

2017 8th International IEEE/EMBS Conference on Neural Engineering (NER 2017)

**Shanghai, China
25 – 28 May 2017**



**IEEE Catalog Number: CFP17CNE-POD
ISBN: 978-1-5090-4604-1**

**Copyright © 2017 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP17CNE-POD
ISBN (Print-On-Demand):	978-1-5090-4604-1
ISBN (Online):	978-1-5090-4603-4
ISSN:	1948-3546

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

Program in Chronological Order

(Copyrighted Papers)

* Author Name – Corresponding Author • * Following Paper Title – Paper not Available

Friday, 26 May 2017

FrPS1T1: 11:30-13:30
Poster I (Poster Session)

Emerald III, Rose, Narcissus & Jasmine

- 11:30-13:30 FrPS1T1.1
Accelerated High-Resolution EEG Source Imaging 1-4
Qin, Jing* (*Montana State University*); Wu, Tianyu (*University of California, Los Angeles*); Li, Ying (*University of California, Los Angeles*); Yin, Wotao (*University of California, Los Angeles*); Osher, Stanley (*University of California, Los Angeles*); Liu, Wentai (*University of California, Los Angeles*)
- 11:30-13:30 FrPS1T1.2
A Least Across-Segment Variance (LASV) Method for the Correction of EEG-fMRI Desynchronization 5-8
Tan, Ao (*The University of Hong Kong*); Tu, Yiheng (*The University of Hong Kong*); Fu, Zening (*University of Hong Kong*); Huang, Gan* (*Sun Yat-Sen University*); Hung, Y.S. (*The University of Hong Kong*); Zhang, Zhiguo (*Sun Yat-sen University*)
- 11:30-13:30 FrPS1T1.3
Improving Sensitivity of Cluster-Based Permutation Test for EEG/MEG Data 9-12
Huang, Gan* (*Sun Yat-Sen University*); Zhang, Zhiguo (*Sun Yat-sen University*)
- 11:30-13:30 FrPS1T1.4
Learning based Image Segmentation of Post-Operative CT-Images: A Hydrocephalus Case Study 13-16
Cherukuri, Venkateswararao* (*Pennsylvania State University*); Ssenyonga, Peter (*CURE Children's Hospital of Uganda*); Warf, Benjamin (*Harvard Medical School*); Kulkarni, Abhaya (*University of Toronto*); Monga, Vishal (*Pennsylvania State University*); Schiff, Steven (*Pennsylvania State University*)
- 11:30-13:30 FrPS1T1.5
Automated Detection of Cavernous Malformations in Brain MRI Images 17-20
Wang, Huiquan (*University of Alberta*); Xu, Hongming (*University of Alberta*); Ahmed, Nizam (*University of Alberta*); Mandal, Mrinal* (*University of Alberta*)
- 11:30-13:30 FrPS1T1.6
An Alpha Wave Pattern from Attenuation to Disappearance for Predicting the Entry into Sleep during Simulated Driving 21-24
Jiao, Yingying (*Shanghai Jiao Tong University*); Lu, Bao-Liang* (*Shanghai Jiao Tong University*)
- 11:30-13:30 FrPS1T1.7
Motor Unit Diversity during Elbow Flexion 25-28
Adams, Zachary* (*University of Delaware*); Akins, Robert (*Nemours - A.I. duPont Hospital for Children*); Buchanan, Thomas (*Delaware Rehabilitation Institute*)
- 11:30-13:30 FrPS1T1.8
Combined Eye-Head vs. Head-Only Scanning in a Blind Patient Implanted with the Argus II Retinal Prosthesis 29-32
Caspi, Avi* (*JCT - Lev Academic Center*); Rosendall, Paul (*Johns Hopkins University Applied Physics Laboratory*); Harper, Jason W. (*The Johns Hopkins University Applied Physics Laboratory*); Katyal, Kapil (*Johns Hopkins University Applied Physics Laboratory*); Barry, Michael P. (*Johns Hopkins University*); Dagnelie, Gislin (*Johns Hopkins Univ*); Roy, Arup (*Second Sight Medical Products, Inc.*)

11:30-13:30	FrPS1T1.9
Assessment of Muscle Fatigue by Simultaneous Sema and NIRS: From the Perspective of Electrophysiology and Hemodynamics	33-36
Guo, Weichao (<i>Shanghai Jiaotong University</i>); Sheng, Xinjun* (<i>Shanghai Jiao Tong University</i>); Zhu, Xiangyang (<i>Shanghai Jiao Tong University</i>)	
11:30-13:30	FrPS1T1.10
Steady State Visual Evoked Potential Detection using Subclass Marginal Fisher Analysis	37-41
Maronidis, Anastasios (<i>Centre for Research and Technology Hellas</i>); Oikonomou, Vangelis* (<i>Centre for Research and Technology Hellas</i>); Nikolopoulos, Spiros (<i>Information Technologies Institute, Centre for Research and Tech</i>); Kompatsiaris, Ioannis (Yannis) (<i>Information Technologies Institute, CERTH</i>)	
11:30-13:30	FrPS1T1.11
Interactive Web Application for Exploring Matrices of Neural Connectivity	42-45
Caldwell, David* (<i>University of Washington</i>); Wu, Jing (<i>University of Washington</i>); Casimo, Kaitlyn (<i>University of Washington</i>); Ojemann, Jeffrey G (<i>University of Washington</i>); Rao, Rajesh PN (<i>University of Washington</i>)	
11:30-13:30	FrPS1T1.12
Influence of EEG Tonic Changes on Motor Imagery Performance	46-49
Nascimben, Mauro (<i>National Chiao Tung University, Brain Research Center</i>); Wang, Yu-Kai (<i>National Chiao Tung University</i>); Singh, Avinash Kumar (<i>Brain Research Center, National Chiao Tung University</i>); King, Jung-Tai* (<i>National Chiao Tung University</i>); Lin, Chin-Teng (<i>National Chiao-Tung University</i>)	
11:30-13:30	FrPS1T1.13
Metabolic Changes after Amputation using Magnetic Resonance Spectroscopy	50-53
Wang, Zhuo (<i>Shanghai Jiao Tong University</i>); Guo, Xiaoli (<i>Shanghai Jiao Tong University</i>); Lyu, Yuanyuan (<i>Shanghai Jiao Tong University</i>); Li, Yao (<i>Shanghai Jiao Tong University</i>); Xiang, Jianbo (<i>Second People's Hospital of Changzhou</i>); Pan, Changjie (<i>Second People's Hospital of Changzhou</i>); Tong, Shanbao* (<i>Shanghai Jiao Tong University</i>)	
11:30-13:30	FrPS1T1.14
Abstract Myoelectric Control with EMG Drive Estimated using Linear, Kurtosis and Bayesian Filtering	54-57
Dyson, Matthew* (<i>Newcastle University</i>); Barnes, Jessica (<i>Newcastle University</i>); Nazarpour, Kianoush (<i>Newcastle University</i>)	
11:30-13:30	FrPS1T1.15
Probing the Functional Role of Broca's Area during Chinese Picture Naming: A TMS Study	N/A
Zhang, Qian (<i>Univ. of Electronic Science and Technology of China</i>); Li, Ling* (<i>Univ of Electronics Sci & Tech</i>)	
11:30-13:30	FrPS1T1.16
Imaging Hemodynamic Response after Distal Middle Cerebral Artery Occlusion with Combined Laser Speckle Imaging and Visible-Light Optical Coherence Tomography	62-65
Liu, Qi (<i>Shanghai Jiao Tong University</i>); Chen, Siyu (<i>Northwestern University</i>); Soetikno, Brian (<i>Northwestern University</i>); Tong, Shanbao (<i>Shanghai Jiao Tong University</i>); Zhang, Hao* (<i>Northwestern University</i>)	
11:30-13:30	FrPS1T1.17
Study of Intrinsic Functional Connectivity from Medial Prefrontal Cortex in Female with Major Depressive Disorders	66-69
Zhang, Xiaoliu (<i>Shanghai Jiao Tong University, School of Biomedical Engineering</i>); Tang, Yingying (<i>Shanghai Mental Health Center, Shanghai Jiao Tong University Scho</i>); Tong, Shanbao (<i>Shanghai Jiao Tong University</i>); Li, Yao* (<i>Shanghai Jiao Tong University</i>)	
11:30-13:30	FrPS1T1.18
Multi-Sensor Wearable Devices for Movement Monitoring in Parkinson's Disease	70-73
Li, Liang (<i>University of Chinese Academy of Sciences</i>); Yu, Qian (<i>Suzhou Institute of Biomedical Engineering and Technology Chines</i>); Xu, Baoteng (<i>Suzhou Institute of Biomedical Engineering and Technology Chines</i>); Bai, Qifan (<i>Suzhou Institute of Biomedical Engineering and Technology Chines</i>); Zhang, Yunpeng (<i>Suzhou Institute of Biomedical Engineering and Technology Chines</i>); Zhang, Huijun (<i>Suzhou University</i>); Mao, Chengjie (<i>Second Hospital Affiliated of Suzhou University</i>); Liu, Chunfeng (<i>Second Hospital Affiliated of Suzhou University</i>); Wang, Shouyan* (<i>Chinese Academy of Sciences</i>); Shen, Tianyu (<i>Shanghai University</i>)	

