PhD program 2010
Advanced topics in functional MRI in cognitive and clinical neuroscience

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This course will focus on specific methodological approaches to functional brain imaging and is intended for students who have previous background and experience in fMRI. The format will be interactive and include 1) general theoretical overviews of a given topic, 2) practical demonstration on real dataset in small groups, 3) a critical discussion of 1-2 papers that need to be read by the students prior to each session. Students are also encouraged to propose papers or experimental issues based on their own interest. Each course will be directed by a main “tutor” who is a renowned researcher in the field.

Credits: 2 ECTS

Location: Brain & Behaviour Lab, CMU (except May 10: CIBM, EPFL)
Time: all sessions will take place 9:00 am - 1:00 pm

Monday May 3
Functional connectivity and dynamic causal modeling
Christoph Phillips, Centre Cyclotron, Université de Liège

Wednesday May 5
Small-world approaches to functional brain networks
Sophie Achard, Wolfson Brain Imaging Centre, University of Cambridge

Monday May 10
Human fMRI at 7T and physiological noise reduction
Wietske van der Zwaag, Centre for Bio-Medical Imaging, EPFL, Lausanne

Wednesday May 12
Quantitative functional imaging with arterial spin labeling (ASL)
Andrea Federspiel, Department of Psychiatric Neurophysiology, University of Bern

Monday May 17
Multivoxel pattern classification analysis for structural MRI
Stefan Klöppel, Center for Neurogeriatry and Neuropsychology, Freiburg-in-Brigsau

Wednesday May 19
Multivoxel pattern classification analysis for functional MRI
Dimitri Van De Ville, Centre for Bio-Medical Imaging, EPFL & HUG

Monday May 24
Holiday

Wednesday May 26
Principles and applications of real-time fMRI
Sven Haller, Neuroradiology, HUG

Monday May 31
Statistical parametric mapping of diffusion MRI
Volkmar Glauche, Department of Neurology & Brain Imaging, Freiburg-in-Brigsau