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Program in Chronological Order

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

Wednesday, 6 November 2013

WeBT2: 13:15-14:00 Pavilion Room
Terrence J. Sejnowski - Suspicious Coincidences in the Brain (Plenary Session)

13:15-14:00 WeBT2.1
Suspicious Coincidences in the Brain *
Sejnowski, Terrence J. (The Salk Institute)*

WeCT3: 14:00-15:30 Pavilion Room
Symposium #1: Neural Informatics and Modeling (Invited Session)
Chair: Sajda, Paul (*Columbia Univ.*)

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Sajda, Paul (Columbia University); White, John (University of Utah); Principe, Jose (University of Florida);
Cauwenberghs, Gert (University of California San Diego); Hu, Xiaoping (Emory University and
Georgia Institute of Technology)*

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<i>Pemba, Dhonam* (University of California, Irvine); Wong, Wai Man (University of California, Irvine); Tang, William C. (University of California)</i>	
15:30-17:00	WeDT8.20
Control of Functional Electrical Stimulation in the Presence of Electromechanical and Communication Delays	299-302
<i>Alibeji, Naji (University of Pittsburgh); Kirsch, Nicholas (University of Pittsburgh); Sharma, Nitin* (University of Pittsburgh)</i>	

15:30-17:00		WeDT9.2
Sensory Manipulation in Writer's Cramp: Possibilities for Rehabilitation		303-306
<i>Rahimi, Fariborz* (London Health Sciences Centre); Delrobaei, Mehdi (London Health Sciences Centre); Atashzar, Seyed Farokh (ECE Department at Western University (UWO), and Canadian Surgica); Shahbazi, Mahya (The University of Western Ontario, Canadian Surgical Technologies); Lee, Jack (London Health Sciences Centre); Jackman, Mallory E. (University of Western Ontario); Patel, Rajni (London Health Sciences Centre); Jog, Mandar (University of Western Ontario - London Health Sciences Centre)</i>		
15:30-17:00		WeDT9.3
Multifunctional Chitosan Implants for Controllable Protein Release		307-310
<i>Mikhailov, Andrey* (University of Tsukuba); Saotome, Kousaku (University of Tsukuba); Matsushita, Akira (University of Tsukuba); Sankai, Yoshiyuki (University of Tsukuba)</i>		
15:30-17:00		WeDT9.6
Classifying the Intent of Novel Users During Human Locomotion using Powered Lower Limb Prostheses		311-314
<i>Young, Aaron* (Northwestern University); Simon, Ann (Rehabilitation Institute of Chicago); Fey, Nicholas (The Rehabilitation Institute of Chicago); Hargrove, Levi (Rehabilitation Institute of Chicago)</i>		
15:30-17:00		WeDT9.7
Electrical Muscle Stimulation Increases Early Reinnervation Following Nerve Injury and Immediate Repair		315-318
<i>Willand, Michael P.* (The Hospital for Sick Children); Zhang, Jennifer J (The Hospital for Sick Children); Chiang, Cameron (The Hospital for Sick Children (SickKids)); Borschel, Gregory H. (The Hospital for Sick Children); Gordon, Tessa (The Hospital for Sick Children)</i>		
15:30-17:00		WeDT9.8
Using in Vivo Spinally-Evoked Potentials to Assess Functional Connectivity Along the Spinal Axis		319-322
<i>Gad, Parag* (University of California, Los Angeles); Choe, Jaehoon (University of California, Los Angeles); Shah, Kedar (Lawrence Livermore National Laboratory); Tooker, Angela (Lawrence Livermore National Lab); Tolosa, Vanessa (Lawrence Livermore National Laboratory); Garcia-Alias, Guillermo (University of California, Los Angeles); Zhong, Hui (University of California, Los Angeles); Pannu, Satinderpall (Lawrence Livermore National Laboratory); Roy, Roland (University of California, Los Angeles); Edgerton, V Reggie (University of California, Los Angeles); Gerasimenko, Yury (University of California, Los Angeles)</i>		
15:30-17:00		WeDT9.10
Early Detection of Human Epileptic Seizures using Intracortical Local Field Potentials		323-326
<i>Park, Yun Sang* (Brown University); Hochberg, Leigh (VA / Brown U. / MGH / Harvard Med. School); Eskandar, Emad (Massachusetts General Hospital); Cash, Sydney (Massachusetts General Hospital); Truccolo, Wilson (Brown University)</i>		
15:30-17:00		WeDT9.11
Movement Change Induced by Voluntary Effort with Low Stimulation Intensity FES-Assisted Dorsiflexion: A Case Study with a Hemiplegic Subject		327-330
<i>Watanabe, Takashi* (Tohoku University); Endo, Shun (Tohoku University); Murakami, Katsunori (Kurokawa Hospital); Kumagai, Yoshimi (Kurokawa Hospital); Kuge, Naomi (Kurokawa Hospital)</i>		
15:30-17:00		WeDT9.12
A Realistic Model for Approaching the Activation Question of Neuromuscular Magnetic Stimulation		331-334
<i>Goetz, Stefan* (Duke University); Weyh, Thomas (TU Muenchen); Herzog, Hans-Georg (TU Muenchen)</i>		
15:30-17:00		WeDT9.13
A Hybrid Multi-Channel Surface EMG Decomposition Approach by Combining CKC and FCM		335-338
<i>Ning, Yong (Zhejiang University); Zhu, Shan'an (Zhejiang University); Zhu, Xiangjun (Zhejiang University of technology); Zhang, Yingchun* (University of Houston)</i>		

15:30-17:00		WeDT9.14
Real-Time Performance of Hand Motion Recognition using Kinematic Signals for Impaired Hand Function Training	339-342	
<i>Zhang, Dongrui (Shenzhen Institutes of Advanced Technology, Chinese Academy of Science); Geng, Yanjuan (Shenzhen Institutes of Advanced Technology); Zhang, Xiufeng (Tsinghua); Zhang, Yuan-Ting (The Chinese University of Hong Kong); Li, Guanglin* (Shenzhen Institutes of Advanced Technology)</i>		
15:30-17:00		WeDT9.16
LPV Subspace Identification of Time-Variant Joint Impedance	343-346	
<i>van Eesbeek, Stijn (Delft University of Technology); van der Helm, Frans (Delft University of Technology); Verhaegen, Michel (Delft University of Technology); de Vlugt, Erwin* (Delft University of Technology)</i>		
15:30-17:00		WeDT9.17
ECG Artifact Removal from EMG Recordings using Independent Component Analysis and Adapted Filter	347-350	
<i>Li, Yun (University of Science and Technology of China); Chen, Xiang* (University of Science & Technology of China); Zhang, Xu (Rehabilitation Institute of Chicago); Zhou, Ping (Northwestern University & Rehab Inst of Chicago, University of S)</i>		
15:30-17:00		WeDT9.18
A Somatosensory Evoked Potential Monitoring Algorithm using Time Frequency Filtering	351-354	
<i>Motahari, Amin (Florida International Univ.); Vedala, Krishnatej* (Florida International Univ.); Goryawala, Mohammed (Florida International Univ.); Cabrerizo, Mercedes (Florida International Univ.); Yaylali, Ilker (Oregon Health and Science Univ.); Adjouadi, Malek (Florida International Univ.)</i>		
15:30-17:00		WeDT9.19
Effects of Electrical Stimulation of Cutaneous Afferents on Corticospinal Transmission of Tremor Signals in Patients with Parkinson's Disease	355-358	
<i>Hao, Manzhao (School of Biomedical Engineering, Shanghai Jiao Tong University); He, Xin (Shanghai Jiao Tong University); Kipke, Daryl (University of Michigan); Lan, Ning* (Shanghai Jiao Tong University)</i>		
15:30-17:00		WeDT9.20
Evaluating Upper-Limb EMG-Prosthesis User Performance by Combining Psychometric Measures and Classification-Rates	359-362	
<i>Ge, Nan (Otto Bock Healthcare Products GmbH); Goebel, Peter Michael* (Otto Bock Healthcare GmbH); Amsuess, Sebastian (Otto Bock Healthcare Products GmbH); Paredes Calderon, Liliana Patricia (Otto Bock Healthcare GmbH); Pawlik, Roland (Otto Bock Healthcare GmbH); Farina, Dario (Bernstein Center for Computational Neuroscience, University of Medicine)</i>		
WeDT10: 15:30-17:00		Pavilion Room
Student Travel Awardees/Best Paper Award Finalists (Poster Session)		
Chair: Akay, Metin (Univ. of Houston)		
15:30-17:00		WeDT10.1
Classification of Single-Trial MEG During Sentence Processing for Automated Schizophrenia Screening	363-366	
<i>Xu, Tingting* (University of Minnesota, Twin Cities); Stephane, Massoud (Minneapolis VA Medical Center); Parhi, Keshab (University of Minnesota)</i>		
15:30-17:00		WeDT10.2
Adaptive and Warning Displays with Brain-Computer Interfaces: Enhanced Visuospatial Attention Performance	367-370	
<i>Trachel, Romain (INRIA/CNRS); Brochier, Thomas (CNRS - Aix-Marseille University); Clerc, Maureen* (INRIA)</i>		
15:30-17:00		WeDT10.3
Spike- LFP Encoding Working Memory in Rat	371-374	
<i>Li, Shuangyan (Tianjin Medical University); Tian, Xin* (Tianjin Medical University)</i>		
15:30-17:00		WeDT10.4
A Dynamical System Model for Neural Tracking of Speech with EEG	375-378	
<i>Rajaram, Siddharth* (Boston University); Lalor, Edmund (Trinity College Dublin); Shinn-Cunningham, Barbara (Boston University)</i>		

15:30-17:00 WeDT10.5
Evaluation of Post-Fabrication Thermoforming Process for Intracortical Parylene Sheath Electrode 379-382
Kim, Brian J. (University of Southern California); Hara, Seth A. (University of Southern California);
 Chen, Benny (University of Southern California); Kuo, Jonathan T.W. (University of Southern California);
 Lee, Curtis (University of Southern California); Gutierrez, Christian A. (University of Southern California);
 Hoang, Tuan (University of Southern California); Gupta, Malancha (University of Southern California);
 Pikov, Victor (HMRI and University of Southern California); Meng, Ellis (University of Southern California)*

15:30-17:00 WeDT10.6
Efferent Microneurography Recordings: A Tool for Motor Control Study and Hand-Prosthesis Decoding 383-386
Petrini, Francesco (Università Campus Biomedico di Roma); Raspopovic, Stanisa (EPFL);
 Bonizzato, Marco (EPFL); Giambattistelli, Federica (Università Campus Biomedico di Roma);
 Zollo, Loredana (Università Campus Bio-Medico); Guglielmelli, Eugenio (Campus Bio-Medico University);
 Micera, Silvestro (Scuola Superiore Sant'Anna)*

15:30-17:00 WeDT10.7
Spatial Coherence Patterns of Fast Ictal Activities Coincide with Those of Slow Interictal Oscillations in the Human Brain 387-390
Cotic, Marija (University of Toronto); Chinvarun, Yotin (Director of Comprehensive Epilepsy Program and
 Neurology Unit, P); Carlen, Peter L. (University of Toronto); Bardakjian, Berj Luther (University of Toronto)*

15:30-17:00 WeDT10.8
ICA-Based Connectivity on Brain Networks using fMRI 391-394
Salah Eddin, Anas (Florida International University); Wang, Jin (Florida International University);
 Sargolzaei, Saman (Florida International University); Gaillard, William (Children's National Medical Center);
 Adjouadi, Malek (Florida International University)*

15:30-17:00 WeDT10.9
Biological Restraint on the Izhikevich Neuron Model Essential for Seizure Modeling 395-398
Strack, Beata (Virginia Commonwealth University); Jacobs, Kimberle (Virginia Commonwealth University);
 Cios, Krzysztof (Virginia Commonwealth University)*

WeET5: 17:00-18:30 Pavilion Room
Brain-Computer and Brain Machine Interfaces II (Poster Session)

17:00-18:30 WeET5.1
Representation of Natural Arm and Robotic Arm Movement in the Striatum of a Marmoset Engaged in a Two Choice Task 399-402
Prins, Noeline W. (University of Miami); Geng, Shijia (University of Miami); Pohlmeier, Eric A. (University of
 Miami); Prasad, Abhishek (University of Miami); Sanchez, Justin C. (University of Miami)*

17:00-18:30 WeET5.2
Broad Band Time-Varying Estimation of Event-Related Synchronization for User-Independent Configuration of a Brain Switch 403-406
Solis-Escalante, Teodoro (Institute for Knowledge Discovery, Graz University of Technology); Faller, Josef
 (Graz University of Technology); Müller-Putz, Gernot (Graz University of Technology)*

17:00-18:30 WeET5.3
Emotion Recognition based on Spatially Smooth Spectral Features of the EEG 407-410
Balli, Tugce (Istanbul Kemerburgaz University); Deniz, Sencer Melih (Bogazici University);
 Cebeci, Bora (Istanbul Kultur University); Erbey, Miray (International Max Planck Research School);
 Duru, Adil Deniz (Bogazici University); Demiralp, Tamer (Istanbul Medical School)*

17:00-18:30 WeET5.4
Adaptive Common Spatial Pattern for Single-Trial EEG Classification in Multisubject BCI 411-414
Song, Xiaomu (Widener University); Yoon, Suk-Chung (Widener University);
 Perera, Viraga (Widener University)*

17:00-18:30	WeET5.5
Integrating EEG Information Improves Performance of Gaze based Cursor Control	415-418
<i>Huang, Baihan (Hong Kong University of Science and Technology); Lo, Anthony Hon Pan (Hong Kong University of Science and Technology); Shi, Bertram E* (Hong Kong University of Science and Technology)</i>	
17:00-18:30	WeET5.6
Reliable Subject-Adapted Recognition of EEG Error Potentials using Limited Calibration Data	419-422
<i>Putze, Felix* (Karlsruhe Institute of Technology); Heger, Dominic (Karlsruhe Institute of Technology, Cognitive Systems Lab); Schultz, Tanja (Karlsruhe Institute of Technology, Cognitive Systems Lab)</i>	
17:00-18:30	WeET5.7
Investigation of Phase-Locked Neuronal Oscillation with Optical Stimulation based on a Time-Frequency Approach	423-426
<i>Kwon, Ki Yong* (Michigan State University); Aviyente, Selin (Michigan State University); Li, Wen (Michigan State University)</i>	
17:00-18:30	WeET5.8
Tracking Chronically Recorded Single-Units in Cortically Controlled Brain Machine Interfaces	427-430
<i>Eleryan, Ahmed* (Electrical and Computer Engineering Department, Michigan State U); Vaidya, Mukta (University of Chicago); Southerland, Joshua (University of Oklahoma); Badreldin, Islam (Michigan State University); Balasubramanian, Karthikeyan (University of Chicago); Fagg, Andrew (University of Oklahoma); Hatsopoulos, Nicholas (University of Chicago); Oweiss, Karim (Michigan State University)</i>	
17:00-18:30	WeET5.10
Electrode Selection and Other Design Considerations for a Modular, Portable Single-Channel EEG-Augmented Hearing Aid	431-434
<i>Brunner, Noah (Portland State Univ.); Rawson, Joseph (Portland State Univ.); Grimm, Matthew W. (Portland State Univ.); Tupper, Patrick (Portland State Univ.); Miller, Ashley J.L. (Portland State Univ.); Billings, Curtis J. (Portland VA Medical Center); Jacobs, Peter G.* (Oregon Health & Science Univ.)</i>	
17:00-18:30	WeET5.11
A Comparison of Classification Performance among the Various Combinations of Motor Imagery Tasks for Brain-Computer Interface	435-438
<i>Kim, Hyun Seok* (Seoul National University); Chang, Min Hye (Seoul National University); Lee, Hong Ji (Seoul National University); Park, Kwang S. (Seoul National University)</i>	
17:00-18:30	WeET5.12
A Coarse-Grained Reconfigurable Approach for Low-Power Spike Sorting Architectures	439-442
<i>Carta, Nicola* (University of Cagliari); Sau, Carlo (DIEE - University of Cagliari); Pani, Danilo (University of Cagliari); Palumbo, Francesca (DIEE - University of Cagliari); Raffo, Luigi (University of Cagliari)</i>	
17:00-18:30	WeET5.13
Multi-Colour Stimuli to Improve Information Transfer Rates in SSVEP-Based Brain-Computer Interfaces	443-446
<i>Falzon, Owen* (University of Malta); Camilleri, Kenneth Patrick (University of Malta)</i>	
17:00-18:30	WeET5.14
Using Electromagnetic Reciprocity and Magnetic Resonance Current Density Imaging to Fit Multi-Electrode Montage for Non-Invasive Brain Stimulation	447-451
<i>Dutta, Arindam* (Gnan Systems LLP); Dutta, Anirban (INRIA)</i>	

WeET6: 17:00-18:30	Pavilion Room
Cognitive Engineering and Science (Poster Session)	

17:00-18:30	WeET6.1
Assessment of Surgeon's Stress Level and Alertness using EEG During Laparoscopic Simple Nephrectomy	452-455
<i>Goksel Duru, Dilek* (Bogazici University); Duru, Adil Deniz (Bogazici University); Erol Barkana, Duygun (Yeditepe University); Sanli, Oner (Istanbul University); Ozkan, Mehmed (Bogazici University)</i>	