11:30-13:30	FrPS1T1.19
Detecting Driving Fatigue with Multimodal Deep Learning	74-77
Du, Lihuan (<i>Shanghai Jiao Tong University</i>); Liu, Wei (<i>Shanghai Jiao Tong University</i>); Zheng, Wei-Long (<i>Shanghai Jiao Tong University</i>); Lu, Bao-Liang* (<i>Shanghai Jiao Tong University</i>)	
11:30-13:30	FrPS1T1.20
EMG Signals based Modelling of the Initial Phase of the Swallowing Process	78-81
Saijo, Ryohei* (<i>University of Tsukuba</i>); Saotome, Kousaku (<i>University of Tsukuba</i>); Jayatilake, Dushyantha (<i>University of Tsukuba</i>); Suzuki, Kenji (<i>University of Tsukuba</i>)	
11:30-13:30	FrPS1T1.21
Quantification of the Motor Symptoms of Parkinson's Disease	82-85
Bai, Qifan (<i>Suzhou Institute of Biomedical Engineering and Technology China</i>); Shen, Tianyu (<i>Shanghai University</i>); Xu, Baoteng (<i>Suzhou Institute of Biomedical Engineering and Technology China</i>); Yu, Qian (<i>Suzhou Institute of Biomedical Engineering and Technology China</i>); Zhang, Huijun (<i>Suzhou University</i>); Mao, Chengjie (<i>Second Hospital Affiliated of Suzhou University</i>); Liu, Chunfeng (<i>Second Hospital Affiliated of Suzhou University</i>); Wang, Shouyan* (<i>Chinese Academy of Sciences</i>)	
11:30-13:30	FrPS1T1.22
Attention Evaluation with Eye Tracking Glasses for EEG-Based Emotion Recognition	86-89
Shi, Zhenfeng* (<i>Shanghai Jiao Tong University</i>); Zhou, Chang (<i>Shanghai Jiao Tong University</i>); Zheng, Wei-Long (<i>Shanghai Jiao Tong University</i>); Lu, Bao-Liang (<i>Shanghai Jiao Tong University</i>)	
11:30-13:30	FrPS1T1.23
Impact of Motor Unit Action Potential Components on the Motor Unit Identification from Dynamic High-Density Surface Electromyograms	90-93
Glaser, Vojko* (<i>University of Maribor, Faculty of Electrical Engineering and Comp</i>); Holobar, Ales (<i>University of Maribor, Faculty of Electrical Engineering and Compu</i>)	
11:30-13:30	FrPS1T1.24
Neural Patterns between Chinese and Germans for EEG-Based Emotion Recognition	94-97
Wu, Si-Yuan (<i>Shanghai Jiao Tong Univ.</i>); Schaefer, Moritz (<i>Tu Berlin</i>); Zheng, Wei-Long (<i>Shanghai Jiao Tong Univ.</i>); Lu, Bao-Liang* (<i>Shanghai Jiao Tong Univ.</i>); Yokoi, Hiroshi (<i>The Univ. of Electro-Communications</i>)	
11:30-13:30	FrPS1T1.25
Using Bilateral Lower Limb Kinematic and Myoelectric Signals to Predict Locomotor Activities: A Pilot Study	98-101
Hu, Blair* (<i>Northwestern University</i>); Rouse, Elliott (<i>Northwestern University / Rehab Institute of Chicago</i>); Hargrove, Levi (<i>Rehabilitation Institute of Chicago</i>)	
11:30-13:30	FrPS1T1.26
A Comparison Study of Nonlinear and Linear Metrics in Probing Intrinsic Brain Networks from EEG Data	102-105
Shou, Guofa (<i>Univ. of Oklahoma</i>); Yuan, Han (<i>Univ. of Oklahoma</i>); Urbano, Diamond (<i>Laureate Institute for Brain Research</i>); Cha, Yoon-Hee (<i>Laureate Institute of Brain Research</i>); Ding, Lei* (<i>Univ. of Oklahoma</i>)	
11:30-13:30	FrPS1T1.27
Quantitative Motion Analysis for Non-Contact Affective and Neurocognitive Assessment	106-109
Flotho, Philipp* (<i>Systems Neuroscience and Neurotechnology Unit</i>); Strauss, Daniel J. (<i>Saarland University, Medical Faculty</i>)	
11:30-13:30	FrPS1T1.28
Preliminary Study of Neurocognitive Differences in Attention and Fluency in Schizophrenia using fNIRS	110-113
Curtin, Adrian* (<i>Drexel Univ.</i>); Ayaz, Hasan (<i>Drexel Univ.</i>); Sun, Junfeng (<i>Shanghai Jiao Tong Univ.</i>); Cheng, Lin (<i>Shanghai Jiao Tong Univ.</i>); Wang, Jijun (<i>Shanghai Mental Health Center, Shanghai Jiaotong Univ. Scho</i>); Onaral, Banu (<i>Drexel Univ.</i>); Tong, Shanbao (<i>Shanghai Jiao Tong Univ.</i>)	
11:30-13:30	FrPS1T1.31
Identification of EEG Features in Stroke Patients based on Common Spatial Pattern and Sparse Representation Classification	114-117
Lei, Xuefeng (<i>Hangzhou Dianzi University</i>); Wang, Luyun (<i>Hangzhou Dianzi University</i>); Kong, Wanzeng* (<i>Hangzhou Dianzi Univ.</i>); Peng, Yong (<i>Shanghai Jiao Tong Univ.</i>); Hu, Sanqing (<i>Hangzhou Dianzi Univ.</i>); Zeng, Hong (<i>Hangzhou Dianzi Univ.</i>); Dai, Guojun (<i>Hangzhou Dianzi Univ.</i>); Jin, Ruoyu (<i>Hangzhou Dianzi Univ.</i>); Sun, Junfeng (<i>Shanghai Jiao Tong Univ.</i>); Tong, Shanbao (<i>Shanghai Jiao Tong Univ.</i>)	

11:30-13:30	FrPS1T1.32
A Preliminary Study on the Relationship between Grip Force and Muscle Thickness	118-121
Yang, Xingchen (<i>Shanghai Jiao Tong University</i>); Li, Yuefeng (<i>Shanghai Jiao Tong University</i>); Fang, Yinfeng (<i>University of Portsmouth</i>); Liu, Honghai* (<i>Shanghai Jiao Tong University</i>)	
11:30-13:30	FrPS1T1.33
Muscle Fatigue Assessment using One-Channel Single-Element Ultrasound Transducer	122-125
Sun, Xueli (<i>Shanghai Jiao Tong University</i>); Li, Yuefeng (<i>Shanghai Jiao Tong University</i>); Liu, Honghai* (<i>Shanghai Jiao Tong University</i>)	
11:30-13:30	FrPS1T1.34
Leveraging Deep Preference Learning for Indexing and Retrieval of Biomedical Images	126-129
Pang, Shuchao (<i>Jilin University</i>); Orgun, Mehmet A. (<i>Macquarie University</i>); Du, Anan (<i>China Mobile</i> (<i>HangZhou</i>) <i>Information Technology Co., Ltd, China</i>); Yu, Zhezhou* (<i>Jilin University</i>)	
11:30-13:30	FrPS1T1.35
Estimation of Three Degrees of Freedom of Wrist Movement from Electromyogram using Kernel Ridge Regression	130-133
Bakshi, Koushik* (<i>Indian Institute of Technology Kharagpur</i>); Biswas, Satarupa (<i>Indian Institute of</i> <i>Technology (IIT), Kharagpur</i>); Mahadevappa, Manjunatha (<i>Indian Institute of Technology Kharagpur</i>); Kumar, Cheruvu Siva (<i>Indian Institute of Technology, Kharagpur</i>)	
11:30-13:30	FrPS1T1.36
A Simplified Hybrid EEG/fNIRS based Brain Computer Interface Approach for Motor Task Classification	134-137
Zhu, Guangming (<i>Guangdong Provincial Work-Injury Rehabilitation Hospital</i>); Li, Rihui (<i>University of Houston</i>); Zhang, Tingting (<i>Guangdong Provincial Work-Injury Rehabilitation Hospital</i>); Lou, Dandan (<i>Guangdong</i> <i>Provincial Work-Injury Rehabilitation Hospital</i>); Wang, Ruirong (<i>Hangzhou Dianzi University</i>); Zhang, Yingchun* (<i>University of Houston</i>)	
11:30-13:30	FrPS1T1.37
Link Prediction in Brain Networks with Epilepsy Disease	138-141
Yan, He* (<i>Guizhou Medical University</i>)	
11:30-13:30	FrPS1T1.38
Hierarchical Multiscale Bayesian Algorithms for Biomagnetic Brain Imaging	142-145
Cai, Chang (<i>University of California, San Francisco</i>); Sekihara, Kensuke (<i>Tokyo Metropolitan University</i>); Nagarajan, Srikantan* (<i>University of California, San Francisco</i>)	
11:30-13:30	FrPS1T1.39
Helping Hand Grasp Rehabilitation. Preliminary Assessment on Chronic Stroke Patients	146-149
Crema, Andrea* (<i>EPFL</i>); Guanzioli, Eleonora (<i>Villa Beretta Rehabilitation Center, Valduce Hospital</i>); Malešević, Nebojsa (<i>Faculty of Electrical Engineering, University of Belgrade</i>); Colombo, Maria (<i>Villa</i> <i>Beretta Rehabilitation Center, Valduce Hospital</i>); Liberali, Davide (<i>Ospedale Valduce - Villa Beretta</i>); Proserpio, Davide (<i>Ospedale Valduce - Villa Beretta</i>); Bijelic, Goran (<i>Tecnalia Research & Innovation</i>); Keller, Thierry (<i>Tecnalia Research & Innovation</i>); Molteni, F (<i>Hospital Valduce 'Villa Beretta'</i>); Micera, Silvestro (<i>Scuola Superiore Sant'Anna</i>)	

FrPS2T1: 16:00-17:45	Emerald III, Rose, Narcissus & Jasmine
Poster II (Poster Session)	

16:00-17:45	FrPS2T1.1
Neuromorphic Spike Data Classifier for Reconfigurable Brain-Machine Interface	150-153
Zjajo, Amir* (<i>Delft University of Technology</i>); Kumar, Sumeet Susheel (<i>Delft University of Technology</i>); van Leuken, Rene (<i>Delft University of Technology</i>)	
16:00-17:45	FrPS2T1.2
Neuronal Excitability and Network Formation on Optically Transparent Electrode Materials	154-157
Thompson, Cort (<i>Michigan State University</i>); Khan, Sahar (<i>Michigan State University</i>); Khan, Wasif (<i>Michigan</i> <i>State University</i>); Li, Wen (<i>Michigan State University</i>); Purcell, Erin* (<i>Michigan State University</i>)	

