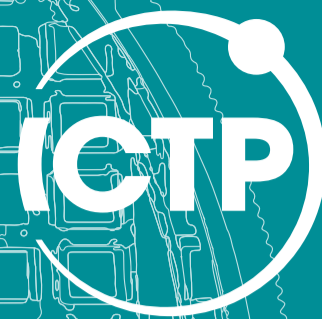


# COLLEGE ON MEDICAL PHYSICS

## Applied Physics of Contemporary Medical Imaging – Expanding Utilization in Developing Countries



**27 August - 14 September 2018**  
**Trieste, Italy**

Further information:  
<http://indico.ictp.it/event/8296/>  
[smr3185@ictp.it](mailto:smr3185@ictp.it)

The College aims to expand the utilization of applied physics of contemporary medical imaging in developing countries by providing students with high-level education and practical training on the clinical use of this equipment, description of relevant physics, and reference materials use.

### Directors:

Prof. Slavik Tabakov, King's College London and IOMP  
Dr Anna Benini, Copenhagen University Hospital  
Prof. Franco Milano, University of Florence  
Dr Mario DeDenaro, Azienda Sanitaria Universitaria Integrata di Trieste  
Prof. Perry Sprawls, Sprawls Educational Foundation

### Description:

Knowledge of the applied physics in contemporary medical imaging equipment is becoming an increasingly critical need because of the complexity of the modern medical imaging procedures that require specific optimization to produce the optimal image quality with minimal patient dose. The materials from the lectures will be given to all participants as valuable resources.

The College faculty include highly experienced specialists with international reputations in the field of education and training in medical physics. The 3-week intense program will include classroom presentations, supported with clinical practicums and computer simulations. The College will include specific professional activities to support the infrastructure for expanding the utilization of this imaging equipment in developing countries. The students will receive advice on setting up professional programs in their departments and hospitals.

### Topics:

- X-ray imaging – sources of radiation and high frequency X-ray generators;
- Computed radiography and flat panel detectors;
- Specific imaging equipment for fluoroscopic, mammographic and dental applications;
- Computed Tomography – foundations, MDCT and CBCT;
- Single Photon Emission Computed Tomography – SPECT/CT foundations and current trends;
- Positron Emission Tomography – PET/CT foundations and current trends;
- Magnetic Resonance Imaging – foundations, applications, safety, QC, and current trends;
- Networks in medical imaging departments;
- Optimization of imaging procedures and quality control;
- Dose management and radiation protection in medical imaging;
- Practical application of optimization, control and dosimetry in digital imaging modalities;
- Selection, installation and management of contemporary medical imaging equipment in developing countries.

### Local Organizer:

Prof. Luciano Bertocchi, ICTP

### Lecturers:

Dr Paola Bregant, Italy  
Dr Cornelius Lewis, UK  
Dr John Oshinski, USA  
Prof. Renato Padovani, Italy  
Prof. Anthony Seibert, USA  
Prof. Magdalena Stoeva, Bulgaria  
Prof. Sameer Tipnis, USA

### How to apply:

Online application:  
<http://indico.ictp.it/event/8296/>

Female scientists are encouraged to apply.

### Grants:

A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries. There is no registration fee.

### Deadline:

**30 April 2018**



The Abdus Salam  
International Centre  
for Theoretical Physics  
[www.ictp.it](http://www.ictp.it)  
Trieste, Italy

