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Program in Chronological Order

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

Wednesday, 1 September 2010

WeA01: 09:15-10:45 Libertador A
1.1.1 Time-Frequency and Time-Scale Analysis (Oral Session)

09:15-09:30 WeA01.1
Adaptive Extraction of Emotion-Related EEG Segments Using Multidimensional Directed Information in Time-Frequency Domain 1-4
Petrantonakis, Panagiotis (Aristotle Univ. of Thessaloniki); Hadjileontiadis, Leontios (Aristotle Univ. of Thessaloniki)*

09:30-09:45 WeA01.2
Wavelet Based Motion Artifact Removal for Functional Near Infrared Spectroscopy 5-8
Molavi, behnam (Univ. of British Columbia); Dumont, Guy (Univ. of British Columbia)*

09:45-10:00 WeA01.3
Reconstruction of High Frame Rate Sequences in Biomechanical Related Areas 9-12
Costa, Monica (Polytechnic Inst. of Castelo Branco, Portugal); Soares, Salviano (Univ. of Trás-os-Montes & Alto Douro); Barroso, João (Knowledge Engineering & Decision Support Research Group/UTAD, Portugal)*

10:15-10:30 WeA01.5
Evolution of Phase Synchronization of the Two Frequency Components of the Electrohyserogram (EHG): Application to the Detection of Human Labor 17-20
Terrien, Jeremy (Reykjavik Univ.); Hassan, Mahmoud (UTC-France); Alexandersson, Asgeir (Faculty of Medicine, Univ. of Iceland, Reykjavik, Iceland); Marque, Catherine (Univ. of Tech. of Compiègne); Karlsson, Brynjar (Reykjavik Univ.)*

10:30-10:45 WeA01.6
High Resolution 3D Cardiac Perfusion Imaging Using Compartment-Based k-t PCA 21-24
Vitanis, Viton (Univ. & ETH Zurich); Manka, Robert (Univ. & ETH Zurich); Boesiger, Peter (Univ. & ETH Zurich); Kozerke, Sebastian (Univ. & ETH Zurich)*

WeA02: 09:15-10:45 Libertador B
2.2.4 Elastography Imaging (Oral Session)

09:15-09:30 WeA02.1
An Image Based Vibration Sensor for Soft Tissue Modal Analysis in a Digital Image Elastography (DIET) System 25-28
Feng, Sheng (Univ. of Canterbury); Lotz, Thomas (Univ. of Canterbury); Chase, J. Geoffrey (Univ. of Canterbury); Hann, Christopher E (Univ. of Canterbury)*

09:30-09:45 WeA02.2
In Vivo Measurement of the Complex Shear Modulus of Rat Mammary Tumors Using Shear Wave Imaging Techniques 29-32
Wang, Yue (Univ. of Illinois at Urbana-Champaign); Orescanin, Marko (Univ. of Illinois at Urbana-Champaign); Insana, Michael F. (Univ. of Illinois)*

09:45-10:00	WeA02.3
Motion Estimation Using the Monogenic Signal Applied to Ultrasound Elastography 33-36	
<i>Maltaverne, Tanguy (Creatis-Lrmn); Delachartre, Philippe (INSA-Lyon); Basarab, Adrian* (Univ. de Toulouse)</i>	
10:00-10:15	WeA02.4
Feasibility of a Transient Elastography Technique for In Vitro Arterial Elasticity Assessment 37-40	
<i>Brum, Javier (Facultad de Ciencias, Univ. de la República); Balay, Guillermo (Inst. de Física, Facultad de Ciencias, Univ. de la República (Montevideo, Uruguay)); Bia, Daniel (School of Medicine, Republic Univ.); Armentano, Ricardo Luis (Favaloro Univ.); Negreira, Carlos* (Inst. de Física, Facultad de Ciencias, Univ. de la República (Montevideo, Uruguay))</i>	
10:15-10:30	WeA02.5
In-Vivo Clinical Validation of Cardiac Deformation and Strain Measurements from 4D Ultrasound 41-44	
<i>Po, Ming Jack (Columbia Univ.); Lorsakul, Auranuch* (Columbia Univ.); Duan, Qi (NYU School of Medicine); Yeroushalmi, Kevin (Columbia Univ.); Oe, Yukiko (Columbia Univ. Medical Center); Hyodo, Eiichi (Columbia Univ. Medical Center); Homma, Shunichi (Columbia Univ.); Laine, Andrew F. (Columbia Univ.)</i>	
10:30-10:45	WeA02.6
Lamb Wave Shearwave Dispersion Ultrasound Vibrometry (SDUV) Validation Study 45-48	
<i>Nenadic, Ivan* (Mayo Clinic College of Medicine); Mitchell, Scott (Mayo Clinic); Urban, Matthew (Mayo Clinic College of Medicine); Greenleaf, James (Mayo Clinic)</i>	
WeA03: 09:15-10:45	
2.3.2 Optical and Fluorescence Microscopy (Oral Session)	
Libertador C	
09:15-09:30	WeA03.1
Learning Cellular Texture Features in Microscopic Cancer Cell Images for Automated Cell-Detection 49-52	
<i>Kazmar, Tomas* (Software Competence Center Hagenberg, Austria)</i>	
09:30-09:45	WeA03.2
3D OCT Eye Movement Correction Based on Particle Filtering 53-56	
<i>Xu, Juan* (Univ. of Pittsburgh, UPMC Eye Center); Ishikawa, Hiroshi (Univ. of Pittsburgh School of Medicine); Wollstein, Gadi (Univ. of Pittsburgh School of Medicine); Schuman, Joel S. (Univ. of Pittsburgh School of Medicine)</i>	
09:45-10:00	WeA03.3
Microfabricated Endoscopic Probe Integrated MEMS Micromirror for Optical Coherence Tomography Bioimaging 57-60	
<i>Wang, Ming-Fang* (Inst. of Microelectronics, Singapore); Xu, Yingshun (IME, Singapore); Prem, C.S. (IME, Singapore); Chen, Wei Sheng (IME, Singapore); Xie, Jin (IME, Singapore); Mu, Xiaojing (NUS, Singapore); Tan, Chee Wei (IME, Singapore); Yu, Aibin (IME, Singapore); Feng, Hanhua (IME, Singapore)</i>	
10:00-10:15	WeA03.4
An Uniform, Raytracing-Based Imaging Model for Rigid and Fiber-Optic Endoscopy 61-67	
<i>Rupp, Stephan (Fraunhofer Inst. (IIS)); Steckhan, Dirk Gunnar* (Fraunhofer IIS)</i>	
10:15-10:30	WeA03.5
Identification of Intracellular Calcium Dynamics in Stimulated Cardiomyocytes 68-71	
<i>Vallmitjana, Alex (Automatic Control Dept., Univ. Politecnica de Catalunya); Barriga, Montserrat (Catalan Inst. of Cardiovascular Sciences); Nenadic, Zoran (UC Irvine); Llach, Anna (Cardiovascular Research Center CSIC-ICCC & Cardiology Dept., Hospital de Sant Pau); Alvarez-Lacalle, Enric (Applied Physics Dept., Univ. Politecnica de Catalunya); Hove-Madsen, Leif (Cardiovascular Research Center from the Spanish Natl. Research Council (CSIC)); Benitez, Raul* (Univ. Politecnica de Catalunya)</i>	
10:30-10:45	WeA03.6
A Quadratic Programming Approach for the Mosaicing of Virtual Slides That Incorporates the Positioning Accuracy of the Microscope Stage 72-77	
<i>Steckhan, Dirk Gunnar* (Fraunhofer IIS); Paulus, Dietrich (Computational Visualistics, Univ. Koblenz, Germany)</i>	

WeA04: 09:15-10:45		Retiro A
9.4.1 Patient Monitoring Devices and Techniques (Oral Session)		
09:15-09:30		WeA04.1
An ECG Ambulatory System with Mobile Embedded Architecture for ST-Segment Analysis		78-81
<i>Miranda-Cid, Alejandro (CINVESTAV); Alvarado-Serrano, Carlos* (CINVESTAV)</i>		
09:30-09:45		WeA04.2
Smart Phone As a Tool for Measuring Anticipatory Postural Adjustments in Healthy Subjects, a Step More towards a Personalized Healthcare		82-85
<i>Martinez Mendez, Rigoberto* (Chiba Univ.); Tamura, Toshiyo (Chiba Univ.); Sekine, Masaki (Chiba Univ.)</i>		
09:45-10:00		WeA04.3
Motor Function Assessment Using Wearable Inertial Sensors		86-89
<i>Parnandi, Avinash Rao (Univ. of Southern California); Wade, Eric* (Univ. of Southern California); Mataric, Maja (Univ. of Southern California)</i>		
10:00-10:15		WeA04.4
Configurable Portable/Ambulatory Instrument for the Analysis of the Coordination between Respiration and Swallowing		90-93
<i>Esteves, Guilherme (Univ. do Estado do Rio de Janeiro); Silva Junior, Evert* (Univ. do Estado do Rio de Janeiro); Nunes, Luiz (Univ. do Estado do Rio de Janeiro); Greco, Catiuscia (Univ. do Estado do Rio de Janeiro); Melo, Pedro Lopes (Univ. do Estado do Rio de Janeiro)</i>		
10:15-10:30		WeA04.5
Evaluation of a CE Approved Ambulatory Patient Monitoring Device in a General Medical Ward		94-97
<i>Catherwood, Philip* (Univ. of Ulster); Donnelly, Nicola (Intelesens); McCullough, Ian (Intelesens); Francey, Jonathan (Intelesens); Harper, Roy (NHS); Anderson, John McCune (Univ. of Ulster); McLaughlin, James (Univ. of Ulster)</i>		
10:30-10:45		WeA04.6
An EMG-Based System for Continuous Monitoring of Clinical Efficacy of Parkinson's Disease Treatments		98-101
<i>Askari, Sina* (California State Univ. Los Angeles); Zhang, Mo (California State Univ., Los Angeles); Won, Deborah (California State Univ., Los Angeles)</i>		
WeA06: 09:15-10:45		Retiro C
1.3.1 Nonlinear Dynamic Analysis of Biomedical Signals (Oral Session)		
09:15-09:30		WeA06.1
Detecting Nonlinear Causal Interactions between Dynamical Systems by Non-Uniform Embedding of Multiple Time Series		102-105
<i>Faes, Luca* (Univ. of Trento); Nollo, Giandomenico (Univ. of Trento); Erla, Silvia (Univ. of Trento); Papadelis, Christos (Aristotle Univ. of Thessaloniki); Braun, Christoph (Univ. of Tübingen); Porta, Alberto (Univ. degli Studi di Milano)</i>		
09:30-09:45		WeA06.2
Methodology for Multifractal Analysis of Heart Rate Variability: From LF/HF Ratio to Wavelet Leaders		106-109
<i>Abry, Patrice* (ENS Lyon, CNRS); Wendt, Herwig (Purdue Univ.); Jaffard, Stephane (Univ. Paris XII); Helgason, Hannes (ens-lyon); Goncalves, Paulo (ENS-Lyon); Pereira, Edmundo (ENS Lyon); Gharib, Claude (Hospices Civils de Lyon Univ. Lyon I); Gaucherand, Pascal (Hospices Civils de Lyon Univ. Lyon I); Doret, Muriel (Hospices Civils de Lyon Univ. Lyon I)</i>		
09:45-10:00		WeA06.3
Wavelet Leader Based Multifractal Analysis of Heart Rate Variability During Myocardial Ischaemia		110-113
<i>Leonarduzzi, Roberto Fabio* (Univ. Nacional de Entre Ríos); Schlotthauer, Gaston (Univ. Nacional de Entre Ríos); Torres, Maria E. (Univ. Nacional de Entre Rios)</i>		
10:00-10:15		WeA06.4
Real-Time Feedback of Dynamic Cardiac Repolarization Properties		114-117
<i>Western, David* (Univ. College London); Taggart, Peter (Univ. College London); Hanson, Ben Mark (Univ. College London, UK)</i>		

10:15-10:30	WeA06.5
Optimized Assessment of Atrial Fibrillation Organization through Suitable Parameters of Sample Entropy 118-121	
<i>Alcaraz Martinez, Raul (Univ. of Castilla-La Mancha); Abásolo, Daniel (Univ. of Valladolid); Hornero, Roberto (Univ. of Valladolid); Rieta, J. J.* (Univ. Politecnica de Valencia)</i>	
10:30-10:45	WeA06.6
Enhancement of Atrial Fibrillation Electrical Cardioversion Procedures through Non-Invasive Organization Estimation 122-125	
<i>Alcaraz Martinez, Raul (Univ. of Castilla-La Mancha); Hornero, Fernando (General Univ. Hospital of Valencia); Rieta, J. J.* (Univ. Politecnica de Valencia)</i>	
WeA07: 09:15-10:45	Martin Fierro 1
8.5.1 Neuroprosthetic Control (Non-Invasive) (Oral Session)	
09:15-09:30	WeA07.1
Towards Natural Non-Invasive Hand Neuroprostheses for Daily Living 126-129	
<i>Tavella, Michele* (Ecole Polytechnique Fédérale de Lausanne); Leeb, Robert (Ecole Polytechnique Fédérale de Lausanne); Rupp, Rüdiger (Heidelberg Univ.); Millán, José del R. (Swiss Federal Inst. of Tech., Lausanne)</i>	
09:30-09:45	WeA07.2
Connectivity Mapping of the Human ECoG During a Motor Task with a Time-Varying Dynamic Bayesian Network 130-133	
<i>Zhang, Huaijian (Zhejiang Univ.); Benz, Heather* (Johns Hopkins Univ.); Bezerianos, Anastasios (Univ. of Patras); Acharya, Soumyadipta (Johns Hopkins Univ.); Crone, Nathan E. (Johns Hopkins Univ., School of Medicine); Maybhate, Anil (Johns Hopkins Univ.); Zheng, Xiaoxiang (Zhejiang Univ.); Thakor, Nitish (Johns Hopkins Univ.)</i>	
09:45-10:00	WeA07.3
Combining ENG and EEG Integrated Analysis for Better Sensitivity and Specificity of Neuroprosthesis Operations 134-137	
<i>Rossini, Luca* (Univ. Campus Biomedico of Rome); Rossini, Paolo Maria (Campus Biomedico Univ.)</i>	
10:00-10:15	WeA07.4
Combining Computer and Human Vision into a BCI: Can the Whole Be Greater Than the Sum of Its Parts? 138-141	
<i>Pohlmeyer, Eric* (Columbia Univ.); Jangraw, David (Columbia Univ.); Wang, Jun (Columbia Univ.); Chang, Shih-Fu (Columbia Univ.); Sajda, Paul (Columbia Univ.)</i>	
10:15-10:30	WeA07.5
Decoding Speed of Imagined Hand Movement from EEG 142-145	
<i>Yuan, Han* (Univ. of Minnesota); Perdoni, Christopher (Univ. of Minnesota); He, Bin (Univ. of Minnesota)</i>	
10:30-10:45	WeA07.6
On the Road to a Neuroprosthetic Hand: A Novel Hand Grasp Orthosis Based on Functional Electrical Stimulation 146-149	
<i>Leeb, Robert* (Ecole Polytechnique Fédérale de Lausanne); Gubler, Miguel (Ecole Polytechnique Fédérale de Lausanne); Tavella, Michele (Ecole Polytechnique Fédérale de Lausanne); Miller, Heather (Ecole Polytechnique Fédérale de Lausanne); Millán, José del R. (Swiss Federal Inst. of Tech., Lausanne)</i>	
WeA08: 09:15-10:45	Martin Fierro 2
1.8.2 Connectivity, Directionality and Causality (Oral Session)	
09:15-09:30	WeA08.1
Network Dynamics of the Epileptic Brain at Rest 150-153	
<i>Stamoulis, Catherine* (Harvard Medical School); Gruber, Lawrence (Beth Israel Deaconess Medical Center); Chang, Bernard (Harvard Medical School/Beth Israel Deaconess Medical Center)</i>	
09:30-09:45	WeA08.2
The Central Oscillatory Network of Essential Tremor 154-157	
<i>Muthuraman, Muthuraman* (Christian Albrechts Univ.); Heute, Ulrich (Christian Albrechts Univ. Kiel); Deuschl, Gunther (Christian Albrechts Univ. kiel); Raethjen, Jan (Christian Albrechts Univ. of Kiel)</i>	

09:45-10:00	WeA08.3
Demand Driven Deep Brain Stimulation: Regimes and Autoregressive Hidden Markov Implementation 158-161 <i>Brittain, John-Stuart* (Univ. of Oxford); Smith, Penny J Probert (Univ. of Oxford); Aziz, Tipu Z (Univ. of Oxford)</i>	
10:00-10:15	WeA08.4
Detecting Causal Interdependence in Simulated Neural Signals Based on Pairwise and Multivariate Analysis 162-165 <i>Yang, Chunfeng* (Univ. de Rennes 1); Le Bouquin Jeannes, Regine (INSERM U642 – Univ. de Rennes 1); Faucon, Gerard (INSERM U642 – Univ. de Rennes 1); Wendling, Fabrice (INSERM – Univ. de Rennes 1)</i>	
10:15-10:30	WeA08.5
Stochastic Resonance in Connectivity between Both Auditory Areas Obtained by Auditory Stimuli 166-169 <i>Tanaka, Keita* (Tokyo Denki Univ.); Nemoto, Iku (Tokyo Denki Univ.); Kawakatsu, Masaki (Tokyo Denki Univ.); Uchikawa, Yoshinori (Tokyo Denki Univ.)</i>	
10:30-10:45	WeA08.6
Two Dimensional Spatial Coherence of the Natural Vibrations of the Biceps Brachii Muscle Generated During Voluntary Contractions 170-173 <i>Archer, Akibi* (Georgia Inst. of Tech.); Sabra, Karim G. (Georgia Inst. of Tech.)</i>	
WeA09: 09:15-10:45	
3.1.5 Acoustic Sensors and Systems (Oral Session)	
09:15-09:30	WeA09.1
Signal Quality Classification for an Ambulatory Monitoring System 174-177 <i>Fu, Yongji* (Sharp Laboratories of America)</i>	
09:30-09:45	WeA09.2
Validation of a Transit Time Blood Flow Meter Used for Coronary Bypass Surgery 178-181 <i>Ortega Palacios, Rocío* (Centro de Investigación y de Estudios Avanzados del Inst. Politécnico Nacional); Moreno, Eduardo (ICIMAF); Leija, Lorenzo (Centro de Investigación y de Estudios Avanzados del Inst. Politecnico Nacional); Vera, Arturo (Centro de Investigación y de Estudios Avanzados del Inst. Politecnico Nacional)</i>	
09:45-10:00	WeA09.3
A New Apparatus for Analysis of Viscoelastic Fluids by Ultrasound Radiation Force 182-185 <i>Almeida, Thiago Wellington Joazeiro (Univ. de São Paulo); Kamimura, Hermes Ayrto (Univ. de São Paulo); Carneiro, Antonio Adilton Oliveira* (Univ. de São Paulo)</i>	
10:00-10:15	WeA09.4
Ultrasonic Array of Thick Film Transducers for Biological Tissue Characterization 186-189 <i>Gwirc, Sergio N.* (Inst. Nacional de Tecnología Industrial); Mariño, Néstor R. (Inst. Nacional de Tecnología Industrial); Negreira, Carlos (Inst. de Física, Facultad de Ciencias, Univ. dela República (Montevideo, Uruguay))</i>	
10:15-10:30	WeA09.5
A Low-Power High-Performance Accelerometer ASIC for High-End Medical Motion Sensing 190-193 <i>Bernal, Olivier D. (Univ. of Toulouse INP-LOSE); Choe, Kunil (Yale Univ., Connecticut, USA); Gopalakrishnan, Pradeep K. (RV-VLSI Design Center, Bangalore, India); Cheng, Hsiu-Yu* (Inst. of Microelectronics, Agency of Science, Tech. and Research, Singapore); Krishna, Kotlanka R. (Inst. of Microelectronics, Agency of Science, Tech. and Research, Singapore); Nuttman, David (Physical Logic, Bnei Brak, Isarel); Axelrod, Noel (Physical Logic, Bnei Brak, Isarel); Je, Minkyu (Inst. of Microelectronics, Agency of Science, Tech. & Research, Singapore)</i>	
10:30-10:45	WeA09.6
An Experimental Measurement Complex for Probable Estimation of Arterial Stiffness 194-197 <i>Pilt, Kristjan* (Technical Univ. of Tallinn); Meigas, Kalju (Tallinn Univ. of Tech.); Viigimaa, Margus (Technomedicum of the Tallinn Institututre of Tech.); Temitski, Kristina (Tallinn Univ. of Tech.); Kaik, Jüri (Tallinn Univ. of Tech.)</i>	

WeA10: 09:15-10:45	Ombu B
10.4.1 Ambient Assisted Living and Smart Homes I (Oral Session)	
09:15-09:30	WeA10.1
Ambient Assisted Nutritional Advisor for Elderly People Living at Home	198-203
<i>Lázaro, Juan Pablo* (Inst. ITACA); Fides, Alvaro (Inst. ITACA); Navarro, Ana (Inst. ITACA); Guillen, Sergio (Inst. Itaca Valencia, Spain)</i>	
09:30-09:45	WeA10.2
A Subject State Detection Approach to Determine Rest-Activity Patterns Using Load Cells	204-207
<i>Adami, Adriana Miorelli (Univ. of Caxias do Sul); Adami, Andre* (Univ. de Caxias do Sul); Schwarz, Gilmar (Univ. de Caxias do Sul); Beattie, Zachary Todd (Oregon Health & Science Univ.); Hayes, Tamara (Oregon Health & Science Univ.)</i>	
09:45-10:00	WeA10.3
Information and Assistance Bubbles to Help Elderly People in Public Environments	208-211
<i>Traver, Vicente (Inst. ITACA); Huertas, Sandra* (Inst. ITACA); Lázaro, Juan Pablo (Inst. ITACA); Guillen, Sergio (Inst. Itaca Valencia, Spain)</i>	
10:00-10:15	WeA10.4
Virtual Worlds to Enhance Ambient-Assisted Living	212-215
<i>Cascado, Daniel (Univ. of Seville); Romero, Salvador Jesús (Univ. de Sevilla); Hors Fraile, Santiago (Univ. de Sevilla); Brasero, Angel (Univ. of Seville); Fernandez-Luque, Luis* (Northern Research Inst. Tromsø (Norut)); Sevillano, Jose Luis (Univ. de Sevilla)</i>	
10:15-10:30	WeA10.5
Home Healthcare Settop-Box for Senior Chronic Care Using ISO/IEEE 11073 PHD Standard	216-219
<i>Lim, Joon-Ho* (Electronics & Telecom Research Inst); Park, Chan-Yong (Electronics & Telecommunications Research Inst.); Park, Soo-Jun (Electr & Telecomm Research Inst)</i>	
10:30-10:45	WeA10.6
Automatic Characterization and Detection of Behavioral Patterns Using Linear Predictive Coding of Accelerometer Sensor Datatarns	220-223
<i>Min, Cheol-Hong* (Univ. of Minnesota); Tewfik, Ahmed (Univ. of Minnesota)</i>	
WeA11: 09:15-10:45	Poncho
4.1.5 Physiological Modeling: Spatially Realistic Models (Oral Session)	
09:15-09:30	WeA11.1
Vulnerability for Reentry in a Three Dimensional Model of Human Atria: A Simulation Study	224-227
<i>Tobon, Catalina* (Univ. Politecnica de Valencia); Ruiz, Carlos (Univ. de Caldas); Rodriguez, Jose Felix (Univ. de Zaragoza); Hornero, Fernando (General Univ. Hospital of Valencia); Ferrero, José M (Univ. Politécnica de Valencia (I3BH)); Saiz, Javier (I3BH-UPV)</i>	
09:30-09:45	WeA11.2
Limitations of the Homogenized Cardiac Monodomain Model for the Case of Low Gap Junctional Coupling	228-231
<i>Mendonça Costa, Caroline* (Federal Univ. of Juiz de Fora); Weber dos Santos, Rodrigo (Univ. Federal de Juiz de Fora)</i>	
09:45-10:00	WeA11.3
Non Lineal Respiratory Systems Mechanics Simulation of Acute Respiratory Distress Syndrome During Mechanical Ventilation	232-234
<i>Madorno, Matias* (MBMed); Rodriguez, Pablo (CEMIC)</i>	
10:00-10:15	WeA11.4
Is Normal Pressure Hydrocephalus More Than a Mechanical Disruption to CSF Flow?	235-238
<i>Tully, Brett* (Univ. of Oxford); Byrne, James (Univ. of Oxford); Ventikos, Yiannis (Univ. of Oxford)</i>	

10:15-10:30 WeA11.5
A Reduced Order Finite Element Algorithm for Surgical Simulation 239-242
Taylor, Zeike Amos (The Univ. of Queensland); Ourselin, Sebastien (Univ. College London); Crozier, Stuart (The Univ. of Queensland)*

10:30-10:45 WeA11.6
An Anatomically Realistic 3D Model of Atrial Propagation Based on Experimentally Recorded Action Potentials 243-246
Al Abed, Amr (Univ. of New South Wales); Guo, Tianruo (Univ. of New South Wales); Lovell, Nigel H (Univ. of New South Wales); Dokos, Socrates (Univ. of New South Wales)*

WeA12: 09:15-10:45 Rio de Plata
7.1.1 Tissue Engineering/Biomanufacturing/Scaffold Design/Medical Devices (Oral Session)

09:15-09:30 WeA12.1
Use of a Gelatin Cryogel as Biomaterial Scaffold in the Differentiation Process of Human Bone Marrow Stromal Cells 247-250
Fassina, Lorenzo (Univ. of Pavia); Saino, Enrica (Univ. of Pavia); Visai, Livia (Univ. of Pavia); Avanzini, Maria Antonietta (Oncoematologia Pediatrica, IRCCS San Matteo di Pavia, Italy); Cusella De Angelis, Maria Gabriella (Univ. of Pavia); Benazzo, Francesco (Univ. of Pavia); Van Vlierberghe, Sandra (Univ. of Ghent, Belgium); Dubruel, Peter (Polymer Chemistry & Biomaterials Research Group, Univ. of Ghent, Ghent, Belgium); Magenes, Giovanni (Univ. of Pavia)*

09:30-09:45 WeA12.2
Viscoelastic Behaviour of a Small Calibre Vascular Graft Made from a POSS-Nanocomposite 251-254
Ahmed, Maqsood (Univ. College London); Seifalian, Alexander (Univ. College London); Hamilton, George (Univ. College London)*

09:45-10:00 WeA12.3
Textile-Templated Electrospun Anisotropic Scaffolds for Tissue Engineering and Regenerative Medicine 255-258
Senel-Ayaz, Hatice Gozde (Drexel Univ.); Perets, Anat (Drexel Univ.); Govindaraj, Muthu (Philadelphia Univ.); Brookstein, David (Philadelphia Univ.); Lelkes, Peter (Drexel Univ.)*

10:00-10:15 WeA12.4
Post-Bioprinting Processing Methods to Improve Cell Viability and Pattern Fidelity in Heterogeneous Tissue Test Systems 259-262
Pepper, Matthew (Clemson Univ.); Burg, Karen (Clemson Univ.); Burg, Timothy (Clemson Univ.); Groff, Richard E (Clemson Univ.); Parzel, Cheryl (Clemson Univ.); Booth, Brian (Clemson Univ.); Mattimore, Justin (Clemson Univ.)*

10:15-10:30 WeA12.5
Analysis of Biomaterial Latex-Derived Flow Mechanical Controller 263-267
M. C. Paula, Patricia (Univ. of Brasilia); S. F. R. Rodrigues, Suelia (UnB-Gama Faculty, Univ. of Brasilia); da Rocha, Adson F. (Univ. of Brasilia); Brasil, Lourdes (Faculdade UnB Gama); Silva, Rita (Faculdade UnB Gama)*

WeA13: 09:15-10:45 Gomez Losada
5.10.1 Sleep and Breathing (Oral Session)

09:15-09:30 WeA13.1
Employment of a Healthgrid for Evaluation and Development of Polysomnographic Biosignal Processing Methods 268-271
Krefting, Dagmar (Charité – Univ. Berlin); Loose, Helena (Charité – Univ. Berlin); Penzel, Thomas (Charite Univ. Hospital)*

09:30-09:45 WeA13.2
Automatic Breath Phase Detection Using Only Tracheal Sounds 272-275
Huq, Saiful (Univ. of Manitoba); Moussavi, Zahra (Univ. of Manitoba)*

09:45-10:00	WeA13.3
Cardiovascular and Respiratory Dynamics in Patients with Sleep Apnea	276-279
<i>Penzel, Thomas* (Charite Univ. Hospital); Wessel, Niels (Humboldt-Univ. zu Berlin); Riedl, Maik (Univ. Potsdam); Kantelhardt, Jan (Univ. Halle, Inst. of Physics); Glos, Martin (Charite-Univ. Berlin); Fietze, Ingo (Charite-Univ. Berlin)</i>	
10:00-10:15	WeA13.4
Visualization and Clustering of Sleep States in a Frequency Domain Feature Space	280-283
<i>Vivaldi, Ennio A.* (Facultad de Medicina, Univ.); Bassi, Alejandro (Univ. de Chile); Diaz, Javier (Univ. de Chile); Duque, Natalia (Univ. de Chile)</i>	
10:15-10:30	WeA13.5
Detection of Airway Occlusion in Simulated Obstructive Sleep Apnea/Hypopnea Using Ultrasound: An in Vitro Study	284-287
<i>Al-Abed, Mohammad* (Univ. of Texas at Arlington); Antich, Peter (Univ. of Texas Southwestern Medical Center in Dallas); Watenpaugh, Donald (Sleep Consultants Inc.); Behbehani, Khosrow (Univ. of Texas at Arlington)</i>	
10:30-10:45	WeA13.6
The Natural History of the Sleep and Respiratory Engineering Track at EMBC 1988 to 2010	288-291
<i>Leder, Ron (Univ. Nacional Autonoma de Mexico); Schlotthauer, Gaston (Univ. Nacional de Entre Ríos); Penzel, Thomas (Charite Univ. Hospital); Jané, Raimon* (Univ. Politècnica de Catalunya)</i>	

WeA14: 09:15-10:45	Auditorium
3.3.2 Bioinstrumentation: Sensors, Micro, Nano and Wearable Technologies (Mini Symposium)	

09:15-09:30	WeA14.1
Lab-On-A-Chip for the Isolation and Characterization of Circulating Tumor Cells	292-294
<i>Stakenborg, Tim* (IMEC); Liu, Chengxun (IMEC); Henry, Olivier (Univ. Rovira i Virgili); O'Sullivan, Ciara (Univ. Rovira i Virgili); Fermér, Christian (Fujirebio Diagnostics); Röser, Tina (Inst. für Mikrotechnik Mainz GmbH); Ritzi, Marion (IMM); Hauch, Siegfried (AdnaGen AG); Borgen, Elin (Natl. Norwegian Radium Hospital); Laddach, Nadja (MRC Holland); Lagae, Liesbet (IMEC)</i>	
09:30-09:45	WeA14.2
Converging Micro-Nano-Bio Technologies towards Integrated In-Vitro Testing Systems: Current Activities and Future Challenges under the EU-Information and Communication Technologies Program	295-297
<i>Lymberis, Andreas* (European Commission)</i>	
09:45-10:00	WeA14.3
Monolithically Integrated Biosensors Based on Frequency-Resolved Mach-Zehnder Interferometers for Multi-Analyte Determinations	298-301
<i>Petrou, Panagiota* (NCSR "Demokritos"); Kitsara, Maria (NCSR "Demokritos"); Makarona, Eleni (NCSR "Demokritos"); Raptis, Ioannis (NCSR "Demokritos"); Kakabakos, Sotirios (NCSR "Demokritos"); Stoffer, Remco (PhoeniX BV); Jobst, Gerhard (Jobst Technologies GmbH); Misiakos, Kostas (NCSR "Demokritos")</i>	
10:00-10:15	WeA14.4
Development of a Toxin Screening Multi-Parameter On-Line Biochip System	302-304
<i>Moore, Eric James* (Tyndall Natl. Inst.)</i>	
10:15-10:30	WeA14.5
Microfluidic and Transducer Technologies for Lab on a Chip Applications	305-307
<i>Hill, Daniel* (KTH); Sandström, Niklas (KTH); Gylfason, Kristinn (KTH); Carlborg, Fredrik (KTH); Karlsson, Mikael (KTH); Haraldsson, Tommy (KTH); Sohlström, Hans (KTH-Royal Inst. of Tech.); Russom, Aman (KTH); Stemme, Göran (Royal Inst. of Tech. (KTH)); Claes, Tom (Ghent Univ.); Bienstman, Peter (Ghent Univ.); Kazmierczak, Andrzej (Multitel); Dortu, Fabian (Multitel); Bañuls Polo, Maria José (Technical Univ. of Valencia); Maquieira Catala, Àngel (Technical Univ. of Valencia); Kresbach, Gerhard (Zeptosens); Vivien, Laurent (Univ. Paris-Sud); Popplewell, Jon (Farfield); Ronan, Gerry (Farfield); Angulo Barrios, Carlos (Technical Univ. of Madrid); van der Wijngaart, Wouter (KTH)</i>	

11.2.2 Education and Ethics (Poster Session)

10:45-12:15

WeBPo01.1

Humanitarian Engineering: Democratizing Science and Technology 308-311

Natero, Rodrigo Nicolas (Favaloro Univ.); Flores Pereyra, Facundo (Favaloro Univ.);
Armentano, Ricardo Luis (Favaloro Univ.)*

10:45-12:15

WeBPo01.2

Group of R&D on Biomedical Engineering: Its Development and Results 312-315

Yabar Escribanel, Leopoldo Félix (Univ. Tecnológica del Perú); Torres Lázaro, Miguel (Univ. Nacional Mayor de San Marcos); Huamani, Robinson (Univ. Tecnológica del Perú)*

10:45-12:15

WeBPo01.3

The Educational Value of Teaching Biomedical Engineering History 316-318

Leder, Ron (Univ. Nacional Autonoma de Mexico); Requena Carrion, Jesus (Univ. Rey Juan Carlos);
Beebe, Marc (IEEE); Geselowitz, Michael (Rutgers Univ.)*

10:45-12:15

WeBPo01.4

From the Foundation Act to the Corporate Culture of a BME Teaching Institute 319-322

*Augustyniak, Ewa (AGH Univ. of Science & Tech., Krakow, Poland);
Augustyniak, Piotr* (AGH Univ. of Science & Tech)*

10:45-12:15

WeBPo01.5

BME Education Program and Research Activities at the National Autonomous University of Mexico (UNAM) 323-326

Gomez-Gonzalez, Juan (Univ. Nacional Autonoma de Mexico);
Vega-Gonzalez, Arturo (Univ Nacional Autónoma de México)*

WeBPo02: 10:45-12:15

Catalinas/Golden Horn

**10.6.3 Wireless Biomedical and Health Technologies,
Body Sensor Networks, RFID in Health I** (Poster Session)

10:45-12:15

WeBPo02.1

A GPU-Based Calculation Using the Three-Dimensional FDTD Method for Electromagnetic Field Analysis 327-330

Nagaoka, Tomoaki (Nat'l. Inst. Info & Comm Tech); Watanabe, Soichi (Nat'l Inst of Information & Comms Tech)*

10:45-12:15

WeBPo02.2

INSIGHT: RFID and Bluetooth Enabled Automated Space for the Blind and Visually Impaired 331-334

Ganz, Aura (Univ. of Massachusetts, Amherst); Gandhi, Siddhesh (Univ. of Massachusetts, Amherst);
Wilson, Carole (Executive Office of Health & Human Services)*

10:45-12:15

WeBPo02.3

Development of Automatic Operated Blood Sampling System for Portable Type Self-Monitoring Blood Glucose Device 335-338

Nakamachi, Eiji (Doshisha Univ.)*

10:45-12:15

WeBPo02.4

Classifying Human Motion Quality for Knee Osteoarthritis Using Accelerometers 339-343

Taylor, Portia (Carnegie Mellon Univ.); Almeida, Gustavo J.M. (Univ. of Pittsburgh);
Hodgins, Jessica (Carnegie Mellon Univ.); Kanade, Takeo (Carnegie Mellon Univ.)*

10:45-12:15

WeBPo02.5

Intelligent Medicine Case System with Distributed RFID Readers 344-347

Suzuki, Takuo (Univ. of Tsukuba); Oyama, Yuya (Univ. of Tsukuba); Nakauchi, Yasushi (Univ. of Tsukuba)*

10:45-12:15

WeBPo02.6

A Receiver Diversity Technique for Ensuring High Reliability of Wireless Vital Data Gathering in Hospital Rooms 348-351

Hara, Shinsuke (Osaka City Univ.); Sugano, Hiroto (Osaka City Univ.); Inoue, Tadayuki (Osaka City Univ.);
Tsujioka, Tetsuo (Osaka City Univ.); Nakajima, Shigeyoshi (Osaka City Univ.); Nakamura, Hajime (Osaka City Univ.); Takeuchi, Kazuhide (Osaka City Univ.)*

10:45-12:15	WeBPo02.7
RFID in Healthcare Environment: Electromagnetic Compatibility Regulatory Issues	352-355
<i>Censi, Federica* (Italian Natl. Inst. of Health); Calcagnini, Giovanni (Italian Natl. Inst. of Health); Mattei, Eugenio (Italian Natl. Inst. of Health); Triventi, Michele (Italian Natl. Inst. of Health); Bartolini, Pietro (Italian Natl. Inst. of Health)</i>	
10:45-12:15	WeBPo02.8
Design of Packet Erasure Mitigation Technique Using a Digital Fountain Code for Wearable Body Area Networks	356-359
<i>Takizawa, Kenichi* (NICT); Hamaguchi, kiyoshi (Natl. Inst. of Information & Communications Tech.)</i>	
10:45-12:15	WeBPo02.9
Performance Analysis of a Proposed Tightly-Coupled Medical Instrument Network Based on CAN Protocol	360-364
<i>Mujumdar, Shantanu (Univ. of Houston); Thongpithoonrat, Pongnarin (Univ. of Houston); Gurkan, Deniz* (Univ. of Houston); McKneely, Paul (MediCAN Systems); Chapman, Frank (Ashford Technical Software, Inc.); Merchant, Fatima (Univ. of Houston)</i>	
10:45-12:15	WeBPo02.10
Clip-On Wireless Wearable Microwave Sensor for Ambulatory Cardiac Monitoring	365-369
<i>Fletcher, Richard Ribon* (Massachusetts Inst. of Tech.); Kulkarni, Sarang (Massachusetts Inst. of Tech.)</i>	
10:45-12:15	WeBPo02.11
Performance Evaluation of Wearable Wireless Body Area Networks During Walking Motions in 444.5 MHz and 2450 MHz	370-373
<i>Takizawa, Kenichi (NICT); Watanabe, Katsuhiko (Meiji Univ.); Kumazawa, Masaki (Meiji Univ.); Hamada, Yusuke (Meiji Univ.); Ikegami, Tetsushi* (Meiji Univ.); Hamaguchi, kiyoshi (Natl. Inst. of Information & CommunicationsTech.)</i>	
10:45-12:15	WeBPo02.12
Design and Realization of a Wireless Sensor Gateway for Health Monitoring	374-377
<i>Becher, Kai (Fraunhofer IBMT); Figueiredo, Celso* (Univ. of Minho); Mühle, Clemens (Fraunhofer IBMT); Ruff, Roman (Fraunhofer Inst. für Biomedizinische Technik); Mendes, Paulo M. (Univ. of Minho); Hoffmann, Klaus-Peter (Fraunhofer Inst.)</i>	
10:45-12:15	WeBPo02.13
Multilayer Limb Quasi-Static Electromagnetic Modeling with Experiments for Galvanic Coupling Type IBC	378-381
<i>Pun, Sio Hang* (Univ. of Macau); Gao, Yue Ming (Fu zhou Univ.); Mou, Pedro Antonio (Univ. of Macau); Mak, Peng Un (Univ. of Macau); Vai, Mang I. (Univ. of Macau); du, min (523 Gongye Road, Fuzhou Univ., Fuzhou, Fujian, 350002,P.R. CHINA)</i>	
10:45-12:15	WeBPo02.14
A Headband for Classifying Human Postures	382-385
<i>Aloqlah, Mohammed* (Case Western Reserve Univ.); Lahiji, Rosa (Case Western Reserve Univ.); Loparo, Kenneth (Case Western Reserve Univ.); Mehregany, Mehran (Case Western Reserve Univ.)</i>	
10:45-12:15	WeBPo02.15
DIORAMA: Dynamic Information Collection and Resource Tracking Architecture	386-389
<i>Ganz, Aura* (Univ. of Massachusetts, Amherst); Yu, Xunyi (Univ. of Massachusetts, Amherst); Schafer, James (Umass Amherst)</i>	
10:45-12:15	WeBPo02.16
Development of a Zigbee Platform for Bioinstrumentation	390-393
<i>Cifuentes, Carlos* (Escuela Colombiana de Carreras Industriales); Gentiletti, Gerardo Gabriel (Univ. Nacional de Entre Rios); Suarez Baron, Marco Javier (Escuela Colombiana de Carreras Industriales-ECCI); Rodríguez Cheu, Luis Eduardo (Escuela Colombiana de Ingeniería)</i>	
10:45-12:15	WeBPo02.17
Faux-Floor Development System for Personnel Detection Using Signal Scavenging Sensors	394-397
<i>Shriniwar, Uday (Univ.); Tyrer, Harry* (Univ. of Missouri – Columbia); Neelgund, Rohan (Univ. of Missouri, Columbia)</i>	

