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 Max-Planck Inst. of Biochemistry
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 NeuroChip Lab, Univ. of Padova

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Univ. Nacional de Entre Ríos
 Univ. Nacional de Entre Ríos
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École Polytech. Fédérale de Lausanne
 Ecole Polytech. Federale de Lausanne
 EPFL
 Ecole Polytech. Fédérale de Lausanne
 Fondazione Santa Lucia IRCCS
 Univ.ersita' La Sapienza
 Fondazione Santa Lucia IRCCS
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Hofmann, Ulrich G.	Univ. of Lübeck
Tronnier, Volker	Univ. Hospital Schleswig-Holstein
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Têtu, Yann	CEA/LETI, MINATEC Campus
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Pudda, Catherine	CEA/LETI/CLINATEC, MINATEC Campus, Grenoble	
Dijon, Jean	CEA/LITEN, Grenoble, France	
Torres-Martinez, Napoleon	CEA/LETI/CLINATEC, MINATEC Campus, Grenoble	
Piallat, Brigitte	Grenoble Inst. of Neuroscience	
Sherdil, Ariana	Grenoble Inst. of Neuroscience	
Divoux, Jean-Louis	MXM Neuromedics	
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 Freifeld, Oren Brown Univ.
 Nuyujukian, Paul Stanford Univ.
 Ryu, Stephen Stanford Univ.
 Black, Michael J. Brown Univ.
 Shenoy, Krishna V. Stanford Univ.

SaA1 Salon I
Neural Rehabilitation Engineering I (Regular Session)

08:30-08:45 SaA1.1
Predication of Motor Recovery Using Kinematic and Kinetic Measures 617
 Mirbagheri, Mehdi* Northwestern Univ./RIC
 Rymer, William Zev Northwest. & Rehab Inst of Chicago

08:45-09:00 SaA1.2
Mapping 4-AP Induced Epilepsy Propagation with a Micro-Electrode Array in Intact Hippocampus In-Vitro 621
 Zhang, Mingming* Case Western Reserve Univ.
 Kibler, Andrew Case Western Reserve Univ.
 Durand, Dominique Case Western Reserve Univ.

09:00-09:15 SaA1.3
Temporal Alignment of Electrocorticographic Recordings Using Upper Limb Kinematics 625
 Talakoub, Omid* Univ. of Toronto
 Marquez Chin, Cesar Univ. of Toronto
 Chen, Robert Toronto Western Research Inst. (TWRI)
 Wong, Willy Univ. of Toronto
 Popovic, Milos R. Univ. of Toronto

09:15-09:30 SaA1.4
A System for Delivering Mechanical Stimulation to the Rat Whisker Pad During Facial Nerve Regeneration 629
 Heaton, James* Massachusetts General Hospital & Harvard Medical School
 Knox, Christopher Harvard Medical School Dept. of Otolaryngology
 Malo, Juan Harvard Medical School Dept. of Otolaryngology
 Hadlock, Tessa Harvard Medical School Dept. of Otolaryngology

09:30-09:45 SaA1.5
Effects of Neuroprosthetic Stimulation on the Peripheral Nerves of Amputees: A Digital Image Processing Study 634
 Herrera-Rincón, Celia Complutense Univ. of Madrid
 Cisneros, Francisco José Univ. Politécnica de Madrid
 Castellanos, Juan Univ. Politécnica de Madrid
 Panetsos, Fivos* Complutense Univ. of Madrid

09:45-10:00

SaA1.6

Disturbance on Inhibitory Control of Reaching Finger Movement Caused by Transcranial Magnetic Stimulation

638

Hiwaki, Osamu*
Ishimaru, Naoyuki
Fukuda, Hiroshi

Hiroshima City Univ.
Hiroshima City Univ.
Hiroshima City Univ.

SaB1

Salon I

Clinical Neural Engineering I (Regular Session)

10:30-10:45

SaB1.1

Low Frequency Stimulation Decreases Seizure Frequency in a Rat Model of Temporal Lobe Epilepsy

642

Rashid, Saifur*
Pho, Gerald
Czigler, Michael
Durand, Dominique

Case Western Reserve Univ.
Massachusetts Inst. of Tech.
Case Western Reserve Univ.
Case Western Reserve Univ.

10:45-11:00

SaB1.2

Circuit Topology Comparison and Design Analysis for Controllable Pulse Parameter Transcranial Magnetic Stimulators

646

Peterchev, Angel V*

Duke Univ.

11:00-11:15

SaB1.3

Functional Electrical Stimulation As a Neuroprosthetic Methodology for Enabling Closed-Loop Urinary Incontinence Treatment

650

Wei, Xuan*
Rijkhoff, Nico
Santa, Wesley
Anderson, Joel
Afshar, Pedram
Schindeldecker, William
Wika, Kent
Barka, Noah
Denison, Timothy

Medtronic Neuromodulation
Aalborg Univ.
Medtronic
Medtronic Neuromodulation
Medtronic Neuromodulation
Medtronic Physiological Labs
Medtronic Physiological Labs
Medtronic Physiological Labs
Medtronic

11:15-11:30

SaB1.4

Epileptogenic Focus Localization through Connectivity Analysis of the Intracranial EEG: A Retrospective Study in 2 Patients

655

van Mierlo, Pieter*
Carrette, Evelien
Hallez, Hans J.
Vonck, Kristl
Van Roost, Dirk MP
Boon, Paul
Staelens, Steven

Ghent Univ. – IBBT
Ghent Univ.
Ghent Univ.
Ghent Univ. Hospital
Ghent Univ. Hospital
Univ. Hospital Ghent, Lab for Clinical & Experimental Neurology
Ghent Univ. – IBBT, Antwerp Univ.

