The Abdus Salam
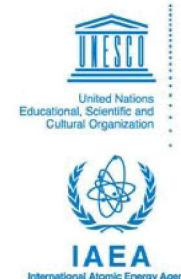**International Centre for Theoretical Physics**

SCHOOL and WORKSHOP on
LOCAL RINGS and
LOCAL STUDY of ALGEBRAIC VARIETIES

honoring G. Valla

31 May - 11 June 2010

Miramare - Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP) will organize a **School and Workshop on Local Rings and Local Study of Algebraic Varieties,** which will be held at ICTP, Trieste, Italy, from **31 May** to **11 June, 2010**.

MAIN TOPICS

- *Hilbert function*
- *Invariants of Local rings*
- *Blow-up algebras*
- *Defining equations of projective varieties*
- *Integral closure of ideals and modules*
- *Free resolutions*

The first week (31 May - 4 June) will be an Advanced School with **four instructional courses** on fundamental techniques in Commutative Algebra and related fields:
1. *A. Conca* (University of Genova, Italy): *Hilbert function and multiplicity*
2. *S. Goto* (Meiji University, Japan): *Numerical invariants of local rings*
3. *I. Swanson* (Reed College, USA): *Integral closures of ideals, rings and modules*
4. *B. Ulrich* (Purdue University, USA): *Blow-up algebras*

The second week (7 - 11 June) will be an **International Workshop on Commutative algebra.** The aim of the workshop is to summarize recent developments of the theory of local rings and related fields and to set up new directions for future investigations. Young Mathematicians are encouraged to participate.

The **tentative list of speakers includes:**
L. Avramov (USA), L. Badescu (Italy), W. Bruns (Germany), F. Catanese (Germany), G. Caviglia (USA), M. Chardin (France), N.T. Cuong (Vietnam), E. De Negri (Italy), J. Elias (Spain), D. Erman (USA), L. Ghezzi (USA), E. Gorla (Switzerland), G.M. Greuel (Germany), J. Herzog (Germany), L.T. Hoa (Vietnam), K. Kurano (Japan), G. Lyubeznik (USA), C. Pedrini (Italy), I. Peeva (USA), C. Polini (USA), B. Purnaprajna (USA) L. Robbiano (Italy), A. Singh (USA), A. Simis (Brazil), W. Vasconcelos (USA), J. Verma (India), K. Watanabe (Japan), S. Zarzuela (Spain).

PARTICIPATION

Mathematicians from all countries that are members of the United Nations, UNESCO or IAEA may attend the School and Workshop. As it will be conducted in English, participants should have an adequate working knowledge of this language. Although the main purpose of the Centre is to help research workers from developing countries, through a programme of training activities within a framework of international cooperation, a limited number of students and post-doctoral scientists from developed countries are also welcome to attend. As a rule, travel and subsistence expenses of the participants should be borne by the home institution. Every effort should be made by candidates to secure support for their fare (or at least half-fare). However, limited funds are available for some participants, especially for those who are nationals of, and working in, a developing country. Such support is available only for the participants who attend the entire activity. **There is no registration fee.**

HOW TO APPLY

The application form can be accessed at the activity website:
http://agenda.ictp.it/smr.php?2147
Once in the website, comprehensive instructions will guide you step-by-step, on how to fill out and submit the application form. Deadline: 1 February 2010.

ORGANIZERS

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March 2010