- 10:45-12:15 WeBPo03.1
Validation of the Forced Oscillation Technique in the Diagnostic of Respiratory Changes in Patients with Silicosis 398-401
Sá, Paula (Univ. do Estado do Rio de Janeiro); Faria, Alvaro Camilo Dias (Univ. do Estado do Rio de Janeiro); Lopes, Agnaldo (Univ. do Estado do Rio de Janeiro); Jansen, José (Univ. do Estado do Rio de Janeiro); Melo, Pedro Lopes (Univ. do Estado do Rio de Janeiro)*
- 10:45-12:15 WeBPo03.2
Study to Prevent the Density of Microcapsules from Diffusing in Blood Vessel by Local Acoustic Radiation Force 402-405
Masuda, Kohji (Tokyo Univ. A&T); Watarai, Nobuyuki (Tokyo Univ of A&T); Nakamoto, Ryusuke (Tokyo Univ. A&T); Miyamoto, Yoshitaka (Nagoya Univ.); Kim, Keri (The Univ. of Tokyo); Chiba, Toshio (Natl. Center for Child Health & Development)*
- 10:45-12:15 WeBPo03.4
Learning Curves of the X Ray Innovated Process in the Imaging Department of the National Institute of Respiratory Diseases, Mexico 406-409
Garcia-Flores, Silvia Eugenia (Univ. Autonoma Metropolitana – Iztapalapa); García-Porres, Julieta (UAM – Iztapalapa); Ortiz-Posadas, Martha (Univ. Autónoma Metropolitana)*
- 10:45-12:15 WeBPo03.5
Risk Analysis for Intraoperative Liver Surgery 410-413
Schwaiger, Johannes (Technical Univ. of Munich); Markert, Mathias (Technical Univ. Munich); Lueth, Tim (Technical Univ. of Munich)*
- 10:45-12:15 WeBPo03.6
Decision Process Model to the Health Technology Incorporation 414-417
Assis Santos, Francisco (Univ. Federal de Santa Catarina); Garcia, Renato (Univ. Federal de Santa Catarina)*
- 10:45-12:15 WeBPo03.7
Clinical Engineering and Risk Management in Healthcare Technological Process Using Architecture Framework 418-421
Signori, Marcos Roberto (Biomedical Engineering Inst., Federal Univ. of Santa Catarina, Brazil); Garcia, Renato (Univ. Federal de Santa Catarina)*
- 10:45-12:15 WeBPo03.8
Automatic Detection of Tic Activity in the Tourette Syndrome 422-425
Bernabei, Michel (Politecnico di Milano); Andreoni, Giuseppe (Politecnico di Milano); Mendez, Martin Oswaldo (Univ. Autonoma de San Luis Potosi); Piccini, Luca (Politecnico di Milano); Aletti, Federico (Politecnico di Milano); Sassi, Marco (Dept. of Neurosurgery, IRCCS Galeazzi, Milan, Italy); Porta, Mauro (IRCCS Galeazzi); Servello, Domenico (IRCCS Galeazzi); Preatoni, Ezio (Politecnico di Milano)*
- 10:45-12:15 WeBPo03.9
Adaptive Multi-Infusion Decision Support System for Multivariable Circulatory Management of Critically Ill Patients 426-429
Mason, David Glen (Univ. of Queensland); Bancroft, Jayne (Prince Charles Hospital, Brisbane, Queensland); Fraser, John F. (Prince Charles Hospital, Brisbane, Queensland)*
- 10:45-12:15 WeBPo03.10
Intelligent Shunt Agent for Gradual Shunt Removal 430-433
Al-Zubi, Nayel (Univ. of Liverpool); Alkharabsheh, Abdel Rahman (Univ. of Liverpool); Momani, Lina (Univ. of Liverpool); Al-Nuaimy, Waleed (Univ. of Liverpool)*
- 10:45-12:15 WeBPo03.11
A Physiological Model for Extracorporeal Oxygenation Controller Design 434-437
Walter, Marian (RWTH Aachen Univ.); Weyer, Sören (RWTH Aachen); Stollenwerk, Andre (RWTH Aachen); Kopp, Rüdger (UK Aachen); Arens, Jutta (RWTH Aachen); Leonhardt, Steffen (RWTH Aachen Univ.)*

10:45-12:15	WeBPo03.12
Image-Based Red Cell Counting for Wild Animals Blood	438-441
<i>Mauricio, Claudio Roberto Marquetto* (Unioeste – Western Parana State Univ., Brazil); Schneider, Fabio Kurt (Federal Univ. of Tech. Parana); Correa, Leonilda dos Santos (Laboratorio Ambiental – ITAIPU Binacional, Brazil)</i>	
10:45-12:15	WeBPo03.13
Computer Aided Surgery for Percutaneous Nephrolithotomy: Clinical Requirement Analysis and System Design	442-445
<i>Oliveira-Santos, Thiago* (ISTB – Inst. for Surgical Tech. & Biomechanics); Peterhans, Matthias (Univ. of Bern); Roth, Beat (Urology Dept., Inselspital, Bern, Switzerland); Reyes, Mauricio (MEM Research Center, Univ. Bern); Nolte, Lutz-Peter (Univ. of Bern); Thalmann, George N. (Urology Dept., Inselspital, Bern, Switzerland); Weber, Stefan (Univ. of Bern)</i>	
10:45-12:15	WeBPo03.14
Modeling of Ubiquitous Technology Integration Process in Health Services	446-449
<i>Cruz Castañeda, William Alberto* (Biomedical Engineering Inst. – Federal Univ. of Santa Catarina, Brazil); Garcia, Renato (Univ. Federal de Santa Catarina)</i>	
10:45-12:15	WeBPo03.15
Improvement of the Health Technology Management Process of the Public Health Services in Morelos Using the Six Sigma Methodology	450-453
<i>Becerril Alquicira, Adriana (Univ. Autónoma Metropolitana); Ortiz-Posadas, Martha* (Univ. Autónoma Metropolitana)</i>	
10:45-12:15	WeBPo03.16
Medical Software Management: A Failure Analysis Approach for Maintenance and Safety Plan	454-457
<i>Minati, Roberto (Univ. di Firenze); Dori, Fabrizio (Univ. di Firenze); Iadanza, Ernesto* (Univ. degli Studi di Firenze); Fregonara Medici, Mario (Azienda Ospedaliero Univ. Careggi)</i>	
WeBPo04: 10:45-12:15	Catalinas/Golden Horn
8.1.3 Assitive, Prosthetics and Orthotocs (Poster Session)	
10:45-12:15	WeBPo04.1
Freespace Estimation in an Autonomous Wheelchair Using a Stereoscopic Camera System	458-461
<i>Nguyen, Thanh Hai (Post & Telecommunication Inst. of Tech., HCM City); Vo, Kiet Tuan* (The Univ. of New South Wales)</i>	
10:45-12:15	WeBPo04.2
Voluntary Motion Support Control of Robot Suit HAL Triggered by Bioelectrical Signal for Hemiplegia	462-466
<i>Kawamoto, Hiroaki* (Univ. of Tsukuba); Stefan, Taal (Univ. of Tsukuba); Hafid, Niniss (CYBERDYNE Inc.); Hayashi, Tomohiro (Univ. of Tsukuba); Kamibayashi, Kiyotaka (Univ. of Tsukuba); Eguchi, Kiyoshi (Univ. of Tsukuba); Sankai, Yoshiyuki (Univ. of Tsukuba)</i>	
10:45-12:15	WeBPo04.3
Cable-Driven Elastic Parallel Humanoid Head with Face Tracking for Autism Spectrum Disorder Interventions	467-470
<i>Su, Hao (Worcester Polytechnic Inst.); Dickstein-Fischer, Laurie (Northeastern Univ.); Harrington, Kevin (WPI); Fu, Qiushi* (Arizona State Univ.); Lu, Weina (Worcester Polytechnic Inst.); Fischer, Gregory (Worcester Polytechnic Inst.)</i>	
10:45-12:15	WeBPo04.4
Assisted Navigation Based on Shared-Control, Using Discrete and Sparse Human-Machine Interfaces	471-474
<i>Lopes, Ana* (Inst. Politécnico de Tomar); Nunes, Urbano (Univ. of Coimbra)</i>	
10:45-12:15	WeBPo04.5
Treadmill Motor Current Based Real-Time Estimation of Anteroposterior Force During Gait	475-478
<i>Nakashima, Yasutaka* (Waseda Univ.); Ohki, Eiichi (Waseda Univ.); Ando, Takeshi (Waseda Univ.); Kobayashi, Yo (Waseda Univ.); Fujie, Masakatsu G. (Waseda Univ.)</i>	

10:45-12:15	WeBPo04.6
Preliminary Design of a Simple Passive Toe Exercise Apparatus with a Flexible Metal Hydride Actuator for Pressure Ulcer Prevention	479-482
<i>Ito, Shuichi* (Natl. Inst. of Advanced Industrial ScienceandTech.); Sato, Mitsuru (Showa Univ.); Hosono, Minako (the Univ. of Tokyo); Nakajima, Sawako (The Univ. of Tokyo); Yamashita, Kazuhiko (Tokyo Healthcare Univ.); Izumi, Takashi (Tokai Univ.)</i>	
10:45-12:15	WeBPo04.7
Feasibility of a Hybrid-FES System for Gait Restoration in Paraplegics	483-486
<i>Quintero, Hugo A.* (Vanderbilt Univ.); Goldfarb, Michael (Vanderbilt Univ.)</i>	
10:45-12:15	WeBPo04.8
Portable and Attachable Tele-Echography Robot System: FASTele	487-490
<i>Ito, Keiichiro* (Waseda Univ.); Sugano, Shigeki (Waseda Univ.); Iwata, Hiroyasu (Waseda Univ.)</i>	
10:45-12:15	WeBPo04.9
Algorithms for Target Prediction for Computer Users with Athetosis	491-494
<i>Peral Rodríguez, Sergio (Univ. of Valladolid); Ding, Dan (Univ. of Pittsburgh); Riviere, Cameron N* (Carnegie Mellon Univ.)</i>	
10:45-12:15	WeBPo04.10
Stiffness and Position Control of a Prosthetic Wrist by means of an EMG Interface	495-498
<i>Rao, Shodhan (Univ. of Twente); Carloni, Raffaella (Univ. of Twente); Stramigioli, Stefano* (Univ. of Twente)</i>	
10:45-12:15	WeBPo04.11
Bio-Inspired Mechanical Design of a Tendon-Driven Dexterous Prosthetic Hand	499-502
<i>Controzzi, Marco (Scuola Superiore Sant'Anna); Cipriani, Christian* (Scuola Superiore Sant'anna); Jehenne, Beryl (Univ. of Tech. of Compiègne); Donati, Marco (Scuola Superiore Sant'Anna); Carrozza, Maria Chiara (Scuola Superiore Sant'Anna)</i>	
10:45-12:15	WeBPo04.12
Autonomous Assistance Navigation for Robotic Wheelchairs in Confined Spaces	503-506
<i>Auat Cheein, Fernando A.* (Natl. Univ. of San Juan); De La Cruz, Celso (Univ. Federal do Espírito Santo); Bastos, Teodiano (Univ. Federal do Espírito Santo); Carelli, Ricardo (Inst. de Automatica, Natl. Univ. of San Juan)</i>	
10:45-12:15	WeBPo04.13
Using "Stall Detection" as an Auxiliary Mechanism for Sensing Obstacles and Hand Grasping in Arm Prosthesis	507-510
<i>Moreno, Démian* (Centro de Investigación y de Estudios Superiores del Inst. Politécnico Nacional); Ramírez-García, Alfredo (Centro de Investigación y de Estudios Avanzados del IPN); Leija, Lorenzo (Centro de Investigación y de Estudios Avanzados del Inst. Politecnico Nacional); Muñoz, Roberto (Centro de Investigación y de Estudios Avanzados del IPN); Vera, Arturo (Centro de Investigación y de Estudios Avanzados del Inst. Politecnico Nacional); Toledo Peral, Cinthya (Centro de Investigación y de Estudios Avanzados del IPN)</i>	
10:45-12:15	WeBPo04.14
Stumble Detection and Classification for an Intelligent Transfemoral Prosthesis	511-514
<i>Lawson, Brian* (Vanderbilt Univ.); Varol, Huseyin Atakan (Vanderbilt Univ.); Sup, Frank (Vanderbilt Univ.); Goldfarb, Michael (Vanderbilt Univ.)</i>	
10:45-12:15	WeBPo04.15
Biomechanical Conceptual Design of a Passive Transfemoral Prosthesis	515-518
<i>Unal, Ramazan* (Univ. of Twente); Carloni, Raffaella (Univ. of Twente); Hekman, Edsko (Univ. of Twente); Stramigioli, Stefano (Univ. of Twente); Koopman, Bart (Univ. of Twente)</i>	
10:45-12:15	WeBPo04.16
A Biomechanical Model for the Development of Myoelectric Hand Prosthesis Control Systems	519-523
<i>Peerdeman, Bart* (Univ. of Twente); Boere, Daphne (Roessingh Research & Development); Kallenberg, Laura (Roessingh Research & Development); Stramigioli, Stefano (Univ. of Twente); Misra, Sarthak (Univ. of Twente)</i>	

1.7.5 Modeling of Therapeutic and Diagnostic Systems (Poster Session)

- 10:45-12:15 WeBPo05.1
An Empirical Model of End-Tidal CO₂ Response to Minute Ventilation 524-527
Hahn, Jin-Oh (Univ. of British Columbia); Shrawane, Prasad (The Univ. of British Columbia); Dumont, Guy (Univ. of British Columbia); Ansermino, J. Mark (British Columbia's Children's Hospital)*
- 10:45-12:15 WeBPo05.2
Basic Study of Brain Injury Mechanism 528-531
Saito, Satoshi (Meiji Univ.); Kato, Kazuo (Meiji Univ.); Kurosawa, Yusuke (Meiji Univ.); Shindo, Yasuhiro (Meiji Univ.)*
- 10:45-12:15 WeBPo05.3
Thermal Injury Models for Optical Treatment of Biological Tissues: A Comparative Study 532-535
Fanjul-Vélez, Félix (Univ. of Cantabria); Ortega-Quijano, Noé (Univ. of Cantabria); Salas-García, Irene (Univ. of Cantabria); Arce-Diego, José L. (Univ. of Cantabria)*
- 10:45-12:15 WeBPo05.4
Application of Tikhonov and MTSVD Methods to Unfold Experimental X-Ray Spectra in the Radiodiagnostic Energy Range 536-539
Querol, Andrea (Polytechnic Univ. of Valencia); Gallardo, Sergio (Univ. Politécnica de Valencia); Rodenas Diago, Jose (Polytechnic Univ. of Valencia); Verdu, Gumersindo (Polytechnic Univ. of Valencia)*
- 10:45-12:15 WeBPo05.5
Towards Improved Sedation Control in Critically Ill Patients 540-543
Greenfield, Kathryn (Canterbury District Health Board); Dove, Richard (Canterbury District Health Board); Shaw, Geoffrey M (Christchurch Hospital); Robinson, Garry (Canterbury District Health Board)*
- 10:45-12:15 WeBPo05.6
Monitor-Decoupled Pharmacodynamics of Propofol in Children Using State Entropy As the Clinical End Point 544-547
Khosravi, Sara (Univ. of British Columbia); Hahn, Jin-Oh (Univ. of British Columbia); Dosani, Maryam (BC Children's Hospital); Dumont, Guy (Univ. of British Columbia); Ansermino, J. Mark (British Columbia's Children's Hospital)*
- 10:45-12:15 WeBPo05.7
Circuit Analysis Justifies a Reduced Mead's Model of Human Respiratory Impedance for Impulse Oscillometry Data 548-552
Ramos-Rocha, Carlos (Univ. of Texas at El Paso); Nazeran, Homayoun (The Univ. of Texas at El Paso); Goldman, Michael David (Univ. of California Los Angeles); Diong, Bill (Texas Christian Univ.)*
- 10:45-12:15 WeBPo05.8
Viability of the Inner Retina in a Novel Mouse Model of Retinitis Pigmentosa 553-556
O'Brien, Emily (Univ. of Melbourne, Natl. ICT Australia); Fletcher, Erica Lucy (The Univ. of Melbourne); Meffin, Hamish (Natl. ICT Australia); Burkitt, Anthony Neville (The Univ. of Melbourne); Grayden, David B. (The Univ. of Melbourne); Greferath, Ursula (The Univ. of Melbourne)*
- 10:45-12:15 WeBPo05.9
SAR Analysis of a Re-Entrant Resonant Cavity Applicator for Brain Tumor Hyperthermia Treatment with a 3-D Anatomical Human Head Model 557-560
Suzuki, Masataka (Meiji Univ.); Kato, Kazuo (Meiji Univ.); Mimoto, Naoki (Meiji Univ.); Shindo, Yasuhiro (Meiji Univ.)*
- 10:45-12:15 WeBPo05.10
Theoretical Simulation of the Dual-Heat-Flux Method in Deep Body Temperature Measurements 561-564
Huang, Ming (Univ. of Aizu); Chen, Wenxi (Univ. of Aizu)*
- 10:45-12:15 WeBPo05.11
Computation Electrical Variables Induced by Magnetic Stimulation in 3D Thigh Model 565-568
Moncada, Maria Elena (Inst. Tecnológico Metropolitano); Sarmiento, Consuelo (Fundación Clínica Valle del Lili); Martinez, Alfredo (Univ. del Valle)*

10:45-12:15 WeBPo05.12
Computational Tool for Modeling and Simulation of Mechanically Ventilated Patients 569-572
Hernandez, Alher Mauricio (Univ. of Antioquia); Mañanas, Miquel Angel (Technical Univ. of Catalonia (UPC)); Serna Higueta, Leidy Yanet (Univ. Politècnica de Catalunya)*

WeBPo06: 10:45-12:15 Catalinas/Golden Horn
1.2.8 Biomedical Modeling and Simulation I (Poster Session)

10:45-12:15 WeBPo06.1
Respiratory Impedance and Corresponding Phase-Constancy in the 7.5 to 247.5 Hz Frequency Interval for Healthy Subjects 573-576
Ionescu, Clara-Mihaela (Ghent Univ.); Orban, Istvan (Technical Univ. of Cluj Napoca, Romania); De Keyser, Robin (Ghent Univ.)*

10:45-12:15 WeBPo06.2
Electron Influence on the Reconstruction of a Linac 6 MeV Photon Spectra by Unfolding Methods 577-580
Juste, Belen (Polytechnic Univ. of Valencia); Miró, Rafael (Polytechnic Univ. of Valencia); Verdú, Gumersindo (Polytechnic Univ. of Valencia); Díez, Sergio (Hospital Clínic de València); Campayo, Juan Manuel (Hospital Clínic de València)*

10:45-12:15 WeBPo06.3
Modeling of Electromagnetic Stimulation of the Human Brain 581-584
Lazutkin, Dmitry (Ilmenau Univ. of Tech.); Husar, Peter (Ilmenau Univ. of Tech.)*

10:45-12:15 WeBPo06.4
Multispectral Acoustic Investigation of a Thyroid Geometrical Model 585-588
Gavriloaia, Gheorghe (Univ. of Pitesti); Gavriloaia, Mariuca-Roxana (Medical & Pharmaceutical Univ. of Bucharest)*

10:45-12:15 WeBPo06.5
Predictive Modeling of Glucose Metabolism using Free-Living Data of Type 1 Diabetic Patients 589-592
Georga, Eleni I. (Univ. of Ioannina); Protopappas, Vasilios C. (Univ. of Patras); Fotiadis, Dimitrios I. (Univ. of Ioannina)*

10:45-12:15 WeBPo06.6
An Automated Online Positioning System and Simulation Environment for Multi-Electrodes in Extracellular Recordings 593-597
Franke, Felix (Technische Univ. Berlin); Natora, Michal (TU Berlin); Meier, Philipp (Technische Univ. Berlin); Hagen, Espen (Norwegian Univ. of Life Sciences); Pettersen, Klas H. (Norwegian Univ. of Life Sciences); Linden, Henrik (Norwegian Univ. of Life Sciences); Einevoll, Gaute (Norwegian Univ. of Life Sciences); Obermayer, Klaus (Technische Univ. Berlin)*

10:45-12:15 WeBPo06.7
Is Pulse Transit Time a Good Indicator of Blood Pressure Changes During Short Physical Exercise in a Young Population? 598-601
Proença, Jorge (Univ. of Coimbra); Muehlsteff, Jens (Philips); Aubert, Xavier (Philips Research Laboratories Europe, Aachen, Germany); de Carvalho, Paulo (Univ. of Coimbra)*

WeBPo07: 10:45-12:15 Catalinas/Golden Horn
1.2.12 Signal Processing in Physiological Systems I (Poster Session)

10:45-12:15 WeBPo07.1
Automatic Wavelet Detrending Benefits to the Analysis of Cardiac Signals Acquired in a Moving Wheelchair 602-605
Pinheiro, Eduardo (Inst. de Telecomunicações); Postolache, Octavian (Inst. de Telecomunicações); Girão, Pedro (Inst. de Telecomunicações, & Inst. Superior Técnico, Technical Univ. of Lisbon)*

10:45-12:15 WeBPo07.2
Comparison of Systolic Time Interval Measurement Modalities for Portable Devices 606-609
de Carvalho, Paulo (Univ. of Coimbra); Paiva, Rui Pedro (Univ. of Coimbra); Couceiro, Ricardo (Univ. of Coimbra); Henriques, Jorge (Univ. of Coimbra); Antunes, Manual (Univ. of Coimbra); Quintal, Isabel (Centro Hospitalar de Coimbra); Muehlsteff, Jens (Philips); Aubert, Xavier (Philips Research Laboratories Europe, Aachen, Germany)*

10:45-12:15	WeBPo07.3
On the Use of Augmented Reality Techniques in Learning and Interpretation of Cardiologic Data	610-613
<i>Lamounier Jr., Edgard* (Federal Univ. of Uberlandia); Buccioli, Arthur (Minas Gerais State Univ.); Cardoso, Alexandre (Federal Univ. of Uberlandia); Soares, Alcimar (Federal Univ. of Uberlandia); Andrade, Adriano (Federal Univ. of Uberlandia)</i>	
10:45-12:15	WeBPo07.4
EEG Compression Using JPEG2000: How Much Loss Is Too Much?	614-617
<i>Higgins, Garry* (NUI, Galway); Faul, Stephen (Univ. College Cork); McEvoy, Robert (Univ. College Cork); McGinley, Brian (Natl. Univ. of Ireland Galway); Glavin, Martin (Natl. Univ. of Ireland); Marnane, Liam (Univ. College Cork); Jones, Edward (Natl. Univ. of Ireland Galway)</i>	
10:45-12:15	WeBPo07.5
Electrocardiographic T-Wave Peak-To-End Interval for Hypoglycemia Detection	618-621
<i>Nuryani, Nuryani* (Univ. of Tech. Sydney); Ling, Steve (Univ. of Tech. Sydney); Nguyen, Hung T. (Univ. of Tech., Sydney)</i>	
10:45-12:15	WeBPo07.6
Classifier of Intestinal Contractile Activity Degree Based on Internal Electroenterogram Recording	622-625
<i>Guimera-Tomas, Josep (I3BH, Univ. Polit�cnica de Valencia); Ye Lin, Yiyao* (Univ. Polit�cnica de Valencia); Garcia-Casado, Javier (Univ. Polit�cnica de Valencia); Prats-Boluda, Gema (I3BH, Univ. Polit�cnica de Valencia)</i>	
10:45-12:15	WeBPo07.7
Mechanomyographic Response During FES in Healthy and Paraplegic Subjects	626-629
<i>Krueger-Beck, Eddy* (Federal Technological Univ. of Paran�); Scheeren, Eduardo Mendon�a (Federal Technological Univ. of Paran�); Nogueira-Neto, Guilherme (State Univ. of Campinas); Button, Vera L�cia da Silveira Nantes (State Univ. of Campinas); Nohama, Percy (Univ. Tecnol�gica Federal do Paran�)</i>	
10:45-12:15	WeBPo07.8
Real Time Breathing Rate Estimation from a Non Contact Biosensor	630-633
<i>Shouldice, Redmond* (BiancaMed Ltd); Heneghan, Conor (BiancaMed); Petres, Gabor (Propix); Zaffaroni, Alberto Antonio (Biancamed Ltd); Boyle, Patricia (St Vincents Private Hospital); Mc Nicholas, Walter (St. Vincent's Univ. Hospital); de Chazal, Philip (BiancaMed Ltd)</i>	
10:45-12:15	WeBPo07.9
The Effect of Lossy ECG Compression on QRS and HRV Feature Extraction	634-637
<i>Twomey, Niall* (Univ. College Cork); Walsh, Noel (Natl. Univ. of Ireland Galway); McGinley, Brian (Natl. Univ. of Ireland Galway); Doyle, Orla Margaret (Univ. College Cork); Glavin, Martin (Natl. Univ. of Ireland); Jones, Edward (Natl. Univ. of Ireland Galway); Marnane, Liam (Univ. College Cork)</i>	
10:45-12:15	WeBPo07.10
R-Point Detection for Noise Affected ECG Recording through Signal Segmentation	638-641
<i>Galeano, Massimiliano (Univ. of Messina); Calisto, Andrea* (Univ. of Messina); Bramanti, Alessia (Univ. of Messina); Serrano, Salvatore (Univ. of Messina); Campobello, Giuseppe (Univ. of Messina); Azzerboni, Bruno (Univ. of Messina)</i>	
10:45-12:15	WeBPo07.11
Improving Phase Congruency for EEG Data Reduction	642-645
<i>Logesparan, Lojini* (Imperial College London); Rodriguez-Villegas, Esther (Imperial College London)</i>	
10:45-12:15	WeBPo07.12
Standard Filter Approximations for Low Power Continuous Wavelet Transforms	646-649
<i>Casson, Alexander James* (Imperial College London); Rodriguez-Villegas, Esther (Imperial College London)</i>	

- 10:45-12:15 WeBPo08.1
A 8.9-ENOB 2.5- μ W 150-KS/s Non-Binary Redundant Successive Approximation ADC in 0.18- μ m CMOS for Bio-Implanted Devices 650-653
 Chan, Kok Lim (Inst. of Microelectronics, A*STAR (Agency of Science), Tech. & Research, Singapore);
 Lee, Andreas Astuti (Inst. of Microelectronics, A*STAR (Agency of Science), Tech. & Research, Singapore);
 Yuan, Xiaojun (ICS Lab, Inst. of Microelectronics); Krishna, Kotlanka R. (Inst. of Microelectronics, Agency of Science, Tech. and Research, Singapore); Je, Minkyu* (Inst. of Microelectronics, A*STAR (Agency of Science, Tech. & Research))
- 10:45-12:15 WeBPo08.2
A Novel RF-Based Propagation Model with Tissue Absorption for Location of the GI Tract 654-657
 Wang, Lujia* (Shenzhen Inst. of Advanced Integration Tech., Chinese Academy of Science); Liu, Li (Shenzhen Inst. of Advanced Integration Tech., Chinese Academy of Sciences); Hu, Chao (Shenzhen Inst. of Advanced Tech.); Meng, Max Q.-H. (The Chinese Univ. of Hong Kong)
- 10:45-12:15 WeBPo08.3
Touch-Less Heartbeat Detection and Measurement-Based Cardiopulmonary Modeling 658-661
 Obeid, Dany* (IETR – INSA de Rennes); Sadek, Sawsan (Lebanese Univ.); Zaharia, Gheorghe (IETR-INSA de Rennes); El Zein, Ghaïs (IETR – INSA de Rennes)
- 10:45-12:15 WeBPo08.4
Bandwidth Tunable Amplifier for Recording Biopotential Signals 662-665
 Hwang, Sungkil (Tufts Univ.); Aninakwa, Kofi (Tufts Univ.); Sonkusale, Sameer* (Tufts Univ.)
- 10:45-12:15 WeBPo08.5
Bio-Recognition Capability of Streptomyces Sp. M7 Evaluated in Adverse Conditions for Use As a Biological Transducer in a Lindane Biosensor 666-669
 López Rodríguez, María Lorena* (Facultad de Ciencias Químicas, Univ. Nacional de Córdoba); Madrid, Rossana Elena (Univ. Nacional de Tucumán); Felice, Carmelo José (Univ. Nacional de Tucumán); Giacomelli, Carla E. (INFIQC, Facultad de Ciencias Químicas, Univ. Nacional de Tucumán)
- 10:45-12:15 WeBPo08.6
Novel Sensing Materials for Breath Analysis Devices 670-673
 Lo Schiavo, Sandra (Dept. of Inorganic Chemistry, Analytical Chemistry & Physical Chemistry, Univ. of Messina); Livoti, Letizia (Dept. of Inorganic Chemistry, Analytical Chemistry & Physical Chemistry, Univ. of Messina); Calisto, Andrea (Univ. of Messina); Bramanti, Alessia* (Univ. of Messina); Latino, Mariangela (Dept. of Chemical Science & Technologies, Univ. of Rome Tor Vergata); Donato, Nicola (Univ. of Messina – Faculty of Engineering); Neri, Giovanni (Dept. of Industrial Chemistry & Materials Engineering, Univ. of Messina)
- 10:45-12:15 WeBPo08.7
Diagnosis of Foot-And-Mouth Disease by Electrochemical Enzyme-Linked Immunoassay 674-676
 Longinotti, Gloria (INTI); Lloret, Paulina (INTI); Ybarra, Gabriel (INTI); Fraigi, Liliana* (INTI); Fraigi, Liliana (INTI); Malatto, Laura (INTI); Tropea, Salvador E. (INTI); Roberti, Mariano (INTI)
- 10:45-12:15 WeBPo08.8
Smart Hydrogel Based Microsensing Platform for Continuous Glucose Monitoring 677-679
 Tathireddy, Prashant* (Univ. of Utah); Avula, Mahender (Univ. of Utah); Lin, Genyao (Univ. of Utah); Hao, Seung Hei (Univ. of Utah); Guenther, Margarita (Technische Univ. Dresden); Volker, Schulz (Technische Univ. Dresden); Gerlach, Gerald (Technische Univ. Dresden); Magda, Jules (Univ. of Utah); Solzbacher, Florian (Univ. of Utah)
- 10:45-12:15 WeBPo08.9
LPV Control of Glucose for Diabetes Type I 680-683
 Sánchez-Peña, Ricardo S.* (CONICET & ITBA); Ghersin, Alejandro Simon (ITBA)

3.12.3 Body Sensor Networks and Telemetric Systems (Poster Session)

10:45-12:15

WeBPo09.1

Quantifying Show Jumping Horse Rider Expertise Using IMUs 684-687

Patterson, Matt (CLARITY Centre for Sensor Web Technologies); Doyle, Julie (CLARITY Centre for Sensor Web Technologies); Cahill, Emma (Univ. College Dublin); Caulfield, Brian (UCD); McCarhyPersson, Ulrik (Univ. College Dublin)*

10:45-12:15

WeBPo09.2

Miniaturized Antennas for Link between Binaural Hearing Aids 688-691

Chandra, Rohit (Lunds Univ.); Johansson, Anders (Lund Univ.)*

10:45-12:15

WeBPo09.3

Wireless Power Delivery for Wearable Sensors and Implants in Body Sensor Networks 692-695

Zhang, Fei (Univ. of Pittsburgh); Hackworth, Steven A. (Univ. of Pittsburgh); Liu, Xiaoyu (Univ. of Pittsburgh); Li, Chengliu (Univ. of Pittsburgh); Sun, Mingui (Univ. of Pittsburgh)*

10:45-12:15

WeBPo09.4

Utilizing Electromagnetic Shielding Textiles in Wireless Body Area Networks 696-699

Sung, Grace Hui-Hsia (Natl. Inst. of Information & CommunicationsTech.); Aoyagi, Takahiro (Natl. Inst. of Information & Communications Tech.); Hernandez, Macro (Natl. Inst. of Information & CommunicationsTech.); Hamaguchi, kiyoshi (Natl. Inst. of Information & CommunicationsTech.); kohno, Ryuji (NICT)*

10:45-12:15

WeBPo09.5

Wireless Powered Electronic Sensors for Biological Applications 700-703

Heer, Rudolf (Austrian Inst. of Tech.); Wissenwasser, Jürgen (AIT Austrian Inst. of Tech.); Milnera, Marcus (Austrian Inst. of Tech.); Farmer, Letizia (Seibersdorf Labor GmbH); Höpfner, Christine (Seibersdorf Labor GmbH); Vellekoop, Michael (Vienna Univ. of Tech.)*

10:45-12:15

WeBPo09.6

Low Power Wireless Acquisition Module for Wearable Health Monitoring Systems 704-707

Figueiredo, Celso (Univ. of Minho); Becher, Kai (Fraunhofer IBMT); Hoffmann, Klaus-Peter (Fraunhofer Inst.); Mendes, Paulo M. (Univ. of Minho)*

10:45-12:15

WeBPo09.7

Time Reversal Microwave Breast Imaging for Contrast-Enhanced Tumor Classification 708-711

Kosmas, Panagiotis (Kings College London); Laranjeira, Simao (King's College London); Dixon, Johnny (Kings College London); Li, Xiaodong (Kings College London); Chen, Yifan (Univ. of Greenwich)*

WeBPo10: 10:45-12:15

Catalinas/Golden Horn

4.1.6 Physiological Modeling: System Models (Poster Session)

10:45-12:15

WeBPo10.1

A Biomechanical Model of Spiculated Tumours under Mammographic Compressions 712-715

Wessel, Carolina (Univ. of Oxford); Schnabel, Julia (Univ. of Oxford); Brady, Michael (Univ. of Oxford)*

10:45-12:15

WeBPo10.2

Effects of Needle Placement Inaccuracies in Hepatic Radiofrequency Tumor Ablation 716-721

Khlebnikov, Rostislav (Graz Univ. of Tech.); Muehl, Judith (Technical Univ. of Graz)*

10:45-12:15

WeBPo10.3

A Computational Model of the Primary Auditory Neuron Activity 722-725

Michel, Christophe (INSERM U583); Nouvian, Regis (CNRS); Azevedo-Coste, Christine (DEMAR INRIA/LIRMM); Puel, Jean-Luc (INSERM-U583, Univ. Montpellier1); Bourien, Jerome (Inserm U583 / Univ. Montpellier 1)*

10:45-12:15

WeBPo10.4

Quantitative Analysis of Tumor Vascular Structure after Drug Treatment 726-729

Wang, Po (Univ. of Oxford); Kelly, Catherine (Univ. of Oxford); Harvey, Ann K. (Oxford Univ.); Qayum, Naseer (Univ. of Oxford); Muschel, Ruth (Univ. of Oxford); Brady, Michael (Univ. of Oxford)*

10:45-12:15	WeBPo10.5
Reduction of a Linear Complex Model for Respiratory System During Airflow Interruption	730-733
<i>Jabłoński, Ireneusz* (Wroclaw Univ. of Tech.); Mroczka, Janusz (Wroclaw Univ. of Tech.)</i>	
10:45-12:15	WeBPo10.6
Comparison of SAR in Realistic Fetus Models of Two Fetal Positions Exposed to Electromagnetic Wave from Business Portable Radio Close to Maternal Abdomen	734-737
<i>Akimoto, Shimpei* (Chiba Univ.); Nagaoka, Tomoaki (Nat'l. Inst. Info & Comm Tech); Saito, Kazuyuki (Chiba Univ.); Watanabe, Soichi (Nat'l Inst of Information & Comms Tech); Takahashi, Masaharu (Chiba Univ.); Ito, Koichi (Chiba Univ.)</i>	
10:45-12:15	WeBPo10.7
Cardiac Valve Annulus Manual Segmentation Using Computer Assisted Visual Feedback in Three-Dimensional Image Data	738-741
<i>Casero, Ramón* (Univ. of Oxford); Burton, Rebecca (Univ. of Oxford); Quinn, T. Alexander (Univ. of Oxford); Bollensdorff, Christian (Univ. of Oxford); Hales, Patrick (Univ. of Oxford); Schneider, Jurgen E. (Univ. of Oxford); Kohl, Peter (Univ. of Oxford); Grau, Vicente (Univ. of Oxford)</i>	
10:45-12:15	WeBPo10.8
A Control Theoretic Approach to Venom Immunotherapy with State Jumps	742-745
<i>Chang, H.J.* (Imperial College London); Astolfi, Alessandro (Imperial College London & Univ. of Rome)</i>	
10:45-12:15	WeBPo10.9
Modeling Bacterial Clearance Using Stochastic-Differential Equations	746-751
<i>Jeremic, Aleksandar* (McMaster Univ.); Atalla, Ashraf (Voith Turbo Inc)</i>	
10:45-12:15	WeBPo10.10
Multiscale Systems Modeling of the Tetralogy of Fallot	752-755
<i>Summers, Ronald* (Loughborough Univ.); Abdulla, Tariq (Loughborough Univ.); Imms, Ryan (Loughborough Univ.); Schleich, Jean-Marc (Hospital Pontchaillou); Carrault, Guy (Univ. de Rennes 1); Hernández, Alfredo I (Univ. of Rennes 1 & INSERM U642); Houyel, Lucille (Marie-Lannelongue Hospital)</i>	
WeBPo11: 10:45-12:15	Catalinas/Golden Horn
4.1.8 Algorithms and Tools for Bioinformatics and Simulation (Poster Session)	
10:45-12:15	WeBPo11.1
SVM-Based Spectral Matching for Metabolite Identification	756-759
<i>Zhou, Bin (Virginia Polytechnic Inst. & State Univ.); Cheema, Amrita (Georgetown Univ.); Resson, Habtom* (Georgetown Univ.)</i>	
10:45-12:15	WeBPo11.2
Shock-Induced Arrhythmogenesis in the Human Heart: A Computational Modelling Study	760-763
<i>Bernabeu, Miguel Oscar* (Univ. of Oxford); Wallman, Mikael (Univ. of Oxford); Rodriguez, Blanca (Oxford Univ.)</i>	
10:45-12:15	WeBPo11.3
Designing Antimicrobial Peptides with Weighted Finite-State Transducers	764-767
<i>Whelan, Christopher* (Oregon Health & Science Univ.); Roark, Brian (Oregon Health & Science Univ.); Sonmez, Kemal (Oregon Health & Science Univ.)</i>	
10:45-12:15	WeBPo11.4
Evolutionary Computation for the Design of a Stochastic Switch for Synthetic Genetic Circuits	768-774
<i>Hallinan, Jennifer* (Newcastle Univ.); Misirli, Goksel (Newcastle Univ.); Wipat, Anil (Newcastle Univ.)</i>	
10:45-12:15	WeBPo11.5
X-Chromosome Linked Recessive Diseases Model	775-778
<i>Del Vecchio, Carmen* (Univ. degli studi del Sannio); Bencivenni, Dimer (Univ. degli studi del Sannio); Durante Mangoni, Emanuele (Seconda Univ. degli Studi di Napoli)</i>	
10:45-12:15	WeBPo11.6
Flexible Modeling for Anatomically-Based Cardiac Conduction System Construction	779-782
<i>Romero, Daniel (Univ. Pompeu Fabra); Zimmerman, Viviana (Univ. Nacional del Comahue); Sebastian, Rafael (Univ. of Valencia); Frangi, Alejandro (Univ. Pompeu Fabra, Barcelona); Frangi, Alejandro* (Univ. Pompeu Fabra)</i>	

4.4.1 Biological Network Modeling (Poster Session)

10:45-12:15

WeBPo12.1

Unraveling the Conundrum of Seemingly Discordant Protein-Protein Interaction Datasets 783-786

Gupta, Shobhit (DoD BioTech. High Performance Computing Software Applications Inst.); Wallqvist, Anders (DoD BioTech. High Performance Software Applications Inst.); Bondugula, Rajkumar (DoD BioTech. High Performance Computing Software Applications Inst.); Ivanic, Joseph (DoD BioTech. High Performance Computing Software Applications Inst.); Reifman, Jaques* (U.S. Army Medical Research)

10:45-12:15

WeBPo12.2

Paired-Pulse Stimulation at Glutamatergic Synapses – Pre and Postsynaptic Components 787-790

Bouteiller, Jean-Marie Charles* (Univ. of Southern California); Allam, Sushmita (Univ. of Southern California); Greget, Renaud (Rhenovia Pharma); Ambert, Nicolas (Rhenovia Pharma); Hu, Eric (Univ. of Southern California); Bischoff, Serge (Rhenovia Pharma); Baudry, Michel (Univ. of Southern California); Berger, Theodore (Univ. of Southern California)

10:45-12:15

WeBPo12.3

Predicting the Target Genes of Intronic MicroRNAs Using Large-Scale Gene Expression Data 791-794

Radfar, Hossein* (Univ. of Toronto); Wong, Willy (Univ. of Toronto); Morris, Quaid (Univ. of Toronto)

10:45-12:15

WeBPo12.4

Identification of Gene Regulatory Networks from Time Course Gene Expression Data 795-798

Wu, FangXiang* (Univ. of Saskatchewan); Liu, LiZhi (Univ. of Saskatchewan); Xia, ZhongHang (Western Kentucky Univ.)