17:00-18:30		WeET6.3
Brain Activity Related to Abandonment of Motor Intention in Point-to-Point Finger Movement	456-459	
<i>Tokiwa, Tatsuji* (Hiroshima City University); Fukuda, Hiroshi (Hiroshima City University); Hiwaki, Osamu (Hiroshima City University)</i>		
17:00-18:30		WeET6.5
The Perceived Orientation in People with and without Alzheimer's	460-463	
<i>Zen, Daniel (Federal University of Espirito Santo); Byagowi, Ahmad (University of Manitoba); Garcia Campuzano, Mari Tere (University of Manitoba); Kelly, Debbie (University of Manitoba); Lithgow, Brian (Alfred Hospital); Moussavi, Zahra* (University of Manitoba)</i>		
17:00-18:30		WeET6.6
Human Intracranial Recordings During Spatial Exploration of a 3D Virtual Environment	464-467	
<i>Snider, Joseph* (UC San Diego); Ahmed, Omar (Department of Neurology, Mass. Genl. Hosp); Halgren, Eric (University of California San Diego); Poizner, Howard (UCSD); Cash, Sydney (Massachusetts General Hospital)</i>		
17:00-18:30		WeET6.7
An EEG Source Localization and Connectivity Study on Deception of Autobiography Memories	468-471	
<i>Wang, Yue* (National University of Singapore); Ng, Wu Chun (CA Engineering Consultancy Company, Singapore); Ng, Khoo Siong (National University of Singapore); Wu, Tiecheng (National University of Singapore); Li, Xiaoping (National University of Singapore)</i>		
17:00-18:30		WeET6.8
Neuronal Cell Spike Sorting using Signal Features Extracted by PARAFAC	472-475	
<i>Just, Thomas* (Ilmenau University of Technology); Kautz, Thomas (Ilmenau University of Technology); Weis, Martin (Ilmenau University of Technology); Williamson, Adam (University of Technology, Ilmenau); Husar, Peter (Ilmenau University of Technology)</i>		
17:00-18:30		WeET6.9
Model-Based Design of Optimal Neurostimulation in the NHP Hippocampus for Enhancing Behavioral Task Performance	476-479	
<i>Marmarelis, Vasilis (University of Southern California); Shin, Dae* (University of Southern California); Song, Dong (University of Southern California); Hampson, Robert (Wake Forest School of Medicine); Deadwyler, Sam (Wake Forest University); Berger, Theodore (University of Southern California)</i>		
17:00-18:30		WeET6.10
The Illusion Box of Syndactyly: Setup and Ad Hoc Algorithm to Induce Virtual Fingers Webbing	480-483	
<i>Merone, Mario (Università Campus Biomedico di Roma); Soda, Paolo* (Università CAMPUS Bio-Medico); Di Pino, Giovanni (campus Biomedico University); Formica, Domenico (Campus Bio-Medico University); Pellegrino, Giovanni (Università Campus Bio-Medico di Roma); Micera, Silvestro (Scuola Superiore Sant'Anna); Di Lazzaro, Vincenzo (Università Campus Bio-Medico di Roma); Iannello, Giulio (Università Campus Bio-Medico di Roma); Guglielmelli, Eugenio (Campus Bio-Medico University)</i>		
17:00-18:30		WeET6.12
An Alpha Resting EEG Study on Nonlinear Dynamic Analysis for Schizophrenia	484-488	
<i>Zhao, Qinglin (Lanzhou University); Hu, Bin* (Lanzhou University); Li, Yunpeng (Lanzhou University); Peng, Hong (Lanzhou University); Li, Lanlan (Lanzhou University); Liu, Quanying (Lanzhou University); Li, Yang (Lanzhou University); Shi, Qiuxia (Lanzhou University); Feng, Jun (The third people's hospital of Lanzhou)</i>		
17:00-18:30		WeET6.13
The Effects of Text-to-Speech System Quality on Emotional States and Frontal Alpha Band Power	489-492	
<i>Arndt, Sebastian* (TU Berlin); Antons, Jan-Niklas (Deutsche Telekom Laboratories); Gupta, Rishabh (VIT University); Laghari, Khalil (INRS-EMT); Schleicher, Robert (Telekom Laboratories); Möller, Sebastian (Telekom Laboratories); Falk, Tiago (Institut National de la Recherche Scientifique)</i>		
17:00-18:30		WeET6.14
Translating Fmri to Fnirs	493-496	
<i>Tumer, Aysegul* (Bogazici Univ.); Erdogan, Sinem Burcu (Bogazici Univ.); Akin, Ata (Bogazici Univ.)</i>		

17:00-18:30		WeET6.16
Wireless Ambulatory ECG Signal Capture for HRV and Cognitive Load Study using the NeuroMonitor Platform	.....	497-500
<i>Md Nazmus Sahadat, Sahadat* (University of Memphis); Consul Pacareu, Sergi (The University of Memphis); Morshed, Bashir (The University of Memphis)</i>		
17:00-18:30		WeET6.17
Brain Activities Changes in Typical and Realistic Scenario-Compatible Stop-Signal Inhibitory Tasks and Classification Performance	.....	501-504
<i>Ko, Li-Wei* (National Chiao-Tung University); Chikara, Rupesh Kumar Chikara (National Chiao Tung University)</i>		
17:00-18:30		WeET6.18
Common Frequency Pattern for Music Preference Identification using Frontal EEG	.....	505-508
<i>Pan, Yaozhang* (Institute for Infocomm Research, Agency for Science, Technology and); Guan, Cuntai (Institute for Infocomm Research); Yu, Juanhong (Institute for Infocomm Research, Agency for Science, Technology and); Ang, Kai Keng (Institute for Infocomm Research); Chan, Ti Eu (Institute For Infocomm Research (A*STAR))</i>		
17:00-18:30		WeET6.19
Analysis of Dominant Neural Activity Clustering in Laminar Cortical Processing of Acoustic Stimuli in Rat Utilizing Von Mises-Fisher Distribution	.....	509-512
<i>Haab, Lars (Saarland University Hospital); Mortezapouraghdam, Zeinab (Saarland University, Department of Computer Science); Schubert, J. Kristof (SNN-Unit); Szczygielski, Jacek (Saarland University Hospital, Neurosurgery Department); Schwerdtfeger, Karsten (Saarland University Hospital); Strauss, Daniel J.* (Saarland University, Medical Faculty)</i>		
17:00-18:30		WeET6.20
Extracting Cortical Inhibition Correlates in ERP-images within Adult ADHD	.....	513-516
<i>Schubert, J. Kristof (SNN-Unit); González-Trejo, Ernesto (Systems Neuroscience and Neurotechnology Unit); Retz, Wolfgang (Neurocenter Saarland University Hospital); Rösler, Michael (Neurocenter Saarland University Hospital); Teuber, Tanja (University of Kaiserslautern); Steidl, Gabriele (University of Kaiserslautern); Strauss, Daniel J.* (Saarland University, Medical Faculty); Corona-Strauss, Farah I. (Saarland University Hospital)</i>		
WeET7: 17:00-18:30		Pavilion Room
Neuroimaging (Poster Session)		
17:00-18:30		WeET7.1
Shape Features as Biomarkers in Early Parkinson's Disease	.....	517-520
<i>Ravindran, Prashanth* (Indian Institute of Technology Delhi); Dutta Roy, Sumantra (Indian Institute of Technology Delhi); Ghosh, Shantanu (Massachusetts General Hospital and Harvard Medical School); Mandal, Pravat (National Brain Research Centre, India)</i>		
17:00-18:30		WeET7.2
A Weighted Dynamic Inverse Problem for Electroencephalographic Current Density Reconstruction	.....	521-524
<i>Giraldo, Eduardo* (Universidad Tecnológica de Pereira); Castaño-Candamil, Juan Sebastián (Universidad Nacional de Colombia); Castellanos-Dominguez, Germán (Universidad Nacional de Colombia)</i>		
17:00-18:30		WeET7.4
A Co-Registration Approach for Electrocorticogram Electrode Localization using Post-Implantation MRI and CT of the Head	.....	525-528
<i>Wang, Po T. (University of California Irvine); King, Christine E. (University of California, Irvine); Shaw, Susan J. (University of Southern California); Millett, David (University of Southern California); Liu, Charles Y. (Keck Hospital of the University of Southern California); Chui, Luis A. (University of California, Irvine); Nenadic, Zoran (University of California Irvine); Do, An H.* (University of California Irvine)</i>		
17:00-18:30		WeET7.5
Evaluation of Motor Learning by Fnirs Signal Analysis using a General Linear Model	.....	529-532
<i>Saito, Shota* (Nagaoka University of Technology); Imai, Takahiro (Nagaoka University of Technology); Sato, Takanori (Nagaoka University of Technology); Nambu, Isao (Nagaoka University of Technology); Wada, Yasuhiro (Nagaoka University of Technology)</i>		

17:00-18:30	WeET7.6
Regional MRI Measures and Neuropsychological Test for Multi-Dimensional Analysis in Alzheimer's Disease	533-536
<i>Zhou, Qi* (Florida International University); Goryawala, Mohammed (Florida International University); Cabrerizo, Mercedes (Florida International University); Wang, Jin (Florida International University); Barker, Warren (Mount Sinai Medical Center); Duara, Ranjan (Wien Center for Alzheimer's Disease and Memory Disorders, Mount); Adjouadi, Malek (Florida International University)</i>	
17:00-18:30	WeET7.7
Wavelet-Based Sparse Source Imaging in Localizing Epileptic Sources for Partial Epilepsy	537-540
<i>Zhu, Min* (University of Oklahoma); Ding, Lei (University of Oklahoma); Zhang, Wenbo (Minnesota Epilepsy Group); Dickens, Deanna (Minnesota Epilepsy Group)</i>	
17:00-18:30	WeET7.9
Which Method Should Be Used for Brain Connectivity Analysis?	541-544
<i>Bucolo, Maide* (Università degli Studi di Catania); Rance, Mariela (Central Institute of Mental Health, Medical Faculty Mannheim, He); Muscarello, Antonella (University of Catania); Spampinato, Alfio (University of Catania); Baeuchl, Christian (Central Institute of Mental Health/Medical Faculty Mannheim, Hei); Flor, Herta (Central Institute of Mental Health/Medical Faculty Mannheim, Hei)</i>	
17:00-18:30	WeET7.11
Automated Visualization for Epilepsy Surgical Evaluation	545-548
<i>Tang, Tong Boon* (Universiti Teknologi PETRONAS); Rasheed, Waqas (Universiti Teknologi PETRONAS); Hamid, Nor Hisham (Universiti Teknologi PETRONAS); Idris, Zamzuri (Universiti Sains Malaysia); Abdullah, Jafri Malin (Universiti Sains Malaysia)</i>	
17:00-18:30	WeET7.12
Impairment of Anatomical Brain Networks in Alzheimer's Disease: A Study based on Diffusion Tensor Tractography	549-552
<i>Yan, Xiaoxiao (Shanghai Jiaotong University); Sun, Junfeng* (Shanghai Jiao Tong University); Fang, Rong (Rui Jin Hospital, Shanghai Jiao Tong University School of Medici); SUN, Yu (National University of Singapore); Cheng, Lin (Shanghai Jiao Tong University); Miao, Fei (Rui Jin Hospital, Shanghai Jiao Tong University School of Medici); Chen, Shengdi (Rui Jin Hospital, Shanghai Jiao Tong University School of Medici); Tong, Shanbao (Shanghai Jiao Tong University)</i>	
17:00-18:30	WeET7.13
Agglomerative Clustering for Resting State MRI	553-556
<i>Billings, Jacob* (Emory University); Medda, Alessio (Georgia Tech Research Institute); Keilholz, Shella (Emory University)</i>	
17:00-18:30	WeET7.14
256-Channel Reconfigurable System for Recording the Electrophysiological Activity of a Neural Tissue in Vitro	557-560
<i>Zoladz, Miroslaw* (AGH University of Science and Technology); Kmon, Piotr (AGH University of Science and Technology); Rauza, Jacek (AGH University); Grybos, Pawel (AGH University of Science and Technology); Kowalczyk, Tomasz (University of Lodz, Faculty of Biology and Environmental Protect)</i>	
17:00-18:30	WeET7.15
Analysis of the Effects of Mechanically Induced Tremor on EEG-EMG Coherence using Wavelet and Partial Directed Coherence	561-564
<i>McManus, Lara* (University College Dublin); Devito, Giuseppe (University College Dublin); Lowery, Madeleine (University College Dublin)</i>	
17:00-18:30	WeET7.16
Automation of Network Burst Analysis in the Single Neuron Resolution based on Calcium Imaging	565-568
<i>Jang, Min Jee (KAIST); Nam, Yoonkey* (KAIST)</i>	

17:00-18:30		WeET7.17
Modeling Brain Functional Dynamics Via Hidden Markov Models		569-572
<i>Ou, Jinli* (School of Biomedical Engineering & Instrument Science, Zhejiang); Xie, Li (School of Biomedical Engineering & Instrument Science, Zhejiang); Wang, Peng (Peking Univ., China); LI, Xiang (Univ. of Georgia); Zhu, Dajiang (Univ. of Georgia); Jiang, Rongxin (Zhejiang Univ.); Wang, Yufeng (Institute of Mental Health, Peking Univ., Beijing); Chen, Yaowu (Zhejiang Univ.); Zhang, Jing (Yale Univ.); Liu, Tianming (Univ. of Georgia)</i>		
17:00-18:30		WeET7.18
Anatomic Differences between Parkinson's Disease and Essential Tremor using ICA-Based Brain Morphometry		573-576
<i>Duann, Jeng-Ren* (University of California San Diego); Chiou, Jin-Chern (National Chiao-Tung University)</i>		
17:00-18:30		WeET7.19
Topography of Seizures Induced by Electroconvulsive Therapy and Magnetic Seizure Therapy		577-580
<i>Deng, Zhi-De* (Columbia University); Peterchev, Angel V (Duke University); Krystal, Andrew (Duke University); Luber, Bruce (Duke University); McClintock, Shawn (Duke University); Husain, Mustafa (Duke University); Lisanby, Sarah (Duke University)</i>		
WeET8: 17:00-18:30		Pavilion Room
Neural Computation and Modeling II (Poster Session)		
17:00-18:30		WeET8.1
How the Selection of Muscles Influences Their Synergies? A Preliminary Study using Real Data		581-584
<i>Pirondini, Elvira (TNE - EPFL); Coscia, Martina* (The Biorobotics Institute, Scuola Superiore Sant'Anna and TNE La); Crema, Andrea (EPFL); Mancuso, Matteo (EPFL); Micera, Silvestro (Scuola Superiore Sant'Anna)</i>		
17:00-18:30		WeET8.2
A Signal-Based Approach for Assessing the Accuracy of High-Density Surface EMG Decomposition		585-588
<i>Holobar, Ales (University of Maribor, Faculty of Electrical Engineering and Comp); Minetto, Marco Alessandro (Division of Endocrinology, Diabetology and Metabolism, Dept); Farina, Dario* (Bernstein Center for Computational Neuroscience, University Medic)</i>		
17:00-18:30		WeET8.3
Dynamic Finite-Element Model of Axon Extracellular Stimulation		589-592
<i>Henríquez Barraza, Fernando (Pontificia Universidad Católica de Chile); Jerez-Hanckes, Carlos* (School of Engineering, Pontificia Universidad Católica de Chile); Altermatt, Fernando (División de Anestesiología Escuela de Medicina Pontificia Univer)</i>		
17:00-18:30		WeET8.5
A Robust and Efficient Method to Recover Neural Events from Noisy and Corrupted Data		593-596
<i>Dyer, Eva* (Rice University); Studer, Christoph (Rice University); Robinson, Jacob T. (Rice University); Baraniuk, Richard G. (Rice University)</i>		
17:00-18:30		WeET8.6
Group-Wise Change Point Detection in Task fMRI Data by Bayesian Methods		597-600
<i>Xing, Jianchuan* (Univ. of Electronic Science and Technology of China; Yale U); Lv, Jinglei (Northwestern Polytechnical Univ., China; The Univ. of G); Lian, Zhichao (Yale Univ.); LI, Xiang (Univ. of Georgia); Zhu, Dajiang (Univ. of Georgia); Liu, Tianming (Univ. of Georgia); Zhang, Jing (Yale Univ.)</i>		
17:00-18:30		WeET8.7
Effects of Ion Channel Currents on Induced Action Potentials		601-604
<i>Komuro, Rie* (NTNU); Balasingham, Ilangko (Intervention Center, Oslo University Hospital)</i>		
17:00-18:30		WeET8.8
Analysis of Nonlinear Dynamics of Healthy and Epileptic EEG Signals using Recurrence based Complex Network Approach		605-608
<i>Puthanmadam Subramaniam, Narayan* (Tampere University of Technology); Hyttinen, Jari (Tampere University of Technology)</i>		
17:00-18:30		WeET8.9
A Probabilistic Framework for Time-Frequency Detection of Burst Suppression		609-612
<i>Prerau, Michael* (Massachusetts General Hospital); Purdon, Patrick L (Massachusetts General Hospital)</i>		

17:00-18:30 WeET8.10
Multilayer Spike-In Spike-Out Representation of Hippocampus Circuitry 613-616
Dibazar, Alireza (University of Southern California); Yousefi, Ali (University of Southern California);
Berger, Theodore (University of Southern California)*

