

Dear Colleagues,

The BIOQIC research training group (Graduiertenkolleg GRK 2260), together with SFB 1340 (Matrix in Vision) and the Department of Radiology of Charité – Universitätsmedizin Berlin, cordially invite you to attend the 9th DFG Workshop for Early Career Investigators in Medical Technology and Medical Physics – NAMT-2019. The topic of the workshop is Quantitative MRI as Key Technology in Life Sciences.

The scientific program gathers outstanding international experts from the field of quantitative and clinical medical imaging to teach young scientists about the current state of the art and the latest developments in MRI.

The central goal of our workshop is to raise awareness for the need of reproducible and biophysics-based MRI markers.

Twenty talented young scientists from all over Germany have been invited to discuss and advance their own projects and to apply for research funding in the aftermath of the workshop.

We look forward to seeing you in Berlin!

The organizers:

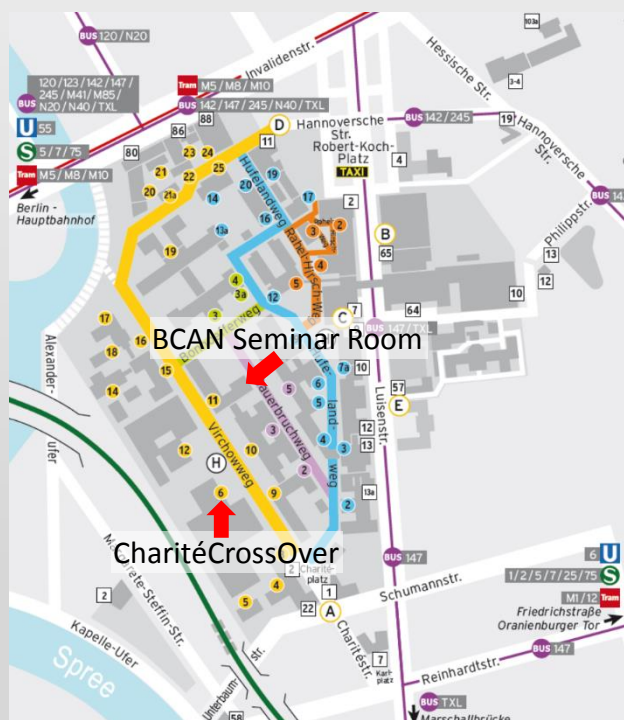
- Dr. Judith Bergs (PhD)
- PD Dr. rer. nat. Jürgen Braun
- Dr. rer. nat. Jing Guo
- Dr. Christoph Kolbitsch (PhD)
- Prof. Dr. med. Marcus R. Makowski
- Prof. Dr. rer. nat. med. habil. Jürgen R. Reichenbach
- Prof. Dr. rer. nat. Ingolf Sack
- Prof. Dr. rer. nat. Tobias Schäffter
- Dr. rer. nat. Leif Schröder
- Prof. Dr. med. Dipl. Phys. Matthias Taupitz

Venue

CharitéCrossOver, Virchowweg 6, Auditorium,
ground floor

BCAN Seminar Room, Sauerbruchweg 4, 1st floor,
Room nr. 2523-02-060

Charité Campus Mitte, Berlin



9th NAMT

(Nachwuchsakademie Medizintechnik)

DFG-Workshop for Early Career Investigators
in Medical Technology and Medical Physics



Interconnecting, Ine Bergs-Geerlings, Swalmen, The Netherlands

Quantitative MRI as Key Technology in Life Sciences

9-11 Sept. 2019 CharitéCrossOver

12-13 Sept. 2019 BCAN Seminar Room
Charité Campus Mitte, Berlin



PROGRAM

9th NAMT

Charité Berlin

Time	Monday 09/09/2019 - CCO Auditorium
9:00-10:00	Welcome and 'speed dating'
	Session I - New Horizons
10:00-11:00	Paul Janmey - Squeezing cells and their nuclei through narrow spaces: the importance of intermediate filaments
11:00-12:00	Peter Kellman - Inline Quantitative Myocardial Perfusion Flow Mapping
12:00-13:00	Andreas Maier - A Gentle Introduction to Deep Learning in Medical Image Processing
13:00-14:00	Lunch
	Session II - Soft tissue pathology
14:00-15:00	Eike Nagel - Soft-tissue pathology
15:00-16:00	Marcus Makowski - Quantitative MR based mapping for the characterisation of abdominal pathologies
16:00-17:00	Jaco Zwanenburg - How the heart beats the brain: Quantitative MRI of blood, brain and fluid mechanics
17:00-18:00	Workshop: Team building
From 18:00	Dinner at restaurant Porta Nova

Time	Tuesday 10/09/2019 - CCO Auditorium
	Session III - NMR / MRI basic approaches
9:00-10:00	Moritz Zaiss - How to find an exoplanet
10:00-11:00	Amnon Bar-Shir - Novel biosensors for molecular and cellular MR imaging
11:00-12:00	Sune Nørhøj Jespersen - Principles of quantitative brain microstructure with diffusion MRI
12:00-13:00	Lunch
13:00-14:00	Workshop: Teamwork at Scanners
	Session IV - qMRI and beyond
14:00-15:00	Sebastian Kozerke - Imaging across spatiotemporal scales - probing flow, diffusion and metabolism in the heart
15:00-16:00	Michael Bock - Quantitative magnetic resonance imaging: more than beautiful images
16:00-17:00	Christiane Kuhl - Breast MRI
17:00-18:00	Workshop: Teamwork at Scanners
18:00-22:00	Social event: guided tour at the museum of medical history and dinner buffet

Time	Wednesday 11/09/2019 - CCO Auditorium
	Session V - Biophysical contrast parameters
9:00-10:00	Mariya Doneva - Reconstruction approaches for efficient quantitative parameter mapping
10:00-11:00	Nikolaus Weiskopf - Characterizing brain microstructure using magnetic resonance imaging (MRI) - towards in-vivo histology
11:00-12:00	Laura Schreiber - Quantitative MRI and Beyond: Understanding Quantitative Perfusion MRI
12:00-13:00	Lunch
13:00-14:00	Workshop: Data processing
	Session VI - Image processing / deep learning
14:00-15:00	Wojciech Samek - Explainability of deep learning
15:00-16:00	Kerstin Hammernik - Image processing / deep learning
16:00-17:00	Nico van den Berg - Synthetic-CT generation for MR-radiotherapy using deep learning
17:00-18:00	Workshop: Writing a proposal
18:00-21:00	Social event: dinner boat trip

Thursday 12/09/2019 and Friday 13/09/2019: Workshop grant writing, for invitees only