

Society of fNIRS  
Virtual Conference 2021  
Program Booklet



VIRTUAL  
fNIRS 2021

18-22 Oct, Planet Earth

# ORAL SESSION I, 18th Oct

## fNIRS in Neurodevelopment Research

GMT time	Los Angeles	Boston	London	CET	Beijing	Tokyo	Sydney
12.00	5.00	8.00	13.00	14.00	20.00	21.00	22.00



GMT time	Abstract #	Presenter (in bold) and Authors	Title	Location
12.00		<b>Welcome Remarks from Society of fNIRS</b>		Zoom
12.15		<b>Keynote Speech by Richard Aslin</b> , chaired by Heather Bortfeld	Simultaneous alignment of whole-head fNIRS with fMRI: Task, rest, and movie viewing	
<b>Topic Chairs</b>		Louisa Gossé, Fen Zhang, Maheen Siddiqui, Ali Rahimpour		
13.00	225	<b>Laura Caron-Desrochers</b> , Natacha Paquette, Phetsamone Vannasing, Julie Tremblay, Cassandra Roger, Sarah Provost, Solène Fourdain, Alejandra Hüsser, Laurence Petitpas, Judith Gervain, Isabelle Boucoiran, Catherine Taillefer and Anne Gallagher	Prenatal exposure to an unfamiliar language: A facilitation or competition effect for the newborn's brain linguistic processing?	
13.10	33	<b>Victoria Dumont</b> , Martina Giovannella, Daniel Zuba, Régis Clouard, Turgut Durduran, Bernard Guillois and Nadege Roche-Labarbe	Prediction of tactile stimuli in the premature newborn brain	
13.20	69	<b>Borja Blanco</b> , Monika Molnar, Irene Arrieta, César Caballero-Gaudes and Manuel Carreiras	Hemodynamic Correlates of Speech Processing Using fNIRS: Assessing the Effect of Bilingualism in Young Infants	
13.30	247	<b>Jie Ren</b> , Lin Cai, Gaoding Jia and Haijing Niu	Cortical Lateralization in Young Infants' Lexical Tone Perception	
13.40	122	<b>Sabrina Di Leonardo Burr</b> , Haykaz Mangardich, Laura Pirazzoli, Abby Magee, Anna Herbolzheimer, Sara Sanchez-Alonso, Benjamin Zinszer, Adam Eggebrecht, Richard Aslin, Charles Nelson, Vikranth Bejjanki and Lauren Emberson	Increased task-based connectivity across development in a social cognition task: Links to developmental outcomes?	
13.50	13	<b>Sobana Wijekumar</b> , Christina Davidson, Courtney McKay, Eva Rafetseder and Yee Lee Shing	An early start to schooling is associated with improvements in vocabulary and visual working memory.	
14.00	228	<b>Anastasia Kerr-German</b> , Stuart White, August Namuth, Jaylin Tuman and Chanelle Gordon	Attention in Toddlers is Related to Individual Differences in Executive Functioning and Parental Risk for Attention Deficits	
14.10	246	<b>Xinge Li</b> , Rebecca Lipschutz, Samuel Montero Hernandez, Brian Biekman, Shutian Shen, Diana Montgomery, Susan Perlman, Luca Pollonini and Johanna Bick	Links Between Socio-Economic Disadvantage, Neural Function, and Working Memory in Early Childhood	
14.20	110	<b>Lisanne Schroer</b> , Paola Pinti, Richard Cooper and Denis Mareschal	Preschoolers' prefrontal cortex activation in action sequence planning in a naturalistic situation	
14.30	22	<b>Trinh Nguyen</b> and Stefanie Hoehl	Neural responses to touch in naturalistic mother-infant interactions	
14.40	45	<b>Chiara Bulgarelli</b> , Anna Blasi, Clare E. Elwell and Sarah Lloyd-Fox	Neural Correlates of social perception between 5 and 24 months in Gambian infants: a longitudinal investigation	
14.50	106	<b>Laura Pirazzoli</b> , Eileen Sullivan, Wanze Xie, John Richards, Rashidul Haque, William Petri and Charles Nelson	Association of psychosocial adversity and social information processing in urban Bangladeshi children: a fNIRS study	
15.00		<b>Social Gathering &amp; Poster Session Assembly I</b>		Gathertown
16.00		<b>Social Media Workshop</b> by Louisa Gossé, Maheen Siddiqui   <b>Industry vs Academia Workshop</b> by Androu Abdalmalak		
16.30		<b>Sponsor Booths</b>		

# ORAL SESSION II, 18th Oct (/19th Oct)

## fNIRS in Cognitive and Social Interactions Neuroscience Research

GMT time	Los Angeles	Boston	London	CET	Beijing	Tokyo	Sydney
20.30	13.30	16.30	21.30	22.30	4.30	5.30	6.30



GMT time	Abstract #	Presenter (in bold) and Authors	Title	Location
20.30		<b>Invited Talk by Sotaro Shimada</b> , chaired by Adam Noah		Zoom
<b>Topic Chairs</b>		Adam Noah, Zhishan Hu		
21.00	131	<b>James Crum</b> , Paul Burgess, Paola Pinti, Ilias Tachtsidis and Antonia Hamilton.	Prefrontal cortical activation associated with prospective memory while walking around a real world street environment	
21.10	100	<b>Vanessa Reindl</b> , Sam Wass, Victoria Leong, Wolfgang Scharke, Sandra Wistuba, Christina Lisa Wirth, Kerstin Konrad and Christian Gerloff.	Does mother-child neural synchrony go beyond synchrony in arousal and behavior? Findings from fNIRS-ECG hyperscanning	
21.20	185	<b>Uzair Hakim</b> , Adam Noah, Xian Zhang, Paola Pinti, Antonia Hamilton, Joy Hirsch and Ilias Tachtsidis.	Trans-Atlantic Hyperscanning: Online Neuroscience	
21.30	36	<b>Simon H. Kohl</b> , Michael Lührs, Pia Melies, Johannes Uttecht, Laura Bell, Shivakumar Viswanathan and Kerstin Konrad.	Modulation of Temporoparietal Junction Activity by fNIRS-based Neurofeedback	
21.40	203	<b>Joy Hirsch</b> , Aishwarya Bhattacharya, Xian Zhang and Adam Noah.	A Neural Complex for Emotion-Contagion: An fNIRS Hyperscanning Investigation	
21.50	60	<b>Robert Luke</b> , Maureen Shader, Amanda Fullerton, Ryssa Moffat, Lindsey Van Yper and David McAlpine.	Utilising functional near-infrared spectroscopy to investigate audition	
22.00	21	<b>Yumie Ono</b> , Xian Zhang, J. Adam Noah, Swethasri Dravida and Joy Hirsch	Detection of Hemodynamic Directional Connectivity with fNIRS: Simulation and Application to Verbal Communication Network	
22.10	20	<b>Deborah Talamonti</b> , Thomas Vincent, Sarah Fraser, Anil Nigam, Frederic Lesage and Louis Bherer.	The benefits of physical activity in individuals with cardiovascular risk factors: A longitudinal investigation using fNIRS and dual-task walking	
22.20	230	<b>Leah Brainin</b> , Kevin Stubbs and Marc Joanisse.	Shedding light on language learning: Neural correlates of vocabulary vs. grammar learning and processing	
22.30	190	<b>Kenta Nakazawa</b> , Kiyomitsu Nioka, Kazue Hirabayashi, Keith Duncan and Ipppeita Dan.	Evaluation of functional impulsivity of consumers with fNIRS	
22.40	23	<b>Jiahong Cui</b> , Daisuke Sawamura, Satoshi Sakuraba, Yoshinobu Tanabe, Hiroshi Miura, Masaaki Sugi, Kazuki Yoshida, Ryuji Saito, Akihiro Watanabe, Yukina Tokikuni, Susumu Yoshida and Shinya Sakai.	Interfering Effect of Cross-modal Conflict During Working Memory Task: A Near-infrared Spectroscopy Study	
22.50	173	<b>Gaoding Jia</b> , Guangfang Liu and Haijing Niu.	Independence hemispheric specialization for language production and visuospatial attention: evidence from fNIRS imaging	
23.00		<b>Poster Session Assembly II</b>		Gathertown

# POSTER SESSION, 18th Oct (/19th Oct)

## ASSEMBLY I

GMT time	Los Angeles	Boston	London	CET	Beijing	Tokyo	Sydney
15.00	8.00	11.00	16.00	17.00	23.00	0.00	1.00

## ASSEMBLY II

GMT time	Los Angeles	Boston	London	CET	Beijing	Tokyo	Sydney
23.00	16.00	19.00	0.00	1.00	7.00	8.00	9.00

