Methods for designing and analyzing human MRI studies - an introduction

This 4-day course combines theory (morning lectures) and practical PC sessions in small groups (afternoon). There are 2 levels: for beginners and 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 1, Building 503 for the theory 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 and your user-level (advanced/beginner).

Program:

Tuesday, April 14th for beginners

9:15 –10:00	Basic MRI contrasts
10:00 – 10:30	Physiological basis of the BOLD signal for beginners
	Coffee break
11:00 – 11:45	Preprocessing
11:45 – 12:30	Voxel-based morphometry
	Lunch break
14:00 – 17:00	Practical session: Preprocessing

Wednesday, April 15th for beginners

9:15 –10:00	General Linear Model, parameter estimation
10:00 – 10:45	Inference statistics
	Coffee break
11:00 – 11:45	Multiple comparisons
11:45 – 12:30	fMRI designs
	Lunch break
14:00 – 17:00	Practical session: 1st level analysis

Thursday, April 16th for advanced users

9:15 –10:00	Physiological basis of the BOLD signal for advanced users
10:00 – 10:45	Event-related and block designs
	Coffee break
11:00 – 11:45	Model-based fMRI
11:45 – 12:30	Overview on combined fMRI/EEG
	Lunch break
14:00 – 17:00	Practical session: 2nd level analysis

Friday, April 17th for advanced users	
9:15 –10:15	Network analyses I
10:15 – 11:00	Network analyses II
	Coffee break
11:15 – 12:30	Multivariate analyses

Map of the University Medical Center (Langenbeckstr. 1, 55131 Mainz):