

fMRI Image Acquisition and Analyses Course
March 18th-20th, 2010

Course Faculty: Kent A. Kiehl, Ph.D.,
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Day 1: March 18, 2010				
	Start	Duration		
Lect 1.1	8:00 am	0:30	Course Introduction	Kiehl, Calhoun, Wager
	8:30 am	1:00	Tour of MRI + acquisition of data; stimulus presentation; behavioral monitoring; signal acquisition	Kiehl
	9:30 am	0:30	Coffee Break	
Lect 1.2	10:00 am	1:00	fMRI pulse sequences, reconstruction; basic physics	Calhoun
	11:00 am	1:00	SPM and Toolbox install – computer check	Wager
	12:00 pm	0:30	Lunch (provided)	
Lect 1.3	12:30 pm	1:00	Intro to SPM; Data checking; Reorienting data	Kiehl
Lect 1.4	1:30 pm	1:00	Spatial Preprocessing: Realignment/ Slice Timing/ Unwarp/	Kiehl
	2:30 pm	0:30	Coffee Break	
Lect 1.5	3:00 pm	1:00	Spatial Preprocessing: Coregistration/ Spatial Normalization	Kiehl
Lect 1.6	4:00 pm	0:30	Spatial Smoothing	Kiehl
Lect 1.7	4:30 pm	1:00	General Linear Model I- Principles and fMRI	Wager
	5:30 pm	0:30	Question/answer	Kiehl, Wager, Calhoun
	6:00 pm		Adjourn	
	7:00 pm		Social Outing – Seasons Bar and Grill in Old Town near Hotel Albuquerque	

Day 2: March 19, 2010				
	Start	Duration		
	8:00 am	1:00	Review from Day 1 question and answer	Kiehl, Calhoun, Wager
Lect 2.1	9:00 am	1:00	Experimental Design – Efficiency/Orthogonalization/ Event-related/ Block design	Wager
	10:00 am	0:30	Coffee	
Lect 2.2	10:30 am	1:00	SPM GUI for Single Subject stats/explore design/scaling	Wager and Kiehl
	11:30 am	0:30	Lunch (provided)	
Lect 2.3	12:00 pm	1:00	General Linear Model II: Contrasts & Thresholding	Wager and Kiehl
Lect 2.4	1:00 pm	1:00	SPM Results: Single subjects; plotting; display	Wager and Kiehl
	2:00 pm	0:30	Break; Coffee	
Lect 2.5	2:30 pm	1:00	Intro to connectivity and mediation	Wager; Kiehl and Calhoun help
Lect 2.6	3:30 pm	1:30	Introduction to Independent Component Analysis	Calhoun
	5:00 pm	1:00	Question/answer	Kiehl, Wager and Calhoun
	6:00 pm		Adjourn	

Day 3: March 20, 2010				
	Start	Duration		
	8:00 am	0:30	Review of Days 1-2	Kiehl, Wager, Calhoun
Lect 3.1	8:30 am	1:00	Random effects; Group stats; Region of Interest Analysis	Wager and Kiehl
Lect 3.2	9:30 am	1:00	Statistical nonparametric Mapping (SnPM)	Wager
	10:30 am	0:30	Coffee Break	
Lect 3.3	11:00 am	1:00	SPM results – group subjects; plotting; display; small volume correction	Wager, Calhoun, Kiehl
	12:00 pm	:30	Lunch (provided)	
	12:30 pm	1:00	Review of Days 1-2	Kiehl, Calhoun
Lect 3.4	1:30 pm	1:00	Independent Component Analyses II: fMRI	Calhoun
	2:30 pm	:30	Coffee Break	
Lect 3.5	3:00 pm	2:00	ICA of fMRI: Implementation	Calhoun, Kiehl
	5:00 pm	1:00	Review & Final Q and A	Calhoun, Kiehl
	6:00		Adjourn	