0 **Identifying Independent Components of Mobile Brain Imaging**

Noelle Jacobsen (University of Florida)*; Daniel Ferris (University of Florida; Marius Klug (TU Berlin); Klaus Gramann (TU Berlin); JiHo Han (University of Florida) *{*jacobsen.noelle@ufl.edu*}

Hardware Posters

1 **Immersive Virtual Environments and Physical Built Environments: Consistent cognitive performance and physiological metrics**

Jesus G Cruz-Garza (Cornell University)*; James Rounds (Cornell University); Joshua Smith (University of Houston); Saleh Kalantari (Cornell University) *{*jgc243@cornell.edu*}

2 **Mobile SSVEPs of real-world environments with LCD glasses**

James Dowsett (LMU Munich) *James.Dowsett@psy.lmu.de*}

3 **Tracking User Experience in VR using Neural Interface Technology**

Lukas Gehrke (TU Berlin)*; Klaus Gramann (TU Berlin) *{*lukas.gehrke@tu-berlin.de*}

4 **Sound processing in everyday life: A mobile ear-EEG study**

Daniel Hölle (University of Oldenburg)*; Martin G. Bleichner (University of Oldenburg) *{*daniel.hoelle@uol.de*}

5 **Crowdsourced EEG Experiments: A proof of concept for remote EEG acquisition using EmotivPRO Builder and EmotivLABS**

Engi Lim (https://www.emotiv.com/)*; Kim Old (Emotiv); Nikolas Williams (Emotiv) *{*engi@emotiv.com*}

6 **EmotiBit: An open-source multi-modal sensor for capturing research-grade physiological signals from anywhere on the body**

Sean M Montgomery (Connected Future Labs)*; Nitin Nair (Connected Future Labs); Phoebe Chen (NYU); Alex Han (NYU); Suzanne Dikker (NYU and Utrecht University) *{*sean@connectedfuturelabs.com*}

7 **Comparison of Human and Phantom Motion Artifacts**

Michael Nonte (NIL)* Anna K McGough, Christian Poindexter, J. Cortney Bradford, W. David Hairs *{*mnonte@dcscorp.com*}

8 **Mobile dry EEG evaluation of cognitive load during sitting, standing, and walking**

Margaret Swerdloff (Northwestern University and Shirley Ryan AbilityLab)*; Levi Hargrove (Northwestern University) *{*margaretswerdloff2016@u.northwestern.edu*}

9 **Individual Variability in Aesthetic Experience: A Mobile EEG and Eye Tracking Study at the San Diego Museum of Art**

Enrique Carrillosulub (UC San Diego); Leon Lange (University of Osnabrueck); Ying Choon Wu (UC San Diego)* *{*yingchoon@gmail.com*}

Methods Posters

10 **MindHive: A community science platform for human brain and behavior research**

Suzanne Dikker (NYU)*; Yury Shevchenko (Kostanz University); Felicia Zerwas (UC Berkeley); Lucy Yetman-Michaelson (NYU); Camillia Matuk (NYU); Kim Burgas (self) *{*suzanne.dikker@nyu.edu*}

11 **BIDS-Motion: organizing motion data for reproducible MoBI research**

Sein Jeung (TU Berlin)*; Stefan Appelhoff (Max Planck Institute for Human Development); Timotheus Berg (Technical University of Berlin); Helena Cockx (Radboud University); Sören Grothkopp (Technical University of Berlin); Robert Oostenveld (Radboud Univer *{*sein.jeung@campus.tu-berlin.de*}

12 **Time to re-calibrate: An alternative approach for selecting calibration data for ASR**

Hyeonseok Kim (UCSD)*; Chiyuan Chang (UCSD); Christian Kothe (Intheon); John Iversen (UCSD); Makoto Miyakoshi (UCSD) *{*hyk030@ucsd.edu*}

13 **Comparison of EEG source localization estimations using simplified and anatomically accurate head models in young and older adults**

