Theme 3

Radiation Protection and Dosimetry, Biological Effects of Ionizing and Non-Ionizing Radiation

Theme Chairs:

Paul Shrimpton,
Health Protection Agency, UK

Gunnar Brix,
Federal Office for Radiation Protection, Germany

ABSTRACT:

Remarkable progress has been made over the past decades in the development and application of medical technologies utilizing ionizing and non-ionizing radiation for diagnosis and treatment of disease. The clinical use of these technologies, however, is accompanied by many questions about how to maximize the benefits for patients while controlling and reducing possible health risks to patients and personnel. These issues will be a central theme of the World Congress 2009. Six program tracks will focus on particular aspects of the theme, ranging from radiation dosimetry and new dosimetric models, through practical aspects of radiation protection, to biological effects of ionizing and non-ionizing radiation. Special topics will cover the expanding use of medical imaging techniques utilizing ionizing radiation for both patients and asymptomatic persons for the early detection of disease, the assessment of radiation risks at low dose-levels relevant to diagnostic imaging, the characterization and optimization of biological radiation effects for cancer treatment, as well as the investigation and assessment of health risks related to non-ionizing radiation. We are eager to receive contributions from a wide range of disciplines and approaches that are related to any of the featured tracks. The program will be supplemented by several keynotes and invited speakers from well-known scientists focusing on issues of particular relevance and importance in dosimetry, optimization and protection.

TRACKS:

Dosimetric Techniques and Phantoms for Radiation Protection

Track Chairs:
Georg Stücklschweiger,
University Hospital Graz, Austria

Maria Zankl,
German Research Center for Environmental Health, Munich, Germany

Radiation Protection of Patients and Personnel

Track Chairs:
Soren Mattsson,
Lund University, Malmö, Sweden

Werner Rühm,
German Research Center for Environmental Health, Munich, Germany

Patient Exposures and Reference Levels in Diagnostic Imaging

Track Chairs:
Jacob Geleijns,
Leiden University, Netherlands

Jürgen Griebel,
Federal Office for Radiation Protection, Germany

Biological Effects of Ionizing Radiation – Low Level and Imaging

Track Chairs:
David J. Brenner,
Columbia University, New York, USA

Christian Streffer,
University of Duisburg-Essen, Germany

Biological Effects of Ionizing Radiation – Therapy

Track Chairs:
Carsten Herskind,
University Medical Center Mannheim, University of Heidelberg, Mannheim, Germany

Michael Baumann,
OncoRay, Carl Gustav Carus University, Dresden, Germany

Biological Effects of Non-Ionizing Radiation

Track Chairs:
Rüdiger Matthes,
Federal Office for Radiation Protection, Germany