MEG UK
Oxford 2017

22-24 March 2017

Medical Research Council

MRC

CTF

YORK INSTRUMENTS

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Guide to Oxford

Areas for food and drink:

George Street near Gloucester Green
- Bars and Restaurants around the Theatre

Jericho north of the city
- High-end cocktails, wine and dining

Cowley Road south-east of the river
- Lively road with food & drink until late

A - The Turf Tavern
B - The King's Arms
C - The White Horse
D - The Bear
E - The Lamb & Flag
F - The Eagle & Child

A - Raoul's Bar
B - The Duke of Cambridge
C - All Bar One

A - My Sichuan Resturant
B - Turl Street Kitchen
C - Quod
D - Sojo
E - Bills

- MEG UK 2017

- Oxford Train Station

- Gloucester Green Bus Station

- Conference Dinner, St Edmund Hall

Events in Oxford:

www.ox.ac.uk/events-list

www.dailyinfo.co.uk/events

experienceoxfordshire.org/whats-on/

to Jericho

to St Clements, Cowley & Iffley
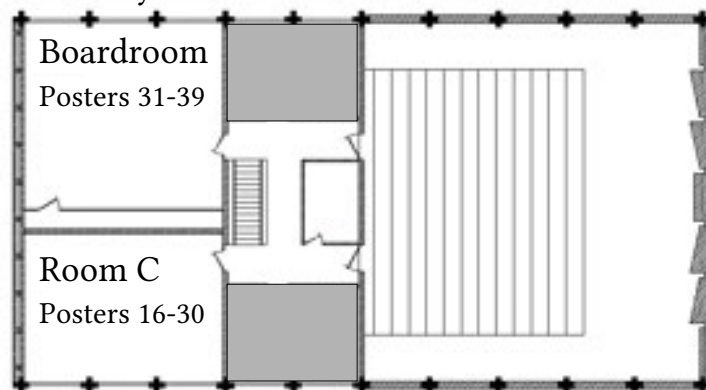
Conference Venue

MEG UK 2017 will be held in St Catherine's College, a short walk or taxi ride from either central Oxford or the train station. The conference will be held in the Bernard Sunley Building and lunch is provided in the College Hall. Bags can be left in the Porter's Lodge. Poster space is available all day. Wifi is freely available through "eduroam" or "TheCloud" (registration required).
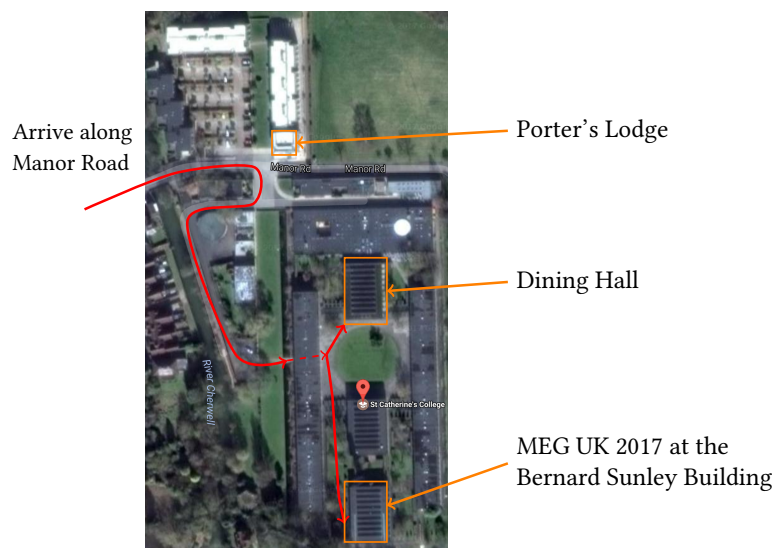
Bernard Sunley Ground Floor

