GKVK Post Office Sharada Nagar, Chikkabommasandra Bangalore 560065 e-mail: aravinda@math.tifrbng.res.in

by 16 June, 2012. List of selected candidates will be posted on the websites of ATM Schools on 20 June, 2012.

#### **Resource Persons**

A.R. Aithal Univ. Of Mumbai C.S. Aravinda TIFR CAM, Bangalore G. Besson Fourier Institute, Grenoble, France IISER, Bhopal A. Mangasuli Akhil Ranjan IIT B, Mumbai

G. Santhanam **IIT Kanpur** Harish Seshadri IISc, Bangalore