Keynote Speakers

Theme 1. Radiation Oncology

Steve Webb

The 21st Birthday Party for intensity-modulated radiation therapy (IMRT); 21 years from 1988-2009; From concept to practical reality

The Insititute of Cancer Research, London, United Kingdom
www.icr.ac.uk

David Jaffray

Image-guided Radiation Therapy: Beyond the Obvious

Ontario Cancer Institute, Toronto, Canada
www.uhnres.utoronto.ca/researchers/profile.php?lookup=2716

Theme 2. Diagnostic Imaging

John Boone

Research in Medical Physics: "What, Why and How"

University of California Davis Medical Center Sacramento, USA

Jürgen Hennig

Nearly 40 but still going strong: Hot Topics in MR today

University Hospital Freiburg, Germany

Vasilis Ntziachristos

Optical and multi-spectral opto-acoustic tomography for post-genome biology and medicine

Helmholtz Zentrum München, Germany
www.cbi.ei.tum.de

Georg Schmitz

Innovation in Therapy and Diagnosis by Ultrasound Technology

Ruhr University Bochum, Germany
www.mt.rub.de

Keynote Speakers

3. Radiation Protection and Dosimetry, Biological Effects of Radiation

Christian Streffer

Biological Effects of Ionising Radiation–with Special Emphasis on Low Level Doses

University of Duisburg-Essen, Germany

Barry Wall

Population exposures from medical x-rays in Europe – too high or too low?

Health Protection Agency, Oxon, United Kingdom
www.hpa.org.uk/radiation

Maria Zankl

The Reference computational phantoms adopted by ICRP and ICRU

Helmholtz Zentrum Munich, Germany
www.helmholtz-muenchen.de

Rüdiger Matthes

Biological Effects of magnetic fields

Federal Office for Radiation Protection, Germany

David J. Brenner

Cancer Risks at Very Low Radiation Doses: Why did the US and French National Academies Come to Directly Opposite Conclusions?

Center for Radiological Research, Columbia University, USA

Theme 4. Image Processing, Biosignal Processing, Modelling and Simulation, Biomechanics

Sergio Cerutti

Information processing in biomedical signals: a probe to assess health and wellness conditions

Polytechnic University, Milan, Italy
www.biomed.polimi.it/BioIntro/personale/docente/cerutti.htm

Thorsten M. Buzug

Magnetic Particle Imaging – Challenges and Promises of a new Modality

University of Lübeck, Germany
www.imt.uni-luebeck.de

Theme 5. Information and Communication in Medicine, Telemedicine and e-Health

Kunio Doi

Computer-Aided Diagnosis in Medical Imaging: Achievements and Challenges

Chicago Medical Center, USA

Olga Golubnitschaja

Novel strategic trends in the European Predictive, Preventive & Personalised Medicine

Friedrich-Wilhelms-Universität Bonn, Germany

Keynote Speakers

Theme 6. Surgery, Minimal Invasive Interventions, Endoscopy and Image Guided Therapy

Heinz-Otto Peitgen

The Liver as Role Model for Safer Surgery and Interventions

Fraunhofer MEVIS, Bremen, Germany
www.mevis.fraunhofer.de

Brian Davies

Robotic surgery; achieving cost-effectiveness

Imperial College of Science, Technology and Medicine, London, United Kingdom, www3.imperial.ac.uk/mechatronicsinmedicine
www.Acrobot.co.uk

Richard E. Latchaw

Accurate, quantifiable deposition of fluids and cells for human endovascular and intraparenchymal therapies--the development of catheters and other access devices

University of California-Davis Medical Center, USA
www.ucdmc.ucdavis.edu

Theme 7. Diagnostic and Therapeutic Instrumentation, Clinical Engineering

Steffen Leonhardt

New Trends in Respiratory Instrumentation

RWTH Aachen University, Germany
www.medit.rwth-aachen.de

Per Ask

Recent developments in cardiovascular instrumentation

Linköping University, Sweden
www.imt.liu.se

Keynote Speakers

Theme 8. Micro- and Nanosystems in Medicine, Active Implants, Biosensors

Gerald Urban

Micro- and Nanosensors for medical applications

Albert-Ludwigs-University of Freiburg, Germany
www.frias.uni-freiburg.de/matter_research/fellows/gerald-urban

Hans-Jürgen Wildau

Active Implants: Remote Management of Local Therapy Delivery

Biotronik GmbH & Co KG Berlin, Germany
www.biotronik.com

Andreas Jordan

Thermotherapy with magnetic nanoparticles: technology and clinical application

Magforce Nanotechnologies AG
www.magforce.com

Andreas Manz

20 years of Lab on a Chip technology- why bother?

University of Twente, Netherlands

Peter Fromherz

Semiconductor Chips with Nerve Cells and Brain Tissue

Max Planck Institute for Biochemistry, Munich, Germany

Günter W. Gross

High throughput microelectrode array platforms for quantitative pharmacology, toxicology and drug development

University of North Texas, Denton, USA
www.cnns.org

Theme 9. Neuroengineering, Neural Systems, Rehabilitation and Prosthetics

Todd Kuiken

Development of a neural machine interface for artificial limbs

Rehabilitation Institute of Chicago and Northwestern University, Chicago, USA, www.ric.org/research/centers/necal/index.aspx

Theodore W. Berger

Toward Replacements Parts for the Brain: Biomimetic Microelectronics to Replace Cognition Lost to Damage or Disease

USC Viterbi School of Engineering University of Southern California, USA
http://neural-prosthesis.com

Phil Troyk

Designing Neural Prostheses: Contrasting Emerging Needs with Established Methodologies

Illinois Institute of Technololgy

Keynote Speakers

Theme 10. Biomaterials, Cellular and Tissue Engineering, Artificial Organs

Dietmar Hutmacher

A road map from bench to bedside for scaffold-based bone engineering

Queensland University of Technology, Kelvin Grove, Australia
www.ihbi.qut.com

Jochen Guck

Feeling for cells with light

University of Cambridge, United Kingdom
www.bss.phy.cam.ac.uk/~jg473/

Daniel Müller

Quantitative analysis and manipulation of cell adhesion to molecular resolution

TU Dresden, Germany
www.biotec.tu-dresden.de

Theme 11. Biomedical Engineering for Audiology, Ophthalmology, Emergency & Dental Medicine

Claus-Peter Richter

Optical stimulation of neural tissue: is this the future for neural interfaces

Nortwestern University, www.oto-hns.northwestern.edu/research/Auditory%20Research/the-laboratory.html

Wolfgang Drexler

Where is retinal optical coherence tomography heading for?

Cardiff University, United Kingdom
www.cf.ac.uk/optom/contactsandpeople/academicstaff/drexler-wolfgang-prof-overview.html

Chung How Kau

The future of imaging in dentistry

Houston University, Texas
www.db.uth.tmc.edu/bios/C_H_Kau.htm

Theme 12. General Subjects

Lodeweijk Bos

Compunetics in Medicine and Care

ICMCC, Utrecht, Netherlands
http://www.icmcc.org

Theme 13. Special Topics and Workshops

Rolf D. Issels

The HEAT is on in Cancer Therapy

Klinikum der Universität München-Großhadern, Germany
http://med3.klinikum.uni-muenchen.de

John W. Wong

The New Frontier in Small Animal Radiation Research

Department of Radiation Oncology and Molecular Radiation Sciences, Baltimore, USA

Dietrich Habs

Ultra-thin diamond foils and ultra-short pulse lasers for particle acceleration

LMU München, Germany