16:00-17:45	FrPS2T1.3
Comparison of the In-Vivo Neural Recording Quality of Floating and Skull-Fixed Silicon Probes	158-161
Pothof, Frederick* (<i>University of Freiburg</i>); Chauvière, Laetitia (<i>Institute of Experimental Medicine, Hungarian Academy of Science</i>); Holzhammer, Tobias (<i>University of Freiburg, Department of Microsystems Engineering</i>); Aarts, Arno (<i>Catholic University of Leuven, (IMEC)</i>); Paul, Oliver (<i>University of Freiburg</i>); Singer, Wolf (<i>Max-Planck Institute for Brain Research, Frankfurt am Main, Germ</i>); Ruther, Patrick (<i>University of Freiburg</i>)	
16:00-17:45	FrPS2T1.4
Extracellular Recording of Human Ntera2 Neurons with Gold Microelectrodes in an SU-8 Trench	162-165
Wang, Yi* (<i>The University of Auckland</i>); Zheng, Hannah (<i>Victoria University of Wellington</i>); Graham, Euan S (<i>University of Auckland</i>); Plank, Natalie Olivia Victoria (<i>Victoria University of Wellington</i>); Unsworth, Charles Peter (<i>University of Auckland</i>)	
16:00-17:45	FrPS2T1.5
Mechanical Deformation and Chemical Degradation of Thin-Film Platinum under Aging and Electrical Stimulation	166-169
Pfau, Jennifer* (<i>University of Freiburg, Department of Microsystems Engineering I</i>); Stieglitz, Thomas (<i>University of Freiburg</i>); Ordonez, Juan Sebastian (<i>University of Freiburg</i>)	
16:00-17:45	FrPS2T1.6
Fabrication of All-Silicon Carbide Neural Interfaces	170-173
Diaz-Botia, Camilo Andres* (<i>UC Berkeley</i>); Luna, Lunet Estefany (<i>UC Berkeley</i>); Chamanzar, Maysamreza (<i>University of California Berkeley</i>); Carraro, Carlo (<i>UC Berkeley</i>); Sabes, Philip N. (<i>University of California, San Francisco</i>); Maboudian, Roya (<i>UC Berkeley</i>); Maharbiz, Michel (<i>University of California, Berkeley</i>)	
16:00-17:45	FrPS2T1.7
Feasibility Analysis of Genetically-Encoded Calcium Indicators as a Neural Signal Source for All-Optical Brain-Machine Interfaces	174-180
Sun, Xulu* (<i>Stanford University</i>); Kao, Jonathan (<i>Stanford University</i>); Marshel, James (<i>Stanford University</i>); Ryu, Stephen (<i>Stanford University</i>); Shenoy, Krishna V. (<i>Stanford University</i>)	
16:00-17:45	FrPS2T1.8
Scaling Models for Microfabricated In-Vivo Neural Recording Technologies	181-185
Scholvin, Jorg* (<i>MIT</i>); Fonstad, Clifton (<i>MIT Microsystems Technology Laboratory, MIT Department of Electr</i>); Boyden, Edward (<i>MIT</i>)	
16:00-17:45	FrPS2T1.9
A Blind Adaptive Stimulation Artifact Rejection (ASAR) Engine for Closed-Loop Implantable Neuromodulation Systems	186-189
Basir-Kazeruni, Sina* (<i>University of California, Los Angeles (UCLA)</i>); Vlaski, Stefan (<i>University of California, Los Angeles (UCLA)</i>); Salami, Hawraa (<i>University of California, Los Angeles (UCLA)</i>); Sayed, Ali H. (<i>University of California at Los Angeles</i>); Markovic, Dejan (<i>UCLA</i>)	
16:00-17:45	FrPS2T1.10
Characterization of Retinal Tissue and Vitreous Humor with Electrical Impedance Spectroscopy	190-193
Biswas, Satarupa* (<i>Indian Institute of Technology (IIT), Kharagpur</i>); Das, Debanjan (<i>IIT Kharagpur</i>); Mahadevappa, Manjunatha (<i>Indian Institute of Technology Kharagpur</i>); Das, Soumen (<i>Indian Institute of Technology, Kharagpur</i>)	
16:00-17:45	FrPS2T1.11
A Statistical Description of Pairwise Interaction between Nerve Fibres	194-198
Zhang, Qichun* (<i>University of Essex</i>); Sepulveda, Francisco (<i>University of Essex</i>)	
16:00-17:45	FrPS2T1.12
Electrocorticographic Dynamics Predict Visually Guided Motor Imagery of Grasp Shaping	199-202
Wu, Jing* (<i>University of Washington</i>); Casimo, Kaitlyn (<i>University of Washington</i>); Caldwell, David (<i>University of Washington</i>); Rao, Rajesh PN (<i>University of Washington</i>); Ojemann, Jeffrey G (<i>University of Washington</i>)	

16:00-17:45	FrPS2T1.13
Design, Fabrication, and Characterization of a Scalable Tissue-Engineered Electronic Nerve Interface	203-206
Desai, Vidhi (<i>Univ. of Florida</i>); Spearman, Benjamin (<i>Univ. of Florida</i>); Shafor, Chancellor (<i>Univ. of Florida</i>); Natt, Sruthi (<i>Univ. of Florida</i>); Teem, Brandon (<i>Univ. of Florida</i>); Graham, James (<i>Univ. of Florida</i>); Atkinson, Eric (<i>Univ. of Florida</i>); Wachs, Rebecca (<i>Univ. of Florida</i>); Nunamaker, Elizabeth (<i>Univ. of Florida</i>); Otto, Kevin (<i>Univ. of Florida</i>); Schmidt, Christine (<i>Univ. of Florida</i>); Judy, Jack* (<i>Univ. of Florida</i>)	
16:00-17:45	FrPS2T1.14
Single Laser to Multiple Optical Fiber Device for Optogenetics-Based Epidural Spinal Cord Stimulation	207-210
Chang, Shih-Yin* (<i>The University of Tokyo</i>); Naganuma, Kazunori (<i>The University of Tokyo</i>); Kanazawa, Hoshinori (<i>The University of Tokyo</i>); Takashima, Kenta (<i>Tokyo University</i>); Konishi, Kuniaki (<i>The University of Tokyo</i>); Someya, Takao (<i>the University of Tokyo</i>); Sekino, Masaki (<i>The University of Tokyo</i>); Kuniyoshi, Yasuo (<i>University of Tokyo</i>); Onodera, Hiroshi (<i>University of Tokyo Graduate School of Engineering</i>)	
16:00-17:45	FrPS2T1.15
High-Channel-Count Impedance Spectroscopy Logger	211-214
Pothof, Frederick* (<i>University of Freiburg</i>); Sharma, Kirti (<i>University of Freiburg</i>); Paul, Oliver (<i>University of Freiburg</i>); Ruther, Patrick (<i>University of Freiburg</i>)	
16:00-17:45	FrPS2T1.16
980nm Infrared Neural Stimulation of Sciatic Nerve Enhanced by Carbon Nanoparticles	215-218
Wang, Manqing (<i>Chongqing University</i>); Xia, Nan (<i>Chongqing University</i>); Wu, Xiaoying (<i>Chongqing University</i>); Hou, Wensheng* (<i>Bioengineering Inst of Chongqing Univ</i>)	
16:00-17:45	FrPS2T1.17
Thermal Model of Spiked Electrode in Transcutaneous Electrical Nerve Stimulation (TENS)	219-222
Chen, Luyao* (<i>Huazhong Univ. of Science and Technology</i>); Lo, Yi-Kai (<i>Univ. of California, Los Angeles</i>); Wang, Yushan (<i>Univ. of California, Los Angeles</i>); Liu, Wentai (<i>Univ. of California, Los Angeles</i>)	
16:00-17:45	FrPS2T1.18
Intrinsic Optical Imaging Revealed Precise Spatial Olfactory Information for Neural Signal Recording	223-226
Zhang, Jiacheng (<i>Qiushi Academy for Advanced Studies, Zhejiang University, Hangzho</i>); Zheng, Yongte (<i>Zhejiang University</i>); Zhang, Shaomin (<i>Zhejiang University</i>); Xu, Kedi* (<i>Qiushi Academy for Advanced Studies, Zhejiang University, Hangzhou</i>)	
16:00-17:45	FrPS2T1.19
A Platinum/reduced Graphene Oxide Nanocomposites Modified Nafion Coated Implantable Microelectrode Array Intent on Neural Dopamine and Electrophysiological Recordings	227-230
Cai, Xinxia* (<i>Institute of Electronics, Chinese Academy of Sciences</i>); Yang, Lili (<i>University of Chinese Academy of Sciences</i>); Song, Yilin (<i>State Key Laboratory of Transducer Technology, Institute of Elec</i>); Zhang, Song (<i>Institute of Electronics, Chinese Academy of Sciences</i>); Xiao, Guihua (<i>University of Chinese Academy of Sciences</i>); Li, Ziyue (<i>Chinese Academy of Sciences, Institutes of Electronics</i>); Gao, Fei (<i>Chinese Academy of Sciences, Institutes of Electronics</i>); Zhang, Yu (<i>Chinese Academy of Sciences, Institutes of Electronics</i>); Xu, Huiren (<i>Chinese Academy of Sciences, Institutes of Electronics</i>)	
16:00-17:45	FrPS2T1.20
Microelectrode Arrays Studies of Glutamate Excitatory Pathway in Hippocampus CA3 by Offside KCl and Glutamate Stimulating	231-234
Cai, Xinxia* (<i>Inst. of Electronics, Chinese Academy of Sciences</i>); Xiao, Guihua (<i>Univ. of Chinese Academy of Sciences</i>); Song, Yilin (<i>Inst. of Electronics, Chinese Academy of Science</i>); Zhang, Song (<i>Inst. of Electronics, Chinese Academy of Sciences</i>); Xu, Shengwei (<i>Inst. of Electronics, Chinese Academy of Science</i>); Yang, Lili (<i>Univ. of Chinese Academy of Sciences</i>); Xu, Huiren (<i>Chinese Academy of Sciences, Inst. of Electronics</i>)	
16:00-17:45	FrPS2T1.21
Structurally and Functionally Interconnected 3D-Neuronal Assemblies Coupled to Micro-Electrode Arrays	235-238
Tedesco, Mariateresa (<i>Univ. of Genova</i>); Colistra, Nicolò (<i>Univ. of Genoa</i>); Massobrio, Paolo (<i>Univ. of Genova</i>); Chiappalone, Michela (<i>Istituto Italiano di Tecnologia</i>); Martinoia, Sergio* (<i>Univ. of Genova</i>)	

