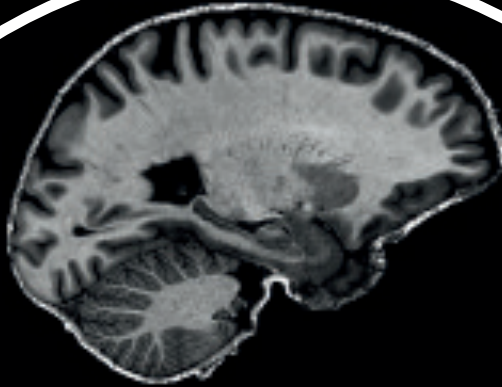


**ESMRMB**

European Society for Magnetic Resonance in Medicine and Biology



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# Lectures on MR 2016

Educational courses, exercises, and practical demonstrations  
on MR Physics and Engineering

**NEW!**

**Quantitative MRI  
for characterising  
brain tissue microstructure**

**June 6–8, 2016**

**Leipzig/DE**

**Programme director:**

Felix Breuer

**Course & local organisers:**

Harald Möller

Nikolaus Weiskopf

# Quantitative MRI for characterising brain tissue microstructure

## Course venue:

Max-Planck-Institute for Human Cognitive and Brain Sciences  
Leipzig, Germany

## Course language:

English

## Educational level:

This course is intended for MR physicists, other scientists and PhD students who already have initial experience in basic MR methods, image processing and data analysis, and who wish to extend their knowledge on quantitative MRI principles and techniques. Some knowledge of MATLAB will be advantageous. All tutorials will be based around pre-existing code prepared for this course. Attendees without any MATLAB experience should have other programming experience and be willing to work with MATLAB.

This course runs from introductory to advanced methods over the three days. At the end of these three days, attendees will take with them the MATLAB code that has been provided and developed by them. This code, in combination with notes taken at the course, will form a package, which will enable attendees to understand different and implement some basic methods discussed during the course.

**Important note on MATLAB tutorials:** For best experience, attendees are asked to bring their own laptop computer with a MATLAB installation (Version 8.3/R2014 or later), since only a small number of computers will be available locally. If you cannot bring your own computer and/or MATLAB, please contact the ESMRMB before registering for the course.

## Topics:

- T1 mapping
- PD mapping
- T2 mapping
- MT mapping
- DWI
- Gradient echo for T2\* and susceptibility mapping
- Biophysical models and interpretation of quantitative MRI data
- Quantitative MRI in group analyses
- Neuroanatomy

## Preliminary faculty:

R. Bowtell, R. Deichmann, S. Geyer, G. Helms, A. MacKay, K. Miller, S. Mohammadi, H. Möller, N. Weiskopf

The Lectures on Magnetic Resonance programme will be applied for accreditation by the European Federation of Organisations for Medical Physics (EFOMP).

A certificate of attendance of the entire course will be available online for the participants.