

# Workshop on Nuclear Reaction Data for Advanced Reactor Technologies

19 - 30 May 2008

*Miramare, Trieste, Italy*

The International Atomic Energy Agency (IAEA), together with the Abdus Salam International Center for Theoretical Physics (ICTP), is organizing a workshop on Nuclear Data for Technological Applications, with focus on advanced reactor concepts. The workshop will be held at ICTP, Trieste, Italy, from 19 to 30 May 2008.

The purpose of the workshop is to provide training and information exchange for nuclear physicists, nuclear engineers, and other users of Nuclear Data for advanced technological applications. Starting from the facilities and techniques used for the experimental determination of basic Nuclear Data quantities, through the evaluation procedures and creation of reliable nuclear reaction data libraries, lectures will focus on providing the most recent developments and results in the field.

Participants will learn the basic principles and techniques used in measurements of nuclear reaction data, particularly for neutron-induced reaction cross sections. Modern nuclear theories for structure and reactions modeling will be covered, together with an introduction to the use of relevant nuclear reaction codes for model calculations.

Presentations and discussions at the workshop will also focus on the implications of the available data on the simulation tools and techniques used in design studies. A set of computer codes for nuclear model calculations and simulation tools will be made available to the participants in order to undertake the various hands-on exercises. An overview of the most appropriate strategies for the development of innovative nuclear reactors will be presented, particularly the options identified in the GEN-IV and GNEP initiatives, and in the IAEA INPRO project.

## Main Topics

- facilities and instrumentation for nuclear reaction data measurements
- experimental techniques for measurements of nuclear reaction data
- modern theoretical nuclear structure and reaction models
- evaluation of nuclear data and creation of evaluated nuclear reaction data libraries
- simulation tools for design studies of advanced nuclear systems
- overview of strategies for advanced nuclear technologies

## **PARTICIPATION**

Scientists and students from all countries which are members of the United Nations, UNESCO or IAEA may attend the School. As it will be conducted in English, participants should have an adequate working knowledge of this language. Although the main purpose of the Centre is to help research workers from developing countries, through a programme of training activities within a framework of international cooperation, a limited number of students and post-doctoral scientists from developed countries are also welcome to attend.

As a rule, travel and subsistence expenses of the participants should be borne by the home institution. 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, who are nationals of, and working in, a developing country, and who not more than 45 years old are. Such support is available only for those who attend the entire activity. There is no registration fee.

## **Requests for participation**

There is no registration fee for attending the School. The "Request for Participation" form is obtainable via Web server: <http://agenda.ictp.it/smr.php?1944> It should be completed, signed and returned by using **only one** of the following ways:

**If sending an application by e-mail** to [smr1944@ictp.it](mailto:smr1944@ictp.it) please save and send file attachments in either PDF (preferably) or RTF zipped or Doc format.

## **If sending an application form by regular mail or courier it should be posted to:**

Workshop on Nuclear Reaction Data for Advanced Reactor Technologies  
(smr 1944 c/o Ms. Ave Lusenti)  
Abdus Salam International Centre for Theoretical Physics  
Strada Costiera 11  
34014 Trieste, Italy

**ACTIVITY SECRETARIAT: Telephone: +39-040-2240544      *Telefax: +39-040-2240585***  
**E-mail: [smr1944@ictp.it](mailto:smr1944@ictp.it)      *ICTP Home Page: <http://www.ictp.it/>***

*Trieste, October 2007*

**In co-operation with the  
International Atomic  
Energy Agency**

## **DIRECTORS**

**A. Mengoni  
IAEA, Vienna**

**A. Stanculescu  
IAEA, Vienna**

## **LOCAL ORGANIZER**

**C. Tuniz  
ICTP, Trieste**

## **DEADLINE**

**for requesting participation:**

**15 February 2008**