10:45-12:15

WeBPo12.5

Inference of an in Situ Epidermal Intracellular Signaling Cascade 799-802

Cursons, Joseph* (Univ. of Auckland); Hurley, Daniel (Univ. of Auckland); Angel, Catherine E. (Univ. of Auckland); Dunbar, Rod (Univ. of Auckland); Crampin, Edmund (Univ. of Auckland); Jacobs, Marc D (The Univ. of Auckland)

10:45-12:15

WeBPo12.6

Graph Theory-Based Measures As Predictors of Gene Morbidity 803-806

Massanet-Vila, Raimon (Univ. Politècnica de Catalunya); Caminal, Pere (Technical Univ. of Catalonia (UPC)); Perera, Alexandre* (Univ. Politècnica de Catalunya)

10:45-12:15

WeBPo12.7

Extracting Very Simple Diagnostic Rules from Microarray Data 807-810

Wang, Lipo* (Nanyang Technological Univ.); Chu, Feng (Nanyang Technological Univ.)

7.3.1 Biomaterials/Drug Delivery (Poster Session)

10:45-12:15

WeBPo13.1

Platforms for Controlled Release of Antibacterial Agents Facilitated by Plasma Polymerization 811-814

Vasilev, Krasimir* (Univ. of South Australia)

10:45-12:15

WeBPo13.2

Development of Conductive Polymer with Carbon Nanotubes for Regenerative Medicine Applications 815-818

Antoniadou, Eleni* (Univ. College of London); Cousins, Brian (Medical School, Univ. College of London); Seifalian, Alexander (Univ. College London)

10:45-12:15

WeBPo13.3

Spontaneous Patterning Obtained by Evaporation of Human Elastin-Like Polypeptide Solutions 819-822

Bandiera, Antonella* (Univ. di Trieste); Urbani, Ranieri (Univ. di Trieste, Dpt. Life Sciences); Sist, Paola (Univ. di Trieste, Dpt. Life Sciences)

10:45-12:15 WeBPo13.4
Osteogenic Differentiation of Mesenchymal Stem Cells Could Be Enhanced by Strontium 823-826
 Yang, Fan* (Chinese Academy of Sciences, Shenzhen Inst. of AdvancedTech. Chinese Academy of Sciences);
 Tu, Jie (Chinese Academy of Sciences, ShenzhenInst.ofAdvancedTech.); Yang, Dazhi (Nanomedical Tech.
 Center, Shenzhen Inst. ofAdvanced Tech., Chinese Academy of Sciences); Wang, Liping (Chinese Academy of
 Sciences, Shenzhen Inst. of Advanced Tech.); Cai, lintao (Nanomedical Tech. Center, Shenzhen Inst. of
 Advanced Tech., Chinese Academy of Sciences)

WeBPo14: 10:45-12:15 Catalinas/Golden Horn
7.4.1 Biomaterials/Cell Mechanics (Poster Session)

10:45-12:15 WeBPo14.1
Cell Sheet Stiffness Sensing without Taking Out from Culture Liquid 827-830
 Uchida, Ryohei* (Osaka Univ.); Tanaka, Nobuyuki (Osaka Univ.); Higashimori, Mitsuru (Osaka Univ.);
 Tadakuma, Kenjiro (Osaka Univ.); Kaneko, Makoto (Osaka Univ.); Kondo, Makoto (Waseda Univ.);
 Yamato, Masayuki (Tokyo Women's Medical Univ.)

10:45-12:15 WeBPo14.2
The Nucleus As a Central Structure in Defining the Mechanical Properties of Stem Cells 831-834
 Ribeiro, Alexandre* (Carnegie Mellon Univ.); Dahl, Kris Noel (Carnegie Mellon Univ.)

10:45-12:15 WeBPo14.3
Review of Studies on Modulating Enzyme Activity by Low Intensity Electromagnetic Radiation 835-838
 Vojisavljevic, Vuk (RMIT Univ.); Pirogova, Elena (RMIT Univ.); Cosic, Irena* (RMIT Univ.)

10:45-12:15 WeBPo14.4
A Biomimetic Three-Layered Compartmented Scaffold for Vascular Tissue Engineering 839-842
 Rainer, Alberto* (Univ. Campus Bio-Medico of Rome); Centola, Matteo (Univ. Campus Bio-Medico of Rome);
 Spadaccio, Cristiano (Univ. Campus Bio-Medico of Rome); De Porcellinis, Stefano (Biomatrica srl);
 Abbruzzese, Franca (Univ. Campus Bio-Medico of Rome); Genovese, Jorge A (Univ. Campus
 Bio-Medico of Rome); Trombetta, Marcella (Univ. Campus Bio-Medico of Rome)

10:45-12:15 WeBPo14.5
A G-CSF Functionalized PLLA Scaffold for Wound Repair: An in Vitro Preliminary Study 843-846
 Spadaccio, Cristiano (Univ. Campus Bio-Medico of Rome); Rainer, Alberto* (Univ. Campus Bio-Medico of
 Rome); De Porcellinis, Stefano (Biomatrica srl); Centola, Matteo (Univ. Campus Bio-Medico of Rome);
 Chello, Massimo (Univ. Campus Bio-Medico of Rome); De Marco, Federico (Regina Elena Inst. – Dept. of
 Virology); Trombetta, Marcella (Univ. Campus Bio-Medico of Rome); Genovese, Jorge A (Univ.
 Campus Bio-Medico of Rome)

WeC01: 14:30-16:00 Libertador A
1.1.2 Time Frequency Analysis of Biosignals (Oral Session)

14:30-14:45 WeC01.1
**Spectral Analysis of Single-Channel Airflow and Oxygen Saturation Recordings in
 Obstructive Sleep Apnea Detection** 847-850
 Álvarez, Daniel* (Univ. of Valladolid, CIF: Q4718001C); Gutierrez, Gonzalo Cesar (Univ. of Valladolid);
 Marcos, J. Victor (Univ. of Valladolid, CIF: Q4718001C); del Campo, Félix (Hospital del Río Hortega);
 Hornero, Roberto (Univ. of Valladolid)

14:45-15:00 WeC01.2
**Evaluation of Feature Extraction Techniques on Event-Related Potentials for Detection of
 Attention-Deficit/Hyperactivity Disorder** 851-854
 Castro-Cabrera, Paola (Univ. Nacional de Colombia Sede Manizales); Gomez-García, Jorge (Univ. Nacional de
 Colombia Sede Manizales); Restrepo, Francia (Univ. Autónoma de Manizales); Moscoso, Oscar (Univ.
 Autónoma de Manizales); Castellanos-Dominguez, Germán* (Univ. Nacional de Colombia)

15:00-15:15 WeC01.3
Analysis of Magnetic Resonance Spectroscopic Signals with Data-Based Autocorrelation Wavelets 855-858
 Schuck Junior, Adalberto* (UFRGS Federal Univ. of RGS); Lemke, Christina (UCL, SC – Phys – FYMA);
 Suvichakorn, Aimamorn (Univ. Catholique de Louvain); Antoine, Jean-Pierre (Univ. catholique de Louvain)

15:15-15:30 WeC01.4
Respiration-Induced Changes in Ear Photoplethysmography Relates to Relative Blood Volume During Hemodialysis 859-862
Javed, Faizan (Univ. of New South Wales); Chan, Gregory S H (The Univ. of New South Wales); Savkin, Andrey (Univ. of New South Wales); Middleton, Paul MacConachie (Univ. of New South Wales); Mackie, James (Prince of Wales Hospital, Sydney); Lovell, Nigel H (Univ. of New South Wales)*

15:30-15:45 WeC01.5
Real-Time Automatic Switching between Noise Suppression Algorithms for Deployment in Cochlear Implants 863-866
Gopalakrishna, Vanishree (Univ. of Texas at Dallas); Kehtarnavaz, Nasser (Univ. of Texas at Dallas); Loizou, Philipos (Univ. of Texas at Dallas); Panahi, Issa (Univ. of Texas at Dallas)*

15:45-16:00 WeC01.6
A Real-Time Weighted-Eigenvector MUSIC Method for Time-Frequency Analysis of Electrogastragram Slow Wave 867-870
Qin, Shujia (Shenyang Inst. of Automation Chinese Academy of Sciences); Miao, Lei (State Key Lab of Robotics, Shenyang Inst. of Automation, Chinese Academy of Sciences); Xi, Ning (Michigan State Univ.); Wang, Yuechao (Shenyang Inst. of Automation, Chinese Academy of Sciences); Yang, Chunmin (Air Force General Hospital)*

WeC02: 14:30-16:00 Libertador B
2.1.1 MR-Specific Image Reconstruction (Oral Session)

14:30-14:45 WeC02.1
High-Resolution Cardiac MRI Using Partially Separable Functions and Weighted Spatial Smoothness Regularization 871-874
Christodoulou, Anthony (Univ. of Illinois at Urbana-Champaign); Brinegar, Cornelius (Univ of Illinois at Urbana-Champaign); Haldar, Justin (Univ. of Illinois at Urbana-Champaign); Zhang, Haosen (Pittsburgh NMR Center for Biomedical Research); Wu, Yijun L. (Carnegie Mellon Univ.); Foley, Lesley (Carnegie Mellon Univ.); Hitchens, T. Kevin (Carnegie Mellon Univ.); Ye, Qing (Carnegie Mellon Univ.); Ho, Chien (Carnegie Mellon Univ.); Liang, Zhi-Pei (Univ. of Illinois at Urbana-Champaign)*

14:45-15:00 WeC02.2
Improved Compressed Sensing MRI with Multi-Channel Data Using Reweighted L1 Minimization 875-878
Chang, Ching-Hua (Texas A&M Univ.); Ji, Jim Xiuquan (Texas A&M Univ.)*

15:00-15:15 WeC02.3
Non-Iterative Relative Bias Correction for 3D Reconstruction of in Utero Fetal Brain MR Imaging 879-882
Kim, Kio (UCSF); Habas, Piotr A. (Univ. of California San Francisco); Rajagopalan, Vidya (UCSF); Scott, Julia (UCSF); Corbett-Detig, James (UCSF); Rousseau, François (CNRS – LSIIT); Glenn, Orit (UCSF); Barkovich, James (UCSF); Studholme, Colin (Univ. of California San Francisco)*

15:15-15:30 WeC02.4
Correction of Field Inhomogeneity Effects on Limited K-Space MRSI Data Using Anatomical Constraints 883-886
Peng, Xi (Univ. of Illinois at Urbana-Champaign); Nguyen, Hien (Univ. of Illinois at Urbana-Champaign); Haldar, Justin (Univ. of Illinois at Urbana-Champaign); Hernando, Diego (Univ of Illinois at Urbana-Champaign); Liang, Zhi-Pei (Univ. of Illinois at Urbana-Champaign)*

15:30-15:45 WeC02.5
Study of the Magnetic Interaction of a 4-Coil Array and Copper Shielding with a PET/MRI Using the Finite-Element Method 887-888
Rodriguez, Alfredo O (UAM, Iztapalapa); Solis-Najera, Sergio E. (UAM-Iztapalapa); Tomasi, Dardo (Natl. Inst. of Health)*

WeC03: 14:30-16:00 Libertador C
3.1.1 Sensors and Systems (Oral Session)

14:30-14:45 WeC03.1
Monitoring Voltage-Sensitive Membrane Impedance Change Using Radio Frequency Interrogation 889-894
Dharia, Sameera (Univ. of Utah); Rabbitt, Richard (Univ. of Utah)*

14:45-15:00	WeC03.2
Microphone Array Based Novel Infant Deafness Detector 895-898	
<i>Agnihotri, Chinmayee* (Siemens Corporate Research & Tech. – India); Subramani, Thiyagarajan (Siemens Corporate Research & Tech. – India); Kalyansundar, Archana (Siemens Corporate Research & Tech. – India)</i>	
15:00-15:15	WeC03.3
Pilot Study of Longitudinal Ultrasonic Sensor for Dynamic Volumetric Assessment of Gastroesophageal Reflux 899-902	
<i>Gao, Xuexin (Univ. of Calgary); Sadowski, Dan (Univ. of Alberta); Mintchev, Martin* (Univ. of Calgary)</i>	
15:15-15:30	WeC03.4
Design and Fabrication of Piezoelectric Microactuators Based on β-Poly(vinylidene Fluoride) Films for Microfluidic Applications 903-906	
<i>Cardoso, Vanessa (Univ. of Minho); Correia, Ramiro (Univ. of Minho); Rocha, Jose (Univ. of Minho); Lanceros-Méndez, Senentxu (Univ. of Minho); Minas, Graca* (Univ. of Minho)</i>	
15:30-15:45	WeC03.5
MRI Compatibility of Microfabricated Magnetic Actuators for Implantable Catheters: Mechanical Evaluations 907-910	
<i>Lee, Hyowon* (UCLA); Xu, Qing (UCLA); Ephrati, Jeremy (UCLA); Bergsneider, Marvin (Univ. of California, Los Angeles); Judy, Jack (UCLA)</i>	
15:45-16:00	WeC03.6
Detection of Respiratory Waveform During Bathing Using Non-Contact Electrodes 911-914	
<i>Nakajima, Kazuki* (Univ. of Toyama); Sekine, Katsuhisa (Kanazawa Univ.); Yamazaki, Katsuya (Univ. of Toyama); Tampo, Atsushi (Univ. of Toyama); Omote, Yuuichirou (Kanazawa Univ.); Fukunaga, Hiroshi (The Kansai Electric Power Co., Inc.); Yagi, Yasuko (The Kansai Electric Power Co., Inc.); Ishizu, Kyoji (The Kansai Electric Power Co., Inc.); Nakajima, Masanori (The Kansai Electric Power Co., Inc.); Tobe, Kazuyuki (Univ. of Toyama); Kobayashi, Masashi (Univ. of Toyama); Sasaki, Kazuo (Univ. of Toyama)</i>	
WeC04: 14:30-16:00	Retiro A
9.4.2 Instrumentation (Oral Session)	
14:30-14:45	WeC04.1
Development of a Point-Of-Care Device for the Quantification of Bilirubin in Cerebral Spinal Fluid 915-918	
<i>Beyette Jr., Fred R* (Univ. of Cincinnati); Booher, Blaine (Xanthostat Diagnostics Inc.); Drennan, James (Xanthostat Diagnostics Inc.); Carraher, Lee (Xanthostat Diagnostics Inc.); Butler, Josh (Univ. of Cincinnati); Bowman, Peggy (Univ. of Cincinnati); Clark, Joseph F (Univ. of Cincinnati); Wilsey, Philip (Univ. of Cincinnati)</i>	
14:45-15:00	WeC04.2
Instrumentation for the Analysis of Airflow Limitation by the Negative Expiratory Pressure Technique 919-922	
<i>Teixeira, Illene (Univ. do Estado do Rio de Janeiro); Nunes, Luiz* (Univ. do Estado do Rio de Janeiro); Melo, Pedro Lopes (Univ. do Estado do Rio de Janeiro)</i>	
15:00-15:15	WeC04.3
Instrumentation for Bedside Analysis of Swallowing Disorders 923-926	
<i>Greco, Catuscia (Univ. do Estado do Rio de Janeiro); Nunes, Luiz* (Univ. do Estado do Rio de Janeiro); Melo, Pedro Lopes (Univ. do Estado do Rio de Janeiro)</i>	
15:15-15:30	WeC04.4
A Contact-Free Respiration Monitor for Smart Bed and Ambulatory Monitoring Applications 927-930	
<i>Hart, Adam* (McGill Univ.); Tallevi, Kevin (Univ. Health Network); Wickland, David (The Centre for Global eHealth Innovation); Kearney, Robert Edward (McGill Univ.); Cafazzo, Joseph (Univ. Health Network)</i>	
15:30-15:45	WeC04.5
A Portable Device for the Clinical Assessment of Upper Limb Motion and Muscle Synergies 931-934	
<i>Murgia, Alessio* (Maastricht Univ.); Kerkhofs, Vincent (Maastricht Univ.); Savelberg, Hans (Maastricht Univ.); Meijer, Kenneth (NUTRIM School of Nutrition, Toxicology & Metabolism, Maastricht Univ. Medical Centre)</i>	
15:45-16:00	WeC04.6
“A Window on Tissue” – Using Facial Orientation to Control Endoscopic Views of Tissue Depth 935-938	
<i>Wachs, Juan Pablo* (Purdue Univ.); Vujjen, Kausheek (Purdue Univ.); Matson, Eric (Purdue Univ.); Adams, Stephen (Purdue Univ.)</i>	

1.3.2 Empirical Mode Decomposition in Biosignal Analysis (Oral Session)

14:30-14:45

WeC06.1

Online Heart Rate Estimation in Unstable Ballistocardiographic Records 939-942

Pinheiro, Eduardo (Inst. de Telecomunicações); Postolache, Octavian (Inst. de Telecomunicações);
Girão, Pedro (Inst. de Telecomunicações, & Inst. Superior Técnico, Technical Univ. of Lisbon)*

14:45-15:00

WeC06.2

Enhancement of Laplacian EEnG from Humans by Means of an EMD-Based Method 943-946

*Garcia-Casado, Javier (Univ. Politécnica de Valencia); Ye Lin, Yiyao (Univ. Politécnica de Valencia);
Prats-Boluda, Gema* (I3BH, Univ. Politécnica de Valencia); Guimera-Tomas, Josep (I3BH, Univ.
Politécnica de Valencia); Alberola-Rubio, Jose (I3BH, Univ. Politécnica de Valencia)*

15:00-15:15

WeC06.3

Application of the Empirical Mode Decomposition in the Study of Murmurs from Arterio-Venous Fistula Stenosis 947-950

Vásquez, Pablo (Lund Univ.); Munguia M., Marco (Natl. Univ. of Engineering);
Mandersson, Bengt (Lund Univ.); Mattsson, Elisabeth (Skane Univ. Hospital)*

15:15-15:30

WeC06.4

Multiparametric Detection of Epileptic Seizures Using Empirical Mode Decomposition of EEG Records 951-954

OROSCO, LORENA (Univ. Nacional de San Juan); Garces, M Agustina (Univ. Nacional de San Juan);
Laciar, Eric (Univ. Nacional de San Juan)*

15:45-16:00

WeC06.6

Artifact Reduction Based on Empirical Mode Decomposition (EMD) in Photoplethysmography for Pulse Rate Detection 959-962

*Wang, Qian (Shenzhen Inst. of Advanced Tech., Shenzhen, P.R. China); Yang, Ping (Univ. of British Columbia);
Zhang, Yuan-Ting* (The Chinese Univ. of Hong Kong)*

8.3.1 Surgical Robotics – Image-Guided Robotized Surgery (Mini Symposium)

14:30-14:45

WeC07.1

An Ingestible Wireless Capsule for Treatment of Obesity 963-966

*Kencana, Andy Prima (Nanyang Technological Univ.); Rasouli, Mahdi (Nanyang Technological Univ.);
Huynh, Van An (Nanyang Technological Univ.); Ting, Eng Kiat (Nanyang Technological Univ.);
Lai, Joshua Chong Yue (Nanyang Technological Univ.); Nguyen, Duc Quang Huy (Nanyang Technological
Univ.); Tan, Su-Lim (Nanyang Technological Univ.); Wong, Kai-Juan (Nanyang Technological Univ.);
Phee, Louis* (Nanyang Technological Univ.)*

14:45-15:00

WeC07.2

Motion Generation of Robotic Surgical Tasks: Learning from Expert Demonstrations 967-970

Reiley, Carol (Johns Hopkins Univ.); Plaku, Erion (Johns Hopkins Univ.); Hager, Gregory D (Johns Hopkins Univ.)*

15:00-15:15

WeC07.3

Robotic-Surgical Instrument Wrist Pose Estimation 971-974

*Fabel, Stephan (Univ. of Hawaii); Baek, Kyungim (Univ. of Hawaii-Manoa);
Berkelman, Peter* (Univ. of Hawaii-Manoa)*

15:15-15:30

WeC07.4

Virtual Environment to Evaluate Multimodal Feedback Strategies for Augmented Navigation of the Visually Impaired 975-978

Hara, Masayuki (École Polytechnique Fédérale de Lausanne); Shokur, Solaiman (EPFL); Yamamoto, Akio (The
Univ. of Tokyo); Higuchi, Toshiro (The Univ. of Tokyo); Gassert, Roger (ETH Zurich); Bleuler, Hannes (EPFL)*

15:30-15:45 WeC07.5
Design of a Surgical Robot with Dynamic Vision Control for Single Port Endoscopic Surgery 979-983
Kobayashi, Yo (Waseda Univ.); Tomono, Yu (Waseda Univ.); Sekiguchi, Yuta (Waseda Univ.); Watanabe, Hiroki (Waseda Univ.); Toyoda, Kazutaka (Waseda Univ.); Konishi, Kozo (Kyusyu Univ. Hospital); Hashizume, Makoto (Kyushu Univ.); Fujie, Masakatsu G. (Waseda Univ.)*

15:45-16:00 WeC07.6
Stochastic Approach to Error Estimation for Image-Guided Robotic Systems 984-987
Haidegger, Tamas (Budapest Univ. of Tech. & Economics); Gyori, Sandor (Budapest Univ. of Tech. & Economics); Benyo, Balazs Istvan (Szechenyi Istvan Univ.); Benyo, Zoltan (Budapest Univ. of Tech. & Economics)*

WeC08: 14:30-16:00 Martin Fierro 2
1.7.3 SVM's Applied to Biosignal Analysis (Oral Session)

14:30-14:45 WeC08.1
Weighted LS-SVM for Function Estimation Applied to Artifact Removal in Bio-Signal Processing 988-991
Caicedo Dorado, Alexander (Katholieke Univ. Leuven); Van Huffel, Sabine (Katholieke Univ. Leuven)*

14:45-15:00 WeC08.2
Support Vector Machine Classification of Multi-Channel EEG Traces: A New Tool to Analyze the Brain Response to Morphine Treatment 992-995
Graversen, Carina (Aalborg Hospital, Mech-Sense, Dept. of Gastroenterology); Drewes, Asbjørn Mohr (Aalborg Hospital, Mech-Sense, Dept. of Gastroenterology); Farina, Dario (Aalborg Univ.)*

15:00-15:15 WeC08.3
Non-Invasive Intracranial Pressure Estimation Using Support Vector Machine 996-999
Chacón, Max (Univ. de Santiago de Chile, USACH.); Pardo, Carlos (Informatics Dept. of Univ. de Santiago de Chile (USACH)); Puppo, Corina (Emergency Dept., Univ. de la República School of Medicine, Montevideo, Uruguay); Curilem, Millaray (Univ. de La Frontera); Landerretche, Jean (Medicine Faculty of Univ. de Santiago de Chile)*

15:15-15:30 WeC08.4
Automatic Error Detection in the Clinical Measurement of Gastric Impedance Spectra 1000-1003
Godínez García, María de Montserrat (Univ. Autónoma Metropolitana); Yanez-Suarez, Oscar (Univ. Autónoma Metropolitana); Sacristan, Emilio (Univ. Autónoma Metropolitana)*

15:30-15:45 WeC08.5
Detection of Periods of Food Intake Using Support Vector Machines 1004-1007
Lopez-Meyer, Paulo (Clarkson Univ.); Schuckers, Stephanie (Clarkson Univ.); Makeyev, Oleksandr (Clarkson Univ.); Sazonov, Edward (Univ. of Alabama)*

15:45-16:00 WeC08.6
A Comprehensive Motor Symptom Monitoring and Management System: The Bradykinesia Case 1008-1011
Cancela, Jorge (Univ. Politécnica de Madrid); Pansera, Mario (Univ. Politécnica de Madrid); Arredondo, María Teresa (Technical Univ. of Madrid); Estrada, Juan Jacobo (Polytechnic Univ. of Madrid); Pastorino, Matteo (Univ. Politécnica de Madrid); Pastor, Laura (Univ. Politécnica de Madrid); Villalar, Juan Luis (Technical Univ. of Madrid)*

WeC09: 14:30-16:00 Ombu A
3.2.1 Optical and Photonic Sensors and Systems (Oral Session)

14:30-14:45 WeC09.1
On-Chip Integrated Lensless Microscopy Module for Optical Monitoring of Adherent Growing Mammalian Cells 1012-1015
Li, Wei (Fraunhofer Inst. for Biomedical Engineering); Knoll, Thorsten (Fraunhofer Inst. for Biomedical Engineering); Thielecke, Hagen (Fraunhofer Inst. for Biomedical Engineering)*

14:45-15:00 WeC09.2
OFSETH: A Breathing Motions Monitoring System for Patients under MRI 1016-1019
De jonckheere, Julien (CHRU de Lille); Jeanne, Mathieu (CHRU de Lille); Narbonneau, François (Multitel); Paquet, Bernard (Centexbel); Kinet, Damien (Multitel); Logier, Régis (CHRU de Lille)*

15:00-15:15	WeC09.3
Preliminary Assessment of Abdominal Organ Perfusion Utilizing a Fiber Optic Photoplethysmographic Sensor 1020-1023	
<i>Hickey, Michelle (City Univ.); Samuels, Neal (St Bartholomew's Hospital); Randive, Nilesch (St Bartholomew's Hospital); Langford, Richard (St Bartholomew's Hospital); Kyriacou, Panayiotis* (City Univ.)</i>	
15:15-15:30	WeC09.4
Evaluation of a Multimode Photoplethysmographic Sensor During Cuff-Induced Hypoperfusion 1024-1027	
<i>Muhammad, Shafique (City Univ. London); Phillips, Justin (City Univ.); Kyriacou, Panayiotis* (City Univ.)</i>	
15:30-15:45	WeC09.5
Bacterial Biofilm Disruption Using Laser Generated Shockwaves 1028-1032	
<i>Taylor, Zachary* (UCLA); Navarro, Artemio (UCLA); Kealey, Colin (UCLA); Beenhouwer, David (UCLA); Haake, David (UCLA); Grundfest, Warren S. (UCLA); Gupta, Vijay (UCLA)</i>	
15:45-16:00	WeC09.6
High-Efficiency Optical Systems for Interrogation of Dermally-Implanted Sensors 1033-1036	
<i>Long, Ruiqi (Texas A&M Univ.); McShane, Mike* (Texas A&M Univ.)</i>	
WeC10: 14:30-16:00	Ombu B
10.2.1 eHealth, mHealth, telehealth I (Oral Session)	
14:30-14:45	WeC10.1
Mobile Healthcare Information Management Utilizing Cloud Computing and Android OS 1037-1040	
<i>Doukas, Charalampos* (Univ. of the Aegean); Pliakas, Thomas (Univ. of the Aegean); Maglogiannis, Ilias (Univ. of Central Greece)</i>	
14:45-15:00	WeC10.2
e_Disease Management. A system for the Management of the Chronic Conditions 1041-1044	
<i>Guillen, Sergio* (Inst. Itaca Valencia, Spain); Meneu, Teresa (Polytechnic Univ. of Valencia); Serafin, Riccardo (TSB Soluciones Tecnologicas para la Salud y Bienestar); Arredondo, María Teresa (Technical Univ. of Madrid); Castellano, Elena (Tecnologías para la Salud y el Bienestar SA); Valdivieso, Bernardo (Hospital Univ. La Fe)</i>	
15:00-15:15	WeC10.3
An Overview of Recent End-To-End Wireless Medical Video Telemedicine Systems Using 3G 1045-1048	
<i>Panayides, Andreas (Univ. of Cyprus); Pattichis, Constantinos* (Univ. of Cyprus); Pattichis, Marios (Univ. of New Mexico,); Schizas, Christos (Univ. of Cyprus); Spanias, Andreas (Arizona State Univ.); Kyriacou, Efthymoulos (Frederick Univ. Cyprus)</i>	
15:15-15:30	WeC10.4
Integration of Heterogeneous Biomedical Sensors into an ISO/IEEE 11073 Compliant Application 1049-1052	
<i>Fioravanti, Alessio* (Technical Univ. of Madrid); Fico, Giuseppe (Technical Univ. of Madrid); Arredondo, María Teresa (Technical Univ. of Madrid); Salvi, Dario (Technical Univ. of Madrid); Villalar, Juan Luis (Technical Univ. of Madrid)</i>	
15:30-15:45	WeC10.5
Personalized Health Applications in the Web 2.0: The Emergence of a New Approach 1053-1056	
<i>Fernandez-Luque, Luis* (Northern Research Inst. Tromsø (Norut)); Karlsen, Randi (Univ. of Tromsø); Krogstad, Trine (Norwegian Centre for Integrated Care & Telemedicine (NST), Univ. Hospital of North Norway); Burkow, Tatjana M. (Univ. Hospital of North-Norway); Vognild, Lars K. (Northern Research Inst. Tromsø (Norut))</i>	
15:45-16:00	WeC10.6
Innovation in Health Care Technology: Is It Part of the Problem or Part of the Solution? Ehealth Gives the Answer 1057-1060	
<i>Colas, Javier* (Medtronic Iberica); Guillen, Alejandra (Medtronic Spain)</i>	

14:30-14:45		WeC11.1
Transcription Factor Activity Inference Based on Particle Swarm Optimization and Fast Network Component Analysis 1061-1064		
<i>Chen, Wei* (Univ. of Hong Kong); Chang, Chunqi (The Univ. of Hong Kong); Hung, Y.S. (The Univ. of Hong Kong)</i>		
14:45-15:00		WeC11.2
Finding Discriminative Subtypes of Aggressive Brain Tumours Using Magnetic Resonance Spectroscopy 1065-1068		
<i>Colas, Fabrice* (Univ. of California Los Angeles); Kok, Joost N. (Leiden Univ.); Vellido, Alfredo (Dept. de Llenguatges i Sistemes Informatics, Univ. Politecnica de Catalunya)</i>		
15:00-15:15		WeC11.3
How Many Clusters to Report: A Recursive Heuristic 1069-1072		
<i>Carlis, John* (Univ. of Minnesota); Bruso, Kelsey (Univ. of Minnesota / Unisys Corp.)</i>		
15:15-15:30		WeC11.4
PSS-SQL: Protein Secondary Structure – Structured Query Language 1073-1076		
<i>Mrozek, Dariusz* (Silesian Univ. of Tech.); Małysiak-Mrozek, Bożena (Inst. of Informatics, Silesian Univ. of Tech., Gliwice, Poland); Kozielski, Stanislaw (Inst. of Informatics, Silesian Univ. of Tech., Gliwice, Poland)</i>		
15:30-15:45		WeC11.5
Fast Orthogonal Search for Genetic Feature Selection 1077-1080		
<i>Nahlawi, Layan* (Queen's Univ.); Mousavi, Parvin (Queen's Univ.)</i>		
15:45-16:00		WeC11.6
A Knowledge Engineering Approach to Recognizing and Extracting Sequences of Nucleic Acids from Scientific Literature 1081-1084		
<i>García-Remesal, Miguel* (Univ. Politécnica de); Maojo, Víctor (School of Computer Science. Univ. Politécnica de Madrid); Crespo, José (School of Computer Science. Univ. Politécnica de Madrid)</i>		

14:30-14:45		WeC13.1
Design of a Pulse Oximeter for Price Sensitive Emerging Markets 1085-1088		
<i>Jones, Zach* (Economedics Inc.); Woods, Eric (Economedics Inc.); Nielson, Dennis (UCSF Children's Hospital); Mahadevan, S.V. (Stanford Univ. School of Medicine)</i>		
14:45-15:00		WeC13.2
Development of a Microbicide-Releasing Diaphragm As an HIV Prevention Strategy 1089-1092		
<i>Major, Ian* (Queen's Univ. Belfast)</i>		
15:00-15:15		WeC13.3
Low-Cost, Portable Optical Imaging Systems for Cancer Diagnosis 1093-1096		
<i>Pierce, Mark* (Rice Univ.); Richards-Kortum, Rebecca (Rice Univ.)</i>		
15:15-15:30		WeC13.4
Non-Instrumented Nucleic Acid Amplification (NINA): Instrument-Free Molecular Malaria Diagnostics for Low-Resource Settings 1097-1099		
<i>LaBarre, Paul* (PATH)</i>		
15:30-15:45		WeC13.5
Designing an Early Stage Prototype of a Neonatal Incubator for Poor Settings: Lessons Learned 1100-1103		
<i>Olson, Kristian (CIMIT, MGH); Caldwell, Aya* (CIMIT, MGH)</i>		
15:45-16:00		WeC13.6
The R Value of Global Health (Conserving Energy to Save Lives) 1104-1107		
<i>McCormick, Bruce* (Savsu Technologies); Koenig, Danial (Savsu Technologies)</i>		

WeC14: 14:30-16:00	Auditorium
11.3.2 Student Session: Tips on Effective Presentation Design and Delivery (Mini Symposium)	
14:30-14:45	WeC14.1
Tips on Effective Presentation Design and Delivery 1108-1108	
<i>James, Christopher (Univ. of Warwick); Linte, Cristian A.* (Robarts Research Inst.)</i>	
WeDPo01: 16:00-17:30	Catalinas/Golden Horn
10.5.4 Data Mining and Signal Processing in Health IT (Poster Session)	
16:00-17:30	WeDPo01.1
Computer-Mediated Emotional Regulation: Detection of Emotional Changes Using Non-Parametric Cumulative Sum 1109-1112	
<i>Leon, Enrique* (Fatronik-Tecnalia); Montalban, Iraitz (Fatronik – Tecnalia); Schlatter, Sarah (Univ. of Rhode Island); Dorronsoro, Inigo (Fatronik)</i>	
16:00-17:30	WeDPo01.2
Wireless Remote Monitoring of Atrial Fibrillation Using Reconstructed 12-Lead ECGs 1113-1118	
<i>Vukajlovic, Dejan (Dedinje Cardiovascular Inst., Belgrade, Serbia); Bojovic, Bosko (NewCardio, Inc); Ljupco, Hadzиеvski (NewCardio, Inc); George, Samuel (NewCardio, Inc); Gussak, Ihor (NewCardio, Inc); Panescu, Dorin* (NewCardio, Inc.)</i>	
16:00-17:30	WeDPo01.3
Extracting Footfalls from Voxel Data 1119-1122	
<i>Stone, Erik* (Univ. of Missouri); Anderson, Derek (Univ. of Missouri); Skubic, Marjorie (Univ. of Missouri); Keller, James M (Univ. of Missouri)</i>	
16:00-17:30	WeDPo01.4
DiseaseAtlas: Multi-Facet Visual Analytics for Online Disease Articles 1123-1126	
<i>Sun, Jimeng* (IBM T.J. Watson Research Center); Gotz, David (IBM); Cao, Nan (Hong Kong Univ of Science & Tech.)</i>	
16:00-17:30	WeDPo01.5
Compressive Sensing: From “Compressing While Sampling” to “Compressing and Securing While Sampling” 1127-1130	
<i>Rodriguez-Villegas, Esther* (Imperial College London); Abdulghani, Amir (Imperial College London)</i>	
16:00-17:30	WeDPo01.6
Detection of Premature Ventricular Beats in ECG Records Using Bayesian Networks Involving the P-Wave and Fusion of Results 1131-1134	
<i>Oliveira, Lorena Sophia Campos* (Federal Univ. of Espirito Santo); Andreao, Rodrigo (Federal Inst. of Espirito Santo); Sarcinelli-Filho, Mario (Federal Univ. of Espirito Santo)</i>	
16:00-17:30	WeDPo01.7
Similarity Retrieval of Cardiac Reports 1135-1141	
<i>Syeda-Mahmood, Tanveer* (IBM Almaden Research Center)</i>	
WeDPo02: 16:00-17:30	Catalinas/Golden Horn
10.5.5 Decision Support Methods I (Poster Session)	
16:00-17:30	WeDPo02.1
Robust Channel Identification Scheme: Solving Permutation Indeterminacy of ICA for Artifacts Removal from ECG 1142-1145	
<i>Acharyya, Amit* (Univ. of Southampton); Maharatna, Koushik (Univ. of Southampton); Al-Hashimi, Bashir M (Univ. of Southampton); Mondal, Sayanta (Imagination Tech.)</i>	
16:00-17:30	WeDPo02.2
Sound Event Detection in Remote Health Care – Small Learning Datasets and Over Constrained Gaussian Mixture Models 1146-1149	
<i>Montalvao, Jugurta (Univ. of Sergipe, São Cristovao); Istrate, Dan* (ESIGETEL); Boudy, Jerome (it-sudparis); Mouba, Joan (ESIGETEL)</i>	

16:00-17:30	WeDPo02.3
Telemedicine Enabled Remote Critical Care Ventilator 1150-1153	
<i>Seifert, Gregory John (Advanced Medical Electronics); Hedin, Daniel* (Advanced Medical Electronics); Dahlstrom, Robert (Advanced Medical Electronics); Havey, Gary (Advanced Medical Electronics Corp.)</i>	
16:00-17:30	WeDPo02.4
RESPLA: A Decision Support Framework for Emergency Resource Planning 1154-1157	
<i>Inampudi, Venkata Srihari* (Univ. of Massachusetts, Amherst); Ganz, Aura (Univ. of Massachusetts, Amherst)</i>	
16:00-17:30	WeDPo02.5
ANTEROCOD: Actuarial Survival Curves Applied to Medical Coding Support for Chronic Diseases 1158-1161	
<i>Lecornu, Laurent* (GET ENST Bretagne); Le Guillou, Clara (Univ. Hospital); Le Saux, Frederic (Telecom Bretagne); Hubert, Matthieu (CHRU Brest); Puentes, John (TELECOM Bretagne – INSERM); Cauvin, Jean-Michel (Univ. Hospital (CHU))</i>	
16:00-17:30	WeDPo02.6
Automatic Decision Using Dirty Databases: Application to Prostate Cancer Diagnosis 1162-1165	
<i>Marin, Oscar R. (Univ. of Alicante); Ruiz Fernandez, Daniel* (Univ. of Alicante); Soriano Paya, Antonio (Univ. of Alicante); Delgado, Francisco J. (General Hospital of Elche)</i>	
16:00-17:30	WeDPo02.7
An Expert System for Hydrocephalus Patient Feedback 1166-1169	
<i>Alkharabsheh, Abdel Rahman* (Univ. of Liverpool); Momani, Lina (Univ. of Liverpool); Al-Zubi, Nayel (Univ. of Liverpool); Al-Nuaimy, Waleed (Univ. of Liverpool)</i>	
16:00-17:30	WeDPo02.8
A Method for Clinical and Physiological Event Stream Processing 1170-1173	
<i>Kamaleswaran, Rishikesan* (Univ. of Ontario Inst. of Tech.); McGregor, Carolyn (Univ of Ontario Inst of Tech.); Eklund, J. Mikael (Univ. of Ontario Inst. of Tech)</i>	
16:00-17:30	WeDPo02.9
Fuzzy Cognitive Maps for Medical Decision Support – A Paradigm from Obstetrics 1174-1177	
<i>Stylios, Chrysostomos* (TEI of Epirus); Georgopoulos, Voula (Technological Educal Inst of Patras)</i>	