17:00-18:30 WeET8.11
**Identification of Functional Synaptic Plasticity from Ensemble Spiking Activities:
A Nonlinear Dynamical Modeling Approach** 617-620
Song, Dong (University of Southern California); Robinson, Brian (University of Southern California);
Chan, Rosa H. M. (City University of Hong Kong); Marmarelis, Vasilis (University of Southern California);
Hampson, Robert (Wake Forest School of Medicine); Deadwyler, Sam (Wake Forest University);
Berger, Theodore (University of Southern California)*

WeET9: 17:00-18:30	Pavilion Room
Neural Prosthesis II (Poster Session)	

17:00-18:30 WeET9.1
**Investigation of Long-Term Electrical Degradation in Neural Recording and
Stimulation Microelectrode Arrays** 621-624
Bredeson, Samuel (Illinois Institute of Technology); Troyk, Philip (Illinois Institute of Technology);
Suh, Sungjae (Illinois Institute of Technology); Bak, M (Microprobe)*

17:00-18:30 WeET9.2
Real-Time Movement Prediction for Improved Control of Neuroprosthetic Devices 625-628
Thomik, Andreas Alexander Christian (Imperial College London); Haber, David (Imperial College London);
Faisal, A. Aldo (Imperial College London)*

17:00-18:30 WeET9.7
Electrode Characterization for use in a Regenerative Peripheral Nerve Interface 629-632
*Larson, John V. (University of Michigan); Goretski, Stephanie A. (University of Michigan); Cockrum, Joshua W.
(University of Michigan); Urbanek, Melanie G. (University of Michigan); Cederna, Paul (University of
Michigan); Langhals, Nicholas B.* (University of Michigan)*

17:00-18:30 WeET9.10
A Rapid Algorithm Prototyping Tool for Bi-Directional Neural Interfaces 633-636
Isaacson, Benjamin (Medtronic Inc); Dani, Siddharth (Medtronic Neuromodulation);
Denison, Timothy (Medtronic); Afshar, Pedram (Medtronic Neuromodulation);
Arcot Desai, Sharanya (Georgia Institute of Technology)*

17:00-18:30 WeET9.12
Stimulation of Somatosensory Cortex Locked to Whisker Motions in a Mouse Model of Active Sensing 637-640
Schroeder, Joseph (Boston University); Mariano, Vincent (Boston University);
Telian, Gregory (Boston University); Ritt, Jason (Boston University)*

17:00-18:30 WeET9.13
A Low-Cost Configurable Multichannel Cortical Stimulator Prototype 641-644
Johnson, Garrett (Old Dominion University); Krusienski, Dean (Old Dominion University)*

17:00-18:30 WeET9.14
Perforated 2x2 Parylene Sheath Electrode Array for Chronic Intracortical Recording 645-648
Hara, Seth A. (University of Southern California); Kim, Brian J. (University of Southern California);
Kuo, Jonathan T.W. (University of Southern California); Lee, Curtis (University of Southern California);
Gutierrez, Christian A. (University of Southern California); Hoang, Tuan (University of Southern California);
Pikov, Victor (HMRI and University of Southern California); Meng, Ellis (University of Southern California)*

17:00-18:30 WeET9.15
PDMS Microchannel Regenerative Peripheral Nerve Interface 649-652
Musick, Katherine (École Polytechnique Fédérale de Lausanne); Chew, Daniel J. (University of Cambridge);
Fawcett, James W (University of Cambridge); Lacour, Stéphanie (EPFL)*

17:00-18:30	WeET9.17
Optimal Feedback-Controlled Point Process Decoder for Adaptation and Assisted Training in Brain-Machine Interfaces	653-656
<i>Shanechi, Maryam* (University of California, Berkeley); Carmena, Jose M. (University of California, Berkeley)</i>	
17:00-18:30	WeET9.18
Modular Assembly of Flexible Thin-Film Electrode Arrays Enabled by a Laser-Structured Ceramic Adapter	657-660
<i>Fiedler, Eva* (University of Freiburg); Ordonez, Juan Sebastian (University of Freiburg); Stieglitz, Thomas (University of Freiburg)</i>	
17:00-18:30	WeET9.19
Silicon Carbide Neural Implants: In Vivo Neural Tissue Reaction	661-664
<i>Frewin, Christopher* (University of South Florida); Locke, Christopher (University of South Florida); Mariusso, Luis (University of South Florida); Weeber, Edwin (University of South Florida); Sadow, Stephen (University of South Florida)</i>	
17:00-18:30	WeET9.20
Resting State Detection for Gating Movement of a Neural Prosthesis	665-668
<i>Suway, Steven* (University of Pittsburgh; Center for the Neural Basis of Cogniti); Tien, Rex (University of Pittsburgh); Jeffries, S. Morgan (University of Pittsburgh); Zohny, Zohny (Washington University in St. Louis); Clanton, Samuel T (University of Pittsburgh); McMorland, Angus J C (University of Pittsburgh); Velliste, Meel (University of Pittsburgh)</i>	

Thursday, 7 November 2013

ThAT1: 08:15-09:45	Pavilion Room
Symposium #2 - Brain-Machine Interface (Invited Session)	
Chair: Sanchez, Justin C. (<i>Univ. of Miami</i>)	

08:15-09:45	ThAT1.1
Symposium #2 - Brain-Machine Interface	*
<i>Sanchez, Justin C.* (University of Miami); Miller, Lee (Northwestern University); Denison, Timothy (Medtronic); Gao, Shangkai (Tsinghua University); Sajda, Paul (Columbia University)</i>	

ThBT3: 10:00-11:30	Pavilion Room
Symposium #3 - Neuroprosthesis (Invited Session)	
Chair: Denison, Timothy (<i>Medtronic</i>)	

10:00-11:30	ThBT3.1
Symposium #3 - Neuroprosthesis	*
<i>Denison, Timothy* (Medtronic); Berger, Theodore (University of Southern California); Lovell, Nigel H. (University of New South Wales); Courtine, Gregoire (EPFL); Edgerton, V Reggie (University of California, Los Angeles)</i>	

ThCT4: 11:30-12:15	Pavilion Room
Jerrold L. Vitek - Deep Brain Stimulation - Challenges and Opportunities (Plenary Session)	

11:30-12:15	ThCT4.1
Deep Brain Stimulation - Challenges and Opportunities	*
<i>Vitek, Jerrold* (University of Minnesota)</i>	

ThDT6: 13:30-15:00	Pavilion Room
Symposium #4 - Neural Control and Modulation (Invited Session)	
Chair: Ding, Lei (<i>Univ. of Oklahoma</i>)	

13:30-15:00	ThDT6.1
Symposium #4 - Neural Control and Modulation	*
<i>Ding, Lei* (University of Oklahoma); Peckham, Hunter (Case Western Reserve University); Grill, Warren (Duke University); Litt, Brian (University of Pennsylvania); Schiff, Steven (Pennsylvania State University)</i>	

Brain-Computer and Brain Machine Interfaces III (Poster Session)

15:00-16:30		ThET7.1
Canonical Correlation Approach to Common Spatial Patterns		669-672
<i>Noh, Eunho* (UCSD); de Sa, Virginia (University of California, San Diego)</i>		
15:00-16:30		ThET7.3
A Combination of Spatial and Spectral Filters for Mental Condition Discrimination		673-676
<i>Yu, Ke (National University of Singapore); Shen, Kaiquan (NUS); Li, Xiaoping* (National University of Singapore)</i>		
15:00-16:30		ThET7.4
Volitional Regulation of the Supplementary Motor Area with Fmri-BCI Neurofeedback in Parkinson's Disease: A Pilot Study		677-681
<i>Buyukturkoglu, Korhan* (International Max Planck Research School, University of Tuebinge); Rana, Mohit (Institute for Medical Psychology and Behavioural Neurobiology, Eb); Ruiz, Sergio (Pontificia Universidad Catolica de Chile); Hackley, Steven Allen (University of Missouri, Columbia); Soekadar, Surjo (University of Tuebingen); Birbaumer, Niels (Eberhard-Karls-University); Sitaram, Ranganatha (Institute for Medical Psychology and Behavioural Neurobiology, E)</i>		
15:00-16:30		ThET7.5
Listening to the Music of the Brain: Live Analysis of ECoG Recordings using Digital Audio Workstation Software		682-685
<i>Milsap, Griffin* (Johns Hopkins University); Fifer, Matthew (Johns Hopkins University); Crone, Nathan E. (Johns Hopkins University, School of Medicine); Thakor, Nitish (Johns Hopkins University)</i>		
15:00-16:30		ThET7.6
The use of Fmri for the Evaluation of the Effect of Training in Motor Imagery BCI Users		686-690
<i>Slenes, Gabriel (UNICAMP); Coco Beltrami, Guilherme (University of Campinas); Oliveira Lima, Fabricio (Campinas State University); Li, Li Min (BRAINN - Brazilian Institute of Neurosciences and Neurotechnology); Castellano, Gabriela* (Institute of Physics Gleb Wataghin, University of Campinas)</i>		
15:00-16:30		ThET7.8
A Polymer Neural Probe with Tunable Flexibility		691-694
<i>Ejserholm, Fredrik* (Lund University); Vastesson, Alexander (KTH Royal Institute of Technology); Haraldsson, Tommy (KTH); van der Wijngaart, Wouter (KTH); Schouenborg, Jens (Lund University); Wallman, Lars (Lund University); Bengtsson, Martin (Lund University)</i>		
15:00-16:30		ThET7.9
Correntropy Kernel Temporal Differences for Reinforcement Learning Brain Machine Interfaces		Á-BE
<i>Bae, Jihye* (University of Florida); Sanchez Giraldo, Luis Gonzalo (University of Florida); Francis, Joseph Thachil (SUNY Downstate Medical Center); Principe, Jose (University of Florida)</i>		
15:00-16:30		ThET7.10
Design of a Low-Cost Wireless Surface EMG Acquisition System		699-702
<i>Fu, Jianting (Chongqing Institute of Green and Intelligent Technology, Chinese); Chen, Jian (Chongqing Institute of Green and Intelligent Technology, Chinese); Shi, Yizhi (Chongqing Institute of Green and Intelligent Technology, Chinese); Li, Yao* (University of Southern California)</i>		
15:00-16:30		ThET7.11
Discrimination of Right and Left-Wrist Motor Imagery using Fnrirs: Towards Control of a Ball-On-A-Beam System		Á-BE
<i>Naseer, Noman (Pusan National University); Hong, Keum-Shik* (Pusan National University)</i>		
15:00-16:30		ThET7.12
Unsupervised Training of Brain-Computer Interface Systems using Expectation Maximization		707-710
<i>Speier, William* (UCLA); Knall, Jennifer (UCLA); Pouratian, Nader (University of California, Los Angeles)</i>		

15:00-16:30	ThET7.13
Motion Classifier Generation using EEG for Robot Control	711-714
<i>Yoshioka, Masataka* (Maebashi Institute of Tecnology); Zhu, Chi (Maebashi Institute of Technology); Uemoto, Kazuhiro, Kazuhiro (Maebashi Institute of Technology); Yoshikawa, Yuichiro (Maebashi Institute of Technology); Yu, Haoyong (National University of Singapore); Yan, Yuling (Stanford University School of Medicine); duan, feng (Nankai University)</i>	
15:00-16:30	ThET7.14
Mixing Decoded Cursor Velocity and Position from an Offline Kalman Filter Improves Cursor Control in People with Tetraplegia	715-718
<i>Homer, Mark* (Brown University); Harrison, Matthew (Brown University); Black, Michael J. (Max Planck Institute for Intelligent Systems); Perge, János (Brown University); Cash, Sydney (Massachusetts General Hospital); Friehs, Gerhard (Brown University); Hochberg, Leigh (VA / Brown U. / MGH / Harvard Med. School)</i>	
15:00-16:30	ThET7.15
Structural Analysis of Explanted Multielectrode Arrays	719-722
<i>Gilgunn, Peter* (Carnegie Mellon Univ.); Schwartz, Andrew B. (Univ. of Pittsburgh); Gaunt, Robert (Univ. of Pittsburgh); Ong, Xiao Chuan (Carnegie Mellon Univ.); Flesher, Sharlene N (Univ. of Pittsburgh)</i>	
15:00-16:30	ThET7.16
Robust Ultra Low-Cost MMG System for Brain-Machine-Interface Applications	723-726
<i>Gavriel, Constantinos* (Imperial College London); Faisal, A. Aldo (Imperial College London); Vikram, Chandra Sen (Imperial College London); Fara, Salvatore (Imperial College London)</i>	
15:00-16:30	ThET7.17
Readily Evoked Forelimb Movement in Rat Via Optogenetic Stimulation of Motor Cortex	727-730
<i>He, Jiwei (University of California, San Francisco); Yazdan-Shahmorad, Azadeh* (University of California San Francisco); Sabes, Philip N. (University of California, San Francisco)</i>	
15:00-16:30	ThET7.18
The Effect of Focused Ultrasonic Stimulation on the Activity of Hippocampal Neurons in Multi-Channel Electrode	731-734
<i>Choi, Jeongbong (Hanyang University); Lim, Seong Hwan (Hanyang University); Cho, Kyeong Won (Hanyang University); Kim, Do Hyoung (Hanyang University); Jang, DongPyo* (Hanyang University); Kim, In-Young (Hanyang University)</i>	
15:00-16:30	ThET7.19
The Head Mouse -- Head Gaze Estimation "In-the-Wild" with Low-Cost Inertial Sensors for BMI Use	735-738
<i>Abbott, William Welby* (Imperial College London); Sim, Nigel Boon Wei (Imperial College London); Gavriel, Constantinos (Imperial College London); Faisal, A. Aldo (Imperial College London)</i>	
15:00-16:30	ThET7.22
A Wearable Real-Time BCI System based on Mobile Cloud Computing	739-742
<i>Ruiz Blondet, Maria (Binghamton University); Badarinath, Adarsha (Binghamton University); Khanna, Chetan (Binghamton University); Jin, Zhanpeng* (Binghamton University, SUNY)</i>	

ThET8: 15:00-16:30	Pavilion Room
Neuroimaging II (Poster Session)	

15:00-16:30	ThET8.2
Brain Tumor Detection using Electrical Capacitance Volume Tomography (ECVT)	743-746
<i>Taruno, Warsito P. (Edwar Technology); Baidillah, Marlin Ramadhan* (Edwar Technology Co.); Iman Sulaiman, Rommy (Edwar Technology); Ihsan, Muhammad Fathul (CTECH Labs Edwar Technology); Yusuf, Arbai (Edwar Technology Co.); Widada, Wahyu (Edwar Technology Co.); Aljohani, Mohammed (King Abdul Aziz University)</i>	
15:00-16:30	ThET8.3
Specific Absorption Rate in an ASTM Phantom Containing a Deep Brain Stimulation Lead at 3 Tesla MRI	747-750
<i>Bonmassar, Giorgio* (A. A. Martinos Ctr. for Biomedical Imaging); serano, Peter (Athinoula A. Martinos Center for Biomedical Imaging, Department); Angelone, Leonardo M. (US Food and Drug Administration, Center for Devices and Radiolog)</i>	