Chang Liu (University of Florida)*; Ryan Downey (University of Florida); Amanda Studnicki (University of Florida); Noelle Jacobsen (University of Florida); Daniel P Ferris (University of Florida) *{*liu.chang1@ufl.edu*}

14 **Subject misrepresentation in EEG research for mobile brain/body imaging**

Lietsel Richardson (University of Central Florida)*; Jennifer Sandoval (University of Central Florida); Lindsay Neuberger (ORCE); Nina Woodley (Pure Avidity Salon); Helen Huang (University of Central Florida) *{*lietsrichardson@knights.ucf.edu*}

15 **Characterizing EEG Artifacts during Real World Table Tennis**

Amanda Studnicki (University of Florida)*; Daniel P Ferris (University of Florida) *{*astudnicki@ufl.edu*}

BCI Posters

16 **Cortical Classification of Mobile EEG with Graph Neural Networks**

Roger Sengphanith (Naval Information Warfare Center Pacific); Mohammad R Alam (Naval Information Warfare Center Pacific)* *{*mohammad.r.alam.civ@us.navy.mil*}

17 **Motor Attempt or Motor Imagery? The Effect of Brain-State on Functional Outcomes of Brain Computer Interface (BCI)-Mediated Neurofeedback Training for Stroke: A Scoping Review.**

Ahad Behboodi (National Institutes of Health)*; Walker A Lee (National Institutes of Health); Victoria Hinchberger (National Institutes of Health); Diane Damiano (National Institutes of Health) *{*ahad.behboodi@nih.gov*}

18 **Developing a Mobile Brain-Controlled Exoskeleton for Enhancing Post-Stroke Rehabilitation**

Lofan Chang (National Yang Ming Chiao Tung University) {*lofan28@gmail.com*}

19 **Determining Optimal Mobile Neurofeedback Methods for Motor Neurorehabilitation in Children and Adults with Non-progressive Neurological Disorders: A Scoping Review**

Diane Damiano (National Institutes of Health)*; Ahad Behboodi (National Institutes of Health); Walker A Lee (National Institutes of Health); Victoria Hinchberger (National Institutes of Health) *{*damianod@cc.nih.gov*}

20 **Investigation of Independent Component Analysis for use in Brain-Computer Interface Neurofeedback Paradigms for Motor Rehabilitation**

Walker A Lee (National Institutes of Health)*; Ahad Behboodi (National Institutes of Health); Thomas Bulea (National Institutes of Health); Diane Damiano (National Institutes of Health) *{*walker.lee@nih.gov*}

21 Comfort Panels: Personal Kinetic Panel Control with Neural Feedback for Increased Productivity and Decreased Stress

Tong Xu (Cornell University)*; Bela Patel (Cornell University); Rebecca North (Cornell University); Linna Hu (Cornell University); Saleh Kalantari (Cornell University) *{*tx66@cornell.edu*}

Clinical/Therapeutic Posters

22 Body weight support differentially affects gait-related cortical activity during treadmill walking in children with and without unilateral cerebral palsy

Thomas Bulea (National Institutes of Health)*; Matthew R Short (National Institutes of Health); Yushin Kim (Cheongju University); Diane Damiano (National Institutes of Health) *{*thomas.bulea@nih.gov*}

23 Multisensory input improves navigation of patients with hippocampal lesions in a virtual Morris Water Maze

Deetje Iggena+ (Charité Universitätsmedizin Berlin); **Sein Jeung**+ (TU Berlin)*; Patrizia Maier (Charité Universitätsmedizin Berlin); Carsten Finke (Charité Universitätsmedizin Berlin); Klaus Gramann (TU Berlin); Christoph Ploner (Charité Universitätsmedizin *{*sein.jeung@campus.tu-berlin.de*}

*+ authors contributed equally

24 The effect of genetic Alzheimer's disease risk factors on cerebral blood flow regulation during sit-to-stand transitions in older adults

Jacqueline A Palmer (University of Kansas Medical Center)*; Carolyn Kaufman (University of Kansas Medical Center); Sandra Billinger (University of Kansas Medical Center) *{*jpalmer9@kumc.edu*}

25 Do reaching ability and task-related EEG brain activation measures differ in children with bilateral cerebral palsy compared to those with typical development?