16:00-17:45	FrPS2T1.22
Effect of Nerve Variations on the Stimulus Current Level in a Wearable Neuromodulator for Migraine: A Modeling Study	239-242
Salkim, Enver* (<i>University College London</i>); Nasrollahy Shiraz, Arsam (<i>University College London</i>); Demosthenous, Andreas (<i>University College London</i>)	
16:00-17:45	FrPS2T1.23
Electrical Analysis of Minocycline Eluting Layer-By-Layer Thin-Films from Functional Micro-Electrode Arrays	243-246
McDermott, Matthew (<i>Purdue Univ.</i>); Olczak, Kaitlynn (<i>Univ. of Florida</i>); Otto, Kevin* (<i>Univ. of Florida</i>)	
16:00-17:45	FrPS2T1.24
Dual-Sided Process with Graded Interfaces for Adhering Underfill and Globtop Materials to Microelectrode Arrays	247-250
Khan, Sharif* (<i>University of Freiburg</i>); Ordóñez, Juan Sebastian (<i>University of Freiburg</i>); Stieglitz, Thomas (<i>University of Freiburg</i>)	
16:00-17:45	FrPS2T1.25
A Wearable EEG-Based Drowsiness Detection System with Blink Duration and Alpha Waves Analysis	251-254
Kartsch Morinigo, Victor Javier* (<i>University of Bologna</i>); Benatti, Simone (<i>University of Bologna</i>); Rossi, Davide (<i>University of Bologna</i>); Benini, Luca (<i>University of Bologna</i>)	
16:00-17:45	FrPS2T1.26
Local Inhibition of Microstimulation-Induced Neural Excitations by Near-Infrared Laser Irradiation in Mouse Cerebral Slices in Vitro	255-258
Hayashida, Yuki* (<i>Osaka University</i>); Sakata, Yuya (<i>Osaka University</i>); Tanaka, Yuta (<i>Osaka University</i>); Nomoto, Tomohiro (<i>Osaka University</i>); Yagi, Tetsuya (<i>Osaka University, Gard. Eng</i>)	
16:00-17:45	FrPS2T1.27
Multi-Site Closed-Loop Stimulation Strategy for Seizure Control with a Generalized Neurostimulator	259-262
Zheng, Yongte (<i>Zhejiang Univ.</i>); Gao, Huan (<i>Qiushi Academy for Advanced Studies, Zhejiang Univ.</i>); Zhang, Jiacheng (<i>Qiushi Academy for Advanced Studies, Zhejiang Univ., Hangzhou</i>); Zhang, Shaomin (<i>Zhejiang Univ.</i>); Wang, Yueming (<i>Zhejiang Univ.</i>); Xu, Kedi* (<i>Qiushi Academy for Advanced Studies, Zhejiang Univ., Hangzhou</i>)	
16:00-17:45	FrPS2T1.28
Decoding of Motor Imagery Movements from EEG Signals using SpiNNaker Neuromorphic Hardware	263-266
Tayeb, Zied* (<i>TUM</i>); Erçelik, Emeç (<i>Tech. Univ. of Munich (TUM)</i>); Conradt, Jorg (<i>Technische Univ. München</i>)	
16:00-17:45	FrPS2T1.29
Microtunnel-Electrode Device for Elucidating Axon Features: Toward Pharmacological Manipulation of Individual Axons	267-270
Shimba, Kenta* (<i>Tokyo Institute of Technology</i>); Sakai, Koji (<i>University of Tokyo</i>); Kotani, Kiyoshi (<i>University of Tokyo</i>); Yagi, Tohru (<i>Tokyo Institute of Technology</i>); Jimbo, Yasuhiko (<i>University of Tokyo</i>)	
16:00-17:45	FrPS2T1.30
Implantation Methodology Development for Tissue-Engineered Electronic Neural Interface (TEENI) Devices	271-274
Nunamaker, Elizabeth* (<i>University of Florida</i>); Spearman, Benjamin (<i>University of Florida</i>); Graham, James (<i>University of Florida</i>); Atkinson, Eric (<i>University of Florida</i>); Desai, Vidhi (<i>University of Florida</i>); Shafor, Chancellor (<i>University of Florida</i>); Natt, Sruthi (<i>University of Florida</i>); Wachs, Rebecca (<i>University of Florida</i>); Schmidt, Christine (<i>University of Florida</i>); Judy, Jack (<i>University of Florida</i>); Otto, Kevin (<i>University of Florida</i>)	
16:00-17:45	FrPS2T1.31
Histological Evaluation of Chronically Implanted Tissue-Engineered-Electronic-Neural-Interface (TEENI) Devices	275-278
Graham, James* (<i>University of Florida</i>); Atkinson, Eric (<i>University of Florida</i>); Nunamaker, Elizabeth (<i>University of Florida</i>); Spearman, Benjamin (<i>University of Florida</i>); Desai, Vidhi (<i>University of Florida</i>); Shafor, Chancellor (<i>University of Florida</i>); Natt, Sruthi (<i>University of Florida</i>); Wachs, Rebecca (<i>University of Florida</i>); Schmidt, Christine (<i>University of Florida</i>); Judy, Jack (<i>University of Florida</i>); Otto, Kevin (<i>University of Florida</i>)	

16:00-17:45	FrPS2T1.32
Spatially Resolved Calcium Spiking in Hippocampal Neurons: Estimation via Confocal Imaging and Model-Based Simulation	279-283
Swain, Sarpras (<i>Indian Institute of Technology, Hyderabad</i>); Ande, Sathish (<i>Indian Institute of Technology Hyderabad</i>); Ravutla, Surya Teja (<i>IIT Hyderabad</i>); Jana, Soumya (<i>Indian Institute of Technology Hyderabad</i>); Giri, Lopamudra* (<i>Indian Institute of Technology, Hyderabad</i>)	
16:00-17:45	FrPS2T1.34
Mimicking Natural Neural Encoding through Retinal Electrostimulation	284-287
Guo, Tianruo (<i>University of New South Wales</i>); Barriga-Rivera, Alejandro (<i>University of New South Wales</i>); Suaning, Gregg (<i>The University of New South Wales</i>); Tsai, David (<i>Columbia University</i>); Dokos, Socrates (<i>University of New South Wales</i>); Morley, John William (<i>University of Western Sydney</i>); Lovell, Nigel H.* (<i>University of New South Wales</i>)	
16:00-17:45	FrPS2T1.35
Improved Long-Term Stability of Thin-Film Glassy Carbon Electrodes through the use of Silicon Carbide and Amorphous Carbon	288-291
Vomero, Maria* (<i>University of Freiburg</i>); Castagnola, Elisa (<i>Istituto Italiano di Tecnologia - RBCS</i>); Ordonez, Juan Sebastian (<i>University of Freiburg</i>); Carli, Stefano (<i>Istituto Italiano di Tecnologia</i>); Zucchini, Elena (<i>Istituto Italiano di Tecnologia</i>); Maggiolini, Emma (<i>Italian Institute of Technology, Robotics, Brain and Cognitive S</i>); Gueli, Calogero (<i>University of Freiburg</i>); Goshi, Noah (<i>San Diego State University</i>); Fadiga, Luciano (<i>Universita' degli Studi di Ferrara, Ferrara, Italia</i>); Ricci, Davide (<i>Istituto Italiano di Tecnologia - RBCS</i>); Kassegne, Sam (<i>San Diego State University</i>); Stieglitz, Thomas (<i>University of Freiburg</i>)	
16:00-17:45	FrPS2T1.36
Blood Oxygenation Changes Resulting From Subthreshold High Frequency Repetitive Transcranial Magnetic Stimulation	292-295
Li, Rihui (<i>University of Houston</i>); Zhang, Yingchun* (<i>University of Houston</i>)	
16:00-17:45	FrPS2T1.37
Desynchronizing of Noisy Neuron Networks using Reinforcement Learning	296-299
Lu, Meili* (<i>Tianjin University of Technology and Education</i>); Wei, Xile (<i>Tianjin University</i>)	
16:00-17:45	FrPS2T1.38
A Portable, Arbitrary Waveform, Multichannel Constant Current Electrotactile Stimulator	300-303
Cornman, Jesse* (<i>University of Illinois at Urbana-Champaign</i>); Akhtar, Aadeel (<i>University of Illinois at Urbana-Champaign</i>); Bretl, Timothy (<i>University of Illinois at Urbana-Champaign</i>)	
16:00-17:45	FrPS2T1.39
A Mathematical Modeling Research for Effects of Electric Stimulus Waveforms on the Excitability of Optic Nerve Fibers	304-307
Li, Xinxin (<i>Shanghai Jiao Tong University</i>); Qiu, Shirong (<i>Shanghai Jiao Tong University</i>); Li, Menghui (<i>Peking University</i>); Guo, Hong (<i>Shanghai Jiao Tong University</i>); Li, Liming* (<i>Shanghai Jiao Tong University</i>)	
16:00-17:45	FrPS2T1.40
A Comparative Study on Electrically Evoked Responses of Retinal Ganglion Cells in Distinct Retinal Areas by Computational Model	308-311
Qiu, Shirong (<i>Shanghai Jiao Tong University</i>); Li, Xinxin (<i>Shanghai Jiao Tong University</i>); Li, Xue (<i>Shanghai Jiao Tong University</i>); Li, Liming* (<i>Shanghai Jiao Tong University</i>)	
16:00-17:45	FrPS2T1.41
Rat Forelimb Movement Components Segregated by Corticospinal Tract Activity	312-315
Gok, Sinan (<i>New Jersey Institute of Technology</i>); Sahin, Mesut* (<i>New Jersey Institute of Technology</i>)	

