



PhD Position in Computational Neuroscience and Neuroimaging at Jülich Research Centre and University of Düsseldorf Germany

One PhD position is available in computational neuroscience with a focus on mathematical modeling of brain dynamics based on neuroimaging data in the lab of Prof. Dr. Simon Eickhoff at Jülich Research Centre and University of Düsseldorf in Germany. The PhD candidate will work on projects involving large-scale dynamical brain models derived from multimodal neuroimaging data (structural, functional & diffusion magnetic resonance imaging, MRI) combined with numerical simulations and analysis of model dynamics and parameter space. We are specifically looking for candidates with training in applied mathematics/computational neuroscience or related fields and experience in programming and numerical simulation of neuronal models/nonlinear dynamics systems. The candidate will be responsible for derivation, validation and analytical and numerical investigation of the whole-brain dynamical models, preparation of necessary neuroimaging data, and writing manuscripts for publication. The position provides an opportunity to work in an interdisciplinary environment and training in mathematical modeling of neuroimaging data and methods for data analysis.

More details on the lab: <http://www.fz-juelich.de/inm/inm-7/EN/>

Requirements:

- Master's degree (or equivalent) in Applied Mathematics, Physics, Engineering, Computer Science or a related field.
- Experience with programming languages such as C/C++/CUDA/Python/Matlab/R.
- Familiarity with numerical simulations of nonlinear dynamical systems/differential equations. Experience with high-performance computing is a plus.
- Strong writing, communication, interpersonal and organizational skills.
- Experience with neuroimaging data processing and related analysis packages (FSL, SPM, MRtrix, etc.) will be of advantage.

To apply:

Please send your CV, names of two referees, one-page letter of motivation (emphasizing any related work/projects) and representative publications if any (up to 3) to Oleksandr Popovych via email (o.popovych@fz-juelich.de). Please mention "PhD application" in the subject.