



Sciences Unit

Cambridge Methods Day 4 December 2023 9.30-10.50 **EEG/MEG** Chair: Olaf Hauk Information theoretic methods for capturing Juho Äijälä distributed and synergistic representations Department of Psychology across the cortical hierarchy The entropy of resting-state neural dynamics is Natalia Zdorovtsova a marker of general cognitive ability in MRC Cognition and Brain childhood Sciences Unit Rebecca Williams DCM with MEG combined with MRI/MRS MRC Cognition and Brain Sciences Unit Golan Karvat A method to separate oscillatory bands based MRC Cognition and Brain on lagged coherence Sciences Unit 11.00-12.00 **Brain Stimulation** Chair: Alexandra Woolgar Introduction to noninvasive deep brain Camilla Nord stimulation with focussed ultrasound MRC Cognition and Brain stimulation Sciences Unit Moataz Assem A novel concurrent TMS-fMRI setup for high MRC Cognition and Brain resolution whole brain imaging: pilot data Sciences Unit Elizabeth Michael Testing e-field modelling as a method for MRC Cognition and Brain determining individual TMS dose Sciences Unit Lunch break (Light lunch buffet will be provided) 13.00-14.20 MRI and fMRI Chairs: Marta Correia & Dace Apšvalka Krzysztof Klodowski Feasibility of parallel transmit 7T MRI for patients with drug-resistant focal epilepsy Wolfson Brain Imaging Centre Dace Apšvalka Challenges of laminar fMRI MRC Cognition and Brain Sciences Unit Marta Correia Prospective head movement correction for MRC Cognition and Brain

fMRI

	The effect of age on the BOLD HRF	Rik Henson
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14.35-16.15	Behavioural and Statistical Methods	
	Chair: Rik Henson	
	Representational Similarity Learning	Saskia Frisby
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	Representational alignment as a tool to jointly understand artificial and biological cognition	Jascha Achterberg
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	Causal inference and direct acyclic graphs	Luisa Fassi
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	Modelling genetic effects on cortical dynamics with RNNs	Rebeca lanov
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	Web-based methods	Adam Attaheri
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