PhD position in Control Engineering with regard to Ultra High-Field MRI

The “MR Spectroscopy and Ultra-High field Methodology” Research Group of the High-Field MR Center (MRC) at the Max Planck Institute for Biological Cybernetics in Tübingen / Germany invites applications for one PhD position in methodological development for ultra-high-field MRI. The global aim is the development of ultra-high-field MR spectroscopy technology for neuroscientific applications in humans with focus on psychiatric disorders and for application in the human myocardium.

To that the establishment and calibration of a real-time motion correction, field stabilization and very high order dynamic $B_0$ shim system for 9.4 T human MR spectroscopy applications is envisioned.

The MRC Department is equipped with two whole body Siemens MRI scanners (3 T and 9.4 T) and one rodent Bruker 14.1 T MRI scanner, RF lab and a biochemical lab for MR contrast agent development. Collaboration with the Biomedical Imaging group at the Institute of Physics, Ernst-Moritz-Arndt University of Greifswald, Germany with access to a 3T clinical MRI system and a 7T rodent MRI system is foreseen.

Applicants for this position should have a control engineering, electrical engineering, biomedical engineering or physics background, be experienced in FPGA programming as well as design, implementation and tuning of control algorithms and systems, interest and / or experience in magnetic resonance tomography, work independently, get acquainted with new methods and knowledge quickly, be able to work in a team with a RF engineer, postdoctoral fellows and fellow PhD students and be willing to work with experimental hardware and applications to humans.

The position is financially secured for the entire duration of the PhD by an ERC starting grant (SYNAPLAST MR) and is available immediately. Payment on a PhD contract base is 50% of TVöD Bund EG 13.

The Max Planck Society is an equal opportunity employer: women and handicapped individuals are strongly encouraged to apply.

Applications should include a letter of motivation, a curriculum vitae, if applicable a list of publications (peer-reviewed original articles; review articles; book chapters; conference contributions; other), PhD and Master certificates (including a list of classes taken during Bachelor and Master studies and grades obtained); three references (contact details or reference letters) and a short summary of past research experience and future research interests.

All materials should be sent to anke.henning - at - tuebingen.mpg.de electronically or to Prof. Dr. Anke Henning
Research Group leader
MRC Department
Max-Planck Institute for Biological Cybernetics
Spemannstrasse 41
72076 Tübingen
Germany

Further information on the Max Planck Institute for Biological Cybernetics and the offered positions can be obtained at www.kyb.tuebingen.mpg.de and via anke.henning - at - tuebingen.mpg.de.