11:30-11:45

SaB1.5

Electrical Brain Stimulation for Assessment and Control of Epileptic Transitions

659

Kalitzin, Stiliyan*
Velis, Demetrios N.
Claus, Steven
Lopes da Silva, Fernando

Epilepsy Inst. in The Netherlands Foundation (SEIN)
Epilepsy Inst. in The Netherlands Foundation – SEIN
Epilepsy Inst. of The Netherlands
Swammerdam Inst. of Life Sciences, Univ. of Amsterdam

11:45-12:00	SaB1.6
Electromagnetic Modeling and Design Optimization of Intra-Cortical Micro-Electrodes	663
Gabran, Salam*	Univ. of Waterloo
Saad, John	Univ. of Waterloo
Salama, Magdy	Univ. of Waterloo
Mansour, Raafat	Univ. of Waterloo

SaC1	Salon I
Cognitive Engineering and Science I (Regular Session)	

13:00-13:15	SaC1.1
EEG-Based Emotion Recognition During Watching Movies	667
Nie, Dan	Shanghai Jiaotong Univ., China
Wang, Xiaowei	Shanghai Jiaotong Univ., China
Shi, Lichen	Shanghai Jiao Tong Univ.
Lu, Bao-Liang*	Shanghai Jiao Tong Univ.

13:15-13:30	SaC1.2
On the Objective Electrophysiological Estimation of Listening Effort in Different Age Groups	671
Bernarding, Corinna	Computational Diagnostics & Biocybernetics Unit
Latzel, Matthias	SIEMENS Audiology
Strauss, Daniel J.	Computational Diagnostics & Biocybernetics Unit
Corona-Strauss, Farah I.*	Saarland Univ. Hospital

13:30-13:45	SaC1.3
Learning EEG Components for Discriminating Multi-Class Perceptual Decisions	675
Lou, Bin	Columbia Univ.
Walz, Jennifer	Columbia Univ. Dept. of Biomedical Eng.
Shi, Jianing V.	Columbia Univ.
Sajda, Paul*	Columbia Univ.

13:45-14:00	SaC1.4
Detection of a Novelty Event in the Identification of Faces in a Passive VEP Task	679
Haab, Lars*	Saarland Univ. Hospital
Busse, Michael	Saarland Univ. Hospital
Mohamed Aminuddin, Mai Mariam	Saarland Univ. Hospital
Weis, Tina	Saarland Univ. Hospital
Strauss, Daniel J.	Computational Diagnostics & Biocybernetics Unit

14:00-14:15	SaC1.5
Phase-Shift Analysis on Single-Trial EEG Signals and Its Correlation with Behavior in a Visual Perceptual Task	683
Devia, Christ*	Prog. of Physiology & Biophysics, Faculty of Medicine, Univ. of Chile
Maldonado, Pedro	Prog. of Physiology & Biophysics, Faculty of Medicine, Univ. of Chile

14:15-14:30

SaC1.6

Assessment of Cortical Inhibition in Adult Attention Deficit/Hyperactivity Disorder by Paired-Chirp Auditory Evoked Potentials 687

González-Trejo, Ernesto*	Computational Diagnostics & Biocybernetics Unit
Philipp-Wiegmann, Florence	Neurocenter Saarland Univ. Hospital
Römer, Konstanze D.	Neurocenter Saarland Univ. Hospital
Reinert, Philip	Neurocenter Saarland Univ. Hospital
Low, Yin Fen	Saarland Univ. Hospital
Bouregghda, Samir	Neurocenter Saarland Univ. Hospital
Retz, Wolfgang	Neurocenter Saarland Univ. Hospital
Rösler, Michael	Neurocenter Saarland Univ. Hospital
Strauss, Daniel J.	Computational Diagnostics & Biocybernetics Unit

SaE1

Salon I

Emerging Technologies I (Regular Session)

15:00-15:15

SaE1.1

Characterization of a Stretchable Multielectrode Array for Epimysial Recording 691

Guo, Liang	Georgia Inst. of Tech.
Guvanasen, Gareth*	Georgia Inst. of Tech.
Tuthill, Christopher	Georgia Inst. of Tech.
Nichols, T. Richard	School of Applied Physiology, Georgia Inst. of Tech.
DeWeerth, Stephen P.	Georgia Tech/Emory Univ.

15:15-15:30

SaE1.2

Low Power Noise Immune Circuit for Implantable CMOS Neurochemical Sensor Applied in Neural Prosthetics 695

Poustinchi, Mohammad*	McGill Univ.
Musallam, Sam	McGill Univ.

15:30-15:45

SaE1.3

A Flexible Optrode for Deep Brain Neurophotonics 700

Lin, Szu-Te	Univ. of Houston
Gheewala, Mufaddal	Univ. of Houston
Wolfe, John C.	Univ. of Houston
Dani, John A.	Baylor College of Medicine
Shih, Wei-Chuan*	Univ. of Houston

15:45-16:00

SaE1.4

Validation of Chronic Implantable Neural Sensing Technology Using Electrocorticographic (ECoG) Based Brain Machine Interfaces 704

Afshar, Pedram*	Medtronic Neuromodulation
Moran, Daniel	Washington Univ. in St. Louis
Wei, Xuan	Medtronic Neuromodulation
Rouse, Adam	Washington Univ.
Denison, Timothy	Medtronic

16:00-16:15

SaE1.5

Temporally Resolved Molecular Motor Dynamics: A Case of Ncd-Microtubule Interactions ... 708

Butterfield, Anthony	Univ. of Utah
Skliar, Mikhail*	Univ. of Utah

16:15-16:30

SaE1.6

Deep Brain Stimulation for Phantom Perceptions 712

Bedenbaugh, Purvis*	East Carolina Univ., Cranial Medical Systems
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