

BIOQIC Days and Retreat 2018: Advancements in Quantitative Medical Imaging - The Present & Future

Schedule BIOQIC Day Wednesday 26/09/2018 – Auditorium CharitéCrossOver, Charité Campus Mitte

9:00-9:15	Welcome and introduction – Dr. Judith Bergs / Prof. Dr. Ingolf Sack		
9:15-10:00	Prof. Dr. Markus Haltmeier - Compressed Sensing in Photoacoustic Tomography <i>Universität Innsbruck, Austria</i>		
10:00-10:15	Coffee break		
PhD student talks - Deep learning and mathematical approaches – Chair: S. Dietrich, Co-chair: S. Wäldchen			
Time	Name	PI's	Project title
10:15-10:30	Andreas Kofler	Dewey Haltmeier Kachelrieß	Deep Learning-based Methods for Image Reconstruction in CT and MRI
10:30-10:45	Nader Aldoj	Dewey Stober Schäffter	Deep learning for automatic prostate segmentation and cancer classification
10:45-11:00	Jan Macdonald	Kutyniok Schäffter Schulz-Menger	A Hierarchical Data Model for Classification Problems
11:00-11:15	Coffee break		
PhD student talks - Simulation and reconstruction – Chair: N. Aldoj, Co-chair: A. Grunwald			
Time	Name	PI's	Project title
11:15-11:30	Sebastian Dietrich	Schäffter Schulz-Menger Niendorf	3D Radial Phase Encoded Flip Angle Imaging at Ultra-High Field Strength
11:30-11:45	Stephan Wäldchen	Kutyniok Sack Hege	Stable Inversion of the Navier-Equation
11:45-12:00	Johannes Mayer	Schäffter/Kolbitsch Makowski Brenner	Quantitative assessment of coronary plaques by motion-compensated PET-MRI - A Flexible Simulation Framework for Dynamic Motion-Resolved PET-MR data
12:00-13:00	Lunch break		
13:00-14:00	Prof. Dr. Marc Kachelrieß - Motion Compensation in CT and in other Modalities <i>Deutsches Krebsforschungszentrum Heidelberg, Germany</i>		
14:00-15:00	Prof. Dr. Julia Schnabel - Automated image quality assessment using deep learning - application to cardiac MRI <i>St. Thomas' Hospital, King's College London, UK</i>		

15:00-15:15	Coffee break		
15:15-16:15	Prof. Dr. Med. Titus Kühne - Cardiovascular imaging: evolution from a diagnostic tool to a proactive decision support system <i>Deutsches Herzzentrum Berlin, Charité – Universitätsmedizin Berlin, Germany</i>		
16:15-16:30	Coffee break		
PhD student talks - Radiodiagnostics, reporters, and elastography – Chair: A. Kofler, Co-chair: J. Macdonald			
Time	Name	PI's	Project title
16:30-16:45	Anna Grunwald	Abram Brenner Buchert	Radioactive Metal Complexes for Nuclear Imaging
16:45-17:00	Patrick Werner	Schröder Rademann Taupitz	Development of Hyper-CEST-MRI reporters for diagnostic imaging in Osteoarthritis
17:00-17:15	Ledia Lilaj	Fischer Sack Hirsch	Towards inversion-recovery based MR poro-elastography: biphasic analysis in phantoms and in vivo brain
17:15-17:30	Felix Schrank	Sack Schulz-Menger Ittermann	Cardiac-gated steady-state MRE of the brain: the influence of cerebral arterial pulsation on brain viscoelasticity
From 18:00	Dinner in restaurant Porta Nova		

Schedule BIOQIC Day/ Retreat Thursday 27/09/2018 - Auditorium CharitéCrossOver, Charité Campus Mitte & Panorama Hotel am Oberuckersee

8:00-9:00	BIOQIC Advisory board meeting (executive committee + advisory board)
9:00-9:30	Coffee break
9:30-10:00	Prof. Dr. Axel Radlach Pries, MD, dean of the Charité - The power of images, visualization of the microcirculation <i>Charité – Universitätsmedizin Berlin, Germany</i>
10:00-11:00	Prof. Dr. Med. Clemens Schmitt - Dissecting lymphoma biology and therapy in mice for cross-species analyses in patients <i>Charité – Universitätsmedizin Berlin, Max-Delbrück-Center for Molecular Medicine, Berlin Institute of Health, Germany</i>
11:00-12:00	PD Dr. Carmen Infante Duarte - Novel MR-tools to monitor, quantify and investigate neuroinflammatory disorders <i>Experimental and Clinical Research Center (ECRC), Charité – Universitätsmedizin Berlin, Germany</i>
12:00-13:00	Lunch break
PhD student talks - MRI, flow and elastography – Chair: Y. Uca, Co-chair: A. Mohtashamdolatshahi	

Time	Name	PI's	Project title
13:00-13:15	Jean Pierre Bassenge	Schmitter Schulz-Menger Kolbitsch	Towards 3D Velocity Encoded MRI in a Breathhold
13:15-13:30	Matteo Ippoliti	Makowski Kolbitsch Brenner	3D non-rigid motion-corrected dynamic contrast enhanced MRI of the liver with 1.5mm isotropic resolution
13:30-13:45	Gergely Bertalan	Sack Fischer Braun	Mechanical signature of the dying brain
13:45-14:15	Coffee break		
PhD student talks - Biology and magnetic particles – Chair: J.P. Bassenge, Co-chair: G. Bertalan			
Time	Name	PI's	Project title
14:15-14:30	Yavuz Uca	Taupitz Schröder Ludwig	Multi-scale elemental mapping of atherosclerotic plaques with synchrotron X-ray fluorescence spectroscopy (SXRF) and laser ablation induced coupled plasma mass spectrometry (LA-ICP-MS)
14:30-14:45	Azadeh Mohtashamdolatsahi	Taupitz/Schnorr Schäffter Käs	Evaluation of MPI: Potential of MCP3 for Angiography
15:00	Depart to Uckermark		
17:00	Arrival at hotel		
19:00	Dinner		
20:00-21:00	Prof. Dr. Richard Ehman, MD - Advanced Multiparametric MRE Technology for Assessing Liver Disease <i>Mayo Clinic Rochester, USA</i>		
From 21.00	BIOQIC Days 2018 Panorama Award for best PhD presentation		

Schedule BIOQIC Retreat Friday 28/09/2018 - Panorama Hotel am Oberuckersee

9:00-10:00	Prof. Dr. Marc Kachelrieß - Neural Networks in CT Image Formation <i>Deutsches Krebsforschungszentrum Heidelberg, Germany</i>
10:00-11:00	Prof. Dr. Paul Janmey - New viscoelastic materials for more realistic cell biology <i>Institute for Medicine and Engineering University of Pennsylvania, USA</i>
11:00-12:30	Discussion forum – The need of quantitative imaging for medical research and the role of BIOQIC: present & future

12:30-13:30	Lunch buffet
13:30-14:30	Social program – Boat trip on the Oberuckersee
15:00	Leave to Berlin