



# National Centre for Mathematics

A joint centre of TIFR and IIT, Bombay

## Advanced Training in Mathematics Schools

Supported by National Board for Higher Mathematics

### Instructional School for Lecturers in Combinatorics

01 -14 June, 2012

Conveners: S. D. Adhikari & R. Thangadurai

#### Brief description of ATM Schools

Advanced Training in Mathematics (ATM) Schools are a joint effort of several active researchers across the country with support from the National Board for Higher Mathematics. These schools are now conducted under the auspices of National Centre for Mathematics. The programmes are conducted in reputed mathematics departments in summer and winter each year. In these Schools, the emphasis will be on problems solving and on highlighting inter-relations of basic subjects in mathematics. The schools are offered mainly for Ph.D. students and lecturers. Presently we invite applications for participation in

#### Instructional School for Lecturers in Combinatorics

#### Brief description of the school

In this school, we mainly plan to cover Introduction to Combinatorics by Martin J. Erickson. More precisely, we plan to cover the following topics: Review of Set Theory, Algebra and Number Theory, The Pigeonhole Principle (many versions), Extremal graphs, Coloring of the plane, Sequences and Partial orders (including Erdős-Szekeres Theorem, Dilworth's Lemma, Sperner's Theorem), Ramsey Theory (including Van der Waerden's Theorem), The fundamental Counting Problem, Recurrence Relations and Explicit Formulas, Permutations and Tableaux, The Polya Theory of counting, Codes and Designs.

#### Eligibility for participation

Applications are invited from lecturers in mathematics who have passed NET/SET or equivalent examination and who are teaching at a college/university. Students doing M. Phil. may also be considered for the school. Teachers below the age of 30 will be given preference.

#### 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:

**[www.atmschools.org/2012](http://www.atmschools.org/2012) or [www.ncmath.org](http://www.ncmath.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, Pincode, 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. S. D. Adhikari and Dr. R. Thangadurai  
Coordinators, ISL  
Harish-Chandra Research Institute  
Chhatnag Road, Jhansi  
Allahabad - 211019  
e-mail: [kr.thangadurai@gmail.com](mailto:kr.thangadurai@gmail.com)  
Phone: +91- 9956062140 (Mob.)  
(0532) 227 4313(O)  
Fax: (0532) 2569576, 2567748

by **Wednesday, February. 29, 2012.** List of selected candidates will be posted on the websites of ATM Schools on **Saturday, 10th March., 2012.**

#### Resource persons

S. D. Adhikari	HRI, Allahabad
Anjana Wirmani	University of Mumbai (Retd.)
S. Sane	IIT Mumbai
B. K. Sharma	University of Allahabad, Allahabad
R. Thangadurai	HRI, Allahabad