



The Abdus Salam  
International Centre  
for Theoretical Physics



# Joint ICTP-IAEA Workshop on Monte Carlo Radiation Transport and Associated Data Needs for Medical Applications

## Description:

Monte Carlo (MC) techniques have been used very 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 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.

## MORE DETAILS:

The Workshop constitutes a unique opportunity for scientists, engineers and medical physicists to gain extensive and up-to-date training on 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. Also, participants will be introduced to the on-line data retrieval for medical applications.

## SPEAKERS:

I. Kawrakow, Bulgaria  
E. Mainegra-Hing, Canada  
P. Oliver, Canada  
D.W.O. Rogers, Canada  
F. Tessier, Canada  
R. Townson, Canada  
B. Walters, Canada

## PREREQUISITES:

The workshop is intended for young graduate students with some experience in Monte Carlo computation.



**28 October - 8 November 2024**



**Trieste, Italy**



**Deadline:  
19 May 2024**

## DIRECTORS:

L. BERTOCCHI, ICTP, Italy  
R. CAPOTE, IAEA, Austria  
D.W.O. ROGERS, Carleton University, Ottawa, Canada  
F. TESSIER, NRC, Canada

## LOCAL ORGANIZER:

M. ESPOSITO, ICTP, Italy

## FURTHER INFORMATION:



E-mail: [smr3978@ictp.it](mailto:smr3978@ictp.it)

Web: <https://indico.ictp.it/event/10516/>

Female scientists are encouraged to apply.

## GRANTS:

A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries. There is no registration fee.

