

2015 7th International IEEE/EMBS Conference on Neural Engineering

(NER 2015)

**Montpellier, France
22-24 April 2015**

Pages 1-552



**IEEE Catalog Number: CFP15CNE-POD
ISBN: 978-1-4673-6387-7**

TABLE OF CONTENTS

COMPARING DECODING PERFORMANCE BETWEEN FUNCTIONALLY DEFINED NEURAL POPULATIONS	1
<i>Matthew Best, Kazutaka Takahashi, Nicholas Hatsopoulos</i>	
HYBRID FNIRS-EEG BASED DISCRIMINATION OF 5 LEVELS OF MEMORY LOAD	5
<i>Christian Herff, Ole Fortmann, Chun-Yu Tse, Xiaoqin Cheng, Felix Putze, Dominic Heger, Tanja Schultz</i>	
SEQUENTIAL POWER PER AREA OPTIMIZATION OF MULTICHANNEL NEURAL RECORDING INTERFACE BASED ON DUAL QUADRATIC PROGRAMMING	9
<i>Amir Zjajo, Carlo Galuzzi, Rene van Iken</i>	
ROBUSTNESS OF MOVEMENT DETECTION TECHNIQUES FROM MOTOR EXECUTION: SINGLE TRIAL MOVEMENT RELATED CORTICAL POTENTIAL	13
<i>Susan Aliakbarhosseini, Ning Jiang, Laura Petrini, Dario Farina, Kim Dremstrup, Natalie Mrachacz-Kersting</i>	
TOWARDS IMPROVEMENT OF MI-BCI PERFORMANCE OF SUBJECTS WITH BCI DEFICIENCY	17
<i>Atieh Bamdadian, Cuntai Guan, Kai Keng Ang, Jian-Xin Xu</i>	
MOTOR CORTICAL ADAPTATION INDUCED BY CLOSED-LOOP BCI	21
<i>Zhiming Xu, Cuntai Guan, Rosa So, Kai Keng Ang, Kyaw Kyar Toe</i>	
A COLLABORATIVE BRAIN-COMPUTER INTERFACE FOR IMPROVING GROUP DETECTION OF VISUAL TARGETS IN COMPLEX NATURAL ENVIRONMENTS	25
<i>Davide Valeriani, Riccardo Poli, Caterina Cini</i>	
BRAIN-COMPUTER INTERFACE ADMINISTRATION OF THE PEABODY PICTURE VOCABULARY TEST-IV	29
<i>Jane E. Huggins, Ramses Eduardo Alcaide-Aguirre, Abdulrahman W. Aref, David Brown, Seth A. Warschausky</i>	
MOVEMENT RELATED DIRECTIONAL TUNING FROM BROADBAND ELECTROCORTICOGRAPHY IN HUMANS	33
<i>Ewan Nurse, Dean Robert Freestone, Thomas Oxley, David Ackland, Simon Vogrin, Michael Murphy, Terence O'Brien, Mark Cook, David B. Grayden</i>	
DYNAMIC MOTION ARTIFACT REMOVAL USING INERTIAL SENSORS FOR MOBILE BCI	37
<i>Byung Hyung Kim, Jinsung Chun, SungHo Jo</i>	
INVESTIGATING INFORMATION CONTENT FROM DIFFERENT BRAIN AREAS FOR SINGLE TRIAL MEG DECODING	41
<i>Tim Pfeiffer, Nicolai Heinze, Ariel Schoenfeld, Georg Rose</i>	
INFLUENCE OF EXTERNAL CUES ON SYNCHRONIZED BRAIN-COMPUTER INTERFACE BASED ON MOVEMENT RELATED CORTICAL POTENTIALS	45
<i>Heiko Scheel, Ren Xu, Ning Jiang, Natalie Mrachacz-Kersting, Kim Dremstrup, Dario Farina</i>	
A BRAIN-TO-SONAR ELECTRONIC INTERFACE TO BYPASS PERIPHERAL AUDITORY SYSTEM IN RATS	49
<i>Antonino S. Fiorillo, Salvatore A. Pullano, Daniela Menniti, Rita Citraro, Giovambattista De Sarro, Emilio Russo</i>	
EXPLORING CPD BASED UNSUPERVISED CLASSIFICATION FOR AUDITORY BCI WITH MOBILE EEG	53
<i>Rob Zink, Borbala Hunyadi, Sabine Van Huffel, Maarten De Vos</i>	
EVALUATION OF THE FEASIBILITY OF A NOVEL DISTANCE ADAPTABLE STEADY-STATE VISUAL EVOKED POTENTIAL BASED BRAIN-COMPUTER INTERFACE	57
<i>Chi-Hsu Wu, Heba Lakany</i>	
AN IMPLANTABLE, RECHARGEABLE NEUROMODULATION RESEARCH TOOL USING A DISTRIBUTED INTERFACE AND ALGORITHM ARCHITECTURE	61
<i>Duane Bourget, Scott Stanslaski, Hank Bink, David Linde, Chris Arnett, Tom Adamski, Timothy Denison</i>	
DORSAL PREMOTOR CORTEX OF THE MACAQUE MONKEY PARTICIPATE GRASP PLANNING	66
<i>Guanghao Sun, Lichao Wang, Qiaosheng Zhang, Yiwen Wang, Kedi Xu, Shaomin Zhang, Xiaoxiang Zheng</i>	
VISUAL FATIGUE EFFECTS ON STEADY STATE VISUAL EVOKED POTENTIAL-BASED BRAIN COMPUTER INTERFACES	70
<i>Dimitra Makri</i>	
EVENT-RELATED POTENTIALS INDUCED BY CUTS IN FEATURE MOVIES AND THEIR EXPLOITATION FOR UNDERSTANDING CUT EFFICACY	74
<i>Ana Matran-Fernandez, Riccardo Poli</i>	
EFFECT OF THE COMBINATION OF DIFFERENT NUMBERS OF FLICKERING FREQUENCIES IN AN SSVEP-BCI FOR HEALTHY VOLUNTEERS AND STROKE PATIENTS	78
<i>Sarah N. Carvalho, Thiago Bulhões da Silva Costa, Luísa Fernanda Suarez, Uribe, Diogo Coutinho Soriano, Sara R. M. Almeida, Li Min Li, Gabriela Castellano, Romis Attux</i>	
JOINT OPTIMIZATION FOR DISCRIMINATIVE, COMPACT AND ROBUST BRAIN-COMPUTER INTERFACING	82
<i>Dominic Heger, Christian Herff, Felix Putze, Tanja Schultz</i>	
SENSORLESS FORCE ESTIMATION USING A NEURO-VISION-BASED APPROACH FOR ROBOTIC-ASSISTED SURGERY	86
<i>Angelica Ivone Aviles, Samar Alsaleh, Pilar Sobrevilla, Alicia Casals</i>	

LONG-TERM PAIRED SENSORY STIMULATION TRAINING FOR IMPROVED MOTOR IMAGERY BCI PERFORMANCE VIA PAVLOVIAN CONDITIONING THEORY	90
<i>Lin Yao, Tao Xie, Xiaokang Shu, Xinjun Sheng, Dingguo Zhang, Xiangyang Zhu</i>	
FEATURE EXTRACTION FOR MULTI-CLASS BCI USING EEG COHERENCE	94
<i>Rocio Salazar-Varas, David Gutierrez</i>	
EAREEG BASED VISUAL P300 BRAIN-COMPUTER INTERFACE	98
<i>Faisal Farooq, David Looney, Danilo Mandic, Preben Kidmose</i>	
CHOICE OF TRAINING DATA FOR CLASSIFIER TRANSFER IN ERROR RELATED POTENTIALS BASED ON SIGNAL CHARACTERISTICS	102
<i>Su Kyoung Kim, Elsa Andrea Kirchner</i>	
RAPID FACE RECOGNITION BASED ON SINGLE-TRIAL EVENT-RELATED POTENTIAL DETECTION OVER MULTIPLE BRAINS	106
<i>Lei Jiang, Yun Wang, Bangyu Cai, Yiwen Wang, Weidong Chen, Xiaoxiang Zheng</i>	
CHANGES IN BRAIN ACTIVITY DUE TO THE SUDDEN APPARITION OF AN OBSTACLE DURING GAIT	110
<i>Rocio Salazar-Varas, Álvaro Costa, Andres Ubeda, Eduardo Ianez, Jose M. Azorin</i>	
PERSONAL IDENTIFICATION NUMBER APPLICATION USING BRAIN-COMPUTER INTERFACE	114
<i>Theerawit Wilaiprasitporn, Tohru Yagi</i>	
CONCURRENT MENTAL ACTIVITIES AFFECT ERPS AND IMPAIR PERFORMANCE OF ERP-SPELLERS	118
<i>Yufeng Ke, Peiyuan Wang, Yuqian Chen, Bin Gu, Hongzhi Qi, Peng Zhou, Dong Ming</i>	
A STUDY ON THE STABILITY OF EEG SIGNALS FOR USER AUTHENTICATION	122
<i>Tien Pham, Wanli Ma, Dat Tran, Duc Su Tran, Dinh Phung</i>	
AN ADAPTIVE ACCURACY-WEIGHTED ENSEMBLE FOR INTER-SUBJECTS CLASSIFICATION IN BRAIN-COMPUTER INTERFACING	126
<i>Sami Dalhoumi, Gérard Dray, Montmain Jacky, Gérard Derosière, Stéphane Perrey</i>	
A CLOSED-LOOP SYSTEM FOR RAPID FACE RETRIEVAL BY COMBINING EEG AND COMPUTER VISION	130
<i>Yun Wang, Lei Jiang, Bangyu Cai, Yiwen Wang, Shaomin Zhang, Xiaoxiang Zheng</i>	
A RECONFIGURABLE GENERAL BEHAVIOR DATA ACQUISITION SYSTEM FOR MOTOR BRAIN MACHINE INTERFACE	134
<i>Lichao Wang, Guanghao Sun, Zhaozhong Gui, Yiwen Wang, Shaomin Zhang, Xiaoxiang Zheng</i>	
STEADY STATE VISUAL EVOKED POTENTIALS-BASED PATIENT INTERFACE UNDER BREATHING CONSTRAINTS	138
<i>Xavier Navarro, Sébastien Campion, Fabrizio De Vico Fallani, Pierre Pouget, Thomas Similowsky, Mathieu Raux, Mario Chávez</i>	
EXPLOITATION OF A COMPACT, COST-EFFECTIVE EEG MODULE FOR PLUG-AND-PLAY, SSVEP-BASED BCI	142
<i>Niccolo' Mora, Ilaria De Munari, Paolo Ciampolini</i>	
SUBJECT-INDEPENDENT, SSVEP-BASED BCI: TRADING OFF AMONG ACCURACY, RESPONSIVENESS AND COMPLEXITY	146
<i>Niccolo' Mora, Ilaria De Munari, Paolo Ciampolini</i>	
HYBRID BRAIN COMPUTER INTERFACE VIA BAYESIAN INTEGRATION OF EEG AND EYE GAZE	150
<i>Xujiong Dong, Haofei Wang, Zhaokang Chen, Bertram E Shi</i>	
REVEALING CRITICAL CHANNELS AND FREQUENCY BANDS FOR EMOTION RECOGNITION FROM EEG WITH DEEP BELIEF NETWORK	154
<i>Wei-Long Zheng, Haotian Guo, Bao-Liang Lu</i>	
ACHIEVEMENTS AND CHALLENGES OF TRANSLATIONAL RESEARCH IN NON-INVASIVE SMR-BCI-CONTROLLED UPPER EXTREMITY NEUROPROSTHESIS IN SPINAL CORD INJURY	158
<i>Gernot Müller-Putz, Rüdiger Rupp</i>	
TOWARDS A BRAIN-DERIVED NEUROFEEDBACK FRAMEWORK FOR UNSUPERVISED PERSONALISATION OF BRAIN-COMPUTER INTERFACES	162
<i>Andrea Ferrante, Constantinos Gavriel, A. Aldo Faisal</i>	
P300-BASED APPLICATIONS FOR INTERACTING WITH SMART MOBILE DEVICES	166
<i>Amr S. Elsayy, Seif Eldawlatly</i>	
DYNAMIC BAYESIAN NETWORKS FOR EEG MOTOR IMAGERY FEATURE EXTRACTION	170
<i>Basem Elsasuty, Seif Eldawlatly</i>	
WHEELCHAIR NAVIGATION WITH AN AUDIO-CUED, TWO-CLASS MOTOR IMAGERY-BASED BRAIN-COMPUTER INTERFACE SYSTEM	174
<i>Sergio Varona-Moya, Francisco Velasco-Álvarez, Salvador Sancha-Ros, Álvaro Fernández-Rodríguez, María J. Blanca, Ricardo Ron-Angevin</i>	
DEVELOPMENT OF A BRAIN COMPUTER INTERFACE FOR DELIVERY OF NON-INVASIVE BRAIN STIMULATION DURING VISUOMOTOR TASK PERFORMANCE - A METHOD STUDY	178
<i>Ágüida Foerster, Athira Jacob, Anirban Dutta, Michael A. Nitsche</i>	
EEG BAND POWER PREDICTS SINGLE-TRIAL REACTION TIME IN A HAND MOTOR TASK	182
<i>Andreas Meinel, Juan Sebastián Castaño-Candamil, Sven Dähne, Janine Reis, Michael Tangermann</i>	
FAST CALIBRATION OF A THIRTEEN-COMMAND BCI BY SIMULATING SSVEPS FROM TRAINS OF TRANSIENT VEPS - TOWARDS TIME-DOMAIN SSVEP BCI PARADIGMS	186
<i>Mohammad Aamir Abbasi, Antoine Gaume, Nadine Francis, Gérard Dreyfus, François-Benoît Vialatte</i>	
ENGAGEMENT-SENSITIVE INTERACTIVE NEUROMUSCULAR ELECTRICAL THERAPY SYSTEM FOR POST-STROKE BALANCE REHABILITATION - A CONCEPT STUDY	190
<i>Deepesh Kumar, Gorish Aggarwal, Rishabh Sehgal, Abhijit Das, Uttama Lahiri, Anirban Dutta</i>	

