

**Second Heidelberg Symposium on Novel Techniques in Ion Beam Radiotherapy
March 2016**

Wednesday 09.03.16	Topic	Speaker
08:30-9:00	Registration on desk	
09:00 - 09:15	Welcome	J. Debus
09:15-11:00	Session 1: Status and challenges <i>Chairs: M. Ciocca, H. Paganetti</i>	
09:15	Status of ion beam radiotherapy : evidence from clinical trials	T. Kamada
10:00	Clinical medical physics: current status and future challenges	M. Ellerbrock
10:30	Overview and uncertainties in planning and delivery	A. Lomax
<i>11:00- 11:30</i>	Coffee	
11:30-15:30	Session 2: Image Guidance <i>Chairs: K. Brock, K. Giske</i>	
11:30	IGRT challenges in photon- and ion- RT & introduction of MR guidance (technical point of view)	B. Raaymakers
12:00	Adaptive RT: The role of image processing – uncertainties and requirements to face in ion-RT	K. Giske
<i>12:30-14:00</i>	Lunch	
14:00	Beyond image processing: Potential & current limitations of biomechanical patient modeling for RT	K. Brock
14:30	Real-time tracking options: state of the art in clinical applications and future developments	G. Baroni
15:00	Discussion	
<i>15:30-16:00</i>	Coffee	
16:00-18:00	Session 3: Poster Session	

Local Organizers:

Prof. Dr. Oliver Jäkel
 Dr. Mark Bangert
 Dr. Kristina Giske
 Prof. Dr. Christian Karger
 Dr. Maria Martisikova
 Dr. Simone Barthold-Beß

Thursday 10.03.16	Topic	Speaker
09:00-12:30	Session 4: Biological effects <i>Chairs: P. Fossati, M. Scholz</i>	
09:00	RBE of protons – do we need a Model?	H. Paganetti
09:30	RBE of carbon ions in tumors and normal tissues – lessons from preclinical data	C. Karger
10:00	RBE-Models in ion beam radiotherapy – how to consider the uncertainty	P. Fossati
<i>10:30 – 11:00</i>	<i>Coffee</i>	
11:00	Response of hypoxic tumors – do we take advantage from high-LET?	Y. Furusawa
11:30	Clinical normal tissue effects in proton and carbon ion RT – what have we learned?	K. Herfarth
12:00	Discussion	
<i>12:30 – 13:30</i>	<i>Lunch</i>	

Thursday 10.03.16	Topic	Speaker
13:30-17:00	Session 5: Treatment planning and optimization <i>Chairs: M. Alber, O. Jäkel</i>	
13:30	State of the art	F. Albertini
14:00	Acceleration and automation	M. Hoogeman
14:30	How to master moving targets in scanned proton radiotherapy	A. Knopf
<i>15:00 – 15:30</i>	<i>Coffee</i>	
15:30	Robust optimization	M. Bangert
16:00	Biological models for inverse planning	J. Wilkens
16:30	Discussion	
<i>17:00-17:15</i>	<i>Short Break</i>	
17:15-17:45	Keynote talk: Functional imaging techniques supporting target volume definition in radiotherapy	S. Delorme
19:00	Symposium Dinner at the restaurant "Vinothek Oskar", Haspelgasse 5	

Friday 10.03.2016.	Topic	Speaker
09:00 - 12:30	Session 6: In-vivo imaging for monitoring of dose delivery and treatment assessment <i>Chairs: K. Parodi, t.b.a.</i>	
09:00	PET imaging: Clinical status	J. Bauer
09:30	Novel developments in PET imaging	M. G. Bisogni
10:00	Prompt gamma imaging and spectroscopy	J. Seco
<i>10:30 - 11:00</i>	<i>Coffee</i>	
11:00	Prompt gamma imaging techniques: status of development	G. Pausch
11:30	Ions instead of photons? – Imaging based on light ion fragments	M. Martisikova
12:00	Discussion	
12:30 – 12:45	Closing & Poster Award	
<i>12:45 – 14:00</i>	<i>Lunch</i>	