	Abstract #	Authors	Title	Presenter Availability
fNIRS in Neurodevelopment Research	14	Jessica Gemignani, Anna Martinez-Alvarez, Caroline Nallet, Lucie Martin, Alessia Pasquini, Judit Gervain and Irene de la Cruz-Pavia	A meta-analysis of fNIRS studies on infants' detection of repetition and diversity-based regularities in speech	Assembly I
	19	Abigail Fiske, Carina de Klerk, Katie Y. K. Lui, Liam Collins-Jones, Alexandra Hendry, Isobel Greenhalgh, Anna Hall, Gaia Scerif, Henrik Dvergsdal and Karla Holmboe	The neural correlates of inhibitory control in 10-month-old infants: a functional near-infrared spectroscopy study	Assembly I
	26	Sori Baek, Sabrina Marques, Kennedy Casey, Meghan Testerman, Felicia McGill and Lauren Emberson	Attrition Rate in Infant fNIRS Research: A Meta-Analysis	Assembly I
	168	Hollis Heim, Kara Lowrey, Rachel Eddings, Bhoonika Nikam, Anastasia Kerr-German and Aaron Buss	Neural activation during dimensional label learning predicts performance in dimensional attention tasks	Assembly I
	53	Claudio Ferre, Carmina Erdei, Meryem Yücel and Nathalie Maitre	Trajectories of Brain Development in Infants at Risk for Cerebral Palsy: an fNIRS Study of Motor and Sensory Function	Assembly I & II
	72	Christina Artemenko	Developmental fronto-parietal shift of brain activation during mental arithmetic across the lifespan	Assembly I
	137	Borja Blanco, Anna Blasi, Sam McCann, Clare Elwell and Sarah Lloyd-Fox	Cortical Specialisation to Vocal and Non-Vocal Auditory Stimuli in 1-Month-Old Infants: UK and The Gambia	Assembly I
	107	Laura Pirazzoli, Eileen Sullivan, Wanze Xie, John Richards, Rashidul Haque, William Petri and Charles Nelson	Impact of stunting on fNIRS resting state functional connectivity in Bangladeshi children	Assembly I & II
fNIRS in Clinical Applications	27	John Sunwoo, Alexander I. Zavriyev, Kutlu Kaya, Zachary Starkweather, Tina Steele, Deborah Cuddyer, Terrie Inder, Maria Angela Franceschini and Mohamed El-Dib	Non-invasive Assessment of Cerebral Autoregulation in Extremely Low Gestational Age Infants via Diffuse Correlation Spectroscopy	Assembly I & II
	15	Androu Abdalmalak, Sergio Novi, Karnig Kazazian, Loretta Norton, Tatiana Benaglia, Rickson Mesquita, Derek Debicki and Adrian Owen	Investigating the Feasibility of fNIRS to Detect Higher-Order Brain Activity During Auditory Tasks	Assembly I & II
	76	Zhili Chen and Yuanxiang Lin	Prefrontal changes in patients with trigeminal neuralgia measured by functional near infrared spectroscopy (fNIRS)	Assembly I
	99	Stella Avtzi, Cristina Udina, Lisa Kobayashi Frisk, Clara Gregori-Pla, Veronika Parfentyeva, Carmina Castellano-Tejedor, Marco Inzitari and Turgut Durduran	A mild orthostatic challenge reveals altered cerebral blood flow response between younger and older adults with and without mild cognitive impairment	Assembly I
	144	Lindsay Butler, Meredith Pecukonis, Helen Tager-Flusberg, David Boas and Meryem Yücel	Left dorsolateral PFC activation during inhibitory control for phonologically but not semantically related words	Assembly I & II
	158	Akihiro Kumagai, Tatsuya Tokuda, Kiyomitsu Niioka, Ippeita Dan, Michihiko Koeda and Mahito Kimura	Classifying Depressed Patients with Autistic-like Traits among Subjects Using fNIRS Data and Machine Learning	Assembly I & II
	253	Arun Karumattu Manattu, Jordan Borrell, Christopher Copeland, Kaitlin Fraser and Jorge Zuniga	Resting State Cortical Connectivity Changes Due to Short-Term Immobilization of Upper Limb: An fNIRS Case Study	Assembly I
	256	Lilian M N Kebaya, Kevin Stubbs, Paige Meyerink, Keith St Lawrence, Sandrine De Ribaupierre and Emma G Duerden	Imaging Brain Growth in Preterm neonates with intraventricular hemorrhage	Assembly I
143	Jordan Borrell, Christopher Copeland, Jessica Lukaszek, Kaitlin Fraser and Jorge Zuniga	Use-Dependent Prosthesis Training Strengthens Contralateral Hemodynamic Brain Responses in a Young Adult With Upper Limb Reduction Deficiency: A Case Report	Assembly I	
Multimodal Measurements	74	Hamoon Zohdi, Felix Scholkmann and Ursula Wolf.	Cerebral oxygenation and systemic physiological changes during a verbal fluency task: Differences between men and women	Assembly I
	169	Andrew Lapointe, Joel Burma, Jamey Loewen, Kailey Newel, Jessica Ritchie, Rachel Vitali, Ateyeh Soroush, Ibukunoluwa Oni and Jeff Dunn.	Theoretical and practical considerations implementing a quadmodal imaging protocol to assess concussion.	Assembly I & II
fNIRS in Cognitive and Social Interactions Neuroscience Research	39	Ingo Helmich, Sophie Mueller, Robert Rein and Hedda Lausberg.	Left hemispheric correlates of action depicting gestures	Assembly I
	123	Jung Han Shin, Min Jun Kang and Sang Ah Lee.	Neural Dynamics in the Subregions of the Lateral Prefrontal Cortex During Working Memory as Captured by fNIRS	Assembly I
	160	Kazuma Okamoto, Kiyomitsu Niioka, Sho Naganawa, Ayako Mukoyama, Tatsuya Tokuda and Ippeita Dan.	Functional connectivity during subjective assessment of audio quality: An fNIRS study	Assembly I & II
	166	Sabino Guglielmini, Gino Bopp, Valentine L. Marcar, Felix Scholkmann and Martin Wolf.	Looking at each other causes entrainment of spontaneous activity of the brain and body physiology between subjects: A systemic physiology augmented functional near-infrared spectroscopy (SPA-fNIRS) hyperscanning study	Assembly I
	188	Hiroki Oishi, Kiyomitsu Niioka, Kenta Nakazawa, Tomoki Takahashi and Ippeita Dan.	Examination of cognitive mechanism related to the IKEA effect: an fNIRS study	Assembly I
	202	Emily J. Braun, Yuanyuan Gao, Erin Carpenter, Manuel J. Marte, Michael Scimeca, Fatemeh Abdollahi, Meryem A. Yücel, David A. Boas and Swathi Kiran.	Use of fNIRS to investigate cortical activation for conversational responses and narrative discourse	Assembly I & II
	152	Zhishan Hu, Xiujuan Qu, Lexuan Li, Ying Han and Haijing Niu	Repeated Photobiomodulation Reduces Brain Activity of Healthy Older Adults During Working Memory	Assembly I
	207	Rens E. Burghardt, Iris H.Y. Ng, Kathy Y.S. Lee, Patrick C.M. Wong and Michael C.F. Tong	Neuroplasticity underlies improved speech in noise comprehension following a gamified training app	Assembly I & II
	Data Analysis / Signal Processing / AI	29	Lingkai Tang, Keith St. Lawrence and Emma Duerden	Artificial Neural Networks to Predict Cortical-subcortical Connectivity from Cortical fNIRS Recordings
	83	Sergio Luiz Novi Junior, Edwin J. Forero, Jose A. Rubianes Silva, Nicolas Gabriel Santana, Giovani Grisotti Martins, Andres Quiroga, Shin Ting Wu and Rickson Coelho Mesquita	Addition of anatomical information increases fNIRS reproducibility	Assembly I & II
	248	Alejandra Rocha-Solache and Felipe Orihuela-Espina	The Lorentzian cubinder: a manifold to support analysis of effective connectivity in fNIRS	Assembly I & II

	186	<i>Uzair Hakim, Paola Pinti, Adam Noah, Xian Zhang, Paul Burgess, Antonia Hamilton, Joy Hirsch and Ilias Tachtsidis</i>	Hyperscanning Methods in Neuroscience: A Systematic Review	Assembly I
	210	<i>Yuanyuan Gao, De'Ja Rogers, Alexander von Lühmann, Antonio Ortega-Martinez, David Boas and Meryem A. Yücel</i>	Short separation generalized linear model (GLM) based image reconstruction of functional near-infrared spectroscopy (fNIRS) data	Assembly I & II
	82	<i>Astasia Grootaers, Bettina Sorger and Michael Lührs</i>	Elaborating fNIRS Recording Guidelines: Optimizing Signal Quality Concerning Motion Artifacts	Assembly I & II
	212	<i>Xian Zhang, Adam Noah and Joy Hirsch</i>	Choice of signal and global component removal for fNIRS analysis	Assembly I & II
<b>Hardware Development</b>	85	<i>Marco Renna, Adriano Peruch, Kuan Cheng Wu, John Sunwoo and Maria Angela Franceschini</i>	A skin-contact sensor for biomedical devices based on capacitive sensing and flexible PCBs	Assembly I
	41	<i>Rebecca Re, Ileana Pirovano, Eliana Colonna, Davide Contini, Alessandro Torricelli and Lorenzo Spinelli</i>	Time domain fNIRS device with high power: towards fast acquisitions	Assembly I
	236	<i>Guy Perkins and Hamid Dehghani</i>	Using multi modulation frequency measurements in frequency domain high density diffuse optical tomography on an inhomogeneous phantom	Assembly I & II
<b>OTHER</b>	32	<i>Ali Rahimpour Jounghani, Luca Pollonini, Daniel Comstock, Ramesh Balasubramaniam and Heather Bortfeld</i>	The Effect of Study Design Context on Timing Behavior and Cortical Brain Activation: fNIRS Alternating vs. Block Study Design	Assembly I & II
	150	<i>Lenaic Borot and Simon Bennett</i>	Now where was I? The changing role of prefrontal cortex during smooth pursuit eye movement: an fNIRS study.	Assembly I