DECODING AND MAPPING OF RIGHT HAND MOTOR IMAGERY TASKS USING EEG SOURCE IMAGING	194
<i>Bradley Edelman, Bryan Baxter, Bin He</i>	
A MODULAR CONFIGURABLE SYSTEM FOR CLOSED-LOOP BIDIRECTIONAL BRAIN-MACHINE INTERFACES	198
<i>Fabio Boi, Francesco Diotalevi, Fabio Stefanini, Giacomo Indiveri, Chiara Bartolozzi, Alessandro Vato</i>	
HOW MANY PEOPLE CAN CONTROL A MOTOR IMAGERY BASED BCI USING COMMON SPATIAL PATTERNS?	202
<i>Rupert Ortner, Josef Scharinger, Alexander Lechner, Christoph Guger</i>	
INTER-SUBJECT INFORMATION CONTRIBUTES TO THE ERP CLASSIFICATION IN THE P300 SPELLER	206
<i>Minpeng Xu, JING LIU, Long Chen, Hongzhi Qi, Feng He, Peng Zhou, Xiaoman Cheng, Baikun Wan, Dong Ming</i>	
FUNCTIONAL CONNECTIVITY ANALYSIS OF MOTOR IMAGERY EEG SIGNAL FOR BRAIN-COMPUTER INTERFACING APPLICATION	210
<i>Poulami Ghosh, Ankita Mazumder, Saugat Bhattacharyya, D.N. Tibarewala, Mitsuhiro Hayashibe</i>	
ONLINE DETECTION OF HORIZONTAL HAND MOVEMENTS FROM LOW FREQUENCY EEG COMPONENTS	214
<i>Andres Ubeda, Enrique Hortal, Javier Alarcón, Rocío Salazar-Varas, Antonio Sanchez, Jose M. Azorin</i>	
A COLLABORATIVE BRAIN-COMPUTER INTERFACE TO IMPROVE HUMAN PERFORMANCE IN A VISUAL SEARCH TASK	218
<i>Davide Valeriani, Riccardo Poli, Caterina Cinel</i>	
BRINGING BCI INTO EVERYDAY LIFE: MOTOR IMAGERY IN A PSEUDO REALISTIC ENVIRONMENT	224
<i>Stephanie Brandl, Johannes Höhne, Klaus-Robert Müller, Wojciech Samek</i>	
NEURAL REPRESENTATIONS OF MOVEMENT INTENTIONS DURING BRAIN-CONTROLLED SELF-MOTION	228
<i>Rosa So, Zhiming Xu, Camilo Libedinsky, Kyaw Kyar Toe, Kai Keng Ang, Shih-Cheng Yen, Cuntai Guan</i>	
DOES FEEDBACK MODALITY AFFECT PERFORMANCE OF BRAIN COMPUTER INTERFACES?	232
<i>Sam Darvishi, Michael Charles Ridding, Derek Abbott, Mathias Baumert</i>	
A VIRTUAL REALITY PLATFORM FOR SAFE EVALUATION AND TRAINING OF NATURAL GAZE-BASED WHEELCHAIR DRIVING	236
<i>Sofia Ira Ktena, William Welby Abbott, A. Aldo Faisal</i>	
DISTRIBUTED INTRACORTICAL NEURAL INTERFACING: NETWORK PROTOCOL DESIGN	240
<i>Alireza Zabihian, Amir M. Sodagar, Mohamad Sawan</i>	
TO WHAT EXTENT CAN RETINAL PROSTHESES RESTORE VISION?	244
<i>Daniel Rathbun, Archana Jalligampala, Katarina Stingl, Eberhart Zrenner</i>	
PHOTOVOLTAIC RESTORATION OF HIGH VISUAL ACUITY IN RATS WITH RETINAL DEGENERATION	248
<i>Henri Lorach, Georges Goetz, Yossi Mandel, Richard Smith, David Boïnagrov, Xin Lei, Roopa Dalal, Philip Huie, Ted Kamins, James S. Harris, Keith Mathieson, Alexander Sher, Daniel Palanker</i>	
OPTIMIZING RETINAL GANGLION CELL RESPONSES TO HIGH-FREQUENCY ELECTRICAL STIMULATION STRATEGIES FOR PREFERENTIAL NEURONAL EXCITATION	252
<i>Tianruo Guo, Nigel H. Lovell, David Tsai, Perry Twyford, Shelley Fried, John William Morley, Gregg Suaning, Socrates Dokos</i>	
SPATIAL PROPERTIES OF NETWORK-MEDIATED RESPONSE OF RETINAL GANGLION CELLS TO ELECTRIC STIMULATION	256
<i>Maesoon Im, Shelley Fried</i>	
DEVELOPMENT OF A CORTICAL VISUAL NEUROPROSTHESIS FOR THE BLIND: REPLACING THE ROLE OF THE RETINA	260
<i>Eduardo Fernandez, Antonio Martínez - Álvarez, Olmedo Andres, Samuel Romero, Christian Morillas, Jose M. Ferrandez, Francisco Pelayo, Richard Normann</i>	
PARTICIPANT PERSPECTIVES FROM A CORTICAL VISION IMPLANT STUDY: ETHICAL AND PSYCHOLOGICAL IMPLICATIONS	264
<i>Frank Lane</i>	
MAGNETIC CONTROL OF CORTICAL PYRAMIDAL NEURON ACTIVITY USING A MICRO-COIL	268
<i>Seung Woo Lee, Shelley Fried</i>	
DEEP BRAIN STIMULATION PROTOCOLS THAT MIRROR ENDOGENOUS RHYTHMS SHOW INCREASED EFFICACY AT TERMINATING SEIZURES	272
<i>Tiwalade Sobayo, David Mogul</i>	
INTRAOPERATIVE MACROELECTRODE LOCAL FIELD POTENTIAL RECORDINGS IN ESSENTIAL TREMOR	276
<i>Ilknur Telkes, Gianluca Meloni, Anish Sen, Aviva Abosch, Nuri Firat Ince, Joohi Shahed, Ashwin Viswanathan</i>	
HYBRID MULTIMODAL DEEP BRAIN PROBE (DBS ARRAY) FOR ADVANCED BRAIN RESEARCH	280
<i>Danesh Ashouri Vajari, Juan Sebastian Ordonez, Luciano Furlanetti, Mate Dobrossy, Volker Coenen, Thomas Stieglitz</i>	
INFLUENCE OF ENCAPSULATION TISSUE REACTION ON THE VOLUME OF TISSUE ACTIVATED WITH DEEP-BRAIN STIMULATION ELECTRODES: A SIMULATION STUDY	284
<i>Milan Djilas, Andre Mercanzini, Pascal Harbi, Alain Dransart, Saso Jezernik</i>	
DYNAMICALLY ADJUSTED, SCALABLE ELECTRICAL STIMULATOR FOR EXCITEABLE TISSUE	288
<i>Soheil Mottaghi, Ulrich G. Hofmann</i>	
A 3D MULTIMODAL APPROACH TO PRECISELY LOCATE DBS ELECTRODES IN THE BASAL GANGLIA BRAIN REGION	292
<i>Nádia Moreira da Silva, Verena E. Rozanski, João Paulo Silva Cunha</i>	