11:45-13:30	SaPS1T1.1
Classifier-Based Closed-Loop Deep Brain Stimulation for Essential Tremor	316-320
Houston, Brady* (<i>University of Washington</i>); Thompson, Margaret (<i>University of Washington, Seattle</i>); Ojemann, Jeffrey G (<i>University of Washington</i>); Ko, Andrew (<i>University of Washington</i>); Chizeck, Howard (<i>University of Washington</i>)	
11:45-13:30	SaPS1T1.2
Frequency Peak Features for Low-Channel Classification in Motor Imagery Paradigms	321-324
Jayaram, Vinay* (<i>Max Planck Institute for Intelligent Systems, Tuebingen</i>); Schölkopf, Bernhard (<i>MPI for Biological Cybernetics</i>); Grosse-Wentrup, Moritz (<i>Max Planck Institute for Biological Cybernetics</i>)	
11:45-13:30	SaPS1T1.3
Musculoskeletal Model for Simultaneous and Proportional Control of 3-DOF Hand and Wrist Movements from EMG Signals	325-328
Pan, Lizhi (<i>North Carolina State University</i>); Crouch, Dustin (<i>North Carolina State University</i>); Huang, He* (<i>North Carolina State University and University of North Carolina</i>)	
11:45-13:30	SaPS1T1.4
Dorsal Premotor Area of the Macaque Monkey Participate Hand Shape Planning	329-332
Sun, Guanghao (<i>Zhejiang University</i>); Zhang, Shaomin* (<i>Zhejiang University</i>); Zhang, Qiaosheng (<i>New York University Medical School</i>); Zhu, Junming (<i>Second Affiliated Hospital, School of Medicine, Zhejiang Universi</i>); Yang, Yiyi (<i>Zhejiang University</i>); Zheng, Xiaoxiang (<i>Zhejiang University</i>); Xu, Kedi (<i>Zhejiang University, Qiusi Academy for Advanced Studies</i>)	
11:45-13:30	SaPS1T1.5
Modulation of Beta Power in EEG during Discrete and Continuous Motor Imageries	333-336
Rimbert, Sébastien* (<i>Université de Lorraine, LORIA, INRIA</i>); Lindig, Cecilia (<i>Inria</i>); Fedotenkova, Mariia (<i>INRIA</i>); Bougrain, Laurent (<i>University of Lorraine</i>)	
11:45-13:30	SaPS1T1.6
Effects of Illumination and Noise on the Performance of a P300 Brain-Computer Interface for Assistive Vehicles	337-340
Lian, Jinling (<i>Beijing Institute of Technology</i>); Bi, Luzheng* (<i>Beijing Institute of Technology</i>); Fan, Xin-an (<i>Beijing Institute of Mechanical Equipment</i>)	
11:45-13:30	SaPS1T1.7
Does Frequency Resolution Affect the Classification Performance of Steady-State Visual Evoked Potentials?	341-344
Nakanishi, Masaki* (<i>University of California San Diego</i>); Wang, Yijun (<i>Institute of Semiconductors, Chinese Academy of Sciences</i>); Wang, Yu-Te (<i>University of California San Diego</i>); Jung, Tzyy-Ping (<i>University of California San Diego</i>)	
11:45-13:30	SaPS1T1.8
Stimulation Strategies for Selective Activation of Retinal Ganglion Cells	345-348
Chang, Yao-Chuan (<i>University of Southern California</i>); Weiland, James* (<i>University of Michigan</i>)	
11:45-13:30	SaPS1T1.9
Neural Interfacing Non-Invasive Brain Stimulation with NIRS-EEG Joint Imaging for Closed-Loop Control of Neuroenergetics in Ischemic Stroke	349-353
von Lühmann, Alexander (<i>Machine Learning Department, Technische Universität Berlin</i>); Addesa, Jessica (<i>Department of Biomedical Engineering, University at Buffalo - SU</i>); Chandra, Sourav (<i>Indian Institute of Technology Madras</i>); Das, Abhijit (<i>Institute of NeuroSciences Kolkata</i>); Hayashibe, Mitsuhiro (<i>INRIA</i>); Dutta, Anirban* (<i>University at Buffalo SUNY</i>)	

11:45-13:30	SaPS1T1.10
Modeling Motor Responses of Paraplegics under Epidural Spinal Cord Stimulation	354-357
Feldman, Ellen* (<i>Caltech</i>); Burdick, Joel W. (<i>Caltech</i>)	
11:45-13:30	SaPS1T1.11
Model Predictive Control of Deep Brain Stimulation for Parkinsonian Tremor	358-362
Haddock, Andrew* (<i>University of Washington</i>); Velisar, Anca (<i>Stanford University</i>); Herron, Jeffrey (<i>University of Washington</i>); Bronte-Stewart, Helen (<i>Stanford University</i>); Chizeck, Howard (<i>University of Washington</i>)	
11:45-13:30	SaPS1T1.12
Optimizing Visual Comfort and Classification Accuracy for a Hybrid P300-SSVEP Brain-Computer Interface	363-366
Xu, Minpeng (<i>Tianjin University</i>); Han, Jin* (<i>Tianjin University</i>); Wang, Yijun (<i>Institute of Semiconductors, Chinese Academy of Sciences</i>); Ming, Dong (<i>Tianjin University</i>)	
11:45-13:30	SaPS1T1.13
In-Vivo Transcranial Ultrasound Imaging of Induced Substantia Nigra Hyperechogenicity using Adaptive Sparse Third Order Volterra Filter	367-370
Cunningham, James (<i>Penn State University</i>); Song, Yi (<i>Penn State University</i>); Albahar, Hadeel (<i>Penn State University</i>); Subramanian, Thyagarajan (<i>Penn State University</i>); Almekkawy, Mohamed* (<i>Penn State University</i>)	
11:45-13:30	SaPS1T1.14
Continuous Force Decoding from Deep Brain Local Field Potentials for Brain Computer Interfacing	371-374
Shah, Syed Ahmar* (<i>Postdoctoral Scientist, University of Oxford</i>); Tan, Huiling (<i>Postdoctoral Research Associate in Nuffield Department of Clinic</i>); Brown, Peter (<i>Director of the Medical Research Council Brain Network Dynamics</i>)	
11:45-13:30	SaPS1T1.15
A Preliminary Study towards Prosthetic Hand Control using Human Stereo-Electroencephalography (SEEG) Signals	375-378
Li, Guangye (<i>Shanghai Jiao Tong University</i>); Jiang, Shize (<i>Fu Dan University</i>); Yang, Xu (<i>Shanghai Jiao Tong University</i>); Wu, Zehan (<i>Huanshan Hospital</i>); Chen, Liang (<i>Huanshan Hospital</i>); Zhang, Dingguo* (<i>Shanghai Jiao Tong University</i>)	
11:45-13:30	SaPS1T1.16
Virtual Reality Sound Localization Testing in Cochlear Implant Users	379-382
Sechler, Stephen (<i>Trinity College Dublin</i>); Lopez Valdes, Alejandro (<i>Trinity Centre for Bioengineering, Trinity College Dublin</i>); Waechter, Saskia Marleen (<i>Trinity College Dublin</i>); Simoes Franklin, Cristina (<i>Beaumont Hospital</i>); Viani, Laura (<i>National Cochlear Implant Program, Beaumont Hospital</i>); Reilly, Richard* (<i>Trinity College Dublin</i>)	
11:45-13:30	SaPS1T1.17
Dynamic Stopping in P300 Speller with Convolutional Neural Network	383-386
Chen, Zhubing* (<i>South China University of Technology</i>); Zhang, Xichun (<i>South China University of Technology</i>)	
11:45-13:30	SaPS1T1.18
An EEG-Based Mind Controlled Virtual-Human Obstacle-Avoidance Platform in Three Dimensional Virtual Environment	387-390
Zhao, Chunhui (<i>South China University of Technology</i>); Zhang, Zhijun* (<i>South China University of Technology</i>); Li, Yuanqing (<i>South China University of Technology</i>); Pan, Xin (<i>South China University of Technology</i>); Qu, Jun (<i>South China University of Technology</i>); Yan, Ziyi (<i>South China University of Technology</i>)	
11:45-13:30	SaPS1T1.19
Identification of Sensory Information in Mixed Nerves using Multi-Channel Cuff Electrodes for Closed Loop Neural Prostheses	391-394
Brunton, Emma Kate* (<i>Newcastle University</i>); Blau, Christoph (<i>Newcastle University</i>); Silveira, Carolina (<i>Newcastle University</i>); Nazarpour, Kianoush (<i>Newcastle University</i>)	
11:45-13:30	SaPS1T1.20
Use of Regularized Discriminant Analysis Improves Myoelectric Hand Movement Classification	395-398
Krasoulis, Agamemnon* (<i>The University of Edinburgh</i>); Nazarpour, Kianoush (<i>Newcastle University</i>); Vijayakumar, Sethu (<i>The University of Edinburgh</i>)	