# ORAL SESSION I, 19th Oct

## fNIRS Standards Special Session



GMT time	Los Angeles	Boston	London	CET	Beijing	Tokyo	Sydney
13.00	6.00	9.00	14.00	15.00	21.00	22.00	23.00

GMT time	Abstract #	Presenter (in bold) and Authors	Title	Location
		Ali Rahimpour, Paola Pinti, Jessica Gemignani		
13.00		<b>Alessandro Torricelli</b>	Standardization of new hardware development	Zoom
13.15		<b>Luca Pollonini</b>	Standardization of data formats, sharing and streaming	
13.30		<b>Felix Scholkmann</b>	Standardization of methodological procedures	
13.45		<b>Meryem Ayşe Yücel</b>	Best practices for fNIRS publications	
14.00		Panel Discussion		
15.00		Poster Session Assembly I		Gathertown

# ORAL SESSION II, 19th Oct (/20th Oct)

## Hardware Development



GMT time	Los Angeles	Boston	London	CET	Beijing	Tokyo	Sydney
20.30	13.30	16.30	21.30	22.30	4.30	5.30	6.30

GMT time	Abstract #	Presenter (in bold) and Authors	Title	Location
20.30		<b>Invited Talk by Maheen Siddiqui, chaired by Frédéric Lange</b>		Zoom
		Rebecca Re, Frédéric Lange		
21.00	209	<b>Caterina Amendola, Marta Zanoletti, Lorenzo Cortese, M. Atif Yaqub, Mauro Buttafava, Talyta Carteano, Luc Demarteau, Lorenzo Frabasile, Claudia Nunzia Guadagno, Tijl Houtbeckers, Umut Karadeinz, Michele Lacerenza, Jaume Mesquida, Rainer Rother Muñoz, Shahrzad Parsa, Eduardo Garrido Sagarzazu, Sanathana Konugolu Venkata Sekar, Jakub Tomanik, Alessandro Torricelli, Alberto Tosi, Udo M. Weigel, Tessa Wagenaar, Davide Contini and Turgut Durduran.</b>	Hybrid DCS and TD-NIRS device for monitoring endothelial health in COVID-19 patients	
21.10	239	<b>Neda Mogharari, Saeed Samaei, Stanislaw Wojtkiewicz, Adam Lieberta and Michal Kacprzaka</b>	Characterization of liquid phantoms using a hybrid diffuse optical system	
21.20	213	<b>Michele Lacerenza, Alessandro Torricelli, Alberto Tosi, Davide Contini, Alberto Dalla Mora, Antonio Pifferi, Franco Zappa and Mauro Buttafava</b>	Compact system for straightforward TD-NIRS measurements: performance and reproducibility across multiple device replicas	
21.30	249	<b>Ryan M. Field, Kernel Flow Team</b>	Kernel Flow TD-fNIRS characterization protocol results	
21.40	97	<b>Alper Kiliç, Yun Miao and Valencía Joyner Koomson</b>	A Miniaturized Frequency Domain Near Infrared Spectroscopy Instrument for Absolute Tissue and Cerebral Oximetry	
21.50	233	<b>Guy Perkins and Hamid Dehghani</b>	Frequency domain near infrared spectroscopy and high density diffuse optical tomography improves quantitative accuracy	
22.00	260	<b>Frederic Lange, Paola Pinti, Maheen Siddiqui, Andrew Levy and Ilias Tachtsidis</b>	A multi-channel broadband NIRS instrument to image the hemodynamic and metabolic state of the toddler's brain	
22.10	245	<b>Joe O'Brien, Bernhard Zimmerman, Antonio Martinez, Robert Bing, Parya Farzam, De'Ja Rogers, Alexander von Lühmann and David Boas</b>	NinjaNIRS 2021: Progress towards whole head, high density fNIRS	
22.20	238	<b>Hubin Zhao, Elisabetta Maria Friji, Ernesto Vidal Rosas, Liam Collins-Jones, Greg Smith, Reuben Nixon-Hill, Samuel Powell, Nicholas L. Everdell and Robert J. Cooper</b>	Advances in Development of a New Wearable, Modular, Neonatal-Specific High-Density Diffuse Optical Tomography Technology	
22.30	165	<b>Morris Vanegas, Miguel Mireles, Meryem Yücel and Qianqian Fang</b>	In-Vivo Validation of Flexible-Circuit-Based, Diamond-Shaped, 3D-Aware Modular fNIRS System	
22.40	44	<b>Kuan-Cheng Wu, Davide Tamborini, Marco Renna, Adriano Peruch, Yujing Huang, Alyssa Martin, Kutlu Kaya, Zack Starkweather, Alexander Zavriyev, Stefan Carp, David Salat and Maria Angela Franceschini</b>	Realization and validation of a low-cost wireless cerebral oximeter using multi-distance method and Bluetooth Low Energy	
22.50	223	<b>Chen-Hao Lin, Inema Orukari, Lisa Frisk, Manish Verma, Sumana Chetia, Adam Eggebrecht, Turgut Durduran, Joseph Culver and Jason Trobaugh</b>	Simulation of Speckle Contrast Optical Tomography for Cerebral Blood Flow Imaging in a Human Head	
23.00		Poster Session Assembly II		Gathertown

# POSTER SESSION, 19th Oct (/20th Oct)

## ASSEMBLY I

GMT time	Los Angeles	Boston	London	CET	Beijing	Tokyo	Sydney
15.00	8.00	11.00	16.00	17.00	23.00	0.00	1.00

## ASSEMBLY II

GMT time	Los Angeles	Boston	London	CET	Beijing	Tokyo	Sydney
23.00	16.00	19.00	0.00	1.00	7.00	8.00	9.00

