



COLLEGE ON MEDICAL PHYSICS

APPLIED PHYSICS OF MEDICAL IMAGING

10 - 28 September 2012

Miramare, Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP), will organize a **College on Medical Physics** to take place from 10 - 28 September 2012. The topic will be: Applied Physics of Medical Imaging – From Science to Effective Clinical Medicine. The College will specially address the needs of Healthcare in Developing Countries.

OBJECTIVE OF THE COLLEGE ON MEDICAL PHYSICS

The objective of the College on Medical Physics is to contribute to the understanding of Physics applied to Medical Imaging and the development of competent medical physicists who can make direct contributions to the improvement of health care in their countries through better medical imaging diagnosis and who can lead in the proper and safe applications of radiation and diagnostic imaging purposes.

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

PROGRAM

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

The three-week College will be devoted to *The Physical Science and Technology of Medical Imaging* with an emphasis on developing educational activities to enhance clinical medicine and healthcare throughout the world. One of the major values of the College will be extensive attention to digital technology. Throughout the world digital technology is becoming the evolving foundation of all medical imaging methods and procedures. Maximum value of this technology requires physicists and engineers with the knowledge of digital image characteristics and how they can be used to enhance all imaging procedures and provide education and training for other healthcare professionals.

The College Program will cover all medical imaging methods with emphasis on:

- Scientific Principles that are the Foundation of Modern Medical Imaging
- Digital Image Characteristics and Quality Factors
- Digital Image Applications in each Imaging Modality
- Digital Image Processing, Management, and Networking
- Evaluation and Analysis of Digital Images in Medical Applications
- Optimization of Imaging Procedures and Quality Control
- Dose Management in Medical Imaging and Radiation Protection
- 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?2365>

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

Telephone: +39-040-2240226 Telefax: +39-040-22407226

E-mail: smr2365@ictp.it

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

DIRECTORS

Anna BENINI (Denmark)

Luciano BERTOCCHI
(Local Organizer, ICTP, Italy)

George Donald FREY (USA)

Franco MILANO (Italy)

Perry SPRAWLS (USA)

Slavik TABAKOV (UK)

TAQI BINESH PRIZE

To honour the memory of the late Prof. Taqi Binesh, his family has offered a prize, to be awarded to a young scientist from a developing country, working in the field of Medical Physics. This prize will be awarded to the best poster submitted by the participants of the College on Medical Physics (September 2012). For this first prize the Selection Committee will consist of the Directors of the College.

A second prize has been offered by TRIL for the best fellow of the TRIL programme, selected among the fellows of TRIL in the past 5 years in the field of Medical Physics. For this second prize the Selection Committee will consist of the ICTP scientists in charge of TRIL (Professors G. Furlan and D. Treleani) and the ICTP scientist in charge of Medical Physics (Professor Luciano Bertocchi). Each prize will consist of the amount of 500 EURO plus a certificate. Both prizes will be awarded in a ceremony during the 2012 College on Medical Physics.

APPLICATION DEADLINE

30 April 2012