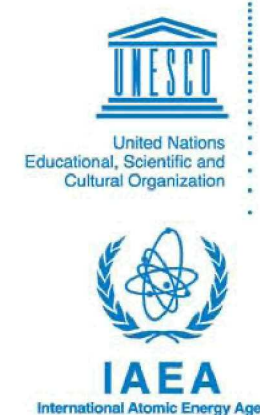




**The Abdus Salam
International Centre for Theoretical Physics**



**Joint ICTP/IAEA School on
NOVEL SYNCHROTRON RADIATION
APPLICATIONS**

16-20 March 2009
ICTP, Miramare - Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP) and the International Atomic Energy Agency (IAEA, Vienna) will jointly organize the "*School on Novel Synchrotron Radiation Applications*", to be held in Trieste *from 16 to 20 March 2009*.

Analytical techniques based on synchrotron radiation (SR) principles play a very important role in both research and industrial applications. Synchrotron light sources had, until recently, been built exclusively in developed countries. Owing to their wide impact across the scientific spectrum with quite often 'near-market' benefits, many of the emerging economies, including Brazil, India, Republic of Korea, Singapore, P.R. China and Thailand have recently built their own sources. Even taking into account the new sources under development, such as SESAME in the Middle East, the rapid growth of the user community and ever-increasing range of applications are outpacing the available supply of synchrotron light for the foreseeable future.

While applications initially focused on Atomic & Molecular Sciences, and on Material Science, Surface & Interface Science, we now have an extremely wide utilization of synchrotron techniques in various fields. Environmental and Food Sciences are some of the expanding areas of science where SR is having an increasing influence. The application areas include food quality, food processing technology and the microstructure of seeds, characterization of contamination in soils, riverbeds or lakes resulting from natural processes or human activities, speciation, elemental analysis of airborne particulates. Access to synchrotron facilities is normally obtained through a highly competitive peer-review process. As such, education of researchers from developing countries is very important to enable them to produce successful beamtime proposals.

The school seeks to target physicists, chemists, and biologists with demonstrated interest in using SR based techniques and those seeking continuous professional development in the field. This event aims to assist competent practitioners to better understand and appreciate the full potential of SR based techniques to improve their ability and to be involved in similar types of research or industrial applications.

The following specific topics will be included:

- **Fundamentals of synchrotron radiation based techniques**
- **Food quality and food processing technology using small and wide angle x-ray scattering, infrared and fluorescence techniques**
- **X-ray absorption spectroscopy, high resolution inelastic x-ray scattering, resonant magnetic soft x-ray scattering, surface diffraction, and micro-focused fluorescence analysis for speciation in environmental and soil sciences**
- **Analysis of airborne particulates with SR techniques**

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 35-40. As the School will be conducted in English, participants must have a good working knowledge of that language.

Limited funds are available for some applicants who are nationals of (and working in) 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. **No registration fee is applicable.**

The request for participation form is available at:
http://cdsagenda5.ictp.trieste.it/full_display.php?smr=0&ida=a08154

The closing date for receipt of applications for participation is 15 November 2008.

Fully completed and signed application form should be returned to:
School on Synchrotron Radiation (smr2031)
c/o Elizabeth Brancaccio
The Abdus Salam International Centre for Theoretical Physics
Strada Costiera 11, 34014 Trieste, Italy

If sending an application by e-mail: smr2031@ictp.it (please sign and send file in pdf attachment)

Phone: +39-040-2240284 Telefax: +39-040-224163
E-mail: smr2031@ictp.it
ICTP Home Page: <http://www.ictp.it/>

F. Mulhauser
(IAEA, Vienna)
SCHOOL DIRECTOR

N. Binggeli
(ICTP, Trieste, Italy)
SCHOOL LOCAL ORGANIZER

DEADLINE:

15 NOVEMBER 2008