	Abstract #	Authors	Title	Presenter Availability
fNIRS in Neurodevelopment Research	180	Jessica Gemignani and Judit Gervain	Changes in the localization of functional activation to repetition sequences in infants across fNIRS studies	Assembly I & II
	149	Baojun Lai, Aiwen Yi, Fen Zhang, Suiping Wang, Jing Xin, Suiping Li and Luodi Yu	Exploring the linguistic correlates of atypical brain lateralization for speech processing in children with autism spectrum disorder	Assembly I
	170	Aaron Buss, Kara Lowery, Rachel Eddings and Bhoomika Nikam	The early differentiation of spatial attention, dimensional attention, and inhibitory control	Assembly I & II
	201	Ashley Miller, Kara Lowery and Aaron Buss	Examining the relationship between vocabulary and neurocognitive measures of executive function	Assembly II
	215	Allison Hancock, Christopher Warren, Carla Orellana, Guoqin Ding and Ronald Gillam	Investigating Working Memory in Children With and Without Developmental Language Disorders	Assembly II
	47	Laura Katus, Anna Blasi, Sam McCann, Luke Mason, Ebrima Mbye, Ebou Touray, Mohammed Ceasay, Michelle de Haan, Sophie Moore, Clare Elwell and Sarah Lloyd-Fox	Longitudinal fNIRS and EEG reveal parallel developmental trajectories of habituation and novelty detection in 1 to 18-month-old infants in rural Gambia	Assembly I
fNIRS in Clinical Applications	261	Maheen Siddiqui, Chiara Bulgarelli, Paola Pinti, Sarah Lloyd-Fox, Emily Jones, Ilias Tachtsidis, Mark H. Johnson and Clare Elwell	Effective metabolic and hemodynamic connectivity in the developing brain	Assembly I
	52	Gihyoun Lee, Jungsoo Lee, Jinuk Kim, Heegoo Kim, Seyoung Shin and Yun-Hee Kim	Brain Network Analysis of Cortical Hemodynamic Response during HD-tDCS in Chronic Stroke: An fNIRS Study	Assembly I & II
	55	Vidhya Vijaykrishnan Nair, Brianna Kish, Ho-Ching Yang, Zhenyang Yu, Hang Guo and Yunjie Tong	Monitoring Anesthesia using Simultaneous Functional Near-Infrared Spectroscopy and Electroencephalography	Assembly II
	56	Carmen Alicia Carabali Carabali, Hamish Innes-Brown, Luke Robert, Soren Kamaric Riis and Colette McKay	Assessment of Neuronal and Systemic Components of fNIRS as Markers of Listening Effort	Assembly I & II
	71	Lisa Kobayashi Frisk, Jonas B. Fischer, Izaksun Belmonte Jimeno, Anna Bosch de Basea Gomez, Marta Navarro Roman, Manel Pérez Marin, Anabel Alba Pérez, Clara Gregori-Pla, Udo M. Weigel, Daniel Guisado Alonso, Joan Martí Fàbregas, Raquel Delgado Mederos and Turgut Durduran	Novel biomarkers for the prognosis of neurological deterioration - towards individualized post stroke physiotherapy regimens	Assembly I
	94	Veronika Parfentyeva, Jonas Fischer, Giacomo Giacalone, Ameer Ghouse, Wesley Baker, Udo Weigel and Turgut Durduran	Effect of controlled breathing and hypocapnia on cerebral hemodynamics and vascular parameters during head-of-bed position changes	Assembly I
	102	Renata Prôa, Joana Balardin, Danilo de Faria, Artur Paulo, João Sato, Carlos Baltazar, Vanderci Borges, Sonia Azevedo Silva, Henrique Ferraz and Patricia de Carvalho Aguiar	Motor Cortex Activation During Writing in Focal Upper-Limb Dystonia: An fNIRS Study	Assembly I & II
	117	Maaik Van Eeckhoutte, Anaïs Bouchet, Erik Kjærbøl and Abigail Kressner	Reliability of functional near-infrared spectroscopy responses to auditory stimulation	Assembly I
	124	Hikari Tanaka, Tatsuya Tokuda, Takahiro Ikeda, Masako Nagashima, Takanori Yamagata, Ippeita Dan and Yukifumi Monden	Neuroimaging-aided prediction of the effect of methylphenidate for ADHD children with machine learning	Assembly I
	132	James Crum, Xian Zhang, Adam Noah, Antonia Hamilton, Paul Burgess and Joy Hirsch	Neuroimaging interpersonal interactions in mental health interventions: A new direction	Assembly I
Multimodal Measurements	104	Caterina Amendola, Alessandra Calcagno, Rebecca Re, Ileana Pirovano, Davide Contini, Lorenzo Spinelli, Ricardo Couceiro, João Durães, Raul Barbosa, Paulo de Carvalho, Henrique Madeira, Anna Maria Bianchi and Alessandro Torricelli.	Brain activations during programming tasks	Assembly II
	140	Anne Josset, Charly Caredda, Eric Van-Reeth, Laurent Mahieu-Williams, Raphaël Sablong, Michaël Sdika, Fabien Schneider, Jacques Guyotat and Bruno Montcel.	Comparison of intraoperative functional brain map obtained with RGB imaging with preoperative functional brain map obtained with functional magnetic Resonance imaging	Assembly I
fNIRS in Cognitive and Social Interactions Neuroscience Research	133	James Crum, Isla Jones, Antonia Hamilton, Ilias Tachtsidis, Paul Burgess and Flaminia Ronca	Region-specific changes in prefrontal cortex hemodynamics underpin exercise-related improvements to executive functions	Assembly II
	57	Ryssa Moffat, Deniz Başkent, Robert Luke, David McAlpine and Lindsey van Yper.	Cortical responses to vocal emotions with attenuated voice pitch variation measured with fNIRS	Assembly II
	61	Rihui Li, Naama Mayseless and Allan Reiss.	Dynamic Inter-Brain Synchrony in Real-life Inter-Personal Cooperation: a fNIRS Hyperscanning Study	Assembly I
	90	Isla Jones, Nick Tyler, Ilias Tachtsidis and Antonia Hamilton.	fNIRS measures of cognitive load in dynamic real-world tasks	Assembly I
	136	Aahana Bajracharya, Arefeh Sherafati, Joseph P. Culver and Jonathan E. Peelle.	Measuring Hierarchical Cortical Responses to Narrative Speech Using High-Density Diffuse Optical Tomography (HD-DOT)	Assembly I & II
	141	Helga O. Miguel, Emma E. Condy, Thien Nguyen, Selin Zeytinoglu, Kosar Khaksari, Hadis Dashtestani, Nathan A. Fox and Amir Gandjbakhche.	Cerebral hemodynamic response during a live action-observation and action-execution task: a fNIRS study	Assembly I
	174	Xiujuan Qu and Haijing Niu.	Transcranial photobiomodulation of the prefrontal cortex modulates working memory performance and brain network organization	Assembly I & II
	176	Kulpreet Cheema, Thi Huynh, Bill Hodgetts and Jacqueline Cummine.	Neural and Behavioural Outcomes of Interventions in Adults with Dyslexia	Assembly II
	204	Tao Buck, Courtney DiCocco, Jennifer L. Cuzzocreo, Adam Noah, Xian Zhang and Joy Hirsch	Cortical Specialization for Social Touch	Assembly II
	54	Hanieh Mohammadi Mohammadi, Sarah Fraser, Anil Nigam and Louis Bherer	Physical Activity Reduces Cerebral Pulsatility Index and is Associated with Improving Cognitive Functions in Older Adults: A Longitudinal fNIRS Study	Assembly I & II

<b>Data Analysis / Signal Processing / AI</b>	42	<i>Mehrin Kiani, Javier Andreu-Perez, Hani Hagra, Maria Laura Filippetti and Silvia Rigato</i>	xMVPA: An Explainable Analysis for fNIRS data	Assembly I & II
	112	<i>Anna Herbolzheimer, Benjamin Zinszer, Richard Aslin, Laurie Bayet, Vikranth Rao Bejjanki, Alexis Black, Jennifer Jaime, Claire Kabdebon, Ananya Mittal, Claire Robertson, Alice Wang, Naiqi Xiao and Lauren Emberson</i>	What is the Best Analytic Approach for Decoding in Adult fNIRS?	Assembly I
	196	<i>Felipe Orhueela-Espina, Bibiana Cuervo-Soto and Javier Herrera-Vega</i>	What does the coordinate basis of processing operations tell us about quality? Theoretical considerations for the pipeline	Assembly I
	146	<i>Pradyumna Lanka, Theodore Huppert and Heather Bortfeld</i>	Effective correction of physiological noise and head motion artifacts with resting-state fNIRS data	Assembly I & II
	88	<i>Hammad Nazeer, Noman Naseer, Aakif Mehboob and Muhammad Jawad Khan</i>	Identifying Cortically Active Channels Using the z-score Method for fNIRS-BCI System	Assembly I
	179	<i>Dmitry Patashov, Yakir Menachem, Yoshinari Kameda, Dmitry Goldstein and Michal Balberg</i>	Detrending fNIRS Data Using the Cumulative Curve Fitting Approximation	Assembly I & II
	159	<i>Hila Gvirts, Mini Sharma, Itai Guttman, Anat Dahan, Yafeng Pan, Jacqueline Stotler and Tessa Wilcox</i>	A new framework for understanding cross-brain coherence in fNIRS hyperscanning studies	Assembly I
	138	<i>Maria Sofia Sappia, Naser Hakimi, Jörn Martin Horschig and Willy N.J.M. Colier</i>	Signal quality index algorithms for fNIRS signal quality assessment	Assembly I
	227	<i>David Perpetuini, Chiara Filippini, Sergio Nocco, Lorenza Mancini, Antonella Pomante, Michele Tritto, Daniela Cardone and Arcangelo Merla</i>	Driver Cognitive Workload Estimation through a supervised machine learning approach based on fNIRS.	Assembly I
<b>Hardware Development</b>	101	<i>Weihaio Fan, Hamid Dehghani and Adam Eggebrecht</i>	Investigation of Modulation Frequency Improvements on the Image Quality of High Density Diffuse Optical Tomography	Assembly I & II
	70	<i>Borja Blanco, Julie Uchitel, Liam Collins-Jones, Ernesto Vidal and Robert Cooper.</i>	Precision Functional Mapping of an Individual Human Brain Using Wearable HD-DOT	Assembly I
	67	<i>M. Atif Yaqub, Marta Zanoletti, Lorenzo Cortese, Umut Karadeniz, Ameer Ghouse, Udo M. Wiegel, Jonas B. Fischer and Turgut Durduran</i>	An Integrated Sensor Platform for Improved Laser Safety and Data Quality for Functional Near-Infrared and Diffuse Correlation Spectroscopy Probes	Assembly I
<b>OTHER</b>	206	<i>Homa Vahidi, Guy Rens, Kevin Stubbs, Derek Quinlan, Bettina Sorger and Jody C. Culham</i>	Using Functional Near-Infrared Spectroscopy for the Study of Naturalistic Hand Actions	Assembly I & II
	251	<i>Cameron Owens, Tamas Csipo, Agnes Lipecz, Dhay Bahadli, Stefano Tarantini, Judith James, Anna Csiszar, Zoltan Ungvari, Jeremy Kellawan, Andriy Yabluchanskiy and Peter Mukli</i>	Increased cognitive workload evokes greater neurovascular coupling responses in healthy young adults	Assembly II

# ORAL SESSION I, 20th Oct

## Hardware Special Session: From Neuroscience to Neuromancer



GMT time	Los Angeles	Boston	London	CET	Beijing	Tokyo	Sydney
13.00	6.00	9.00	14.00	15.00	21.00	22.00	23.00

GMT time	Abstract #	Presenter (in bold) and Authors	Title	Location
<b>Topic Chairs</b>		Joe Culver, Rebecca Re, Frédéric Lange		
13.00		<b>Joe Culver</b>	Theme and Overview	Zoom
13.10		<b>Rob Cooper</b>	Is wearable HD-DOT the coming-of-age of fNIRS, and if so, what's next?	
13.30		<b>Stefan Carp</b>	Perfusion based functional imaging	
13.50		<b>Katherine Perdue</b>	Neurotech for individual benefit	
14.10		<b>Rebecca Re</b>	fNIRS hardware: highlights from the hardware session TOPIC6	
14.20		Panel Discussion		
15.00	<b>Poster Session Assembly I</b>			Gathertown

# ORAL SESSION II, 20th Oct (/21st Oct)

## Data Analysis / Signal Processing / AI



GMT time	Los Angeles	Boston	London	CET	Beijing	Tokyo	Sydney
20.30	13.30	16.30	21.30	22.30	4.30	5.30	6.30

