The Abdus Salam
International Centre for Theoretical Physics

UNESCO
United Nations Educational, Scientific and Cultural Organization

IAEA
International Atomic Energy Agency
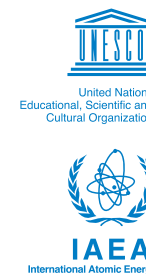
JOINT ICTP-IAEA SCHOOL ON ADVANCED RADIOTHERAPY TECHNIQUES
with Emphasis on Imaging and Treatment Planning

04 - 08 April 2011
Miramare, Trieste, Italy

The aim of this School is to spread knowledge on recent advances in imaging and treatment planning techniques used in radiotherapy, contributing to the development of qualified and competent medical physicists by:

- disseminating information about issues on the leading edge of radiotherapy physics and defining innovations that could improve the quality of radiotherapy services;
- outlining a systematic approach to the assessment of the appropriateness of advanced radiotherapy techniques; and
- facilitating the creation of a network for the exchange of information on radiotherapy physics among scientists in developing and developed Member States.

There has been a rapid expansion of imaging technology in medicine. The information currently available to diagnose and monitor diseases has resulted in a kind of revolution in the way in which patients are diagnosed and treated. Failure to disseminate this knowledge and to expand the human resource capacity of developing countries to adopt these technologies will create a gap in the quality of medical services they can provide, in addition to the gap in access to basic medical services that already exists. Traditionally, medical physicists have played a significant role in driving developments in radiation medicine. As well, medical physicists provide the infrastructure needed to assess, acquire and implement new technologies, particularly in the area of radiation imaging and radiation treatment. The effective use of radiation treatment technology demands a greater understanding of radiation imaging and its integration into treatment planning, including functional information that is available through Positron Emission Tomography (PET), or Magnetic Resonance Spectroscopy. This advanced school will take a comprehensive approach to the discussion of recent developments in imaging and treatment planning that are of importance in radiation medicine.

PARTICIPATION

The advanced school would seek to target experienced medical physicists working in radiotherapy departments and teachers involved in medical physics education programmes.
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, 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 from developing countries, to be selected by the organizers. There is no registration fee.

HOW TO APPLY FOR PARTICIPATION

The application form can be accessed at the activity website http://agenda.ictp.it/smr.php?2231

Once in the website, comprehensive instructions will guide you step-by-step, on how to fill out and submit the application form.

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ICTP Home Page: http://www.ictp.it/

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TOPICS

Review of advances in medical imaging applied to radiotherapy

Computed Tomography and Magnetic Resonance Imaging

Nuclear Medicine imaging

Image fusion and registration

Treatment planning and its practical implementation

Treatment delivery

Treatment verification

Case studies

Co-Sponsored By:

CMS GmbH
DOSIsoft
Varian Medical Systems

APPLICATION DEADLINE

09 January 2011