

PHILOSOPHY MEETS COGNITIVE SCIENCE



Stiftung
Mercator



Mercator
Research Group

Organization and contact: Prof. Dr. Markus Werning.

Website: www.rub.de/phil-lang.

Venue: Fri., 30 April 2010, 14-16h, in room GAFO 04/615.

All interested students, scientists, and scholars are cordially invited to the following talk of the research colloquium:

Dr. Tim Raettig

(MPI for Human Cognitive and Brain Science, Leipzig)

The Cortical Infrastructure of Language: Investigating Connectivity Patterns with Diffusion Tensor Imaging

In the talk, Raettig discusses the methodological basis of Diffusion Tensor Imaging, an NMR-based data acquisition technique that can be used for the analysis of brain connectivity patterns. Importantly, information about the anatomical connections between distant cortical areas can yield critical insights into the organization of neurocognitive processes, complementing functional imaging studies. He first introduces the principles behind diffusion weighted MR imaging and then describes several advanced methods used to analyze the resulting data, focusing on white matter tractography and cortical parcellation. Finally, he presents results from a number of recent studies investigating the anatomical structure of the language processing network.

Dr. Tim Raettig studied Psycholinguistics and Theoretical Linguistics in Bonn and Potsdam. Becoming a member of the MPI Leipzig, Department of Neuropsychology, he received a PhD in Cognitive Science from the University of Potsdam. He is currently a postdoctoral researcher at the Research Group *Neurocognition of Rhythm in Communication* at the MPI Leipzig and the Cluster of Excellence *Languages of Emotion* at the Free University of Berlin. He has published a.o. in *NeuroImage*, *Cerebral Cortex*, *Cortex*, and *Brain and Language*.