



The Abdus Salam International Centre for Theoretical Physics


United Nations
Educational, Scientific
and Cultural Organization


International Atomic
Energy Agency

WINTER COLLEGE ON FIBRE OPTICS, FIBRE LASERS AND SENSORS

12 - 23 February 2007

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), the European Optical Society (EOS) and the International Society on Optics Within Life Sciences (OWLS), will organize a **Winter College on Fibre Optics, Fibre Lasers and Sensors**, which will be held at ICTP, Trieste, Italy, from **12 to 23 February, 2007**.

DIRECTORS: **A. Clarkson** (University of Southampton, U.K.)
H. L. Fragnito (University of Campinas, Brazil)
A. G. Mignani (CNR - Institute of Applied Physics 'Nello Carrara', Firenze, Italy)

LOCAL ORGANIZER: **G. Denardo** (ICTP, Italy)

The College will expose the participants to the scientific issues that are driving the progress of fibre lasers and modern fibre optics. The programme consists of lectures by international experts, group discussions and laboratory demonstrations. The aim is to provide the background needed to follow the most advanced literature.

MAIN TOPICS:

- **Fundamentals of fibre lasers and amplifiers**
- **Spectroscopy of rare-earth-doped glasses**
- **High-power fibre lasers and amplifiers**
- **Ultrashort pulse fibre sources**
- **Fibre sensors - Introduction and basic principles**
- **Fibre sensors - Different architectures and applications**
- **Optical fibre telecommunications**
- **Photonic crystal (or microstructured) fibres - Theory and applications**
- **Nonlinear effects in optical fibres and applications**
- **Passive fibre components and integration**
- **Fibre Bragg gratings - Theory, fabrication and applications**

An ICTP **PREPARATORY SCHOOL** will be organized the week before the College (from **5 to 9 February 2006**) 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. Those who intend to deliver a seminar are expected to come to ICTP prepared with all the material needed for their talk.

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 2006**. 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?1829>), should be completed and returned to:

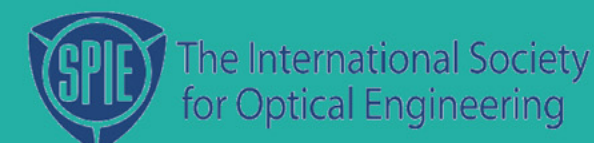
SMR 1829 - Winter College on Fibre Optics, Fibre Lasers and Sensors
the Abdus Salam International Centre for Theoretical Physics, Strada Costiera 11, 34014 Trieste, Italy

If sending your applications by e-mail, please save and send file attachments in RTF or PDF format to: **smr1829@ictp.it**

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

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July 2006



International Society on
Optics Within Life Sciences
Non-Profit Organization established on August 13, 1990



**Deadline for
Requesting Funds**

15 OCTOBER 2006