WeDPo03: 16:00-17:30	Catalinas/Golden Horn
9.4.3 Patient Monitoring Devices and Techniques Poster (Poster Session)	

16:00-17:30	WeDPo03.1
Real-Time Sleep Quality Assessment Using Single-Lead ECG and Multi-Stage SVM Classifier 1178-1181	
<i>Bsoul, Majdi (Alcatel-Lucent); Minn, Hlaing (Univ. of Texas at Dallas); Nourani, Mehrdad (Univ. of Texas at Dallas); Gupta, Gopal (Univ. of Texas Dallas); Tamil, Lakshman* (Univ. of Texas at Dallas)</i>	
16:00-17:30	WeDPo03.2
A Portable Self-Sensing Rheometer for Investigation and Therapy of Swallowing Disorders 1182-1185	
<i>O'Leary, Mark Terence (Univ. College London); Hanson, Ben Mark* (Univ. College London, UK)</i>	
16:00-17:30	WeDPo03.3
Electronic Temperature Monitoring During the Decompression Surgery of the Facial Nerve 1186-1189	
<i>M. C. Paula, Patricia* (Univ. of Brasilia); S. F. R. Rodrigues, Suelia (UnB-Gama Faculty, Univ. of Brasilia); Altoe, Mirella Lorrainy (Univ. of Brasilia); Larissa S. dos Santos, Larissa (Univ. of Brasilia – UnB – Brazil); da Rocha, Adson F. (Univ. of Brasilia)</i>	
16:00-17:30	WeDPo03.4
Intraoperative Multichannel Audio-Visual Information Recording and Automatic Surgical Phase and Incident Detection 1190-1193	
<i>Suzuki, Takashi* (Tokyo Women's Medical Univ.); Sakurai, Yasuo (Tokyo Women's Medical Univ.); Yoshimitsu, Kitaro (Tokyo Women's Medical Univ.); Nambu, Kyojiro (Tokyo Women's Medical Univ.); Muragaki, Yoshihiro (Tokyo Women's Medical Univ.); Iseki, Hiroshi (Tokyo Women's Medical Univ.)</i>	

16:00-17:30	WeDPo03.5
PhysioDoloris: A Monitoring Device for Analgesia / Nociception Balance Evaluation Using Heart Rate Variability Analysis 1194-1197	
<i>Logier, Regis* (CHRU de Lille); Jeanne, Mathieu (CHRU de Lille); De jonckheere, Julien (CHRU de Lille); Dassonneville, Alain (CHRU de Lille); Tavernier, Benoit (CHRU de Lille)</i>	
16:00-17:30	WeDPo03.6
Determining Levels of Arousal Using Electrocardiography: A Study of HRV During Transcranial Magnetic Stimulation 1198-1201	
<i>Goldie, Jessica* (Univ. of Ontario Inst. of Tech.); McGregor, Carolyn (Univ of Ontario Inst of Tech.); Murphy, Bernadette (Univ. of Ontario Inst. of Tech.)</i>	
16:00-17:30	WeDPo03.7
Technological Platform for Biomechanical Analysis of Static and Dynamic Tests of Upper and Lower Limbs 1202-1205	
<i>Rodrigo, Alvarado (UPIBI-IPN); Chairez Oria, Isaac* (UPIBI-IPN); Garcia, Alejandro (CINVESTAV-IPN); Alberto, Luviano (CINVESTAV-IPN); Adriana, Rivera (UPIBI-IPN); Rodriguez, Alberto (UPIBI-IPN); Rodriguez, Neftali (UPIBI-IPN)</i>	
16:00-17:30	WeDPo03.8
Method to Observe Hemodynamic and Metabolic Changes During Hemodiafiltration Therapy with Exercise 1206-1209	
<i>Cadena, Miguel* (Univ. Autonoma Metropolitana); Azpiroz-leehan, Joaquin (Univ. Autonoma Metropolitana)</i>	
WeDPo04: 16:00-17:30	Catalinas/Golden Horn
9.1.2 Instrumentation Poster (Poster Session)	
16:00-17:30	WeDPo04.1
Fluorescence and Diffuse Reflectance Spectroscopy for Early Cancer Detection Using a New Strategy towards the Development of a Miniaturized System 1210-1213	
<i>Ferreira, Debora (Univ. of Minho); Coutinho, Paulo (Univ. do Minho); Castanheira, Elisabete M. S. (Univ. do Minho); Correia, Higino (Univ. of Minho); Minas, Graca* (Univ. of Minho)</i>	
16:00-17:30	WeDPo04.2
A New Drip Infusion Solution Monitoring System with a Free-Flow Detection Function 1214-1217	
<i>Ogawa, Hidekuni* (Hiroshima Inst. of Tech.); Maki, Hiromichi (Hiroshima Inst. of Tech.); Tsukamoto, Sosuke (Hiroshima Inst. of Tech.); Yonezawa, Yoshiharu (Hiroshima Inst. of Tech.); Amano, Hikaru (Hiroshima Inst. of Tech.); Caldwell, Morton (Caldwell Biomedical Electronics)</i>	
16:00-17:30	WeDPo04.3
Microwave Tomographic Imaging for Osteoporosis Screening 1218-1221	
<i>Zhou, Tian* (Dartmouth College); Meaney, Paul (Dartmouth College); Pallone, Matthew (Dartmouth College); Geimer, Shireen (Dartmouth College); Paulsen, Keith (Dartmouth College)</i>	
16:00-17:30	WeDPo04.4
Proportional Mechanical Ventilation through PWM Driven On/off Solenoid Valve 1222-1225	
<i>Sardellitti, Irene* (italian Inst. of Tech.); Cecchini, Stefano (Univ. Campus Bio-Medico of Rome); Silvestri, Sergio (Univ. Campus Bio-Medico); Caldwell, Darwin G. (Italian Inst. of Tech.)</i>	
16:00-17:30	WeDPo04.5
A Blood Pressure Monitor with Robust Noise Reduction System under Linear Cuff Inflation and Deflation 1226-1229	
<i>Usuda, Takashi* (Nihon Kohden Corp.); Kobayashi, Naoki (Nihon Kohden Corp.); Takeda, Sunao (Tokyo Univ. of Engineering); Kotake, Yoshifumi (Toho Univ. School of Medicine)</i>	
16:00-17:30	WeDPo04.6
Design and Analysis of an Actuated Endoscopic Grasper for Manipulation of Large Body Organs 1230-1233	
<i>Mirbagheri, Alireza* (Sharif Univ. of Tech.); Farahmand, Farzam (Sharif Univ. of Tech.)</i>	
16:00-17:30	WeDPo04.7
Comparison of Manual Steering and Steering Via Joystick of a Flexible Rhino Endoscope 1234-1237	
<i>Eckl, Richard* (Technische Univ. Muenchen); Strauss, Gero (Univ. of Leipzig); Hofer, Mathias (Univ.); Dietz, Andreas (Univ. of Leipzig); Lueth, Tim (Technical Univ. of Munich)</i>	

16:00-17:30	WeDPo04.8
A Design of RF Stimulator Which Is Similar to Temperature Distribution by Moxibustion (Preliminary Study) 1238-1241	
<i>Myoung, Hyoun Seok (YONSEI Univ.); Park, Jin Sung (Yonsei Univ.); Cho, Sung Pil (Yonsei Univ.); Lee, Jeon (Daegu Haany Univ.); Choi, Ho Seon (Daewon Univ. College); Lee, Kyoung Joung* (Yonsei Univ.)</i>	
16:00-17:30	WeDPo04.9
A Fully Automatic Calibration Framework for Navigated Ultrasound Imaging 1242-1245	
<i>Peterhans, Matthias (Univ. of Bern); Anderegg, Sylvain (Univ. of Bern); Gaillard, Philippe (Univ. of Bern); Oliveira-Santos, Thiago* (ISTB – Inst. for Surgical Tech. & Biomechanics); Weber, Stefan (Univ. of Bern)</i>	
16:00-17:30	WeDPo04.10
Design of a Medical and Laboratory Equipment Management Program for the New Standards Certification Achievement in Mexico 1246-1249	
<i>Franco Clark, Dulce Maria* (Univ. Iberoamericana); Pimentel-Aguilar, Ana Bertha (INER: Inst. Nacional de Enfermedades Respiratorias); Rodriguez Vera, Ricardo Noe (Inst. Nacional de Enfermedades Respiratorias)</i>	
16:00-17:30	WeDPo04.11
Capacitive Driven-Right-Leg Grounding in Indirect-Contact ECG Measurement 1250-1253	
<i>Lim, Yong Gyu* (Sangji Univ.); Chung, Gih Sung (Seoul Natl. Univ.); Park, Kwang S. (Seoul Natl. Univ.)</i>	
16:00-17:30	WeDPo04.12
Optimized Surgical Tool for Pectus Bar Extraction 1254-1257	
<i>Rechowicz, Krzysztof (Old Dominion Univ.); McKenzie, Frederic (Rick) D.* (Old Dominion Univ.); Bawab, Sebastian (Old Dominion Univ.); Obermeyer, Robert (Children's Hospital of the King's Daughters)</i>	
16:00-17:30	WeDPo04.13
Acupoint Stimulation Device Using Focused Ultrasound 1258-1261	
<i>Tsuruoka, Noriko* (Tohoku Univ.); Watanabe, Masashi (Tohoku Univ.); Seki, Takashi (Tohoku Univ.); Matsunaga, Tadao (Tohoku Univ.); Haga, Yoichi (Tohoku Univ.)</i>	
16:00-17:30	WeDPo04.14
Effectiveness of LLLT Associated to Acupuncture in Peripheral Artery Disease 1262-1265	
<i>Cunha Gontijo, Rodrigo* (IP&D, UNIVAP); Kátia Kalligaris, Kátia Rodrigues Kalligaris (Federal Univ. of Pernambuco); Salvador, Marcos (Univ. of Campinas); Zângaro, Renato A (Camilo Castelo Branco Univ.)</i>	
16:00-17:30	WeDPo04.15
Multi-Organ Effects of Conducted Electrical Weapons (CEW) – A Review 1266-1270	
<i>Biria, Mazda (Univ. of Kansas Hospital); Bommana, Sudha Rani (Univ. of Kansas Hospitals); Kroll, Mark (Univ. of Minnesota); Lakkireddy, Dhanunjaya* (Univ. of Kansas Hospitals)</i>	
WeDPo05: 16:00-17:30	Catalinas/Golden Horn
8.1.4 Rehabilitation Robotics I (Poster Session)	
16:00-17:30	WeDPo05.1
Hiding Robot Inertia Using Resonance 1271-1274	
<i>Vallery, Heike* (ETH & Univ. Zurich); Duschau-Wicke, Alexander (ETH & Univ. Zurich); Riener, Robert (ETH & Univ. Zurich)</i>	
16:00-17:30	WeDPo05.2
A Novel Variable Stiffness Actuator: Minimizing the Energy Requirements for the Stiffness Regulation 1275-1278	
<i>Tsagarakis, Nikos* (Italian Inst. of Tech.)</i>	
16:00-17:30	WeDPo05.3
Soft Artificial Tactile Sensors for the Measurement of Human-Robot Interaction in the Rehabilitation of the Lower Limb 1279-1282	
<i>De Rossi, Stefano Marco Maria* (Scuola Superiore Sant'Anna); Vitiello, Nicola (Scuola Superiore Sant'Anna); Lenzi, Tommaso (Scuola Superiore Sant'Anna); Ronsse, Renaud (EPFL); Koopman, Bram (Univ. of Twente); Persichetti, Alessandro (Scuola Superiore Sant'Anna); Giovacchini, Francesco (Scuola Superiore Sant'Anna); Vecchi, Fabrizio (Scuola Superiore Sant'Anna); Ijspeert, Auke (EPFL); van der Kooij, Herman (Univ. of Twente); Carrozza, Maria Chiara (Scuola Superiore Sant'Anna)</i>	

16:00-17:30 WeDPo05.4
A Wearable Ergonomic Gaze-Tracker for Infants 1283-1286
Guglielmelli, Eugenio (Campus Bio-Medico Univ.); Chersi, Fabian (CNR); Zollo, Loredana (Campus Bio-Medico Univ.)*

16:00-17:30 WeDPo05.5
On the Control of the MIT-Skywalker 1287-1291
Artemiadis, Panagiotis (Massachusetts Inst. of Tech.); Krebs, Hermano Igo (MIT)*

WeDPo06: 16:00-17:30 Catalinas/Golden Horn
6.9.4 Gait and Daily Activities (Poster Session)

16:00-17:30 WeDPo06.1
Human Characterization and Emotion Characterization from Gait 1292-1295
Venture, Gentiane (Tokyo Univ. of Agriculture & Tech.)*

16:00-17:30 WeDPo06.2
Adaptive Estimation of Temporal Gait Parameters Using Body-Worn Gyroscopes 1296-1299
Greene, Barry R. (Intel); McGrath, Denise (Univ. College Dublin); O' Neill, Ross (Natl. Univ. of Ireland Maynooth); O'Donovan, Karol (Intel Corp.); Burns, Adrian (Intel); Caulfield, Brian (UCD)*

16:00-17:30 WeDPo06.3
A Single Gyroscope Method for Spatial Gait Analysis 1300-1303
Doheny, Emer (Intel); Greene, Barry R. (Intel); Foran, Tim (St.James's Hospital)*

16:00-17:30 WeDPo06.4
A PDF-Based Classification of Gait Cadence Patterns in Patients with Amyotrophic Lateral Sclerosis ... 1304-1307
Wu, Yunfeng (Xiamen Univ.); NG, Sin Chun (The Open Univ. of Hong Kong)*

16:00-17:30 WeDPo06.5
Domo-Grip: Functional Evaluation and Rehabilitation Using Grip Force 1308-1311
Hewson, David J (Univ. de technologie de Troyes); Li, Ke (Shandong Univ.); Frerejean, Alexis (AECRTS); Hogrel, Jean-Yves (Inst. de Myologie); Duchêne, Jacques (UTT)*

16:00-17:30 WeDPo06.6
Extension Assist Control for Individuals with Cervical Cord Injury Using Motion Assist Robot for Upper Limb 1312-1315
Watanabe, Tatsuya (Gifu Univ.); Yano, Kenichi (Gifu Univ.)*

WeDPo07: 16:00-17:30 Catalinas/Golden Horn
1.2.9 Biomedical Modeling and Simulation II (Poster Session)

16:00-17:30 WeDPo07.1
Towards Smart Prosthetic Hand: Adaptive Probability Based Skeletan Muscle Fatigue Model 1316-1319
Kumar, Parmod (Idaho State Univ.); Sebastian, Anish (Idaho State Univ.); Potluri, Chandra Sekhar (Idaho State Univ.); Urfer, Alex (Idaho State Univ.); Schoen, Marco P. (Idaho State Univ.); Naidu, D Subbaram (Idaho State Univ.)*

16:00-17:30 WeDPo07.2
Experimental Analysis for the Contribution of Tooth Vibration to Production of Sibilant /s/ ~ Measurement of Sound and Vibration ~ 1320-1323
Nakamura, Masanori (Osaka Univ.); Nozaki, Kazunori (Osaka Univ.); Nagamune, Kazuya (Osaka Univ.); Takimoto, Haruka (Osaka Univ.); Fujigaki, Motoharu (Wakayama Univ.); Wada, Shigeo (Osaka Univ.)*

16:00-17:30 WeDPo07.3
Post-Prandial Plasma Glucose Prediction in Type I Diabetes Based on Impulse Response Models 1324-1327
Ståhl, Fredrik (Lund Univ.); Johansson, Rolf (Lund Univ.)*

16:00-17:30 WeDPo07.4
Dynamic Modeling of EMG-Force Relationship Using Parallel Cascade Identification 1328-1331
hashemi, Javad (Queen's Univ.); Hashtrudi-Zaad, Keyvan (Queen's Univ.); Morin, Evelyn (Queen's Univ.); Mousavi, Parvin (Queen's Univ.)*

16:00-17:30	WeDPo07.5
Phase Velocity Analysis of Acoustic Propagation in Trabecular Bone 1332-1335	
<i>Villarreal, Alejandro (Univ. Autonoma Metropolitana Izt); Medina, Lucia* (Dept. de Fisica, Facultad de Ciencias, Univ.)</i>	
16:00-17:30	WeDPo07.6
Modeling of Medical Care with Stochastic Petri Nets 1336-1339	
<i>Maia, Cicilia* (UERN & FMC); R.M.A. Sizilio, Gláucia (UFRN); L. Martin, Daniel (UFRN); dos Santos, Keyly E.A. (UFRN); Valentim, Ricardo Alexsandro de Medeiros (Federal Univ of Rio Grande do Norte); Araújo, Bruno G. de (IFRN); Dantas de Melo, Jorge (UFRN); D. Dória Neto, Adrião (UFRN); Guerreiro, Ana Maria G. (Federal Univ. of Rio Grande do Norte)</i>	
WeDPo08: 16:00-17:30	Catalinas/Golden Horn
1.2.11 Signal Processing in Physiological Systems II (Poster Session)	
16:00-17:30	WeDPo08.1
Localization of Spontaneous Magnetoencephalographic Activity of Neonates and Fetuses Using Independent Component and Hilbert Phase Analysis 1344-1347	
<i>Vairavan, Srinivasan* (Univ. of Arkansas at Little Rock); Eswaran, Hari (Univ of Arkansas for Medical Sci); Preissl, Hubert (Univ. of Tübingen); Wilson, James (Univ. of Arkansas at Little Rock); Haddad, Naim (UAMS); Lowery, Curtis (Univ. of Arkansas for Medical Sciences); Govindan, Rathinaswamy (UAMS)</i>	
16:00-17:30	WeDPo08.2
The Behavior of Action Potential Conduction Velocity on Isokinetic Knee Extension Tests 1348-1351	
<i>Schwartz, Fabiano* (Univ. of Brasilia); Nascimento, Francisco A. de O. (Univ. of Brasilia); Bottaro, Martim (Univ. of Brasilia); Souza Celes, Rodrigo (Univ. of Brasilia)</i>	
16:00-17:30	WeDPo08.3
SigMate: A MATLAB-Based Neuronal Signal Processing Tool 1352-1355	
<i>Mahmud, Mufti* (Univ. of Padova); Girardi, Stefano (NeuroChip Laboratory, Univ. of Padova); Maschietto, Marta (NeuroChip Laboratory, Univ. of Padova); Bertoldo, Alessandra (Univ. of Padova); Vassanelli, Stefano (NeuroChip Laboratory, Univ. of Padova)</i>	
16:00-17:30	WeDPo08.4
Signal Processing System to Quantify Bilirubin in the Jaundice Clinical Model Spectra 1356-1359	
<i>Alla, Suresh Kumar* (Univ. of Cincinnati); Huddle, Adam (Dept. of Biomedical Engineering, Univ. of Cincinnati); Clark, Joseph F (Univ. of Cincinnati); Beyette Jr., Fred R (Univ. of Cincinnati)</i>	
16:00-17:30	WeDPo08.5
Hybrid EEG-EOG Brain-Computer Interface System for Practical Machine Control 1360-1363	
<i>Punsawad, Yunyong (Mahidol Univ.); Wongsawat, Yodchanan* (Mahidol Univ.); Parnichkun, Manukid (Asian Inst. of Tech.)</i>	
16:00-17:30	WeDPo08.6
Fourier and Wavelet Spectral Analysis of EMG Signals in Supramaximal Constant Load Dynamic Exercise 1364-1367	
<i>Camata, Thiago* (Univ. Estadual de Londrina); Dantas, José Luiz (Univ. Estadual de Londrina); Abrão, Taufik (Univ. Estadual de Londrina); Brunetto, Maria Angélica de Oliveira Camargo (Univ. Estadual de Londrina); Moraes, Antônio Carlos de (Univ. de Campinas); Altimari, Leandro Ricardo (Univ. Estadual de Londrina)</i>	
16:00-17:30	WeDPo08.7
Dynamic Characteristics between the Subjective Score of Motion Sickness Discomfort and Video Global Motion 1368-1369	
<i>Tanaka, Akira* (Fukushima Univ.); Sugita, Norihiro (Tohoku Univ.); Yoshizawa, Makoto (Tohoku Univ.); Abe, Makoto (Tohoku Univ.); Yambe, Tomoyuki (Tohoku Univ)</i>	

16:00-17:30	WeDPo08.8
Predicting the Neurodevelopmental Outcome in Newborns with Hypoxic-Ischaemic Injury 1370-1373	
<i>Doyle, Orla Margaret* (Univ. College Cork); Temko, Andriy (Univ. College Cork); Murray, Deirdre (Univ. College Cork); Lightbody, Gordon (Univ. College Cork); Marnane, Liam (Univ. College Cork); Boylan, Geraldine (Univ. College Cork)</i>	
16:00-17:30	WeDPo08.9
Comparison of Speech Processing Strategies for the Design of an Ultra Low-Power Analog Bionic Ear 1374-1377	
<i>Sawigun, Chutham (Delft Univ. of Tech.); Ngamkham, Wannaya* (Delft Univ. of Tech.); Serdijn, Wouter A. (Delft Univ. of Tech.)</i>	
16:00-17:30	WeDPo08.10
Optimal FES Parameters Based on Mechanomyographic Efficiency Index 1378-1381	
<i>Krueger-Beck, Eddy* (Federal Technological Univ. of Paraná); Scheeren, Eduardo Mendonça (Federal Technological Univ. of Paraná); Nogueira-Neto, Guilherme (State Univ. of Campinas); Button, Vera Lúcia da Silveira Nantes (State Univ. of Campinas); Nohama, Percy (Univ. Tecnológica Federal do Paraná)</i>	
16:00-17:30	WeDPo08.11
Real-Time Detection of Auditory Steady-State Responses 1382-1385	
<i>Cheah, Lam Aun* (Univ. of Hull); Hou, Ming (Univ.)</i>	
WeDPo09: 16:00-17:30	Catalinas/Golden Horn
1.7.4 Neural Networks in Biosignal Processing and Classification I (Poster Session)	
16:00-17:30	WeDPo09.1
Classification of Cardiac Arrhythmias Using Competitive Networks 1386-1389	
<i>Maia, Cicilia* (UERN & FMC); R. M. A. Sizilio, Gláucia (UFRN); L. Martin, Daniel (UFRN); dos Santos, Keylly E.A. (UFRN); Valentim, Ricardo Alexsandro de Medeiros (Federal Univ of Rio Grande do Norte); Araújo, Bruno G. de (IFRN); Dantas de Melo, Jorge (UFRN); D. Dória Neto, Adrião (UFRN); Guerreiro, Ana Maria G. (Federal Univ. of Rio Grande do Norte)</i>	
16:00-17:30	WeDPo09.2
A Single Tri-Axial Accelerometer-Based Real-Time Personal Life Log System Capable of Activity Classification and Exercise Information Generation 1390-1393	
<i>Lee, Myong-Woo* (Kyung-Hee Univ.); Khan, Adil Mehmood (Kyung Hee Univ.); Kim, Ji-Hwan (Kyunghee Univ.); Cho, Young-Sun (Kyung Hee Univ.); Kim, Tae-Seong (Kyung Hee Univ.)</i>	
16:00-17:30	WeDPo09.3
Automatic Identification of Chronic Obstructive Pulmonary Disease Based on Forced Oscillation Measurements and Artificial Neural Networks 1394-1397	
<i>Amaral, Jorge (Univ. do Estado do Rio de Janeiro); Faria, Alvaro Camilo Dias* (Univ. do Estado do Rio de Janeiro); Lopes, Agnaldo (Univ. do Estado do Rio de Janeiro); Jansen, José (Univ. do Estado do Rio de Janeiro); Melo, Pedro Lopes (Univ. do Estado do Rio de Janeiro)</i>	
16:00-17:30	WeDPo09.4
Affinity-matrix representation of spike train activities in the early visual pathway 1398-1400	
<i>Fontes, Cássio (Univ. Federal de Minas Gerais); Turchetti-Maia, Ana Luiza (Univ. Federal de Minas Gerais); Baron, Jérôme (Univ. Federal de Minas Gerais); Braga, Antônio* (Univ. Federal de Minas Gerais)</i>	
16:00-17:30	WeDPo09.5
State Classification of Heart Rate Variability by an Artificial Neural Network in Frequency Domain 1401-1404	
<i>Yasumoto, Yutaka (Hosei Univ.); Shoji, Yagi (Hosei Univ.); Yana, Kazuo* (Hosei Univ.); Nozawa, Masaki (Hosei Univ.); Ono, Takuya (Nippon Medical School)</i>	
16:00-17:30	WeDPo09.6
An Automatic Detector of Drowsiness Based on Spectral Analysis and Wavelet Decomposition of EEG Records 1405-1408	
<i>Garces, M Agustina* (Univ. Nacional de San Juan); Laciari, Eric (Univ. Nacional de San Juan)</i>	

16:00-17:30	WeDPo09.7
Assessment of Human Instantaneous Arterial Diameter Using B-Mode Ultrasound Imaging and Artificial Neural Networks: Determination of Wall Mechanical Properties 1409-1412	
<i>Pessana, Franco* (FICEN, Favaloro Univ.); Venialgo, Esteban (UTN); Rubstein, Jonathan Alejandro (UTN – FRBA); Furfaro, Alejandro (Electronic Dept., Buenos Aires Regional Faculty, Natl. Technological Univ.)</i>	
16:00-17:30	WeDPo09.8
Human Gait Classification after Lower Limb Fracture Using Artificial Neural Networks and Principal Component Analysis 1413-1416	
<i>Lozano-Ortiz, Carlos Alirio (Federal Univ. of Rio de Janeiro); Muniz, Adriane Mara de Souza* (Physical Education Collage of Brazilian Army); Nadal, Jurandir (Federal Univ. of Rio de Janeiro)</i>	
16:00-17:30	WeDPo09.9
Optimization of MFCC Parameters Using Particle Swarm Optimization for Diagnosis of Infant Hypothyroidism Using Multi-Layer Perceptrons 1417-1420	
<i>Lee, Khuan Y.* (Univ. Teknologi Mara); Zabidi, Azlee (Univ. Teknologi Mara); Mansor, Wahidah (Univ. Teknologi Mara); Mohd Yassin, Ahmad Ihsan (Univ. Teknologi Mara); Sahak, Rohilah (Univ. Teknologi Mara)</i>	
16:00-17:30	WeDPo09.10
Bio-Signal Analysis System Design with Support Vector Machines Based on Cloud Computing Service Architecture 1421-1424	
<i>Shen, Chia-Ping* (Natl. Taiwan Univ.); Chen, Wei-Hsin (Graduate Inst. of Biomedical Electronics & Bioinformatics, Natl. Taiwan Univ.); Chen, Jia-Ming (Inst. of Computer Science & Engineering, College of Computer Science Natl. Chiao Tung Univ.); Hsu, Kai-Ping (Natl. Taiwan Univ.); Lin, Jeng-Wei (Tunghai Univ.); Chiu, Ming-Jang (Dept. of Nerology, Natl. Taiwan Univ. Hospital, No.7); Lai, Feipei (Natl. Taiwan Univ.)</i>	
WeDPo10: 16:00-17:30	Catalinas/Golden Horn
3.11.3 Wearable Technology (Poster Session)	
16:00-17:30	WeDPo10.1
Radiation Characterization of an Intra-Oral Wireless Device at Multiple ISM Bands: 433 MHz, 915 MHz, and 2.42 GHz 1425-1428	
<i>Huo, Xueliang* (Georgia Inst. of Tech.); Jow, Uei-Ming (Georgia Inst. of Tech.); Ghovanloo, Maysam (Georgia Inst. of Tech.)</i>	
16:00-17:30	WeDPo10.2
Objective Evaluation of Stress with the Blind by the Monitoring of Autonomic Nervous System Activity 1429-1432	
<i>Massot, Bertrand* (INSA Lyon); Baltenneck, Nicolas (S.I.S. Dept., Inst. of Psyschology, EA4129 Univ. of Lyon); Gehin, Claudine (INSA Lyon); Dittmar, Andre (INSA Lyon); McAdams, Eric (Univ. of Ulster)</i>	
16:00-17:30	WeDPo10.3
Glass-Type Wireless PPG Measuring System 1433-1436	
<i>Lee, Eun Mi* (Chungbuk Natl. Univ.); Shin, Ji-Yun (Chungbuk Natl. Univ.); Hong, Joo Hyun (Chungbuk Natl. Univ.); Cha, Eun Jong (Chungbuk Natl. Univ.); Lee, Tae Soo (Chungbuk Natl. Univ.)</i>	
16:00-17:30	WeDPo10.4
Measuring the Attenuation Characteristics of Biological Tissues Enabling for Low Power in Vivo RF Transmission 1437-1440	
<i>Laqua, Daniel* (Ilmenau Univ. of Tech.); Just, Thomas (Ilmenau Univ. of Tech.)</i>	
16:00-17:30	WeDPo10.5
System-Level Design Trade-Offs for Truly Wearable Wireless Medical Devices 1441-1444	
<i>Chen, Guangwei (Imperial College London); Rodriguez-Villegas, Esther* (Imperial College London)</i>	
16:00-17:30	WeDPo10.6
Clutter Isolation and Cardiac Monitoring Using Harmonic Doppler Radar with Heterodyne Receiver and Passive RF Tags 1445-1448	
<i>Singh, Aditya* (Univ. of Hawaii at Manoa); Lubecke, Victor (Univ. of Hawaii Manoa)</i>	
16:00-17:30	WeDPo10.7
Insole Sensor System for Real-Time Detection of Biped Slip 1449-1452	
<i>Lincoln, Lucas* (Univ. of Utah); Bamberg, Stacy J Morris (Univ. of Utah)</i>	

4.1.3 Model Identification and Parameter Estimation (Poster Session)

16:00-17:30

WeDPo11.1

Model-Based Optimal Immunization for Antibody Production in Birds 1453-1456

Olarte, Andres (Univ. Nacional de Colombia); Clavijo, Carlos (Univ. Nacional de Colombia);
Diaz, Hernando (Univ. Nacional de Colombia)*

16:00-17:30

WeDPo11.2

Phenomenological Modeling of Cell-To-Cell and Beat-To-Beat Variability in**Isolated Guinea Pig Ventricular Myocytes 1457-1460**

Walmsley, John (Univ. of Oxford); Mirams, Gary (Univ. of Oxford); Bahoshy, Maya (Univ. of Oxford);
Bollensdorff, Christian (Univ. of Oxford); Rodriguez, Blanca (Oxford Univ.); Burrage, Kevin (Univ. of Oxford)*

16:00-17:30

WeDPo11.3

Stochastic Modeling of the Neuronal Activity in the Thalamus of Essential Tremor Patient 1461-1464

Basu, Ishita (Univ. of Illinois at Chicago); Tuninetti, Daniela (Univ. of Illinois at Chicago);
Graupe, Daniel (Univ. of Illinois at Chicago); Slavin, Konstantin (Univ. of Illinois at Chicago)*

16:00-17:30

WeDPo11.4

A Generic Ionic Model of Cardiac Action Potentials 1465-1468

Guo, Tianruo (Univ. of New South Wales); Al Abed, Amr (Univ. of New South Wales); Lovell, Nigel H (Univ. of
New South Wales); Dokos, Socrates (Univ. of New South Wales)*

16:00-17:30

WeDPo11.5

Simulation of Late Gadolinium Enhancement Cardiac Magnetic Resonance Studies 1469-1472

Tobon-Gomez, Catalina (Univ. Pompeu Fabra, Barcelona); Sukno, Federico M (CIBER-BBN; CISTIB, Univ.
Pompeu Fabra); Butakoff, Constantine (Univ. Pompeu Fabra, Barcelona); Huguet, Marina (Cetir Sant Jordi;
CIBER-BBN, Barcelona, Spain); Frangi, Alejandro (Univ. Pompeu Fabra)*

16:00-17:30

WeDPo11.6

Airway and Tissue Loading in Postinterrupter Response of the Respiratory System –**An Identification Algorithm Construction 1473-1476**

Jabłoński, Ireneusz (Wroclaw Univ. of Tech.); Mroczka, Janusz (Wroclaw Univ. of Tech.)*

16:00-17:30

WeDPo11.7

Parameter Estimation Method for Improper Fractional Models and Its Application to**Molecular Biological Systems 1477-1480**

Tian, LiPing (Beijing Wuzi Univ.); Liu, LiZhi (Univ. of Saskatchewan); Wu, FangXiang (Univ. of Saskatchewan)*

4.1.7 Software Tools for Physiological and Network Modeling (Poster Session)

16:00-17:30

WeDPo12.1

MLL Toolkit and Work Flow Overview: Creating Temporo-Spatial Heart Models from CellML 1481-1484

Chang, David (Univ. of New South Wales); Dokos, Socrates (Univ. of New South Wales);
Lovell, Nigel H (Univ. of New South Wales)*

16:00-17:30

WeDPo12.2

Design of a Framework for Modeling, Integration and Simulation of Physiological Models 1485-1489

Erson, E. Zeynep (Case Western Reserve Univ.); Cavusoglu, M. Cenk (Case Western Reserve Univ.)*

16:00-17:30

WeDPo12.3

ART-ML – A Novel XML Format for the Biological Procedures Modeling and the**Representation of Blood Flow Simulation 1490-1493**

Karvounis, Evaggelos (Univ. of Ioannina); Tsakanikas, Vasilis D. (Univ. of Ioannina);
Fotiou, Evangelos (d.d. Synergy Hellas); Fotiadis, Dimitrios I. (Univ. of Ioannina)*

16:00-17:30

WeDPo12.4

WebPK, a Web-Based Tool for Custom Pharmacokinetic Simulation 1494-1497

Srimani, Jaydeep (Georgia Inst. of Tech.); Moffitt, Richard A. (Georgia Inst. of Tech.);
Wang, May Dongmei (Georgia Tech & Emory Univ.)*

16:00-17:30 WeDPo12.5
A Global Sensitivity Tool for Cardiac Cell Modeling: Application to Ionic Current Balance and Hypertrophic Signaling 1498-1502
Sher, Anna (Univ. of Oxford); Cooling, Michael (Univ. of Auckland); Bethwaite, Blair (Monash Univ.); Tan, Jefferson (Monash Univ.); Peachey, Tom (Monash Univ.); Enticott, Colin (Monash Univ.); Garic, Slavisa (Monash Univ.); Gavaghan, David (Univ. of Oxford); Noble, Denis (Univ. of Oxford); Abramson, David (Monash Univ.); Crampin, Edmund (Univ. of Auckland)*

16:00-17:30 WeDPo12.6
A Simple yet Effective Data Integration Approach to Tree-Based Microarray Data Classification 1503-1506
Liu, Lin (Univ. of South Australia); Li, Yi (Univ. of South Australia); Liu, Bing (Univ. of South Australia); Li, Jiuyong (Univ. of South Australia)*

WeDPo13: 16:00-17:30	Catalinas/Golden Horn
6.1.6 Neural Microsystems and Interface Engineering I (Poster Session)	

16:00-17:30 WeDPo13.1
Effects of Tms Coil Geometry on Stimulation Specificity 1507-1510
Talebinejad Mohammadi, Mehran (McGill Univ.); Musallam, Sam (Caltech)*

16:00-17:30 WeDPo13.2
Functional Regeneration of Severed Peripheral Nerve Using an Implantable Electrical Stimulator 1511-1514
Lee, Tae Hyung (Seoul Natl. Univ.); Pan, Hui (Seoul Natl. Univ.); Kim, In Sook (Seoul Natl. Univ.); Hwang, Soon Jung (Seoul Natl. Univ.); Kim, Sung June (Seoul Natl. Univ.)*

16:00-17:30 WeDPo13.3
Modeling of Microcavity Electrodes for Medical Implants 1515-1518
Ansari, Umar (Univ. of New South Wales, Sydney, Australia); Dokos, Socrates (Univ. of New South Wales); Lovell, Nigel H (Univ. of New South Wales); Suaning, Gregg (The Univ. of New South Wales)*

16:00-17:30 WeDPo13.4
A High-Voltage, High-Current CMOS Pulse Generator ASIC for Deep Brain Stimulation 1519-1522
Laotaveerungrueng, Noppasit (Case Western Reserve Univ.); Lahiji, Rosa (Case Western Reserve Univ.); Garverick, Steven (Case Western Reserve Univ.); Mehregany, Mehran (Case Western Reserve Univ.)*

16:00-17:30 WeDPo13.5
Design and Experiment of a Neural Signal Detection using a FES Driving System 1523-1526
Huang, Zonghao (Southeast Univ.); Wang, Zhigong (Southeast Univ.); Lü, Xiaoying (Southeast Univ.); Li, Wenyuan (Southeast Univ.); Shen, Xiaoyan (Southeast Univ.); Zhao, Xintai (Southeast Univ.); Xie, Shushan (Southeast Univ.); Pan, Haixian (Southeast Univ.); Zhu, Cunliang (Southeast Univ.)*

16:00-17:30 WeDPo13.6
Preliminary Investigations on Laminin Coatings for Flexible Polyimide/platinum Thin Films for PNS Applications 1527-1530
Bossi, Silvia (Scuola Superiore Sant'Anna); Benvenuto, Antonella (Campus Biomedico Univ.); Di Pino, Giovanni (campus Biomedico Univ.); Boretius, Tim (Univ. of Freiburg); Guglielmelli, Eugenio (Campus Bio-Medico Univ.); Stieglitz, Thomas (Univ. of Freiburg); Navarro, Xavier (Univ. Autònoma de Barcelona); Micera, Silvestro (Scuola Superiore Sant'Anna)*

16:00-17:30 WeDPo13.7
Optimizing the Diameter of Holes for Flexible Regeneration Microelectrode 1531-1534
Gojo, Riho (The Univ. of Tokyo); Saito, Harukazu (Natl. Hospital Organization Murayama Medical Center, JAPAN); Suzuki, Takafumi (The Univ. of Tokyo); Mabuchi, Kunihiro (The Univ. of Tokyo)*

16:00-17:30 WeDPo13.8
Recognition and Inhibition of Dorsal Horn Nociceptive Signals within a Closed-Loop System 1535-1538
Farajidavar, Aydin (The Univ. of Texas at Arlington); Hagains, Christopher (The Univ. of Texas at Arlington); Peng, Yuan (The Univ. of Texas at Arlington); Behbehani, Khosrow (Univ. of Texas at Arlington); Chiao, Jung-chih (The Univ. of Texas at Arlington)*

