University of Zurich[UZH]

ETH Eidgenössische Technische Hochschule Zürich Swiss Federal Institute of Technology Zurich

The University of Zurich and ETH in Zurich are leading international universities with extensive research programmes. The successful candidate will be a member of both the Laboratory for Social and Neural Systems Research (SNS Lab) and the MRI Methods Development Group within the Institute of Biomedical Engineering (IBT).
Activities within the SNS Lab include neuro–scientific research that is based on advanced magnetic resonance imaging (MRI) methods. More specifically Dr. Zoltan Nagy's work focuses on establishing and testing the MRI acquisition methods that provide high quality data and use these data for non-invasive cortical parcellation in humans. This work is possible because of a close collaboration with the IBT, where Professor Klaas Prüssmann's group advances MR imaging techniques for biomedical and healthcare applications.
We currently have an opening for a

Doctoral student of Physics or Engineering

The successful candidate will work with us to further improve our MRI acquisition and cortical parcellation methods and, more specifically, **implement novel MRI data acquisition methods and perform in–vivo parcellation of the human cortex**.

The successful candidate will a) become an expert user of magnetic field monitoring equipment and develop cutting edge MRI data acquisition methods for high angular resolution diffusion imaging, b) be involved with neuroscience applications that use the acquired high quality data for non-invasively fingerprinting the human cerebral cortex tissue and c) incorporate the image processing methods into a freely available cortical parcellation toolbox.

For further background see http://www.ncbi.nlm.nih.gov/pubmed/23691102

This is a highly interdisciplinary project, hence we are looking for applicants with a(n)

- Master's degree in (bio)physics, engineering or an equivalent field
- Solid background in mathematics
- Sound programming skills [Matlab and C or C++]
- Avid interest in neuroscience
- Experience in scientific research
- Command of written and spoken English

The position will be advertised until a suitable candidate is found. If interested, please send your comprehensive application [incl. **CV/letter of motivation/contact details of 3 references**] to Dr. Zoltan Nagy (zoltan.nagy@uzh.ch) with the subject line **PhD Position @ SNS Lab / IBT**

The Laboratory for Social and Neural Systems Research (SNS Lab) https://www.zne.uzh.ch/en/facilities.html

Institute for Biomedical Engineering (IBT) http://www.biomed.ee.ethz.ch