

fNIRS UK Day 2
15th of September 2023

08:30	Registration Opens
09:00	Welcome Javier Andreu-Perez, <i>University of Essex</i>
09:15	Plenary: Taking fNIRS out of the research lab to study infant development Sarah Lloyd-Fox, <i>University of Cambridge</i>
	Session 1 Cognitive Neuroscience - Chair: TBC
09:45	Learning in Social Interaction: a Multimodal Hyperscanning Study Sara De Felice, Institute of Cognitive Neuroscience, University College London (UCL)
10:00	Rose-tinted embodiment: Mirroring impacts enjoyment, empathy, and cortical activity when observing synchronous movements Ryssa Moffat, ETH Zurich
10:15	Listening to the Brain: A Large, Naturalistic HD-DOT Study Exploring the Link Between Music and Cognition through Public Engagement Sruthi Srinivasan, University of Cambridge
10:30	Coffee Break
	Session 2 Developmental Neuroscience - Chair: Maria Laura Filippetti
11:00	Behavioural and neural underpinnings of preschoolers' social preference: a proof-of-principle study on the use of wearable fNIRS and immersive virtual reality to study social development Chiara Bulgarelli, Birkbeck, University of London
11:15	Using diffuse optical tomography for evaluating brain hemodynamics in pre-term infants in response to glyceic events Guy A. Perkins, Università degli Studi di Padova
11:30	Sleep EEG slow waves and their association with fNIRS functional connectivity in napping infants Louisa Gossé, Birkbeck, University of London
11:45	Interpersonal neural synchrony in parent-child dyads: New data from fathers and mothers including attachment representations Pascal Vrticka, University of Essex
12:00	Lunchtime poster session

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14:00	Plenary: Shining a light on the newborn brain Topun Austin, <i>University of Cambridge</i>
	Session 3 Data Analysis – Chair: Felipe Orihuela-Espina
14:30	Using smoothed Functional Principal Components to characterise infant neurodevelopment Sam Beaton, King's College London
14:45	Towards a data-driven assessment of mild traumatic brain injury (mTBI) with fNIRS Mohammadreza Jamalifard, University of Essex
15:00	Do Motion Sensors aid the detection of motion artifacts for Wearable High Density Diffuse Optical Tomography? Elisabetta Maria Frijia, University College London
15:15	NIRSync – Inspecting fNIRS Data Quality with Synchronised Video Kieran Rock, University of Nottingham
15:30	Coffee Break
	Session 4 Optical Imaging-Hardware – Chair: Rob Cooper
16:00	A digital instrument simulator to optimize the development of a hyperspectral imaging system for neurosurgery Frederic Lange, University College London
16:15	Studying cerebral oscillations with fast TD fNIRS measurements Letizia Contini, Dipartimento di Fisica, Politecnico di Milano
16:30	Proof-of-concept: Whole-head high-density diffuse optical tomography in infants Liam H. Collins-Jones, University College London
16:45	Plenary: Adventures in fNIRS & Social Perception Emily Cross, <i>ETH Zürich</i>
17:15	Awards and symposium closure Javier Andreu-Perez, <i>University of Essex</i>
17:45+	Drinks and networking at the University bar

Posters Presentations

Abstract Number	Title	Authors	Affiliation
1	Dissecting neural correlates of affective and cognitive empathy in preschoolers: an fNIRS study	Chiara Bulgarelli	Birkbeck, University of London
2	Growth in early infancy drives optimal brain functional connectivity which predicts cognitive flexibility in later childhood	Chiara Bulgarelli	Birkbeck, University of London
3	Learning abstract concepts in children: the role of social interaction	Gal Rozic	University College London
4	Investigating the effects of iTBS on neuroplasticity and cognition: An fNIRS and TMS study	Amy Miller	University of Leeds
5	Understanding Brain Stimulation using concurrent fNIRS	Melanie Burke	University of Leeds
6	BenchNIRS: a framework for best practice with machine learning for fNIRS	Johann Benerradi	University of Nottingham
7	Meta-analysis and data pooling to improve fNIRS research – moving towards a collaborative data science consortium	David Mehler	RWTH Aachen University
8	Identifying frequencies of physiological processes using TD-fNIRS	Ammaar Sultan	University of Birmingham
9	Multimodal fNIRS-EEG classification in brain-computer interfaces	Ren Xu	g.tec medical engineering
10	Your brain on juggling: quantifying the relationship between motor task complexity and neural response.	Robin Dale	University of Birmingham
11	Broadband NIRS reveals protection of vascular-metabolic coupling by nimodipine in an animal model of cerebral small vessel disease	Zhiyuan Yang	University College London
12	Investigating audience effects across cultures using fNIRS	Isla Jones	University College London
13	The Effect of Recreational Eye-Trackers on fNIRS Measurements	Musa Talati	University College London
14	Low-Cost bNIRS Reconstruction of Oxygenation and Cytochrome-C- Oxidase using off the shelf Spectrometers	Robert Ward	University of Birmingham
15	Left DLPFC hemodynamic response and pupil dilation during n-back task performance: a preliminary fNIRS and eye tracking study	Robert Kwasniak	University of Lubin
16	Neural Underpinnings of Speaking and Listening During Online Video Calling	Uzair Hakim	University College London
18	Exploring wearable High Density Diffuse Optical Tomography (HD DOT) as a real-time BCI	Akshat Sharma	University of Cambridge

