

Registration

Until 19.3.2020 via e-mail to: schilling@tum.de
Participation is free of charge but limited to 60 persons.

Organization

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

jungeskolleg.badw.de

Acknowledgements

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BAdW

In Vivo Magnetic Resonance – Recent Methods and Advances

WORKSHOP

2/4/20

9.00 A.M. – 6.00 P.M.

**Junges
Kolleg**

BAYERISCHE
AKADEMIE
DER
WISSENSCHAFTEN

Programme

- 9.00 **Welcome and introduction**
FRANZ SCHILLING
(Technical University of Munich)
- 9.20 **Imaging tissue microstructure
by diffusion-relaxation MRI**
MARKUS NILSSON
(Lund University)
- 9.55 **Magnetic resonance of fat**
DIMITRIOS KARAMPINOS
(Technical University of Munich)
- 10.30 **Coffee Break**
- 11.00 **Quantitative, multiparametric MRI
using MR fingerprinting concepts**
MARION MENZEL
(GE Healthcare)
- 11.35 **Learning to process MR signals:
perfusion and spectra**
BJÖRN MENZE
(Technical University of Munich)
- 12.10 **Short talks from junior scientists**
- 12.40 **Lunch Break**
- 14.00 **Multimodal MRI of the tumor microenvironment**
ANDRÉ MARTINS
(University of Tübingen)

In Vivo Magnetic Resonance – Recent Methods and Advances

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.

- 14.35 **Neuroenergetics of the human brain with
quantitative glucose and oxygen metabolism**
VALENTIN RIEDL
(Technical University of Munich)
- 15.10 **Short talks from junior scientists**
- 15.40 **Coffee Break**
- 16.10 **CEST at high and ultra-high magnetic fields**
MORITZ ZAISS
(FAU Erlangen)
- 16.45 **Imaging tumour metabolism**
KEVIN BRINDLE
(University of Cambridge, CRUK)
- 17.20 **Methods and advances in MRI over the course
of half of a century**
AXEL HAASE
(Technical University of Munich)