G - Gentlemen's Toilets
L - Ladies' Toilets

Tea & Coffee

Registration

Room A
Posters 1-15
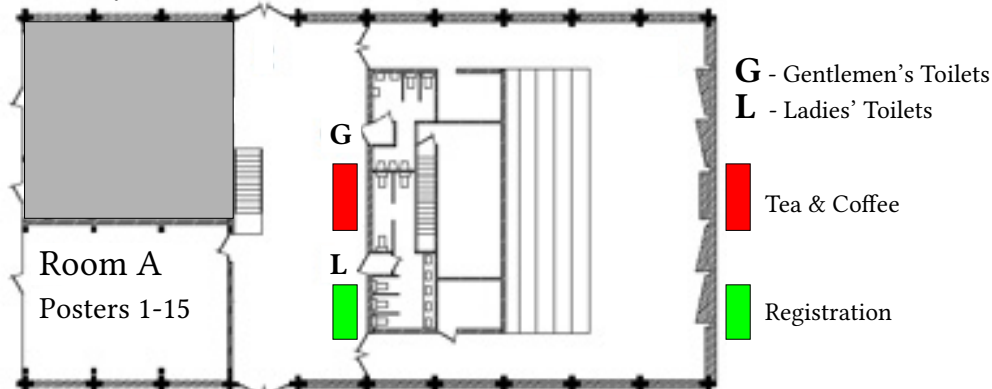
Bernard Sunley First Floor

Boardroom
Posters 31-39

Room C
Posters 16-30

Keynotes

Christoph Michel

The Functional Brain Mapping Laboratory, Université de Genève

EEG Microstates as Basic Building Blocks of Mentation at Rest.
22nd March, 5pm.

Stephanie Jones

Department of Neuroscience, Brown University

**Biophysically Principled Modeling of Human MEG/EEG Signals
Reveals Novel Mechanisms & Meaning of Brain Rhythms.**
23rd March, 10.45am.

Pascal Fries

Ernst Strüngmann Institute (ESI) for Neuroscience in Cooperation with Max Planck
Society

Rhythms for Cognition: Communication through Coherence
24th March, 11.45am.

Wednesday 22nd March - Workshop

12.00   Registration

Oscillations & Dynamics

12.30   **Hyojin Park** - University of Glasgow
Analysis of neuronal oscillatory communication: entrainment, coupling and directionality in cognitive paradigm.

13.00   **Bernadette van Wijk** - Charitè-University Medicine Berlin
Detection and interpretation of cross-frequency coupling.

13.30   **Rik Henson** - Cognition & Brain Sciences Unit, University of Cambridge
.   Frequency-specific and scalp-specific differences in resting-state effective connectivity with age and dementia: evidence from multivariate autoregressive modelling.

14.00   Coffee

Source & Network Modelling

14.30   **Sofie Meyer** - University College London
How to build and use generative models of MEG data for source reconstruction.

15.00   **Arjan Hillebrand** - Vrije Universiteit Amsterdam
Opportunities & challenges in functional connectivity and network analysis using MEG.

15.30   **George O'Neill** - University of Nottingham
Dynamic functional connectivity: black holes and revelations.

16.00   Coffee

16.30   **Krish Singh** - Cardiff University
Oscillatory biomarkers of synaptic function in health and disease.

Keynote

17.00   **Christoph Michel** - Université de Genève
EEG microstates as basic building blocks of mentation at rest.

18.00   Wrap Up

All talks are in the Bernard Sunley Lecture Theatre. Tea & Coffee are served in the foyer.

Day 1

Thursday 23rd March

9.45	Registration & Coffee
10.30	Welcome
10.45	**Stephanie Jones**: Biophysically Principled Modeling of Human MEG/EEG Signals Reveals Novel Mechanisms & Meaning of Brain Rhythms.
11.45	**Glasgow**
12.30	**Birmingham**
12.45	Lunch
13.30	**Nottingham**
14.15	**Short Talks A**

> **James Bonaiuto** - Comparing methods for making laminar specific inference in MEG.
>
> **Alain Bigirimana** - Emotion-inducing imagery vs motor imagery - A MEG study.
>
> **Jonathan Hadida** - Optimisation of structure from function using large-Scale Biophysical Models.
>
> **Diana Dima** - Wired to watch out: tracking the spatiotemporal dynamics of emotional face perception.
>
> **Lucrezia Liuzzi** - Optimising experimental design for MEG resting state functional connectivity measurement.