SPIKING CEREBELLAR MODEL WITH MULTIPLE PLASTICITY SITES REPRODUCES EYE BLINKING CLASSICAL CONDITIONING	296
<i>Alberto Antonietti, Claudia Casellato, Jesus A. Garrido, Egidio D'Angelo, Alessandra Pedrocchi</i>	
MAXIMIZING PREDICTABILITY OF A BOTTOM-UP COMPLEX MULTI-SCALE MODEL THROUGH SYSTEMATIC VALIDATION AND MULTI-OBJECTIVE MULTI-LEVEL OPTIMIZATION	300
<i>Jean-Marie Charles Bouteiller, Zhuobo Feng, alexander onopa, Mike Huang, Eric Hu, Endre Somogyi, Michel Baudry, Serge Bischoff, Theodore Berger</i>	
EVALUATION OF A SEMI-PARAMETRIC MODEL FOR HIGH-DIMENSIONAL FES CONTROL.....	304
<i>Eric Schearer, Yu-Wei Liao, Eric Perreault, Matthew Tresch, Robert Kirsch, Kevin Lynch</i>	
INVESTIGATING THE TEMPORAL DYNAMICS OF AUDITORY CORTICAL ACTIVATION TO SILENT LIPREADING.....	308
<i>Michael Crosse, Hesham ElShafei, John Foxe, Edmund Lalor</i>	
ACTIVITY-DEPENDENT REGULATION DECREASES METABOLIC COST IN THE AUDITORY BRAINSTEM.....	312
<i>Christophe Bernard Michel, Bruce Philip Graham</i>	
NONLINEAR DYNAMICAL MODELING OF HUMAN HIPPOCAMPAL CA3-CA1 FUNCTIONAL CONNECTIVITY FOR MEMORY PROSTHESES	316
<i>Dong Song, Robert Hampson, Brian Robinson, Ioan Opris, Vasilis Marmarelis, Sam Deadwyler, Theodore Berger</i>	
EFFECT OF INTEROCEPTION ON INTRA- AND INTER-NETWORK CONNECTIVITY OF HUMAN BRAIN — AN INDEPENDENT COMPONENT ANALYSIS OF FMRI DATA	320
<i>Behnaz Jarrahi, Dante Mantini, Spyros Kollias</i>	
A ONE-DIMENSIONAL SPIKING NEURAL NETWORK MODEL OF THE MIDBRAIN SUPERIOR COLLICULUS.....	324
<i>Bahadır Kasap, John van Opstal</i>	
A POINT PROCESS APPROACH TO ENCODE TACTILE AFFERENTS.....	328
<i>Patrick Kasi, Ingvars Birznieks, André van Schaik</i>	
VERGENCE CONTROL LEARNING THROUGH REAL V1 DISPARITY TUNING CURVES	332
<i>Agostino Gibaldi, Andrea Canessa, Silvio P. Sabatini</i>	
EIGENVECTOR CENTRALITY REVEALS THE TIME COURSE OF TASK-SPECIFIC ELECTRODE CONNECTIVITY IN HUMAN ECOG	336
<i>Geoffrey Newman, Matthew Fifer, Heather Benz, Nathan E. Crone, Nitish Thakor</i>	
CHANGES IN REACHING REACTION TIMES DUE TO VOLITIONAL MODULATION OF BETA OSCILLATIONS.....	340
<i>Preeya Khanna, Jose M. Carmena</i>	
IDENTIFICATION OF DIVERSE SYNCHRONY PATTERNS IN DISSOCIATED CORTICAL CULTURE USING BAYESIAN NON-NEGATIVE MATRIX FACTORIZATION	344
<i>Yuichiro Yada, Takeshi Mita, Ryohei Kanzaki, Douglas Bakkum, Hirokazu Takahashi</i>	
TOWARDS NEUROBEHAVIORAL BIOMARKERS FOR LONGITUDINAL MONITORING OF NEURODEGENERATION WITH WEARABLE BODY SENSOR NETWORKS.....	348
<i>Constantinos Gavriel, Andreas Alexander Christian Thomik, Pedro Rente Lourenço, Sathiji Nageshwaran, Stavros Athanasopoulos, Anastasia Sylaidi, Richard Festenstein, A. Aldo Faisal</i>	
A HYBRID CONTINUUM-DISCRETE COMPUTATIONAL MODEL OF ELECTRICAL STIMULATION OF THE RETINAL NETWORK	352
<i>Amr Al Abed, Nigel H. Lovell, Gregg Suaning, Socrates Dokos</i>	
INHERENTLY STOCHASTIC SPIKING NEURONS FOR PROBABILISTIC NEURAL COMPUTATION	356
<i>Maruan Al-Shedivat, Rawan Naous, Emre Neftci, Gert Cauwenberghs, Khaled N Salama</i>	
ENHANCING SINGLE-TRIAL MENTAL WORKLOAD ESTIMATION THROUGH XDawn SPATIAL FILTERING.....	360
<i>Raphaëlle N. Roy, Stéphane Bonnet, Sylvie Charbonnier, Aurélie Campagne</i>	
CORTICAL ACTIVITY WAVES ARE THE PHYSICAL CARRIERS OF MEMORY AND THOUGHT	364
<i>Paul Koch, Gerry Leisman</i>	
THE NEED FOR ADEQUATE EEG MODELING AND PERSONALIZATION IN DAILY LIFE COGNITIVE ENGAGEMENT MONITORING	368
<i>Vojkan Mihajlovic, Shrishail Patki, Bernard Grundlehner</i>	
FUNCTIONAL CONNECTIVITY IN CULTURED CORTICAL NETWORKS DURING DEVELOPMENT: COMPARISON BETWEEN CORRELATION AND INFORMATION THEORY-BASED ALGORITHMS	374
<i>Daniele Poli, Vito Paolo Pastore, Paolo Massobrio, Sergio Martinoia</i>	
TOWARDS AN INTEGRATIVE SPIKING NEURON MODEL OF MOTOR CONTROL - FROM CORTEX & BASAL GANGLIA TO MUSCLES & SENSORY FEEDBACK	378
<i>Yufei Wu, A. Aldo Faisal</i>	
DYNAMIC INTERLAMINAR AND THALAMOCORTICAL INTERACTION SUPPORTED BY TOP-DOWN BETA RHYTHMS.....	382
<i>Narsis Salafzoon, Daniel J. Strauss, Nicholas Hatsopoulos, Kazutaka Takahashi</i>	
ACCURATE NEURONAL TRACING OF MICROELECTRODES BASED ON PEDOT-DYE COATINGS.....	386
<i>Stefanie Heizmann, Antje Kilias, Samora Okujeni, Christian Boehler, Patrick Ruther, Ulrich Egert, Maria Asplund</i>	
NANOSTRUCTURED MICROSPHERE COATED WITH LIVING CELLS AND TETHERED WITH LOW-STIFFNESS WIRE: A POSSIBLE SOLUTION TO BRAIN TISSUE REACTIONS	390
<i>Elisa Castagnola, Sara De Faveri, Alberto Ansaldo, Emma Maggolini, Fabio Benfenati, Davide Ricci, Luciano Fadiga</i>	

