

ESMRMB

European Society for Magnetic Resonance in Medicine and Biology

For more
information and
registration visit
www.esmrb.org



Lectures on MR 2013

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

**Create your own echo:
How to generate, calculate
and manipulate echoes**
September 2–4, 2013
Munich/DE

Course & local organisers:

Klaus Scheffler
Carl Ganter

Create your own echo: How to generate, calculate and manipulate echoes

Course venue:

Klinikum rechts der Isar
Technical University of Munich
Germany

Course language:

English

Educational level:

This course is suited for established MR physicists, engineers, and other scientists with several years of direct experience in performing MRI applications and/or MRI technological research and development. The advanced course intends to provide a deeper understanding and mathematical description of state-of-the-art, rapid imaging principles.

Topics:

- Rotation Matrices: the Piece-Wise Constant Bloch Equation
- Simulation of Steady-State Sequences
- Simulation of differential Bloch Equation
- The phase graph concept
- Transverse and longitudinal states
- Higher order echoes
- Duality of spatial and phase graph representation
- Description of the steady state in spatial and phase graph description
- CPMG and non-CPMG condition
- Pseudo steady state and Hyper echo
- Balanced, unbalanced and RF spoiled GE-sequences
- Transient phase and steady state

Preliminary faculty:

O. Bieri, C. Ganter, K. Scheffler, M. Weigel

The Lectures on Magnetic Resonance programme is accredited by the European Federation of Organisations for Medical Physics (EFOMP).

A certificate of attendance will be delivered to the participants of the entire course.