Connor M Phillips (The National Institutes of Health)*; Christopher Stanley (The National Institutes of Health); Thomas Bulea (National Institutes of Health); Diane Damiano (National Institutes of Health) *{*connor.phillips@nih.gov*}

Gait Posters

26 CORTICO-MUSCULAR CONNECTIVITY IS MODULATED BY PASSIVE AND ACTIVE ROBOTIC-ASSISTED GAIT TRAINING

Fiorenzo Artoni (University of Geneva) {*fiorenzo.artoni@unige.ch*}

27 Electrocortical responses to frequent small treadmill belt perturbations during walking

Jinfeng Li (University of Central Florida)*; Helen Huang (University of Central Florida) *{*jinfeng@knights.ucf.edu*}

28 Sustained effects of exercise-induced hemodynamic response on executive function during fine motor-cognitive tasks: A functional near-infrared spectroscopy study

Soo-Yong Park (Institute for Sport and Exercise Science, University of Stuttgart, Germany)*; Nadja Schott (Institute of Sport and Movement Science, Department of Sport Psychology and Human Movement Science, University of Stuttgart, Germany) *{*soo-yong.park@inspo.uni-stuttgart.de*}

29 Cortical activity during drop-landings with unplanned side- and forward- steps in healthy males: feasibility and relationship between ERPs and task performance

Manca Peskar (Science and Research Centre Koper)*; Florian Giesche (University of Frankfurt); Aleksandar Miladinovic (University of Trieste); Uros Marusic (Science and research centre Koper) *{*manca.peskar@zrs-kp.si*}

30 Prefrontal cortex activation during dual-task tandem walking in young and older adults

Nadja Schott (Institute of Sport and Movement Science, Department of Sport Psychology and Human Movement Science, University of Stuttgart, Germany)*; Soo-Yong Park (Institute for Sport and Exercise Science, University of Stuttgart, Germany) *{*nadja.schott@inspo.uni-stuttgart.de*}

31 Dual-task performance in hearing-impaired older adults – a MoBI study

Anna Wunderlich (TU Berlin)*; Oliver Vogel (Universität Hamburg); Klaus Gramann (TU Berlin); Bettina Wollesen (TU Berlin) *{*anna.wunderlich@tu-berlin.de*}

Interpersonal Interaction Posters

32 Contexts of coordination in caregiver-infant interactions and relations to early development

Erica Flaten (Mcmaster University)*; Natasha Wandel (McMaster University); Susan Marsh Rollo (McMaster University); Dobri Dotov (McMaster University); Laurel Trainor (McMaster University) *{*flatene@mcmaster.ca*}

33 Decoding attention to self and other during music performance

Lucas Klein (McMaster University)*; Emily Wood (McMaster University); Daniel Bosnyak (McMaster University); Laurel Trainor (McMaster University) *{*kleinl1@mcmaster.ca*}

34 Multimodal Integration for Multiple Subject Musical Hyperscanning

Thiago Roque (Georgia Tech); Saksham Jain (Georgia Institute of Technology); Neha Rajagopalan (Georgia Institute of Technology); Sophia K Mehdizadeh (Brain Music Lab, Georgia Institute of Technology)*; Grace Leslie (Georgia Institute of Technology) *{*smehdizadeh7@gatech.edu*}

34.5 Inter-Brain Synchrony in a Creative Writing Workshop (z)

Akanksha Acharya (University of Houston)*; Jesus G Cruz-Garza (Cornell University); Mauricio A Ramírez-Moreno (Tecnológico de Monterrey); Cristina Rivera Garza (University of Houston); Jose Contreras-Vidal (University of Houston) { akanksha.acharya14@gmail.com }

Sensorimotor Posters

35 Frontal theta power increases during table tennis play – indications for neurophysiological demands during open-skill sports?