AN INTRAFASCICULAR ELECTRODE WITH INTEGRATED AMPLIFIERS FOR PERIPHERAL NERVE RECORDING	394
<i>Kian Ann NG, Annarita Cutrone, Silvia Bossi, Sudip Nag, Ignacio Delgado-Martínez, Swathi Sheshadri, Claire A Poulard, Yong Ping Xu, Shih-Cheng Yen, Nitish Thakor</i>	
SEMI-CHRONIC CHAMBER SYSTEM FOR SIMULTANEOUS SUBDURAL ELECTROCORTICOGRAPHY, LOCAL FIELD POTENTIALS, AND SPIKE RECORDINGS	398
<i>Amy Orsborn, Charles Wang, Ken Chia-Han Chiang, Michel Maharbiz, Jonathan Viveni, Bijan Pesaran</i>	
DECREASING STIMULATION CHARGE BY DELAYING THE DISCHARGE PHASE - COMPARISON OF EFFICACY FOR VARIOUS STIMULATION WAVEFORMS	402
<i>Pawel Maciejasz, Jordi Badia, Guillaume Souquet, Paul Cvancara, Chloé Picq, Thomas Stieglitz, Xavier Navarro, David Guiraud</i>	
MODELING THE RESPONSE OF SMALL MYELINATED AND UNMYELINATED AXONS TO KILOHERTZ FREQUENCY SIGNALS	406
<i>Nicole Amelia Pelot, Christina Behrend, Warren Grill</i>	
IRIDIUM OXIDE (IROX) SERVES AS ADHESION PROMOTER FOR CONDUCTING POLYMERS ON NEURAL MICROELECTRODES	410
<i>Christian Boehler, Felix Oberueber, Thomas Stieglitz, Maria Asplund</i>	
OPTIMAL STIMULUS WAVEFORMS FOR ELICITING A SPIKE: HOW CLOSE IS THE SPIKE-TRIGGERED AVERAGE?	414
<i>Joshua Chang, David Paydarfar</i>	
A FULLY IMPLANTABLE AND RECHARGEABLE NEUROSTIMULATION SYSTEM FOR ANIMAL RESEARCH	418
<i>Kunal Paralikar, Wesley Santa, Rajesh Iyer, Andrew thom, Su Xin, Hovland Erik, David Dinsmoor, Gordon Munns, Steven May, Erik Scott, Timothy Denison</i>	
IMPROVING THE BRAIN MACHINE INTERFACE VIA MULTIPLE TETRAMETHYL ORTHOSILICATE SOL-GEL COATINGS ON MICROELECTRODE ARRAYS	422
<i>Matthew McDermott, Johnny Zhang, Kevin Otto</i>	
FREQUENCY-DEPENDENT SIMULATION OF VOLUME CONDUCTION IN A LINEAR MODEL OF THE IMPLANTED COCHLEA	426
<i>Chidrupi Shilpitha Inguva, Paul Wong, Andrian Sue, Alistair McEwan, Paul Michael Carter</i>	
PHANTOM MODEL OF TRANSCUTANEOUS ELECTRICAL STIMULATION WITH KILOHERTZ SIGNALS	430
<i>Leonel Medina, Warren Grill</i>	
SIMULTANEOUS MICROELECTRODE RECORDING OF LAYERED STRUCTURE OF CORTEX AND TONOTOPIC STRUCTURE OF THALAMUS IN THE AUDITORY PATHWAY	434
<i>Hirokazu Takahashi, Tomoyo Shiramatsu, Kazusa Takahashi, Takahiro Noda, Ryohei Kanzaki, Haruka Nakahra</i>	
CALCIUM IMAGING OF RETINAL GANGLION CELL DENDRITIC RESPONSES TO EXTRACELLULAR MICROELECTRODE STIMULATION	438
<i>Chih-Yu Yang, Andrew Woolley, David Tsai, Gregg Suaning, John William Morley, Nigel H. Lovell</i>	
BIOCOMPATIBILITY EVALUATION OF PARYLENE C AND POLYIMIDE AS SUBSTRATES FOR PERIPHERAL NERVE INTERFACES	442
<i>Jaume del Valle, Natàlia de la Oliva, Matthias Mueller, Thomas Stieglitz, Xavier Navarro</i>	
COMBINED NEURAL MEASUREMENT WITH SURFACE AND DEPTH MICROELECTRODE ARRAY FOR TOPOGRAPHIC AND LAYER-SPECIFIC CHARACTERIZATION IN THE AUDITORY CORTEX AND THALAMUS	446
<i>Tomoyo Shiramatsu, Kazusa Takahashi, Takahiro Noda, Ryohei Kanzaki, Haruka Nakahra, Hirokazu Takahashi</i>	
IN VITRO BIOLOGICAL ASSESSMENT OF ELECTRODE MATERIALS FOR NEURAL INTERFACES	450
<i>Aaron Gilmour, Josef Goding, Laura A. Poole-Warren, Christine Thomson, Rylie Adelle Green</i>	
SELECTIVE STIMULATION OF PERIPHERAL MOTOR NERVE USING A FLEXIBLE SPLIT-RING ELECTRODE	454
<i>Sanghoon Lee, Swathi Sheshadri, Ning Xue, Sun Tao, Lee Chengkuo, Nitish Thakor, Shih-Cheng Yen, Ignacio Delgado-Martínez</i>	
IN-VIVO CHARACTERIZATION OF A 0.8 – 3 μV RMS INPUT-NOISE VERSATILE CMOS PRE-AMPLIFIER	458
<i>Oscar Fernando Cota Monjaras, Dennis T.T. Plachta, Thomas Stieglitz, Yiannos Manoli, Matthias Kuhl</i>	
MODEL-BASED DESIGN OF CONTROL MODULES FOR NEUROMODULATION DEVICES	462
<i>Hector Manuel Romero Ugalde, David Ojeda, Virginie Le Rolle, Olivier Rossel, Jean-Luc Bonnet, Nicole Karam, Albert Hagège, Philippe Mabo, Guy Carrault, Alfredo I Hernández</i>	
NEW SECTORIZED IMPLANTABLE MICROELECTRODE FABRICATION, PACKAGING AND AGEING FOR NEURAL SENSING AND STIMULATION	466
<i>Frédéric Bottausci, François Baleras, Catherine Pudda, Martine Cochet, Claude Chabrol, Fabien Sauter-Starace, Julie Ozat, Maelys ROVETTA, Beatrice ICARD, David Guiraud, Jean-Louis Divoux, Charles-Henri Malbert, Christine Henry, Sandrine Maubert</i>	
THE EFFECT OF TRIGGERED ENDOCARDIAL NEUROMODULATION DECREASING ELEVATED HEART RATE	470
<i>Antje Pohl, Jakob Orschulik, Akram Idrissi, Carl H. Lubba, Patrick Schauerte, Nima Hatam, Steffen Leonhardt</i>	
IN-VIVO TESTS OF A 16-CHANNEL IMPLANTABLE WIRELESS NEURAL STIMULATOR	474
<i>Philip Troyk, Samuel Bredeson, Stuart Cogan, Mario Ignacio Romero-Ortega, Sungjae Suh, Zhe Hu, Aswini Kanneganti, Rafael Granja-Vazquez, Jennifer Seifert, M Bak</i>	
REPAIRING LESIONS VIA KERNEL ADAPTIVE INVERSE CONTROL IN A BIOMIMETIC MODEL OF SENSORIMOTOR CORTEX	478
<i>Kan Li, Salvador Dura-Bernal, Joseph Thachil Francis, William Lytton, Jose Principe</i>	

RECORDING PROPERTIES OF AN ELECTRODE IMPLANTED IN THE PERIPHERAL NERVOUS SYSTEM: A HUMAN COMPUTATIONAL MODEL	482
<i>Beryl Jehenne, Stanisa Raspopovic, Marco Capogrosso, Angelo Arleo, Silvestro Micera</i>	
COMPARISON OF THE ELECTROCHEMICAL PROPERTIES OF SMOOTH AND POROUS TIN ELECTRODE COATINGS IN RATS	486
<i>Suzan Meijs, Charlotte Sørensen, Søren Sørensen, Kristian Rechendorff, Morten Fjorback, Nico Rijkhoff</i>	
MODELING THE EFFECTS OF ELECTRODE RECESSING ON ELECTROCHEMICAL SAFETY IN COCHLEAR IMPLANT ELECTRODES	490
<i>Andrian Sue, Paul Wong, Phillip Tran, Qing Li, Paul Michael Carter</i>	
CONTROL OF INTRASPINAL MICROSTIMULATION USING AN ADAPTIVE TERMINAL-BASED NEURO-SLIDING MODE CONTROL	494
<i>Ehsan Rouhani, Abbas Erfanian</i>	
EFFECTS OF DIFFERENT CONFIGURATIONS OF MULTI-CONTACT CUFF ELECTRODE ON RECRUITMENT CHARACTERISTICS OF NERVE STIMULATION	498
<i>Wanjun Tao, Zhigong Wang, Xiaoying Lü, Yujie Gao</i>	
CHRONIC THRESHOLDS FOR EVOKING PERCEPTUAL RESPONSES IN THE RAT SENSORY CORTEX	502
<i>Emma Kate Brunton, Edwin Yan, Katherine Gillespie-Jones, Arthur James Lowery, Ramesh Rajan</i>	
EFFECTS OF STRATUM CORNEUM AND CONDUCTIVE GEL PROPERTIES ON SENSORY AFFERENTS RECRUITMENT BY 3D TENS COMPUTATIONAL MODELING	506
<i>Kaihua Zhu, Peng Li, Guohong Chai, Xiaohong Sui</i>	
STIMULATION OF SMALL DIAMETER MYELINATED AND UNMYELINATED ABDOMINAL VAGAL NEURONS USING HIGH FREQUENCY PULSES	510
<i>Charles-Henri Malbert, Jean-Louis Divoux, Pawel Maciejasz, Chloé Plcq, David Andreu, David Guiraud</i>	
SYNTHETIC NEURONAL CIRCUITS: OPTICALLY ACTIVE SEMICONDUCTOR MICROTUBES AS REMOTELY ACCESSIBLE SENSORS FOR ACTION POTENTIALS	514
<i>Aune Koitmäe, Jann Harberts, Gabriele Loers, Manuel Müller, David Sonnenberg, Christian Heyn, Wolfgang Hansen, Robert H. Blick</i>	
SIMULATION PLATFORM FOR COUPLED MODELING OF EM-INDUCED NEURONAL DYNAMICS AND FUNCTIONALIZED ANATOMICAL MODELS	517
<i>Esra Neufeld, Ioannis Vogiatzis, Maria Ida Iacono, Esther Akinagbe, Leonardo M. Angelone, Wolfgang Kainz, Niels Kuster</i>	
A LOW-POWER, LOW-AREA MODULAR ARCHITECTURE FOR HIGH DENSITY NEURAL PROBES	521
<i>Gian Nicola Angotzi, Luca Berdondini</i>	
INODE IN-VIVO TESTING FOR SELECTIVE VAGUS NERVE RECORDING AND STIMULATION	525
<i>Oscar Fernando Cota Monjaras, Mario Schloesser, Michael Schiek, Thomas Stieglitz, Mortimer Gierthmuehlen, Dennis T.T. Plachta</i>	
COMPARISON OF LONG-TERM DECODING STABILITY OF ULTRA HIGH FREQUENCY BAND LOCAL FIELD POTENTIALS (>500HZ) AND SPIKE SIGNALS IN PRIMATE MOTOR CORTEX	529
<i>Yile Jin, Qiaosheng Zhang, Yue Li, Shaomin Zhang, Xiaoxiang Zheng, Junming Zhu, Guanghao Sun</i>	
ROLE OF MAJOR BURST LEADERS IN MODULAR HIPPOCAMPAL NETWORKS	533
<i>Marta Bisio, Valentina Pasquale, Alessandro Bosca, Luca Berdondini, Michela Chiappalone</i>	
DEVELOPMENT OF A SINGLE-SIDED PARYLENE C BASED INTRAFASCICULAR MULTICHANNEL ELECTRODE FOR PERIPHERAL NERVES	537
<i>Mathias Mueller, Miguel Angel Ulloa Suarez, Martin Schuettler, Thomas Stieglitz</i>	
ANALYSIS OF A BAROREFLEX MODEL FOR THE STUDY OF THE CHRONOTROPIC RESPONSE TO VAGAL NERVE STIMULATION	541
<i>David Ojeda, Virginie Le Rolle, Olivier Rossel, Nicole Karam, Albert Hagège, Jean-Luc Bonnet, Philippe Mabo, Guy Carrault, Alfredo I Hernández</i>	
BIDIRECTIONAL COMMUNICATIONS IN WIRELESS MICROSTIMULATORS BASED ON ELECTRONIC RECTIFICATION OF EPIDERMICALLY APPLIED CURRENTS	545
<i>Laura Becerra-Fajardo, Antoni Ivorra</i>	
EVALUATION OF THIN-FILM TEMPERATURE SENSORS FOR INTEGRATION IN NEURAL PROBES	549
<i>Eva Fiedler, Maria Francisca Porto Cruz, Oscar Fernando Cota Monjaras, Thomas Stieglitz</i>	
ULTRA-LOW POWER, LOW NOISE MAC PROTOCOL COMPLIANT NON-PLL BASED WEARABLE TRANSMITTER FOR DYNAMIC OPEN SPECTRUM SHARING	553
<i>Ruchir Saraswat, Mohammad Usaid Abbasi, Esther Rodriguez-Villegas</i>	
A CUFF-SHAPED ENZYMELESS GLUCOSE SENSOR INTEGRATED WITH CHRONICALLY IMPLANTABLE PERIPHERAL NERVE CUFF ELECTRODE FOR INFLAMMATION MONITORING	557
<i>Yi Jae Lee, Sung Jin Park, Ji Yoon Kang, Soo Hyun Lee</i>	
FABRICATION AND IMPLANTATION OF HYDROGEL COATED, FLEXIBLE POLYIMIDE ELECTRODES	561
<i>Christina Hassler, Nils Ehler, Vivek Singh, Yijing Xie, Nadja Martini, Robert Kirch, Oswald Prucker, Jürgen Rühle, Ulrich G. Hofmann, Thomas Stieglitz</i>	
A USER-FRIENDLY WEARABLE SINGLE-CHANNEL EOG-BASED HUMAN-COMPUTER INTERFACE FOR CURSOR CONTROL	565
<i>Man Shun Ang, Zhiguo Zhang, Y.S. Hung, Joe Mak</i>	
TOWARD COMPLEX MULTIPOLAR SELECTIVE NEURAL STIMULATION	569
<i>Thomas Guiho, Olivier Rossel, Guillaume Souquet, Alfredo I Hernández, Laure Laporte, Christine azevedo, David Andreu, David Guiraud</i>	
A LOW-COST, 61-CHANNEL μECOG ARRAY FOR USE IN RODENTS	573
<i>Virginia Woods, Charles Wang, Silvia Bossi, Michele Insanally, Michael Trumpis, Robert Froemke, Jonathan Viventi</i>	

