

# Workshop on Monte Carlo Radiation Transport and Associated Data Needs for Medical Applications

17 - 28 October 2011

ICTP, Miramare — Trieste, Italy

Organized by the  
International Atomic Energy Agency



The International Atomic Energy Agency (IAEA, Vienna, Austria) is organizing a workshop on "Monte Carlo Radiation Transport and Associated Data Needs for Medical Applications" to be held at the International Centre for Theoretical Physics (ICTP) in Trieste from 17 - 28 October 2011.



Hosted by  
The Abdus Salam  
International Centre for Theoretical Physics

Monte Carlo (MC) techniques have been used extensively in medical physics applications, and offer the most powerful tool for modelling radiation transport in different media. The availability of general purpose MC codes (e.g. EGSnrc, Penelope and Geant4) combined with the ever-increasing computer speed and decreasing costs have led to a boom in MC studies in recent years. MC techniques will dominate the field of radiation dosimetry and benchmark dose calculations in radiotherapy for many years to come.

The Workshop constitutes a unique opportunity for scientists, engineers and medical physicists to gain extensive and up-to-date training in the use and understanding of Monte Carlo methods of relevance to medical applications in therapy and diagnostics, in particular in the use of the state-of-the-art BEAMnrc/EGSnrc Monte Carlo code.

Scientists and engineers from all countries that are members of the United Nations, UNESCO or IAEA may attend the Workshop. They should hold an advanced degree in medical physics, nuclear physics, nuclear engineering or related subjects, and preferably possess several years' professional experience in medical physics and/or medical application of nuclear technology. Students will also be given the opportunity to give a short presentation of their own Monte Carlo technical work at the workshop. As this activity will be conducted in English, participants must have an adequate working knowledge of this language.

As a rule, travel and subsistence expenses for participants should be borne by their home institutions. However, limited funds will be available to support some participants, who are nationals of, and working in, a developing country. Such financial support will be available only to those who attend the entire activity. Thus, every effort should be made by candidates to secure support for their fare from their home countries. No registration fee is associated with attendance at the Workshop.

## DIRECTOR:

**R. Capote Noy**  
(IAEA, Vienna, Austria)

## LECTURERS:

**E. Mainegra-Hing**  
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(National Research  
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**I. Kawrakow**  
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**B. Walters**  
(Thunder Bay Regional  
Research Institute, Canada)

## Deadline:

**15 APRIL 2011**

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Background information on the IAEA Nuclear Data Section is available from: <http://www-nds.iaea.org>

Background information on the ICTP can be found at the ICTP Home Page: <http://www.ictp.it>

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**The closing date for receipt of applications for participation is 15 April 2011.**

Those wishing to participate should **fully complete and sign** the "Request for Participation" form available from <http://www-nds.iaea.org/MC2011/application.doc> and send a copy as a file attachment to Kira Nathani (e-mail: [k.nathani@iaea.org](mailto:k.nathani@iaea.org)) or by FAX (+43 1 26007, Att. Kira Natthani, NAPC-Nuclear Data Section).

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