GMT time	Abstract #	Presenter (in bold) and Authors	Title	Location
20.30		<b>Invited Talk by Jessica Gemignani</b> , chaired by Paola Pinti	Analysing infant fNIRS data with linear classifiers: the impact of data characteristics on performances	Zoom
<b>Topic Chairs</b>		Jessica Gemignani, Paola Pinti, Hiroshi Kawaguchi		
21.00	80	<b>Franziska Klein</b> , Amaia Benitez-Andonegui, Michael Lührs, Pauline Roehn and Cornelia Kranczioch	First Steps Towards a Validation of Online Systemic Activity Correction Methods in fNIRS With and Without Short Distance Channels	
21.10	103	<b>Christian Gerloff</b> , Kerstin Konrad, Danilo Bzdok, Christina Buesing and Vanessa Reindl	Network based inference and prediction for interacting brains	
21.20	229	<b>Ernesto Elias Vidal Rosas</b> and Robert J. Cooper	To regress or not to regress? Analysis of short-separation channel regression in high-density diffuse optical tomography (HD-DOT)	
21.30	208	<b>Emanuele Russomanno</b> , Alexander Kalyanov, Jingjing Jiang and Martin Wolf	Effects of a range of head tissues optical properties on near-infrared spectroscopy	
21.40	113	<b>Johann Benerradi</b> , Jeremie Clos, Aleksandra Landowska, Michel F. Valstar and Max L. Wilson	Benchmarking Framework for Machine Learning with fNIRS	
21.50	194	<b>Andrew Levy</b> , Paola Pinti, Maheen Siddiqui, Frederic Lange, Karl Friston and Ilias Tachtsidis	Metabolic measures of repetition suppression – An event-related broadband near-infrared spectroscopy study	
22.00	142	<b>Candida Barreto</b> , Gullherme Bruneri, Guilherme Brockington, Hasa Ayaz and Joao Ricardo Sato	Can teacher's hemodynamics responses predict student's during an interaction task?	
22.10	11	<b>Androu Abdalmalak</b> , Sergio Novi, Karnig Kazazian, Loretta Norton, Olivia Mercier, Tatiana Benaglia, Marat Slessarev, Derek Debicki, Keith St. Lawrence, Rickson Mesquita and Adrian Owen	Effects of Systemic Physiology on fNIRS-based Resting-State Functional Connectivity	
22.20	145	<b>Zhengchen Cai</b> , Giovanni Pellegrino, Jean-Marc Lina and Christophe Grova	Robust Bayesian Gaussian Process for Hemodynamic Response Function Deconvolution and Stimulus Amplitude Decoding	
22.30	155	<b>Jasmine Chan</b> , Murtadha Hssayeni, Teresa Wilcox and Behnaz Ghorraani	Tensor Decomposition as a Method to Analyze fNIRS Data	
22.40	198	<b>Adam Noah</b> , Xian Zhang, Swethasri Dravida, Courtney DiCocco, Tatsuya Suzuki, Richard Aslin, Ilias Tachtsidis and Joy Hirsch	Comparison of Short-Channel Separation and Spatial Filtering for Removal of Non-Neural Components in Functional Near-infrared Spectroscopy Signals	
22.50	135	<b>Antonio Ortega-Martinez</b> , Alexander von Lühmann, David Boas and Meryem A. Yücel	Properly tuned multivariate Kalman filter outperforms real-time regression over the recursive least-squares general linear model	
23.00	<b>Poster Session Assembly II</b>			Gathertown



# POSTER SESSION, 20th Oct (/21st Oct)

## ASSEMBLY I

GMT time	Los Angeles	Boston	London	CET	Beijing	Tokyo	Sydney
15.00	8.00	11.00	16.00	17.00	23.00	0.00	1.00

## ASSEMBLY II

GMT time	Los Angeles	Boston	London	CET	Beijing	Tokyo	Sydney
23.00	16.00	19.00	0.00	1.00	7.00	8.00	9.00

	Abstract #	Authors	Title	Presenter Availability
fNIRS in Neurodevelopment Research	46	Chiara Bulgarelli, Adam T. Eggebrecht, Anna Blasi, Sarah Lloyd-Fox and Clare E. Elwell	Longitudinal development of functional connectivity in Gambian infants over the first 2 years of life	Assembly I
	130	Paola Pinti, Chiara Bulgarelli, Louisa Gossé, Giulia Ghilia, Leslie Tucker, Tim Smith, Denis Mareschal, Ilias Tachtsidis and Clare Elwell	Feasibility of wearable fNIRS in assessing cortical specialization to social cues in toddlers	Assembly I
	214	Elena Throm, Louisa Gossé, Paola Pinti, Dianna Ilyka, Pedro Ferreira da Costa, Sarah Lloyd-Fox, Robert Leech, Emily Jane Harrison Jones and Anna Gui	Real-time fNIRS to Study Individual Differences in Infant Social Development	Assembly I
	172	Bo Yun, Brian White, Tiffany Ko, Wesley Baker, Arjun Yodh, Daniel Licht, Brian Hanna and Jennifer Lynch	Optically Measured Changes in Cerebral Hemodynamics are Not Associated with Changes in Pulmonary Vascular Resistance in Children with Pulmonary Hypertension	Assembly I
	139	Kara Lowery, Bhoomika Nikam and Aaron Buss	Dimensional label learning predicts later dimensional attention development	Assembly I
	255	Shannon Powers, Xu Han, Jacqueline Martinez, Alexander Dufford, Tom Yeh and Pilyoung Kim	Neural Correlates of Infant Cry and Cannabis use in the Second Trimester	Assembly I & II
	222	Louisa Gossé, Frank Wiesemann, Clare Elwell and Emily J.H. Jones	Individual differences in functional connectivity during infant sleep	Assembly I
fNIRS in Clinical Applications	17	S. Ahmed Hassan, Leandro Viçosa Bonetti, Karina Tamy Kasawara, Dmitry Rozenberg and W. Darlene Reid	Decreased automaticity contributes to decrements in dual task walking in older compared to younger adults	Assembly I
	68	Jonas Fischer, Ameer Ghouse, Susanna Tagliabue, Federica Maruccia, Aykut Eken, Amelia Jiménez Sánchez, Joan Medina Martí, Anna Rey-Perez, Marcelino Báguena, Katuska Rosas, Riccardo Zucca, Udo Michael Weigel, Maria Antonia Poca, Gemma Piella, Juan Sahuquillo and Turgut Durduran	Non-invasive estimation of intracranial pressure by diffuse optics in traumatic brain injury patients	Assembly I
	109	Elisabetta Maria Frijia, Hubin Zhao, Liam Collins-Jones, Greg Smith, Nick L. Everdell, Topun Austin and Robert J Cooper	Towards Cot-side Mapping of the Sensorimotor Cortex in Preterm and Term Infants using High-Density Diffuse Optical Tomography	Assembly I
	118	Marianne Suwalski, Daniel Milej, Leena Shoemaker, J. Kevin Shoemaker, Jason Chui and Keith St. Lawrence	Assessment by multi-distance hyperspectral NIRS of changes in the oxidation state of cytochrome c oxidase (oxCCO) during carotid artery compressions	Assembly I
	127	Lorenzo Frabasile, Michele Lacerenza, Mauro Buttafava, Alberto Tosi, Lorenzo Spinelli, Alessandro Torricelli and Davide Contini	Brain cortex activation in easy motor exercises: a TD-fNIRS study on healthy subjects oriented to motor disorders assessment	Assembly I & II
	167	Emilie Benson, Danielle Aronowitz, Alec Lafontant, Jharna Jahnavi, Jake Breimann, Bo Yun, Gerard Laurent, Nicolina Ranieri, Alistair Lewis, Wesley Baker, William Gaynor, Todd Kilbaugh, Daniel Licht, Arjun Yodh and Tiffany Ko	Effects of Mild Hypothermic Cardiopulmonary Bypass on Cerebral Hemodynamics	Assembly I & II
	191	Justin Skowno, David Highton, Frederic Lange, Gemma Bale, Dorothy Tse, Sofia Yao and Ilias Tachtsidis	Changes in cerebral mitochondrial oxygenation during paediatric cardiac surgery	Assembly I
	34	Rebecca Re, Dario Messenio, Giuseppe Marano, Lorenzo Spinelli, Ileana Pirovano, Davide Contini, Roberto Colombo, Patrizia Boracchi, Elia Biganzoli, Rinaldo Cubeddu and Alessandro Torricelli	Application of TD-fNIRS on glaucomatous subjects: a clinical study	Assembly I
	105	João Pereira, Bruno Direito, Michael Lührs, Miguel Castelo-Branco and Teresa Sousa.	Characterization of Spatial and Temporal Dynamics Between Hemodynamic Response Measured by fMRI and fNIRS	Assembly I & II
	244	Ibukunoluwa K Oni, Joel S Burma, Andrew P Lapointe, Jonathan D Smirl and Jeff F Dunn	Development of simultaneous multimodal fNIRS/TCD acquisition system to assess brain activity and cerebrovascular regulation	Assembly I
fNIRS in Cognitive and Social Interactions Neuroscience Research	65	Kiyomitsu Niioka, Tatsuya Tokuda, Keita Ochi and Ippeita Dan.	Detection of Crime-Relevant Items Using Convolutional Neural Network for fNIRS-Based Searching Concealed Information Test	Assembly I
	147	Ségolène M. R. Guérin, Marion A. Vincent and Yvonne N. Delevoye-Turrell.	Effects of Motor Pace on Frontal Activity during Whole-Body Movements	Assembly I
	151	Stoyan Rumenov Stefanov, Mithun Poozhivil, Ayse Kucukyilmaz and Horia Alexandru Maior.	The use of fNIRS for Mental Workload Assessment in Robotic Teleoperation	Assembly I & II
	178	Kazue Hirabayashi, Keith Kawabata Duncan, Ren Komiyaama and Ippeita Dan.	Decoding feelings of luxury from the brain	Assembly I
	182	Pascal Vrticka, Trinh Nguyen and Stefanie Hoehl.	Parent-child interpersonal neural synchrony: A new biomarker for relationship quality, attachment, and caregiving?	Assembly I
	242	Raimundo da Silva Soares Junior, Amanda Yumi Ambríola Oku, Cândida Barreto and João Ricardo Sato.	Neural correlates of children's cognitive effort during mental rotation tasks – A multimodal approach with fNIRS and Eye-tracking	Assembly I & II
	243	Samuel Montero-Hernandez, Michelle Rojas-Cisneros and Felipe Orihuela-Espina.	Functional Connectivity Characterize Autism Spectrum Phenotypes	Assembly I
	205	Nan Zhao, Xian Zhang, Adam Noah, Mark Tiede and Joy Hirsch	Dissociated Face Mechanisms for Gaze at Live Faces and at Webcam Faces: Evidence from Eye-Tracking, Electroencephalography, Neuroimaging, and Cross-Brain Coherence	Assembly II
	217	Termara Parker, Xian Zhang, Adam Noah, Megan Kelley and Joy Hirsch	Responses to initiated gaze cueing are modulated by visual dwell time	Assembly II
Data Analysis / Signal Processing / AI	199	Tian Wen Chan and Tong Boon Tang	Fuzzy Logic Based Mental Workload Estimation For Brain Computer Interface Systems	Assembly I
	37	Robin Dale, Guy Perkins and Hamid Dehghani	The Movie of the Mind: A computer vision approach to fNIRS based brain-computer interface	Assembly I