15:00-16:30		ThET8.4
Gamma Power Correlates with Clinical Response to Repetitive Transcranial Magnetic Stimulation (rTMS) for Depression		751-754
<i>Pathak, Yagna (Marquette Univ.); Salami, Oludamilola (Medical College of Wisconsin); Baillet, Sylvain (McGill Univ.); Li, Zhimin (Medical College of Wisconsin); Butson, Christopher* (Medical College of Wisconsin)</i>		
15:00-16:30		ThET8.5
Automated Quantification of a Weak Signal in Magnetic Resonance Spectroscopy Data		755-758
<i>Li, Miaofeng (Shanghai Jiao Tong Univ.); Sun, Junfeng* (Shanghai Jiao Tong Univ.); Cheng, Lin (Shanghai Jiao Tong Univ.); Li, Yao (Shanghai Jiao Tong Univ.); Tong, Shanbao (Shanghai Jiao Tong Univ.)</i>		
15:00-16:30		ThET8.7
Sustained Thermal Pain Modulates Spontaneous Sensorimotor Rhythms		759-760
<i>Zhang, Huishi* (Univ. of Minnesota); Lu, Yunfeng (Univ. of Minnesota); He, Bin (Univ. of Minnesota)</i>		
15:00-16:30		ThET8.9
EEG Event-Related Potentials in Preparation, Planning and Execution of Arm Isometric Exertions, Localized by Surface Laplacian		761-764
<i>Nasseroleslami, Bahman* (Northeastern University); Lakany, Heba (University of Strathclyde); Conway, Bernard A (University of Strathclyde)</i>		
15:00-16:30		ThET8.10
Abnormal Neural Activity and Functional Connectivity in Amnesic Mild Cognitive Impairment: A Resting State Fmri Study		765-769
<i>Liu, Ruiyue (Lanzhou University); Hu, Bin* (Lanzhou University); Yao, Zhijun (Lanzhou University); Ratcliffe, Martyn (Birmingham City University); Wang, Wei (Lanzhou University); Liang, Chuanjiang (Lanzhou University); Cai, Qingcui (The Special Education School, Lanzhou); Yang, Jing (Lanzhou University second Hospital); Zhao, Qinglin (Lanzhou University)</i>		
15:00-16:30		ThET8.11
FMRI Assessment of Load based Working Memory in Blast TBI and Associated Effects in FDG-PET Signal		770-773
<i>Stout, Jeffrey* (Illinois Institute of Technology); Bolzenius, Jacob (Saint Louis University); Roskos, Tyler (Saint Louis University); Osman, Medhat (Saint Louis University); Frausto, Randall (Illinois Institute of Technology); Bucholz, Richard (Saint Louis University); Mogul, David (Illinois Institute of Technology)</i>		
15:00-16:30		ThET8.12
Discovering Optimal Brain States for Problem Solving with EEG		774-777
<i>Wu, Ying Choon* (Univ. of California); Jung, Melody (Canyon Crest Academy); Lock, Derrick (Univ. of California, San Diego); Chao, Eric (Univ. City High School); Jung, Tzyy-Ping (Univ. of California San Diego)</i>		
15:00-16:30		ThET8.13
Identifying Functional Networks Via Sparse Coding of Whole Brain FMRI Signals		778-781
<i>Lv, Jinglei* (Northwestern Polytechnical University, China; The University of G); Jiang, Xi (University of Georgia); Li, Xiang (University of Georgia); Zhu, Dajiang (University of Georgia); Chen, Hanbo (The University of Georgia, Athens, GA, USA); Zhang, Tuo (Northwestern Polytechnical University, Xi'an, China); Zhang, Shu (University of Georgia); Hu, Xintao (Northwestern Polytechnical University, Xi'an, China); Han, Junwei (Northwestern Polytechnical University); Huang, Heng (University of Texas at Arlington); Zhang, Jing (Yale University); Guo, Lei (Northwestern Polytechnical University); Liu, Tianming (University of Georgia)</i>		
15:00-16:30		ThET8.14
A Framework of Fmri Data Analysis using Pattern Recognition Techniques	B#5	
<i>Faye, Ibrahim (Department of Fundamental and Applied Sciences, Universiti Tekno); Yousssofzadeh, Vahab* (University of Ulster); Malik, Aamir Saeed (Universiti Teknologi PETRONAS); Reza, Faruque (Department of Neurosciences, School of Medical Sciences, Hospita); Abdullah, Jafri Malin (Universiti Sains Malaysia)</i>		
15:00-16:30		ThET8.19
Developing a Wearable Real-World Neuroimaging System to Study Stress		786-789
<i>Doty, Tracy Jill* (U.S. Army Research Laboratory); Hairston, W. David (Us Army Research Laboratory); Kellihan, Bret (DCS Corporation); Canady, Jonroy (DCS Corporation); Oie, Kelvin (U.S. Army Research Laboratory); McDowell, Kaleb (U.S. Army Research Laboratory)</i>		

15:00-16:30	ThET9.1
Propagation of Epileptiform Activity in the Hippocampus Can Be Driven by Non-Synaptic Mechanisms	790-793
<i>Zhang, Mingming* (Case Western Reserve University); Durand, Dominique (Case Western Reserve University)</i>	
15:00-16:30	ThET9.3
Low-Frequency Fluctuations of Plantar Flexion Torque in Force and Position Control Tasks Studied Experimentally and by a Neuromusculoskeletal Model	794-797
<i>Watanabe, Renato Naville* (Biomedical Engineering Laboratory, Escola Politécnica, Universit); Elias, Leonardo (Biomedical Engineering Laboratory, Dept. of Telecommunication an); Kohn, Andre (University of Sao Paulo)</i>	
15:00-16:30	ThET9.4
Reflex Stiffness Gain and Dynamics in Spinal Cord Injury: Abnormalities and Underlying Mechanisms	798-801
<i>Mirbagheri, Mehdi* (Northwestern University/RIC)</i>	
15:00-16:30	ThET9.7
Neural Drive Estimation using the Hypothesis of Muscle Synergies and the State-Constrained Kalman Filter	802-805
<i>Rasool, Ghulam (Univ. of Arkansas at Little Rock); Iqbal, Kamran* (Univ. of Arkansas at Little Rock); Bouaynaya, Nidhal (Univ. of Arkansas at Little Rock); White, Gannon (Univ. Of Arkansas At Little Rock)</i>	
15:00-16:30	ThET9.8
Forward Estimation of Joint Torque from EMG Signal through Muscle Synergy Combinations	806-809
<i>Li, Zhan* (University of Montpellier); Hayashibe, Mitsuhiro (INRIA); Guiraud, David (INRIA)</i>	
15:00-16:30	ThET9.9
Wavelet-Approximated Generalized Matched Filter for the Detection of Multi-Sensor Extracellular Action Potentials	810-814
<i>Szymanska, Agnieszka (University of California, Irvine); Nenadic, Zoran* (University of California Irvine)</i>	
15:00-16:30	ThET9.10
Human Seizure Detection using Quadratic Rényi Entropy	815-818
<i>Feltane, Amal (University of Rhode Island); Boudreaux-Bartels, G. Faye (University of Rhode Island); Boudria, Yacine (University of Rhode Island); Gaitanis, John (The Warren Alpert Medical School at Brown University); Besio, W. G.* (University of Rhode Island)</i>	
15:00-16:30	ThET9.11
The Effect of Inaccurate Targeting of the Left Dorsolateral Prefrontal Cortex on TMS Response	819-822
<i>De Geeter, Nele* (University of Ghent); Crevecoeur, Guillaume (Ghent University); Dupré, Luc (Ghent University, Dept. Electrical Energy, Systems and Automatio)</i>	
15:00-16:30	ThET9.13
A Comparison of Effective Connectivity Methods using Different Performance Metrics	823-826
<i>Kim, Su Kyoung* (University of Bremen); Sanga, Suraj Kumar (Bremen University of Applied Science); Kirchner, Elsa Andrea (University of Bremen)</i>	
15:00-16:30	ThET9.14
A Phenomological Model for Capturing Cerebrovascular Reactivity to Anodal Transcranial Direct Current Stimulation	827-830
<i>Dutta, Anirban (INRIA); Roy Chowdhury, Shubhajt (International Institute of Information Technology, Hyderabad); Dutta, Arindam* (Gnan Systems LLP); Sylaja, PN (Sree Chitra Tirunal Institute for Medical Sciences & Technology.); Guiraud, David (INRIA); Nitsche, Michael A. (Georg-August-University, Goettingen)</i>	
15:00-16:30	ThET9.15
Modeling of Topology-Dependent Neural Network Plasticity Induced by Activity-Dependent Electrical Stimulation	831-834
<i>Ni, Ruiye* (Washington University in St. Louis); Ledbetter, Noah (Washington University in St. Louis); Barbour, Dennis (Washington University in St. Louis)</i>	

15:00-16:30 ThET9.19
Simulating Lesions in Multi-Layer, Multi-Columnar Model of Neocortex 835-838
Strack, Beata (Virginia Commonwealth University); Jacobs, Kimberle (Virginia Commonwealth University); Cios, Krzysztof (Virginia Commonwealth University)*

ThET10: 15:00-16:30 Pavilion Room
Neural Prostheses III (Poster Session)

15:00-16:30 ThET10.3
Drug Eluting Coating for 3D Parylene Sheath Electrode 839-842
Lee, Curtis (University of Southern California); Yu, Lawrence (University of Southern California); Kuo, Jonathan T.W. (University of Southern California); Kim, Brian J. (University of Southern California); Hoang, Tuan (University of Southern California); Meng, Ellis (University of Southern California)*

15:00-16:30 ThET10.4
Temporal Patterns of Pudendal Afferent Stimulation Modulate Reflex Bladder Activation 843-846
McGee, Meredith (Duke University); Grill, Warren (Duke University)*

15:00-16:30 ThET10.5
Integrated Reliability Modules Used in the Implantable IMES2 Wireless EMG Sensor 847-850
DeMichele, Glenn (Sigenics Inc.); Hu, Zhe (Illinois Institute of Technology); Troyk, Philip (Illinois Institute of Technology)*

15:00-16:30 ThET10.6
A Real Time Performance Assessment of Simultaneous Pattern Recognition Control for Multi-Functional Upper Limb Prostheses 851-854
Wurth, Sophie Marie (Swiss Federal Institute of Technology Lausanne, Center for Bioni); Hargrove, Levi (Rehabilitation Institute of Chicago)*

15:00-16:30 ThET10.7
Investigating Ocular Movements and Vestibular Evoked Potentials for a Vestibular Neuroprosthesis: Response to Pulse Trains and Baseline Stimulation 855-858
Nguyen, Thuy Anh Khoa (EPF Lausanne); Gong, Wangsong (MEEI); Poppendieck, Wigand (Fraunhofer Institut für Biomedizinische Technik); DiGiovanna, Jack (EPFL); Micera, Silvestro (Scuola Superiore Sant'Anna)*

15:00-16:30 ThET10.8
Stability and Selectivity of a Chronic, Multi-Contact Cuff Electrode for Sensory Stimulation in a Human Amputee 859-862
Tan, Daniel (Case Western Reserve University); Schiefer, Matthew A. (Case Western Reserve University); Tyler, Dustin (Case Western Reserve University); Keith, Michael (MetroHealth Medical Center); Anderson, Robert (UH Rainbow Babies & Children's Hospital)*

15:00-16:30 ThET10.9
Towards an Implantable Intelligent CMOS Neurotrophic Factor Delivery Micro Neural Prosthetic for Parkinson's Disease 863-867
Poustinchi, Mohammad (McGill University); Musallam, Sam (McGill University)*

15:00-16:30 ThET10.10
Exploring the Limits of Helium Spray Tests 868-871
Boretius, Tim (University of New South Wales); Mintri, Apoorv (University of New South Wales); Suaning, Gregg (The University of New South Wales)*

15:00-16:30 ThET10.11
Silicone Rubber and Thin-Film Polyimide for Hybrid Neural Interfaces –a MEMS-Based Adhesion Promotion Technique – 872-875
Ordonez, Juan Sebastian (University of Freiburg); Boehler, Christian (University of Freiburg); Schuettler, Martin (University of Freiburg); Stieglitz, Thomas (University of Freiburg)*

15:00-16:30 ThET10.12
Biomimetic Non-Linear CMOS Adder for Neuromorphic Circuits 876-879
Zhou, Xiahan (University of Southern California); Guo, Yimu (University of Southern California); Parker, Alice (University of Southern California); Hsu, Chih-Chieh (University of Southern California); Choma, John, Jr. (University of Southern California)*

15:00-16:30 ThET10.13
Proposed Intracortical Vision Prosthesis System for Phosphene Mapping and Psychophysical Studies 880-882
Kaskhedikar, Gayatri (Illinois Institute of Technology); Hu, Zhe (Illinois Institute of Technology); Dagnelie, Gislin (Johns Hopkins Univ); Troyk, Philip (Illinois Institute of Technology)*

ThET11: 15:00-16:30 Pavilion Room
Neural Robotics (Poster Session)

15:00-16:30 ThET11.4
Effect of Kinesthetic Force Feedback and Visual Sensory Input on Writer's Cramp 883-886
Atashzar, Seyed Farokh (ECE Department at Western University (UWO), and Canadian Surgica); Shahbazi, Mahya (The University of Western Ontario, Canadian Surgical Technologie); Rahimi, Fariborz (London Health Sciences Centre); Delrobaei, Mehdi (London Health Sciences Centre); Lee, Jack (London Health Sciences Centre); Patel, Rajni (London Health Sciences Centre); Jog, Mandar (University of Western Ontario - London Health Sciences Centre)*

15:00-16:30 ThET11.5
3D Printers May Reduce Animal Numbers to Train Neuroengineering Procedures 887-890
Pohl, B. Matthias (University of Luebeck); Gasca, Fernando (University of Lübeck); Christ, Olaf (University of Luebeck); Hofmann, Ulrich G. (University of Freiburg)*

15:00-16:30 ThET11.7
Conditioned Behavior in a Robot Controlled by a Spiking Neural Network 891-894
Helgadottir, Lovisa Irpa (Freie Universität Berlin); Haenicke, Joachim (Freie Universität Berlin); Landgraf, Tim (Freie Universität Berlin); Rojas, Raúl (Freie Universität Berlin); Nawrot, Martin Paul (Freie Universität Berlin)*

15:00-16:30 ThET11.11
Passive Robot Assistance in Arm Movement Decoding from EEG Signals 895-898
Ubeda, Andres (Universidad Miguel Hernandez de Elche); Hortal, Enrique (Universidad Miguel Hernandez de Elche); Ianez, Eduardo (Universidad Miguel Hernandez de Elche); Planelles, Daniel (Universidad Miguel Hernandez de Elche); Azorin, Jose M. (Universidad Miguel Hernandez de Elche)*

15:00-16:30 ThET11.12
Embodied Neuronal Assemblies: A Closed-Loop Environment for Coding and Decoding Studies 899-902
Tessadori, Jacopo (IIT - Italian Institute of Technology); Venuta, Daniele (Italian Institute of Technology (IIT)); Kumar, Sreedhar (University of Freiburg); Bisio, Marta (Istituto Italiano di Tecnologia); Pasquale, Valentina (Istituto Italiano di Tecnologia); Chiappalone, Michela (Italian Institute of Technology)*

15:00-16:30 ThET11.13
Can a Competitive Neural Network Explain Selective Attention in Insect Target Tracking Neurons? 903-906
Shoemaker, Patrick (Tanner Research, Inc); Wiederman, Steven (University of Adelaide); O'Carroll, David (University of Adelaide)*

15:00-16:30 ThET11.15
Neuromorphic Network Implementation of the Somatosensory Cortex 907-910
Joshi, Jonathan (University of Southern California); Parker, Alice (University of Southern California); Celikel, Tansu (Donders Institute, Radboud University)*

ThET12: 15:00-16:30 Pavilion Room
Neuro-Nanotechnology (Poster Session)

15:00-16:30 ThET12.4
Fabrication of Flexible Electrode Array based on PDMS for Long-Term In-Vivo Use 911-914
Jeong, Jinmo (Gwangju institute of science and technology); Chou, Namsun (Gwangju Institute of Science and Technology (GIST)); Kim, Sohee (Gwangju Institute of Science and Technology)*

15:00-16:30	ThET12.5
Bi-Directional Optrode for Quantitative Prediction of Neural Interface Failure	915-918
<i>McLaughlin, Bryan* (Draper Laboratory); Kampasi, Komal (University of Michigan, Ann Arbor); Le Blanc, John (Draper Laboratory); Perlin, Gayatri, E. (University of Michigan); Segura, Carlos Alejandro (Draper Laboratory, Boston University); Achyuta, Anil (Draper Laboratory); Kumar, Parshant (Draper Labs); Cook, Eugene (Draper Laboratory); Mittal, Vikram (Draper Laboratory); Kipke, Daryl (University of Michigan)</i>	
15:00-16:30	ThET12.6
In Vitro Homogeneous and Heterogeneous Interconnected Neuronal Cultures: Exploring Expressed Dynamics and Functional Connectivity	919-922
<i>Martinoia, Sergio* (University of Genova); Massobrio, Paolo (University of Genova); Tedesco, Mariateresa (University of Genova); Kanagasabapathi, Thirukumaran T. (Philips Research Laboratories Eindhoven); Marcoli, Manuela (University of Genova, Italy); Cervetto, Chiara (University of Genova, Italy); Nowak, Przemyslaw (University of Genoa)</i>	
15:00-16:30	ThET12.7
Selective ENG Recordings using a Multi-Contact Cuff Electrode	923-926
<i>Bonnet, Stéphane* (CEA Léti MINATEC); Rubeck, Christophe (CEA); Agache, Vincent (CEA/LETI, MINATEC Campus, Department DTBS, Grenoble, France); Bourgerette, Alain (CEA); Fuchs, Olivier (CEA); Gharbi, Sadok (CEA/LETI/MINATEC); Sauter-Starace, Fabien (CEA); Maciejasz, Pawel (LIRMM); Divoux, Jean-Louis (MXM Neuromedics); Bourquin, Nolwen (Neuromedics, MXM group F- 06224 Vallauris, France); Henry, Christine (SORIN); Maubert, Sandrine (CEA)</i>	
15:00-16:30	ThET12.9
Ultra-Flexible and Brain-Conformable Micro-Electrocortigraphy Device with Low Impedance PEDOT-Carbon Nanotube Coated Microelectrodes	927-930
<i>Castagnola, Elisa* (Istituto Italiano di Tecnologia - RBCS); Maiolo, Luca (Institute of Microelectronics and Microsystems; Consiglio Nazion); Maggiolini, Emma (Italian Institute of Tech., Robotics, Brain and Cognitive S); Minotti, Antonio (Institute of Microelectronics and Microsystems; Consiglio Nazion); Marrani, Marco (Institute of Microelectronics and Microsystems; Consiglio Nazion); Maita, Francesco (Institute of Microelectronics and Microsystems; Consiglio Nazion); Pecora, Alessandro (Institute of Microelectronics and Microsystems; Consiglio Nazion); Angotzi, Gian Nicola (IIT, Genova); Ansaldo, Alberto (Istituto Italiano di Tecnologia - RBCS); Fadiga, Luciano (Universita' degli Studi di Ferrara, Ferrara, Italia); fortunato, Guglielmo (Institute of Microelectronics and Microsystems; Consiglio Nazion); Ricci, Davide (Istituto Italiano di Tecnologia - RBCS)</i>	
15:00-16:30	ThET12.10
Chip-Scale Packaging for Bioelectronic Implants	931-936
<i>Weiland, James* (University of Southern California); Kimock, Fred Michael (Four Circle, Incorporated); Yehoda, Joseph (Morgan Advanced Materials - Diamonex); Gill, Emma Claire (Morgan Technical Ceramics); McIntosh, Ben (University of Southern California); Nasiatka, Patrick (University of Southern California); Tanguay, Armand (University of Southern California)</i>	
15:00-16:30	ThET12.13
Organic FET Device as a Novel Sensor for Cell Bioelectrical and Metabolic Activity Recordings	937-940
<i>Martinoia, Sergio* (University of Genova); Spanu, Andrea (University of Genoa, Italy); Lai, Stefano (University of Cagliari); Cosseddu, Piero (University of Cagliari); Bonfiglio, Annalisa (University of Cagliari); Tedesco, Mariateresa (University of Genova)</i>	
15:00-16:30	ThET12.14
Dielectrophoretic Trapping of P19 Cells on Indium Tin Oxide based Microelectrode Arrays	941-944
<i>Gangopadhyay, Aveek (George Mason University); Minnikanti, Saugandhika (George Mason University); Reyes, Darwin R. (National Institute of Standards and Technology); Mulpuri, Rao (George Mason University); Peixoto, Nathalia* (George Mason University)</i>	
15:00-16:30	ThET12.15
Long Term Observation of Propagating Action Potentials Along the Axon in a Microtunnel Device	945-948
<i>Shimba, Kenta* (University of Tokyo); Sakai, Koji (University of Tokyo); Arimatsu, Kazuyuki (The University of Tokyo); Kotani, Kiyoshi (University of Tokyo); Jimbo, Yasuhiko (University of Tokyo)</i>	

