IMPRS
on Cognitive NeuroImaging
INTERNATIONAL MAX PLANCK RESEARCH SCHOOL

IMPRS on Cognitive NeuroImaging
Module 3: Advanced Courses

Advanced MRI: Aspects of Proton Relaxation in Tissues

09–13 February 2026

Date	Time	Topic	Lecturer	Venue
12 January	09:30	Preparatory Meeting	Harald Möller	Dorothea Erxleben Room (C004) *
09 February	09:30 – 11:00	Classical Description of Magnetic Resonance: The Phenomenological Bloch Equations	Harald Möller	Charlotte Bühler Room (C402)
	11:30 – 12:15	Demonstration of Magnetic Resonance on the Workbench	TBD	
	12:15 – 13:00	«oh cet écho!» Demonstration of & Experiments with Echoes	TBD	
	14:00 – 15:30	Relaxation by Dipolar Coupling: The BBP Theory	Harald Möller	
Tue, 10 February	09:30 – 11:00	Transverse Relaxation & Relation to Brain Tissue Composition	Harald Möller	
	11:30 – 12:30	Extended Phase Graphs & Stimulated Echoes	TBD	
Wed, 11 February	09:30 – 11:00	Longitudinal Relaxation & Relation to Brain Tissue Composition	Harald Möller	
	11:30 – 12:30	Mapping T_1 by Variable Flip Angle MRI & MP2RAGE	TBD	
	14:00 – 15:00	Proton Relaxation in White Matter: Fullerton's Model & Koenig's Model	TBD	
Thu, 12 February	09:30 – 11:00	Magnetization Transfer & Multiple Proton-Pool Models	Harald Möller	
	11:30 – 12:30	Orientation Effects in Relaxation-Based Contrast	TBD	
Fri, 13 February	09:30 – 11:00	Effective Transverse Relaxation & Signal Phase	Harald Möller	
	11:30 – 13:00	*Everything You Always Wanted to Know About MR* (*But Were Afraid to Ask)*	Everybody	

* or via Zoom: https://eu02web.zoom-x.de/j/62367228228

Venue
Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig

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Credit Points : Participants have the possibility to receive 2 ECTS CPs. Conditions: 80% attendance and presentation during one of the lectures (see time slots and topics in green color).

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