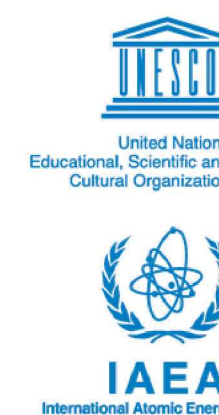




The Abdus Salam
International Centre for Theoretical Physics



WINTER COLLEGE ON MICRO AND NANO PHOTONICS FOR LIFE SCIENCES

11 - 22 February 2008

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 Micro and Nano Photonics for Life Sciences**, which will be held at ICTP, Trieste, Italy, from **11 to 22 February, 2008**.

DIRECTORS: **M. Bertolotti** (University of Rome, Italy)
M. Havenith (Ruhr University, Germany)
O. E. Martinez (University of Buenos Aires, Argentina)

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

The Winter College will expose the participants to the recent achievements of the theory and applications of micro-optics and nano-photonics techniques for the study of Life Sciences. 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: → **Photonic crystals and nanostructured devices**
→ **Nonlinear techniques (CARS, STED, harmonics and more)**
→ **Optics of and with nanoparticles**
→ **Single molecule/particle techniques**
→ **Near field techniques**
→ **Optical manipulation (structured light, tweezers)**

WITH APPLICATIONS TO:
→ **biosensors**
→ **imaging beyond the classical limits (diffraction barrier, turbid media and more)**
→ **optical tomography**
→ **protein folding, DNA sequencing and more**

An ICTP **PREPARATORY SCHOOL** will be organized the week before the College (from **4 to 8 February 2008**) 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 **14 OCTOBER 2007**. The 'Request for Participation' form, to be found at the back of the Bulletin, (also obtainable from the ICTP WWW Server: http://cdsagenda5.ictp.trieste.it/full_display.php?id=a07141), should be completed and returned by using only one of the following ways:

by e-mail to: smr1932@ictp.it (please save and send file attachments in either PDF -preferably- or RTF zipped or Doc format)

or

by post to: SMR 1932 - Winter College on Micro and Nano Photonics for Life Sciences
the Abdus Salam International Centre for Theoretical Physics, Strada Costiera 11, 34014 Trieste, Italy

(Please include a recent photograph; signature of the candidate is compulsory)
(The decision of the Organizers will be communicated to all candidates as soon as possible)

Telephone: +39-040-22409932 Telefax: +39-040-2240-7932 E-mail: smr1932@ictp.it



INTERNATIONAL COMMISSION FOR OPTICS
COMMISSION INTERNATIONALE D'OPTIQUE



The International Society
for Optical Engineering



European Optical Society

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



**Deadline for
Requesting Funds**

14 OCTOBER 2007