

Methods for designing and analyzing human MRI studies

08.04.-12.04.2019

This 5-day course combines theory (morning lectures) and practical PC sessions in small groups (afternoon). There are 2 user-levels. Day 1 and 2 are for beginners and day 3, 4, 5 for advanced users.

Goals:

- get an overview of human MRI applications with a focus on functional imaging
- understand the basic principles of fMRI design and analysis
- be prepared for in-depth methods courses elsewhere (e.g., Hamburg or London SPM course)

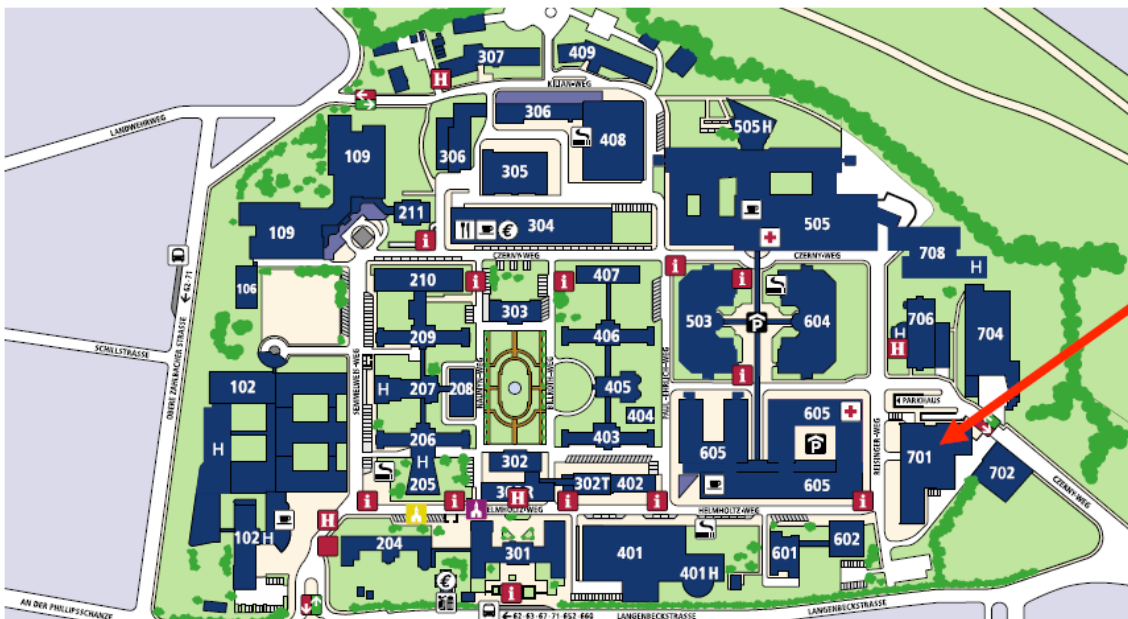
Language: English

Location: Seminar room R39, Building 701 theoretical sessions,
NIC offices, Building 701 for the practical sessions

Registration: nic-koordination@unimedizin-mainz.de

Tel: 06131/17-8419

Please indicate your field of research, your user-level (advanced/beginner) and which days you want to participate.



University
Medical Center
Langenbeckstr. 1
55131 Mainz
NIC, Building 701

Program:

Monday, April 8th for beginners

9:15 – 10:00	Basic MRI contrasts	
10:00 – 10:30	Physiological basis of the BOLD signal	
	Coffee break	
10:45 – 11:30	Preprocessing	
11:30 – 12:15	General Linear Model, parameter estimation	
	Lunch break	
13:00 – 16:00	Practical session: Preprocessing	

Tuesday, April 9th for beginners

9:00 – 9:45	Inference statistics	
9:45 – 10:30	Multiple comparisons	
	Coffee break	
10:45 – 11:30	fMRI designs	
11:30 – 12:15	Event-related and block designs	
	Lunch break	
13:00 – 16:00	Practical session: 1st & 2nd level analysis	

Wednesday, April 10th, Advanced modules

9:00 – 10:30	Voxel-based Morphometry	
	Coffee break	
10:45 – 12:15	PET analysis using SPM	
	Lunch break	
13:00 – 16:00	Practical session: Advance modules	

Thursday, April 11th, Advance modules

9:00 – 10:30	Multivoxel pattern analyses	
	Coffee break	
11:45 – 12:15	Functional and effective connectivity	
	Lunch break	
13:00 – 16:00	Practical session: Advance modules	

Friday, April 12th, Advanced modules

9:00 – 10:30	Neuroimaging meta-analysis & meta-analytic modeling	
	Coffee break	
10:45 – 12:15	Reproducible and flexible data analysis pipelines	
	Lunch break	
13:00 – 14:30	Open discussion	