11:45-13:30	SaPS1T1.21
A BCI System for Assisting Visual Fixation Assessment in Behavioral Evaluation of Patients with Disorders of Consciousness	399-402
Xiao, Jun (<i>South China University of Technology</i>); Lin, Qing (<i>Guangzhou University of Chinese Medicine</i>); Yu, Tianyou (<i>South China University of Technology, Chinese</i>); Xie, Qiuyou (<i>Guangzhou General Hospital of Guangzhou Military Command</i>); Yu, Ronghao (<i>Guangzhou General Hospital of Guangzhou Military Command</i>); Li, Yuanqing* (<i>South China University of Technology</i>)	
11:45-13:30	SaPS1T1.22
High Performance in Brain-Computer Interface Control of an Avatar using the Missing Hand Representation in Long Term Amputees	403-406
Cohen, Ori* (<i>Bar-Ilan University and the Interdisciplinary Center Herzliya (I)</i>); Doron, Dana (<i>Sheba Medical Center, Tel-Hashomer.</i>); Koppel, Moshe (<i>Bar-Ilan University</i>); Malach, Rafael (<i>Weizmann Institute of Science</i>); Friedman, Doron (<i>the Interdisciplinary Center Herzliya (IDC H.)</i>)	
11:45-13:30	SaPS1T1.23
Development of Double-D Coils for Transcranial Magnetic Stimulation Care at Home	407-410
Kawasaki, Yuta* (<i>The University of Tokyo</i>); Yamamoto, Keita (<i>The University of Tokyo</i>); Hosomi, Koichi (<i>Osaka University</i>); Saitoh, Youichi (<i>Osaka University</i>); Sekino, Masaki (<i>The University of Tokyo</i>)	
11:45-13:30	SaPS1T1.24
Robotic Arm Control using Hybrid Brain-Machine Interface and Augmented Reality Feedback	411-414
Yanxin, Wang (<i>Southeast University</i>); Hong, Zeng* (<i>Southeast University</i>); Aiguo, Song (<i>Southeast University</i>); Baoguo, Xu (<i>Southeast University</i>); Huijun, Li (<i>Southeast University</i>); Lifeng, Zhu (<i>Southeast University</i>); Pengcheng, Wen (<i>AVIC Aeronautics Computing Technique Research Institute</i>); Liu, Jia (<i>Nanjing University of Information Sciences & Technology</i>)	
11:45-13:30	SaPS1T1.25
Augmenting Group Performance in Target-Face Recognition via Collaborative Brain-Computer Interfaces for Surveillance Applications	415-418
Valeriani, Davide* (<i>Univ. of Essex</i>); Cinel, Caterina (<i>Univ. of Essex</i>); Poli, Riccardo (<i>Univ. of Essex</i>)	
11:45-13:30	SaPS1T1.26
Prediction of Consciousness Recovery in Patients with Disorders of Consciousness using Brain-Computer Interface	419-423
Pan, Jiahui (<i>South China University of Technology</i>); Xie, Qiuyou (<i>Guangzhou General Hospital of Guangzhou Military Command</i>); Lin, Qing (<i>Guangzhou University of Chinese Medicine</i>); Huang, Haiyun (<i>South China University of technology</i>); Yu, Ronghao (<i>Guangzhou General Hospital of Guangzhou Military Command</i>); Li, Yuanqing* (<i>South China University of Technology</i>); Wang, Fei (<i>South China University of Technology</i>)	
11:45-13:30	SaPS1T1.27
Neurostimulation using Mechanical Motion of Magnetic Particles Wiggled by External Oscillating Magnetic Gradients	424-427
Nacev, Alek (<i>Weinberg Medical Physics LLC</i>); Weinberg, Irving* (<i>Weinberg Medical Physics, Inc.</i>); Mair, Lamar (<i>Weinberg Medical Physics LLC</i>); Hilaman, Ryan (<i>Weinberg Medical Physics LLC</i>); Jafari, Sahar (<i>Weinberg Medical Physics Inc</i>); Ijanaten, Said (<i>University of Maryland</i>); da Silva, Claudian (<i>Weinberg Medical Physics Inc</i>); Baker-McKee, James (<i>University of Maryland</i>); Chowdhury, Sagar (<i>Purdue University</i>); Stepanov, Pavel (<i>Weinberg Medical Physics LLC</i>)	
11:45-13:30	SaPS1T1.28
Optimizing Cerebellar Transcranial Direct Current Stimulation for Visuomotor Learning – Anterior versus Posterior Lobe of Cerebellum	428-431
Abadi, Zeynab Rezaee Hassan (<i>University at Buffalo SUNY</i>); Dutta, Anirban* (<i>University at Buffalo SUNY</i>)	
11:45-13:30	SaPS1T1.29
Polynomial Kalman Filter for Myoelectric Prosthetics using Efficient Kernel Ridge Regression	432-435
Nieveen, Jacob (<i>Univ. of Utah</i>); Zhang, Yiman* (<i>Harbin Engineering Univ.</i>); Wendelken, Suzanne (<i>Dartmouth College</i>); Davis, Tyler (<i>Univ. of Utah</i>); Kluger, David (<i>Northwestern Univ.</i>); George, Jacob A. (<i>Univ. of Utah</i>); Warren, David (<i>Univ. of Utah</i>); Hutchinson, Douglas (<i>Univ. of Utah</i>); Duncan, Christopher (<i>Univ. of Utah</i>); Clark, Gregory (<i>Univ. of Utah</i>); Mathews, V. John Mathews (<i>Univ. of Utah</i>)	

11:45-13:30	SaPS1T1.30
Profiling BCI Users based on Contralateral Activity to Improve Kinesthetic Motor Imagery Detection	436-439
Rimbert, Sébastien* (<i>Université de Lorraine, LORIA, INRIA</i>); Lindig, Cecilia (<i>Inria</i>); Bougrain, Laurent (<i>University of Lorraine</i>)	
11:45-13:30	SaPS1T1.31
EEG based Motor Imagery Study of Time Domain Features for Classification of Power and Precision Hand Grasps	440-443
Roy, Rinku* (<i>IIT Kharagpur</i>); Sikdar, Debdeep (<i>IIT Kharagpur</i>); Mahadevappa, Manjunatha (<i>Indian Institute of Technology Kharagpur</i>); Kumar, Cheruvu Siva (<i>Indian Institute of Technology, Kharagpur</i>)	
11:45-13:30	SaPS1T1.32
Retinotopy within Rat Primary Visual Cortex in Response to Electrical Stimulation of the Retina	444-447
Nimmagadda, Kiran (<i>University of Southern California</i>); Weiland, James* (<i>University of Michigan</i>)	
11:45-13:30	SaPS1T1.33
Individual Hand Movement Detection and Classification using Peripheral Nerve Signals	448-451
Zhang, Yiman* (<i>Harbin Engineering University</i>); Nieveen, Jacob (<i>University of Utah</i>); Wendelken, Suzanne (<i>Dartmouth College</i>); Page, David (<i>University of Utah</i>); Davis, Tyler (<i>University of Utah</i>); Padilha Lanari Bó, Antônio (<i>Universidade de Brasília</i>); Hutchinson, Douglas (<i>University of Utah</i>); Clark, Gregory (<i>University of Utah</i>); Warren, David (<i>University of Utah</i>); Zhang, Chaozhu (<i>Harbin Engineering University</i>); Mathews, V. John Mathews (<i>University of Utah</i>)	
11:45-13:30	SaPS1T1.34
Effect of Two Different Treadmill Training Protocols on Locomotion Recovery in Spinalized Rats	452-455
Kobravi, Hamid Reza* (<i>Islamic Azad University, Mashhad Branch</i>)	
11:45-13:30	SaPS1T1.35
Wireless Power Transfer and Optogenetic Stimulation of Freely Moving Rodents	456-460
Nassirinia, Farnaz* (<i>Erasmus Medical Center</i>); Straver, Wil (<i>Delft University of Technology</i>); Hoebeek, Freek (<i>Erasmus Medical Center</i>); Serdijn, Wouter A. (<i>Delft University of Technology</i>)	
11:45-13:30	SaPS1T1.36
BNEL_VP: An Image Processing Toolbox for Visual Prostheses	461-464
Abolfotuh, Hossam H. (<i>Ain Shams University</i>); Jawwad, Amr (<i>Ain Shams University</i>); Abdullah, Bassem (<i>Ain Shams University</i>); Mahdi, Hani (<i>Ain Shams University</i>); Eldawlatly, Seif* (<i>Ain Shams University</i>)	
11:45-13:30	SaPS1T1.37
Experimental Demonstration of a Delay Compensating Controller in a Hybrid Walking Neuroprosthesis	465-468
Dodson, Albert (<i>Univ. of Pittsburgh</i>); Alibeji, Naji (<i>Univ. of Pittsburgh</i>); Sharma, Nitin* (<i>Univ. of Pittsburgh</i>)	
11:45-13:30	SaPS1T1.38
Distributed Open-Loop Optogenetic Control of Cortical Epileptiform Activity in a Wilson-Cowan Network	469-472
Che, Yanqiu* (<i>Tianjin University of Technology and Education</i>)	
11:45-13:30	SaPS1T1.39
The Effect of Gender on Vection Perception and Postural Response Induced by Immersive Virtual Rotation Drum	473-476
Wei, Miaoluan (<i>Sun Yat-sen University, School of Engineering, Guangdong Provinci</i>); Luo, Jie* (<i>Sun Yat-sen University</i>); Luo, Haizhen (<i>Sun Yat-sen University</i>); Song, Rong (<i>Sun Yat-sen University</i>)	
11:45-13:30	SaPS1T1.49
Minimally Invasive Brain Computer Interface for Fast Typing	477-480
Li, Dongyang (<i>Tsinghua University</i>); Han, Hao (<i>Tsinghua University</i>); Xu, Xin (<i>PLA General Hospital</i>); Ling, Zhipei (<i>General Hospital of People's Liberty Army</i>); Hong, Bo* (<i>Tsinghua University</i>)	