15:00-16:30		ThET12.16
Implantable Neural Device Integrated with Regenerative Scaffold for Neural Signal Sensing from Damaged Spinal Cord	949-952	
<i>Jeong, Jinwoo (Korea Institute of Science and Technology); Kim, Taehyung (Korea Institute of Science and Technology); Han, Sungmin (Korea Institute of Science and Technology); Youn, Inchan (Korea Institute of Science and Technology); Suh, Jun-Kyo (Korea Institute of Science and Technology); Kim, Jinseok* (Korea Institute of Science and Tech)</i>		
15:00-16:30		ThET12.23
Characterization of the Size, Shape, and Drug Encapsulation Efficiency of PLGA Microcapsules Produced Via Electrojetting for Drug Delivery to Brain Tumors	953-956	
<i>Fattahi, Pouria (The Pennsylvania State University); Borhan, Ali (The Pennsylvania State University); Abidian, Mohammad Reza* (Pennsylvania State University)</i>		
15:00-16:30		ThET12.26
3D Engineered Neural Networks Coupled to Micro-Electrode Arrays: Development of an Innovative In-Vitro Experimental Model for Neurophysiological Studies	957-960	
<i>Frega, Monica* (Univ. of Genova); Tedesco, Mariateresa (Univ. of Genova); Massobrio, Paolo (Univ. of Genova); Pesce, Mattia (Italian Institute of Technology); Williamson, Adam (Univ. of Technology, Ilmenau); Schober, Andreas (Univ. of Technology, Ilmenau); Martinoia, Sergio (Univ. of Genova)</i>		
ThFT7: 16:30-18:00		Pavilion Room
Brain-Computer and Brain Machine Interfaces IV (Poster Session)		
16:30-18:00		ThFT7.4
Electrochemical Sensing Via Selective Surface Modification of Iridium Microelectrodes to Create a Platinum Black Interface	961-964	
<i>Patel, Paras (University of Michigan); Gibson, Matthew (University of Michigan); Ludwig, Kip (NIH); Langhals, Nicholas B.* (University of Michigan)</i>		
16:30-18:00		ThFT7.6
An Optimal Control Analysis of Motor Strategies in a Brain-Computer Interface Task	965-968	
<i>Haddock, Andrew* (University of Washington); Matlack, Charlie (University of Washington); Moritz, Chet (University of Washington); Chizeck, Howard (University of Washington)</i>		
16:30-18:00		ThFT7.7
State and Trajectory Decoding of Upper Extremity Movements from Electrocorticogram	969-972	
<i>Wang, Po T.* (University of California Irvine); Puttock, Eric J. (University of California Irvine); King, Christine E. (University of California, Irvine); Schombs, Andrew (University of California, Irvine); Lin, Jack J. (University of California, Irvine); Sazgar, Mona (University of California, Irvine); Hsu, Frank P. K. (University of California, Irvine); Shaw, Susan J. (University of Southern California); Millett, David (University of Southern California); Liu, Charles Y. (Keck Hospital of the University of Southern California); Chui, Luis A. (University of California, Irvine); Do, An H. (University of California Irvine); Nenadic, Zoran (University of California Irvine)</i>		
16:30-18:00		ThFT7.8
Electrophysiological Monitoring of Cerebellar Evoked Potentials Following Fluid Percussion Injury	973-976	
<i>Ordek, Gokhan* (New Jersey Institute of Tech.); Groth, Jonathan (New Jersey Institute of Tech., Newark); Pfister, Bryan (New Jersey Institute of Tech.); Sahin, Mesut (New Jersey Institute of Tech.)</i>		
16:30-18:00		ThFT7.10
Online Co-Adaptive Brain-Computer Interfacing: Preliminary Results in Individuals with Spinal Cord Injury	977-980	
<i>Faller, Josef* (Graz University of Technology); Solis-Escalante, Teodoro (Institute for Knowledge Discovery, Graz University of Technology); Costa, Ursula (Guttmann Rehabilitation Hospital); Opisso, Eloy (Guttmann Institute); Medina Casanovas, Josep (Guttmann Rehabilitation Hospital); Scherer, Reinhold (Graz University of Technology); Müller-Putz, Gernot (Graz University of Technology)</i>		
16:30-18:00		ThFT7.11
Using a Neural Network Classifier to Predict Movement Outcome from LFP Signals	981-984	
<i>Zhang, Simeng (University of Minnesota); Fahey, Patrick (University of Minnesota); Rynes, Mathew (University of Minnesota); Kerrigan, Stephen (University of Minnesota); Ashe, James* (University of Minnesota)</i>		

16:30-18:00		ThFT7.12
A Smart Cage for Behavioral Experiments on Small Freely Behaving Animal Subjects		985-988
<i>McMenamin, Peter (Georgia Institute of Technology); Jow, Uei-Ming (Georgia Institute of Technology); Kiani, Mehdi (Georgia Institute of Technology); Manns, Joseph (Emory University); Ghovanloo, Maysam* (Georgia Institute of Technology)</i>		
16:30-18:00		ThFT7.13
A Fully Wireless Platform for Correlating Behavior and Neural Data from an Implanted, Neural Recording Device: Demonstration in a Freely Moving Swine Model		989-992
<i>Agha, Naubahar* (Brown University); Komar, Jacob (Brown University); Yin, Ming (Brown University); Bor ton, David (Ecole Polytechnique Federale de Lausanne); Nurmikko, Arto (Brown University)</i>		
16:30-18:00		ThFT7.14
Extraction of Error Related Local Field Potentials from the Striatum During Environmental Perturbations of a Robotic Arm		993-996
<i>Geng, Shijia (University of Miami); Prins, Noeline W.* (University of Miami); Pohlmeier, Eric A. (University of Miami); Prasad, Abhishek (University of Miami); Sanchez, Justin C. (University of Miami)</i>		
16:30-18:00		ThFT7.15
Unsupervised Decoder Initialization for Brain-Machine Interfaces using Neural State Space Dynamics		997-1000
<i>Badreldin, Islam* (Michigan State University); Southerland, Joshua (University of Oklahoma); Vaidya, Mukta (University of Chicago); Eleryan, Ahmed (Electrical and Computer Engineering Department, Michigan State U); Balasubramanian, Karthikeyan (University of Chicago); Fagg, Andrew (University of Oklahoma); Hatsopoulos, Nicholas (University of Chicago); Oweiss, Karim (Michigan State University)</i>		
16:30-18:00		ThFT7.16
Data Acquisition System for High Resolution, Multiplexed Electrode Arrays		1001-1004
<i>Bink, Hank* (University of Pennsylvania); Wagenaar, Joost (University of Pennsylvania); Viventi, Jonathan (Polytechnic Institute of New York University)</i>		
16:30-18:00		ThFT7.17
Stability of Thin-Film Wireless Recording and Stimulation Devices for Epilepsy Monitoring		1005-1008
<i>Troyk, Philip (Illinois Institute of Technology); Cogan, Stuart* (EIC Laboratories, Inc.); DeMichele, Glenn (Sigenics Inc.)</i>		
16:30-18:00		ThFT7.18
A Compact Wireless Multi-Channel System for Real-Time Intracortical Microstimulation of Behaving Rodents		1009-1012
<i>Angotzi, Gian Nicola (IIT, Genova); Boi, Fabio (Fondazione Istituto Italiano diTecnologia); Zordan, Stefano (University of Genoa); Vato, Alessandro* (Fondazione Istituto Italiano di Tecnologia)</i>		
16:30-18:00		ThFT7.19
Reliability Investigations and Improvements of Interconnection Technologies for the Wireless Brain-Machine Interface – ‘BrainCon’		1013-1016
<i>Kohler, Fabian* (Univ. of Freiburg); Ulloa Suarez, Miguel Angel (Univ. of Freiburg); Ordonez, Juan Sebastian (Univ. of Freiburg); Stieglitz, Thomas (Univ. of Freiburg); Schuettler, Martin (Univ. of Freiburg)</i>		
16:30-18:00		ThFT7.20
Comparison of Neural Activity During Closed-Loop Control of Spike or LFP-Based Brain-Machine Interfaces		1017-1020
<i>Orsborn, Amy* (University of California Berkeley); So, Kelvin (University of California, Berkeley); Dangi, Siddharth (University of California, Berkeley); Carmena, Jose M. (University of California, Berkeley)</i>		
16:30-18:00		ThFT7.21
Towards a Brain Computer Interface based on the N2pc Event-Related Potential		1021-1024
<i>Awni, Hani (University of Illinois at Urbana Champaign); Norton, James JS* (University of Illinois); Umunna, Stephen (University of Illinois); Federmeier, Kara (University of Illinois); Bretl, Timothy (University of Illinois at Urbana-Champaign)</i>		
16:30-18:00		ThFT7.23
Classification of Auditory Steady-State Responses to Speech Data		1025-1028
<i>Nakamura, Takashi* (Waseda Univ.); Namba, Hironao (Waseda Univ.); Matsumoto, Takashi (Waseda Univ.)</i>		

16:30-18:00	ThFT7.24
The Parallel-BCI Speller based on the P300 and SSVEP Features	1029-1032
<i>Xu, Minpeng (Tianjin University); Qi, Hongzhi* (Tianjin University); Zhang, Lixin (Tianjin University); Cheng, Xiaoman (Tianjin University of Technology); Wan, Bai-kun (Tianjin University); Ming, Dong (Tianjin University)</i>	
16:30-18:00	ThFT7.25
A New Online Event Related Potential based Brain-Computer Interfaces using an Ensemble Classifier .	1033-1036
<i>Onishi, Akinari* (Kyushu Institute of Technology); Natsume, Kiyohisa (Kyushu Institute of Technology)</i>	
16:30-18:00	ThFT7.26
Glutamate, GABA and Dopamine Hydrochloride Concentration Effects on the Conductivity and Impedance of Cerebrospinal Fluid	1037-1040
<i>Xing, Paul* (École Polytechnique de Montréal); Miled, Amine (Ecole Polytechnique); Sawan, Mohamad (Polytechnique Montreal)</i>	
16:30-18:00	ThFT7.27
Chroma Speller: Isotropic Visual Stimuli for Truly Gaze-Independent Spelling	1041-1044
<i>Acqualagna, Laura* (Berlin Institut of Technology); Treder, Matthias Sebastian (Technische Universität Berlin); Blankertz, Benjamin (Berlin Institute of Technology)</i>	
16:30-18:00	ThFT7.28
Patterned Visual Stimuli for Enhancement of SSVEP-Based BCI Performance	1045-1048
<i>da Cruz, Janir Nuno* (University of Macau); Wong, Chi Man (University of Macau); Cao, Teng (University of Macau); Wan, Feng (University of Macau)</i>	
16:30-18:00	ThFT7.29
How Fast Can F-VEP BCIs Ever Be?	1049-1053
<i>Sengelmann, Malte* (Univ. Medical Center Hamburg-Eppendorf; Dept. of Neurophysi); Engel, Andreas Karl (Univ. Medical Center Hamburg-Eppendorf); Maye, Alexander (Univ. Medical Center Hamburg-Eppendorf)</i>	
16:30-18:00	ThFT7.30
Towards a General Architecture for a Co-Learning of Brain Computer Interfaces	1054-1057
<i>Kosmyna, Nataliya* (Grenoble INP); Tarpin-Bernard, Franck (Univ. Grenoble Alpes); Rivet, Bertrand (Grenoble Universities)</i>	
16:30-18:00	ThFT7.31
Envelope Detection based on Online ICA Algorithm and Its Application to Motor Imagery Classification	1058-1061
<i>Guo, Xiaojing* (Anhui University); Wu, Xiaopei (Anhui University); Gong, Xiaoxiao (Anhui University, the Key Laboratory of Intelligent Computing & S); Zhang, Lei (Anhui University)</i>	
16:30-18:00	ThFT7.32
Optimizing P300-Speller Sequences by RIP-Ping Groups Apart	1062-1065
<i>Thomas, Eoin (INRIA); Clerc, Maureen* (INRIA); Daucé, Emmanuel (INSERM, UMR 1106 "Institut de Neurosciences des Systemes", Facul); Carpentier, Alexandra (Sequel Project-Team, INRIA Lille Nord Europe); Devlaminck, Dieter (Athena Project-Team, INRIA Sophia Antipolis - Mediterranee,); Munos, Rémi (Sequel Project-Team, INRIA Lille Nord Europe, France)</i>	
16:30-18:00	ThFT7.33
EEG Band Powers for Characterizing User Engagement in P300-BCI	1066-1069
<i>Liu, Yichuan* (Drexel University); Ayaz, Hasan (Drexel University); Onaral, Banu (Drexel University); Shewokis, Patricia A (Drexel University)</i>	
16:30-18:00	ThFT7.34
Development of a Robust Method for an Online P300 Speller Brain Computer Interface	1070-1075
<i>Tahmasebzadeh, Alireza* (Imperial College London); Bahrani, Masih (Sharif University of Technology); Setarehdan, Seyed Kamaledin (University of Tehran)</i>	
16:30-18:00	ThFT7.35
Volitional Phase Control of Neural Oscillations using a Brain-Machine Interface	1076-1079
<i>Khanna, Preeya* (University of California, Berkeley); So, Kelvin (University of California, Berkeley); Carmena, Jose M. (University of California, Berkeley)</i>	

16:30-18:00	ThFT7.36
Design and Optimization of Microscale Magnetic Probes for Multi-Site Neural Stimulation	1080-1083
<i>Fan, Bin* (Michigan State University); Li, Wen (Michigan State University)</i>	
16:30-18:00	ThFT7.37
Analytic Common Spatial Pattern and Adaptive Classification for Multiclass Motor Imagery-Based BCI	1084-1087
<i>Nicolas-Alonso, Luis Fernando* (Biomedical Engineering Group, E.T.S. Ingenieros de Telecomunicac); Corralejo, Rebeca (University of Valladolid, CIF: Q4718001C); Álvarez, Daniel (University of Valladolid, CIF: Q4718001C); Hornero, Roberto (University Of Valladolid)</i>	
16:30-18:00	ThFT7.38
Pilot Study on the use of Audio Feedback for Seng-Based Brain-Machine-Body Interface	1088-1091
<i>Dao, Cindy (University of California Davis); Skavhaug, Ida-Maria* (University of California Davis); Vernon, Benjamin (University of California at Davis); Randolph, David (University of California Davis); Joshi, Sanjay (University of California, Davis)</i>	
16:30-18:00	ThFT7.39
Integrating Interference Frequency Components Elicited by Monitor Refresh Rate to Enhance Frequency Detection of SSVEPs	1092-1095
<i>Nakanishi, Masaki* (Keio University); Wang, Yijun (University of California, San Diego); Wang, Yu-Te (University of California San Diego); Mitsukura, Yasue (Keio University); Jung, Tzyy-Ping (University of California San Diego)</i>	
16:30-18:00	ThFT7.40
Collaborative Brain-Computer Interfaces for the Automatic Classification of Images	1096-1099
<i>Matran-Fernandez, Ana (University of Essex); Poli, Riccardo* (University of Essex); Cinel, Caterina (University of Essex)</i>	

ThFT8: 16:30-18:00	Pavilion Room
Neural Computation and Modeling IV (Poster Session)	

