



COLLEGE ON MEDICAL PHYSICS

13 September - 1 October 2010

Miramare, Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP), will organize a **College on Medical Physics** to take place from 13 September to 1 October 2010. The topic will be: Digital Imaging Science and Technology to Enhance Healthcare in the Developing Countries.

OBJECTIVE OF THE COLLEGE ON MEDICAL PHYSICS

The objective of the College on Medical Physics is to contribute to 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, training, and resources to enhance their effectiveness as Program Directors and educators who can then provide educational and training opportunities to medical professionals and students in all nations.

PROGRAM

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

The three-week College will be devoted to *Digital Imaging Science and Technology of Medical Imaging*. 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.

Imaging modalities that utilize digital technology include Radiography, Mammography, Fluoroscopy, Magnetic Resonance Imaging, Radionuclide Imaging and Ultrasound Imaging.

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

- Digital Image Characteristics and Quality Factors
- Digital Image Applications in each Imaging Modality
- Image Processing and the Optimization of Imaging Procedures
- Evaluation and Analysis of Digital Images in Medical Applications
- Radiation Risk and Dose Management in Medical Imaging
- 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?2166>

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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DIRECTORS

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APPLICATION DEADLINE

30 April 2010

TAQI BINESH PRIZE

To honour the memory of the late Prof. Taqi Binesh, his family has offered a prize of 1000 EURO, to be awarded to young scientists from developing countries, working in the field of Medical Physics.

In the year 2010 the prize will be divided equally in two prizes of 500 EURO each:

- 1 prize for the best poster submitted by the participants of the College on Medical Physics (September 2010). For this first prize the Selection Committee will consist of the Directors of that College.

- 1 prize 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 2010 College on Medical Physics