16:00-17:45	SaPS2T1.1
Quickest Detection for Abrupt Changes in Neuronal Ensemble Spiking Activity using Model-Based and Model-Free Approaches	481-484
Chen, Zhe* (<i>Harvard Medical School/MIT</i>); Hu, Sile (<i>New York University</i>); Zhang, Qiaosheng (<i>New York University Medical School</i>); Wang, Jing (<i>New York University School of Medicine</i>)	
16:00-17:45	SaPS2T1.2
Improving the P300-Based Brain-Computer Interface with Transfer Learning	485-488
Hou, Jiayun (<i>Tsinghua University</i>); Li, Yali (<i>Tsinghua University</i>); Liu, Hongma (<i>Tsinghua University</i>); Wang, Shengjin* (<i>Tsinghua University</i>)	
16:00-17:45	SaPS2T1.3
Spiking Cerebellar Model with Damaged Cortical Neural Population Reproduces Human Ataxic Behaviors in Perturbed Upper Limb Reaching	489-492
Geminiani, Alice* (<i>Politecnico di Milano</i>); Pedrocchi, Alessandra (<i>Politecnico di Milano</i>); D'Angelo, Egidio (<i>University of Pavia</i>); Casellato, Claudia (<i>Politecnico di Milano</i>)	
16:00-17:45	SaPS2T1.4
Real-Time Feature Extraction for Multi-Channel EEG Signals Time-Frequency Analysis	493-496
Zhang, Lei* (<i>University of Regina</i>)	
16:00-17:45	SaPS2T1.5
Depuration, Augmentation and Balancing of Training Data for Supervised Learning based Detectors of EEG Patterns	497-500
Lachner Piza, Daniel* (<i>University Medical Center Freiburg</i>); Schulze-Bonhage, Andreas (<i>University Hospital Freiburg</i>); Stieglitz, Thomas (<i>University of Freiburg</i>); Jacobs, Julia (<i>Montreal Neurological Institute</i>); Dümpelmann, Matthias (<i>University Medical Center Freiburg</i>)	
16:00-17:45	SaPS2T1.6
A New Perspective of Noise Removal from EEG	501-504
Li, Junhua* (<i>National University of Singapore</i>); Li, Chao (<i>Harbin Engineering University</i>); Thakor, Nitish (<i>Johns Hopkins University</i>); Cichocki, Andrzej (<i>BSI RIKEN</i>); Bezerianos, Anastasios (<i>National University of Singapore</i>)	
16:00-17:45	SaPS2T1.7
A New Approach to Detection and Classification Epileptic Spikes in EEG	N/A
Khouma, Ousmane* (<i>Université Cheikh Anta DIOP</i>); Ndiaye, Mamadou Lamine (<i>Cheikh Anta DIOP University</i>); Diop, Idy (<i>Cheikh Anta DIOP University</i>); Diaw, Samba (<i>Université Cheikh Anta DIOP</i>); Diop, Abdou Khadre (<i>Université Cheikh Anta DIOP</i>); Farssi, Sidi Mohamed (<i>Cheikh Anta DIOP University</i>); Diouf, Birahime (<i>Cheikh Anta DIOP University</i>); Tall, Khaly (<i>Université Cheikh Anta DIOP</i>); Montois, Jean-Jacques (<i>Renne1 University</i>)	
16:00-17:45	SaPS2T1.8
Unsupervised Robust Detection of Behavioral Correlates in ECoG	509-512
Loza, Carlos* (<i>University of Florida</i>); Principe, Jose (<i>University of Florida</i>)	
16:00-17:45	SaPS2T1.9
Neurotrauma Evaluation in a 3D Electro-Mechanical Model of a Nerve Bundle	513-516
Cinelli, Ilaria* (<i>NUI of Galway</i>); Destrade, Michel (<i>CNRS / Université Pierre et Marie Curie</i>); Duffy, Maeve (<i>NUI Galway</i>); McHugh, Peter (<i>NUI of Galway</i>)	
16:00-17:45	SaPS2T1.10
Effects of Nerve Bundle Geometry on Neurotrauma Evaluation	517-520
Cinelli, Ilaria* (<i>NUI of Galway</i>); Destrade, Michel (<i>CNRS / Université Pierre et Marie Curie</i>); Duffy, Maeve (<i>NUI Galway</i>); McHugh, Peter (<i>NUI of Galway</i>)	
16:00-17:45	SaPS2T1.11
Decoding Acute Pain with Combined EEG and Physiological Data	521-524
Lancaster, Jenessa (<i>Imperial College London</i>); Mano, Hiroaki (<i>National Institute of Communications Technology</i>); Callan, Daniel (<i>National Institute of Communications Technology</i>); Kawato, Mitsuo (<i>ATR Computational Neuroscience Laboratories</i>); Seymour, Ben* (<i>Cambridge University</i>)	

16:00-17:45	SaPS2T1.12
Dynamic Synchronization State Identification	525-528
Luo, Huichun (<i>University of Science and Technology of China, Hefei</i>); Du, Xueying (<i>Suzhou Institute of Biomedical Engineering and Technology</i>); Huang, Yongzhi (<i>Suzhou Institute of Biomedical Engineering and Technology, China</i>); Green, Alexander L (<i>University of Oxford</i>); Aziz, Tipu Z (<i>University of Oxford</i>); Wang, Shouyan* (<i>Chinese Academy of Sciences</i>)	
16:00-17:45	SaPS2T1.13
Development of an Extensible SSVEP-BCI Software Platform and Application to Wheelchair Control	529-532
Waytowich, Nicholas (<i>Army Research Laboratory</i>); Krusienski, Dean* (<i>Old Dominion University</i>)	
16:00-17:45	SaPS2T1.14
Inter-Ictal Seizure Onset Zone Localization using Unsupervised Clustering and Bayesian Filtering	533-539
Varatharajah, Yogatheesan* (<i>University of Illinois at Urbana-Champaign</i>); Berry, Brent Michael (<i>Mayo clinic</i>); Kalbarczyk, Zbigniew (<i>University of Illinois at Urbana-Champaign</i>); Brinkmann, Benjamin (<i>Mayo Foundation</i>); Worrell, Gregory A. (<i>Mayo Clinic</i>); Iyer, Ravishankar (<i>University of Illinois at Urbana-Champaign</i>)	
16:00-17:45	SaPS2T1.15
Use of Wavelet Transform Coefficients for Spike Detection for a Robust Intracortical Brain Machine Interface	540-543
Lee, Cheng Feng, Gary (<i>Institute for Infocomm Research</i>); Guan, Cuntai (<i>Nanyang Technological University</i>); Libedinsky, Camilo (<i>A*STAR</i>); So, Rosa* (<i>Institute for Infocomm Research</i>)	
16:00-17:45	SaPS2T1.16
Common Spatial Pattern with Polarity Check for Reducing Delay Latency in Detection of MRCP based BCI System	544-547
Yao, Lin* (<i>University Medical Center Goettingen, Georg-August-University</i>); Chen, Mei Lin (<i>University of Waterloo</i>); Sheng, Xinjun (<i>Shanghai Jiao Tong University</i>); Mrachacz-Kersting, Natalie (<i>Aalborg University</i>); Zhu, Xiangyang (<i>Shanghai Jiao Tong University</i>); Farina, Dario (<i>Bernstein Center for Computational Neuroscience, University Medic</i>); Jiang, Ning (<i>University of Waterloo</i>)	
16:00-17:45	SaPS2T1.17
Identification of Gait-Related Brain Activity using Electroencephalographic Signals	548-551
Chai, Jingwen (<i>National University of Singapore, Singapore Institute of Neurote</i>); Chen, Gong (<i>National University of Singapore</i>); Thangavel, Pavithra (<i>NUS</i>); Dimitrakopoulos, Georgios (<i>University of Patras</i>); Kakkos, Ioannis (<i>National University Singapore</i>); Sun, Yu (<i>National University of Singapore</i>); Dai, Zhongxiang (<i>Singapore Institute for Neurotechnology (SINAPSE), Centre for Li</i>); Yu, Haoyong (<i>National University of Singapore</i>); Thakor, Nitish (<i>Johns Hopkins University</i>); Bezerianos, Anastasios (<i>National University of Singapore</i>); Li, Junhua* (<i>National University of Singapore</i>)	
16:00-17:45	SaPS2T1.18
Effect of Attention Division on Movement Detection and Execution in Dual-Task Conditions	552-555
Aliakbaryhosseinabadi, Susan* (<i>the Center for Sensory-Motor Intraction, Department of Health Sc</i>); Kamavuako, Ernest Nlandu (<i>Aalborg University</i>); Farina, Dario (<i>Bernstein Center for Computational Neuroscience, University Medic</i>); Mrachacz-Kersting, Natalie (<i>Aalborg University</i>)	
16:00-17:45	SaPS2T1.20
EEG-Based Target Detection during a Multi-Rapid Serial Visual Presentation	556-559
Lin, Zhimin (<i>China National Digital Switching System Engineering and Technolo</i>); Zeng, Ying (<i>China National Digital Switching System Engineering and Technolo</i>); Wang, Xiaojuan (<i>China National Digital Switching System Engineering and Technolo</i>); Wu, Qunjian (<i>China National Digital Switching System Engineering and Technolo</i>); Yan, Bin* (<i>China National Digital Switching System Engineering and Technolo</i>)	
16:00-17:45	SaPS2T1.21
Theta Oscillations during Cognitive Reappraisal of Sad and Fearful Stimuli	560-563
Wei, Ling (<i>Shanghai Univ. of medicine & health Sciences</i>); Zhao, Minjie (<i>School of Communication and Information Engineering of Shanghai</i>); Yang, Xiaoli (<i>Purdue Univ. Calumet</i>); Li, YingJie* (<i>Shanghai Univ.</i>)	