16:00-17:30	WeDPo13.9
Restoring Basal Ganglia in Parkinson's Disease to Normal Via Multi-Input Phase Shifted Deep Brain Stimulation	1539-1542
<i>Agarwal, Rahul* (Johns Hopkins Univ.); Sarma, Sridevi V. (Johns Hopkins Univ.)</i>	
16:00-17:30	WeDPo13.10
ODEs Model of Foreign Body Reaction Around Peripheral Nerve Implanted Electrode	1543-1546
<i>Di Pino, Giovanni (campus Biomedico Univ.); Formica, Domenico* (Campus Bio-Medico Univ.); Lonini, Luca (Frankfurt Inst. for Advanced Studies, Goethe Univ.); Accoto, Dino (Campus Bio-Medico Univ.); Benvenuto, Antonella (Campus Biomedico Univ.); Micera, Silvestro (Scuola Superiore Sant'Anna); Rossini, Paolo Maria (Campus Biomedico Univ.); Guglielmelli, Eugenio (Campus Bio-Medico Univ.)</i>	
16:00-17:30	WeDPo13.11
Dual-Monitor Deterministic Hardware for Visual Stimuli Generation in Neuroscience Experiments	1547-1549
<i>Gazziro, Mario* (Univ. of Sao Paulo); Almeida, Lirio (Univ. de Sao Paulo)</i>	
WeDPo14: 16:00-17:30	Catalinas/Golden Horn
6.1.5 Neural Microsystems and Interface Engineering II (Poster Session)	
16:00-17:30	WeDPo14.1
Remote Tactile Sensing Glove-Based System	1550-1554
<i>Culjat, Martin O.* (UCLA); Son, Ji (UCLA); Fan, Richard (UCLA); Wottawa, Christopher (UCLA); Bisley, James W. (UCLA); Grundfest, Warren S. (UCLA); Dutson, Erik P. (UCLA)</i>	
16:00-17:30	WeDPo14.2
A Multi-Channel Low-Power System-On-Chip for Single-Unit Recording and Narrowband Wireless Transmission of Neural Signal	1555-1560
<i>Bonfanti, Andrea (Politecnico di Milano); Ceravolo, Maria (Politecnico di Milano); Zambra, Guido* (Politecnico di Milano); Gusmeroli, Riccardo (Politecnico di Milano – IU.NET); S. Spinelli, Alessandro (Politecnico di Milano – IU.NET); Lacaita, Andrea Leonardo (Politecnico di Milano); Angotzi, Gian Nicola (IIT, Genova); Baranauskas, Gytis (Italian Inst. of Tech.); Fadiga, Luciano (Univ. degli Studi di Ferrara, Ferrara, Italia)</i>	
16:00-17:30	WeDPo14.3
A High-Speed Circuit Architecture for IR-UWB Transmission of Fast-Scan Cyclic Voltammetry in 0.35 μm CMOS	1561-1564
<i>Zamani, Hamidreza (Case Western Reserve Univ.); Mohseni, Pedram* (Case Western Reserve Univ.)</i>	
16:00-17:30	WeDPo14.4
Wireless Channel Characterization for Mm-Size Neural Implants	1565-1568
<i>Mark, Michael* (Univ. of California, Berkeley); Björninen, Toni (Tampere Univ. of Tech.); Chen, Yuhui David (Univ. of California, Berkeley); Venkatraman, Subramaniam (Univ. of California, Berkeley); Ukkonen, Leena (Tampere Univ. of Tech.); Sydänheimo, Lauri (Tampere Univ. of Tech.); Carmena, Jose M. (Univ. of California, Berkeley); Rabaey, Jan M. (Univ. of California, Berkeley)</i>	
16:00-17:30	WeDPo14.5
An Implantable VLSI Architecture for Real Time Spike Sorting in Cortically Controlled Brain Machine Interfaces	1569-1572
<i>Aghagolzadeh, Mehdi* (Michigan State Univ.); Zhang, Fei (Univ. of Pittsburgh); Oweiss, Karim (Michigan State Univ.)</i>	
16:00-17:30	WeDPo14.6
A Low-Power Self-Biased Neural Amplifier for Implantable EEG Recording System ICs	1573-1576
<i>Kim, Jungsuk* (Univ. of California, Santa Cruz)</i>	
16:00-17:30	WeDPo14.7
A Device for Vacuum Drying, Inert Gas Backfilling and Solder Sealing of Hermetic Implant Packages	1577-1580
<i>Schuettler, Martin* (Univ. of Freiburg); Hügler, Matthias (Univ. of Freiburg); Ordonez, Juan Sebastian (Univ. of Freiburg); Wilde, Jürgen (Univ. of Freiburg); Stieglitz, Thomas (Univ. of Freiburg)</i>	

16:00-17:30	WeDPo14.8
A High-Performance Transcutaneous Battery Charger for Medical Implants 1581-1584	
<i>Artan, Nabi Sertac* (Polytechnic Inst. of New York Univ.); Vanjani, Hitesh (Polytechnic Inst. of New York Univ.); Vashist, Gurudath Narasimha Rao (Polytechnic Inst. of New York Univ.); Fu, Zhen (Polytechnic Inst. of New York Univ.); Bhakthavatsala, Santosh (Polytechnic Inst. of New York Univ.); Ludvig, Nandor (Comprehensive Epilepsy Center, New York Univ. School of Medicine); Medveczky, Geza (Comprehensive Epilepsy Center, New York Univ. School of Medicine); Chao, Jonathan (Polytechnic Inst. of New York Univ.)</i>	
16:00-17:30	WeDPo14.9
Fabrication and Test of a Hermetic Miniature Implant Package with 360 Electrical Feedthroughs 1585-1588	
<i>Schuetzler, Martin* (Univ. of Freiburg); Ordonez, Juan Sebastian (Univ. of Freiburg); Silva Santisteban, Tomas (Univ. of Freiburg); Schatz, Andreas (Univ. of Freiburg); Wilde, Jürgen (Univ. of Freiburg); Stieglitz, Thomas (Univ. of Freiburg)</i>	
16:00-17:30	WeDPo14.10
Adaptive Control of 2-Wheeled Balancing Robot by Cerebellar Neuronal Network Model 1589-1592	
<i>Tanaka, Yoshiyuki (Chubu Univ.); Ohata, Yohei (Chubu Univ.); Kawamoto, Tomohiro (Bosch Corp.); Hirata, Yutaka* (Chubu Univ., College of Eng)</i>	
16:00-17:30	WeDPo14.11
Simulation of a Conductive Shield Plate for the Focalization of Transcranial Magnetic Stimulation in the Rat 1593-1596	
<i>Gasca, Fernando* (Univ. of Lübeck); Richter, Lars (Univ. of Luebeck); Schweikard, Achim (Univ. of Luebeck, Germany)</i>	
WeE04: 17:30-19:00	Retiro A
9.1.1 Ablation Therapies (Oral Session)	
17:30-17:45	WeE04.1
Thermal Heating of a Retinal Prosthesis: Thermal Model and In-Vitro Study 1597-1600	
<i>Opie, Nicholas Lachlan* (NICTA); Burkitt, Anthony Neville (The Univ. of Melbourne); Meffin, Hamish (Natl. ICT Australia); Grayden, David B. (The Univ. of Melbourne)</i>	
17:45-18:00	WeE04.2
MR-Compatible RF Ablation System for Online Treatment Monitoring Using MR Thermometry 1601-1604	
<i>Will, Karl (Otto-von-Guericke Univ., Magdeburg); Krug, Johannes* (Otto-von-Guericke Univ., Magdeburg); Jungnickel, Kerstin (Dept. of Radiology, Otto-von-Guericke-Univ. of Magdeburg); Fischbach, Frank (Dept. of Radiology, Otto-von-Guericke-Univ. of Magdeburg); Rieke, Jens (Dept. of Radiology, Otto-von-Guericke-Univ. of Magdeburg); Rose, Georg (Otto-von-Guericke Univ., Magdeburg); Omar, Abbas (Dept. of Signal Processing & Communications, Otto-von-Guericke-Univ. of Magdeburg)</i>	
18:00-18:15	WeE04.3
Mathematical Modeling of Impedance Controlled Radiofrequency Tumor Ablation and Ex-Vivo Validation 1605-1608	
<i>Haemmerich, Dieter* (Medical Univ. of South Carolina)</i>	
18:15-18:30	WeE04.4
Initial Human Feasibility Study of DC Ablation As a Treatment for Benign Prostatic Hyperplasia: 6 Month Follow-Up Data 1609-1613	
<i>Cabezas, Juan (Univ. de Chile); Storme, Oscar (Univ. de Chile); Fruland, Benjamin (Ionix Medical, Inc.); Kroll, Kai* (Ionix Medical, Inc.); Larson, Thayne (Inst. of Medical Research)</i>	
18:30-18:45	WeE04.5
Development of Selective Laser Treatment Techniques Using Mid-Infrared Tunable Nanosecond Pulsed Laser 1614-1617	
<i>Ishii, Katsunori* (Osaka Univ.); Saiki, Masayuki (Graduate School of Engineering, Osaka Univ.); Hazama, Hisanao (Osaka Univ.); Awazu, Kunio (Osaka Univ.)</i>	

18:45-19:00

WeE04.6

The Laser Driven Short-Term Heating Balloon Catheter: Relation between the Chronic Neointimal Hyperplasia Formation and Thermal Damage to Arterial Smooth Muscle Cells 1618-1621
 Shimazaki, Natsumi* (Keio Univ.); Kunio, Mie (Keio Univ.); Hayashi, Tomoaki (Keio Univ.); Igami, Yuka (Keio Univ.); Arai, Tsunenori (Keio Univ.); Sakurada, Masami (Tokorozawa Heart Center)

WeE05: 17:30-19:00

Retiro B

1.5.1 Biomedical Applications of Principal Component Analysis and Independent Component Analysis (Oral Session)

17:30-17:45

WeE05.1

Point Process Time-Frequency Analysis of Respiratory Sinus Arrhythmia under Altered Respiration Dynamics 1622-1625
 Kodituwakku, Sandun* (RSISE, Australian Natl. Univ.); Lazar, Sara (Harvard Medical School); Indic, Premananda (Univ. of Massachusetts Medical School); Brown, Emery N (MGH-Harvard Medical School-MIT); Barbieri, Riccardo (MGH-Harvard Medical School-MIT)

17:45-18:00

WeE05.2

Time-Varying Analysis of Autonomic Control in Response to Spontaneous Sighs in Sickle Cell Anemia ... 1626-1629
 Sangkatumvong, Suvimol* (Univ. of Southern California); Coates, Thomas (Childrens Hospital Los Angeles, USC Keck School of Medicine); Wood, John (Childrens Hospital Los Angeles); Meiselman, Herbert (Keck School of Medicine, Univ. of Southern California); Kato, Roberta (Childrens Hospital Los Angeles); Detterich, Jon (Childrens Hospital Los Angeles); Bush, Adam (Childrens Hospital Los Angeles); Khoo, Michael (Univ. of Southern California)

18:00-18:15

WeE05.3

Dynamic Assessment of Spontaneous Baroreflex Sensitivity by Means of Time – Frequency Analysis Using Either RR or Pulse Interval Variability 1630-1633
 Orini, Michele* (Univ. of Zaragoza); Mainardi, Luca (Politecnico di Milano); Gil, Eduardo (Zaragoza Univ. & CIBER-BBN); Laguna, Pablo (Zaragoza Univ. & CIBER-BBN); Bailon, Raquel (Univ. of Zaragoza)

18:15-18:30

WeE05.4

Analysis of Heart Rate Variability Dynamics During Propofol and Dexmedetomidine Anesthesia 1634-1637
 Tarvainen, Mika* (Univ. of Eastern Finland); Georgiadis, Stefanos (Univ. of Kuopio); Lipponen, Jukka (Univ. of Eastern Finland); Laitio, Timo (Turku Univ. Hospital); Karjalainen, Pasi, A (Univ. of Eastern Finland); Scheinin, Harry (Turku Univ. Hospital); Kaskinoro, Kimmo (Turku Univ. Hospital)

18:30-18:45

WeE05.5

Slow Neuronal Oscillations in the Resting Brain vs Task Execution: A BSS Investigation of EEG Recordings 1638-1641
 Demanuele, Charmaine* (Univ. of Southampton); James, Christopher (Univ. of Warwick)

18:45-19:00

WeE05.6

EEG–EMG Coherence Estimated Using Time-Varying Autoregressive Models in Movement-Activated Myoclonus in Patients with Progressive Myoclonic Epilepsies 1642-1645
 Panzica, Ferruccio* (Fondazione IRCCS Istituto Neurologico C. Besta Milano, Italy); Varotto, Giulia (Fondazione IRCCS Istituto Neurologico C. Besta, via Celoria 11, Milano, Italy); Canafoglia, Laura (Fondazione IRCCS Istituto Neurologico C. Besta, via Celoria 11, Milano, Italy); Rossi Sebastiano, Davide (Fondazione IRCCS Istituto Neurologico C. Besta, via Celoria 11, Milano, Italy); Visani, Elisa (Fondazione IRCCS Istituto Neurologico C. Besta, via Celoria 11, Milano, Italy); Franceschetti, Silvana (Fondazione IRCCS Istituto Neurologico C. Besta, via Celoria 11, Milano, Italy)

WeE06: 17:30-19:00

Retiro C

1.3.3 Multivariate Signal Processing (Oral Session)

17:30-17:45

WeE06.1

The Impact of Expertise on Brain Computer Interface Based Salient Image Retrieval 1646-1649
 Yazdani, Ashkan* (EPFL); Vesin, Jean-Marc (EPFL); Izzo, Dario (ESA); Ampatzis, Christos (ESA); Ebrahimi, Touradj (EPFL)

17:45-18:00	WeE06.2
Application of Multivariate Empirical Mode Decomposition for Seizure Detection in EEG Signals	1650-1653
<i>Rehman, Naveed* (Imperial College London); Xia, Yili (Imperial College London); Mandic, Danilo (Imperial College)</i>	
18:00-18:15	WeE06.3
Shrinkage Approach for EEG Covariance Matrix Estimation	1654-1657
<i>Beltrachini, Leandro* (Univ. Nacional de La Plata); von Ellenrieder, Nicolas (Univ. Nacional de La Plata); Muravchik, Carlos (Univ. Nacional de La Plata)</i>	
18:15-18:30	WeE06.4
Multichannel Surface Electromyography Classification Based on Muscular Synergy	1658-1661
<i>Lopez, Natalia M* (Univ. Nacional de San Juan); Orosco, Eugenio (Univ. Nacional de San Juan); di Sciascio, Fernando (Univ. Nacional de San Juan)</i>	
18:30-18:45	WeE06.5
Multiple Coherence vs Multiple Component Synchrony Measure for Somatosensory Evoked Response Detection	1662-1665
<i>Melges, Danilo* (Federal Univ. of Rio de Janeiro); Miranda de Sá, Antonio Mauricio (Federal Univ. of Rio de Janeiro); Infantosi, Antonio Fernando (Federal Univ. of Rio de Janeiro)</i>	
18:45-19:00	WeE06.6
Analysis of Propagation of Multi-Channel EEG in the Test of Sustained Attention	1666-1669
<i>Nan, Yan* (The Univ. of Hong Kong, Hong Kong); Sheng, Hengsong (Xi'an Jiaotong Univ.)</i>	
WeE07: 17:30-19:00	
8.5.2 Neuroprosthetic Control (Invasive Approaches) (Oral Session)	
Martin Fierro 1	
17:30-17:45	WeE07.1
Decoder Remapping to Counteract Neuron Loss in Brain-Machine Interfaces	1670-1673
<i>Héliot, Rodolphe (CEA – LETI MINATEC); Venkatraman, Subramaniam (Univ. of California, Berkeley); Carmena, Jose M.* (Univ. of California, Berkeley)</i>	
17:45-18:00	WeE07.2
Altering Function in Cortical Networks by Short-Latency, Paired Stimulation	1674-1677
<i>Miller, Lee* (Northwestern Univ.); Rebesco, James (Northwestern Univ.)</i>	
18:00-18:15	WeE07.3
Finite Element and Biophysics Modelling of Intraneural Transversal Electrodes: Influence of Active Site Shape	1678-1681
<i>Raspopovic, Stanisa (scuola Superiore Sant'Anna); Capogrosso, Marco (Scuola Superiore Sant'Anna); Navarro, Xavier (Univ. Autònoma de Barcelona); Micera, Silvestro* (Scuola Superiore Sant'Anna)</i>	
18:15-18:30	WeE07.4
Extracting an Evaluative Feedback from the Brain for Adaptation of Motor Neuroprosthetic Decoders ..	1682-1685
<i>Mahmoudi, Babak (Univ. of Florida); Principe, Jose (Univ. of Florida); Sanchez, Justin C.* (Univ. of Florida)</i>	
18:30-18:45	WeE07.5
Comparison of Force and Power Generation Patterns and Their Predictions under Different External Dynamic Environments	1686-1690
<i>Chhatbar, Pratik Yashvant (SUNY Downstate Medical Center); Francis, Joseph Thachil* (SUNY Downstate Medical Center)</i>	
18:45-19:00	WeE07.6
Reconfigurable Embedded System Architecture for Next-Generation Neural Signal Processing	1691-1694
<i>Balasubramanian, Karthikeyan (Temple Univ.); Obeid, Iyad* (Temple Univ.)</i>	

1.8.1 Interactions, Coupling and Synchronizations (Oral Session)

- 17:30-17:45 WeE08.1
Altered Interactions of Heart Rate and Blood Pressure During Normal and Abnormal Pregnancy 1695-1698
Voss, Andreas (Univ. of Applied Sciences Jena); Seeck, Andrea (Univ. of Applied Sciences Jena, Dept. Medical Engineering & BioTech.); Baumert, Mathias (The Univ. of Adelaide)*
- 17:45-18:00 WeE08.2
An Identifiable Model to Assess Frequency-Domain Granger Causality in the Presence of Significant Instantaneous Interactions 1699-1702
Faes, Luca (Univ. of Trento); Erla, Silvia (Univ. of Trento); Tranquillini, Enzo (Neurology Divisio, S. Chiara Hospital, Trento, Italy); Orrico, Daniele (Neurology Division, S. Chiara Hospital, Trento); Nollo, Giandomenico (Univ. of Trento)*
- 18:00-18:15 WeE08.3
The Sequence Technique Revised: Additional Concepts on the Assessment of Spontaneous Baroreflex Function 1703-1705
Di Rienzo, Marco (Fondazione Don Carlo Gnocchi); Castiglioni, Paolo (Fondazione Don Carlo Gnocchi ONLUS); Parati, Gianfranco (Univ. degli Studi di Milano-Bicocca)*
- 18:15-18:30 WeE08.4
Time-Variant Analysis of Linear and Non-Linear Phase Couplings of and between Frequency Components of EEG Burst Patterns in Full-Term Newborns 1706-1709
Wacker, Matthias (Friedrich Schiller Univ.); Putsche, Peter (Friedrich Schiller Univ.); Witte, Herbert (Friedrich Schiller Univ.)*
- 18:30-18:45 WeE08.5
Measures of Connectivity Among the Different Brain Areas During an Attention Task 1710-1713
Bianchi, Anna Maria (Politecnico di Milano)*
- 18:45-19:00 WeE08.6
Coherence and Imaginary Part of Coherency Identifies Cortico-Muscular and Cortico-Thalamic Coupling 1714-1717
Sander-Thömmes, Tilmann H. (Physikalisch-Technische Bundesanstalt)*

6.2.4 Estimation of Brain Functional Connectivity (Oral Session)

- 17:30-17:45 WeE09.1
Asymptotic Behavior of Generalized Partial Directed Coherence 1718-1721
Brito, Carlos Stein Naves de (Univ. of Sao Paulo); Baccala, Luiz Antonio (Escola Politecnica); Takahashi, Daniel Yasumasa (Univ. of São Paulo); Sameshima, Koichi (Univ. de Sao Paulo, Faculdade de Medicina)*
- 17:45-18:00 WeE09.2
Information Processing in Brain and Dynamic Patterns of Transmission 1722-1725
Cieslak-Blinowska, Katarzyna (Warsaw Univ.); Kaminski, Maciej (Warsaw Univ.); Kaminski, Jan (Nencki Inst. of Experimental Biology, Dept. of Neurophysiology, Warsaw, Poland); Brzezicka, Aneta (Warsaw School of Social Sciences & Humanities, Warsaw, Poland)*
- 18:00-18:15 WeE09.3
Frequency Domain Connectivity: An Information Theoretic Perspective 1726-1729
Baccala, Luiz Antonio (Escola Politecnica); Sameshima, Koichi (Univ. de Sao Paulo, Faculdade de Medicina); Takahashi, Daniel Yasumasa (Univ. of São Paulo)*
- 18:15-18:30 WeE09.4
Functional Connectivity Networks in the Autistic and Healthy Brain Assessed Using Granger Causality ... 1730-1733
Pollonini, Luca (Univ. of Houston); Patidar, Udit (Univ. of Houston); Situ, Ning (Univ. of Houston); Rezaie, Roozbeh (Univ. of Texas Medical School); Papanicolaou, Andrew (Univ. of Texas Medical School); Zouridakis, George (Univ. of Houston)*

18:30-18:45 WeE09.5
Imaging the Social Brain: Multi-Subjects EEG Recordings During the “Chicken’s Game” 1734-1737
Astolfi, Laura (Univ. of Rome); Babiloni, Fabio (Univ. of Rome); He, Bin (Univ. of Minnesota);
De Vico Fallani, Fabrizio (Univ. La Sapienza); Vecchiato, Giovanni (Univ. of Rome Sapienza)*

18:45-19:00 WeE09.6
**Large-Scale Cortical Networks Estimated from Scalp EEG Signals During Performance of
Goal-Directed Motor Tasks** 1738-1741
*De Vico Fallani, Fabrizio (Univ. La Sapienza); Astolfi, Laura (Univ. of Rome);
Zouridakis, George (Univ. of Houston); Babiloni, Fabio* (Univ. of Rome)*

WeE10: 17:30-19:00 Ombu B
10.8.1 Emerging IT for Efficient/Low-Cost Healthcare Delivery (Oral Session)

17:30-17:45 WeE10.1
**Technology Enabled Assessment and Intervention Protocols in a Community and
Home Care Setting for Independent Living** 1742-1745
Caulfield, Brian (UCD)*

17:45-18:00 WeE10.2
Just Enough Measurement: A Proposed Paradigm for Designing Medical Instrumentation 1746-1750
Bamberg, Stacy J Morris (Univ. of Utah); Dyer, Philip (Univ of Utah); Lincoln, Lucas (Univ. of Utah);
Yang, Linfang (Univ. of Utah)*

18:00-18:15 WeE10.3
**Upper Extremity Rehabilitation of Children with Cerebral Palsy Using Accelerometer
Feedback on a Multitouch Display** 1751-1754
*Dunne, Alan (NUI Galway); Do-Lenh, Son (Swiss Federal Inst. of Tech. Lausanne (EPFL)); O’Laighin, Gearoid
(Natl. Univ. of Ireland Galway); Shen, Chia (Harvard Univ.); Bonato, Paolo* (Harvard Medical School)*

18:15-18:30 WeE10.4
Health Informatics for Low-Cost and High-Quality Health Care 1755-1758
Poon, Carmen CY (The Chinese Univ. of Hong Kong); Gu, Wenbo (The Chinese Univ. of Hong Kong);
Zhang, Yuan-Ting (The Chinese Univ. of Hong Kong)*

18:30-18:45 WeE10.5
Digital Divide: Use of Electronic Personal Health Record by Different Population Groups 1759-1762
Kim, Eung-Hun (Univ. of Washington); Kim, Yongmin (Univ. of Washington)*

18:45-19:00 WeE10.6
Wearable Sensors: Opportunities and Challenges for Low-Cost Health Care 1763-1766
Fletcher, Richard Ribon (Massachusetts Inst. of Tech.); Poh, Ming-Zher (Massachusetts Inst. of Tech.);
Eydgahi, Hoda (MIT)*

WeE11: 17:30-19:00 Poncho
4.4.2 Novel Applications of Bioinformatics Algorithms (Oral Session)

17:30-17:45 WeE11.1
High Performance and Resource Efficient Biological Sequence Alignment 1767-1770
Hasan, Laiq (TU Delft); Al-Ars, Zaid (TU Delft); Taouil, Mottaqiallah (TU Delft)*

17:45-18:00 WeE11.2
Low-Coupled Parallel Strategy for Monte Carlo Radiation Dose Calculation 1771-1774
Massa, José María (UNICEN); Doorn, Jorge Horacio (UNICEN); Wainschenker, Sergio Rubén (UNICEN)*

18:00-18:15 WeE11.3
**Non-Parametric Kernel Density Estimation for the Prediction of Neoadjuvant
Chemotherapy Outcomes** 1775-1778
Wanderley, Maria Fernanda (Univ. Federal de Minas Gerais); Braga, Antônio (Univ. Federal de Minas Gerais);
Mendes, Eduardo Mazoni Andrade Marçal (Univ. Federal de Minas Gerais); Natowicz, René (Univ. Paris-Est,
ESIEE-Paris); Rouzier, Roman (Hôpital Tenon, Service de gynécologie)*

18:15-18:30	WeE11.4
SNP Analysis of Rac1 for Personalized Ligand Interaction 1779-1782	
<i>Maggi, Norbert (Univ. of Genoa); Arrigo, Patrizio (CNR Genova); Ruggiero, Carmelina* (Univ. of Genoa)</i>	
18:30-18:45	WeE11.5
Exons and Introns Characterization in Nucleic Acid Sequences by Time-Frequency Analysis 1783-1786	
<i>Melia, Umberto Sergio Pio (Univ. Politècnica de Catalunya); Claria, Francesc (Lleida Univ.); Gallardo-Chacón, Joan-Josep (CIBER Bioengineering, Biomaterials, & Nanomedicin); Caminal, Pere (Technical Univ. of Catalonia (UPC)); Perera, Alexandre (Univ. Politècnica de Catalunya); Vallverdu, Montserrat* (Univ. Politècnica de Catalunya)</i>	
WeE12: 17:30-19:00	Rio de Plata
6.8.4 Minisymposium on Impaired Attention: Drowsiness and Microsleeps (Mini Symposium)	
17:30-17:45	WeE12.1
Monitoring of Drowsiness and Microsleep 1787-1787	
<i>Golz, Martin* (Univ. of Applied Sciences Schmalkalden); Sommer, David (Univ. of Applied Sciences Schmalkalden)</i>	
17:45-18:00	WeE12.2
Lapses of Responsiveness: Characteristics, Detection, and Underlying Mechanisms 1788-1791	
<i>Jones, Richard D.* (Van der Veer Inst.); Poudel, Govinda (Univ. of Otago); Innes, Carrie R. H. (Canterbury District Health Board); Davidson, Paul Robert (Van der Veer Inst.); Peiris, Malik T. R. (Univ. of Canterbury); Malla, Amol (Fisher & Paykel Healthcare Ltd); Signal, T. L. (Massey Univ.); Carroll, G. J. (Christchurch Hospital); Watts, Richard (Univ. of Canterbury); Bones, P. J. (Univ. of Canterbury)</i>	
18:00-18:15	WeE12.3
Arousing Feedback Rectifies Lapse in Performance and Corresponding EEG Power Spectrum 1792-1795	
<i>Jung, Tzyy-Ping* (Univ. of California San Diego); Huang, Kuan-Chih (Natl. Chiao-Tung Univ.); Chuang, Chun-Hsiang (Natl. Chiao-Tung Univ.); Chen, Chien-Ann (Natl. Chiao-Tung Univ.); Ko, Li-Wei (Natl. Chiao-Tung Univ.); Chiu, Tzai-Wen (Natl. Chiao-Tung Univ.); Lin, Chin-Teng (Natl. Chiao-Tung Univ.)</i>	
WeE13: 17:30-19:00	Gomez Losada
6.2.1 Microelectrode Technology (Oral Session)	
17:30-17:45	WeE13.1
A Transparent Electrode Array for Simultaneous Cortical Potential Recording and Intrinsic Signal Optical Imaging 1796-1799	
<i>Stieglitz, Thomas* (Univ. of Freiburg); Huang, Wenqi (Univ. of New South Wales, Sydney, Australia); Chen, Spencer Chin-Yu (Univ. of New South Wales); Morley, John William (Univ. of Western Sydney); Lovell, Nigel H (Univ. of New South Wales); Suaning, Gregg (The Univ. of New South Wales)</i>	
17:45-18:00	WeE13.2
Intrafascicular Thin-Film Multichannel Electrodes for Sensory Feed-Back: Evidences on a Human Amputee 1800-1803	
<i>Benvenuto, Antonella* (Campus Biomedico Univ.); Raspopovic, Stanisa (scuola Superiore Sant'Anna); Hoffmann, Klaus-Peter (Fraunhofer Inst.); Carpaneto, Jacopo (Scuola Superiore Sant'Anna); Cavallo, Giuseppe (Campus Bio-Medico Univ.); Di Pino, Giovanni (campus Biomedico Univ.); Guglielmelli, Eugenio (Campus Bio-Medico Univ.); Rossini, Luca (Univ. Campus Biomedico of Rome); Rossini, Paolo Maria (Campus Biomedico Univ.); Tombini, Mario (Campus Bio-Medico Univ.); Micera, Silvestro (Scuola Superiore Sant'Anna)</i>	
18:00-18:15	WeE13.3
A Modular 256-Channel Micro Electrode Array Platform for in Vitro and in Vivo Neural Stimulation and Recording: BioMEA™ 1804-1807	
<i>Charvet, Guillaume* (CEA Grenoble); Billoint, Olivier (CEA-LETI); Gharbi, Sadok (CEA/LETI/MINATEC); Heuschkel, Marc (Ayanda Biosystems SA); Georges, Cedric (Bio-Logic SAS); Kauffmann, Thierry (Bio-Logic SAS); Pellissier, Aymeric (Bio-Logic SAS); Yvert, Blaise (CNRS & Univ. Bordeaux 1and2); Guillemaud, Regis (CEA Léti MINATEC)</i>	
18:15-18:30	WeE13.4
3D Microprobes for Deep Brain Stimulation and Recording 1808-1811	
<i>A. Fomani, Arash* (Univ. of Waterloo); Moradi, Maryam (Univ. of Waterloo); Assaf, Souhile (Medtronic Inc.); Mansour, Raafat (Univ. of Waterloo)</i>	

18:30-18:45	WeE13.5
Tuning Electrode Impedance for the Electrical Recording of Biopotentials	1812-1815
<i>Fontes, Marcelo (Catholic Univ. of Leuven); Op de Beeck, Maaïke* (IMEC); Van Hoof, Chris (IMEC); Neves, Herc (imec)</i>	
18:45-19:00	WeE13.6
An Implantable Integrated Low-Power Amplifier-Microelectrode Array for Brain-Machine Interfaces	1816-1819
<i>Patrick, Erin (Univ. of Florida); Sankar, Viswanath (Univ. of Florida); Rowe, William (Univ. of Florida); Sanchez, Justin C.* (Univ. of Florida); Nishida, Toshikazu (Univ. of Florida)</i>	

Thursday, 2 September 2010

ThA01: 09:15-10:45	Libertador A
1.2.1 Advances in Signal and Image Processing and Computational Intelligence Methods in the Post-Genome Era (Oral Session)	

09:15-09:30	ThA01.1
Predicting a Protein's Melting Temperature from Its Amino Acid Sequence	1820-1823
<i>Seker, Huseyin* (Bio-Health Informatics Research Group)</i>	
09:30-09:45	ThA01.2
An Analysis of Sequence Alignment: Heuristic Algorithms	1824-1827
<i>Bucak, Ihsan Omur* (Fatih Univ.); Uslan, Volkan (Fatih Univ.)</i>	
09:45-10:00	ThA01.3
Clustering-Based Spot Segmentation of cDNA Microarray Images	1828-1831
<i>Uslan, Volkan (Fatih Univ.); Bucak, Ihsan Omur* (Fatih Univ.)</i>	
10:00-10:15	ThA01.4
A Comparative Study for Characterisation and Prediction of Tissue-Specific DNA Methylation of CpG Islands in Chromosomes 6, 20 and 22	1832-1835
<i>Ali, Isse (De Montfort Univ.); Seker, Huseyin* (Bio-Health Informatics Research Group)</i>	
10:15-10:30	ThA01.5
A Signal Processing-Based Bioinformatics Approach to Assessing Drug Resistance: Human Immunodeficiency Virus As a Case Study	1836-1839
<i>Nwankwo, Norbert Ikechukwu (De Montfort Univ.); Seker, Huseyin* (Bio-Health Informatics Research Group)</i>	
10:30-10:45	ThA01.6
Denoising Embolic Doppler Ultrasound Signals Using Dual Tree Complex Discrete Wavelet Transform	1840-1843
<i>Serbes, Gorkem (Bahcesehir Univ.); AYDIN, Nizamettin* (Yildiz Technical Univ.)</i>	

ThA03: 09:15-10:45	Libertador C
3.1.3 Mechanical Sensors and Systems (Oral Session)	

09:15-09:30	ThA03.1
Portable Digital Esophageal Stethoscope System	1844-1847
<i>Shin, Ji-Yun* (Chungbuk Natl. Univ.); Lim, Seung Won (Chungbuk Natl. Univ.); Cha, Eun Jong (Chungbuk Natl. Univ.); Lee, Tae Soo (Chungbuk Natl. Univ.)</i>	
09:30-09:45	ThA03.2
Integrating Optical Fiber Force Sensors into Microforceps for ORL Microsurgery	1848-1851
<i>Bell, Brett* (Univ. Bern); Stankowski, Stefan (Berner Fachhochschule Biel); Moser, Benjamin (Berner Fachhochschule Biel); Oliva, Vidina (Inst. of Surgical Tech. & Biomechanics, Univ. Bern); Stieger, Christof (Inselspital Univ. of Berne); Nolte, Lutz-Peter (Univ. of Bern); Caversaccio, Marco (Insel Spital, Univ. Bern); Weber, Stefan (Univ. of Bern)</i>	

09:45-10:00 ThA03.3
A Gel Filled Intravaginal Transducer for Extended Measurements of Intra-Abdominal Pressure 1852-1855
*Coleman, Tanner (Univ. of Utah); Hsu, Yvonne (Univ. of Utah); Nygaard, Ingrid (Univ. of Utah);
 Raynes, John (Raynes Engineering, Inc.); Gordon, Kevin (Summit Medical Products, Inc);
 Kumathe, Mridula (Univ. of Utah); Hitchcock, Robert* (Univ. of Utah)*

10:00-10:15 ThA03.4
An Insole Sensor for Recording Weight Bearing Behavior During Tibial Fracture Rehabilitation 1856-1859
North, Kylee (Univ. of Utah); Maass, Sean (Univ. of Utah); Hitchcock, Robert (Univ. of Utah)*

10:15-10:30 ThA03.5
Stress Development, Heat Production and Dynamic Modulus of Rat Isolated Cardiac Trabeculae Revealed in a Flow-Through Micromechanocalorimeter 1860-1863
Taberner, Andrew (The Univ. of Auckland); Han, June-Chiew (The Univ. of Auckland); Kirton, Robert (The Univ. of Auckland); Loiselle, Denis (The Univ. of Auckland); Nielsen, Poul (The Univ. of Auckland)*

10:30-10:45 ThA03.6
Feasibility Study of a Smart Pen for Autonomous Detection of Concentration Lapses During Reading .. 1864-1867
*DePrenger, Michael (George Mason Univ.); Shao, Yu (George Mason Univ.); Lu, Fiona (George Mason Univ.);
 Fleming, Nick (George Mason Univ.); Sikdar, Siddhartha* (George Mason Univ.)*

ThA04: 09:15-10:45	Retiro A
9.3.1 Image-Guided Therapies (Oral Session)	

09:15-09:30 ThA04.1
Fast and Accurate Calibration of an X-Ray Imager to an Electromagnetic Tracking System for Interventional Cardiac Procedures 1868-1873
*Lang, Andrew (Philips Research North America); Stanton, Douglas (Philips Research North America);
 Parthasarathy, Vijay (Philips Research North America); Jain, Ameet* (Philips Research)*

09:30-09:45 ThA04.2
Catheter Steering Using a Magnetic Resonance Imaging System 1874-1877
Lalande, Viviane (Ecole polytechnique de Montréal); Gosselin, Frédéric P. (Ecole polytechnique de Montréal);
 Martel, Sylvain (Ecole Polytechnique de Montreal)*

09:45-10:00 ThA04.3
Simulation and Experimental Validation of Resonant Electric Markers Used for Medical Device Tracking in Magnetic Resonance Imaging 1878-1881
Krug, Johannes (Otto-von-Guericke Univ., Magdeburg); Will, Karl (Otto-von-Guericke Univ., Magdeburg);
 Rose, Georg (Otto-von-Guericke Univ., Magdeburg)*

10:00-10:15 ThA04.4
MiMed Liver: A Planning System for Liver Surgery 1882-1885
Shevchenko, Nikita (Technische Univ. Muenchen); Seidl, Bernhard (Technische Univ. Muenchen); Schwaiger, Johannes (Technical Univ. of Munich); Markert, Mathias (Technical Univ. Munich); Lueth, Tim (Technical Univ. of Munich)*

10:15-10:30 ThA04.5
Real-Time Cannula Navigation in Biological Tissue with High Temporal and Spatial Resolution Based on Impedance Spectroscopy 1886-1889
Trebbels, Dennis (HSG-IMIT); Jugl, Michael (HSG-IMIT); Zengerle, Roland (Hahn-Schickard-Inst. für Mikro- und Informationstechnik – HSG-IMIT)*

10:30-10:45 ThA04.6
Tagging Module for Lesion Localization in Capsule Endoscopy 1890-1893
Jayakrishnan, Chandrappan (Inst. of Microelectronics (IME), A-STAR Singapore); Vaidyanathan, Kripesh (Inst. of Microelectronics); Lim, Ruiqi (Inst. of Microelectronics, IME (Singapore)); Su, Nandar (Inst. of Microelectronics, IME (Singapore)); Tang, Shao Qiang (Inst. of Microelectronics, IME (Singapore))*

ThA05: 09:15-10:45	Retiro B
1.5.2 Advanced Methods of Principal Component Analysis and Independent Component Analysis (Oral Session)	
09:15-09:30	ThA05.1
An Extension of the Canonical Correlation Analysis to the Case of Multiple Observations of Two Groups of Variables	1894-1897
<i>Phlypo, Ronald* (INPG/CNRS UMR 5216); Congedo, Marco (cnrs)</i>	
09:30-09:45	ThA05.2
Space-Time Independent Component Analysis: The Definitive BSS Technique to Use in Biomedical Signal Processing?	1898-1901
<i>James, Christopher* (Univ. of Warwick); Demanuele, Charmaine (Univ. of Southampton)</i>	
09:45-10:00	ThA05.3
On Joint Diagonalization of Cumulant Matrices for Independent Component Analysis of MRS and EEG Signals	1902-1905
<i>Albera, Laurent* (Univ. de Rennes 1 & INSERM); Kachenoura, Amar (Univ. de Rennes1 & INSERM); Wendling, Fabrice (INSERM – Univ. de Rennes 1); Senhadji, Lotfi (Univ. de Rennes 1 & INSERM); Merlet, Isabelle (INSERM – Univ. de Rennes 1)</i>	
10:00-10:15	ThA05.4
Weighted-PCA for Unsupervised Analysis of Cardiac Arrhythmias	1906-1909
<i>Rodríguez-Sotelo, Jose-Luis (Univ. Nacional de Colombia sede Manizales); Delgado, Edilson* (Inst. Tecnológico Metropolitano); Peluffo-Ordóñez, Diego Hernán (Natl. Univ., Colombia – Manizales); Cuesta-Frau, David (Politechnic Univ. of Valencia); Castellanos-Dominguez, Germán (Univ. Nacional de Colombia)</i>	
10:15-10:30	ThA05.5
Foetal PQRST Extraction from ECG Recordings Using Cyclostationarity-Based Source Separation Method	1910-1913
<i>Haritopoulos, Michel* (Inst. PRISME); Capdessus, Cécile (Inst. PRISME); Nandi, Asoke K (The Univ. of Liverpool)</i>	
10:30-10:45	ThA05.6
Spatiotemporal ICA Applied to Retinotopic Fmri Data	1914-1917
<i>Keck, Ingo* (Univ. of Regensburg); Fischer, Volker (Univ. of Regensburg); Tome, Ana Maria (Univ. de Aveiro); Lang, Elmar W. (Univ. of Regensburg)</i>	
ThA06: 09:15-10:45	Retiro C
1.4.3 Biomedical Signal Classification I (Oral Session)	
09:15-09:30	ThA06.1
Arrhythmia Detection and Classification Using Morphological and Dynamic Features of ECG Signals ...	1918-1921
<i>Ye, Can* (Dept. of Electrical & Computer Engineering, Carnegie Mellon Univ.); Coimbra, Miguel (Inst. de Telecomunicações / Univ. do Porto); Bhagavatula, Vijayakumar (Dept. of Electrical & Computer Engineering, Carnegie Mellon Univ.)</i>	
09:30-09:45	ThA06.2
A Fast Critical Arrhythmic ECG Waveform Identification Method Using Cross-Correlation and Multiple Template Matching	1922-1925
<i>Chin, Fook Joo (RMIT Univ. (Melbourne campus), Australia); Fang, Qiang (RMIT Univ.); Zhang, Tao (Suzhou Inst. of Biomedical Engineering & Tech.); Cosic, Irena* (RMIT Univ.)</i>	
09:45-10:00	ThA06.3
Applying Machine Learning to Detect Individual Heart Beats in Ballistocardiograms	1926-1929
<i>Brueser, Christoph* (RWTH Aachen Univ.); Stadlthanner, Kurt (Philips Research Europe Laboratories); Brauers, Andreas (Philips Research Europe Laboratories); Leonhardt, Steffen (RWTH Aachen Univ.)</i>	

10:00-10:15 ThA06.4
Classification of Low Systemic Vascular Resistance Using Photoplethysmogram and Routine Cardiovascular Measurements 1930-1933
Lee, Qim Yi (The Univ. of New South Wales); Chan, Gregory S H (The Univ. of New South Wales); Redmond, Stephen James (Univ. of New South Wales); Middleton, Paul MacConachie (Univ. of New South Wales); Steel, Elizabeth (Prince of Wales Hospital Sydney); Malouf, Philip (Prince of Wales Hospital, Sydney); Critoph, Christopher (Prince of Wales Hospital); Flynn, Gordon (Prince of Wales Hospital); O'lonc, Emma (Prince of Wales Hospital); Lovell, Nigel H (Univ. of New South Wales)*

10:15-10:30 ThA06.5
Exploiting the Ambiguity Domain for Non-Stationary Biomedical Signal Classification 1934-1937
Sugavaneswaran, Lakshmi (Ryerson Univ.); Umapathy, Karthikeyan (Ryerson Univ.); Krishnan, Sridhar (Ryerson Univ.)*

10:30-10:45 ThA06.6
Impact of Movement on Cardiorespiratory Coordination in Conscious Rats 1938-1941
Kabir, Muammar Muhammad (The Univ. of Adelaide); Nalivaiko, Eugene (Univ. of Newcastle); Abbott, Derek (The Univ. of Adelaide); Baumert, Mathias (The Univ. of Adelaide)*

ThA07: 09:15-10:45	Martin Fierro 1
8.3.2 Robotics Inside the Body (Oral Session)	

09:15-09:30 ThA07.1
Microrobotic Navigable Entities for Magnetic Resonance Targeting 1942-1945
Martel, Sylvain (Ecole Polytechnique de Montreal)*

09:30-09:45 ThA07.2
Toward Tetherless Insufflation of the GI Tract 1946-1949
Webster, Robert (Vanderbilt Univ., Dept. of Mechanical Engineering); Menciassi, Arianna (Scuola Superiore Sant'Anna)*

09:45-10:00 ThA07.3
Optimal Trajectory for a Microrobot Navigating in Blood Vessels 1950-1953
Arcese, Laurent (Univ. d'Orléans); Cherry, Ali (Univ. d'Orléans); Fruchard, Matthieu (Univ. d'Orléans); Ferreira, Antoine (ENSI de Bourges)*

10:00-10:15 ThA07.4
From Miniature to Nano Robots for Diagnostic and Therapeutic Applications 1954-1957
Menciassi, Arianna (Scuola Superiore Sant'Anna); Sinibaldi, Edoardo (Italian Inst. of Tech.); Pensabene, Virginia (Italian Inst. of Tech.); Dario, Paolo (IIT Italian Inst. of Tech.)*

10:15-10:30 ThA07.5
Oxygen Sensing Using Microrobots 1958-1961
Ergeneman, Olgac (ETH Zurich); Chatzipirpiridis, George (ETH Zürich); Gelderblom, Femke B. (ETH Zürich); Pokki, Juho Anton Ilmari (ETH Zürich); Pané Vidal, Salvador (ETH Zürich); Marin-SuarezdelToro, Marta (Univ. of Granada); Fernandez Sanchez, Jorge Fernando (Univ. of Granada); Sotiriou, Georgios A. (Particle Tech. Laboratory, Inst. of Process Engineering, Dept. of Mechanical & Process Engineering, ETH Zurich); Nelson, Bradley (ETH Zurich)*

10:30-10:45 ThA07.6
Electromagnetic Actuation Methods for Intravascular Locomotive Microrobot 1962-1965
Cha, Kyoungrae (Chonnam Natl. Univ.); Jeong, Semi (Chonnam Natl. Univ.); Choi, Jongho (Chonnam Natl. Univ.); Qin, Lulu (Chonnam Natl. Univ.); Li, Jie (Chonnam Natl. Univ.); Park, Jongoh (Chonnam Natl. Univ.); Park, Sukho (Chonnam Natl. Univ.)*

2.10.1 Optical Molecular Imaging (Oral Session)

09:15-09:30

ThA08.1

Sparsity-Promoting Fluorescence Molecular Tomography with Iteratively Reweighted Regularization ... 1966-1969

Han, Dong (Inst. of Automation, Chinese Academy of Sciences, Beijing, China); Zhang, Bo (Sino-Dutch Biomedical & Information Engineering School of Northeastern Univ., Shenyang, China); Gao, Qiujuan (Medical Image Processing Group, Inst. of Automation, Chinese Academy of Sciences, Beijing, China); Liu, Kai (Inst. of Automation, Chinese Academy of Sciences); Tian, Jie* (Chinese Academy of Sciences)

09:30-09:45

ThA08.2

Multimodal Optical Imaging for Simultaneous In-Vivo Morphological and Biochemical**Characterization of Oral Epithelial Cancer 1970-1973**

Jo, Javier Antonio* (Texas A&M Univ.); Applegate, Brian (Texas A&M Univ.)

