

## Master Projects available in the Institute of Systems Neuroscience

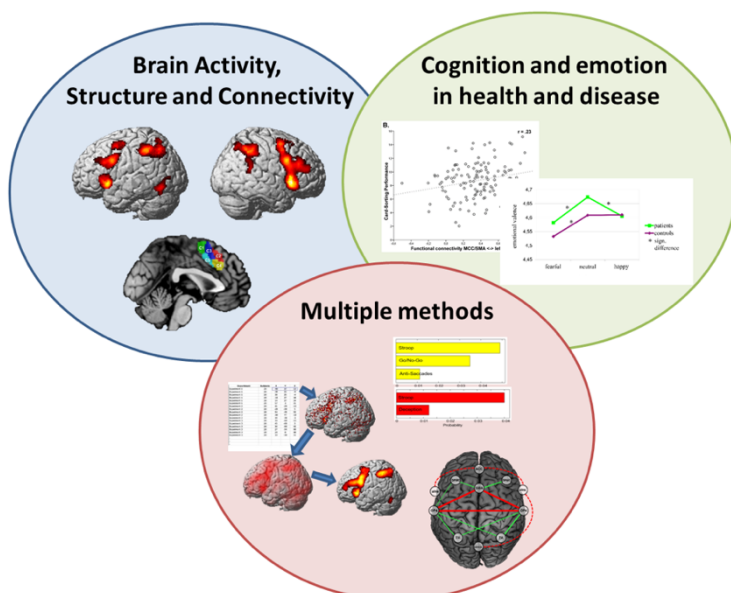
Are you interested in cognitive neuroscience and/or processes associated to psychiatric disorders? Are you looking for a master thesis topic? Do you want to get to know the working environment in the Research Centre Jülich?

The institute of Systems Neuroscience located at the University Hospital Düsseldorf and the Research Centre Jülich offers several master thesis projects in the fields of behavioral and clinical neuroscience as well as its replicability. Multimodal approaches are used to investigate cortical morphology and brain networks underlying affective and executive functions. Methods include neuroimaging and behavioral meta-analyses, task-based and resting state connectivity modeling and connectivity-based parcellation. Moreover, we are interested in the pathophysiology of mental disorders such as schizophrenia and depression.

Master students will pursue their own project that should involve learning at least one of the aforementioned methods. At the moment the following research topics are available:

- Investigating impairments of different aspects of emotion or cognitive processing in patients with depression or schizophrenia by using meta-analyses
- Connectivity-based parcellation of regions of the frontal cortex based on functional and/or structural connectivity profiles
- Investigating the neural correlates of the conflict adaptation effect using neuroimaging meta-analysis
- Reproducible MRI analysis: Replication of basic (f)MRI effects using publicly available data in standard workflows - from RAW data to statistical modeling

There is some flexibility in the actual topics, and we are open for individual suggestions and ideas to accommodate to your particular interest.



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