16:00-17:45	SaPS2T1.22
Real-Time EEG-Based Person Authentication System using Face Rapid Serial Visual Presentation	564-567
Wu, Qunjian (<i>China National Digital Switching System Engineering and Technolo</i>); Zeng, Ying (<i>China National Digital Switching System Engineering and Technolo</i>); Lin, Zhimin (<i>China National Digital Switching System Engineering and Technolo</i>); Wang, Xiaojuan (<i>China National Digital Switching System Engineering and Technolo</i>); Yan, Bin* (<i>China National Digital Switching System Engineering and Technolo</i>)	
16:00-17:45	SaPS2T1.23
A Comparison of DTI Pre-Processing Tools on a Dataset of Chronic Subcortical Stroke Rehabilitation Patients	568-571
Lu, Zhongkang (<i>Institute for Infocomm Research</i>); Huang, Weimin (<i>Institute for Infocomm Research, Agency for Science Technology a</i>); Guan, Cuntai* (<i>Nanyang Technological University</i>)	
16:00-17:45	SaPS2T1.24
Decoding Speed of Hand Movement Execution using Temporal Features of EEG	572-575
Robinson, Neethu* (<i>Nanyang Technological Univ.</i>); Achutavarrier Prasad, Vinod (<i>Nanyang Technological Univ.</i>)	
16:00-17:45	SaPS2T1.25
Automatic Detection of PTZ-Induced Seizure based on Functional Brain Connectivity Network in Rats	576-579
Akbarian, Behnaz (<i>Iran University of Science and Technology</i>); Erfanian, Abbas* (<i>Iran University of Science and Technology</i>)	
16:00-17:45	SaPS2T1.26
A Toolbox for Dynamic and Connectivity Analysis of Neuronal Spike Trains Data	580-583
Pastore, Vito Paolo* (<i>University of Genova</i>); Godjoski, Aleksandar (<i>University of Genova</i>); Martinoia, Sergio (<i>University of Genova</i>); Massobrio, Paolo (<i>University of Genova</i>)	
16:00-17:45	SaPS2T1.27
The Dynamic Response of Neural Activity to Deep Brain Stimulation	584-587
Du, Xueying (<i>Suzhou Institute of Biomedical Engineering and Technology</i>); Luo, Huichun (<i>University of Science and Technology of China, Hefei</i>); Huang, Yongzhi (<i>Suzhou Institute of Biomedical Engineering and Technology, Chine</i>); Wang, Shouyan* (<i>Chinese Academy of Sciences</i>)	
16:00-17:45	SaPS2T1.28
Convolutional Neural Network-Based Transfer Learning and Knowledge Distillation using Multi-Subject Data in Motor Imagery BCI	588-591
Sakhavi, Siavash* (<i>National University of Singapore</i>); Guan, Cuntai (<i>Nanyang Technological University</i>)	
16:00-17:45	SaPS2T1.29
An Automatic Approach for EOG Artifact Elimination based on Single-Channel ICA Combined with VMD and ICA in EEG Signals	N/A
Xie, Ping* (<i>Yanshan University</i>); Wang, Yibo (<i>Yanshan University</i>); Zhang, Jinming (<i>Yanshan University</i>); Yang, Wenjuan (<i>Yanshan University</i>); Hu, Guiting (<i>Yanshan University</i>); Zhou, Sa (<i>Yanshan University</i>)	
16:00-17:45	SaPS2T1.30
A Biophysical Model of Heat Sensitivity in Nociceptive C-Fiber Neurons	596-599
Aruljothi, Satchithananthi* (<i>Indian Institute of Technology Bombay</i>); Mandge, Darshan (<i>Indian Institute of Technology Bombay, Mumbai, India</i>); Manchanda, Rohit (<i>IIT Bombay</i>)	
16:00-17:45	SaPS2T1.31
Sparse Bayesian Learning for Subject Independent Classification with Application to SSVEP-BCI	600-604
Oikonomou, Vangelis* (<i>Centre for Research and Technology Hellasa</i>); Maronidis, Anastasios (<i>Centre for Research and Technology Hellas</i>); Liaros, Georgios (<i>Centre of Research and Technology Hellas</i>); Nikolopoulos, Spiros (<i>Information Technologies Institute, Centre for Research and Tech</i>); Kompatsiaris, Ioannis (Yannis) (<i>Information Technologies Institute, CERN</i>)	
16:00-17:45	SaPS2T1.32
Optimal Bandpower Estimation and Tracking via Kalman Filtering for Real-Time Brain-Computer Interfaces	605-608
Gruenwald, Johannes* (<i>Johannes Kepler University Linz</i>); Kapeller, Christoph (<i>g.tec medical engineering GmbH</i>); Kamada, Kyouosuke (<i>Asahikawa Medical University</i>); Scharinger, Josef (<i>Department of Computational Perception, Johannes Kepler Universi</i>); Guger, Christoph (<i>g.tec medical engineering GmbH</i>)	

16:00-17:45	SaPS2T1.33
EEG-Based Biometric Identification with Deep Learning	609-612
Mao, Zijing (<i>UTSA</i>); Yao, Wan Xiang (<i>UTSA</i>); Huang, Yufei* (<i>University of Texas at San Antonio</i>)	
16:00-17:45	SaPS2T1.34
Multistep Inference for Generalized Linear Spiking Models Curbs Runaway Excitation	613-616
Hocker, David (<i>Stony Brook University</i>); Park, Il Memming* (<i>Stony Brook University</i>)	
16:00-17:45	SaPS2T1.35
Real-Time Decoding of Bladder Pressure from Pelvic Nerve Activity	617-620
Lubba, Carl Henning (<i>Imperial College London</i>); Mitrani, Elie (<i>McLaren</i>); Hokanson, Jim (<i>Duke University</i>); Grill, Warren (<i>Duke University</i>); Schultz, Simon R* (<i>Imperial College London</i>)	
16:00-17:45	SaPS2T1.36
Dynamic Spatio-Spectral Patterns of Rhythmic EEG in Infants	621-624
Patino, Alejandro* (<i>Univ. of Oklahoma</i>); Fagg, Andrew (<i>Univ. of Oklahoma</i>); Kolobe, Thubi H.A. (<i>Univ. of Oklahoma Health Sciences Center</i>); Miller, David (<i>Univ. of Oklahoma</i>); Ding, Lei (<i>Univ. of Oklahoma</i>)	
16:00-17:45	SaPS2T1.37
Circular Organization of the Instantaneous Phase in ERPs and the Ongoing EEG due to Selective Attention	625-628
Corona-Strauss, Farah I.* (<i>Saarland University</i>); Strauss, Daniel J. (<i>Saarland University, Medical Faculty</i>)	
16:00-17:45	SaPS2T1.38
Dynamic Point Stochastic Rounding Algorithm for Limited Precision Arithmetic in Deep Belief Network Training	629-632
Essam, Mohaned (<i>Universiti Teknologi PETRONAS</i>); Tang, Tong Boon* (<i>Universiti Teknologi PETRONAS</i>); Ho, Eric Tatt Wei (<i>Universiti Teknologi PETRONAS</i>); Chen, Hsin (<i>National Tsing-Hua University</i>)	
16:00-17:45	SaPS2T1.39
Identification of Isotonic Forearm Motions using Muscle Synergies for Brain Injured Patients	633-636
Geng, Yanjuan (<i>Shenzhen Institutes of Advanced Technology</i>); Ouyang, Yatao (<i>Guangdong Provincial Industrial Injury Rehabilitation Center</i>); Samuel, Oluwarotimi Williams (<i>Shenzhen Institutes of Advanced Technology</i>); Yu, Wenlong (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Wei, Yue (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Bi, Sheng (<i>National Research Center for Rehabilitation Technical Aids</i>); Lu, Xiaoqiang (<i>Xian Institute of Optics and Precision Mechanics, Chinese academ</i>); Li, Guanglin* (<i>Shenzhen Institutes of Advanced Technology</i>)	
16:00-17:45	SaPS2T1.40
Multifractal Analysis of Electroencephalogram for Human Speech Modalities	637-640
Sikdar, Debdeep (<i>IIT Kharagpur</i>); Roy, Rinku (<i>IIT Kharagpur</i>); Mahadevappa, Manjunatha* (<i>Indian Institute of Technology Kharagpur</i>)	
16:00-17:45	SaPS2T1.41
Extraction of Working Memory Load and the Importance of Understanding the Temporal Dynamics	641-647
Astrand, Elaine* (<i>Mälardalen University</i>); Ekström, Martin (<i>Mälardalen University</i>)	
16:00-17:45	SaPS2T1.43
Computational Model for Intercellular Communication between DRG Neurons via Satellite Glial Cells using ATP	648-651
Mandge, Darshan* (<i>Indian Institute of Technology Bombay, Mumbai, India</i>); Bhatnagar, Archit (<i>Indian Institute of Technology, Bombay</i>); Manchanda, Rohit (<i>IIT Bombay</i>)	
16:00-17:45	SaPS2T1.44
Is the Lack of EEG Stationarity Useful? The Dynamics of Metastable Brain States Under Cognition	652-655
Mora-Sanchez, Aldo* (<i>ESPCI ParisTech</i>); Vialatte, François-Benoît (<i>ESPCI ParisTech</i>)	
16:00-17:45	SaPS2T1.45
A Computational Model for Characterizing Visual Information using Both Spikes and Local Field Potentials	656-659
Niknam, Kaiser (<i>Montana State University</i>); Akbarian Aghdam, Amir (<i>Montana State University</i>); Noudoost, Behrad (<i>Montana State University</i>); Nategh, Neda* (<i>Montana State University</i>)	

16:00-17:45	SaPS2T1.46
Modified Genetic Crossover and Mutation Operators for Sparse Regressor Selection in NARMAX Brain Connectivity Modeling	660-663
Nariyoshi, Pedro (<i>Michigan State University</i>); Deller, John* (<i>Michigan State University</i>); Yan, Jinyao (<i>Michigan State University</i>)	
16:00-17:45	SaPS2T1.47
Tensor based Blind Source Separation for Current Source Density Analysis of Evoked Potentials from Somatosensory Cortex of Mice	664-667
Carvalho Lustosa da Costa, João Paulo (<i>Universidade de Brasília</i>); Kehrle Miranda, Ricardo (<i>University of Brasilia</i>); da Rosa Zanatta, Mateus* (<i>University of Brasilia</i>)	
16:00-17:45	SaPS2T1.48
An EEG Study on Hand Force Imagery for Brain-Computer Interfaces	668-671
Wang, Kun* (<i>Tianjin Univ.</i>); Wang, Zhongpeng (<i>Tianjin Univ.</i>); Guo, Yi (<i>Tianjin Univ.</i>); He, Feng (<i>Tianjin Univ.</i>); Qi, Hongzhi (<i>Tianjin Univ.</i>); Xu, Minpeng (<i>Tianjin Univ.</i>); Ming, Dong (<i>Tianjin Univ.</i>)	
16:00-17:45	SaPS2T1.49
Stacked Recurrent Neural Network for Decoding of Reaching Movement using Local Field Potentials and Single-Unit Spikes	672-675
Fathi, Yaser (<i>Iran Univ. of Science and Technology</i>); Erfanian, Abbas* (<i>Iran Univ. of Science and Technology</i>)	