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, UNIGE (except May 23: CIBM, EPFL)

Time: all sessions will take place **9:00 am - 1:00 pm**

**Wednesday May 2**
CMU- Room 4097
Calibrated functional magnetic resonance imaging
Richard Wise, University of Cardiff

**Monday May 7**
CMU- Room 4097
Independent component analysis for joint EEG-fMRI measurements
Tom Eichele, Bergen, Norway

**Wednesday May 9**
CMU- Room 4097
Functional connectivity and dynamic causal modeling
Andre Marreiros, University College London, UCL

**Monday May 14**
CMU- Room 4106
Multivoxel pattern classification analysis for functional MRI
Jonas Richiardi & Dimitri Van De Ville, UniGE & EPFL

**Wednesday May 16**
CMU- Room 4106
Real-time fMRI: principles & applications
Frank Scharnowski, UniGE

**Monday May 21**
CMU- Room 4106
Magnetic resonance spectroscopy for functional imaging
Suresh Muthukumaraswamy, University of Cardiff

**Wednesday May 23**
**exceptionally at CIBM, EPFL**
Human fMRI at 7T and physiological noise reduction
Wietse van der Zwaag, Centre for Bio-Medical Imaging, EPFL, Lausanne

**Monday May 28**
Holiday

**Monday June 4**
CMU- Room 4097
Human connectome: theory and applications
Patrik Hagmann, CHUV