

Seminar series: Selected research topics in Biomedical Engineering

Location: Allschwil, Gewerbestrasse 14, Lecture Room 14.03.002

22. November, 13:00-14:30, host Oliver Bieri:

Ultra-high fields:

Challenges and opportunities for brain imaging

Prof. Dr. Klaus Scheffler

MPI for biological Cybernetics + University of Tübingen

Abstract:

I will give an overview of challenges and opportunities of ultra-high magnetic fields for brain research in human and mice. A special focus will be on dedicated techniques that are required to get high fidelity MR signals from the human brain. Furthermore, I will elaborate several methods and techniques on the signal formation in the neurovascular tissue and its relation to the measured brain activity.

Curriculum:

Klaus Scheffler studied Physics at the University of Freiburg and in 1995 gained a PhD in Biophysical Chemistry from the University of Basel. He continued a few years in Basel as a postdoctoral fellow at Department of Biochemical Chemistry and later moved to at the Radiology Department of the University of Freiburg. In 2002, Klaus Scheffler returned to Basel and became Assistant Professor and then (2008) Full Professor in Medical Physics at the University of Basel. Since 2011, Prof Scheffler is Full Professor of Neuroimaging and MR Physics at the University of Tübingen and currently is the Director of the Department of Biomedical Magnetic Resonance, and head of the high field Department at MPI for biological cybernetics.

Prof Scheffler is the author of more than 270 publications, and is the owner of 22 patents.