

BAdW

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.

jungeskolleg.badw.de

Acknowledgements

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BAVARIAN ACADEMY OF SCIENCES AND HUMANITIES

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In Vivo Magnetic Resonance – Recent Methods and Advances

ONLINE WORKSHOP – ZOOM WEBINAR

6/5/21

9.00 A.M. – 4.00 P.M.

Junges
Kolleg

BAYERISCHE
AKADEMIE
DER
WISSENSCHAFTEN

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**

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.

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)