

ROADMAP



ORGANISATION DETAILS

Contact:

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Certification:

Accredited at the state medical association
Baden-Württemberg with five continuous
medical education training credits.

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ELEKTA GmbH, Hamburg



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Admission is free:

We ask for a brief informal registration via
Email.

INVITATION

DEPARTMENT OF RADIATION ONCOLOGY

Universitätsmedizin Mannheim
Medical Faculty Mannheim
Heidelberg University

10th Summer Workshop

**Image Guided and
Robotic Radiotherapy**
Saturday, 31. August 2013
9:00 – 14:00

Alte Brauerei, Röntgenstrasse 7
Lecture Room H02, EG
68167 Mannheim

opposite to
University Medical Centre Mannheim,



Medizinische Fakultät Mannheim
der Universität Heidelberg
Universitätsklinikum Mannheim



PREAMBLE

Dear Colleagues,

We would like to invite you to our 10th Summer Workshop on **Image Guided and Robotic Radiotherapy**.

Ultimate goal of medical physics, biomedical engineering and medical science is to cure patients. This can be achieved by either the development of new (large) medical devices and/or tailoring existing methods better to the treated patient.

This individualized/personalized medicine is increasingly emphasized in radiotherapy. To optimize and monitor the patient's treatment, individual imaging is essential, be it anatomical or functional. When appropriately used, these data enable patient and tumour specific therapies in such different approaches as other beam qualities, molecular therapy, and brachytherapy. All these new developments inherently need modelling: This could be modelling of the function of the used devices, the patient biokinetics for individualized treatment or – most relevant – the expected outcome.

The symposium addresses physicians, physicists in radiation oncology and neighbouring disciplines as well as students in medical physics. The symposium is certified by the Landesärztekammer with 5 credits points.

It is a pleasure for us to welcome you in Mannheim.

Prof. Dr. F. Wenz **Prof. Dr. G. Glatting**

Prof. Dr. J. Hesser

A G E N D A

Lecture times include 5 min discussion!

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|---|--|----------------------|
| 9:00 | Welcome
Moderation | F. Wenz
J. Hesser |
| 9:10 | Unconventional imaging in ion beam therapy – status and perspectives | K. Parodi |
| 9:35 | In-room PET/CT Verification of Proton Therapy | G. El Fakhri |
| 10:00 | Quantitative and visual assessment of PET/CT image reconstruction | F. Molina Duran |
| 10:25 | Molecular imaging and cancer theranostics | Q. Ren |
| 10:50 | The Role of Dosimetry in Therapeutic Nuclear Medicine | M. Lassmann |
| 11:15 – 12:15 Break and Poster Session | | |
| | Moderation | G. Glatting |
| 12:15 | Nanoparticle Transport and Interactions in the Airways and Bloodstream | E. Sajo |
| 12:40 | Robotic Assisted Minimally Invasive Radiotherapy | D. Bürgy |
| 13:05 | Optimal linac target design for contrast enhanced radiotherapy | P. Zygmanski |
| 13:30 | Traditional and alternative methods for modeling outcome predictions after stereotactic body radiotherapy for non-small cell lung cancer | R. Klement |
| 13:55 | Conclusions | F. Wenz |

Ceremony : Award of master certification “Medical Physics” and “Biomedical Engineering”

MODERATORS & SPEAKERS

Prof. Dr. Frederik Wenz
Dept. of Radiation Oncology
University Medical Centre Mannheim

Prof. Dr. Jürgen Hesser
Experimental Radiation Oncology
University Medical Centre Mannheim

Prof. Dr. Gerhard Glatting
Medical Radiation Physics/Radiation Protection
University Medical Centre Mannheim

Prof. Dr. Katia Parodi
Ludwig Maximilians University (LMU) München
Experimental Physics – Medical Physics

Prof. Dr. Georges El Fakhri
Harvard Medical School
Boston, USA

M. Sc Flavia Molina Duran
Dept. of Radiation Oncology
University Medical Centre Mannheim

Prof. Dr. Qiushi Ren
Dept. Biomedical Engineering
Peking University Hospital, China

Prof. Dr. Michael Lassmann
Dept. of Nuclear Medicine
University Hospital Würzburg

Prof. Dr. Erno Sajo
Dept. of Physics and Applied Physics
University of Massachusetts Lowell, USA

Dr. Daniel Bürgy
Dept. of Radiation Oncology
University Medical Centre Mannheim

Prof. P. Zygmanski
Brigham & Women's Hospital
Harvard Medical School
Boston, USA

Dr. Rainer Klement
Dept. of Radiation Oncology
University of Würzburg