16:30-18:00	ThFT8.4
State-Space Analysis of Hodgkin-Huxley Axonal Neural Mass Model During Subthreshold High Frequency Alternating Current Stimulation	1100-1103
<i>Dutta, Anirban* (INRIA); Nitsche, Michael A. (Georg-August-University, Goettingen)</i>	
16:30-18:00	ThFT8.5
Biophysical Modeling of Alpha Rhythms During Halothane-Induced Unconsciousness	1104-1107
<i>Vijayan, Sujith* (Boston University); Ching, ShiNung (Washington University in St. Louis); Purdon, Patrick L (Massachusetts General Hospital); Brown, Emery N (MGH-Harvard Medical School-MIT); Kopell, Nancy (Department of Mathematics and Statistics, Boston University, Bos)</i>	
16:30-18:00	ThFT8.6
Electric Stimulation of Neurons and Neural Networks in Retinal Prostheses	1108-1111
<i>Schmid, Erich (University of Tuebingen); Fink, Wolfgang* (University of Arizona); Wilke, Robert (University of New South Wales)</i>	
16:30-18:00	ThFT8.7
FEA Modeling of Temperature Elevation in Neural Tissue Illuminated by a Laser: Transient Effects	1112-1114
<i>Yucel, Atabek Can* (New Jersey Institute of Technology); Ersen, Ali (NJIT); Sahin, Mesut (New Jersey Institute of Technology); Al-Smadi, Yahia (New Jersey Institute of Technology)</i>	
16:30-18:00	ThFT8.8
Using Spatial Summation of Multi-Site Stimulation Electrodes to Improve the Capability of a Sensory Neural Interface	1115-1118
<i>Williams, Aaron (University of Virginia); Gerling, Gregory* (University of Virginia)</i>	
16:30-18:00	ThFT8.9
Nonlinear Elastic Brain Tissue Model for Neural Probe-Tissue Mechanical Interaction	1119-1122
<i>Hamzavi, Nader* (National University of Singapore)</i>	

16:30-18:00		ThFT8.10
Network Model of the Effects of Spinal Cord Stimulation		1123-1126
<i>Zhang, Tianhe* (Duke University); Janik, John (Stryker); Grill, Warren (Duke University)</i>		
16:30-18:00		ThFT8.11
Quantifying Neural Coding Noise in Linear Threshold Models		1127-1130
<i>Meyer, Arne Freerk* (University of Oldenburg); Diepenbrock, Jan-Philipp (Leibniz Institute for Neurobiology); Ohl, Frank W. (Leibniz Institute for Neurobiology (LIN)); Anemüller, Jörn (University of Oldenburg)</i>		
16:30-18:00		ThFT8.12
Challenging the Optimality of Rectangular Pulse Stimulation for Neuroprosthetic Devices		1131-1134
<i>Tahayori, Bahman* (University of Melbourne); Dokos, Socrates (University of New South Wales)</i>		
16:30-18:00		ThFT8.13
Effect of Soma Polarization on Electrical Stimulation Thresholds of Retinal Ganglion Cells		1135-1138
<i>Sergeev, Evgeni Nikitich* (The University of Melbourne); Meffin, Hamish (National ICT Australia); Tahayori, Bahman (University of Melbourne); Grayden, David B. (The University of Melbourne); Burkitt, Anthony Neville (The University of Melbourne)</i>		
16:30-18:00		ThFT8.14
Effect of the Nerve Fiber Path Eccentricity on the Single Fiber Action Potential		1139-1142
<i>Horn, Ryne* (Indiana University Purdue University Indianapolis); Qiao, Shaoyu (Purdue University, West Lafayette); Yoshida, Ken (Indiana University-Purdue University Indianapolis)</i>		
16:30-18:00		ThFT8.16
Closed-Loop Modeling of the Hippocampus and Design of Neurostimulation Patterns for Suppressing Seizures		1143-1146
<i>Sandler, Roman* (University of Southern California); Shin, Dae (University of Southern California); Song, Dong (University of Southern California); Hampson, Robert (Wake Forest School of Medicine); Deadwyler, Sam (Wake Forest University); Berger, Theodore (University of Southern California); Marmarelis, Vasilis (University of Southern California)</i>		
16:30-18:00		ThFT8.17
The Effects of NMDA Receptor Model Time Dynamics Over the Short and Long Term When Set to Striatal Dorsolateral and Ventromedial Medium Spiny Neurons		1147-1150
<i>Biddell, Kevin* (Biosynesi LLC); Johnson, Jeffrey (University of Cincinnati)</i>		
16:30-18:00		ThFT8.19
Multivariate Spectral Analysis of Electroencephalography Data		1151-1154
<i>Lainscsek, Claudia* (The Salk Institute for Biological Studies); Hernandez, Manuel (University of California, San Diego); Poizner, Howard (UCSD); Sejnowski, Terrence J. (The Salk Institute)</i>		
ThFT9: 16:30-18:00		Pavilion Room
Neural Prostheses IV (Poster Session)		
16:30-18:00		ThFT9.1
Intramuscular EMG after Targeted Muscle Reinnervation for Pattern Recognition Control of Myoelectric Prostheses		1155-1158
<i>Smith, Lauren* (Northwestern University); Hargrove, Levi (Rehabilitation Institute of Chicago)</i>		
16:30-18:00		ThFT9.2
A Pre-Clinical Framework for Neural Control of a Therapeutic Upper-Limb Exoskeleton		1159-1162
<i>Blank, Amy (Rice University); O'Malley, Marcia K.* (Rice University); Francisco, Gerard (University of Texas Health Science Center); Contreras-Vidal, José (University of Houston)</i>		
16:30-18:00		ThFT9.3
Differential Measure of Matched Linear Accelerometers as a Sensing Strategy for the Development of a Vestibular Prosthesis		1163-1166
<i>Challa, Prashanth (Georgia Institute of Technology); Töreyn, Hakan (Georgia Institute of Technology); Bhatti, Pamela* (Georgia Institute of Technology)</i>		

16:30-18:00		ThFT9.4
Verification and Validation of an Electrode Array for a Blink Prosthesis for Facial Paralysis Patients	1167-1170	
<i>McDonnall, Daniel* (Ripple LLC); Askin, Robert E. (Ripple LLC); Smith, Christopher Farand (Ripple, LLC.); Guillory, Kenneth Shane (Ripple LLC)</i>		
16:30-18:00		ThFT9.13
Laser-Fabrication of Neural Electrode Arrays with Sputtered Iridium Oxide Film	1171-1173	
<i>Schuetzler, Martin* (University of Freiburg); Ulloa Suarez, Miguel Angel (University of Freiburg); Ordonez, Juan Sebastian (University of Freiburg); Stieglitz, Thomas (University of Freiburg)</i>		
16:30-18:00		ThFT9.17
Powered Prosthesis Control During Walking, Sitting, Standing, and Non-Weight-Bearing Activities using Neural and Mechanical Inputs	1174-1177	
<i>Simon, Ann* (Rehabilitation Institute of Chicago); Fey, Nicholas (The Rehabilitation Institute of Chicago); Ingraham, Kimberly (Rehabilitation Institute of Chicago); Young, Aaron (Northwestern University); Hargrove, Levi (Rehabilitation Institute of Chicago)</i>		
16:30-18:00		ThFT9.18
EMG Control of Robotic Reaching by People with Tetraplegia Improved through Proprioceptive and Force Feedback	1178-1181	
<i>Corbett, Elaine (Northwestern University); Sachs, Nicholas (Northwestern University); Perreault, Eric* (Northwestern University)</i>		
ThFT10: 16:30-18:00		Pavilion Room
Deep Brain Stimulation II (Poster Session)		
16:30-18:00		ThFT10.1
Simulation of PID Control Schemes for Closed-Loop Deep Brain Stimulation	1182-1185	
<i>Dunn, Eleanor* (University College Dublin); Lowery, Madeleine (University College Dublin)</i>		
16:30-18:00		ThFT10.4
Brain Stimulation by Network Resonance with Weak Electric Fields Probed by Optogenetics in Vitro	1186-1189	
<i>Schmidt, Stephen (University of North Carolina at Chapel Hill); Foulser, Anna Alban (University of North Carolina at Chapel Hill); Frohlich, Flavio* (University of North Carolina at Chapel Hill)</i>		
16:30-18:00		ThFT10.5
Static Magnetic Field Modulates Excitatory Activity in Layer II/III Pyramidal Neurons of the Rat Motor Cortex	1190-1193	
<i>Klein, Rebecca (Duke University); Goetz, Stefan (Duke University); Liedtke, Wolfgang (Duke University); Moore, Scott (Duke University); Peterchev, Angel V* (Duke University)</i>		
16:30-18:00		ThFT10.7
An Automatic Classifier of Pain Scores in Chronic Pain Patients from Local Field Potentials Recordings ...	1194-1197	
<i>Zhang, Suyi (National Institute for Information and Communications Technology); Green, Alexander L (University of Oxford); Probert Smith, Penny J* (University of Oxford)</i>		
16:30-18:00		ThFT10.8
Chronic, Multi-Contact, Neural Interface for Deep Brain Stimulation	1198-1201	
<i>Tooker, Angela* (Lawrence Livermore National Lab); Madsen, Teresa (Emory University); Crowell, Andrea (Emory University); Shah, Kedar (Lawrence Livermore National Laboratory); Felix, Sarah (Lawrence Livermore National Laboratory); Mayberg, Helen (Emory University); Pannu, Satinderpall (Lawrence Livermore National Laboratory); Rainnie, Donald (Emory University); Tolosa, Vanessa (Lawrence Livermore National Laboratory)</i>		
16:30-18:00		ThFT10.10
A Method to Quantitatively Evaluate Changes in Tremor During Deep Brain Stimulation Surgery	1202-1205	
<i>Shah, Ashesh* (University of Applied Sciences and Arts, Northwestern Switzerland); Coste, Jérôme (Centre Hospitalier Universitaire de Clermont-Ferrand, Image-Guid); Lemaire, Jean-Jacques (Centre Hospitalier Universitaire de Clermont-Ferrand, Image-Guid); Schkommodau, Erik (Institute for Medical and Analytical Technologies, University of); Hemm, Simone (University of Applied Sciences)</i>		

16:30-18:00		ThFT10.11
A Dosimetric Study Comparing Intra-Operatory Microelectrode and Chronic Macroelectrode in the DBS Technique		1206-1209
<i>Paffi, Alessandra (ICEmB at La Sapienza Univ Rome); Apollonio, Francesca (ICEmB at La Sapienza Univ Rome); Puxeddu, Maria Grazia (Sapienza University of Rome); Parazzini, Marta (Consiglio Nazionale delle Ricerche); D'Inzeo, Guglielmo (ICEmB at "La Sapienza" University of Rome); Ravazzani, Paolo (CNR); Camera, Francesca* (Sapienza University of Rome); Liberti, Micaela (ICEmB at Sapienza University of Rome)</i>		
16:30-18:00		ThFT10.12
Stimulation Location within the Substantia Nigra Pars Reticulata Differentially Modulates Gait in Hemiparkinsonian Rats		1210-1213
<i>McConnell, George* (Duke University); Grill, Warren (Duke University)</i>		
16:30-18:00		ThFT10.13
A Magnetic Field Projector for Deep Brain Modulation		1214-1217
<i>Fan, Jie (National Univ. of Singapore); Wu, Tiecheng (National Univ. of Singapore); Ye, Yan (National Univ. of Singapore); Bui, Ha Duc (National Univ. of Singapore); Li, Xiaoping* (National Univ. of Singapore)</i>		
16:30-18:00		ThFT10.14
Global Sensitivity Analysis of the Probabilistic Volume of Tissue Activated in a Volume Conductor Model for Deep Brain Stimulation		1218-1221
<i>Schmidt, Christian* (University of Rostock); van Rienen, Ursula (University of Rostock)</i>		
16:30-18:00		ThFT10.15
Modulations in Pallidal Local Field Potentials in the Systemic 1-Methyl-4-Phenyl-1, 2, 3, 6-Tetrahydropyridine Nonhuman Primate Model of Parkinson's Disease During a Voluntary Reaching Task ..		1222-1225
<i>Hendrix, Claudia* (University of Minnesota); Agnesi, Filippo (Mayo Clinic); Connolly, Allison (University of Minnesota); Baker, Kenneth (University of Minnesota); Johnson, Matthew (University of Minnesota); Vitek, Jerrold (University of Minnesota)</i>		
ThFT11: 16:30-18:00		Pavilion Room
Rehabilitation Engineering II (Poster Session)		
16:30-18:00		ThFT11.1
Lower-Limb Muscle Synergies in Children with Cerebral Palsy		1226-1229
<i>Li, Fei (University of Science and Technology of China); Wang, Qian (University of Science and Technology of China); Cao, Shuai (University of Science and Technology of China); Wu, De (Anhui Medical University); Wang, Quan (Anhui Medical University); Chen, Xiang* (University of Science & Technology of China)</i>		
16:30-18:00		ThFT11.2
The Functional Role of Automatic Body Response in Shaping Voluntary Actions based on Muscle Synergy Theory		1230-1233
<i>Alnajjar, Fady SK* (BTCC, RIKEN); Berenz, Vincent (BTCC, RIKEN); Shimoda, Shingo (RIKEN)</i>		
16:30-18:00		ThFT11.3
Motor Unit Structural Change Post Stroke Examined Via Surface Electromyography: A Preliminary Report		1234-1237
<i>Jeon, Brian* (Rehabilitation Institute of Chicago); Suresh, Nina (Rehabilitation Institute of Chicago); Suresh, Aneasha (Northwestern University); Rymer, William Zev (Northwest. & Rehab Inst of Chicago); Hu, Xiaogang (Rehabilitation Institute of Chicago)</i>		
16:30-18:00		ThFT11.4
Alterations of Neuromuscular Signals as a Result of Vestibular Stimulation		1238-1241
<i>Androwis, Ghaith* (New Jersey Institute of Tech.); Michael, Peter (New Jersey Institute of Tech.); Strongwater, Allan (St. Joseph's Regional Medical Center); Foulds, Richard (New Jersey Institute of Tech.)</i>		
16:30-18:00		ThFT11.6
Prescreening Seizure-Like Events in a Rat Model of Epilepsy B: A 3D Online Video Processing Method ...		1242-1245
<i>Christ, Olaf* (University of Luebeck); Somerlik-Fuchs, Karin H (Albert-Ludwigs-University Freiburg); Stieglitz, Thomas (University of Freiburg); Schulze-Bonhage, Andreas (University Hospital Freiburg); Hofmann, Ulrich G. (University of Freiburg)</i>		

16:30-18:00		ThFT11.7
'Looking' Better: Designing an At-Home Gaze Training System for Children with ASD	1246-1249	
<i>Chukoskie, Leanne* (University of California, San Diego); Soomro, Ahmad (University of California: San Diego, Swartz Center for Computati); Townsend, Jeanne (University of California, San Diego); Westerfield, Marissa (University of California San Diego)</i>		
16:30-18:00		ThFT11.8
Heuristic Evaluation of User Interface for Point-Of-Care Diagnosis and Rehabilitation of Mild Traumatic Brain Injury	1250-1253	
<i>Subbian, Vignesh* (University of Cincinnati); Wilsey, Philip (University of Cincinnati); Beyette, Fred R (University of Cincinnati)</i>		
16:30-18:00		ThFT11.9
An Evaluation of Clustering Techniques to Classify Dexterous Manipulation of Individuals with and without Dysfunction	1254-1257	
<i>Lawrence, Emily* (University of Southern California); Fassola, Isabella (Institut de la Main, Clinique Jouvenet); Dayanidhi, Sudarshan (University of Southern California); Leclercq, Caroline (Institut de la Main, Clinique Jouvenet); Valero-Cuevas, Francisco (University of Southern California)</i>		
16:30-18:00		ThFT11.10
Extraction of Listening Effort Correlates in the Oscillatory EEG Activity: Investigation of Different Hearing Aid Configurations	1258-1261	
<i>Bernarding, Corinna (Saarland University Hospital); Hannemann, Ronny (Siemens Audiologische Technik); Herrmann, David Peter (Saarland University of Applied Sciences); Strauss, Daniel J.* (Saarland University, Medical Faculty); Corona-Strauss, Farah I. (Saarland University Hospital)</i>		
16:30-18:00		ThFT11.11
Kinematic Measures of Upper-Extremity Performance in the Home Setting for an Individual Post-Stroke: A Case Report	1262-1265	
<i>Wade, Eric* (University of Southern California); Justin, Fan (University of Southern California)</i>		
16:30-18:00		ThFT11.12
A Forearm Pronation/supination Assessment Method Integrated into Haptic Knob for Stroke Rehabilitation	1266-1269	
<i>Zhou, Longjiang* (Institute for Infocomm Research, Agency for Science, Technology); Ang, Kai Keng (Institute for Infocomm Research); Wang, Chuanchu (Institute for Infocomm Research); Phua, Koksoon (Institute for Infocomm Research); Guan, Cuntai (Institute for Infocomm Research)</i>		
16:30-18:00		ThFT11.13
Center of Pressure Velocity Autocorrelation as a New Measure of Postural Control During Quiet Stance	1270-1273	
<i>Hernandez, Manuel* (University of California, San Diego); Stevenson, Cory (University of California, San Diego); Snider, Joseph (UC San Diego); Poizner, Howard (UCSD)</i>		
16:30-18:00		ThFT11.14
HARMONIE: A Multimodal Control Framework for Human Assistive Robotics	1274-1278	
<i>Katyal, Kapil (Johns Hopkins University Applied Physics Laboratory); Johannes, Matthew (The Johns Hopkins University Applied Physics Laboratory); McGee, Timothy (Johns Hopkins University Applied Physics Laboratory); Harris, Andrew (Johns Hopkins University Applied Physics Laboratory); Armiger, Robert (Johns Hopkins University Applied Physics Laboratory); Firpi, Alexer H. (JHU); McMullen, David (Johns Hopkins University); Hotson, Guy (Johns Hopkins University); Fifer, Matthew (Johns Hopkins University); Crone, Nathan E. (Johns Hopkins University, School of Medicine); Vogelstein, R. Jacob (Johns Hopkins University); Wester, Brock* (Johns Hopkins University Applied Physics Laboratory)</i>		
16:30-18:00		ThFT11.15
Wireless Kinematic Body Sensor Network for Low-Cost Neurotechnology Applications "in-The-Wild" ..	1279-1282	
<i>Gavriel, Constantinos* (Imperial College London); Faisal, A. Aldo (Imperial College London)</i>		
16:30-18:00		ThFT11.18
Using Prefrontal Cortex Near-Infrared Spectroscopy and Autonomic Nervous System Activity for Identifying Music-Induced Emotions	1283-1286	
<i>Moghimi, Saba (University of Toronto); Chau, Tom (University of Toronto); Guerquerian, Anne Marie* (University of Toronto)</i>		