	92	<i>Asma Gulraiz, Noman Naseer and Hammad Nazeer</i>	Sparse Representation Classification of Walking Imagery and Rest for hybrid fNIRS-EEG based BCI	Assembly I
	91	<i>Huma Hamid, Noman Naseer and Hammad Nazeer</i>	fNIRS-based Control of Lower Limb Exoskeleton for Gait Rehabilitation	Assembly I
	28	<i>Ilaria Mazzonetto, Marco Castellaro, Robert J. Cooper and Sabrina Brigadoi</i>	Photogrammetry-based approaches improve optodes registration to atlases	Assembly II
	59	<i>Robert Luke and David McAlpine</i>	fNIRS Apps: A framework for reproducible analysis	Assembly I & II
	96	<i>Melissa Wu and Stefan Carp</i>	Complete head cerebral sensitivity mapping for diffuse correlation spectroscopy using subject-specific MRI models	Assembly I
	62	<i>Mengmeng Wang, Leigh A. Johnston and Catherine E. Davey</i>	Correction for time-varying signal power in fNIRS connectivity analyses	Assembly II
<b>Hardware Development</b>	153	<i>Eugene Jeong, Minseok Seo and Kyungsoo Kim</i>	MBLL error caused by the assumption of NIR light sources being single wavelength	Assembly I
	66	<i>Lorenzo Cortese, Marta Zanoletti, Umut Karadeniz, Marco Pagliazzi, Muhammad Atif Yaquub, David R. Busch, Jaume Mesquida and Turgut Durduran</i>	Performance assessment and unit-to-unit variability of a commercial continuous-wave near infrared spectroscopy tissue oximeter for an international clinical trial	Assembly I & II
	114	<i>Sanghoon Chong, Yi Hong Ong, Mirna El Khatib, Srinivasa Allu, Ashwin Parthasarathy, Joel Greenberg, Arjun Yodh and Sergei Vinogradov.</i>	Real-time tracking of cerebral oxygen metabolism during functional activation in the rat brain	Assembly I & II
<b>OTHER</b>	35	<i>James Xede</i>	The Effect of Insecurity and Gratitude on System 1 and System 2 Processing in Managers' Materialistic Behaviour: fNIRS and Behavioural Evidence	Assembly I
	252	<i>Peter Mukli, Tamas Csipo, Agnes Lipecz, Orestis Stylianou, Frigyes Samuel Racz, Cameron Owens, Jonathan Perry, Stefano Tarantini, William Sonntag, Anna Csiszar, Zoltan Ungvari and Andriy Yabluchanskiy</i>	Impact of sleep deprivation on the task-related changes of global functional connectivity and its association to cognitive performance in human subjects	Assembly II
	177	<i>Wakana Kawai, Kiyomitsu Nioka, Tatsuya Tokuda, Katsumasa Shinozuka and Ippeita Dan</i>	Classification of Japanese Learners of English at the Individual Level by Machine Learning, Using Hemodynamic Responses	Assembly I
	265	<i>Jessica Gemignani and Judit Gervain</i>	Comparing different pre-processing routines for infant fNIRS data	Assembly I

# ORAL SESSION I, 21st Oct

## fNIRS in Clinical Applications



GMT time	Los Angeles	Boston	London	CET	Beijing	Tokyo	Sydney
13.00	6.00	9.00	14.00	15.00	21.00	22.00	23.00

GMT time	Abstract #	Presenter (in bold) and Authors	Title	Location
		Topic Chairs		
		Tiffany S. Ko, Androu Abdalmalak		
13.00	197	<b>Ke Peng</b> , Ali Kassab, Denahin Toffa, Manon Robert, Frederic Lesage and Dang Nguyen	Continuous EEG-fNIRS in Neurological Intensive Care: Monitoring Hemodynamic Changes Associated with Abnormal EEG Patterns	Zoom
13.10	161	<b>Ningning Liu</b> , Gaoding Jia, Haimei Li, Yufeng Wang, Lu Liu, Haijing Niu and Qiujin Qian	Persistent adult ADHD and childhood conduct symptoms: an fNIRS study	
13.20	93	<b>Augusto Bonilauri</b> , Francesca Sanguiliano Intra, Giuseppe Baselli and Francesca Baglio	Is fNIRS motor task informative about laterality mechanisms in Parkinson's Disease?	
13.30	211	<b>Monalisa Munsri</b> , Arefeh Sherafati, Adam T Eggebrecht, Tracy M Burns-Yocum, Heather M Luger, Anagha Narayanan, Tasha Doty, Sarah A Eisenstein, Alexandra M Svoboda, Mariel Lee Schroeder, Abraham Z Snyder, Mwiza Ushe, Joseph P Culver and Tamara Hershey	Understanding Deep Brain Stimulation's Impact on Cortical Networks in Essential Tremor Using High-Density Diffuse Optical Tomography	
13.40	200	<b>Ateyeh Soroush</b> , Damilola D. Adingupu, Taelor Evans, Scott Jarvis, Lenora Brown and Jeff F. Dunn	Detection of reduced interhemispheric functional connectivity during rest and non-rest tasks in individuals with Multiple Sclerosis using functional NIRS (fNIRS)	
13.50	73	<b>Julie Uchitel</b> , Borja Blanco, Liam Collins-Jones, Emma Porter, Andrea Edwards, Robert Cooper and Topun Austin	First Application of Wearable HD-DOT to Study Functional Connectivity During Sleep in the Newborn Brain Cot-side	
14.00	189	Sabrina Oishi, Allison Kearney, Sam Huth, Jonathan Fanning, Ian Scott, Kyle White, Xenia Caney, David Sturgess, Michael Baras and <b>David Highton</b>	Wavelet measured autoregulation during non-cardiac surgery.	
14.10	75	<b>Harleen Chhabra</b> , Rujuta Parlikar, Sowmya Selvaraj, Venkataram Shivakumar, Sreeraj Vanteemar S, Dinakaran Damodharan, Satish Suhas, Janardhanan C. Narayanaswamy, Monojit Debnath and Ganesan Venkatasubramanian	Genetic Correlates of the Effect of HD-tDCS on functional connectivity in Schizophrenia Patients with Auditory Verbal Hallucinations: A fNIRS Study	
14.20	258	Frederic Lange, <b>Gaia Frigerio</b> , Thomas Williams, Jeremy Chataway, Kenneth Smith and Ilias Tachtsidis	Investigation of the light propagation in brains suffering from Multiple Sclerosis via Monte-Carlo simulations	
14.30	121	<b>Kutlu Kaya</b> , Alexander I. Zavriyev, Felipe Oriuela-Espina, John Sunwoo, Mirela V. Simon, Glenn M. LaMuraglia, Eric T. Pierce and Maria Angela Franceschini	Elucidating dynamic autoregulation of cerebral blood flow and oxygenation during carotid endarterectomy using diffuse correlation spectroscopy and near-infrared spectroscopy	
14.40	111	<b>Daniel Milej</b> , Ajay Rajaram, Leena N. Shoemaker, Marianne Suwalski and Keith St. Lawrence	Simultaneous monitoring of cerebral blood flow, oxygen consumption and the oxidation state of cytochrome c oxidase	
14.50	24	<b>Susanna Tagliabue</b> , Isabel Serra, Michal Kacprzak, Jonas Fischer, Federica Maruccia, Lavinia Herea, Anna Rey-Perez, Sara Vallés Angulo, Andres F. Jimenez, Maria Antonia Poca, Juan Sahuquillo and Turqut Durduran	Transcranial detection of periods of misery perfusion risk during induced hypocapnia in patients with severe traumatic brain injury	
15.00		Poster Session Assembly I		Gathertown