14.45	Coffee & Posters
15.45	**York**
16.30	**Cardiff**
17.15	Wrap Up
17.30	Close
19.30	Dinner at St Edmund Hall

All talks are in the Bernard Sunley Lecture Theatre. Lunch is served in the College Hall, Tea & Coffee are served in the foyer. Spaces for posters are available all day, presenters will be at their posters during the designated session at 14.45.

Day 2

Friday 24th March

9.15	Business Meeting
	● MEG UK 2018 ● MRC Collaborative Grant ● Biomag 2020
9.45	**Ulster**
10.30	**Aston**
11.15	Coffee
11.45	**Pascal Fries**: Rhythms for Cognition: Communication through Coherence
12.45	Lunch
13.30	**UCL**
14.15	**Short Talks B**

> **Christoph Daube** - Band-pass filtering introduces spurious synergy in estimates of transfer entropy
>
> **Anna-Katharina Bauer** - Cross-modal phase entrainment enhances auditory gap detection abilities.
>
> **Angus Stevener** - MEG functional connectivity during sleep?
>
> **Stavros Dimitriadis** - Identification of time-resolved phase-to-amplitude cross-frequency coupling (PAC-CFC) in inter-regional and local neural oscillations
>
> **Lucy MacGregor** - The neuromagnetic time course of semantic ambiguity resolution in speech comprehension.

14.45	Coffee & Posters
15.45	**Cambridge**
16.30	**Oxford**
17.15	Wrap Up
17.30	Close

All talks are in the Bernard Sunley Lecture Theatre. Lunch is served in the College Hall, Tea & Coffee are served in the foyer. Spaces for posters are available all day, presenters will be at their posters during the designated session at 14.45. Please make sure that all posters have been taken down by 18.00.

