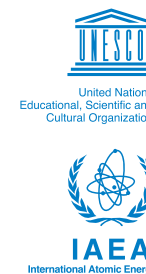




The Abdus Salam
International Centre for Theoretical Physics



School on
**SYNCHROTRON AND
FREE-ELECTRON-LASER SOURCES AND
THEIR MULTIDISCIPLINARY
APPLICATIONS**

26 April - 7 May 2010
ICTP, Miramare - Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP) and the Elettra Synchrotron Light Laboratory will jointly organize the "*School on Synchrotron and Free-Electron-Laser Sources and their Multidisciplinary Applications*", to be held in Trieste from 26 April to 7 May 2010.

Synchrotron Radiation (SR) based research techniques play a pivotal role across a wide range of disciplines in science and technology, attracting fast growing user communities from physics, chemistry, biology, medicine, environmental sciences, materials science and engineering. The rapid and continuing expansion of SR based research is reflected by the growing number of synchrotron facilities all over the world. At present emerging new light sources such as the IR, VUV, and x-ray free-electron lasers (FEL's) with unprecedented coherence, peak brightness, and pulse length are opening new opportunities for development and research. Furthermore, this facility-based research is genuinely international, with a large number of scientists complementing abroad the research done at their home laboratories using the unique instrumentation, and participating in development of new tools for interdisciplinary research at these large-scale facilities.

The scope of the school, generally aimed at PhD students and young researchers, is to provide basic knowledge about functioning mechanisms of synchrotrons & FEL's and related instrumentation, as well as a description of state-of-the-art research techniques and their multidisciplinary applications. The School will consist of two 5-day working weeks with morning and afternoon lectures and seminars, complemented by practical training and demonstrations at SR and FEL facilities at Elettra. The following specific topics will be included:

- Fundamentals of SR and FEL Radiation •
- Photon Optics and Beamline Instrumentation •
- X-ray Absorption, Scattering and Diffraction Techniques and Applications •
- Photoemission Techniques and Applications •
- Microscopy and Imaging Techniques, and Applications •
- New Research Opportunities with FEL's •

Students and young scientists from all countries that are members of the UN, UNESCO or IAEA can attend the School. The main purpose of the Centre is to help researchers from developing countries through a programme of training activities within a framework of international co-operation. However, scientists from developed countries are also welcome to attend. In particular, this School is intended for strongly motivated graduate students and young post-doctoral scientists. Logistics limit the number of participants to 75-80.

*Limited funds are available for some applicants from developing countries, to be selected by the organizers. Such financial support is available only to those who attend the entire activity. Every effort should be made by candidates to secure support for their fares (or at least half-fare) from their home country. **There is no registration fee for attending the School.***

HOW TO APPLY FOR PARTICIPATION:

Access to the Online **Application form** with comprehensive instructions on how to fill in and submit the application form are to be found on the website:

<http://agenda.ictp.it/smr.php?2139>

The closing date for receipt of applications for participation is 5 November 2009.

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DEADLINE

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