Title of Research Internship
Mapping of inter-brain synchronicity using fMRI based hyper scanning.

Contact Person
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Type of Research
Functional magnetic resonance imaging based hyper scanning study

Period of Research Internship
The project is ready to start and is expected to continue throughout 2022. The intern is not expected to stay for the entire duration of the project but is welcome to do so.

Additional Information
The Brain Imaging Facility employs a diverse mix of nationalities, most contact and meetings will be in English. Being able to understand and speak a decent level of German is, however, preferred to improve contact with participants and day to day business in the Uniklinik, RWTH Aachen.

Description of Research Internship
The intern will cooperate and assist with an ongoing fMRI study. In this study we will investigate inter-brain synchronicity during cooperation and competition, using fMRI based hyper scanning (two fMRI scanners at the same time). The study is exceptional due to its unusual setup and use of several high-end stimulation devices. The internship will be relatively technical, data handling and analyses will play a large part. The internship is, at this time, unpaid.
Responsibilities:

- General participation and cooperation in the Brain Imaging Facility, including regular group meetings
- Assisting with technical setup and participant handling during MRI sessions
- Participant recruitment
- Preliminary analyses of data using “non-standard” approaches
- As the study will already have started, the intern can unfortunately not offer much input to the design of the study.

Requirements:

- Ability to understand and speak basic German is highly preferred.
- General technical and technological affinity
- Good statistical knowledge
- Experience with MATLAB
  - Preferably skilled with MATLAB

We offer:

- An interdisciplinary research group of psychologists, neuroscientists, computer scientists, and biomedical engineers.
- Direct supervision for your master’s thesis.
- fMRI data which can be analyzed and included in your thesis.
- Depending on the intern’s contribution to the study, co-authorships on any publications are possible.
- Educational courses offered by the Brain Imaging Facility (e.g. MATLAB, SPM)
- An exceptional hyper scanning project using two 3 Tesla fMRI scanners.
- Working with high-end stimulation equipment:
  - Participants will be able to communicate during parts of the scanning session using fMRI compatible headsets (OptoAcoustics).