19	Impact of Escalating Cognitive Workload on Surgeons' Brain Activation	Mary Goble	Imperial College London
20	Investigating Task-Free Functional Connectivity in Neonates at Home using High-Density Diffuse Optical Tomography: Potential Associations with Caregiver-Infant Interactive Behaviours	Laura Carnevali	University of Padova
22	Examining the Impact of Verbal-Imagery Cognitive Style on Mental Workload using fNIRS	Huimin Tang	University of Nottingham
23	Interrogating visual deficits in dementia and cognitive impairment using HD-DOT and broadband NIRS	Emilia Butters	University of Cambridge
24	The Acting Self: measuring an actor's sense of self during a monologue performance	Dwaynica Greaves	University College London
25	Integrating Subject-Specific Anatomical Information for Improved Regional Analysis of HD-DOT data	Sruthi Srinivasan	University of Cambridge
26	Exploring the Links between Attachment and Interpersonal Neural Synchrony during Stress in Romantic Couples	Pascal Vrticka	University of Essex
27	Studying neural bases of attention orienting in real world infant experience	Giulia Serino	Birkbeck, University of London
28	Development and preliminary testing of a multi-wavelength wearable diffuse optical tomography system	Georgina Leadley	University of Cambridge
29	Characterizing the Morphology of Speech-Evoked fNIRS Responses in Sleeping Infants: Evidence for Two Independent Mechanisms.	Onn Wah Lee	Universiti Kebangsaan Malaysia
30	A Wearable fNIRS Hyper-Scanning Study: Naturalistic Problem-Solving Between Preschoolers and Mothers	Victoria Mousley	Birkbeck, University of London
31	Investigating HD-DOT for non-invasive ICP monitoring	Cameron Smith	University of Cambridge
32	Infant brain responses to speech at 4- and 24-months of age: a longitudinal fNIRS study	Borja Blanco	University of Cambridge
33	Machine Learning based fNIRS Motion Artifact Detection on Heterogeneous Device	Yunyi Zhao	University College London
35	Examining dynamic functional connectivity during sleep in neonates using high density diffuse optical tomography	Katharine Lee	University of Cambridge
36	Investigating the effect of different short channel regression methodologies in GLM-based frameworks	Natalie Gunasekara	University College London
37	An all-digital, multi-frequency, portable, frequency domain near-infrared spectroscopy technology	Xinkai Zhao	University College London
38	The impact of treating postpartum depression on infant emotion regulation	Klan Yousefi Khousha	McMaster University

	and response to threat; a randomised control trial		
39	fNIRS as an objective measure of cognitive workload in healthcare: A systematic Review	Aws Almkhtar	Imperial College London
40	An AI-empowered, fNIRS-EEG BCI for wheelchair control	Jianan Chen	University College London
41	Neuroplasticity of speech-in-noise processing in older adults assessed by fNIRS	Guangting Mai	University of Nottingham
42	Optical brain monitoring to understand mechanism of learning	Xinyi Wang	Cambridge University
43	Understanding the development of visual working memory networks across cultures	Samuel Forbes	Durham University
44	A new generation, intelligent, real-time, multichannel motion artifact detector for fNIRS/DOT	Yunjai Xia	University College London
46	Whole head wearable high-density diffuse optical tomography in the adult brain	Ernesto Elias	University College London
47	fNIRS a novel neuroimaging tool to investigate olfaction, olfaction imagery and crossmodal interaction: a systematic review	Eleanor Boot	University College London