09:45-10:00

ThA08.3

Skin Lesion Segmentation Using an Improved Snake Model 1974-1977

Zhou, Huiyu (Queen's Univ. Belfast); Schaefer, Gerald* (Loughborough Univ.); Celebi, M. Emre (Louisiana State Univ in Shreveport); Iyatomi, Hitoshi (Hosei Univ.); Liu, Tangwei (Guangxi Medical Univ.); Lin, Faquan (Guangxi Medical Univ.)

10:00-10:15

ThA08.4

Imaging Microvascular Flow Characteristics Using Laser Speckle Contrast Imaging 1978-1981

Rege, Abhishek* (Johns Hopkins Univ.); Murari, Kartikeya (Johns Hopkins Univ.); Li, Nan (Johns Hopkins Univ.); Thakor, Nitish (Johns Hopkins Univ.)

10:15-10:30

ThA08.5

Probabilistic Independent Component Analysis for Laser Speckle Contrast Images Reveals**in Vivo Multi – Component Vascular Responses to Forepaw Stimulation 1982-1985**

Li, Nan* (Johns Hopkins Univ.); Pelled, Galit (Kennedy Krieger Inst., & Radiology Dept., Johns Hopkins Univ.); Thakor, Nitish (Johns Hopkins Univ.)

10:30-10:45

ThA08.6

In Vivo Sarcomere Imaging and Fiber Tension Measurements 1986-1989

Wu, Yi-Ning (Rehab. Inst. of Chicago); Ren, Yupeng* (Rehab. Inst. of Chicago); Zhang, Liqun (Northwestern Univ.)

5.2.1 Ventricular Fibrillation (Oral Session)

09:15-09:30

ThA09.1

A Novel Mechanism for Electrical Currents Inducing Ventricular Fibrillation:**The Three-Fold Way to Fibrillation 1990-1996**

Kroll, Mark* (Univ. of Minnesota); Panescu, Dorin (NewCardio, Inc.); Hinz, Andrew (TASER Intl.); Lakkireddy, Dhanunjaya (Univ. of Kansas Hospitals)

09:30-09:45

ThA09.2

Control of Action Potential Duration Alternans in Canine Ventricular Tissue 1997-2000

Kanu, Uche (Weill Cornell Medical College); Iravanian, Shahriar (Emory Univ.); Gilmour, Robert (Cornell Univ.); Christini, David* (Weill Cornell Medical College)

09:45-10:00

ThA09.3

Wavelet-Based Markers of Ventricular Fibrillation in Optimizing Human Cardiac Resuscitation 2001-2004

Hosseyndoust Foomany, Farbod (Ryerson Univ.); Umapathy, Karthikeyan* (Ryerson Univ.); Sugavaneswaran, Lakshmi (Ryerson Univ.); Krishnan, Sridhar (Ryerson Univ.); Masse, Stephane (THCFM Lab, Toronto General Hospital); Farid, Talha (THCFM Lab, Toronto General Hospital); Nair, Krishnakumar (THCFM Laboratory, Toronto General Hosp.); Dorian, Paul (St. Michael's Hospital); Nanthakumar, Kumaraswamy (THCFM Lab, Toronto General Hospital)

10:00-10:15 ThA09.4
Influences of Sites and Protocols on Inducing Ventricular Fibrillation: A Computer Simulation Study 2005-2008
 Zheng, Yi (Fudan Univ. & Univ. of Aizu); Wei, Daming (Univ. of Aizu); Fang, Zuxiang (Fudan Univ.);
 Zhu, Xin* (the Univ. of Aizu)

10:15-10:30 ThA09.5
Prediction of Ventricular Fibrillation Based on the ST-Segment Deviation: Allometric Model 2009-2012
 Arini, Pedro David (CONICET); Valentinuzzi, Max E.* (Univ. de Buenos Aires)

10:30-10:45 ThA09.6
Distinguishing between Ventricular Tachycardia and Ventricular Fibrillation from Compressed ECG Signal in Wireless Body Sensor Networks 2013-2016
 Ibaida, Ayman* (RMIT Univ.); Khalil, Ibrahim (RMIT Univ.)

ThA10: 09:15-10:45 Ombu B
10.6.1 Body Sensor Networks, Issues and Applications (Oral Session)

09:15-09:30 ThA10.1
Power Optimization in Body Sensor Networks: The Case of an Autonomous Wireless EMG Sensor Powered by PV-Cells 2017-2020
 Penders, Julien* (imec / Holst Centre); Pop, Valer (IMEC/Holst Centre); Caballero, Luis (HolstCentre);
 van de Molengraft, Jef (Holst Centre); Vullers, Ruud (imec/Holst Centre); van Schaijk, Rob (imec / Holst
 Centre); Van Hoof, Chris (IMEC)

09:30-09:45 ThA10.2
Advances in Wearable Technology and Its Medical Applications 2021-2024
 Bonato, Paolo* (Harvard Medical School)

09:45-10:00 ThA10.3
Energy Efficient On-Sensor Processing in Body Sensor Networks 2025-2029
 Marnane, Liam* (Univ. College Cork); Faul, Stephen (Univ. College Cork); Bleakley, Chris (Univ. College
 Dublin); Conway, Richard (Univ. of Limerick); Jones, Edward (Natl. Univ. of Ireland Galway); Popovici, Emanuel
 (Univ. College Cork); de la Guia Solaz, Manuel (Univ. of Limerick); Morgan, Fearghal (Natl. Univ. of Ireland,
 Galway); Patel, Kunjan (CASL, Univ. College Dublin)

10:00-10:15 ThA10.4
Clinical Tests and Evaluations of a Wireless ECG Sensor for Realization of Ubiquitous Health Care Systems 2030-2033
 Sugano, Hiroto* (Osaka City Univ.); Tsujioka, Tetsuo (Osaka City Univ.); Inoue, Tadayuki (Osaka City Univ.);
 Nakajima, Shigeyoshi (Osaka City Univ.); Hara, Shinsuke (Osaka City Univ.); Nakamura, Hajime (Osaka City
 Univ.); Takeuchi, Kazuhide (Osaka City Univ.)

10:15-10:30 ThA10.5
A Fast Key Generation Method to Secure Body Sensor Networks for Health Applications 2034-2036
 zhang, guanghe (Inst. of Computing Tech., ChineseAcademyofSciences); Poon, Carmen CY* (The Chinese
 Univ. of Hong Kong); Zhang, Yuan-Ting (The Chinese Univ. of Hong Kong)

10:30-10:45 ThA10.6
FIREGUIDE: Firefighter Guide and Tracker 2037-2040
 Gandhi, Siddhesh* (Univ. of Massachusetts, Amherst); Ganz, Aura (Univ. of Massachusetts, Amherst)

ThA11: 09:15-10:45 Poncho
6.4.2 Brain Stimulation (Oral Session)

09:15-09:30 ThA11.1
Changes in Frequency of Seizure-Like Events in Stimulated Cortical Slices 2041-2044
 Mason, Jonathan (Freedom High School); Voss, Logan James (Univ. of Auckland); Jacobson, Gregory Michael
 (Univ. of Waikato, Hamilton, New Zealand); Elbohouty, Maher (Waikato); Sleigh, Jamie (Univ. of Auckland);
 Steyn-Ross, Moira (School of Engineering, Univ. of Waikato, Hamilton, New Zealand); Steyn-Ross, Alistair
 (School of Engineering, Univ. of Waikato, Hamilton, New Zealand); Peixoto, Nathalia* (George Mason Univ.)

09:30-09:45 ThA11.2
Regional Electric Field Induced by Electroconvulsive Therapy: A Finite Element Simulation Study 2045-2048
Lee, Won Hee (Columbia Univ.); Deng, Zhi-De (Columbia Univ.); Kim, Tae-Seong (Kyung Hee Univ.); Laine, Andrew (Columbia Univ.); Lisanby, Sarah (Columbia Univ. / New York State Psychiatric Inst.); Peterchev, Angel V (Columbia Univ.)*

09:45-10:00 ThA11.3
Electroconvulsive Therapy in the Presence of Deep Brain Stimulation Implants: Electric Field Effects ... 2049-2052
Deng, Zhi-De (Columbia Univ.); Hardesty, David (Columbia Univ.); Lisanby, Sarah (Columbia Univ. / New York State Psychiatric Inst.); Peterchev, Angel V (Columbia Univ.)*

10:00-10:15 ThA11.4
Reduced Spatial Focality of Electrical Field in Tdcs with Ring Electrodes Due to Tissue Anisotropy 2053-2056
Suh, Hyun Sang (Kyung Hee Univ.); Lee, Won Hee (Columbia Univ.); Cho, Young-Sun (Kyung Hee Univ.); Kim, Ji-Hwan (Kyunghee Univ.); Kim, Tae-Seong (Kyung Hee Univ.)*

10:15-10:30 ThA11.5
Micro vs Macro Electrode DBS Stimulation: A Dosimetric Study 2057-2060
Maggio, Fernando (ICEMB@La Sapienza Univ. Rome); Pasciuto, Tina (Univ. La Sapienza); Paffi, Alessandra (ICEmB@La Sapienza Univ Rome); Apollonio, Francesca (ICEmB@La Sapienza Univ Rome); Parazzini, Marta (CNR); Ravazzani, Paolo (CNR); D'Inzeo, Guglielmo (ICEmB@"La Sapienza" Univ. of Rome); Liberti, Micaela (ICEMB@La Sapienza Univ Rome)*

ThA12: 09:15-10:45 6.3.1 Modeling of Neural Stimulation (Oral Session)	Rio de Plata
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09:15-09:30 ThA12.1
Steering Deep Brain Stimulation Fields Using a High Resolution Electrode Array 2061-2064
Toader, Emil (Philips Research); Decré, Michel (Philips Research); Martens, Hubert (Philips Research)*

09:30-09:45 ThA12.2
Modeling the Motor Striatum under Deep Brain Stimulation in Normal and MPTP Conditions 2065-2068
santaniello, sabato (Johns Hopkins Univ.); Gale, John (Cleveland Clinic); Montgomery, Erwin (Univ. of Alabama at Birmingham); Sarma, Sridevi V. (Johns Hopkins Univ.)*

09:45-10:00 ThA12.3
A Computational Model of Direct Brain Stimulation by Electroconvulsive Therapy 2069-2072
Bai, Siwei (Univ. of New South Wales); Loo, Colleen (School of Psychiatry, Univ. of New South Wales); Dokos, Socrates (Univ. of New South Wales)*

10:00-10:15 ThA12.4
Modeling the Electric Field Induced in a High Resolution Realistic Head Model During Transcranial Current Stimulation 2073-2076
Salvador, Ricardo (Univ. of Lisbon); Mekonnen, Abeye (Inst. of Biophysics & Biomedical Engineering, Univ. of Lisbon); Ruffini, Giulio (Starlab Barcelona SL); Miranda, Pedro (Faculty of Science, Univ. of Lisbon)*

10:15-10:30 ThA12.5
A Continuum Model of the Retinal Network and Its Response to Electrical Stimulation 2077-2080
Yin, Shijie (Univ. of New South Wales); Lovell, Nigel H (Univ. of New South Wales); Suanning, Gregg (The Univ. of New South Wales); Dokos, Socrates (Univ. of New South Wales)*

10:30-10:45 ThA12.6
Modeling the Effects of Deep Brain Stimulation on Sensorimotor Cortex in Normal and MPTP Conditions 2081-2084
santaniello, sabato (Johns Hopkins Univ.); Gale, John (Cleveland Clinic); Montgomery, Erwin (Univ. of Alabama at Birmingham); Sarma, Sridevi V. (Johns Hopkins Univ.)*

09:15-09:30	ThA13.1
Vibrotactile Guidance for Trajectory Following in Computer Aided Surgery	2085-2088
<i>Bluteau, Jeremy* (Laboratoire TIMC – i3D LIG laboratory – LPNC laboratory); Dubois, Marie-dominique (CHU Saint Etienne, Hôpital Nord, 42000 Saint Etienne, France); Coquillart, Sabine (i3D LIG laboratory – INRIA); Gentaz, Edouard (LPNC laboratory – Grenoble Univ. – CNRS); Payan, Yohan (Laboratoire TIMC-IMAG)</i>	
09:30-09:45	ThA13.2
Relative to Direct Haptic Feedback, Remote Vibrotactile Feedback Improves but Slows Object Manipulation	2089-2092
<i>Stepp, Cara* (Univ. of Washington); Matsuoka, Yoky (Univ. of Washington)</i>	
09:45-10:00	ThA13.3
Effect of Force Feedback from Each DOF on the Motion Accuracy of a Surgical Tool in Performing a Robot-Assisted Tracing Task	2093-2096
<i>Samad, Manar D. (Univ. of Calgary); Hu, Yaoping* (The Univ. of Calgary); Sutherland, Garnette (Univ. of Calgary)</i>	
10:00-10:15	ThA13.4
Learning Kinematic Mappings in Laparoscopic Surgery	2097-2102
<i>Huang, Felix* (Rehab. Inst. of Chicago); Patton, James (Jim) (Rehab Inst. of Chicago & U. of Illinois at Chicago); Mussa-Ivaldi, Ferdinando (Rehab. Inst. of Chicago); Pugh, Carla (Dept. of Surgery, Northwestern Univ.)</i>	
10:15-10:30	ThA13.5
Preliminary Evaluation of Podotactile Feedback in Sighted and Blind Users	2103-2106
<i>Velazquez, Ramiro* (Univ. Panamericana); Bazan, Omar (Univ. Panamericana)</i>	
10:30-10:45	ThA13.6
A Portable Ebook Reader for the Blind	2107-2110
<i>Velazquez, Ramiro* (Univ. Panamericana); Hernandez, Hermes (Univ. Panamericana); Preza, Enrique (Univ. Panamericana)</i>	

10:45-12:15	ThBPo01.1
Inkjet Printed Arrays of Pressure Sensors Based on All-Organic Field Effect Transistors	2111-2114
<i>Cosseddu, Piero (Univ. of Cagliari); Bonfiglio, Annalisa (Univ. of Cagliari); Neelgund, Rohan (Univ. of Missouri, Columbia); Tyrer, Harry* (Univ. of Missouri – Columbia)</i>	
10:45-12:15	ThBPo01.2
Software Simulation of Unobtrusive Falls Detection at Night-Time Using Passive Infrared and Pressure Mat Sensors	2115-2118
<i>Ariani, Arni* (Univ. of New South Wales); Redmond, Stephen James (Univ. of New South Wales); Chang, David (Univ. of New South Wales); Lovell, Nigel H (Univ. of New South Wales)</i>	
10:45-12:15	ThBPo01.3
Monitoring Pulse and Respiration with a Non-Invasive Hydraulic Bed Sensor	2119-2123
<i>Heise, David* (Univ. of Missouri); Skubic, Marjorie (Univ. of Missouri)</i>	
10:45-12:15	ThBPo01.4
Personalized Building-Embedded and Wearable Monitoring Infrastructures with Mediated Data Transfer	2124-2127
<i>Augustyniak, Piotr* (AGH Univ. of Science & Tech)</i>	
10:45-12:15	ThBPo01.5
Alert Management for Home Healthcare Based on Home Automation Analysis	2128-2131
<i>Truong, Thi Bich Thanh* (European Univ. of Brittany France); de Lamotte, Florent (Univ. de Bretagne Sud); Diguet, Jean-Philippe (CNRS); SAID, Farida (Univ. de Bretagne Sud)</i>	

10:45-12:15	ThBPo01.6
ART – A New Concept for an Activity Recorder and Transceiver	2132-2135
<i>D'Angelo, Lorenzo Tancredi* (Technische Univ. Muenchen); Czabke, Axel (TU Muenchen); Somlai, Ian (Technical Univ. Munich, Germany); Niazmand, Khalil (Technische Univ. München); Lueth, Tim (Technical Univ. of Munich)</i>	
10:45-12:15	ThBPo01.7
Minimal Hardware Bluetooth Tracking for Long-Term At-Home Elder Supervision	2136-2140
<i>Kelly, Damian* (Natl. Univ of Ireland, Maynooth); McLoone, Sean F. (Natl. Univ of Ireland, Maynooth); Farrell, Ronan (Natl. Univ. of Ireland Maynooth)</i>	
10:45-12:15	ThBPo01.8
Towards Automated Assistance for Operating Home Medical Devices	2141-2146
<i>gao, zan (Beijing Univ. of Posts & Telecommunications); Detyniecki, Marcin (CNRS & UMPC –Univ. Pierre et Marie Curie); Chen, Ming-yu (CMU); Wu, Wen (Siemens Corporate Research, a division of Siemens Corp.); Hauptmann, Alexander (Carnegie Mellon Univ.); Wactlar, Howard* (Carnegie Mellon Univ.)</i>	
10:45-12:15	ThBPo01.9
A Method for Estimating Rest-Activity Patterns Using Simple Pyroelectric Motion Sensors	2147-2150
<i>Hayes, Tamara (Oregon Health & Science Univ.); Riley, Thomas (Oregon Health & Science Univ.); Pavel, Michael* (Oregon Health & Science Univ.); Kaye, Jeffrey A. (Oregon Health & Science Univ.)</i>	
10:45-12:15	ThBPo01.10
Measuring Nightly Activity, Body Weight and Body Weight Change Rate with a Sensor Equipped Bed ..	2151-2154
<i>Schrempf, Andreas* (Upper Austria Univ. of Applied Sciences, School of Applied Health & Social Sciences); Schossleitner, Gerold (Upper Austria Univ. of Applied Sciences, School of Applied Health & Social Sciences, Dept. of Medical Engineering); Blaha, Armin (Spantec)</i>	
10:45-12:15	ThBPo01.11
Ambient Assisted Living: A Methodological Approach	2155-2158
<i>Estudillo-Valderrama, Miguel Ángel* (Biomedical Engineering Group, Univ. of Seville); Roa, Laura M. (Univ. of Seville); Reina-Tosina, Javier (Univ. of Seville); Roman, Isabel (Univ. of Seville)</i>	
10:45-12:15	ThBPo01.12
Evaluation and Analysis of Multimodal Sensors for Developing in and Around the Bed Patient Monitoring System	2159-2162
<i>Aung Aung, Phyto Wai (Inst. for Infocomm Research); Huang, Weimin (Inst. for Infocomm Research, Agency for Science Tech. & Research); Foo, Siang Fook Victor (Inst. for Infocomm Research); Biswas, Jit (Inst. for Infocomm Research); Phua, Jiliang Eugene* (Inst. for Infocomm Research); Hsia, Chi-Chun (Industrial Tech. Research Inst.); Liou, Koujuch (Industrial Tech. Research Inst.)</i>	

ThBPo02: 10:45-12:15	Catalinas/Golden Horn
10.2.3 eHealth, mHealth, telehealth II (Poster Session)	

10:45-12:15	ThBPo02.1
Reducing Hardware Risks in the Development of Telematic Rescue Assistance Systems:	
A Methodology	2163-2166
<i>Müller, Matthias* (RWTH Aachen Univ., Germany); Loijens, Patrick (Dept. of Information Mgmt. in Mechanical Engineering at RWTH Aachen Univ., Germany); Schilberg, Daniel (Dept. of Information Mgmt. in Mechanical Engineering at RWTH Aachen Univ., Germany); Jeschke, Sabina (RWTH Aachen Univ., Germany)</i>	
10:45-12:15	ThBPo02.2
On Search Guide Phrase Compilation for Recommending Home Medical Products	2167-2171
<i>Luo, Gang* (IBM)</i>	
10:45-12:15	ThBPo02.3
Internal Validation of a Telemedical System for Monitoring Patients with Chronic Respiratory Diseases	2172-2175
<i>Jabłoński, Ireneusz (Wrocław Univ. of Tech.); Głomb, Grzegorz (Wrocław Univ. of Tech.); Guskowski, Tomasz (Wrocław Univ. of Tech.); Kasprzak, Bogdan (Wrocław Univ. of Tech.); Pękała, Janusz (Wrocław Univ. of Tech.); Polak, Adam (Wrocław Univ. of Tech.); Stępień, Andrzej (Wrocław Univ. of Tech.); Swierczyński, Zbigniew (Wrocław Univ. of Tech.); Mroccka, Janusz* (Wrocław Univ. of Tech.)</i>	

10:45-12:15	ThBPo02.4
Vital Signs Remote Monitoring through Multipoint Videoconferencing	2176-2179
<i>Valente, Augusto Cavalcante (Univ. de Brasília); Pereira, Debora (Univ. de Brasília); Almeida, Eduardo (Univ. de Brasília); Matsunaga, Raphael (Univ. de Brasília); dos Santos, Icaro* (Univ. of Brasília)</i>	
10:45-12:15	ThBPo02.5
A Multipoint Videoconference-Based Telemedicine System for Electrocardiogram Monitoring	2180-2183
<i>Matsunaga, Raphael (Univ. de Brasília); Almeida, Eduardo (Univ. de Brasília); Pereira, Debora (Univ. de Brasília); Valente, Augusto Cavalcante (Univ. de Brasília); dos Santos, Icaro* (Univ. of Brasília)</i>	
10:45-12:15	ThBPo02.6
Improving the Management of Chronic Diseases Using Web-Based Technologies: An Application in Hemophilia Care	2184-2187
<i>Teixeira, Leonor* (Aveiro Univ.); Saavedra, Vasco (Aveiro Univ.); Ferreira, Carlos Manuel Santos (Aveiro Univ.); Sousa Santos, Beatriz (Aveiro Univ.)</i>	
10:45-12:15	ThBPo02.7
A System for Intelligent Home Care ECG Upload and Priorisation	2188-2191
<i>D'Angelo, Lorenzo Tancredi* (Technische Univ. Muenchen); Tarita, Eugeniu (Biosigna GmbH); Zywiets, Tosja (Rosenberger Hochfrequenztechnik GmbH & Co. KG); Lueth, Tim (Technical Univ. of Munich)</i>	
10:45-12:15	ThBPo02.8
Interoperable and Standard E-Health Solution Over Bluetooth	2192-2195
<i>Martinez Ruiz, Ignacio* (Univ. of Zaragoza); del Valle, Pilar (Univ. of Zaragoza); Muñoz, Pilar (Univ. of Zaragoza); Trigo, Jesus (Univ. of Zaragoza); Escayola, Javier (Univ. of Zaragoza); Martinez-Espronedea, Miguel (Public Univ. of Navarra); Muñoz, Adolfo (Health Inst. "Carlos III" – ISCIII); Serrano, Luis (Public Univ. of Navarra); García Moros, Jose (Univ. of Zaragoza)</i>	
10:45-12:15	ThBPo02.9
A Wireless Blood Pressure Monitoring System for Personal Health Management	2196-2199
<i>Li, Wun-Jin (Natl. Taiwan Univ. of Science & Tech.); Luo, Yuan-Long (Natl. Taiwan Univ. of Science & Tech.); Chang, Yao-Shun (Natl. Taiwan Univ. of Science & Tech.); Lin, Yuan-Hsiang* (Natl. Taiwan Univ. of Science & Tech.)</i>	
10:45-12:15	ThBPo02.10
AngelCare Mobile System: Homecare Patient Monitoring Using Bluetooth and GPRS	2200-2203
<i>Ribeiro, Anna Giselle* (Univ. Federal do Rio Grande do Norte); Maitelli, André (Univ. Federal do Rio Grande do Norte); Valentim, Ricardo Alessandro de Medeiros (Federal Univ of Rio Grande do Norte); Guerreiro, Ana Maria G. (Federal Univ. of Rio Grande do Norte); Brandão, Gláucio Bezerra (Federal Univ. of Rio Grande do Norte)</i>	
10:45-12:15	ThBPo02.11
GIS and Spatial Analysis for Costs and Services Optimization in Neurological Telemedicine	2204-2207
<i>Bramanti, Alessia* (Univ. of Messina); Bonanno, Lilla (IRCCS – Centro Neurolesi "Bonino Pulejo"); Celona, Alessandro (IRCCS – Centro Neurolesi "Bonino Pulejo"); Bertuccio, Saul (IRCCS – Centro Neurolesi "Bonino Pulejo"); Calisto, Andrea (Univ. of Messina); Lanzafame, Pietro (IRCCS – Centro Neurolesi "Bonino Pulejo"); Bramanti, Placido (IRCCS – Centro Neurolesi "Bonino Pulejo")</i>	
10:45-12:15	ThBPo02.12
Mobile Communications for Monitoring Heart Disease and Diabetes	2208-2210
<i>Mulvaney, David* (Loughborough Univ.); Woodward, Bryan (Loughborough Univ.); Datta, Sekharjit (Loughborough Univ.); Harvey, Paul Dennis (Loughborough Univ.); Vyas, Anoop Lal (Indian Inst. of Tech. Delhi); Thakker, Bhaskar (Indian Inst. of Tech. Delhi); Farooq, Omar (Aligarh Muslim Univ.)</i>	
10:45-12:15	ThBPo02.13
Feasibility of Congestive Heart Failure Telemanagement Using a Wii-Based Telecare Platform	2211-2214
<i>Finkelstein, Joseph (Johns Hopkins Univ.); Wood, Jeffrey* (Johns Hopkins Univ.); Cha, Eunme (Johns Hopkins Univ.)</i>	
10:45-12:15	ThBPo02.14
Wireless Remote Monitoring of Myocardial Ischemia Using Reconstructed 12-Lead ECGs	2215-2220
<i>Vukcevic, Vladan (Clinical Center of Serbia); Panescu, Dorin* (NewCardio, Inc.); Bojovic, Bosko (NewCardio, Inc); George, Samuel (NewCardio, Inc); Gussak, Ihor (NewCardio, Inc); Stankovic, Ivana (Clinical Center of Serbia, Belgrade, Serbia); Giga, Vojislav (Clinical Center of Serbia, Belgrade, Serbia)</i>	

10:45-12:15 ThBPo02.15
A Healthy Lifestyle Coaching-Persuasive Application for Patients with Type 2 Diabetes 2221-2224
Fico, Giuseppe (Technical Univ. of Madrid); Fioravanti, Alessio (Technical Univ. of Madrid); Arredondo, María Teresa (Technical Univ. of Madrid); Ardigo, Diego (Univ. of Parma); Guillen, Alejandra (Medtronic Spain)*

ThBPo03: 10:45-12:15 Catalinas/Golden Horn
10.4.2 Ambient Assisted Living and Fall Detection (Poster Session)

10:45-12:15 ThBPo03.1
Body Sway Measurement for Fall Risk Assessment Using Inexpensive Webcams 2225-2229
Wang, Fang (Univ. of Missouri); Skubic, Marjorie (Univ. of Missouri); Abbott, Carmen (Univ. of Missouri); Keller, James M (Univ. of Missouri)*

10:45-12:15 ThBPo03.2
Behaviour Monitoring of the Elderly by Trajectories Analysis 2230-2233
Campo, Eric (Univ. de Toulouse; UPS, INSA, INP, ISAE; UTM ; LAAS); Chan, Marie (LAAS-CNRS); Bourennane, Walid (Univ. de Toulouse ; UPS, INSA, INP, ISAE; LAAS); Esteve, Daniel (LAAS-CNRS)*

10:45-12:15 ThBPo03.3
Automatic Segmentation of Triaxial Accelerometry Signals for Falls Risk Estimation 2234-2237
Redmond, Stephen James (Univ. of New South Wales); Scalzi, Maria Elena (Politecnico di Milano); Narayanan, Michael Ravi (Univ. of New South Wales); Lord, Stephen (Univ. of New South Wales); Cerutti, Sergio (Politecnico di Milano); Lovell, Nigel H (Univ. of New South Wales)*

10:45-12:15 ThBPo03.4
Diagnosing Health Problems from Gait Patterns of Elderly 2238-2241
Pogorelc, Bogdan (Jožef Stefan Inst.); Gams, Matjaž (Jozef Stefan Inst.)*

10:45-12:15 ThBPo03.5
Acoustic Fall Detection Using a Circular Microphone Array 2242-2245
Li, Yun (Univ. of Missouri); Zeng, Zhiling (Univ. of Missouri); Popescu, Mihail (Univ. of Missouri); Ho, K.C. (Univ. of Missouri)*

10:45-12:15 ThBPo03.6
A System for Ubiquitous Fall Monitoring at Home Via a Wireless Sensor Network 2246-2249
Zapata, Juan (Univ. Politecnica de Cartagena)*

ThBPo04: 10:45-12:15 Catalinas/Golden Horn
8.1.5 Therapeutic Robotics (Poster Session)

10:45-12:15 ThBPo04.1
Skill Generalization Relevant to Robotic Neuro-Rehabilitation 2250-2254
Bansal, Deivya (Univ. of Illinois at Chicago, Rehabilitaiton Inst.of Chicago); Kenyon, Robert (Univ. of Illinois at Chicago); Patton, James (Jim) (Rehab Inst. of Chicago & U. of Illinois at Chicago)*

10:45-12:15 ThBPo04.2
Integrated versus Isolated Training of the Hemiparetic Upper Extremity in Haptically Rendered Virtual Environments 2255-2258
Qiu, Qinyin (NJIT); Fluet, Gerard (UMDNJ); saleh, soha (NJIT); Lafond, Ian (New Jersey Inst. of Tech.); Merians, Alma (UMDNJ); Adamovich, Sergei (NJIT)*

10:45-12:15 ThBPo04.3
Tracking Training Evolution: Patient with Upper Limb Amputation above the Elbow 2259-2262
Toledo Peral, Cinthya (Centro de Investigación y de Estudios Avanzados del IPN); Leija, Lorenzo (Centro de Investigación y de Estudios Avanzados del Inst. Politecnico Nacional); Muñoz, Roberto (Centro de Investigación y de Estudios Avanzados del IPN); Vera, Arturo (Centro de Investigación y de Estudios Avanzados del Inst. Politecnico Nacional)*

10:45-12:15	ThBPo04.4
Model Based Control of a Rehabilitation Robot for Lower Extremities	2263-2266
<i>Xie, Xiao (Chinese Academy of Sciences); Hou, Zeng-Guang* (Inst. of Automation, Chinese Academy of Sciences); Li, Pengfeng (Inst. of Automation, Chinese Academy of Sciences); Ji, Cheng (Chinese Academy of Sciences); Zhang, Feng (Chinese Academy of Sciences); Tan, Min (Chinese Academy of Sciences)</i>	
10:45-12:15	ThBPo04.5
Evaluation of Leg Joint Trajectories While Carrying Out Passive Manipulation by NEUROBike	2267-2270
<i>Coscia, Martina (Scuola Superiore Sant'Anna); Galardi, Giuseppe (Fondazione Istituto San Raffaele/G. Giglio, Contrada Pierapollastra, 90015, Cefalù (PA), Italy); Monaco, Vito (Scuola Superiore Sant'Anna, Pisa); Bagnato, Sergio (Fondazione Istituto San Raffaele/G. Giglio, Contrada Pierapollastra, 90015, Cefalù (PA), Italy); Micera, Silvestro* (Scuola Superiore Sant'Anna)</i>	
10:45-12:15	ThBPo04.6
Enhancing Robotic Gait Training Via Augmented Feedback	2271-2274
<i>Patritti, Ben (Harvard Medical School); Sicari, Monica (Harvard Medical School); Deming, Lynn (Harvard Medical School); Romaguera, Fernanda (Harvard Medical School); Pelliccio, Marlena (Harvard Medical School); Benedetti, Maria Grazia (Univ. di Bologna); Nimec, Donna (Harvard Medical School); Bonato, Paolo* (Harvard Medical School)</i>	
ThBPo05: 10:45-12:15	Catalinas/Golden Horn
8.3.5 Robotic and Image-Guided Surgery (Poster Session)	
10:45-12:15	ThBPo05.1
Evaluation in Vitro of a Treatment Planning Algorithm for an Epicardial Crawling Robot	2275-2278
<i>Goyette, Brina (Carnegie Mellon Univ.); Becker, Brian C.* (Carnegie Mellon Univ.); Zenati, Marco (Harvard Medical School); Riviere, Cameron N (Carnegie Mellon Univ.)</i>	
10:45-12:15	ThBPo05.2
Disposable Endoscope Tip Actuation Design and Robotic Platform	2279-2282
<i>Chen, Yi* (MIT); Tanaka, Shigehiko (MIT); Hunter, Ian (Massachusetts Inst. of Tech.)</i>	
10:45-12:15	ThBPo05.3
Towards Direct Head Navigation for Robot-Guided Transcranial Magnetic Stimulation Using 3D Laserscans: Idea, Setup and Feasibility	2283-2286
<i>Richter, Lars* (Univ. of Luebeck); Bruder, Ralf (Univ. of Luebeck); Schlaefer, Alexander (Univ. of Luebeck); Schweikard, Achim (Univ. of Luebeck, Germany)</i>	
10:45-12:15	ThBPo05.4
On the Controllability of Dynamic Model-Based Needle Insertion in Soft Tissue	2287-2291
<i>Haddadi, Amir (Queen's Univ.); Goksel, Orcun (Univ. of British Columbia); Salcudean, Septimiu E. (Univ. of British Columbia); Hashtrudi-Zaad, Keyvan* (Queen's Univ.)</i>	
10:45-12:15	ThBPo05.5
A Compact Dynamic Force Model for Needle-Tissue Interaction	2292-2295
<i>Asadian, Ali* (Univ. of Western Ontario (UWO)); Kermani, Mehrdad R. (Univ. of Western Ontario); Patel, Rajni (London Health Sciences Centre)</i>	
10:45-12:15	ThBPo05.6
Accuracy Study of a New Assistance System under the Application of Navigated Control® for Manual Milling on a Head Phantom	2296-2299
<i>Shi, Jiaxi* (Technical Univ. Munich); Stenzel, Roland (Technical Univ. of Munich); Wenger, Thomas (Technical Univ. Munich & ERGOSURG GmbH); Lueth, Tim (Technical Univ. of Munich)</i>	
10:45-12:15	ThBPo05.7
Real-Time Determination of Skull Thickness for a Manually-Navigated Synergistic Trepanation Tool	2300-2303
<i>Korff, Alexander* (RWTH Aachen Univ.); Follmann, Axel (RWTH Aachen Univ.); Winter, Lukas (Max Delbrück Center for Molecular Medicine); de la Fuente, Matias (RWTH Aachen Univ.); Schmieder, Kirsten (Ruprecht-Karls-Univ. of Heidelberg, Neurosurgery Dept. of the Medical Faculty Mannheim); Radermacher, Klaus (RWTH Aachen Univ., Chair of Medical Engineering)</i>	