Friday, 8 November 2013

FrAT1: 08:15-09:45 Pavilion Room
Symposium #5 - Neural Robotics and Rehabilitation (Invited Session)
Chair: Durand, Dominique (*Case Western Res. Univ.*)

08:15-09:45 FrAT1.1
Symposium #5: Neural Robotics and Rehabilitation *
*Durand, Dominique** (*Case Western Reserve University*); *Kuiken, Todd* (*Rehabilitation Institute of Chicago*);
Farina, Dario (*Bernstein Center for Computational Neuroscience, University Medic*); *Guiraud, David* (*INRIA*);
Micera, Silvestro (*Scuola Superiore Sant'Anna*)

FrBT3: 10:00-11:30 Pavilion Room
Panel #1: Funding in Neuroengineering (Invited Session)
Chair: He, Bin (*Univ. of Minnesota*)

10:00-11:30 FrBT3.1
Panel #1: Funding and Trends in Neuroengineering *
*He, Bin** (*University of Minnesota*); *Liu, Yuan* (*NIH*); *Peng, Grace* (*NIH/NIBIB*); *Sanchez, Justin C.* (*University of Miami*); *Ye, Kaiming* (*NSF*)

FrCT4: 11:30-12:15 Pavilion Room
Dominique M. Durand - Reliable Interfaces with the Peripheral Nervous System (Plenary Session)

11:30-12:15 FrCT4.1
Reliable Interfaces with the Peripheral Nervous System *
*Durand, Dominique** (*Case Western Reserve University*)

FrDT8: 13:15-15:30 Pavilion Room
Brain-Computer and Brain Machine Interfaces V (Poster Session)

13:15-15:30 FrDT8.1
A Fiber Optic Multi-Channel Neural Recording System for Freely Moving Rats 1287-1290
*Park, Sunmee** (*Brown University*); *Ozden, Ilker* (*Brown University*); *Song, Yoon-Kyu* (*Seoul National University*); *Yin, Ming* (*Brown University*); *Nurmikko, Arto* (*Brown University*)

13:15-15:30 FrDT8.7
Extraction of Spatially Sparse Common Spatio-Spectral Filters with Recursive Weight Elimination 1291-1294
ONARAN, IBRAHIM (*University of Houston*); *Ince, Nuri Firat** (*University of Houston*)

13:15-15:30 FrDT8.8
Age and Gender Classification using EEG Paralinguistic Features 1295-1298
Nguyen, Phuoc (*University of Canberra*); *Tran, Dat** (*University of Canberra*); *Huang, Xu* (*University of Canberra*); *Ma, Wanli* (*University of Canberra*)

13:15-15:30 FrDT8.11
Steady-State Visual Evoked Potential based Classification System for Detecting Migraine Seizures 1299-1302
*Ko, Li-Wei** (*National Chiao-Tung University*); *Lai, Kuan-Lin* (*Taipei Municipal Gandau Hospital*);
Lin, Chin-Teng (*National Chiao-Tung University*); *Wang, Shuu-Jiun* (*Department of Neurology, Taipei Veterans General Hospital and Fa*)

13:15-15:30 FrDT8.12
Simultaneous Classification of Motor Imagery and SSVEP EEG Signals 1303-1306
*Dehzangi, Omid** (*University of Texas at Dallas*); *Jafari, Roozbeh* (*University of Texas at Dallas*);
Zou, Yuan (*University of Texas at Dallas*)

13:15-15:30 FrDT8.13
Online Classification of Two Mental Tasks using a SVM-Based BCI System 1307-1310
Hortal, Enrique (Universidad Miguel Hernandez de Elche); Ubeda, Andres (Universidad Miguel Hernandez de Elche); Ianez, Eduardo (Universidad Miguel Hernandez de Elche); Planelles, Daniel (Universidad Miguel Hernandez de Elche); Azorin, Jose M. (Universidad Miguel Hernandez de Elche)*

13:15-15:30 FrDT8.14
Design and Implementation of a Human ECoG Simulator for Testing Brain-Machine Interfaces 1311-1314
Fifer, Matthew (Johns Hopkins University); Milsap, Griffin (Johns Hopkins University); Greenwald, Elliot (Johns Hopkins University); McMullen, David (Johns Hopkins University); Anderson, William S. (Department of Neurosurgery, Brigham and Women's Hospital, Boston,); Thakor, Nitish (Johns Hopkins University); Crone, Nathan E. (Johns Hopkins University, School of Medicine); Vinjamuri, Ramana (University of Pittsburgh)*

13:15-15:30 FrDT8.15
Feature Computation for BCI Applications: A General Purpose Approach using a Genetic Algorithm. Preliminary Results 1315-1318
Ramat, Stefano (Università di Pavia); Caramia, Nicoletta (Università di Pavia)*

13:15-15:30 FrDT8.16
Hardware Architecture for On-Chip Unsupervised Online Neural Spike Sorting 1319-1322
Saeed, Maryam (School of Electrical Engineering and Computer Science, National); Kamboh, Awais Mehmood (School of Electrical Engineering and Computer Science, National)*

13:15-15:30 FrDT8.17
A Robust Gauss-Newton Algorithm for Analyzing Steady-State Visual Evoked Potentials 1323-1326
Riyahi, Pouria (The George Washington University); Eskandarian, Azim (The George Washington University)*

FrDT9: 13:15-15:30 Pavilion Room
Cognitive Engineering and Science II (Poster Session)

13:15-15:30 FrDT9.2
Human Electrocortical Dynamics of Spatial Navigation in a Predefined Square Spiral 1327-1330
Trees, Jason (UC San Diego); Snider, Joseph (UC San Diego); Halgren, Eric (University of California San Diego); Poizner, Howard (UCSD)*

13:15-15:30 FrDT9.3
Investigation of Independent Components based EEG Metrics for Mental Fatigue in Simulated ATC Task 1331-1334
Dasari, Deepika (University of Oklahoma); Shou, Guofa (University of Oklahoma); Ding, Lei (University of Oklahoma)*

13:15-15:30 FrDT9.5
Effects of Age-Related Cognitive Deficits on EEG Phase Coherence 1335-1338
Ferreira, Daniela (Life and Health Sciences Research Institute (ICVS)); Reis, Joana (Life and Health Sciences Research Institute (ICVS)); Silva, Ana Maria (Life and Health Sciences Research Institute (ICVS)); Pinho, Francisco (Department of Industrial Electronics, University of Minho, Guima); Jacinto, Luis (University of Minho); Dias, Nuno S. (University of Minho)*

13:15-15:30 FrDT9.6
Ongoing EEG Oscillatory Dynamics Suggesting Evolution of Mental Fatigue in a Color-Word Matching Stroop Task 1339-1342
Shou, Guofa (University of Oklahoma); Ding, Lei (University of Oklahoma)*

13:15-15:30 FrDT9.8
The Effect of Stimulus Type and Distance on Neural Control of a Smart TV 1343-1345
Kim, Jinsoo (Korea University); Hwang, Taeho (DMC R&D Center, Samsung Electronics); Kim, Miyoung (DMC R&D Center, Samsung Electronics); Oh, Eunmi (DMC R&D Center, Samsung Electronics); Hwangbo, Minsoo (DMC R&D Center, Samsung Electronics); Kim, Min-Ki (Korea University); Kim, Sung-Phil (Korea University)*

13:15-15:30	FrDT9.10
EEG Correlates of Unsupervised Spatial Learning in Immersive, Large-Scale Virtual Environments	1346-1349
<i>Plank, Markus (UC San Diego); Snider, Joseph (UC San Diego); Kaestner, Erik (University of California, San Diego); Halgren, Eric (University of California San Diego); Poizner, Howard* (UCSD)</i>	
13:15-15:30	FrDT9.11
Paired Chirp Evoked Cortical Inhibition and Its Behavioral Correlates in a Speech Intelligibility Task	1350-1353
<i>González-Trejo, Ernesto* (Systems Neuroscience and Neurotechnology Unit); Herrmann, David Peter (Saarland University of Applied Sciences); Kohl, Manuel (Saarland University of Applied Sciences); Corona-Strauss, Farah I. (Saarland University Hospital); Strauss, Daniel J. (Saarland University, Medical Faculty)</i>	
13:15-15:30	FrDT9.12
Attenuation of P300 Amplitude of Auditory-Evoked Potentials by Theta Burst Stimulation Over Left Prefrontal in Schizophrenia	1354-1357
<i>Xu, Zhenzhu (Shanghai Univ.); Li, YingJie* (Shanghai Univ.); Yang, Xiaoli (Purdue Univ. Calumet)</i>	
13:15-15:30	FrDT9.13
Detection of Sleep Apnea Events Via Tracking Nonlinear Dynamic Cardio-Respiratory Coupling from Electrocardiogram Signals	1358-1361
<i>Karandikar, Kunal (Oklahoma State University); Le, Trung (Oklahoma State University); Sa-ngasoongsong, Akkarapol (Oklahoma State University); Wongdhamma, Woranat* (Oklahoma State University); Bukkapatnam, Satish (Oklahoma State University)</i>	
13:15-15:30	FrDT9.14
The Effect of Physical and Virtual Rotations of a 3D Object on Spatial Perception	1362-1365
<i>Ranjbar Pouya, Omid (University); Byagowi, Ahmad (University of Manitoba); Kelly, Debbie (University of Manitoba); Moussavi, Zahra* (University of Manitoba)</i>	
13:15-15:30	FrDT9.15
A Pilot Evaluation of Vestibular Performance using EVestG Following Mtbi	1366-1369
<i>Lithgow, Brian John* (Alfred Hospital); Moussavi, Zahra (University of Manitoba)</i>	
13:15-15:30	FrDT9.16
The Effect of Beijing Opera on Spatial Processing of Different Facial Expressions	1370-1373
<i>Wei, Ling (Shanghai University); Cao, Dan (Shanghai University); Li, YingJie* (Shanghai University)</i>	
13:15-15:30	FrDT9.17
Effects of ocular artifact removal through ICA decomposition on EEG phase	1374-1377
<i>Montefusco-Siegmund, Rodrigo (Center for Vision Research, York University); Maldonado, Pedro (Program of Physiology and Biophysics, Faculty of Medicine, Unive); Devia, Christ* (University of Chile)</i>	
13:15-15:30	FrDT9.18
Change in Physiological Signals During Mindfulness Meditation	1378-1381
<i>Ahani, Asieh* (Northeastern University, Boston, USA); Helane, Wahbehn (Oregon Health and Science University); Nezamfar, Hooman (Northeastern University); Miller, Meghan (Oregon Health and Science University); Erdogmus, Deniz (Northeastern University); Oken, Barry (Oregon Health & Science University)</i>	
13:15-15:30	FrDT9.19
Tonic EEG Dynamics During Psychomotor Vigilance Task	1382-1385
<i>Molina, Enrique (University of Granada); Correa, Angel (University of Granada); Sanabria, Daniel (University of Granada); Jung, Tzyy-Ping* (University of California San Diego)</i>	

FrDT10: 13:15-15:30

Pavilion Room

Neural Computation and Modeling V (Poster Session)

13:15-15:30	FrDT10.1
A Multimodal Platform for Cloud-Based Collaborative Research	1386-1389
<i>Wagenaar, Joost* (University of Pennsylvania); Brinkmann, Benjamin (Mayo Foundation); Worrell, Gregory A. (Mayo Clinic); Ives, Zachary (University of Pennsylvania); Litt, Brian (University of Pennsylvania)</i>	

13:15-15:30		FrDT10.2
Measuring ERP Latency Shifts across Experimental Conditions using Spatial Filtering		1390-1393
<i>Wu, Chaohua* (Tsinghua University); Wu, Wei (Tsinghua University); Gao, Xiaorong (Tsinghua University)</i>		
13:15-15:30		FrDT10.3
Sample Entropy Enhanced Wavelet-ICA Denoising Technique for Eye Blink		
Artifact Removal from Scalp EEG Dataset		1394-1397
<i>Mahajan, Ruhi* (University of Memphis); Morshed, Bashir (The University of Memphis)</i>		
13:15-15:30		FrDT10.4
Investigating the Effective Brain Networks Related to Working Memory using a		
Modified Directed Transfer Function		1398-1401
<i>Shahabi, Hossein (Ferdowsi University of Mashhad); Moghimi, Sahar* (Ferdowsi University of Mashhad); Moghimi, Ali (Ferdowsi University of Mashhad)</i>		
13:15-15:30		FrDT10.5
Using Brain Connectivity Measure of EEG Synchrony for Discriminating Typical and		
Autism Spectrum Disorder		1402-1405
<i>Jamal, Wasifa (University of Southampton); Das, Saptarshi (University of Southampton); Maharatna, Koushik* (University of Southampton); Kuyucu, Doga (University of Southampton); Sicca, Federico (Stella Maris Scientific Institute); Billeci, Lucia (Institute of Clinical Physiology, CNR, Pisa); Apicella, Fabio (Stella Maris Scientific Institute); muratori, filippo (University of Pisa, IRCCS Fondazione Stella Maris)</i>		
13:15-15:30		FrDT10.6
Suppression of Spontaneous Activity in a Computational Tinnitus DCN Model Depends on		
Notched-Stimulation Bandwidth		1406-1409
<i>Ruckert, Jonathan (Saarland University Hospital); Haab, Lars (Saarland University Hospital); Hannemann, Ronny (Siemens Audiologische Technik); Strauss, Daniel J.* (Saarland University, Medical Faculty)</i>		
13:15-15:30		FrDT10.8
Adaptive Parametric Spectral Estimation with Kalman Smoothing for Online Early Seizure Detection		1410-1413
<i>Park, Yun Sang* (Brown University); Hochberg, Leigh (VA / Brown U. / MGH / Harvard Med. School); Eskandar, Emad (Massachusetts General Hospital); Cash, Sydney (Massachusetts General Hospital); Truccolo, Wilson (Brown University)</i>		
13:15-15:30		FrDT10.9
Towards Efficient, Personalized Anesthesia using Continuous Reinforcement		
Learning for Propofol Infusion Control		1414-1417
<i>Lowery, Cristobal (Imperial College London); Faisal, A. Aldo* (Imperial College London)</i>		
13:15-15:30		FrDT10.12
Continuous-Time Estimation of Latent Variables from Poisson-Spiking Neurons		1418-1420
<i>Sanger, Terence David* (University of Southern California); Ghoreyshi, Atiyeh (McGill University)</i>		
13:15-15:30		FrDT10.13
Assessing Spike Sorting Contribution to Neural Implant Reliability		1421-1424
<i>Furno, Lidia (Scuola Superiore Sant'Anna di Pisa); Rigosa, Jacopo* (Scuola Superiore Sant'Anna); Panarese, Alessandro (Scuola Superiore Sant'Anna di Pisa); Micera, Silvestro (Scuola Superiore Sant'Anna)</i>		
13:15-15:30		FrDT10.14
Integrating Neural Spiking and LFP Activity to Decode Kinematics of the		
Arm and Hand During Unconstrained Reach to Grasp Movements		1425-1428
<i>Best, Matthew (University of Chicago); Takahashi, Kazutaka* (University of Chicago); Chen, Zhe (Harvard Medical School/MIT); Huh, Noah (University of Chicago); Brown, Kevin (University of Chicago); Hatsopoulos, Nicholas (University of Chicago)</i>		

