



WINTER COLLEGE ON OPTICS IN ENVIRONMENTAL SCIENCE

2 - 13 February 2009

Miramare - Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP), in collaboration with the International Commission for Optics (ICO), the Optical Society of America (OSA), the International Society for Optical Engineering (SPIE) and the European Optical Society (EOS), will organize a **Winter College on Optics in Environmental Science**, which will be held at ICTP, Trieste, Italy, from **2 to 13 February, 2009**.

DIRECTORS: **A. Consortini** (University of Florence, Italy)
R.P. Singh (Indian Institute of Technology Kanpur, India)
S. Svanberg (Lund University, Sweden)

LOCAL ORGANIZER: **J. Niemela** (ICTP, Italy)

The Winter College will expose the participants to recent achievements of the theory and applications of optical techniques for assessment of the environment. The scientific programme consists of lectures by international experts, internal seminars and group discussions, some laboratory demonstrations. The aim of the Winter College is to provide the background needed to follow the most advanced literature.

MAIN TOPICS:

- **Scattering and propagation in the atmosphere at optical frequencies**
- **Fundamentals of optical spectroscopy**
- **Basics of multi-spectral imaging**
- **Principles of remote sensing from ground- and satellite-based platforms**
- **Lidars and Sensors**

WITH APPLICATIONS TO:

- **Diagnostics of the environment**
- **Atmospheric monitoring**
- **Remote sensing of land, vegetation, water, and atmosphere**
- **Agriculture and natural hazards**

An ICTP **PREPARATORY SCHOOL** will be organized the week before the College (from **26 to 30 January 2009**) for a limited number of selected participants. The purpose is to recollect some basic scientific elements that are relevant to the contents of the College lectures. The School sessions will have a tutorial structure, i.e. will include lectures and exercises.

The **LAMP** (Laser, Atomic and Molecular Physics) programme will include group discussions and internal seminars by participants. All participants are encouraged to present their own research, either in poster form or as an oral presentation, which will be determined sufficiently prior to the College.

PARTICIPATION

Scientists and students from all countries that are members of the UN, UNESCO or IAEA can attend the College. As it will be conducted in English, participants should have an adequate working knowledge of that language. As a rule, travel and subsistence expenses of the participants are borne by the home institutions. 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 from developing countries, who will be selected by the Organizers.

A limited number of grants will be made available by the Central European Initiative (CEI) Secretariat in Trieste to support participants from CEI countries.

Such financial support is available only for those who attend the entire activity. There is no registration fee to attend the College.

The closing date for requesting participation is **15 OCTOBER 2008**. The 'Request for Participation' form, to be found at the back of the Bulletin, also obtainable from the ICTP WWW Server: <http://agenda.ictp.it/smr.php?2018>, should be completed and returned by using only one of the following ways:

- by e-mail** to: smr2018@ictp.it (please save and send file attachments in either PDF -preferably- or RTF zipped or Doc format) **or**
- by post** to: SMR 2018 - Winter College on Optics in Environmental Science, The Abdus Salam International Centre for Theoretical Physics, Strada Costiera 11, 34014 Trieste, Italy

(The decision of the Organizers will be communicated to all candidates as soon as possible)

Secretariat:

Telephone: +39-040-2240-9932 Fax: +39-040-2240-7932 E-mail: smr2018@ictp.it



INTERNATIONAL COMMISSION FOR OPTICS
COMMISSION INTERNATIONALE d'OPTIQUE



**Deadline for
Requesting Funds**

15 OCTOBER 2008