Posters - Day 1

Cognitive | Clinical | Methods

A-1	Temporal dynamics of Bayesian causal inference in multisensory spatial ventriloquism **Yinan Cao**, University of Oxford
A-2	The relationship between beta oscillations and variability in motor learning **Svenja Espenhahn**, University College London
A-3	Investigating differences in the dynamic-systems structure of auditory cognition as a function of musical training. **Naomi du Bois**, National University of Ireland, Galway (NUIG)/Ulster University
A-4	Orthogonal Connectivity Factorization: Interpretable Decomposition of Variability in Connectivity Matrices **Aapo Hyvarinen**, University College London
A-5	Semantic and phonological trade-offs in typical and atypical English reading **Kelly Murphy**, Aston University
A-6	Real-time non-invasive imaging of the human hippocampus **Sofie Meyer**, University College London
A-7	Electrophysiological Indices of Reinforcement Learning Mechanisms for Spatial Navigation **Eva Zita Patai**, University College London
A-8	Spatio-temporal pattern of visual motion processing in Autism spectrum disorders **Yoshihito Shigihara**, University College London
A-9	Sensory predictions of time and space are modulated by task relevance: evidence of neural and behavioural effects from model-based MEG **Ryszard Auksztulewicz**, University of Oxford
A-10	Detecting movement-related activity in the cerebellum using head casts **Roeland Heerema**, University College London
A-11	Kymata Atlas Dataset 3.01: publicly available EMEG data **Andrew Thwaites**, University of Cambridge
A-12	Neural decomposition of synergistic and redundant information in interaction between audiovisual speech rhythms and brain oscillations **Hyojin Park**, University of Glasgow
A-13	Dynamic causal modelling of cortical - basal ganglia interactions **Bernadette van Wijk**, University College London
A-14	Dynamics and properties of mental models of spinning 3D objects: an M/EEG study. **Clement Moutard**, UPMC Paris 6 (Paris, France)
A-15	Non-Linear covariance estimation for reconstructing neural activity **Leonardo Duque Muoz**, Universidad de Antioquia
A-16	Task Dynamics in Whole Brain Connectivity with Fast Transient HMM States **Andrew Quinn**, University of Oxford
A-17	Sustained processing of sensory information during auditory perceptual decision **Jiaxiang Zhang**, Cardiff University
A-18	MEG and TMS investigations of Obsessive Compulsive Disorder (OCD) checking behaviour during a working memory and pictorial Stroop task. **Gerard Gooding-Williams**, Aston University
A-19	Effects of AMPA antagonist perampanel on movement-related oscillations **Holly Rossiter**, Cardiff University
A-20	Somatomotor Mapping in MEG **Eleanor Barratt**, University of Nottingham
A-21	Optimising experimental design for MEG resting state functional connectivity measurement **Lucrezia Liuzzi**, University of Nottingham
A-22	Myelin-informed generative models for M/EEG source reconstruction **Saskia Helbling**, MPI for Human Cognitive and Brain Sciences, Leipzig
A-23	Comparing methods for making laminar specific inference in MEG **James Bonaiuto**, University College London
A-24	Neural correlates of response inhibition as reflected by go/nogo and stop-signal tasks: an MEG study. **Ainara Jauregi**, Aston University
A-25	A Survey On Methods Skills In Cognitive Neuroscience **Olaf Hauk**, MRC Cognition and Brain Sciences Unit
A-26	Wired to watch out: tracking the spatiotemporal dynamics of emotional face perception **Diana Dima**, Cardiff University
A-27	The coupling between visually-induced gamma oscillations and BOLD and CBF responses in Multiple Sclerosis: A MEG-fMRI Study **Rachael Stickland**, Cardiff University
A-28	Single-trial detection of event-related fields in MEG from the presentation of happy faces: Results of the Biomag 2016 data challenge **Hubert Cecotti**, Ulster University
A-29	A comparison of MEG-MRI co-registration using manual fiducial placement and automated digitised head shape matching **Loes Koelewijn**, Cardiff University
A-30	Modulation of visual gamma oscillations by spatial attention **Lorenzo Magazzini**, Cardiff University
A-31	Resting state network connectivity in haemodynamic and oscillatory networks in First-Episode and Chronic stages of Schizophrenia **Gemma Williams**, Cardiff University
A-32	Expectation violation and attention to pain jointly modulate neural gain in somatosensory cortex **Francesca Fardo**, University College London
A-33	Project Skyfall: Oscillatory-vascular coupling probed using MEG and fMRI during movie watching **Krish Singh**, Cardiff University
A-34	Revisiting the functional neuroanatomy of post-traumatic stress disorder: insights from meta-analysis and whole-brain connectomics **Marina Charquero**, University of Oxford
A-35	Exploring resting state oscillatory brain activity in mood instability **Lauren Atkinson**, University of Oxford
A-36	MEG Markers of Face Recognition **Narjes Soltani Dehaghani**, PhD Student at Shahid Beheshti university, Iran
A-37	Switching between Temporal and Spatial Attention in Older Adults: An Investigation into Age-related Changes in Underlying Neural Mechanisms **Eleanor Callaghan**, Aston University
A-38	Fast transient dynamic brain networks of oscillatory phase locking **Diego Vidaurre**, University of Oxford

Posters - Day 2

B-1 Resting-State Functional Networks Predict Performance of Mental Imagery-based Brain-Computer Interface (BCI) **Dheeraj Rathee**, Ulster University

B-2 From perception to action in an uncertain world: decisions all the way **Alessandro Tomassini**, Medical Research Council

B-3 Comparing MEG and fMRI resting-state functional connectivity in the UK MEG Partnership cohort. **Bethany Routley**, Cardiff University

B-4 Large-scale sustained MEG responses as a marker for auditory sequence predictability? **Maria Chait**, University College London

B-5 Auditory Predictive Processing in Hippocampal-Prefrontal Circuits: an MEG study **Marc Recasens**, University of Glasgow

B-6 Cross-modal phase entrainment enhances auditory gap detection abilities **Anna-Katharina Bauer**, University of Oldenburg

B-7 Connectivity Makes the World Go Round? A Perspective Taking MEG Study of ASD and Neurotypical Populations **Robert Seymour**, Aston University

B-8 MEG functional connectivity during sleep? **Angus Stevner**, University of Oxford