13:15-15:30	FrDT10.15
Electrocorticogram Encoding of Upper Extremity Movement Trajectories	1429-1432
<i>Wang, Po T. (University of California Irvine); King, Christine E.* (University of California, Irvine); Schombs, Andrew (University of California, Irvine); Lin, Jack J. (University of California, Irvine); Sazgar, Mona (University of California, Irvine); Hsu, Frank P. K. (University of California, Irvine); Shaw, Susan J. (University of Southern California); Millett, David (University of Southern California); Liu, Charles Y. (Keck Hospital of the University of Southern California); Chui, Luis A. (University of California, Irvine); Nenadic, Zoran (University of California Irvine); Do, An H. (University of California Irvine)</i>	
13:15-15:30	FrDT10.18
Detection of Alertness States using Electroencephalogram and Cortical Auditory Evoked Potential Responses	1433-1436
<i>Rabie, Alaleh* (University of Technology Sydney); Al-Ani, Ahmed (University of Technology, Sydney); VanDun, Bram (National Acoustic Laboratories); Dillon, Harvey (National Acoustic Laboratories)</i>	
13:15-15:30	FrDT10.19
Automatic Selection of Neuronal Spike Detection Threshold Via Smoothed Teager Energy Histogram ...	1437-1440
<i>Ng, Andrew Keong* (Institute for Infocomm Research (I2R), Agency for Science, Technol); Ang, Kai Keng (Institute for Infocomm Research); Guan, Cuntai (Institute for Infocomm Research)</i>	
13:15-15:30	FrDT10.20
A Co-Robotic Assistant Capable of Object Selection and Search via a Brain Machine Interface	1441-1444
<i>Shankar, Varsha* (University of Pennsylvania); Sherbakov, Lena (Boston University); Galbraith, Byron (Boston University); Sohail, Aisha (Boston University); Livitz, Gennady (Boston University); Gorchetchnikov, Anatoli (Boston University); Ames, Heather (Boston University); Guenther, Frank (Boston University); Versace, Massimiliano (Boston University)</i>	
13:15-15:30	FrDT10.22
A Study of EEG Signals Modeling for Different Scent Intensity Levels	1445-1448
<i>Ho, Melvin Weiyuan (Nanyang Technological University); Ser, Wee* (Nanyang Technological University); Sieow, Brendan Fu-Long (Nanyang Technological University); Lwin, May Oo (Nanyang Technological University); Kwok, Kenneth (NUS Temasek Lab)</i>	

FrDT11: 13:15-15:30	Pavilion Room
Neural Prosthesis V (Poster Session)	

13:15-15:30	FrDT11.1
A Real-Time Platform for Studying the Modulatory Capacity of Epidural Stimulation after Spinal Cord Injury	1449-1452
<i>Martin Moraud, Eduardo* (EPFL BM 3110); Wenger, Nikolaus (EPFL); Gandar, Jerome (EPFL); DiGiovanna, Jack (EPFL); Musienko, Pavel (EPFL); Courtine, Gregoire (EPFL); Micera, Silvestro (Scuola Superiore Sant'Anna)</i>	
13:15-15:30	FrDT11.2
Enhanced Electrode Design for Peripheral Nerve Recording	1453-1456
<i>Sadeghlo, Bitra (University of Toronto); Yoo, Paul* (University of Toronto)</i>	
13:15-15:30	FrDT11.4
Anatomically based Bayesian Decoding of the Cortical Response to Intracortical Microstimulation	1457-1460
<i>Millard, Daniel* (Georgia Institute of Tech.); Stanley, Garrett (Georgia Institute of Tech. & Emory Univ.)</i>	
13:15-15:30	FrDT11.6
Poly(3, 4-Ethylenedioxythiophene) on Decellular Scaffolding Interrupts Grafted Muscle Revascularization	1461-1464
<i>Baldwin, Joseph F. (University of Michigan); Washabaugh, E. Peter, IV (University of Michigan); Moon, Jana D. (University of Michigan); Shim, Bong Sup (INHA University); Martin, David C (University of Delaware); Cederna, Paul (University of Michigan); Langhals, Nicholas B. (University of Michigan); Urbanek, Melanie G.* (University of Michigan)</i>	

13:15-15:30	FrDT11.9
Wide Field Epiretinal Micro-electrode-Design and Feature Test	1465-1468
<i>Cui, Hongyan (Institute of Biomedical Engineering, Chinese Academy of Medical); Xu, Shengpu (Institute of Biomedical Engineering, Chinese Academy of Medical); Hu, Yong (The University of Hong Kong); Feng, Li (Institute of Biomedical Engineering, Chinese Academy of Medical S); Xie, Xiaobo* (Institute of Biomedical Engineering, Chinese Academy of Medical)</i>	
13:15-15:30	FrDT11.10
Identification of Spectral Landmarks on the Single Fiber Action Potential Waveform for Unit Tracking ..	1469-1472
<i>Qiao, Shaoyu* (Purdue Univ., West Lafayette); Yoshida, Ken (Indiana Univ.-Purdue Univ. Indianapolis)</i>	
13:15-15:30	FrDT11.11
Circuit and Volume Conductor Models of Transcutaneous Electrical Stimulation	1473-1476
<i>Medina, Leonel* (Duke University); Grill, Warren (Duke University)</i>	
13:15-15:30	FrDT11.12
Optimizing Electrode Surface Area to Minimize Power Consumption in a Cortical Penetrating Prosthesis.	1477-1480
<i>Brunton, Emma Kate* (Monash Univ.); Rajan, Ramesh (Monash Univ.); Lowery, Arthur James (Monash Univ.)</i>	
13:15-15:30	FrDT11.13
Precision Control of Pulse Widths for Charge Balancing in Functional Electrical Stimulation	1481-1484
<i>Lo, Yi-Kai* (University of California, Los Angeles); Hill, Richard (University of California, Los Angeles); Chen, Kuanfu (University of California, Santa Cruz); Liu, Wentai (University of California, Los Angeles)</i>	
13:15-15:30	FrDT11.14
Wireless Microstimulators for Treatment of Peripheral Vascular Disease	1485-1488
<i>Towe, Bruce* (Arizona State University); Graber, Taylor (Arizona State University); Gulick, Daniel (Arizona State University); herman, richard (Banner Good Samaritan Medical Center)</i>	
13:15-15:30	FrDT11.15
Towards Improved Partial-Hand Prostheses: The Effect of Wrist Kinematics on Pattern-Recognition-Based Control	1489-1492
<i>Adewuyi, Adenike* (Northwestern University); Hargrove, Levi (Rehabilitation Institute of Chicago); Kuiken, Todd (Rehabilitation Institute of Chicago)</i>	
13:15-15:30	FrDT11.16
A Multisite Neural Probe with Simultaneous Neural Recording and Drug Delivery Capabilities	1493-1496
<i>Pemba, Dhonam* (University of California, Irvine); Tang, William C. (University of California)</i>	
13:15-15:30	FrDT11.17
Computational Study on Thermal Effects of Coil-Based Implantable Magnetic Stimulation using Finite Element Analysis	1497-1500
<i>Park, Heejin* (Gwangju Institute of Science and Tech.); Kim, Sohee (Gwangju Institute of Science and Tech.)</i>	

FrDT12: 13:15-15:30	Pavilion Room
Neuroimaging III (Poster Session)	

13:15-15:30	FrDT12.4
Resting State Functional Connectivity based on Principal Component Transformation of Cortical fMRI Measurements	1501-1504
<i>Sargolzaei, Saman (Florida International University); Salah Eddin, Anas* (Florida International University); Cabrerizo, Mercedes (Florida International University); Adjouadi, Malek (Florida International University)</i>	
13:15-15:30	FrDT12.5
Automatic Detection of Alzheimer Disease in Brain Magnetic Resonance Images using Fractal Features	1505-1508
<i>Lahmiri, Salim (University of Quebec at Montréal); Boukadoum, Mounir* (University of Quebec at Montréal)</i>	
13:15-15:30	FrDT12.6
Self-Organizing Maps for Brain Tractography in MRI	1509-1512
<i>Goksel Duru, Dilek* (Bogazici University); Ozkan, Mehmed (Bogazici University)</i>	

13:15-15:30		FrDT12.7
Discriminating Regional Functional Networks in Pediatric Epilepsy		1513-1516
<i>Wang, Jin (Florida International University); Salah Eddin, Anas (Florida International University); Zhou, Qi* (Florida International University); Gaillard, William (Children's National Medical Center); Adjouadi, Malek (Florida International University)</i>		
13:15-15:30		FrDT12.8
A Connectivity Difference Measure for Identification of Functional Neuroimaging Markers for Epilepsy .		1517-1520
<i>Riaz, Atif (National University of Science and Technology, Islamabad); Rajpoot, Kashif* (SEECs NUST); Rajpoot, Nasir (Qatar University (Qatar) & University of Warwick)</i>		
13:15-15:30		FrDT12.9
Bayesian Estimation of Neural Activity for Nonstationary Sources using Time Frequency-Based Priors ...		1521-1524
<i>Castaño-Candamil, Juan Sebastián* (Universidad Nacional de Colombia); Martínez-Vargas, Juan David (Universidad Nacional de Colombia); Giraldo, Eduardo (Universidad Tecnológica de Pereira); Castellanos-Dominguez, Germán (Universidad Nacional de Colombia)</i>		
13:15-15:30		FrDT12.10
Calcium Imaging in Temporal Focus		1525-1528
<i>Agabi, Oshiorenoya Eghierua* (Imperial College London); Marchand, Paul James (Imperial College London); Mutlu, Murat Can Mutlu (Bogaziçi University); Klotz, Laura (Imperial College London); Schultz, Simon R (Imperial College London)</i>		
13:15-15:30		FrDT12.12
Detecting Event-Related Motor Activity using Functional Near-Infrared Spectroscopy		1529-1532
<i>Ozawa, Takuya* (Nagaoka University of Technology); Aihara, Takatsugu (ATR); Fujiwara, Yusuke (ATR); Otake, Yohei (Keio University School of Medicine); Nambu, Isao (Nagaoka University of Technology); Osu, Rieko (ATR Computational Neuroscience Laboratories); Izawa, Jun (Advanced Telecommunications Research International); Wada, Yasuhiro (Nagaoka University of Technology)</i>		
13:15-15:30		FrDT12.13
Resting-State fMRI Activity in the Basal Ganglia Predicts Unsupervised Learning Performance in a Virtual Reality Environment		1533-1536
<i>Wong, Chi Wah* (University of California San Diego); Olafsson, Valur (University of California at San Diego); Plank, Markus (UC San Diego); Snider, Joseph (UC San Diego); Halgren, Eric (University of California San Diego); Poizner, Howard (UCSD); Liu, Thomas (University of California San Diego)</i>		
13:15-15:30		FrDT12.14
Computational De-Scattering for Enabling High Rate Deep Imaging of Neural Activity Traces: Simulation Study		1537-1540
<i>Paluch, Shir* (Technion, IIT); Dana, Hod (Technion, IIT); Elbaz, Romi (Technion, IIT); Shoham, Shy (Technion-Israel Institute of Technology)</i>		
13:15-15:30		FrDT12.15
A Computational Approach to Quantifying Axon Regeneration in the Presence of Mesenchymal Stem Cells		1541-1544
<i>Lam, KP* (University of Keele); Dempsey, Katherine Phoebe (University of Keele); Smith, William Alexander (Keele University); Wright, Karina (University of Keele); Masri, Wagih (University of Keele); Richardson, James (University of Keele)</i>		

FrDT13: 13:15-15:30

Pavilion Room

Rehabilitation Engineering III (Poster Session)

13:15-15:30		FrDT13.1
Facilitation of Completely Paralyzed Forearm Muscle Activity in Chronic Stroke Patients		1545-1548
<i>Garcia-Cossio, Eliana* (Universität Tübingen); Birbaumer, Niels (Eberhard-Karls-University); Ramos-Murguialday, Ander (Eberhard Karls University of Tübingen/TECNALIA)</i>		

13:15-15:30		FrDT13.2
Characterization of Plantar Pressures in Visually Impaired Individuals: A Pilot Study		1549-1553
<i>Abu-Faraj, Ziad* (American University of Science & Technology); Faraj, Yasmeen (American University of Science and Technology); Mohtar, Khalil (American University of Science and Technology); Rammal, Maryam (American University of Science and Technology)</i>		
13:15-15:30		FrDT13.3
Estimation of Stiffening Strategy of Ankle and Hip based on Joint Sway		1554-1557
<i>Azaman, Aizreena* (Shibaura Institute of Tech.); Yamamoto, Shin-ichiroh (Shibaura Institute of Tech.)</i>		
13:15-15:30		FrDT13.4
A Dynamically Consistent Model of a Motorized Ankle-Foot Orthosis		1558-1561
<i>Vivian, Michele* (University of Padua); Reggiani, Monica (University of Padova); Moreno, Juan C. (CSIC); Pons, Jose Luis (Instituto de Automática Industrial); Farina, Dario (Bernstein Center for Computational Neuroscience, University Medic); Sartori, Massimo (University of Padova)</i>		
13:15-15:30		FrDT13.5
An Exploration of the Effects of Audio-Visual Entrainment on Parkinson's Disease Tremor		1562-1565
<i>Cinel, Caterina (University of Essex); Poli, Riccardo* (University of Essex); Citi, Luca (University of Essex); Roberson, Deborah (University of Essex)</i>		
13:15-15:30		FrDT13.6
Preliminary Report of Brain Activities During Active and Passive Gait-Like Motion		1566-1569
<i>Ikeda, Takahiro* (Univ. of Tsukuba); Matsushita, Akira (Univ. of Tsukuba); Saotome, Kousaku (Univ. of Tsukuba); Hasegawa, Yasuhisa (Univ. of Tsukuba); Sankai, Yoshiyuki (Univ. of Tsukuba)</i>		
13:15-15:30		FrDT13.7
Immersive Augmented Reality: Investigating a New Tool for Parkinson Disease Rehabilitation		1570-1573
<i>Bell Boucher, Danielle* (Western University); south, Angela (University of Western Ontario); Ayala-Garcia, Andres (Western University); Katchabaw, Michael (Western University); Jog, Mandar (University of Western Ontario - London Health Sciences Centre)</i>		
13:15-15:30		FrDT13.8
An Apparatus for Improving Upper Limb Function by Engaging Synchronous Tongue Motion		1574-1577
<i>Kim, Jeonghee (Georgia Institute of Technology); Bulach, Christoph (Georgia Institute of Technology); Richards, Kimberly (Georgia State University); Wu, David (Georgia State University); Butler, Andrew (Georgia State University); Ghovanloo, Maysam* (Georgia Institute of Technology)</i>		
13:15-15:30		FrDT13.9
Novel Time-Frequency-Eigen Filter for Intraoperative Neurophysiologic Monitoring in Spinal Surgeries		1578-1581
<i>Vedala, Krishnatej* (Florida International Univ.); Motahari, Amin (Florida International Univ.); Goryawala, Mohammed (Florida International Univ.); Cabrerizo, Mercedes (Florida International Univ.); Yaylali, Ilker (Oregon Health and Science Univ.); Adjouadi, Malek (Florida International Univ.)</i>		
13:15-15:30		FrDT13.10
Sway Detection in Human Daily Actions using Hidden Markov Models		1582-1585
<i>Branzan Abu, Alexandra* (University of Victoria); Beugeling, Trevor (University of Victoria)</i>		
13:15-15:30		FrDT13.11
Clustering Index Analysis of the Surface Electromyogram Poststroke		1586-1589
<i>Zhang, Xu* (Rehabilitation Institute of Chicago); Zhou, Ping (Northwestern University & Rehab Inst of Chicago, University of S)</i>		
13:15-15:30		FrDT13.12
Emulation of Muscle Tone of Upper Limb Spasticity and Rigidity		1590-1593
<i>Che Zakaria, Noor Ayuni* (Shibaura Institute of Technology); Komeda, Takashi (Shibaura Institute of Technology); Low, Cheng Yee (Universiti Teknologi MARA); Inoue, Kaoru (Tokyo Metropolitan University)</i>		

13:15-15:30	FrDT13.13
Characteristics of Gait Freezing: Possibilities for Rehabilitation	1594-1597
<i>Rahimi, Fariborz* (London Health Sciences Centre); Xian, Si Yu (London Health Sciences Centre); Delrobaei, Mehdi (London Health Sciences Centre); Jog, Mandar (University of Western Ontario - London Health Sciences Centre)</i>	
13:15-15:30	FrDT13.14
Pose Estimation Algorithm for Hand Assessment	1598-1601
<i>Cordella, Francesca* (University of Naples Federico II); Di Corato, Francesco (Research Center "E. Piaggio" Università di Pisa); Zollo, Loredana (Università Campus Bio-Medico); Guglielmelli, Eugenio (Campus Bio-Medico University); Siciliano, Bruno (Univ. Napoli Federico II)</i>	
13:15-15:30	FrDT13.15
A Preliminary Analysis of Reconstructed Nerve Function using Targeted Muscle Reinnervation in a Rat Model	1602-1605
<i>Zhou, Hui (Shenzhen Institute of Advanced Technology); Wu, Fengxia (Shenzhen Institutes of Advanced Technology); Yang, Lin (Shenzhen Institutes of Technology, Chinese Academy of Sciences); Zhang, Liangqing (Guangzhou Medical University); Guo, Hongmin (Futian Hospital of Guangdong Medical College); Li, Guanglin* (Shenzhen Institutes of Advanced Technology)</i>	
13:15-15:30	FrDT13.16
Power Spectral Analysis of Surface EMG in Stroke: A Preliminary Study	1606-1609
<i>Srivatsan, Sudarshan* (Northwestern University, Rehabilitation Institute of Chicago); Hu, Xiaogang (Rehabilitation Institute of Chicago); Suresh, Aneesha (Northwestern University); Rymer, William Zev (Northwest. & Rehab Inst of Chicago); Suresh, Nina (Rehabilitation Institute of Chicago); Jeon, Brian (Rehabilitation Institute of Chicago)</i>	

FrET6: 15:30-17:00	Pavilion Room
Panel #2: Translational Neuroengineering (Invited Session)	
Chair: Akay, Metin (Univ. of Houston)	

15:30-17:00	FrET6.1
Panel #2: Translational Neuroengineering	*
<i>Akay, Metin* (University of Houston); Humayun, Mark (University of Southern California); Thakor, Nitish (Johns Hopkins University); Worrell, Gregory A. (Mayo Clinic)</i>	