Daniel Büchel (Universitaet Paderborn)*; Anton Visser (Universitaet Paderborn); Tim Lehmann (Universitaet Paderborn); Jochen Baumeister (Universitaet Paderborn) *{*daniel.buechel@upb.de*}

36 Juggling on the moon: Computational neuroscience of skill acquisition

John Iversen (UCSD)*; Hiroyuki Kambara (Tokyo Polytechnic Institute); Hirokazu Tanaka (Tokyo City University); Takahiro Kagawa (Aichi Institute of Technology); Makotoo Sato (Toyko Institute of Technology); Hyeonseok Kim (UCSD); Makoto Miyakoshi (UCSD); Sc *{*jiversen@ucsd.edu*}

37 Neuronal correlates of performance monitoring in a shooting task using VR & mobile EEG

Leon Lange (University of Osnabrueck)*; Joanna Kisker (University of Osnabrueck); Roman Osinsky (University of Osnabrueck) *{*leon.lange@uni-osnabrueck.de*}

38 **Effects of surface instability on cortical information processing during multi-joint compound movements: an exploratory EEG study**

Tim Lehmann (Exercise Science & Neuroscience Unit, Paderborn University)*; Anton Visser (Exercise Science & Neuroscience Unit, Paderborn University); Tim Havers (Exercise Science & Neuroscience Unit, Paderborn University); Daniel Büchel (Exercise Science *{*tim.lehmann@uni-paderborn.de*}

39 **Lower-limb visuomotor reaction speed in healthy young males: Evidence from visual-evoked potentials**

Uroš Marušič (Science and research centre Koper)*; Manca Peskar (Science and Research Centre Koper); Florian Giesche (University of Frankfurt) *{*uros.marusic@zrs-kp.si*}

40 **Head-mounted display or headphones – Does information processing benefit from cue-modality in a cognitive-motor cued task-switch paradigm?**

Julian Elias Reiser (Leibniz Research Centre for Working Environment and Human Factors)*; Gerhard Rinkenauer (Leibniz Research Centre for Working Environment and Human Factors); Lewis Chuang (Leibniz Research Centre for Working Environment and Human Facto *{*reiser@ifado.de*}

41 **Underwater balance perturbations modulate human frontoparietal theta band spectral power**

Seongmi Song (Texas A&M University)*; Andrew D. Nordin (Texas A&M University) *{*songseongmi@tamu.edu*}

42 **Visual demands of walking are reflected in eye-blink evoked EEG-activity**

Edmund Wascher (Leibniz Research Centre for Working Environment and Human Factors)*; Stefan Arnau (Leibniz Research Centre for Working Environment and Human Factors); Marie Gutberlet (Leibniz Research Centre for Working Environment and Human Factors); Lew *{*wascher@ifado.de*}

Spatial Cognition Posters

43 **The influence of idiothetic information on the neural mechanisms of path integration**

Timotheus Berg (TU Berlin)*; Klaus Gramann (TU Berlin); John Iversen (UCSD) *{*timotheus.berg@pm.me*}

44 **Human spatial memory and neural directional representations in virtual and real world conditions**

Shachar Maidenbaum (Ben Gurion University)*; Ansh Patel (Columbia University); Vaclav Kremen (Mayo Clinic); Gregory Worrell (Mayo Clinic); Joshua Jacobs (Columbia University) *{*shachar.maidenbaum@mail.huji.ac.il*}

45 **Audiomaze: a novel EEG paradigm toward neuroimaging of real-space navigation**

Makoto Miyakoshi (UCSD) {*mmiyakoshi@ucsd.edu*}

46 **Neural Decoding of the Landmark Recognition Process in Urban Settings**

James Rounds (Cornell University)*; Jesus G Cruz-Garza (Cornell University); Michael Darfler (Cornell Unviersity); Saleh Kalantari (Cornell University) *{*jj324@cornell.edu*}

47 **Brain dynamics of assisted pedestrian navigation in the real-world**

Anna Wunderlich (TU Berlin)*; Klaus Gramann (TU Berlin) *{*anna.wunderlich@tu-berlin.de*}