B-9 Identification of Time-Resolved Phase-to-Amplitude Cross-Frequency Coupling (PAC-CFC) in Inter-Regional and Local Neural Oscillations **Stavros Dimitriadis**, Cardiff University

B-10 Semantic network in the brain: MEG/EEG analyses of semantic hubs and spokes **Rezvan Farahibozorg**, University of Cambridge

B-11 Using multivariate autoregressive Hidden Markov Modeling of resting state MEG to predict cross-subject variability of spectral dynamics during hand movements **Robert Becker**, University of Oxford

B-12 Biophysical modelling of resting brain states and inhibitory synaptic plasticity **Romesh Abeysuriya**, University of Oxford

B-13 Anticipation increases target identity information and delays distractor interference in early visual brain responses **Freek van Ede**, University of Oxford

B-14 The neuromagnetic time course of semantic ambiguity resolution in speech comprehension **Lucy MacGregor**, MRC Cognition and Brain Sciences Unit

B-15 Optimisation of Structure from Function using Large-Scale Biophysical Models **Jonathan Hadida**, University of Oxford

B-16 The neural correlates of automatic imitation **Victoria Schroeder**, Aston University

B-17 Resting state functional connectivity and network topology in Dyslexia genotypes **Diandra Brkic**, Aston University

B-18 Changes in the reading network of patients with central alexia in response to therapy: A DCM analysis. **Sheila Kerry**, University College London

B-19 Inference of subject-specific parcellations from MEG data **Sam Harrison**, University of Oxford

B-20 A cross-validation approach to estimate the relative signal- and noise-content of ICA components. **Tim Kietzmann**, MRC CBU (Cambridge)

B-21 Neural mechanisms of spatial and temporal orienting in aging **Alexander Luettich**, University of Oxford

B-22 Band-pass filtering introduces spurious synergy in estimates of Transfer Entropy **Christoph Daube**, University of Glasgow

B-23 The subnormal suppression of N1 component in action-related sounds in patients with low-risk psychosis when compared to ultra-high risk psychosis: an evidence from MEG study **Lingling Hua**, University of Glasgow

B-24 An brain connectivity study of the obsessively compulsive checking population using MEG **Hongfang Wang**, Aston University

B-25 Travelling waves in the motor system **Simon Little**, University College London

B-26 Competitive and stable dynamics in fronto-parietal cortex during perceptual decision making **Tom Marshall**, University of Oxford

B-27 Combining MEG with EEG and eye tracking for natural reading research **Béla Weiss**, MRC Cognition and Brain Sciences Unit, Cambridge; Brain Imaging Centre, Research Centre for Natural Sciences, Hungarian Academy of Sciences, Budapest

B-28 Decoding of multi-direction wrist movements using multivariate empirical mode decomposition based filtering **Pramod Gaur**, Ulster University

B-29 An MEG based multi-direction wrist movements connectivity analysis using empirical mode decomposition **Geetika Kaushik**, Visting Researcher at Ulster University

B-30 The effect of Galantamine on neural oscillations in a healthy population **Lauren Gascoyne**, University of Nottingham

B-31 Emotion-Inducing Imagery vs Motor Imagery - A MEG Study **Alain Bigirimana**, Ulster University

B-32 Anticipatory neural dynamics of joint spatial-temporal orienting of attention in younger and older adults **Simone Heideman**, University of Oxford

B-33 Pulse Tube Refrigerators in MEG: Cryogen free Cryogenics **Sam Johnson**, York Instruments

B-34 The role of MEG within a multimodal personalized clinical approach **Andreas Ioannides**, AAI Scientific Cultural Services Ltd, Cyprus

B-35 New generation of MEG: Multi-channel OPM measurements **Elena Boto**, University of Nottingham

B-36 Age-Related Delay in Visual and Auditory Evoked Responses is Mediated by White- and Gray-matter Differences **Darren Price**, MRC Cognition and Brain Sciences Unit

B-37 Spatial, temporal and functional characteristics of attention during visual short-term memory **Marlies Vissers**, University of Birmingham

B-38 Nulling coils for free moving OPM-MEG **Niall Holmes**, University of Nottingham

Notes

Notes

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