# ORAL SESSION II, 21st Oct (/22nd Oct)

## Multimodal Measurements (and Other)



GMT time	Los Angeles	Boston	London	CET	Beijing	Tokyo	Sydney
20.30	13.30	16.30	21.30	22.30	4.30	5.30	6.30

GMT time	Abstract #	Presenter (in bold) and Authors	Title	Location
20.30		Invited Talk by <b>Keum-Shik Hong</b> , chaired by Androu Abdalmalak		Zoom
		Topic Chairs		
		Maheen Siddiqui, J. Adam Noah, Yuanyuan Gao		
21.00	134	<b>Yotam Erel</b> , Sagi Jaffe-Dax, Yaara Yeshurun and Amit Bermato	STORM-Net: Simple and Timely Optode Registration Method for Functional Near-Infrared Spectroscopy (fNIRS)	
21.10	126	<b>Pietro Levoni</b> , Fangzhou Zhao, Lorenzo Frabasile, Hong Qi, Michele Lacerenza, Pranav Lanka, Alessandro Torricelli, Antonio Pifferi, Rinaldo Cubeddu and Lorenzo Spinelli	Reproducibility of Identical Solid Phantoms	
21.20	64	<b>Jonas B. Fischer</b> , Lisa Kobayashi Frisk, Raquel Delgado-Mederos, Mercedes Mayos, Felix Scholkmann and Turqut Durduran.	Effect of face masks on cerebral hemodynamics and brain function	
21.30	226	<b>Karolina Bejm</b> , Stanislaw Wojtkiewicz, Żanna Pastuszak and Adam Liebert.	Changes in amplitude of oxy and deoxy hemoglobin in response to visual cortex stimulation under various oxygen condition	
21.40	49	<b>Gemma Bale</b> , Ingrid Turner, Robert Cooper, Laura Cuaya, Vivien Reicher and Attila Andics	Monitoring canine brain activity using near infrared spectroscopy	
21.50	220	<b>Louisa Katharina Gossé</b> , Paola Pinti, Frank Wiesemann, Clare Elwell and Emily J.H. Jones	Developing customized NIRS-EEG for infant sleep research	
22.00	79	<b>Eleanor Smith</b> , Addison Billing, Edwin Dalmajer, Bronagh McCoy, Sarah Lloyd-Fox, Robert Cooper and Rebecca Lawson.	Measuring infant engagement with eye-tracking to inform fNIRS analysis.	
22.10	58	<b>Lin Wang</b> , Jeffrey Cochran, Tiffany Ko, Wesley Baker, Kenneth Abramson, David Busch, Lian He, Arjun Yodh and Nadav Schwartz.	Transabdominal Assessment of Human Placental Oxygenation with FD-NIRS	
22.20	108	<b>Sara Sanchez-Alonso</b> , Rebecca Canale and Richard Aslin.	Within-subject correspondence of simultaneously collected fMRI and full-head fNIRS signals across language and visual paradigms	
22.30	192	<b>Yaoshen Yuan</b> , Yuxuan Zhan and Qianqian Fang	Simulation Study of fNIRS Wavelength in the Presence of Human Hairs Using Implicit Mesh-Based Monte Carlo	
22.40	50	<b>Andrew Lapointe</b> , Ashley Ware, Chris Duszynski, Keith Yeates and Jeff Dunn.	Cerebral hemodynamic and white matter microstructure relationships in pediatric brain injury: Preliminary findings from Advancing Concussion Assessment in Pediatrics (A-CAP)	
22.50	63	<b>Ishara Paranawithana</b> , Darren Mao, Colette McKay and Yan Wong	Short Channel Correction to Reduce Physiological Noise Induced False Discoveries in Resting State Functional Connectivity	
23.00		Social Gathering & Poster Session Assembly II		Gathertown
0.00		Women in STEM by Tiffany Ko, Fen Zhang   Hardware Hacking by Adam Noah, Xian Zhang, Uzair Hakim		
0.30		Sponsor Booths		

# POSTER SESSION, 21th Oct (/22nd Oct)

## ASSEMBLY I

GMT time	Los Angeles	Boston	London	CET	Beijing	Tokyo	Sydney
15.00	8.00	11.00	16.00	17.00	23.00	0.00	1.00

## ASSEMBLY II

GMT time	Los Angeles	Boston	London	CET	Beijing	Tokyo	Sydney
23.00	16.00	19.00	0.00	1.00	7.00	8.00	9.00

	Abstract #	Authors	Title	Presenter Availability
fNIRS in Neurodevelopment Research	175	<i>Guangfang Liu, Gaoding Jia, Haihong Liu, Qi Dong and Haijing Niu</i>	Development and Emergence of Functional Network Asymmetry in 3- to 9-Month-old Infants	Assembly II
	51	<i>Onn Lee, Darren Mao, Julia Wunderlich, Emily Jeffreys, Mikhail Korneev, Gautam Balasubramanian, Gerard Loquet and Colette McKay</i>	The habituation-dishabituation of heart rate to speech in sleeping infants measured using functional near-infrared spectroscopy	Assembly II
	120	<i>Morgan Fogarty, Kalyan Tripathy, Alexandra Svoboda, Mariel Schroeder, Sean Rafferty, Patricia Mansfield, Rachel Ulbrich, Madison Booth, Edward Richter, Christopher Smyser, Adam Eggebrecht and Joseph Culver</i>	Deep learning feature tracking in naturalistic stimuli for human brain mapping using high-density diffuse optical tomography	Assembly I & II
	48	<i>Eileen Sullivan, Laura Pirazzoli, John Richards, Rashidul Haque, William Petri and Charles Nelson</i>	The use of fNIRS in the study of statistical learning in two- and five-year-old Bangladeshi children: Associations with early adversity and language outcomes	Assembly II
	181	<i>Jessica Gemignani and Judit Gervain</i>	Sex differences in repetition-based rule learning: a meta-analysis of fNIRS language studies	Assembly I
	234	<i>Rachel Eddings and Aaron Buss</i>	The Effects of Response Type in a Visual Working Memory Task	Assembly I
	12	<i>Irene de la Cruz-Pavia and Judit Gervain</i>	Six-month-old infants' abilities to represent regularities in speech	Assembly II
	40	<i>Hideyuki Taura and Amanda Taura</i>	Impact of fetus language experiences exerted on a newborn baby: An fNIRS case study	Assembly I & II
fNIRS in Clinical Applications	16	<i>Sobana Wijekumar, Samuel Forbes, Vincent Magnotta, Vinay Singh, Aarti Kumar and John Spencer</i>	Stunting in the first year of life is associated with changes in the dorsal and ventral attention networks	Assembly I
	43	<i>Artur José Marques Paulo, Danilo Donizete de Faria, Renata Proa Dalle Lucca, Joana Balardin, João Ricardo Sato, Carlos Arruda Baltazar, Vanderci Borger, Sonia Maria Azevedo Silva, Henrique Ballalai Ferraz and Patricia Maria de Aguiar</i>	Task-related brain activity in upper limb dystonia using simultaneous fNIRS and EEG	Assembly I
	84	<i>Jessica Defenderfer, Samuel Forbes, Sobanawartiny Wijekumar, Mark Hedrick, Patrick Plyler and Aaron Buss</i>	Frontotemporal activation differs between perception of simulated cochlear implant speech and speech in background noise: An image-based fNIRS study	Assembly I & II
	78	<i>Zhili Chen and Yuanxiang Lin</i>	Prediction of postoperative cognitive outcome in epilepsy by verbal fluency test (VFT) monitored by functional near infrared spectroscopy (fNIRS)	Assembly I
	95	<i>Karnig Kazazian, Androu Abdimalak, Loretta Norton, Teneille E. Gofton, Derek Debicki, Sergio L. Novi, Rickson C. Mesquita and Adrian M. Owen</i>	A multi-modal functional neuroimaging approach to assess brain activity in the intensive care unit	Assembly I & II
	232	<i>Luis Felipe Bortoletto, Andrés Fabián Quiroga Soto, Sérgio Luiz Novi Junior, Gabriel Franco Dutra Leite, Rodrigo Menezes Forti, Giovanni Grisotti Martins, Ana Terezinha Guillaumon, Wagner Mauad Avelar and Rickson Coelho Mesquita</i>	Quantification of brain reorganization in patients with carotid artery disease with resting-state functional connectivity	Assembly I & II
	240	<i>Alistair Lewis, Alec Lafontant, Rodrigo Forti, Yuxi Lin, Nicholas Widmann, Sydney Jaramillo, Hunter Gaudio, Sarah Morton, Tiffany Ko, Daniel Licht, Wesley Baker, Todd Kilbaugh, Arjun Yodh and David Jang</i>	Optical Biomarkers of Cerebral Mitochondrial Dysfunction in Swine Model of Carbon Monoxide Poisoning: Pilot Results	Assembly I
	241	<i>Samuel Montero-Hernandez, Hongyu Miao, Hyochol Ahn and Luca Pollonini</i>	Functional Connectivity in Nonpharmacological Pain Management	Assembly I & II
	259	<i>Frederic Lange, Kelly Harvey-Jones, Gemma Bale, Subhabrata Mitra, Turgut Durduran and Ilias Tachtsidis</i>	Simultaneous investigation of changes in cerebral microvascular blood flow and mitochondrial metabolism together at the cot-side in neonatal encephalopathy using a hybrid bNIRS/DCS instrument	Assembly I & II
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	224	<i>Maheen Siddiqui, Paola Pinti, Andrew D Levy, Emily Jones and Ilias Tachtsidis</i>	Investigating the relationship between brain haemodynamics, metabolism and neural activity during functional activation	Assembly I
fNIRS in Cognitive and Social Interactions Neuroscience Research	148	<i>Xiujuan Qu, Lexuan Li, Ying Han and Haijing Niu</i>	Effect of repeated transcranial photobiomodulation on improving working memory of healthy older adults: investigation during the post-stimulation and the 3-week follow up	Assembly I
	154	<i>Jasmine Chan, Teresa Wilcox and Terrence Barnhardt.</i>	Impact of Ad Hoc Product Categories on Purchase Intentions: An fNIRS Study	Assembly I & II
	157	<i>Saori Ohshima, Kiyomitsu Nioka, Hikaru Saito, Tatsuya Tokuda, Ippeta Dan and Michihiko Koeda.</i>	Cerebral response to emotional working memory based on vocal cues: An fNIRS study	Assembly I
	183	<i>Paola Pinti, Dwaynica Greaves, Sara Din, Robert Hickson, Diao Mingyi, Charlotte Lange, Priyasha Khurana, Kelly Hunter, Ilias Tachtsidis and Antonia Hamilton.</i>	The actor's self: probing self-representation in the prefrontal cortex of actors performing a piece of theatre	Assembly I
	187	<i>Elham Zolfaghari, Jennifer SteGeorge, Shelly Lane, Renata Di Lorenzo, Valsamma Eapen and Daniel Lin.</i>	Physiological and Neural Synchrony in Father-Child Rough and Tumble Play: Study Protocol	Assembly I & II
	231	<i>Ernesto Elias Vidal Rosas, Yan Wu and Robert J. Cooper.</i>	Investigating the dual-task cost of texting while walking using wearable High-Density Diffuse Optical Tomography (HD-DOT)	Assembly I
	250	<i>Hannah Shatzer, Michael Zara, Carmen Dang, Karla Kovacek and Frank Russo.</i>	Use of a standard passive auditory task for localization of auditory cortex in fNIRS	Assembly I & II
	257	<i>Katherine Perdue and Kernel Flow Team.</i>	TD-fNIRS measurements of brain activity in everyday activities: meditation and video gaming	Assembly I & II
	262	<i>Atsumichi Tachibana, J Adam Noah and Yumie Ono.</i>	Prefrontal activation and deactivation related to spontaneous creativity with rock music improvisation	Assembly I

