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 neuroscientific research that is based on advanced magnetic resonance imaging [ MRI ] methods. Dr. Zoltan Nagy’s work focuses on establishing and testing MRI methods that provide high quality data for use in structural and functional neuroscience projects. This work is possible because of a close collaboration with the IBT, where Professor Klaas Pruessmann’s group advances MR imaging techniques for biomedical and healthcare applications.

We are seeking applications for a

**fully funded PhD position in Biomedical Engineering**

to begin in January or February 2021.

The specific aims of the project are to implement novel quality assurance methods and evaluate the reproducibility of functional MRI [ fMRI ] data and results

The successful candidate will a) become an expert user of magnetic field monitoring equipment and develop cutting edge fMRI data acquisition methods, b) perform statistical evaluations to establish reliable measures of reproducibility of said fMRI data c) be involved with neuroscience applications that use the acquired high quality data for functional mapping of the human brain.

This is a highly interdisciplinary project. Hence we are looking for applicants with a(n)

- Master’s degree in physics, engineering or an equivalent field
- Solid background in mathematics
- Sound programming skills [ e.g. Matlab or 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 colour-coded images on the left, show the coefficient of variation across repeated acquisition of same type of fMRI data from a single human volunteer. The yellow-green colour represents ~15% variability, which is much greater than the functional signal of the brain we measure with MRI. Images on the right are shown for anatomical reference only.


Institute for Biomedical Engineering [ IBT ] https://biomed.ee.ethz.ch/