AFFECTIVE STATE CHARACTERIZATION BASED ON ELECTROENCEPHALOGRAPHY GRAPH-THEORETIC FEATURES	577
<i>Rishabh Gupta, Tiago Falk</i>	
PROBE-INDEPENDENT EEG ASSESSMENT OF MENTAL WORKLOAD IN PILOTS.....	581
<i>Michael Johnson, Justin Blanco, Rodolphe Gentili, Kyle Jaquess, Hyuk Oh, Bradley Hatfield</i>	
EXPLORING THE LIMIT OF ENG SPATIO-TEMPORAL FILTERING FOR VELOCITY-SELECTIVITY	585
<i>Mariam Abdallah, Olivier Rossel, Serge Bernard, Fabien Soulier, Guy Cathebras</i>	
INVESTIGATION OF THE SPATIAL AND SPECTRAL PATTERNS OF HAND EXTENSION/FLEXION USING HIGH-DENSITY ECG	589
<i>Tianxiao Jiang, Nuri Firat Ince, Tao Jiang, Shenshen Mei, Yunlin Li, Wang Xiaofei, Zhiyi Sha, Prabhu Sujit</i>	
CLASSIFICATION OF PHASES OF HAND GRASP TASK BY THE EXTRACTION OF MINIATURE COMPOUND NERVE ACTION POTENTIALS (MCNAPS).....	593
<i>Swathi Sheshadri, Jukka Kortelainen, Jacopo Rigosa, Annarita Cutrone, Silvia Bossi, Camilo Libedinsky, Amitabha Lahari, Louiza Chan, Keefe Chng, Nitish Thakor, Ignacio Delgado-Martinez, Shih-Cheng Yen</i>	
HIGH COMPRESSION RATE AND EFFICIENT SPIKES DETECTION SYSTEM USING COMPRESSED SENSING TECHNIQUE FOR NEURAL SIGNAL PROCESSING.....	597
<i>nan li, Mohamad Sawan</i>	
MECHANICALLY ADAPTIVE MATERIALS FOR INTRACORTICAL IMPLANTS	601
<i>Mehdi Jorfi, Kelsey Potter, Jessica Nguyen, Allison Hess, Earl Johan Foster, Jeffrey Capadona, Christoph Weder</i>	
CONTROLLING CELL FUNCTIONS BY LIGHT	603
<i>guglielmo lanzani, maria rosa antognazza, nicola martino, Diego Ghezzi, Fabio Benfenati</i>	
FREESTANDING, SOFT BIOELECTRONICS	607
<i>Alessandro Amella, Alexander Patton, Penny Martens, Nigel H. Lovell, Laura A. Poole-Warren, Rylie A. Green</i>	
DYNAMIC FORWARD PREDICTION FOR PROSTHETIC HAND CONTROL BY INTEGRATION OF EMG, MMG AND KINEMATIC SIGNALS	611
<i>Michele Xiloyannis, Constantinos Gavriel, Andreas Alexander Christian Thomik, A. Aldo Faisal</i>	
RECOGNITION OF ASCENDING STAIRS FROM 2D IMAGES FOR CONTROL OF POWERED LOWER LIMB PROSTHESES	615
<i>Nili Eliana Krausz, Levi Hargrove</i>	
LINEAR REGRESSION USING INTRAMUSCULAR EMG FOR SIMULTANEOUS MYOELECTRIC CONTROL OF A WRIST AND HAND SYSTEM.....	619
<i>Lauren Smith, Todd Kuiken, Levi Hargrove</i>	
REAL-TIME CLOSED-LOOP FES CONTROL OF MUSCLE ACTIVATION WITH EVOKED EMG FEEDBACK	623
<i>Zhan Li, Mitsuhiro Hayashibe, David Andreu, David Guiraud</i>	
EFFICACY OF TORQUE VERSUS MYOCONTROL FOR ACTIVE, ROBOTIC-ASSISTED REHABILITATION OF THE SHOULDER AFTER STROKE: AN EXPERIMENTAL STUDY	627
<i>Liliana Patricia Paredes Calderon, Dario Farina, Yong-Il Shin, Andrea Turolla</i>	
EVALUATION OF REGRESSION METHODS FOR THE CONTINUOUS DECODING OF FINGER MOVEMENT FROM SURFACE EMG AND ACCELEROMETRY	631
<i>Agamemnon Krasoulis, Sethu Vijayakumar, Kianoush Nazarpour</i>	
TIBIALIS ANTERIOR ELECTROMYOGRAPHIC ANALYSIS DURING FAST DORSIFLEXION: RELATIONSHIP WITH RECOVERY OF GAIT, MUSCLE STRENGTH AND EVOKED POTENTIALS DURING SUBACUTE SPINAL CORD INJURY	635
<i>Elisabeth Bravo-Esteban, Julian S Taylor, Gerardo Avila-Martin, Cristina Simon-Martinez, Diego Torricelli, Jose Luis Pons, Julio Gomez-Soriano</i>	
EFFECT OF ADDITIONAL MECHANICAL SENSOR DATA ON AN EMG-BASED PATTERN RECOGNITION SYSTEM FOR A POWERED LEG PROSTHESIS	639
<i>John Spanias, Ann Simon, Kimberly Ingraham, Levi Hargrove</i>	
SYSTEM IDENTIFICATION OF BRAIN-MACHINE INTERFACE CONTROL USING A CURSOR JUMP PERTURBATION	643
<i>Sergey Stavisky, Jonathan Kao, Jordan Sorokin, Stephen Ryu, Krishna V. Shenoy</i>	
WIRELESS FOR PERIPHERAL NERVE PROSTHESIS AND SAFETY	648
<i>Rangarajan Jegadeesan, Nitish Thakor, Shih-Cheng Yen</i>	
CLASSIFICATION OF MOTOR UNIT ACTIVITY FOLLOWING TARGETED MUSCLE REINNERVATION	652
<i>Tamas Kapelner, Ning Jiang, Ivan Vujaklija, Oskar Aszmann, Ales Holobar, Dario Farina</i>	
ALPHA REBOUND IMPROVES ON-LINE DETECTION OF THE END OF MOTOR IMAGERIES	655
<i>Cecilia Lindig, Laurent Bougrain, Sebastien Rimbart</i>	
GAUSSIAN PROCESS REGRESSION FOR ACCURATE PREDICTION OF PROSTHETIC LIMB MOVEMENTS FROM THE NATURAL KINEMATICS OF INTACT LIMBS.....	659
<i>Michele Xiloyannis, Constantinos Gavriel, Andreas Alexander Christian Thomik, A. Aldo Faisal</i>	
A HYBRID NMES-EXOSKELETON FOR REAL OBJECTS INTERACTION	663
<i>Andrea Crema, Matteo Mancuso, Antonio Frisoli, Fabio Salsedo, Flavio Raschella, Silvestro Micera</i>	
IN SITU VALIDATION OF A PARAMETRIC MODEL OF ELECTRICAL FIELD DISTRIBUTION IN AN IMPLANTED COCHLEA	667
<i>Kai Dang, Maureen Clerc, Clair Vandersteen, Nicolas Guevara, Dan Gnansia</i>	
ELECTROPHYSIOLOGICAL CORRELATES OF SPECTRAL DISCRIMINATION FOR COCHLEAR IMPLANT USERS	671
<i>Alejandro Lopez Valdes, Myles McLaughlin, Laura Viani, Peter Walshe, Jaclyn Smith, Fan -Gang Zeng, Richard Reilly</i>	

