Registration
Until 04.05.2021 via the following link:
https://bit.ly/3qFvXoW
Participation is free of charge but limited to 500 persons

Organization
Franz Schilling is professor for Biomedical Magnetic Resonance at the Klinikum rechts der Isar of the Technical University of Munich and since 2018 a member of the Young Academy of the Bavarian Academy of Sciences and Humanities.

jungskolleg.badw.de

Acknowledgements
We gratefully acknowledge financial support from the DFG through the Collaborative Research Centre 824 - Imaging for Selection, Monitoring and Individualization of Cancer Therapies (SFB 824)
In Vivo Magnetic Resonance –
Recent Methods and Advances

Fifty years ago in 1971, Dr. Paul Lauterbur pioneered the idea of spatial encoding of magnetic resonance signals. Since its foundations, the field of in vivo magnetic resonance has progressed from anatomical to physiological, functional and molecular imaging thereby yielding unprecedented non-destructive insights into the human body. Still, innovative novel technologies that enhance sensitivity, exploit fast acquisition schemes or benefit from artificial intelligence approaches continue to arise leading to novel applications such as assessment of perfusion, microstructure, metabolism and connectivity. In this workshop, both experts in the field of in vivo magnetic resonance and junior scientists present research highlights in the field of in vivo magnetic resonance.

Program

9.00 Welcome and introduction
FRANZ SCHILLING
(Technical University of Munich)

OPENING LECTURE

9.15 Methods and advances in MRI over the course of half of a century
AXEL HAASE
(Technical University of Munich)

MORNING SESSION

9.50 Imaging tissue microstructure by diffusion-relaxation MRI
BJÖRN LAMPINEN
(Lund University)

10.10 Magnetic resonance of fat
DIMITRIOS KARAMPINOS
(Technical University of Munich)

10.30 Coffee Break

10.50 Quantitative, multiparametric MRI using MR fingerprinting concepts
MARION MENZEL
(GE Healthcare)

11.10 Learning to process MR signals: perfusion and spectra
BJÖRN MENZE
(University of Zurich)

11.30 Short talks from junior scientists
(CAROLIN PIRKL, SOPHIA KRONTHALER, KATARZYNA KURCYUS)

12.00 Lunch Break

AFTERNOON SESSION

13.30 Multimodal MRI of the tumor microenvironment
ANDRÉ MARTINS
(University of Tübingen)

13.50 Neuroenergetics of the human brain with quantitative glucose and oxygen metabolism
VALENTIN RIEDL
(Technical University of Munich)

14.10 Short talks from junior scientists
(STEPHAN KACZMARZ, SABRINA HOFFMANN, MARTIN GRASHEI)

14.40 Coffee Break

15.00 CEST at high and ultra-high magnetic fields
MORITZ ZAISS
(FAU Erlangen-Nürnberg)

KEYNOTE LECTURE

15.20 Imaging tumour metabolism
KEVIN BRINDLE
(University of Cambridge, CRUK)