10:45-12:15	ThBPo05.8
Evaluation of a Synergistically Controlled Semiautomatic Trepanation System for Neurosurgery 2304-2307	
<i>Follmann, Axel* (RWTH Aachen Univ.); Korff, Alexander (RWTH Aachen Univ.); Schmieder, Kirsten (Ruprecht-Karls-Univ. of Heidelberg, Neurosurgery Dept. of the Medical Faculty Mannheim); Radermacher, Klaus (RWTH Aachen Univ., Chair of Medical Engineering); Fuertjes, Tobias (RWTH Aachen Univ.); Lauer, Wolfgang (RWTH Aachen Univ.); Kunze, Sandra (Univ. of Heidelberg, Neurosurgery Dept. of the Medical Faculty Mannheim)</i>	
10:45-12:15	ThBPo05.9
Pilot Study on Verification of Effectiveness on Operability of Assistance System for Robotic Tele-Surgery Using Simulation 2308-2312	
<i>Kawamura, Kazuya* (Waseda Univ.); Kobayashi, Yo (Waseda Univ.); Fujie, Masakatsu G. (Waseda Univ.)</i>	
10:45-12:15	ThBPo05.10
How Accurate Is Accurate Enough? a Brief Overview on Accuracy Considerations in Image-Guided Cardiac Interventions 2313-2316	
<i>Linte, Cristian A. * (Robarts Research Inst.); Moore, John (Robarts Research Inst.); Peters, Terry (Robarts Research Inst.)</i>	
10:45-12:15	ThBPo05.11
First Neuronavigation Experiences in Uruguay 2317-2320	
<i>Carbajal, Guillermo (Facultad de Ingeniería – Udelar); Gómez, Alvaro* (Facultad de Ingeniería – Udelar); Pereyra, Gabriela (Facultad de Ingeniería – Udelar); Lima, Ramiro (Facultad de Medicina – Udelar); Preciozzi, Javier (Facultad de Ingeniería – Udelar); Vázquez, Luis (Facultad de Ingeniería – Udelar); Villar, Alvaro (Centro Regional de Neurocirugía de Tacuarembó)</i>	
10:45-12:15	ThBPo05.12
3D Localization of Ferromagnetic Probes for Small Animal Neurosurgery 2321-2324	
<i>Heinig, Maximilian* (Univ. of Luebeck); Schlaefer, Alexander (Univ. of Luebeck); Schweikard, Achim (Univ. of Luebeck, Germany)</i>	
10:45-12:15	ThBPo05.13
Automated Detection of Fiducial Screws from CT/DVT Volume Data for Image-Guided ENT Surgery 2325-2328	
<i>Zheng, Guoyan* (Univ. of Bern); Gerber, Nicolas (Univ. of Bern); Widmer, Daniel (Univ. of Bern); Stieger, Christof (Univ. of Bern); Caversaccio, Marco (Insel Spital, Univ. Bern); Nolte, Lutz-Peter (Univ. of Bern); Weber, Stefan (Univ. of Bern)</i>	
ThBPo06: 10:45-12:15	Catalinas/Golden Horn
1.2.10 Signal Processing in Physiological Systems III (Poster Session)	
10:45-12:15	ThBPo06.1
Automatic Detector of High Frequency Oscillations for Human Recordings with Macroelectrodes 2329-2333	
<i>Zelmann, Rina* (McGill Univ., Montreal Neurological Inst.); Mari, Francesco (Montreal Neurological Inst.); Jacobs, Julia (Montreal Neurological Inst.); Zijlmans, Maeike (Montreal Neurological Inst.); Chander, Rahul (McGill Univ.); Gotman, Jean (McGill Univ.)</i>	
10:45-12:15	ThBPo06.2
An Automatic Multi-Lead Electrocardiogram Segmentation Algorithm Based on Abrupt Change Detection 2334-2337	
<i>Illanes-Manriquez, Alfredo* (Univ. Austral de Chile)</i>	
10:45-12:15	ThBPo06.3
Electromyographic Assessment of Muscle Fatigue During Isometric Vibration Training at Varying Frequencies 2338-2341	
<i>Mischi, Massimo* (Eindhoven Univ. of Tech.); Rabotti, Chiara (Eindhoven Univ. of Tech.); Cardinale, Marco (British Olympic Association)</i>	
10:45-12:15	ThBPo06.4
Statistical Characterization of Actigraphy Data During Sleep and Wakefulness States 2342-2345	
<i>Adamec, Ondrej (VSB Technical Univ. of Ostrava); Domingues, Alexandre* (Inst. Superior Técnico); Paiva, Teresa (Inst. Superior Técnico); Sanches, J. Miguel (Inst. for Systems & Robotics, NIF)</i>	

10:45-12:15	ThBPo06.5
GNL-HybELS: An Algorithm to Classify and Identify VOR Responses Simultaneously 2346-2349	
<i>Ghoreyshi, Atiyeh* (McGill Univ.); Galiana, Henrietta L. (McGill Univ.)</i>	
10:45-12:15	ThBPo06.6
Benzodiazepine Administration Effect on EEG Fractal Dimension: Results and Causalities 2350-2353	
<i>Michail, Emmanouil (Aristotle Univ. of Thessaloniki); Chouvarda, Ioanna (Aristotle Univ.); Maglaveras, Nikolaos* (Aristotle Univ. of Thessaloniki)</i>	
10:45-12:15	ThBPo06.7
Implementation of a Real-Time Algorithm for Maternal and Fetal Heart Rate Monitoring in a Digital Signal Controller Platform 2354-2357	
<i>Arias-Ortega, Ronald* (Univ. Autónoma Metropolitana); Gaitan-Gonzalez, Mercedes (Univ. Autonoma Metropolitana); Yanez-Suarez, Oscar (Univ. Autonoma Metropolitana)</i>	
10:45-12:15	ThBPo06.8
Development of a Multimodal Monitoring Platform for Medical Research 2358-2361	
<i>Gomez, Hector* (Univ. de la Republica, Uruguay); Camacho, Jorge (Spanish Natl. Research Council (CSIC)); Yelicich, Bernardo (Laboratorio de Acústica Ultrasonora, Inst. de Física – Facultad de Ciencias, Univ. de la República, Uruguay); Moraes, Leandro (Intensive Care Unit, Hospital de Clinicas, Univ. de la República School of Medicine, Montevideo, Uruguay); Biestro, Alberto (Intensive Care Unit, Hospital de Clinicas, Univ. de la República School of Medicine, Montevideo, Uruguay); Puppo, Corina (Emergency Dept., Univ. de la República School of Medicine, Montevideo, Uruguay)</i>	
10:45-12:15	ThBPo06.9
Estimation of Ankle Joint Angle from Peroneal and Tibial Electroneurograms Based on Muscle Spindle Model 2362-2366	
<i>Lin, Chou-Ching* (Natl. Cheng Kung Univ.); Ju, Ming-Shung (Natl. Cheng Kung University); Chan, Ching-Chao (Natl. Cheng Kung Univ.)</i>	
10:45-12:15	ThBPo06.10
Influence of Rotary Blood Pumps Over Preload Recrutable Stroke Work 2367-2370	
<i>Sugai, Telma Keiko* (Tohoku Univ.); Yoshizawa, Makoto (Tohoku Univ.); Tanaka, Akira (Fukushima Univ.); Shiraishi, Yasuyuki (Tohoku Univ.); Yambe, Tomoyuki (Tohoku Univ.); Baba, Atsushi (Tohoku Univ.)</i>	
10:45-12:15	ThBPo06.11
Destructive Power Dynamics of Alpha-Theta Oscillations Via Spike and Wave in CA3 2371-2374	
<i>Dong, Guoya (Hebei Univ. of Tech.); Chen, Xiaogang (Hebei Univ. of Tech.); Li, Wenwen (Hebei Univ. of Tech.); Cheng, Zhishuang* (Hebei Univ. of Tech.); Ge, Manling (Hebei Univ. of Tech.)</i>	

ThBPo07: 10:45-12:15	Catalinas/Golden Horn
1.3.5 Nonlinear Analysis of Biomedical Signals II (Poster Session)	

10:45-12:15	ThBPo07.1
Nonlinear, Multiple-Input Modeling of Cerebral Autoregulation Using Volterra Kernel Estimation 2375-2378	
<i>Kouchakpour, Hesam* (Southampton Univ.); Simpson, David Martin (Univ. of Southampton); Allen, Robert (Univ. of Southampton)</i>	
10:45-12:15	ThBPo07.2
Regularity Analysis of the MEG Background Activity in Alzheimer's Disease Using Approximate Entropy 2379-2382	
<i>Gomez, Carlos* (Univ. of Valladolid, CIF: Q4718001C); Abásolo, Daniel (Univ. of Valladolid); Poza, Jesús (Univ. of Valladolid); Fernandez, Alberto (Univ. Complutense de Madrid); Hornero, Roberto (Univ. of Valladolid)</i>	
10:45-12:15	ThBPo07.3
Characterization of Activity Epochs in Actimetric Registries for Infantile Colic Diagnosis: Identification and Feature Extraction Based on Wavelets and Symbolic Dynamics 2383-2386	
<i>Martin-Martínez, Diego (Univ. of Valladolid); Casaseca-de-la-Higuera, Pablo* (Univ. de Valladolid); Vegas-Sanchez-Ferrero, Gonzalo (Univ. de Valladolid); Cordero-Grande, Lucilio (Univ. de Valladolid); Andrés-de-Llano, Jesús María (Univ. of Valladolid); Garmendia-Leiza, José Ramón (Univ. of Valladolid); Ardura-Fernández, Julio (Univ. of Valladolid)</i>	

10:45-12:15	ThBPo07.4
Nonlinearity of EHG Signals Used to Distinguish Active Labor from Normal Pregnancy Contractions 2387-2390	
<i>Hassan, Mahmoud* (UTC-France); Terrien, Jeremy (Reykjavik Univ.); Alexandersson, Asgeir (Faculty of Medicine, Univ. of Iceland, Reykjavik, Iceland); Marque, Catherine (Univ. of Tech. of Compiègne); Karlsson, Brynjar (Reykjavik Univ.)</i>	
10:45-12:15	ThBPo07.5
A State Space Based Approach in Non-Linear Hemodynamic Response Modeling with fMRI Data 2391-2394	
<i>Hettiarachchi, Imali Thanuja* (Deakin Univ.); Pathirana, Pubudu N. (Deakin Univ.); Brotchie, Peter (Geelong Hospital)</i>	
10:45-12:15	ThBPo07.6
Comparison of Median Filter and Discrete Dyadic Wavelet Transform for Noise Cancellation in Electrocardiogram 2395-2398	
<i>Lin, Wanhua (Shenzhen Inst. of AdvancedTech., Chinese Academy of Sciences); Wong, Mico Yee Man (The Chinese Univ. of Hong Kong); Pu, Lina (Chinese Academy of Sciences); Zhang, Yuan-Ting* (The Chinese Univ. of Hong Kong)</i>	
10:45-12:15	ThBPo07.7
Correntropy-Based Nonlinearity Test Applied to Patients with Chronic Heart Failure 2399-2402	
<i>Garde, Ainara* (Univ. Politècnica de Catalunya); Sornmo, Leif (Lund Univ.); Jané, Raimon (Univ. Politècnica de Catalunya); Giraldo, Beatriz (Univ. Politècnica de Catalunya)</i>	
10:45-12:15	ThBPo07.8
Wavelet Based Time Series Forecast with Application to Acute Hypotensive Episodes Prediction 2403-2406	
<i>Rocha, Teresa* (Inst Superior de Eng de Coimbra); Paredes, Simão (Inst. Superior de Engenharia de Coimbra); de Carvalho, Paulo (Univ. of Coimbra); Henriques, Jorge (Univ. of Coimbra); Harris, Matthew (Philips Research)</i>	
ThBPo08: 10:45-12:15 Catalinas/Golden Horn	
1.2.7 Signal Processing in Physiological Systems IV (Poster Session)	
10:45-12:15	ThBPo08.1
Using the Lomb Periodogram for Non-Contact Estimation of Respiration Rates 2407-2410	
<i>Vasu, Vishalini* (Queen's Univ. Belfast); Fox, Niall (BiancaMed); Heneghan, Conor (BiancaMed); Sezer, Sakir (Queen's Univ. Belfast)</i>	
10:45-12:15	ThBPo08.2
Automated Levodopa-Induced Dyskinesia Assessment 2411-2414	
<i>Tsipouras, Markos G. (Univ. of Ioannina); Tzallas, Alexandros* (Univ. of Ioannina); Rigas, Georgios (Univ. of Ioannina); Bougia, Panagiota (Univ. of Ioannina); Fotiadis, Dimitrios I. (Univ. of Ioannina); Konitsiotis, Spiros (Medical School, Univ. of Ioannina)</i>	
10:45-12:15	ThBPo08.3
Localized Fatigue Effects on Quiet Standing Control by Fractional Brownian Motion 2415-2418	
<i>Mello, Roger Gomes Tavares* (Naval School, Brazilian Navy); Oliveira, Liliam Fernandes de (Federal Univ. of Rio de Janeiro); Nadal, Jurandir (Federal Univ. of Rio de Janeiro)</i>	
10:45-12:15	ThBPo08.4
An Alternative Approach in Muscle Fatigue Evaluation from the Surface EMG Signal 2419-2422	
<i>Cavalcanti Garcia, Marco Antonio* (Núcleo de Estudos do Movimento Humano (NEMoH) – EEFD/UFRJ); Yamasaki Catunda, João Marcos (Laboratório de Instrumentação Biomédica – PEB/COPPE/UFRJ); Lemos, Thiago (Laboratório de Neurobiologia II – IBCCF/CCS/UFRJ); Fernandes de Oliveira, Liliam (Laboratório de Biomecânica Muscular (LABMUSC) – EEFD/UFRJ); Imbiriba, Luis aureliano (Núcleo de Estudos do Movimento Humano (NEMoH) – EEFD/UFRJ); Souza, Marcio N. (Federal Univ. of Rio de Janeiro)</i>	
10:45-12:15	ThBPo08.5
Real-Time Low-Energy Fall Detection Algorithm with a Programmable Truncated MAC 2423-2426	
<i>de la Guía Solaz, Manuel* (Univ. of Limerick); Bourke, Alan (Univ. of Limerick); Conway, Richard (Univ. of Limerick); Nelson, John (Univ. of Limerick); O'Laighin, Gearoid (Natl. Univ. of Ireland Galway)</i>	

10:45-12:15 ThBPo08.6
Novel Delta Zero Crossing Regression Features for Gait Pattern Classification 2427-2430
Ibrahim, Ronny Kurniawan (Univ. of New South Wales); Sethu, Vidhyasaharan (Univ. of New South Wales); Ambikairajah, E (Univ. of New South Wales)*

ThBPo09: 10:45-12:15 Catalinas/Golden Horn
1.4.6 Biomedical Signal Classification III (Poster Session)

10:45-12:15 ThBPo09.1
Automatic Seizure Detection: Going from sEEG to iEEG 2431-2434
Henriksen, Jonas (Technical Univ. of Denmark); Remvig, Line Sofie (HypoSafe A/S); Madsen, Rasmus Elsborg (HypoSafe A/S); Conradsen, Isa (Technical Univ. of Denmark); Kjaer, Troels Wesenberg (RigsHospitalet); Thomsen, Carsten Eckhart (Univ. of Copenhagen); Sorensen, Helge (Technical Univ. of Denmark)*

10:45-12:15 ThBPo09.2
Morphological Descriptors for Automatic Detection of Epileptiform Events 2435-2438
Boos, Christine Fredel (Inst. of Biomedical Engineering – UFSC); Pereira, Maria do Carmo Vitarelli (Faculdade de Medicina do Vale do Aço (FAMEVAÇO)); Argoud, Fernanda Isabel Marques (Dept. de Eletrônica – IFSC); Azevedo, Fernando Mendes (Inst. of Biomedical Engineering – UFSC)*

10:45-12:15 ThBPo09.3
Vigilance Detection Based on Sparse Representation of EEG 2439-2442
Yu, Hongbin (Shanghai Jiao Tong Univ.); Lu, Hongtao (MOE-Microsoft Laboratory for Intelligent Computing & Intelligent Systems, & the Dept. of Computer Science & Engineeri); Ouyang, Tian (Dept. of Computer Science & Engineering, Shanghai Jiao Tong Univ.); Liu, Hongjun (Dept. of Computer Science & Engineering, Shanghai Jiao Tong Univ.); Lu, Bao-Liang (Shanghai Jiao Tong Univ.)*

10:45-12:15 ThBPo09.4
Ambulatory REACT: Real-Time Seizure Detection with a DSP Microprocessor 2443-2446
McEvoy, Robert (Univ. College Cork); Faul, Stephen (Univ. College Cork); Marnane, Liam (Univ. College Cork)*

10:45-12:15 ThBPo09.5
Assisted Diagnosis of Attention-Deficit Hyperactivity Disorder through EEG Bandpower Clustering with Self-Organizing Maps 2447-2450
Alba Sánchez, Federico (Univ. Autónoma Metropolitana); Yanez-Suarez, Oscar (Univ. Autonoma Metropolitana); Brust-Carmona, Hector (Inst. Nacional de Rehabilitacion)*

10:45-12:15 ThBPo09.6
On the Use of Virtual and Augmented Reality for Upper Limb Prostheses Training and Simulation 2451-2454
Lamounier Jr., Edgard (Federal Univ. of Uberlandia); Nogueira, Kenedy (Federal Univ. of Uberlandia); Cardoso, Alexandre (Federal Univ. of Uberlandia); Andrade, Adriano (Federal Univ. of Ubelandia); Soares, Alcimar (Federal Univ. of Uberlandia)*

ThBPo10: 10:45-12:15 Catalinas/Golden Horn
5.10.3 Respiratory Engineering (Poster Session)

10:45-12:15 ThBPo10.1
Physical Modeling of Low-Frequency Sound Propagation through Human Thoracic Tissue 2455-2458
Pandia, Keya (Stanford Univ.); Vijayraghavan, Karthik (Stanford Univ.); Kovacs, Gregory T.A. (Stanford Univ.); Giovangrandi, Laurent (Stanford Univ.)*

10:45-12:15 ThBPo10.2
Wakefulness Estimation Only Using Ballistocardiogram: Nonintrusive Method for Sleep Monitoring 2459-2462
Chung, Gih Sung (Seoul Natl. Univ.); Lim, Yong Gyu (Sangji Univ.); Jeong, Do-Un (Seoul Natl. Univ. Hospital); Park, Kwang S. (Seoul Natl. Univ.)*

10:45-12:15 ThBPo10.3
Approximate Entropy As a Measure of the Airflow Pattern Complexity in Asthma 2463-2466
Veiga, Juliana (Univ. do Estado do Rio de Janeiro); Faria, Renan (Univ. do Estado do Rio de Janeiro); Esteves, Guilherme (Univ. do Estado do Rio de Janeiro); Lopes, Agnaldo (Univ. do Estado do Rio de Janeiro); Jansen, José (Univ. do Estado do Rio de Janeiro); Melo, Pedro Lopes (Univ. do Estado do Rio de Janeiro)*

- 10:45-12:15 ThBPo10.4
Electrical Circuit Models of the Human Respiratory System Reflect Small Airway Impairment Measured by Impulse Oscillation (IOS) **2467-2472**
Goldman, Michael David (Univ. of California Los Angeles); Nazeran, Homayoun (The Univ. of Texas at El Paso); Ramos-Rocha, Carlos (Univ. of Texas at El Paso); Hafezi, Nazila (The Univ. of Texas at El Paso); Meraz, Erika (Univ. of Texas at El Paso); Diong, Bill (Texas Christian Univ.)*
- 10:45-12:15 ThBPo10.5
One-Dimensional Computational Model of Pulse Wave Propagation in the Human Bronchial Tree **2473-2476**
Clavica, Francesco (Brunel Univ.); Alastruey, Jordi (Imperial College London); Borlotti, Alessandra (Brunel Univ., London, UK); Sherwin, Spencer (Imperial college London); Khir, Ashraf (Brunel Univ.)*
- 10:45-12:15 ThBPo10.6
Mechanical Analysis of an Oscillatory Positive Expiratory Pressure Device Used in Respiratory Rehabilitation **2477-2480**
Alves, Carlos (Univ. do Estado do Rio de Janeiro); Nunes, Luiz (Univ. do Estado do Rio de Janeiro); Melo, Pedro Lopes (Univ. do Estado do Rio de Janeiro)*
- 10:45-12:15 ThBPo10.7
Evaluation of Pulmonary Rehabilitation after Lung Resection through Opto-Electronic Plethysmography .. **2481-2484**
Bastianini, Flavia (Univ. Campus Bio-Medico of Rome); Silvestri, Sergio (Univ. Campus Bio-Medico); Schena, Emiliano (Univ. of Rome Campus Bio-Medico); Cecchini, Stefano (Univ. Campus Bio-Medico of Rome); Sterzi, Silvia (Campus Bio-medico Univ.)*
- 10:45-12:15 ThBPo10.8
Spectral Analysis of the RR Series and the Respiratory Flow Signal on Patients in Weaning Process **2485-2488**
Arcentales, Andrés (Univ. Politècnica de Catalunya); Giraldo, Beatriz (Univ. Politècnica de Catalunya); Caminal, Pere (Technical Univ. of Catalonia (UPC)); Benito, Salvador (Hospital de la Santa Creu i Sant Pau); Diaz, Ivan (Hospital de la Santa Creu i Sant Pau)*
- 10:45-12:15 ThBPo10.9
Online Estimation of Respiratory Mechanics in Non-Invasive Pressure Support Ventilation: A Bench Model Study **2489-2492**
Mulqueeney, Qestra Camille (Univ. of New South Wales); Lovell, Nigel H (Univ. of New South Wales); Redmond, Stephen James (Univ. of New South Wales)*
- 10:45-12:15 ThBPo10.10
Noninvasive Measurement of Inspiratory Muscle Performance by Means of Diaphragm Muscle Mechanomyographic Signals in COPD Patients During an Incremental Load Respiratory Test **2493-2496**
Torres, Abel (Univ. Politècnica de Catalunya); Sarlabous, Leonardo (Univ. Politècnica de Catalunya (UPC)); Fiz Fernandez, José Antonio (Navarra Hospital); Gea, Joaquim (IMIM- Hospital del Mar, UPF, CIBERES); Martínez-Llorens, Juana M. (IMIM- Hospital del Mar, UPF, CIBERES); Morera Prat, Jose (Hospital Univ. Germans Trias i Pujol); Jané, Raimon (Univ. Politècnica de Catalunya)*
- 10:45-12:15 ThBPo10.11
A Wearable Respiratory Biofeedback System Based on Body Sensor Networks **2497-2500**
Liu, Guan-Zheng (Shenzhen Inst. of Advanced Tech. Chinese Academy of Sciences, Shenzhen, China); Huang, Bangyu (Shenzhen Inst. of Advanced Tech.); Mei, Zhan-Yong (Shenzhen Inst. of Advanced Tech. Chinese Academy of Sciences); guo, Yan-wei (Shenzhen Inst. of Advanced Tech. Chinese Academy of Sciences); Wang, Lei (Shenzhen Inst. of Advanced Tech. Chinese Academy of Sciences, Shenzhen, China)*
- 10:45-12:15 ThBPo10.12
Development of a Cardiorespiratory Monitoring System Based on Pressure Change of Aircushion **2501-2504**
Kim, Joohan (College of Health Science, Yonsei Univ.); Cho, Sung Pil (Yonsei Univ.); Shin, Jae-Yeon (Yonsei Univ.); Park, Ho Dong (MEZOO Co.); Choi, Hyun Seok (Yonsei Univ.); Lee, Kyoung Joung (Yonsei Univ.)*

5.1.3 Cardiovascular Engineering (Poster Session)

10:45-12:15

ThBPo11.1

Cerebral Autoregulation in the Vertebral and Middle Cerebral Arteries During Combined Head Upright Tilt and Lower Body Negative Pressure in Healthy Humans 2505-2508

Deegan, Brian Michael Thomas (Natl. Univ. of Ireland, Galway); Kennedy, Cian (Univ. Hospital Galway); Lyons, Declan (Mid-Western Regional Hospital, Limerick); O'Laighin, Gearoid* (Natl. Univ. of Ireland Galway); Serrador, Jorge Manuel (Beth Israel Deaconess Medical Center)

10:45-12:15

ThBPo11.2

Influence of Tear Configuration on False and True Lumen Haemodynamics in Type B Aortic Dissection 2509-2512

Rudenick, Paula Andrea* (Univ. Pompeu Fabra); Bordone, Maurizio (Univ. Politècnica de Catalunya); Bijmens, Bart Hendrik (ICREA-Univ. Pompeu Fabra); Soudah, Eduardo (Univ. Politècnica de Catalunya); Oñate, Eugenio (Univ. Politècnica de Catalunya); Garcia-Dorado, David (Univ. Hospital Vall d'Hebron); Evangelista, Arturo (Univ. Hospital Vall d'Hebron)

10:45-12:15

ThBPo11.3

Development of Miniaturized Mass-Flow Meter for an Axial Flow Blood Pump Using a Curved Cannula 2513-2516

Kosaka, Ryo* (Natl. Inst. of Advanced Industrial Science & Tech. (AIST)); Nishida, Masahiro (Natl. Inst. of Advanced Industrial Science & Tech. (AIST)); Maruyama, Osamu (Natl. Inst. of Advanced Industrial Science & Tech. (AIST)); Yamane, Takashi (Natl. Inst. of Advanced Industrial Science & Tech. (AIST))

10:45-12:15

ThBPo11.4

In Vivo Validation of Pulsatile Flow and Differential Pressure Estimation Models in a Left Ventricular Assist Device 2517-2520

Zhang, Xintao (Univ. of New South Wales); Alomari, Abdul-Hakeem H* (Univ. of New South Wales); Savkin, Andrey (Univ. of New South Wales); Ayre, Peter Joseph (Ventracor Ltd); Lim, Einly (Univ. of New South Wales); Salamonsen, Robert F (Alfred Hospital); Rosenfeldt, Franklin L. (Alfred Hospital); Lovell, Nigel H (Univ. of New South Wales)

10:45-12:15

ThBPo11.5

Improvement of Artery Radii Determination With Single Ultra Sound Channel Hardware and In Vitro Artificial Heart System 2521-2524

Balay, Guillermo (Inst. de Física, Facultad de Ciencias, Univ. de la República (Montevideo, Uruguay)); Brum, Javier (Facultad de Ciencias, Univ. de la República); Bia, Daniel (School of Medicine, Republic Univ.); Armentano, Ricardo Luis (Favaloro Univ.); Negreira, Carlos* (Inst. de Física, Facultad de Ciencias, Univ. de la República (Montevideo, Uruguay))

10:45-12:15

ThBPo11.6

Real Time Conductance Catheter System Based on FPGA 2525-2528

Gómez López, María de los Angeles (Electrical, Electronic & Computational Engineering Dept.-FACET-Univ. Nacional de Tucumán); Olivera, Juan Manuel (Bioengineering Dept.-Facet-Univ. Nacional de Tucumán); Herrera, Myriam Cristina* (Univ Nacional de Tucumán)

10:45-12:15

ThBPo11.7

Heart Rate and Blood Pressure Variability Effects As a Result of Oxygen and Nitrous Oxide Administration in the Anesthetized Mouse 2529-2532

Constantinides, Christakis* (Assistant Professor, Univ. of Cyprus); Mean, Richard (Dept. of Mechanical Engineering, Univ. of Cyprus); Janssen, Ben (Maastricht Univ.)

10:45-12:15

ThBPo11.8

Non-Invasive Assessment of Atherosclerotic Plaques Effects on the Segment-To-Segment Human Carotid Visco-Elasticity and Filtering 2533-2536

Bia, Daniel (School of Medicine, Republic Univ.); Pessana, Franco* (FICEN, Favaloro Univ.); Forcada, Pedro (Hospital Austral, Buenos Aires, Argentina); Zócalo, Yanina (School of Medicine, Republic Univ.); Armentano, Ricardo Luis (Favaloro Univ.)

10:45-12:15	ThBPo11.9
Conduction Abnormalities in the Right Ventricular Outflow Tract in Brugada Syndrome Detected by Body Surface Potential Mapping	2537-2540
<i>Guillem, Maria S.* (Univ. Politecnica de Valencia); Climent, Andreu M. (Univ. Politecnica de Valencia); Millet, Jose (Univ. Politecnica de Valencia); Berné, Paola (Hospital Clínic de Barcelona); Ramos, Rafael (Inst. Català de Salut, Girona); Brugada, Josep (Hospital Clínic de Barcelona); Brugada, Ramon (Univ. de Girona)</i>	
10:45-12:15	ThBPo11.10
A 2D-Computer Model of Atrial Tissue Based on Histograms Describes the Electro-Anatomical Impact of Microstructure on Endocardiac Potentials and Electric Near Fields	2541-2544
<i>Campos, Fernando O. (Medical Univ. of Graz); Wiener, Thomas (Medical Univ. of Graz); Prassl, Anton J. (Medical Univ. of Graz); Ahammer, Helmut (Medical Univ. of Graz); Plank, Gernot (Medical Univ. of Graz); Weber dos Santos, Rodrigo* (Univ. Federal de Juiz de Fora); Sánchez-Quintana, Damián (Univ. de Extremadura); Hofer, Ernst (Medical Univ. Graz)</i>	
ThBPo12: 10:45-12:15	Catalinas/Golden Horn
5.8.1 Cardiovascular Signal Processing (Poster Session)	
10:45-12:15	ThBPo12.1
Cardiac Output Assessment Using Oxygen Consumption Estimated from the Left Ventricular Pressure-Volume Area	2545-2548
<i>Negróni, Jorge* (Favaloro Univ.); Lascano, Elena (Favaloro Univ.); Bertolotti, Alejandro (Favaloro Foundation U/niversity Hospital); Gómez, Carmen (Favaloro Foundation Univ. Hospital); Rodríguez-Correa, Carlos (Favaloro Foundation Univ. Hospital); Favaloro, Roberto (Favaloro Foundation Univ. Hospital)</i>	
10:45-12:15	ThBPo12.2
Seasonal Chaotic Features of Pulse Rate in a Healthy Subject and a Patient after Coronary Stenting	2549-2552
<i>Chen, Ying* (Univ. of Aizu); Chen, Wenxi (Univ. of Aizu)</i>	
10:45-12:15	ThBPo12.3
Modeling of Human Heart Rate Response During Walking, Cycling and Rowing	2553-2556
<i>Baig, Dur-e-Zehra (Univ. of New south wales, Australia); Su, Hao (Univ. of New South Wales); Cheng, Teddy Man Lai (The Univ. of New South Wales); Savkin, Andrey* (Univ. of New South Wales); Su, Steven Weidong (Univ. of Tech., Sydney); Celler, Branko George (Univ. of New South Wales)</i>	
10:45-12:15	ThBPo12.4
Heart and Respiratory Rate Detection on a Bathroom Scale Based on the Ballistocardiogram and the Continuous Wavelet Transform	2557-2560
<i>Gilaberte, Sonia (Univ. Politècnica de Catalunya); Gómez-Clapers, Joan (Univ. Politècnica de Catalunya); Casanella, Ramon* (Univ. Politècnica de Catalunya); Pallas-Areny, Ramon (Univ. Politecnica de Catalunya)</i>	
10:45-12:15	ThBPo12.5
Analysis of QRS Loop in the Vectorcardiogram of Patients with Chagas' Disease	2561-2564
<i>Correa, Raúl* (Univ. Nacional de San Juan (San Juan-Argentina)); Laciár, Eric (Univ. Nacional de San Juan); Arini, Pedro David (CONICET); Jané, Raimon (Univ. Politècnica de Catalunya)</i>	
10:45-12:15	ThBPo12.6
A New ECG Biomarker for Drug Toxicity: A Combined Signal Processing and Computational Modeling Study	2565-2568
<i>Jie, Xiao* (Oxford Univ.); Rodriguez, Blanca (Oxford Univ.); Pueyo, Esther (Univ. of Zaragoza)</i>	
10:45-12:15	ThBPo12.7
Fast Tracking of a Given Heart Rate Profile in Treadmill Exercise	2569-2572
<i>WENG, Kaili* (UTS); Turk, Basil (Univ. of Tech., Sydney); Dolores, Louis (Univ. of Tech., Sydney); Nguyen, Tuan Nghia (Univ. of Tech., Sydney); Celler, Branko George (Univ. of New South Wales); Su, Steven Weidong (Univ. of Tech., Sydney); Nguyen, Hung T. (Univ. of Tech., Sydney)</i>	

10:45-12:15	ThBPo12.8
Reproducibility of Heart Rate Turbulence Indexes in Heart Failure Patients	2573-2576
<i>D'Addio, Gianni* (S. Maugeri Foundation); Cesarelli, Mario (Dept. of Biomedical, Electronic & Telecommunication Engineering, Univ. "Federico II", Naples, Italy.); Corbi, Graziamaria (Univ. of Molise); Romano, Maria (Dept. of Biomedical, Electronic & Telecommunication Engineering, Univ. "Federico II", Naples, Italy.); Furgi, Giuseppe (S. Maugeri Foundation); Ferrara, Nicola (S. Maugeri Foundation); Rengo, Franco (S. Maugeri Foundation)</i>	
10:45-12:15	ThBPo12.9
A Miniature On-Chip Multi-Functional ECG Signal Processor with 30 μW Ultra-Low Power Consumption ...	2577-2580
<i>Liu, Xin* (ICS Lab, Inst. of Microelectronics, Singapore); Zheng, Yuanjin (ICS Lab, Inst. of Microelectronics); Phyu, Myint Wai (ICS Lab, Inst. of Microelectronics, Singapore); Zhao, Bin (ICS Lab, Inst. of Microelectronics, Singapore); Je, Minkyu (Inst. of Microelectronics, Agency of Science, Tech. & Research, Singapore); Yuan, Xiaojun (ICS Lab, Inst. of Microelectronics)</i>	
10:45-12:15	ThBPo12.10
Derive Right Precordial Leads at Higher Intercostal Spaces from 12-Lead System for Diagnosis of Brugada Syndrome	2581-2584
<i>Zhu, Xin* (the Univ. of Aizu); Wei, Daming (Univ. of Aizu); Okazaki, Osamu (Natl. Center for Global Health & Medicine)</i>	
10:45-12:15	ThBPo12.11
Modal Analysis of Ultrasound Radiation Force Generated Shear Waves on Arteries	2585-2588
<i>Bernal, Miguel* (Mayo Clinic College of Medicine); Nenadic, Ivan (Mayo Clinic College of Medicine); Urban, Matthew (Mayo Clinic College of Medicine); Greenleaf, James (Mayo Clinic)</i>	
ThBPo13: 10:45-12:15	Catalinas/Golden Horn
5.6.2 Cardiovascular Modeling and Simulation (Poster Session)	
10:45-12:15	ThBPo13.1
Flow Model with Vessel Tree for Segmentation and Registration with Color Doppler Ultrasound and CT	2589-2593
<i>Winter, Christian* (Fraunhofer IIS); Bergen, Tobias (Fraunhofer Inst for Integrated Circuits); Krueger, Sophie (Stadtkrankenhaus Schwabach); Lell, Michael (Univ. Erlangen)</i>	
10:45-12:15	ThBPo13.2
Using PIV to Determine Relative Pressures in a Stenotic Phantom under Steady Flow Based on the Pressure-Poisson Equation	2594-2597
<i>Khodarahmi, Iman (Univ. of Louisville); Shakeri, Mostafa (Univ. of Louisville); Sharp, Keith (Univ. of Louisville); Amini, Amir* (Univ. of Louisville)</i>	
10:45-12:15	ThBPo13.3
Spectral Models for 1D Blood Flow Simulations	2598-2601
<i>Tamburrelli, Vincenzopio* (Univ. Campus Bio-Medico of Rome); Ferranti, Francesco (Ghent Univ., Dept. of Information Tech. (INTEC)); Antonini, Giulio (Univ. degli Studi dell'Aquila); Cristina, Saverio (Univ. Campus Bio-Medico of Rome); Dhaene, Tom (Ghent Univ., Dept. of Information Tech. (INTEC)); Knockaert, Luc (Ghent Univ., Dept. of Information Tech. (INTEC))</i>	
10:45-12:15	ThBPo13.4
Evaluation of Model-Independent Deconvolution Techniques to Estimate Blood Perfusion	2602-2607
<i>Kind, Taco* (VU Univ. Medical Center); Houtzager, Ivo (Delft Univ. of Tech.); Faes, Theo (VU Univ. Medical Center); Hofman, Mark (VU Univ. Medical Center)</i>	
10:45-12:15	ThBPo13.5
Automatic Reconstruction of Activation and Velocity Maps from Electro-Anatomic Data by Radial Basis Functions	2608-2611
<i>Masè, Michela* (Univ. of Trento); Ravelli, Flavia (Univ. of Trento)</i>	
10:45-12:15	ThBPo13.6
Dynamic Modeling of the Vascular System in the State-Space	2612-2615
<i>Monzon, Jorge E.* (Univ. Nacional del Nordeste); Pisarello, Maria Ines (Univ. Nacional del Nordeste); Alvarez Picaza, Carlos (Univ. Nacional del Nordeste); Veglia, Julian Ignacio (Univ. Nacional del Nordeste)</i>	

- 10:45-12:15 ThBPo13.7
Numerical Investigation of the Hemodynamics in Anatomically Realistic Lateral Cerebral Aneurysms ... 2616-2621
Valencia, Alvaro (Univ. de Chile); Munizaga, Julio (Univ. de Chile); Rivera, Rodrigo (Inst. de Neurocirugia ASENJO); Bravo, Eduardo (Inst. de Neurocirugia ASENJO)*
- 10:45-12:15 ThBPo13.8
Comparison of Steady-State and Transient Blood Flow Simulations of Intracranial Aneurysms 2622-2625
Geers, Adrianus Johannes (Univ. Pompeu Fabra & CIBER-BBN); Larrabide, Ignacio (Networking Research Center on Bioengineering, Biomaterials & Nanomedicine (CIBER-BBN), Univ. Pompeu Fabra); Morales, Hernan G. (CISTIB – Univ. Pompeu Fabra & CIBER-BBN, Barcelona, Spain); Frangi, Alejandro (Univ. Pompeu Fabra)*
- 10:45-12:15 ThBPo13.9
Computed Wall Stress May Predict the Growth of Abdominal Aortic Aneurysm 2626-2629
Li, Zhi-Yong (Southeast Univ.)*
- 10:45-12:15 ThBPo13.10
Changes in Wall Viscosity and Filtering As Determinant of Carotid and Femoral Atherosclerotic Plaque Vulnerability: Theoretical Analysis 2630-2633
Bia, Daniel (School of Medicine, Republic Univ.); Brum, Javier (Facultad de Ciencias, Univ. de la República); Pessana, Franco Martin (Favaloro Univ.); Zócalo, Yanina (School of Medicine, Republic Univ.); Balay, Guillermo (Inst. de Física, Facultad de Ciencias, Univ. de la República (Montevideo, Uruguay)); Negreira, Carlos (Inst. de Física, Facultad de Ciencias, Univ. de la República (Montevideo, Uruguay)); Armentano, Ricardo Luis (Favaloro Univ.)*
- 10:45-12:15 ThBPo13.11
Linear and Nonlinear Viscoelastic Modeling of Ovine Aortic Biomechanical Properties under in Vivo and Ex Vivo Conditions 2634-2637
Valdez-Jasso, Daniela (North Carolina State Univ.); Bia, Daniel (School of Medicine, Republic Univ.); Haider, Mansoor (North Carolina State Univ.); Zócalo, Yanina (School of Medicine, Republic Univ.); Armentano, Ricardo Luis (Favaloro Univ.); Olufsen, Mette (North Carolina State Univ.)*
- 10:45-12:15 ThBPo13.12
Distribution of Active Fiber Stress at the Beginning of Ejection Depends on Left-Ventricular Shape 2638-2641
Choi, Hon Fai (KULeuven); D'hooge, Jan (KULeuven); Rademakers, Frank E (KULeuven); Claus, Piet (Catholic Univ. Leuven)*
- 10:45-12:15 ThBPo13.13
3D Mesh Based Wall Thickness Measurement: Identification of Left Ventricular Hypertrophy Phenotypes ... 2642-2645
Tobon-Gomez, Catalina (Univ. Pompeu Fabra, Barcelona); Butakoff, Constantine (Univ. Pompeu Fabra, Barcelona); Yushkevich, Paul (Penn Image Computing & Science Laboratory (PICSL), Dept. of Radiology, Univ. of Pennsylvania, Philadelphia, USA); Huguet, Marina (Cetir Sant Jordi; CIBER-BBN, Barcelona, Spain); Frangi, Alejandro (Univ. Pompeu Fabra)*