ELECTRICAL STIMULATION ALTERS LIGHT RESPONSES OF MOUSE RETINAL GANGLION CELLS	675
<i>Archana Jalligampala, Eberhart Zrenner, Daniel Rathbun</i>	
INFLUENCE OF RETINAL GANGLION CELL MORPHOLOGY ON NEURONAL RESPONSE PROPERTIES	
- A SIMULATION STUDY	679
<i>Siwei Bai, Tianruo Guo, David Tsai, John William Morley, Gregg Suaning, Nigel H. Lovell, Socrates Dokos</i>	
OBJECTIVE ASSESSMENT OF OPTIMAL GROUP DELAYS IN COCHLEAR IMPLANTS	683
<i>Stefan Zirn, Susan Arndt, Thomas Wesarg</i>	
AUTOMATED CLASSIFICATION OF ELECTRICALLY-EVOKED COMPOUND ACTION POTENTIALS.....	687
<i>Idrick Akhoun, Julie Bestel, Philip Pracht, Elie El-Zir, Thierry Van-den-Abbeele</i>	
MODELING ELECTRODE PLACE DISCRIMINATION IN COCHLEAR IMPLANTS: ANALYSIS OF THE	
INFLUENCE OF ELECTRODE ARRAY INSERTION DEPTH	691
<i>Xiao Gao, David B. Grayden, Mark Damian McDonnell</i>	
SOMATOSENSORY ENCODING WITH CUNEATE NUCLEUS MICROSTIMULATION: EFFECTS ON	
DOWNSTREAM CORTICAL ACTIVITY	695
<i>Andrew Richardson, Pauline Weigand, Srihari Sritharan, Timothy Lucas</i>	
AN APPROACH TO DEVELOP AN OBJECTIVE MEASURE OF TEMPORAL PROCESSING IN COCHLEAR	
IMPLANT USERS BASED ON SCHROEDER-PHASE HARMONIC COMPLEXES	699
<i>Anne Mathilde Leijsen, Alejandro Lopez Valdes, Myles McLaughlin, Jaclyn Smith, Laura Viani, Peter Walshe, Richard Reilly</i>	
EFFECT OF INTERNAL MODEL DEVELOPMENT ON EFFORT AND ERROR DURING EMG CONTROL	
OF THREE FUNCTIONAL TRACKING TASKS	703
<i>Sophie Daigle, Reva Johnson, Jonathon W. Sensinger</i>	
A NOVEL APPROACH TO DRIVING FATIGUE DETECTION USING FOREHEAD EOG.....	707
<i>Yu-Fei Zhang, Xiangyu Gao, Jia-Yi Zhu, Wei-Long Zheng, Bao-Liang Lu</i>	
A PERSONALIZED BALANCE MEASUREMENT FOR HOME-BASED REHABILITATION	711
<i>Alejandro Gonzalez, Philippe Fraisse, Mitsuhiro Hayashibe</i>	
ALPHA AND THETA INTENSIVE NEUROFEEDBACK PROTOCOL FOR AGE-RELATED COGNITIVE	
DEFICITS	715
<i>Joana Reis, Ana Maria Silva, Mariana Pereira, Nuno S. Dias</i>	
HAPTIC SLAM FOR CONTEXT-AWARE ROBOTIC HAND PROSTHETICS - SIMULTANEOUS	
INFERENCE OF HAND POSE AND OBJECT SHAPE USING PARTICLE FILTERS	719
<i>Feryal M. P. Behbahani, Ruth Taunton, Andreas Alexander Christian Thomik, A. Aldo Faisal</i>	
EFFECTS OF SURFACE WIDTH ON QUANTITATIVE DEPTH PERCEPTION IN SURFACE EDGES FROM	
TEMPORAL INTEROCULAR UNMATCHED FEATURES	723
<i>Siqi Zhuang, Yao Chen</i>	
ASSESSING THE ACQUISITION OF A NEW SKILL WITH ELECTROENCEPHALOGRAPHY	727
<i>David Gutierrez, Mauricio Adolfo Ramirez-Moreno, Alicia Guadalupe Lazcano-Herrera</i>	
RECOGNITION OF POSTURES AND FREEZING OF GAIT IN PARKINSON'S DISEASE PATIENTS USING	
MICROSOFT KINECT SENSOR	731
<i>Amin Amini Maghsoud Bigy, Konstantinos Banitsas, Atta Badii, John Cosmas</i>	
CORTICAL NETWORKS FOR AUDIOVISUAL INTERACTIONS DURING VISUAL-AFFECTED	
AUDITORY DISCRIMINATION.....	735
<i>Xiaoli Guo, Xuan Li, Shanbao Tong</i>	
WEB-ENABLED SOFTWARE FOR CLINICAL TELEGAMING EVALUATION OF MULTISENSORY	
INTEGRATION AND RESPONSE TO AUDITORY AND VISUAL STIMULI.....	739
<i>Linda Xu, Stephan Loh, Carl Taswell</i>	
METHODOLOGY FOR AUTOMATIC MOVEMENT CYCLE EXTRACTION USING SWITCHING LINEAR	
DYNAMIC SYSTEM.....	743
<i>Roberto de Souza Baptista, Antônio Padilha Lanari Bó, Mitsuhiro Hayashibe</i>	
CORRELATION BETWEEN CORTICAL INHIBITION AND AUDITORY STREAM SEGREGATION IN A	
DRIVING ENVIRONMENT	747
<i>Ernesto Gonzalez-Trejo, Manuel Kohl, Alexander Steinbach, Hannes Mögele, Norbert Pfleger, Daniel J. Strauss</i>	
GAZE BASED ROBOT CONTROL: THE COMMUNICATIVE APPROACH.....	751
<i>Anastasia A. Fedorova, Sergei L. Shishkin, Yury Nuzhdin, Boris Mitrofanovich Velichkovsky</i>	
CONTINUOUS PREDICTION OF SHOULDER JOINT ANGLE IN REAL-TIME	755
<i>Yee Mon Aung, Khairul Anam, Adel Al-Jumaily</i>	
ERGONOMICS OF THE CONTROL BY A QUADRIPLAGIC OF HAND FUNCTIONS.....	759
<i>Wafa Tigra, Christine azevedo, Charles Fattal, David Guiraud</i>	
IMPLEMENTATION OF FEATURE EXTRACTION METHODS AND SUPPORT VECTOR MACHINE FOR	
CLASSIFICATION OF PARTIAL BODY WEIGHT SUPPORTS IN OVERGROUND ROBOT-AIDED	
WALKING	763
<i>Joana Figueiredo, Cristina Santos, Eloy Urendes, Jose Luis Pons, Juan C. Moreno</i>	
EVALUATING DRIVING FATIGUE DETECTION ALGORITHMS USING EYE TRACKING GLASSES.....	767
<i>Xiangyu Gao, Yu-Fei Zhang, Wei-Long Zheng, Bao-Liang Lu</i>	
SIMILAR TRIAL-BY-TRIAL ADAPTATION BEHAVIOR ACROSS TRANSHUMERAL AMPUTEES AND	
ABLE-BODIED SUBJECTS.....	771
<i>Reva Johnson, Konrad Kording, Levi Hargrove, Jonathon W. Sensinger</i>	
SLIDING MODE CONTROL OF INTRAMUSCULAR FUNCTIONAL ELECTRICAL STIMULATION USING	
FUZZY NEURAL NETWORK WITH TERMINAL SLIDING MODE LEARNING	775
<i>Seyyed Hossein Sadat-Hosseini, Abbas Erfanian</i>	

SENSORY SYNERGY: MODELING THE NEURAL DYNAMICS OF ENVIRONMENTAL FEEDBACK TO THE CENTRAL NERVOUS SYSTEM	779
<i>Fady SK Alnajjar, Matti Itkonen, Chikara Nagai, Shingo Shimoda</i>	
LOWER-LIMB MUSCLE ACTIVITY WHEN WALKING ON DIFFERENT SLIPPERY SURFACES	783
<i>Mariah Whitmore, Levi Hargrove, Eric Perreault</i>	
MULTIMODAL VIRTUAL REALITY PLATFORM FOR THE REHABILITATION OF PHANTOM LIMB PAIN	787
<i>Naoki Wake, Yuko Sano, Reishi Oya, Masahiko Sumitani, Shin-ichiro Kumagaya, Yasuo Kuniyoshi</i>	
A VERSATILE FAST-DEVELOPMENT PLATFORM APPLIED TO CLOSED-LOOP DIAPHRAGMATIC PACING	791
<i>Adeline Zbrzeski, Ricardo Siu, Yannick Bornat, Brian Hillen, Ranu Jung, Sylvie Renaud</i>	
AN INVESTIGATION INTO THE RELIABILITY OF UPPER-LIMB ROBOTIC EXOSKELETON MEASUREMENTS FOR CLINICAL EVALUATION IN NEUROREHABILITATION	795
<i>Justin Fong, Vincent Crocher, Denny Oetomo, Ying Tan</i>	
MODELING 3D TREMOR SIGNALS WITH A QUATERNION WEIGHTED FOURIER LINEAR COMBINER	799
<i>Kabita Adhikari, Sivanagaraja Tatinati, Kalyana C. Veluvolu, Kianoush Nazarpour</i>	
ADAPTIVE CONTROL OF A ROBOTIC EXOSKELETON FOR NEUROREHABILITATION	803
<i>Tommaso Proietti, Nathanael Jarrassé, Agnes Roby-Brami, Guillaume Morel</i>	
FREQUENCY DOMAIN IDENTIFICATION OF PROPRIOCEPTIVE EVOKED POTENTIALS IN COMPLIANT KINEMATIC EXPERIMENTS	807
<i>Abraham Akinin, Nikhil Govil, Howard Poizner, Gert Cauwenberghs</i>	
VIDEO GAME SPEECH REHABILITATION FOR VELOPHARYNGEAL DYSFUNCTION: FEASIBILITY AND PILOT TESTING	812
<i>Meredith Cler, Graham Voysey, Cara Stepp</i>	
A NEUROMUSCULAR ELECTRICAL STIMULATION STRATEGY BASED ON MUSCLE SYNERGY FOR STROKE REHABILITATION	816
<i>Cheng Zhuang, Juan Carlos Márquez Ruiz, Hongen Qu, Xin He, Ning Lan</i>	
RATE-DEPENDENT HYSTERESIS IN THE EMG-FORCE RELATIONSHIP: A NEW DISCOVERY IN EMG-FORCE RELATIONSHIP	820
<i>Dingguo Zhang, Lizhi Pan</i>	
A NOVEL EXTREME LEARNING MACHINE FOR DIMENSIONALITY REDUCTION ON FINGER MOVEMENT CLASSIFICATION USING SEMG	824
<i>Khairul Anam, Adel Al-Jumaily</i>	
ON THE CONTROL OF A MUSCULAR FORCE MODEL INCLUDING MUSCULAR FATIGUE	828
<i>Aurore Maillard, Maxime Yochum, Toufik Bakir, Stéphane Binczak</i>	
COMPUTATIONAL STUDIES ON URINARY BLADDER SMOOTH MUSCLE: MODELING ION CHANNELS AND THEIR ROLE IN GENERATING ELECTRICAL ACTIVITY	832
<i>Chitaranjan Mahapatra, Keith L. Brain, Rohit Manchanda</i>	
INTUITIVE MOTION CLASSIFICATION FROM EMG FOR THE 3-D ARM MOTIONS COORDINATED BY MULTIPLE DOFS	836
<i>Qin Zhang, Caihua Xiong, Chengfei Zheng</i>	
GUIDING DEEP BRAIN STIMULATION CONTACT SELECTION USING LOCAL FIELD POTENTIALS SENSED BY A CHRONICALLY IMPLANTED DEVICE IN PARKINSON'S DISEASE PATIENTS	840
<i>Allison Connolly, Bill Kaemmerer, Siddharth Dani, Scott Stanslaski, Eric Panken, Matthew Johnson, Timothy Denison</i>	
CLOSED-LOOP DBS WITH MOVEMENT INTENTION	844
<i>Jeffrey Herron, Timothy Denison, Howard Chizeck</i>	
A MODEL OF THE CORTICO-BASAL GANGLIA NETWORK AND LOCAL FIELD POTENTIAL DURING DEEP BRAIN STIMULATION	848
<i>Eleanor Dunn, Madeleine Lowery</i>	
SIMULATING THE THERAPEUTIC EFFECTS OF DEEP BRAIN STIMULATION IN RODENTS USING A CORTICO-BASAL GANGLIA NETWORK AND VOLUME CONDUCTOR MODEL	852
<i>Christian Schmidt, Eleanor Dunn, Madeleine Lowery, Ursula van Rienen</i>	
ANALYSIS OF COMPUTATIONAL MODELS OF DEEP BRAIN STIMULATION USING SPHERICAL STATISTICS	856
<i>Yizi Xiao, Matthew Johnson</i>	
DESIGN OF A NOVEL CLOSED-LOOP DEEP BRAIN STIMULATION SYSTEM FOR PARKINSON'S DISEASE AND OBSSIVE-COMPULSIVE DISORDER	860
<i>Sofia Karamintziou, Brigitte Piallat, Stephan Chabardes, Mircea Polosan, Olivier David, George Tsirogiannis, Nikolaos Deligiannis, Pantelis Stathis, George Tagaris, Efsthios Boviatsis, Damianos Sakas, Georgia - Stavroula Polychronaki, Konstantina Nikita</i>	
BRAIN IMAGING FROM THE NANO- TO THE MACRO-SCALE	864
<i>Ludovico Silvestri, Anna Letizia Allegra Mascaro, Irene Costantini, Leonardo Sacconi, Francesco Saverio Pavone</i>	
OPTOGENETICS AND WAVE FRONT SHAPING	867
<i>Valentina Emiliani</i>	
WHOLE-BRAIN DYNAMICS OF NEURONAL CIRCUITS ENABLED BY SCULPTED LIGHT AND LIGHT FIELD MICROSCOPY	869
<i>Tobias Nöbauer, Robert Prevedel, Friederike Schlumm, Maximilian Hoffmann, Maxim Molodtsov, Alipasha Vaziri</i>	
FIVE-DIMENSIONAL OPTOACOUSTIC TOMOGRAPHY FOR REAL-TIME WHOLE BRAIN NEUROIMAGING OF STIMULUS-EVOKED RESPONSES	873
<i>Sven Gottschalk, Thomas F. Fehm, C. Luis Deán-Ben, Daniel Razansky</i>	

