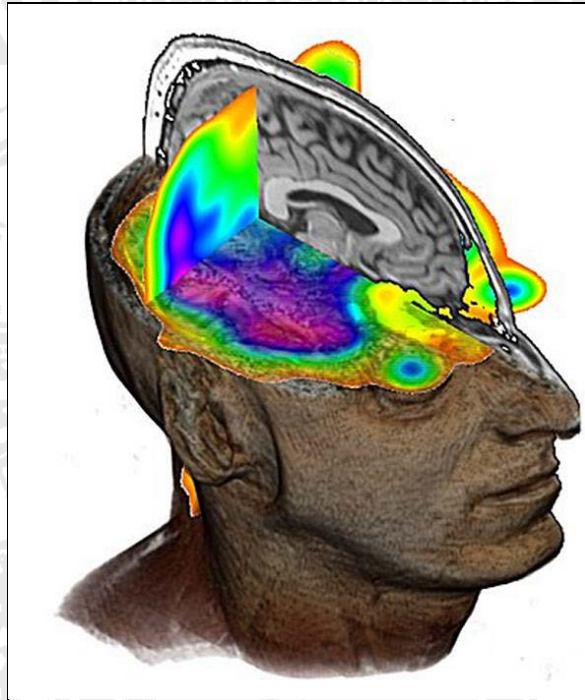




# SONDERKOLLOQUIUM

AM 16. NOVEMBER 2015 UM 17 UHR C.T.

IM GROßEN HÖRSAAL



## Magnetic Resonance Imaging: From Anatomy to Organ Function and Beyond

PROF. DR. MICHAEL BOCK

*EXPERIMENTELLE RADIOLOGIE, UNIVERSITÄTSKLINIKUM FREIBURG*

Magnetic resonance imaging (MRI) is an indispensable tool for the diagnosis of many diseases as it offers several advantages over other medical imaging methods: MRI has an unmatched contrast between the soft tissues in the human body, it provides three-dimensional image data in arbitrary orientations, and it does not expose the patient to ionizing radiation. In addition to the visualization of the anatomy, over the recent decade new MR imaging techniques have been realized that allow quantifying functional information in tissues. With MR flow measurements, the total blood supply of organs in the body can be studied, perfusion MRI is measuring the local blood flow in tissue, and oxygen-sensitive MR methods provide insights into the oxygen metabolism of various organs. In this presentation, the physical concepts behind these new MRI techniques will be presented, and their possible use in clinical routine will be discussed in the light of new MRI hardware developments.