



## Cambridge Methods Day

*5 December 2017*

### MRC Cognition and Brain Sciences Unit

9.30-9.35	<b>Welcome</b>	
9.35-10.50	<b>MRI I</b> Johan Carlin	
	Neural modelling of fMRI repetition effects	Rik Henson <i>MRC Cognition and Brain Sciences Unit</i>
	Validation of the canonical hemodynamic response function model used in fMRI studies	Wiktor Olszowy <i>Wolfson Brain Imaging Centre &amp; Centre For Mathematical Sciences</i>
	Joint Functional and Geometric modelling in neuroimaging studies	Eardi Lila <i>Centre For Mathematical Sciences</i>
	A Bayesian log-Gaussian Cox process model for fMRI meta-regression	Pantelis Samartsidis <i>MRC Biostatistics Unit</i>
	Applications of high-res fMRI at 3T	Becky Lawson <i>UCL &amp; Dept. of Psychology</i>
Coffee break		
11.15-12.15	<b>MRI II</b> Marta Correia	
	Automatic segmentation of brain lesions with neural networks	Konstantinos Kamnitsas <i>Biomedical Image Analysis Group, Imperial College London and Microsoft Research, Cambridge</i>
	Compressed sensing Plus Motion (CS+M): A Simultaneous Reconstruction and Motion Estimation Approach for Improving Undersampled MRI Reconstruction	Angelica Aviles-Rivero <i>Centre for Mathematical Imaging in Healthcare</i>
	Preliminary Analysis of ultra-high resolution 7T fMRI data	Huang Pei <i>MRC Cognition and Brain Sciences Unit</i>

	Imaging metabolism in vivo using 7 Tesla MRI	Chris Rodgers <i>Wolfson Brain Imaging Centre</i>
Lunch break (lunch not provided)		
13.00-14.00	<b>Multivariate Pattern Analysis</b> Marieke Mur	
	Visualising representational dynamics	Marieke Mur <i>MRC Cognition and Brain Sciences Unit</i>
	Deep convolutional neural networks as models of neural processing	Courtney Spoerer <i>MRC Cognition and Brain Sciences Unit</i>
	The dynamics of perceptual to conceptual representations revealed with oscillatory RSA	Alex Clarke <i>Dept. of Psychology</i>
Tea break		
14.15-15.15	<b>Data Collection And Statistical Methodology</b> Rogier Kievit	
	Generalized Linear Mixed Models	Delia Fuhrmann <i>MRC Cognition and Brain Sciences Unit</i>
	Structural Equation Modelling Trees	Rogier Kievit <i>MRC Cognition and Brain Sciences Unit</i>
	Tools for online data collection	Becky Gilbert <i>MRC Cognition and Brain Sciences Unit</i>
	Using RMarkdown to create scientific manuscripts	Alex Quent <i>MRC Cognition and Brain Sciences Unit</i>
Tea break		
15.30-16.30	<b>EEG/MEG And Brain Stimulation</b> Olaf Hauk	
	Single-trial analysis of EEG/MEG data - Combining eye-tracking with EEG/MEG	Olaf Hauk <i>MRC Cognition and Brain Sciences Unit</i>
	Estimating the relative signal and noise content of ICA components in M/EEG	Tim Kietzmann <i>MRC Cognition and Brain Sciences Unit</i>
	Cognitive, EEG and EMG effects of motor cortex tDCS during REM sleep	Valdas Noreika <i>Dept. of Psychology</i>
	Mother-Infant hyperscanning: from EEG	Lorena Santamaria-Covarrubias <i>Dept. of Psychology</i>

	synchrony to graph metrics	
--	----------------------------	--

For questions and comments, please contact [olaf.hauk@mrc-cbu.cam.ac.uk](mailto:olaf.hauk@mrc-cbu.cam.ac.uk).