



The Abdus Salam
**International Centre
for Theoretical Physics**
50th Anniversary 1964 - 2014



COLLEGE ON MEDICAL PHYSICS

**ADVANCES IN MEDICAL IMAGING PHYSICS TO ENHANCE
HEALTHCARE IN DEVELOPING COUNTRIES**

1 - 19 September 2014

Miramare, Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP), will organize a **College on Medical Physics** to take place from 1 - 19 September 2014. The topic will be: **Advances in Medical Imaging Physics to Enhance Healthcare in Developing Countries.**

OBJECTIVE OF THE COLLEGE ON MEDICAL PHYSICS

The objective of the ICTP College on Medical Physics 2014 is to contribute to improved healthcare in the developing countries by applying physics knowledge and experience to increase the diagnostic effectiveness and safety of medical imaging procedures. This will be achieved by providing participants with education, practical training and resources to enhance their effectiveness as practicing medical physicists and disseminators of this knowledge by providing educational and training opportunities to other medical professionals and students in their countries. A special emphasis of the College will be to provide participants with the knowledge and resources to support the clinical application of the many advances in medical imaging and digital technology that is becoming available. Knowledge of physics in the clinical setting is becoming an increasingly critical need because of the complexity of the modern medical imaging procedures that require optimization to achieve appropriate image quality and manage safety factors.

PROGRAM

The program of the College will consist of lectures, tutorials, interactive discussions and problem solving sessions, focused practical exercise and applied learning experiences. The three-week College will be devoted to *The Physics of Medical Imaging* with an emphasis on developing educational activities to enhance clinical medicine and healthcare in developing countries. One of the major values of the College will be extensive attention to digital technology. The College will include specially designed practical activities at the local hospital as well as PC simulations that will apply didactic learning to a variety of medical physics clinical-support procedures. The College will include also a Workshop on Digital Medical Imaging development at participants countries, which will aim to exchange experience and form future collaborations, specifically relevant to colleagues from developing countries.

The College Program will cover the physics of all medical imaging methods and the implementation of digital medical imaging in developing countries, with emphasis on:

- Digital Image Applications in Each Imaging Modality
- Image Characteristics and Quality Factors
- Optimization of Imaging Procedures and Quality Control
- Dose Management in Medical Imaging and Radiation Protection
- Evaluation and Analysis of Images in Medical Applications
- Development and Delivery of Highly Effective Educational Activities

PARTICIPATION

Scientists and advanced students from all countries that are members of the United Nations, UNESCO or IAEA may attend the College on Medical Physics. Participants should hold a university degree in physics, engineering, medical physics, or related subjects and have several years of professional experience in medical physics and/or physics/engineering related to medical imaging and healthcare. They are expected to apply acquired knowledge through teaching and working to improve medical imaging in their home countries. The main purpose of the Centre is to help experienced scientists from developing countries, through a programme of training activities within a framework of international cooperation.

However, students and post-doctoral scientists from developed countries are also welcome to attend. As this activity will be conducted in English, participants should have an adequate working knowledge of that language.

As a rule, travel and subsistence expenses of the College 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. Such financial support is available only for those who attend all 3 weeks of the College. There is no registration fee for the College.

The **Application Form** is available on the ICTP WWW server:

<http://agenda.ictp.it/smr.php?2603>

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

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International Organization for Medical Physics



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APPLICATION DEADLINE

30 April 2014