PHOTONIC INTERFACING WITH NATURAL AND BIOENGINEERED LARGE-SCALE NEURONAL NETWORKS.....	876
<i>Shy Shoham, Inna Gefen, Adi Schejter, Anat Marom, Hod Dana</i>	
LOW-INTENSITY LOCAL DIRECT CURRENT MODULATES INTERICTAL DISCHARGES IN MTLT: COMPUTATIONAL AND EXPERIMENTAL INSIGHTS	878
<i>Faten Mina, Pascal Benquet, Gabriel Dieuset, Fabrice Wendling</i>	
GENE REACTIVATION DIMINISHES DELTA-MODULATED HIGH FREQUENCY OSCILLATIONS DURING SEIZURE-LIKE EVENTS IN MECP2-DEFICIENT MICE	882
<i>Sinisa Colic, Min Lang, Rob Wither, Liang Zhang, James Eubanks, Berj Luther Bardakjian</i>	
A LONGITUDINAL STUDY OF BRAIN ACTIVATION DURING STROKE RECOVERY USING BOLD-FMRI	886
<i>Ping Wang, Zengai Chen, Lin Cheng, qun xu, qing lu, Jianrong Xu, Yao Li, Shanbao Tong</i>	
EXPANSION OF CONTRALESIONAL SENSORY REPRESENTATION TO IPSILESIONAL HINDLIMB STIMULATION IN ACUTE PHASE OF ISCHEMIC STROKE IN RAT MODEL	890
<i>Yongzhi He, Xiaoli Guo, Yao Li, Hongyang Lu, Shanbao Tong</i>	
A NOVEL APPROACH FOR DETECTION OF MEDIAL TEMPORAL DISCHARGES USING BLIND SOURCE SEPARATION INCORPORATING DICTIONARY LOOK UP	894
<i>Shahrzad Shapoori, Saeid Sanei, Wenwu wang</i>	
THE INFLUENCE OF STIMULATION PARAMETERS ON THE RELATIVE PHASE CLUSTERING INDEX	898
<i>Karin H Somerlik-Fuchs, Ulrich G. Hofmann, Thomas Stieglitz, Andreas Schulze-Bonhage</i>	
FATIGUE-RELATED ALTERATIONS TO INTRA-MUSCULAR COHERENCE	902
<i>Lara McManus, Xiaogang Hu, William Zev Rymmer, Nina Suresh, Madeleine Lowery</i>	
CURRENT PERCEPTION THRESHOLD THROUGH SINUSOIDAL ELECTRICAL STIMULATION AT DIFFERENT FREQUENCIES IN A COMPARATIVE ASSESSMENT FOR SUBJECTS AFFECTED AND NON-AFFECTED BY DIABETES MELLITUS	906
<i>Franassis Barbosa Oliveira, Emerson Fachin-Martins, Clarissa Cardoso dos Santos Couto-Paz, Henrique Resende Martins, Carlos Julio Tierra-Criollo, Christine Azevedo-Coste</i>	
THE CONTRIBUTION OF TRAINED PARAMETERS TO THE GOODNESS OF FIT OF A BAYESIAN NEURAL ENCODING MODEL FOR THE AUDITORY SYSTEM	910
<i>Eric Plourde, Thilo Rode, Hubert Lim</i>	
MUTUAL INFORMATION BETWEEN INTER-HEMISPHERIC EEG SPECTRO-TEMPORAL PATTERNS: A NEW FEATURE FOR AUTOMATED AFFECT RECOGNITION	914
<i>Andrea Clerico, Rishabh Gupta, Tiago Falk</i>	
VALIDATING ONLINE RECURSIVE INDEPENDENT COMPONENT ANALYSIS ON EEG DATA.....	918
<i>Sheng-Hsiou Hsu, Tim Mullen, Tzyy-Ping Jung, Gert Cauwenberghs</i>	
THE INTERFACE BETWEEN THE BRAIN MICROWAVE RADIATION AND AUTONOMIC NERVOUS SYSTEM	922
<i>Vladimir Kublanov, Vasilii Borisov, Anton Dolganov</i>	
MODULATED HIGH FREQUENCY OSCILLATIONS CAN IDENTIFY REGIONS OF INTEREST IN HUMAN IEEG USING HIDDEN MARKOV MODELS	926
<i>Mirna Guirgis, Yotín Chinvarun, Martín del Campo, Peter L. Carlen, Berj Luther Bardakjian</i>	
ONLINE LEARNING OF NEURAL NETWORK STRUCTURE FROM SPIKE TRAINS.....	930
<i>Eric Hall, Rebecca Willett</i>	
DETECTION OF HIGH FREQUENCY OSCILLATIONS IN EPILEPSY WITH K-MEANS CLUSTERING METHOD	934
<i>Su Liu, Nuri Firat Ince, Akin Sabanci, Aydin Aydoseli, Yavuz Aras, Altay Sencer, Nerses Bebek, Zhiyi Sha, Candan Gurses</i>	
TOWARDS SPARSE CODING OF NATURAL MOVEMENTS FOR NEUROPROSTHETICS AND BRAIN-MACHINE INTERFACES	938
<i>Andreas Alexander Christian Thomik, Sonja Fenske, A. Aldo Faisal</i>	
COMPUTATIONALLY EFFICIENT, CONFIGURABLE, CAUSAL, REAL-TIME PHASE DETECTION APPLIED TO LOCAL FIELD POTENTIAL OSCILLATIONS.....	942
<i>Jadin C. Jackson, Robert Corey, Greg Loxtercamp, Scott Stanslaski, Heather Orser, Timothy Denison</i>	
DATA-EFFICIENT HAND MOTOR IMAGERY DECODING IN EEG-BCI BY USING MORLET WAVELETS & COMMON SPATIAL PATTERN ALGORITHMS	948
<i>Andrea Ferrante, Constantinos Gavriel, A. Aldo Faisal</i>	
RELATING AUDITORY EVOKED RESPONSES TO THE LAMINAR PHASE DYNAMICS IN RATS USING MUTUAL INFORMATION	952
<i>Zeinab Mortezapouraghdam, Lars Haab, Karsten Schwerdtfeger, Daniel J. Strauss</i>	
MULTICHANNEL REAL TIME SPIKE SORTING FOR DECODING RIPPLE SEQUENCES.....	956
<i>Ankit Sethi, Caleb Kemere</i>	
RECURRENCE NETWORK ANALYSIS OF WIDE BAND OSCILLATIONS OF LOCAL FIELD POTENTIALS FROM THE PRIMARY MOTOR CORTEX REVEALS RICH DYNAMICS.	960
<i>Jari Hyttinen, Narayan Puthanmadam Subramaniam, Nicholas G. Hatsopoulos</i>	
BEHAVIOR DISCRIMINATION USING A DISCRETE WAVELET BASED APPROACH FOR FEATURE EXTRACTION ON LOCAL FIELD POTENTIALS IN THE CORTEX AND STRIATUM	964
<i>Jovana Belic, Pär Halje, Ulrike Richter, Per Petersson, Jeanette Hellgren Kotaleski</i>	
A SCALABLE HIGH PERFORMANCE CLIENT/SERVER FRAMEWORK TO MANAGE AND ANALYZE HIGH DIMENSIONAL DATASETS RECORDED BY 4096 CMOS-MEAS.....	968
<i>Stefano Zordan, Matteo Zanotto, Thierry Nieuws, Stefano Di Marco, Hayder Amin, Alessandro Maccione, Luca Berdondini</i>	

