



# Advanced Training in Mathematics Schools

Supported by *National Board for Higher Mathematics*

## Advanced Instructional School on Schemes & Cohomology

Venue: *KSOM, Kozhikode*

28 June - 16 July, 2010

Conveners: *A. J. Parameswaran & V. Balaji*

### A Brief Description of ATM Schools

Advanced Training in Mathematics (ATM) Schools are a joint effort of a large number of mathematicians in the country for training mathematics research scholars and teachers with generous 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 is on problems solving and on understanding inter-relations of basic subjects in mathematics. At the initial stage, ATM Schools consist of two Annual Foundation Schools (AFS I & II) in algebra, analysis, and topology. At a later stage, Advanced Instructional Schools (AIS) and workshops (ATMW) in all major areas are organised. Several advanced instructional schools (ATML) are organized each year exclusively for young lecturers in colleges and universities.

### Advanced Instructional School on Schemes & Cohomology

The AIS will be directed towards making young researchers in India familiar with the developments in Algebraic Geometry, with special emphasis on Grothendieck's programme. The three week programme is primarily aimed at early researchers in this field to become familiar and users of the tools and techniques in this subject. To acquire a good knowledge of modern algebraic geometry it is essential to see the "local" aspects coming from Commutative algebra in its interplay in geometry as well as the immense machinery of cohomology. These two themes will be the main ones for the workshop. To give a flavour of the manner in which these tools have lead to fundamental theorems in algebraic geometry, the final week will stress on some research themes. A team of active researchers in the field has been invited for this purpose.

#### Resource persons

TEV Balaji	V. Balaji	Vivek Mallik
D. S. Nagaraj	Suresh Naik	A. J. Parameswaran
	K. N. Raghavan	

#### Unity of Mathematics Lectures

*Najmuddin Fakhruddin, R. V. Gurjar, Nitin Nitsure, Kapil Paranjape, S. Ramanan, Pramathanath Sastry, C. S. Seshadri*

### Eligibility for Participation

The school will admit 30 students in their first and second years of Ph.D. programme, and a few young university lecturers and college teachers. Students who have attended AFS-I/II before will be given preference to attend this school.

#### 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, application form and other information about the programme is available on the website:

<http://www.bprim.org/atm>

Applications 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. These should be attested by Head/Principal of the institute.

#### Completed application forms should reach

*A. J. Parameswaran & V. Balaji*

*KSOM, KUNNAMANGALAM (PO), KOZHIKODE,*

*9446429164 (Mobile), 0495 2809001 (Office),*

*0495 2809000 (KSOM Office)*

*e-mail: param@math.tifr.res.in, balaji@cmi.ac.in*

by **Friday, 21st May, 2010.** List of selected candidates will be posted on the website of ATM Schools on **Friday, 28th May, 2010.**

#### NBHM Committee for the ATM Programme

Prof. S. A. Katre	Pune U., Pune
Prof. S. Kesavan	IMSc, Chennai
Prof. Shobha Madan	IIT Kanpur
Prof. N. Nitsure	TIFR, Mumbai
Prof. J. K. Verma (Convener)	IIT Bombay