	216	<i>Megan Kelley, Adam Noah, Xian Zhang, Termara Parker and Joy Hirsch</i>	Processing Real Faces: Simultaneous fNIRS, EEG, and Eye-tracking Investigation of Supramarginal and Angular Gyri	Assembly II
<b>Data Analysis / Signal Processing / AI</b>	164	<i>Qianqian Fang and Edward Xu</i>	NeuroJSON and future of fNIRS data sharing, integration, and automation	Assembly I
	89	<i>Isla Jones, James Crum, Flaminia Ronca, Kimya Ghazi-Zadeh, Ilias Tachtsidis, Paul Burgess and Antonia Hamilton</i>	Including physiological measures in fNIRS analyses	Assembly I
	195	<i>Yingrui Chen and Haijing Niu</i>	Functional Connectome Fingerprint: individual identification based on resting-state fNIRs	Assembly II
	237	<i>Luca Pollonini and Samuel Antonio Montero Hernandez</i>	Effect of Scalp-Optode Coupling on fNIRS Cardiac Pulsation	Assembly I & II
	18	<i>Zhifei Li and Nanguang Chen</i>	Two-dimensional Visualization Model for Recognizing Distinctive Pattern of Depression from A Large-scale NRIS Dataset	Assembly I & II
	184	<i>Uzair Hakim, Paola Pinti, J.Adam Noah, Xiang Zhang, Paul Burgess, Antonia Hamilton, Joy Hirsch and Ilias Tachtsidis</i>	Investigation of fNIRS signals ability to infer brain activity and development of the Haemodynamic Phase Correlation signal	Assembly I
	87	<i>Hammad Nazeer, Noman Naseer and Rayyan Azam Khan</i>	Improving Classification Accuracy for fNIRS-BCI using Novel Features Estimated by Vector-based Phase Analysis	Assembly I
	10	<i>Aykut Eken, Damla Sayar-Akaslan, Bora Baskak and Kerim Münir</i>	Classification of Schizophrenia and Bipolar Disorder Patients by Using fNIRS Based Dynamic Functional Connectivity	Assembly I
	128	<i>Haroon Khan, Farzan Majeed Noor, Noman Naseer, Nauman Khalid Qureshi, Hammad Nazeer and Peyman Mirtaheri</i>	Classification of Individual Finger Movements using fNIRS for BCI Applications	Assembly I
	156	<i>Xiaoxue Fu and John Richards</i>	devfOLD: A Toolbox for Designing Age-Specific fNIRS Channel Placement	Assembly I
<b>Hardware Development</b>	86	<i>Nisan Ozana, Marco Renna, Mitchell Robinson, Dibbyan Mazumder, Megan Blackwell, Niyom Lue, Stefan Carp and Maria Angela Franceschini</i>	Continuous Wave and Time-Gated Diffuse Correlation Spectroscopy via Superconductive Sensing at 1064nm	Assembly I
	25	<i>Dariusz Zapala, Pawel Augustynowicz and Marek Karwacki</i>	Cortivision Spotlight - a wearable fNIRS system for research and training in VR environment	Assembly I & II
	38	<i>Pengrui Zhang, Yao Zhang, Dongyuan Liu, Lu Bai and Feng Gao</i>	Wearable functional near-infrared spectroscopy of brain and muscle hemodynamics	Assembly II
<b>OTHER</b>	9	<i>Laura Bell, Vanessa Reindl, Jana A. Kruppa, Alexandra Niephaus, Simon H. Kohl and Kerstin Konrad</i>	Discovering fNIRS with Children's Eyes	Assembly I
	171	<i>Leena Shoemaker, Marianne Suwalski, Daniel Milej, J. Kevin Shoemaker and Keith St. Lawrence</i>	Effect of momentary carotid compression on cerebral microvascular perfusion and tissue oxygenation	Assembly I
	266	<i>Dafna Mintzer, Tamar Mizrahi, Noam Somech and Vadim Axelrod</i>	A contextual cue prior to the auditory story modulates frontal lobes activity recorded using fNIRS	Assembly I
	267	<i>Tamar Mizrahi, Noam Somech, Yael Caspi and Vadim Axelrod</i>	Processing of story and classical music by frontal lobes: an fNIRS study	Assembly I
	268	<i>Christina Davidson, Line Caes, Courtney McKay, Eva Rafetseder, Yee Lee Shing and Sobanawartiny Wijekumar</i>	The association between visual working memory, vocabulary, and home environment.	Assembly I & II
	269	<i>Hiroshi Kawaguchi</i>	Open PoTATo for fNIRS: Open Platform of Transparent Analysis Tools for functional near infrared spectroscopy	Assembly II
	270	<i>Helena Cockx, Robert Oostenveld, Merel Tabor, Ecaterina Savenco, Arne van Setten, Ian Cameron and Richard van Wezel</i>	Differentiating automatic and non-automatic finger and leg movements with fNIRS	Assembly II
	271	<i>Matthew Kolisnyk, Androu Abdalmalak, Derek Debicki and Adrian Owen</i>	Using machine learning to enhance the sensitivity and specificity of simultaneous EEG-fNIRS to motor imagery	Assembly I

# ORAL SESSION, 22nd Oct

## Early Investigator Award Finalists



GMT time	Los Angeles	Boston	London	CET	Beijing	Tokyo	Sydney
13.00	6.00	9.00	14.00	15.00	21.00	22.00	23.00

GMT time	Abstract #	Presenter (in bold) and Authors	Title	Location
			Heather Bortfeld	
13.00	129	<b>Paola Pinti</b> with Maheen Siddiqui, Andrew Levy, Emily Jones and Ilias Tachtsidis	An analysis framework for the investigation and integration of brain haemodynamics and metabolism as measured with broadband NIRS during functional brain activity	Zoom
13.20	98	<b>Wesley Baker</b> with S.Lang, T.S. Ko, J.S. Breimann, J.Jahnavi, G. Laurent, B. Yun, M.Cook, S. Myers, K. Agarwal, K. Lourie, T.M. Flanders, G.G. Heuer, J.W. Huh, and D.J.Licht	Optical Detection of Shunt Failure in Pediatric Hydrocephalus	
13.40	30	<b>Stephanie Sutoko</b> with M. Kiguchi, H. Atsumori, A. Nishimura, A. Obata, T. Funane, H. Nakagawa, M. Egi, and H. Kuriyama	Understanding the associations of brain and behavior on mental conditions	
14.00	<b>fNIRS Society General Meeting</b>			
15.00	<b>Awards Ceremony - Closing Remarks</b>			