DIRECTIONAL BRAIN FUNCTIONAL INTERACTION ANALYSIS IN PATIENTS WITH AMYOTROPHIC LATERAL SCLEROSIS	972
<i>Yalda Shahriari, Eric Sellers, Lynn McCane, Theresa Vaughan, Dean Krusienski</i>	
COMPARISON BETWEEN ADJAR AND XDAWN ALGORITHMS TO ESTIMATE EYE-FIXATION RELATED POTENTIALS DISTORTED BY OVERLAPPING.....	976
<i>Emmanuelle Kristensen, Anne Guerin-Dugue, Bertrand Rivet</i>	
HOW NETWORKED BRAIN CHANGES WHEN WORKING MEMORY LOAD REACHES THE CAPACITY?	980
<i>Dan Zhang, Xin Tian</i>	
LFPS NETWORK OF HIPPOCAMPAL-PREFRONTAL CIRCUIT DURING WORKING MEMORY TASK.....	984
<i>Tiaotiao Liu, Xin Tian</i>	
CHARACTERISTICS OF THE RIGHT CERVICAL VAGAL ACTIVITY DURING BASELINE AND VALSALVA-LIKE MANOEUVRE	988
<i>Clément Gallet, Stéphane Bonnet, Virginie Le Rolle, Laure Laporte, Jean-Luc Bonnet, Nicole Karam, Albert Hagège, Charles-Henri Malbert, Philippe Mabo, Sandrine Maubert, Alfredo I Hernández, Guy Carrault</i>	
MAXIMUM CONTRASTIVE NETWORKS FOR MULTI-CHANNEL SSVEP DETECTION.....	992
<i>Sharat Embrandiri, Ramasubba Reddy M</i>	
SEGMENTATION OF NEURON AND MEASUREMENT OF OPTICALLY PROGRAMED NEURITE GROWTH: FAST AUTOMATION VIA BAYESIAN THRESHOLDING	996
<i>Puneeth Reddy, Saurabh Shukla, Ajit Karunarathne, Soumya Jana, Lopamudra Giri</i>	
HIGH-DENSITY MEAS REVEAL LOGNORMAL FIRING PATTERNS IN NEURONAL NETWORKS FOR SHORT AND LONG TERM RECORDINGS	1000
<i>Hayder Amin, Alessandro Maccione, Stefano Zordan, Thierry Nieus, Luca Berdondini</i>	
PCA-SIR: A NEW NONLINEAR SUPERVISED DIMENSION REDUCTION METHOD WITH APPLICATION TO PAIN PREDICTION FROM EEG	1004
<i>Yiheng Tu, Y.S. Hung, Li Hu, Zhiguo Zhang</i>	
SYSTEMATIC CHARACTERIZATION OF STOCHASTIC ACTIVITY IN NON-INVASIVELY RECORDED NEURAL SIGNALS.....	1008
<i>Catherine Stamoulis, Bernard Chang</i>	
SELF-SUPERVISED LEARNING MODEL FOR SKIN CANCER DIAGNOSIS	1012
<i>Ammara Masood, Adel Al-Jumaily, Khairul Anam</i>	
ON THE THRESHOLD BASED NEURONAL SPIKE DETECTION, AND AN OBJECTIVE CRITERION FOR SETTING THE THRESHOLD	1016
<i>Jarno Mika Antero Tanskanen, Fikret Emre Kapucu, jari hyttinen</i>	
A THEORETICAL LIMIT AND SIMULATION OF TIME-DOMAIN EVENT DETECTION IN THE EEG	1020
<i>Paul Watkins, Luke Doolittle, Dean Krusienski, Nicholas Anderson</i>	
THE P300 POTENTIAL FOR FIXATIONS ONTO TARGET OBJECT WHEN EXPLORING NATURAL SCENES DURING A VISUAL TASK AFTER DENOISING OVERLAPPED EFRP	1024
<i>Hélène Devillez, Emmanuelle Kristensen, Nathalie Guyader, Bertrand Rivet, Anne Guerin-Dugue</i>	
TRAINING-INDUCED CHANGES IN INFORMATION TRANSFER EFFICIENCY OF THE BRAIN NETWORK: A FUNCTIONAL CONNECTOME APPROACH.....	1028
<i>Fumihiko Taya, Yu Sun, Gianluca Borghini, Pietro Aricò, Fabio Babiloni, Anastasios Bezerianos, Nitish Thakor</i>	
CROSSED CEREBELLAR DIASCHISIS AFTER AWAKE BRAIN SURGERY: CAN WE MEASURE PRE/POST OPERATIVE CHANGES ON RESTING STATE FMRI DATA?	1032
<i>Anthony Boyer, Deverdun Jérémy, Duffau Hugues, Le Bars Emmanuelle, Menjot de Champfleu Nicolas, François Bonnetblanc</i>	
EMOTION RECOGNITION BASED ON EEG CHANGES IN MOVIE VIEWING	1036
<i>Shuang Liu, Jiayuan Meng, Di Zhang, Jiajia Yang, Xin Zhao, Feng He, Hongzhi Qi, Dong Ming</i>	
NEAR INFRA-RED SPECTROSCOPY COMBINED WITH TRANSCRANIAL DIRECT CURRENT STIMULATION IN FPGA-BASED HARDWARE FOR POINT OF CARE TESTING OF CEREBRAL VASCULAR STATUS - A STROKE STUDY	1040
<i>Utkarsh Jindal, Mehak Sood, Abhijit Das, Shubhajit Roy Chowdhury, Anirban Dutta</i>	
FUNCTIONAL CONNECTIVITY DURING AUTONOMIC STIMULATION ESTIMATED USING SPECTRAL COHERENCE OF FMRI SIGNALS	1044
<i>Matteo Mancini, Eugenio Mattei, Federica Censi, Giovanni Calcagnini, Marco Bozzali, Silvia Conforto</i>	
EVALUATING PERFORMANCE ON OLDER INDIVIDUALS USING A FMRI PROTOCOL FOR WISCONSIN CARD SORTING TASK.....	1048
<i>Joana Festa, José Miguel Soares, Paulo Marques, Nadine Santos, Nuno Sousa, Nuno S. Dias</i>	
TOWARDS COGNITIVE BCI: NEURAL CORRELATES OF SUSTAINED ATTENTION IN A CONTINUOUS PERFORMANCE TASK.....	1052
<i>Antoine Gaume, Mohammad Aamir Abbasi, Gérard Dreyfus, François-Benoît Vialatte</i>	
SINGLE TRIAL EEG CLASSIFICATION OF LOWER-LIMB MOVEMENTS USING IMPROVED REGULARIZED COMMON SPATIAL PATTERN.....	1056
<i>Yudu Li, Yu Sun, Fumihiko Taya, Haoyong Yu, Nitish Thakor, Anastasios Bezerianos</i>	
IDENTIFICATION OF BRAIN NETWORKS WITH HIGH TIME/SPACE RESOLUTION USING DENSE EEG	1060
<i>Mahmoud Hassan, Olivier DUFOR, Pascal Benquet, Claude Berrou, Fabrice Wendling</i>	
EEGNET: A NOVEL TOOL FOR PROCESSING AND MAPPING EEG FUNCTIONAL NETWORKS	1064
<i>Mohamad Shamas, Fabrice Wendling, Wassim El Falou, Mahmoud Hassan</i>	
A NOVEL ALGORITHM FOR MEASURING GRAPH SIMILARITY: APPLICATION TO BRAIN NETWORKS.....	1068
<i>Ahmad Mheich, Mahmoud Hassan, Vincent Gripon, Olivier Dufor, Mohamad Khalil, Claude Berrou, Fabrice Wendling</i>	

THE IMPACT OF DUAL TASKING ON COGNITIVE PERFORMANCE IN A PARKINSON'S DISEASE COHORT WITH AND WITHOUT FREEZING OF GAIT: AN EEG AND BEHAVIORAL BASED APPROACH	1072
<i>Saskia Marleen Waechter, Conor Fearon, Conor McDonnell, Jonathan Gallego, Brendan Quinlivan, Isabelle Killane, John Butler, Tim Lynch, Richard Reilly</i>	
THE CRITICAL REGULARIZATION VALUE: INCORPORATING SPATIAL SMOOTHNESS TO ENHANCE SIGNAL DETECTION IN HIGHLY NOISY FMRI DATA	1076
<i>Xian Yang, Lei Nie, Paul Matthews, Valentina Tomassini, Zhiwei Xu, Yike Guo</i>	
MODELLING OF BRAIN SOURCES USING THE MODIFIED SAINT VENANT'S METHOD IN FEM RESOLUTION OF EEG FORWARD PROBLEM.....	1080
<i>Takfarinas Medani, David Lautru, Denis Pierre Olivier Schwartz, Zhuoxiang Ren, Gerard Sou</i>	
EFFECTS OF STEREOSCOPIC 3D DISPLAY TECHNOLOGY ON EVENT-RELATED POTENTIALS (ERPS).....	1084
<i>Hafeez Ullah Amin, Aamir Saeed Malik, Nasreen Badruddin, Nidal Kamel, Muhammad Hussain</i>	
AGING AND ATTENTIONAL SET SHIFTING ON WCST: AN EVENT-RELATED EEG STUDY	1088
<i>Luís Fernandes, Daniela Ferreira, Pedro Almeida, Nuno S. Dias</i>	
EVALUATING THE ELECTRODE MEASUREMENT SENSITIVITY OF SUBDERMAL ELECTROENCEPHALOGRAPHY ELECTRODES	1092
<i>Miguel Rodrigues Mendes, Narayan Puthanmadam Subramaniam, Katrina Wendel-Mitoraj</i>	
A SYSTEM BASED ON 3D AND 2D EDUCATIONAL CONTENTS FOR TRUE AND FALSE MEMORY PREDICTION USING EEG SIGNALS.....	1096
<i>Muhammad Hussain, Saeed Bamatraf, Aboalsamh Hatim, Aamir Saeed Malik, Hafeez Ullah Amin, Mathkour Hassan, Muhammad Ghulam, Qazi Emad-Ul-Haq</i>	
OBJECTIVE EXTRACTION OF DYNAMICAL LISTENING EFFORT PROFILES	1100
<i>Corinna Bernarding, Daniel J. Strauss, Ronny Hannemann, Harald Seidler, Farah I. Corona-Strauss</i>	
F2MOVE: FMRI-COMPATIBLE HAPTIC OBJECT MANIPULATION SYSTEM FOR CLOSED-LOOP MOTOR CONTROL STUDIES	1104
<i>Anastasia Sylaidi, Pedro Rente Lourenço, Sathiji Nageshwaran, Chin-Hsuan Lin, Marisol Rodriguez, Richard Festenstein, A. Aldo Faisal</i>	
PRIOR ARTIFACT INFORMATION BASED AUTOMATIC ARTIFACT REMOVAL FROM EEG DATA.....	1108
<i>Chi Zhang, Hai-Bing Bu, Ying Zeng, Jing-Fang Jiang, Bin Yan, Jian-Xin Li</i>	
APPLICATION OF BCI-FES SYSTEM ON STROKE REHABILITATION	1112
<i>Shenglong Jiang, Long Chen, Zhongpeng Wang, Jiapeng Xu, Cheng Qi, Hongzhi Qi, Feng He, Dong Ming</i>	
DEFAULT MODE FUNCTIONAL CONNECTIVITY ESTIMATION AND VISUALIZATION FRAMEWORK FOR MEG DATA	1116
<i>Waqas Rasheed, Tong Boon Tang, Nor Hisham Hamid</i>	
Author Index	