



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

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**EFOMP**



# SCHOOL ON MEDICAL PHYSICS FOR RADIATION THERAPY: DOSIMETRY AND TREATMENT PLANNING FOR BASIC AND ADVANCED APPLICATIONS

27 March - 7 April, 2017  
*Miramare, Trieste, Italy*

The Abdus Salam International Centre for Theoretical Physics (ICTP) will organize, with the support of the International Organization for Medical Physics (IOMP), the European Federation of Organisations for Medical Physics (EFOMP), the American Association of Physicists in Medicine (AAPM) and the Associazione Italiana di Fisica Medica (AIFM), a School on Medical Physics for Radiation Therapy to take place from 27 March to 7 April, 2017.

The topic will be: Applied Physics of Medical Radiation Therapy - Dosimetry and Treatment Planning for Basic and Advanced Applications. The School will specially address the needs of Healthcare in low and middle income countries.

#### OBJECTIVE OF THE SCHOOL

The objective of the School is to contribute to the understanding of Physics applied to Radiation Therapy and the development of competent medical physicists who can make a direct contribution to the improvement of health care in their countries through better radiation therapy.

This will be achieved by providing participants with education and practical training to enhance their effectiveness as future disseminators of this knowledge, who can provide in turn educational and training opportunities to other medical professionals and students.

#### PROGRAM

The program of the School will consist of lectures, interactive discussions and problem solving sessions and applied learning experiences in local hospitals.

The two-week School will be devoted to the Physics applied to Radiation Therapy with the aim to introduce to conventional and advanced therapy principles, methods and technology:

- disseminating information about issues on radiotherapy physics and defining innovations that could improve the quality of radiotherapy services;
- outlining a systematic approach to the assessment of the appropriateness of conventional and 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.

Traditionally, medical physicists have played a significant role in driving development in radiation medicine. This school will take a comprehensive approach for the implementation of conventional and advanced therapy methods, including the integration in treatment planning and patient setup of imaging modalities relevant in radiation therapy.

#### PARTICIPATION

Medical Physics scientists and students from all countries which are members of the United Nations, UNESCO or IAEA may attend the School. Participants should hold a university degree in medical physics or related subjects and have some professional experience in medical physics related to radiation therapy. 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 program of training activities within a framework of international cooperation, 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

<https://e-applications.ictp.it/applicant/login/3110>

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

ACTIVITY SECRETARIAT: Telephone: +39-040-2240-226

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## TOPICS

Radiobiology

Dosimetry

Dosimetry algorithms

3D conformal, advanced (IMRT, VMAT) treatment delivery and brachytherapy

Imaging and image integration

Treatment planning and its practical implementation

Treatment verification

Quality assurance

Case studies

## APPLICATION DEADLINE

**31 December 2016**