ThBPo14: 10:45-12:15	Catalinas/Golden Horn
5.3.1 Cardiac Electrophysiology (Poster Session)	

- 10:45-12:15 ThBPo14.1
Functional Model of Dual AV Nodal Pathway Physiology 2646-2649
Climont, Andreu M. (Univ. Politecnica de Valencia); Guillem, Maria S. (Univ. Politecnica de Valencia); Zhang, Youhua (Dept. of Molecular Cardiology, Cleveland Clinic, Cleveland, Ohio); Millet, Jose (Univ. Politecnica de Valencia); Mazgalev, Todor N. (Dept. of Molecular Cardiology, Cleveland Clinic, Cleveland, Ohio)*
- 10:45-12:15 ThBPo14.2
Spiral Wave Induced Numerically Using Electrical Stimulation and Comparison with Experimental Results 2650-2653
Xu, Binbin (Univ. de Bourgogne, FRANCE); Jacquir, Sabir (LE2I UMR CNRS 5158, Univ. de Bourgogne); Laurent, Gabriel (LE2I UMR CNRS 5158, Univ. de Bourgogne, France); Bilbault, Jean-Marie (LE2I UMR CNRS 5158, Univ. de Bourgogne, France); Binczak, Stéphane (LE2I UMR CNRS 5158 Univ. de Bourgogne)*

10:45-12:15	ThBPo14.3
Long-Term Biatrial Recordings in Postoperative Atrial Fibrillation	2654-2657
<i>Masè, Michela* (Univ. of Trento); Graffigna, Angelo (Division of Cardiac Surgery, S.Chiera Hospital, Trento); Sinelli, Stefano (Division of Cardiac Surgery, S.Chiera Hospital, Trento); Pallaoro, Gloria (Division of Cardiac Surgery, S.Chiera Hospital, Trento); Nollo, Giandomenico (Univ. of Trento); Ravelli, Flavia (Univ. of Trento)</i>	
10:45-12:15	ThBPo14.4
A Novel Biophysically-Detailed Mathematical Model of Rabbit Purkinje Cell Electrophysiology	2658-2661
<i>Corrias, Alberto* (Oxford Univ.); Rodriguez, Blanca (Oxford Univ.)</i>	
10:45-12:15	ThBPo14.5
Exploring the Parameter Space of a Rabbit Ventricular Action Potential Model to Investigate the Effect of Variation on Action Potential and Calcium Transients	2662-2665
<i>Gemmell, Philip* (Univ. of Oxford); Burrage, Kevin (Univ. of Oxford); Rodriguez, Blanca (Oxford Univ.); Quinn, T. Alexander (Univ. of Oxford)</i>	
10:45-12:15	ThBPo14.6
Automatic Code Generation for Solvers of Cardiac Cellular Membrane Dynamics in GPUs	2666-2669
<i>Amorim, Ronan M. (Federal Univ. of Juiz de Fora); Rocha, Bernardo M.* (Natl. Laboratory of Scientific Computing (LNCC)); Campos, Fernando O. (Medical Univ. of Graz); Weber dos Santos, Rodrigo (Univ. Federal de Juiz de Fora)</i>	
ThC01: 14:30-16:00	Libertador A
6.4.3 Brain-Computer/Machine Interface I (Oral Session)	
14:30-14:45	ThC01.1
Real-Time Recognition of Feedback Error-Related Potentials During a Time-Estimation Task	2670-2673
<i>Lopez-Larraz, Eduardo* (Univ. of Zaragoza); Iturrate, Iñaki (Zaragoza Univ.); Montesano, Luis (Univ. de Zaragoza); Minguez, Javier (Zaragoza Univ.)</i>	
14:45-15:00	ThC01.2
Parallel Field Programmable Gate Array Particle Filtering Architecture for Real-Time Neural Signal Processing	2674-2677
<i>Mountney, John (Temple Univ.); Silage, Dennis (Electrical & Computer Engineering Temple Univ.); Obeid, Iyad* (Temple Univ.)</i>	
15:00-15:15	ThC01.3
Application of System Identification Methods for Decoding Imagined Single-Joint Movements in an Individual with High Tetraplegia	2678-2681
<i>Ajiboye, Abidemi Bolu* (Cleveland VA Medical Center); Hochberg, Leigh (VA / Brown U. / Harvard Med. School); Donoghue, John (Brown Univ.); Kirsch, Robert (Case Western Reserve Univ.)</i>	
15:15-15:30	ThC01.4
Corticostriatal Dynamics During Learning and Performance of a Neuroprosthetic Task	2682-2685
<i>Koralek, Aaron (UC Berkeley); Long, John D. (Univ. of California, Berkeley); Costa, Rui (Champalimaud Neuroscience Programme, Inst. Gulbenkiande Ciência); Carmenta, Jose M.* (Univ. of California, Berkeley)</i>	
15:30-15:45	ThC01.5
A Novel Brain-Computer Interface based on the Rapid Serial Visual Presentation Paradigm	2686-2689
<i>Acqualagna, Laura* (Univ. degli Studi di Genova); Treder, Matthias Sebastian (Berlin Inst. of Tech.); Schreuder, Evert-Jan Martijn (Berlin Inst. of Tech.); Blankertz, Benjamin (Berlin Inst. of Tech.)</i>	
15:45-16:00	ThC01.6
Using ERPs for Assessing the (Sub)Conscious Perception of Noise	2690-2693
<i>Porbadnigk, Anne Kerstin* (Berlin Inst. of Tech.); Antons, Jan-Niklas (Telekom Laboratories); Blankertz, Benjamin (Berlin Inst. of Tech.); Treder, Matthias Sebastian (Berlin Inst. of Tech.); Schleicher, Robert (Telekom Laboratories); Möller, Sebastian (Telekom Laboratories); Curio, Gabriel (Charité – Univ. Medicine Berlin)</i>	

2.1.2 Diffusion-Tensor and Diffusion-Spectrum Imaging (Oral Session)

- 14:30-14:45 ThC02.1
A Pointwise Correspondence Based DT-MRI Fiber Similarity Measure 2694-2697
Berkiten, Sema (Bogazici Univ.); Acar, Burak (Bogazici Univ.)*
- 14:45-15:00 ThC02.2
Robust ODF Smoothing for Accurate Estimation of Fiber Orientation 2698-2701
Beladi, Somaieh (Deakin Univ.); Pathirana, Pubudu N. (Deakin Univ.); Brochie, Peter (Geelong Hospital)*
- 15:00-15:15 ThC02.3
Maximum Likelihood Estimation for Rician Distributed Data in Analytical Q-Ball Imaging 2702-2705
Beladi, Somaieh (Deakin Univ.); Pathirana, Pubudu N. (Deakin Univ.); Brochie, Peter (Geelong Hospital)*
- 15:15-15:30 ThC02.4
Incorporating Independent Component Analysis to Q-Ball Imaging for Diffusion Orientation Distribution Reconstruction 2706-2709
Jing, Min (Univ. of Ulster); McGinnity, T. Martin (Univ. of Ulster); Coleman, Sonya (Univ. of Ulster); Zhang, Haizhong (Univ. of Ulster)*
- 15:30-15:45 ThC02.5
A New Model for Diffusion Weighted MRI: Complete Fourier Direct MRI 2710-2713
Ozcan, Alpay (Washington Univ. in Saint Louis)*
- 15:45-16:00 ThC02.6
Use of Shannon Information in Treatment of High Resolution Diffusion MRI 2714-2717
Lori, Nicolas (Faculty of Medicine, Univ. of Coimbra, Portugal); Santos, Carlos (Dept. of Physics, Univ. of Coimbra)*

3.1.4 Biological and Chemical Sensors (Oral Session)

- 14:30-14:45 ThC03.1
An Integrated, Low Noise Patch-Clamp Amplifier for Biological Nanopore Applications 2718-2721
Wang, Gang (Univ. of CA, Santa Cruz); Dunbar, William B. (Univ. of California, Santa Cruz)*
- 14:45-15:00 ThC03.2
Carbon Nanotube Electrodes for Electrochemiluminescence Biosensors 2722-2725
Sanginario, Alessandro (Politecnico di Torino); Demarchi, Danilo (Politecnico di Torino); Civera, Pierluigi (Politecnico di Torino); Giorcelli, Mauro (Politecnico di Torino); Castellino, Micaela (Politecnico di Torino); Tagliaferro, Alberto (Politecnico di Torino)*
- 15:00-15:15 ThC03.3
A Novel 16k Micro-Nail CMOS-Chip for In-Vitro Single-Cell Recording, Stimulation and Impedance Measurements 2726-2729
Huys, Roeland (IMEC); Braeken, Dries (IMEC); Wouters, Jan (IMEC); Loo, Josine (IMEC); Severi, Simone (IMEC); Vleugels, Franks (IMEC); Batic, Carmen (IMEC); Borghs, Gustaaf (IMEC); Eberle, Wolfgang (imec)*
- 15:15-15:30 ThC03.4
Impedimetric Biosignal Analysis and Quantification in a Real-Time Biosensor System 2730-2734
Messing, Dean S. (Sharp Laboratories of America); Ghindilis, Andrey (Sharp Laboratories of America); Schwarzkopf, Kevin (Sharp Laboratories of America)*
- 15:30-15:45 ThC03.5
Towards a Closed-Loop System for Stimulation and Recording: An in Vitro Approach with Embryonic Cardiomyocytes 2735-2738
Nguyen, Thi Kim Thoa (Imec); Braeken, Dries (IMEC); Musa, Silke (IMEC); Krylychikina, Olga (IMEC); Batic, Carmen (IMEC); Gielen, Georges (ESAT, KULeuven); Eberle, Wolfgang (imec)*

9.2.1 Thermal, Electroporation and Photodynamic Therapies (Oral Session)

14:30-14:45

ThC04.1

Photodynamic Effects on Basal Cell Carcinoma with Topical Photosensitizer 2739-2742

Salas-García, Irene (Univ. of Cantabria); Fanjul-Vélez, Félix (Univ. of Cantabria); Ortega-Quijano, Noé (Univ. of Cantabria); Arce-Diego, José L.* (Univ. of Cantabria)

14:45-15:00

ThC04.2

Non-Thermal Irreversible Electroporation for Deep Intracranial Disorders 2743-2746

Garcia, Paulo, A.* (Virginia Tech – Wake Forest Univ.); Neal, II, Robert E. (Virginia Polytechnic Inst. & State Univ.); Rossmeisl, Jr., John H. (Virginia-Maryland Regional College of Veterinary Medicine); Davalos, Rafael (Virginia Tech)

15:00-15:15

ThC04.3

A Study Using Irreversible Electroporation to Treat Large, Irregular Tumors in a Canine Patient 2747-2750

Neal, II, Robert E.* (Virginia Polytechnic Inst. & State Univ.); Garcia, Paulo, A. (Virginia Tech – Wake Forest Univ.); Rossmeisl, Jr., John H. (Virginia-Maryland Regional College of Veterinary Medicine); Davalos, Rafael (Virginia Tech)

15:15-15:30

ThC04.4

Ferrimagnetic Nanoparticles Enhance Microwave Heating for Tumor Hyperthermia Therapy 2751-2754

Pearce, John Anthony* (Univ. of Texas at Austin); Cook, Jason (The Univ. of Texas at Austin); Emelianov, Stanislav (Univ. of Texas at Austin)

15:30-15:45

ThC04.5

Practical Evaluations on Heating Characteristics of Thin Microwave Antenna for Intracavitary Thermal Therapy 2755-2758

Saito, Kazuyuki* (Chiba Univ.); Tsubouchi, Kousuke (Chiba Univ.); Takahashi, Masaharu (Chiba Univ.); Ito, Koichi (Chiba Univ.)

15:45-16:00

ThC04.6

Basic Study of Charring Detection at the Laser Catheter-Tip Using Back Scattering Light Measurement During Therapeutic Laser Irradiation in Blood 2759-2761

Takahashi, Mei* (Keio Univ.); Ito, Arisa (Keio Univ.); Kajihara, Takuro (Keio Univ.); Matsuo, Hiroki (Keio Univ.); Arai, Tsunenori (Keio Univ.)

1.4.7 Biomedical Signal Classification II (Oral Session)

14:30-14:45

ThC05.1

Nonlinear Dynamic Analyses of Single Hippocampal Neurons before and after Long-Term Potentiation ... 2762-2765

Lu, Ude* (Univ. of Southern California); Song, Dong (Univ. of Southern California); Berger, Theodore (Univ. of Southern California)

14:45-15:00

ThC05.2

Surface EMG Classification During Dynamic Contractions for Multifunction Transradial Prostheses 2766-2769

Lorrain, Thomas* (Aalborg Univ.); Jiang, Ning (Aalborg Univ.); Farina, Dario (Aalborg Univ.)

15:00-15:15

ThC05.3

Nonlinear Dynamic Modeling of Impaired Voice 2770-2773

Dibazar, Alireza* (Univ. of Southern California)

15:15-15:30

ThC05.4

Comparison of Artificial Neural Networks and Support Vector Machines for Feature Selection in Electrogastronomy Signal Processing 2774-2777

Curilem, Millaray (Univ. de La Frontera); Chacón, Max (Univ. de Santiago de Chile, USACH.); Acuña, Gonzalo (Univ. de Santiago de Chile, USACH.); Ulloa, Sebastian (Univ. de La Frontera); Pardo, Carlos* (Informatics Dept. of Univ. de Santiago de Chile (USACH)); Defilippi, Carlos (Clinical Hospital, Univ. de Chile.); Madrid, Ana María (Clinical Hospital, Univ. de Chile.)

15:30-15:45	ThC05.5
A Graph Based Algorithm for Postures Estimation Based on Accelerometers Data 2778-2781	
<i>Jallon, Pierre* (CEA Grenoble)</i>	
15:45-16:00	ThC05.6
Assessment of Waist-Worn Tri-Axial Accelerometer Based Fall-Detection Algorithms Using Continuous Unsupervised Activities 2782-2785	
<i>Bourke, Alan* (Univ. of Limerick); van de Ven, Pepijn (Univ. of Limerick); Gamble, Mary (Univ. of Limerick); O'Connor, Raymond (Univ. of Limerick); Murphy, Kieran (Univ. of Limerick); Bogan, Elizabeth (Cois Abhann Primary Care Team, Mid-Western Health Board, Limerick); McQuade, Eamonn (Univ. of Limerick); Finucane, Paul (Univ. of Limerick); O'Laighin, Gearoid (Natl. Univ. of Ireland Galway); Nelson, John (Univ. of Limerick)</i>	
ThC06: 14:30-16:00	Retiro C
1.3.4 Nonlinear Analysis of Biomedical Signals I (Oral Session)	
14:30-14:45	ThC06.1
Analysis of Human Tremor in Patients with Parkinson Disease Using Entropy Measures of Signal Complexity 2786-2789	
<i>Gil, Lucia (Univ. do Estado do Rio de Janeiro); Pereira, Thiago (Univ. do Estado do Rio de Janeiro); Schuindt, Flávio (Univ. do Estado do Rio de Janeiro); Faria, Alvaro Camilo Dias (Univ. do Estado do Rio de Janeiro); Melo, Pedro Lopes* (Univ. do Estado do Rio de Janeiro)</i>	
14:45-15:00	ThC06.2
Entropy of the EEG in Transition to Burst Suppression in Deep Anesthesia: Surrogate Analysis 2790-2793	
<i>Anier, Andres (ELIKO Competence Centre); Lipping, Tarmo* (Tampere Univ. of Tech.); Jäntti, Ville (Seinäjäki Central Hospital & Tampere Univ. of Tech.); Puumala, Pasi (Tampere Univ. Hospital); Huotari, Ari-Matti (Oulu Univ. Hospital)</i>	
15:00-15:15	ThC06.3
Graph Analysis of Neuronal Interactions for the Error-Related Negativity 2794-2797	
<i>Bolanos, Marcos* (Michigan State Univ.); Aviyente, Selin (Michigan State Univ.); Bernat, Edward (Univ. of Minnesota)</i>	
15:15-15:30	ThC06.4
Characterization of Neurologic Injury Using Novel Morphological Analysis of Somatosensory Evoked Potentials 2798-2801	
<i>Madhok, Jai (Johns Hopkins School of Medicine); Iyer, Shrivats (Johns Hopkins Univ.); Thakor, Nitish* (Johns Hopkins Univ.); Maybhate, Anil (Johns Hopkins Univ.)</i>	
15:30-15:45	ThC06.5
Complexity Analysis of the Uterine Electromyography 2802-2805	
<i>Moslem, Bassam* (Univ. Libanaise/Univ. de Technologie Compiègne); Khalil, Mohamad (Lebanese Univ., Doctoral School for Sciences and Tech., Azm Center for Research in BioTech.); Marque, Catherine (Univ. of Tech. of Compiègne); Diab, Mohamad (Univ. of Tech. of Compiègne)</i>	
15:45-16:00	ThC06.6
Band-Phase-Randomized Surrogate Data Reveal High-Frequency Chaos in Heart Rate Variability 2806-2809	
<i>Li, Cheng (Fudan Univ.); Ding, Guang-Hong (Fudan Univ.); Wu, Guoqiang (Fudan Univ.); Poon, Chi-Sang* (Massachusetts Inst. of Tech.)</i>	
ThC07: 14:30-16:00	Martin Fierro 1
2.9.5 Reading the Brain: Decoding Neural Systems (Oral Session)	
14:30-14:45	ThC07.1
Finding Stationary Brain Sources in EEG Data 2810-2813	
<i>von Büнау, Paul* (TU Berlin); Meinecke, Frank (TU Berlin); Scholler, Simon (Fraunhofer FIRST); Müller, Klaus-Robert (Berlin Inst. of Tech.)</i>	
14:45-15:00	ThC07.2
Simultaneous Estimation of Cortical Activity During Social Interactions by Using EEG Hyperscannings 2814-2817	
<i>Astolfi, Laura* (Univ. of Rome); Babiloni, Fabio (Univ. of Rome); Vecchiato, Giovanni (Univ. of Rome Sapienza); De Vico Fallani, Fabrizio (Univ. La Sapienza); He, Bin (Univ. of Minnesota)</i>	

15:00-15:15	ThC07.3
Neurophysiology of Perceived Confidence	2818-2821
<i>Graziano, Martin (Laboratory of Integrative Neuroscience, Faculty of Exact & Natural Science, Univ. of Buenos Aires, Argentina); Parra, Lucas (City College of New York); Sigman, Mariano* (Univ. of Buenos Aires)</i>	
15:15-15:30	ThC07.4
Decoding State Transitions in Hippocampal Oscillatory Activity in Mice	2822-2824
<i>Akay, Metin* (Univ. of Houston)</i>	
15:30-15:45	ThC07.5
Movement Decoding from Noninvasive Neural Signals	2825-2828
<i>Contreras-Vidal, José* (Univ. of Maryland); Bradberry, Trent (Univ. of Maryland); Agashe, Harshavardhan (Univ. of Maryland-College Park)</i>	

ThC08: 14:30-16:00	Martin Fierro 2
2.10.2 Contrast-Enhanced Imaging (Oral Session)	

14:30-14:45	ThC08.1
Compressed-Sensing Dynamic MR Imaging with Partially Known Support	2829-2832
<i>Liang, Dong (Univ. of Wisconsin, Milwaukee); Ying, Leslie* (Univ. of Wisconsin)</i>	
14:45-15:00	ThC08.2
First-Pass Perfusion Cardiac MRI Using the Partially Separable Functions Model with Generalized Support	2833-2836
<i>Brinegar, Cornelius (Univ of Illinois at Urbana-Champaign); Zhang, Haosen (Pittsburgh NMR Center for Biomedical Research); Wu, Yijun L. (Carnegie Mellon Univ.); Foley, Lesley (Carnegie Mellon Univ.); Hitchens, T. Kevin (Carnegie Mellon Univ.); Ye, Qing (Carnegie Mellon Univ.); Ho, Chien (Carnegie Mellon Univ.); Liang, Zhi-Pei* (Univ. of Illinois at Urbana-Champaign)</i>	
15:00-15:15	ThC08.3
Quantification of DCE-MRI: Pharmacokinetic Parameter Ratio between TOI and RR in Reference Region Model	2837-2840
<i>Lee, Joonsang* (The Univ. of Georgia); Zhao, Qun (Univ. of Georgia)</i>	
15:15-15:30	ThC08.4
Automated Intracranial Aneurysm Isolation and Quantification	2841-2844
<i>Larrabide, Ignacio* (Networking Research Center on Bioengineering, Biomaterials & Nanomedicine (CIBER-BBN), Univ. Pompeu Fabra); Cruz-villa, Maria-Cruz (Univ. Pompeu Fabra); Cardenes, Ruben (Univ. Pompeu Fabra, Barcelona); Pozo, Jose Maria (Univ. Pompeu Fabra, Barcelona); Hose, David R. (Univ. of Sheffield); Frangi, Alejandro (Univ. Pompeu Fabra)</i>	

ThC09: 14:30-16:00	Ombu A
5.1.2 Cardiovascular Dynamics (Oral Session)	

14:30-14:45	ThC09.1
Pulse Transit Time Variability Analysis in an Animal Model of Endotoxic Shock	2849-2852
<i>Tang, Collin Howe Hing (Univ. of New South Wales); Chan, Gregory S H (The Univ. of New South Wales); Middleton, Paul MacConachie (Univ. of New South Wales); Cave, Grant (Univ. of Otago); Harvey, Martyn (Waikato Hospital); Javed, Faizan (Univ. of New South Wales); Savkin, Andrey* (Univ. of New South Wales); Lovell, Nigel H (Univ. of New South Wales)</i>	
14:45-15:00	ThC09.2
A Novel Continuous Cardiac Output Monitor Based on Pulse Wave Transit Time	2853-2856
<i>Sugo, Yoshihiro* (NIHON KOHDEN); Ukawa, Teiji (NIHON KOHDEN); Takeda, Sunao (Tokyo Univ. of Engineering); Ishihara, Hironori (Dept. of Anesthesiology, Hirosaki Univ., Graduate School of Medicine); Kazama, Tomiei (Dept. of Anesthesiology, Natl. Defense Medical College); Takeda, Junzo (Dept. of Anesthesiology, School of Medicine, Keio Univ.)</i>	

15:00-15:15	ThC09.3
A Comparison between Local Wave Speed in the Carotid and Femoral Arteries in Healthy Humans: Application of a New Method 2857-2860	
<i>Borlotti, Alessandra*</i> (Brunel Univ., London, UK); <i>Vermeersch, Sebastian</i> (Univ. Gent); <i>Rietzschel, Ernst R.</i> (Ghent Univ. Hospital); <i>Segers, Patrick</i> (Ghent Univ.); <i>Khair, Ashraf</i> (Brunel Univ.)	
15:15-15:30	ThC09.4
Validity of a New Method to Estimate Mean Arterial Pressure at Brachial Level 2861-2864	
<i>Graf, Sebastián*</i> (Favaloro Univ.); <i>Craiem, Damian</i> (Favaloro Univ.); <i>Armentano, Ricardo Luis</i> (Favaloro Univ.)	
15:30-15:45	ThC09.5
Levels and Rates of Change in Carotid-Radial Pulse Wave Velocity Associated with Reactive Hyperaemia: Analysis of the Dependence on Transient Ischemia Length 2865-2868	
<i>Torrado, Juan</i> (School of Medicine, Republic Univ.); <i>Farro, Ignacio</i> (Dept. de Fisiología, Facultad de Medicina, Univ. de la República, Montevideo, Uruguay); <i>Bia, Daniel*</i> (School of Medicine, Republic Univ.); <i>Zócalo, Yanina</i> (School of Medicine, Republic Univ.); <i>Valls, Gabriela</i> (School of Medicine, Republic Univ.); <i>Valero, Matías</i> (Favaloro Univ., Buenos Aires, Argentina); <i>Salvucci, Fernando</i> (Univ. Favaloro); <i>Armentano, Ricardo Luis</i> (Favaloro Univ.)	
15:45-16:00	ThC09.6
How to Quantitatively Synthesize Dynamic Changes in Arterial Pressure from Baroreflexly Modulated Ventricular and Arterial Properties 2869-2871	
<i>Sakamoto, Takafumi*</i> (Kyushu Univ.); <i>Murayama, Yoshinori</i> (Kyushu Univ.); <i>Tobushi, Tomoyuki</i> (Kyushu Univ.); <i>sakamoto, kazuo</i> (Kyushu Univ.); <i>Tanaka, Atsushi</i> (Kyushu Univ. Graduate School of Medical Sciences, Japan); <i>Sunagawa, Kenji</i> (Kyushu Univ.)	
ThC10: 14:30-16:00	Ombu B
10.5.1 Knowledge Management, Data Mining, GIS, Knowledge Discovery (Oral Session)	
14:30-14:45	ThC10.1
Cardiovascular Risk and Status Assessment 2872-2876	
<i>Paredes, Simão*</i> (Inst. Superior de Engenharia de Coimbra); <i>Rocha, Teresa</i> (Inst Superior de Eng de Coimbra); <i>de Carvalho, Paulo</i> (Univ. of Coimbra); <i>Henriques, Jorge</i> (Univ. of Coimbra); <i>Harris, Matthew</i> (Philips Research); <i>Morais, João</i> (Hospital de Santo André, Leiria)	
14:45-15:00	ThC10.2
Effect of ECG Quality Measures on Piecewise-Linear Trend Detection for Telehealth Decision Support Systems 2877-2880	
<i>Xie, Yang*</i> (The Univ. of New South Wales); <i>Redmond, Stephen James</i> (Univ. of New South Wales); <i>Basilakis, Jim</i> (Univ. of NSW); <i>Lovell, Nigel H</i> (Univ. of New South Wales)	
15:00-15:15	ThC10.3
E-Health towards Ecumenical Framework for Personalized Medicine Via Decision Support System 2881-2885	
<i>Kouris, Ioannis</i> (School of Electrical & Computer Engineering, Natl. Technical Univ. of Athens); <i>Tsirmpas, Charalampos</i> (School of Electrical & Computer Engineering, Natl. Technical Univ. of Athens); <i>Mougiakakou, Stavroula</i> (Univ. of Bern); <i>Iliopoulou, Dimitra</i> (Natl. Technical Univ. of Athens); <i>Koutsouris, Dimitrios*</i> (Natl. Technical Univ. of Athens (NTUA))	
15:15-15:30	ThC10.4
Discovery and Use of Efficient Biomarkers for Objective Disease State Assessment in Alzheimer's Disease 2886-2889	
<i>van Gils, Mark*</i> (VTT Tech Research Centre of Finland); <i>Koikkalainen, Juha</i> (VTT Technical Research Centre of Finland); <i>Mattila, Jussi Jaakko Olavi</i> (VTT); <i>Herukka, Sanna-Kaisa</i> (Univ. of Eastern Finland); <i>Löjtjönen, Jyrki</i> (VTT Technical Research Centre of Finland); <i>Soininen, Hilikka</i> (Kuopio Univ. Hospital)	
15:30-15:45	ThC10.5
An Intelligent System for Classification of Patients Suffering from Chronic Diseases 2890-2893	
<i>Bellos, Christos</i> (FORTH BRI Foundation for Research & Tech. – Hellas, Biomedical Research); <i>Papadopoulos, Athanasios*</i> (Foundation for Research & Tech. – Hellas, Biomedical Research, Ioannina Greece); <i>Fotiadis, Dimitrios I.</i> (Univ. of Ioannina); <i>Rosso, Roberto</i> (Tesan S.p.A.)	

15:45-16:00 ThC10.6
Decision-Making System for Orthodontic Treatment Planning Based on
Direct Implementation of Expertise Knowledge 2894-2897
Yagi, Masakazu (Osaka Univ.); Ohno, Hiroko (Osaka Univ.); Takada, Kenji (Osaka Univ.)*

ThC11: 14:30-16:00 Poncho
6.5.1 Brain Functional Imaging I (Oral Session)

14:30-14:45 ThC11.1
Influence of Source Separation and Montage on Ictal Source Localization 2898-2901
Koessler, Laurent (Centre de Recherche en Automatique de Nancy (CRAN), Nancy-Univ., CNRS & Centre Hospitalier Univ. de Nancy, Servic); Salido-Ruiz, Ricardo (CRAN, Nancy Univ.); Ranta, Radu (Nancy-Univ.); Louis-Dorr, Valerie (Nancy-Univ.); Gavaret, Martine (Laboratoire de Neurophysiologie et Neuropsychologie, Aix Marseille Univ. , INSERM); Maillard, Louis (Centre de Recherche en Automatique de Nancy (CRAN), Nancy-Univ., CNRS & Centre Hospitalier Univ. de Nancy, Servic)*

14:45-15:00 ThC11.2
Neuropolitics: EEG Spectral Maps Related to a Political Vote Based on the
First Impression of the Candidate's Face 2902-2905
Vecchiato, Giovanni (Univ. of Rome Sapienza); Astolfi, Laura (Univ. of Rome); Babiloni, Fabio (Univ. of Rome)*

15:00-15:15 ThC11.3
Three-Fold Cross-Validation of Parkinsonian Brain Patterns 2906-2909
Spetsieris, Phoebe (Center for Neurosciences, Feinstein Inst. for Medical Research); Dhawan, Vijay (Center for Neurosciences, Feinstein Inst. for Medical Research); Eidelberg, David (Center for Neurosciences, Feinstein Inst. for Medical Research)*

15:15-15:30 ThC11.4
A Kullback-Leibler Methodology for HRF Estimation in Fmri Data 2910-2913
Seghouane, Abd-krim (Natl. ICT Australia)*

15:30-15:45 ThC11.5
Estimation of Dynamic Neural Activity Using a Kalman Filter Approach Based on Physiological Models .. 2914-2917
Giraldo, Eduardo (Univ. Tecnologica de Pereira); den Dekker, Arnold J. (Delft Univ. of Tech.); Castellanos-Dominguez, Germán (Univ. Nacional de Colombia)*

15:45-16:00 ThC11.6
Hemodynamic Correlates of Visuomotor Motor Adaptation by Functional Near Infrared Spectroscopy .. 2918-2921
Gentili, Rodolphe (Univ. of Maryland); Hadavi, Cyrus (Univ. of Maryland); Ayaz, Hasan (Drexel Univ.); Shewokis, Patricia A (Drexel Univ.); Contreras-Vidal, José (Univ. of Maryland)*

ThC12: 14:30-16:00 Rio de Plata
6.4.1 Neural Stimulation Technology (Oral Session)

14:30-14:45 ThC12.1
Repetitive Transcranial Magnetic Stimulator with Controllable Pulse Parameters (cTMS) 2922-2926
Peterchev, Angel V (Columbia Univ.); Murphy, David (Columbia Univ.); Lisanby, Sarah (Columbia Univ. / New York State Psychiatric Inst.)*

14:45-15:00 ThC12.2
Towards a Switched-Capacitor Based Stimulator for Efficient Deep-Brain Stimulation 2927-2930
Vidal, Jose (Georgia Inst. of Tech.); Ghovanloo, Maysam (Georgia Inst. of Tech.)*

15:00-15:15 ThC12.3
An Architecture for a Universal Neural Stimulator with Almost Arbitrary Current Waveform 2931-2934
Noorsal, Emilia (Ulm Univ.); Ortmanns, Maurits (Univ. of Ulm)*

15:15-15:30 ThC12.4
A Neurophotonic Device for Stimulation and Recording of Neural Microcircuits 2935-2938
Wang, Jing (Brown Univ.); Borton, David (Brown Univ.); Zhang, Jiayi (Brown Univ.); Burwell, Rebecca (Brown Univ.); Nurmikko, Arto (Brown Univ.)*

15:30-15:45 ThC12.5
VLSI Implementation of a Template Subtraction Algorithm for Real-Time Stimulus Artifact Rejection **2939-2942**
Limnusun, Kanokwan (Case Western Reserve Univ.); Lu, Hui (Case Western Reserve Univ.);
Chiel, Hillel (Case Western Reserve Univ.); Mohseni, Pedram (Case Western Reserve Univ.)*

15:45-16:00 ThC12.6
Using Reciprocal Derivative Chronopotentiometry As a Technique to Determine Safe Charge
Injection Limits of Electrodes Used for Neural Stimulation **2943-2946**
Musa, Silke (IMEC); Prodanov, Dimitar (IMEC); Loo, Josine (IMEC); Eberle, Wolfgang (imec);*
Bartic, Carmen (IMEC); Nuttin, Bart (KU Leuven); Borghs, Gustaaf (IMEC)

ThC13: 14:30-16:00	Gomez Losada
11.2.1 Education (Oral Session)	

14:30-14:45 ThC13.1
Pedagogical Issues for Effective Teaching of Biosignal Processing and Analysis **2947-2950**
Sandham, William (Scotsig); Hamilton, David (Univ. of Strathclyde)*

14:45-15:00 ThC13.2
Learning by Gaming – Evaluation of an Online Game for Children **2951-2954**
Lazareck, Lisa Joanna (City Univ. London (UK)); Farrell, David (City Univ. London); Kostkova, Patty (CeRC,*
City Univ. London); Lecky, Donna (Health Protection Agency, UK); McNulty, Cliodna (Health Protection Agency,
UK); Weerasinghe, Dasun (City Univ. London)

15:00-15:15 ThC13.3
Collaboration for Cooperative Work Experience Programs in Biomedical Engineering Education **2955-2958**
Krishnan, Shankar Muthu (Wentworth Inst. of Tech.)*

15:15-15:30 ThC13.4
Challenges of the Biomedical Engineering Education in Europe **2959-2962**
Magjarevic, Ratko (Univ. of Zagreb)*

15:30-15:45 ThC13.5
Assessment of Moral Judgment of BME and Other Health Sciences Students **2963-2966**
Monzon, Jorge E. (Univ. Nacional del Nordeste); Ariasgago, Olga Leonor (Univ. Nacional del Nordeste);*
Monzon-Wyngaard, Alvaro (Univ. Nacional del Nordeste)

15:45-16:00 ThC13.6
Updating the Biomedical Engineering Curriculum: Inclusion of Health Technology Assessment Subjects .. **2967-2970**
Martinez-Licon, Fabiola (Univ. Autonoma Metropolitana); Urbina-Medal, E. Gerardo (Univ. Autonoma
Metropolitana); Azpiroz-leeahan, Joaquin (Univ. Autonoma Metropolitana)*

ThDPo01: 16:00-17:30	Catalinas/Golden Horn
11.1.2 Design and Intellectual Property (Poster Session)	

16:00-17:30 ThDPo01.1
Design and Construction of a Real Simulator for Calibrating Lung Servo-Ventilators **2971-2974**
Avendano, Guillermo (Univ. of Valparaiso, Fac. De Ciencias, Ing. Biomedica); Tencio, Felipe Alejandro (Univ. de*
Valparaíso, Facultad de Ciencias); Fuentes, Pablo Esteban (Univ. of Valparaiso, Fac. de Ciencias, Ing. Biomedica)

16:00-17:30 ThDPo01.2
Headset Bluetooth and Cell Phone Based Continuous Central Body Temperature Measurement System **2975-2978**
Sanches, J. Miguel (Inst. for Systems & Robotics, NIF); Pereira, Bruno (Inst. Superior Técnico);*
Paiva, Teresa (Inst. Superior Técnico)

16:00-17:30 ThDPo01.3
Patents on Diagnostic Methods in Europe under the European Patent Convention (EPC) **2979-2981**
Barba, Michelangelo (European Patent Office)*

9.2.3 Rehabilitation and Prosthetic Devices Poster (Poster Session)

- 16:00-17:30 ThDPo02.1
Performance of Insole in Reducing Plantar Pressure on Diabetic Patients in the Early Stages of the Disease 2982-2985
Zequera Diaz, Martha Lucia (Pontificia Univ. Javeriana); Solomonidis, Stephanos (Bioengineering Unit Strathclyde Univ.)*
- 16:00-17:30 ThDPo02.2
Dynamic Modeling and Experimental Results for a Head Tilt Response 2986-2989
Geisinger, Dario (Laboratory of Otoneurology); Ferreira, Enrique D. (Univ. Catolica del Uruguay); Suarez, Alejo (Laboratory of Otoneurology); Suarez, Hamlet (Laboratory of Otoneurology)*
- 16:00-17:30 ThDPo02.3
Active Metabolic Weight Estimation Using Bioimpedance, Indirect Calorimetry and the Clino-Ortho Maneuver 2990-2992
Cadena, Miguel (Univ. Autonoma Metropolitana); Azpiroz-leeahan, Joaquin (Univ. Autonoma Metropolitana)*
- 16:00-17:30 ThDPo02.4
An Evaluation of Passive Mechanical Properties of Spastic Muscles in Hemiparetic Stroke Survivors ... 2993-2996
Chardon, Matthieu (Rehab. Inst. of Chicago); Suresh, Nina (Rehab. Inst. of Chicago); Rymer, William Zev (Northwest. & Rehab Inst of Chicago)*

2.3.3 Optical Imaging I (Poster Session)

- 16:00-17:30 ThDPo03.1
Global Solution of the Finite Element Shape-From-Shading Model with a Bioluminescent Molecular Imaging Application 2997-3000
Zhong, Jianghong (Inst. of Automation, Chinese Academy of Sciences); Tian, Jie (Chinese Academy of Sciences); Yang, Xin (Inst. of Automation, Chinese Academy of Sciences); Qin, Chenghu (Chinese Academy of Sciences)*
- 16:00-17:30 ThDPo03.2
Multimodal Multidimensional Imaging for Visual System Status Assessment 3001-3004
Sliesoraityte, Ieva (Univ. of Tuebingen)*
- 16:00-17:30 ThDPo03.3
Anomalous Diffusion of Kv2.1 Channels Observed by Single Molecule Tracking in Live Cells 3005-3008
Weigel, Aubrey (Colorado State Univ.); Tamkun, Michael (Colorado State Univ.); Krapf, Diego (Colorado State Univ.)*
- 16:00-17:30 ThDPo03.4
An Efficient Global Inexact Newton Method Regularized by a Dynamic Sparse Term for in Vivo Tomographic Bioluminescence Imaging 3009-3012
Liu, Kai (Inst. of Automation, Chinese Academy of Sciences); Tian, Jie (Chinese Academy of Sciences); Yang, Xin (Inst. of Automation, Chinese Academy of Sciences); Qin, Chenghu (Chinese Academy of Sciences); Zhu, Shouping (Inst. of Automation, Chinese Academy of Sciences); Han, Dong (Inst. of Automation, Chinese Academy of Sciences, Beijing, China); Ma, Xibo (Inst. of Automation, Chinese Academy of Sciences)*
- 16:00-17:30 ThDPo03.5
Automatic Detection of Schwalbe's Line in the Anterior Chamber Angle of the Eye Using HD-OCT Images 3013-3016
Tian, Jing (Nanyang Technological Univ.); Marziliano, Pina (Nanyang Technological Univ.); Wong, Hon-Tym (Tan Tock Seng Hospital)*
- 16:00-17:30 ThDPo03.6
Time-Domain Optical Coherence Tomography System with Integrated Delay Line for Surgical Guidance Applications 3017-3020
Geljon, Max (Delft Univ. of Tech.); Margallo-Balbás, Eduardo (TU Delft); Pandraud, Gregory (TU Delft); Wicaksono, Dedy (Delft Univ. of Tech.); French, Patrick J. (TU Delft)*

16:00-17:30

ThDPo03.7

Terahertz Sensing of Corneal Hydration 3021-3024

*Singh, Rahul** (Univ. of California, Santa Barbara); *Tewari, Priyamvada* (UCLA); *Bourges, Jean Louis* (Paris Descartes Univ., APHP, Hotel-Dieu Hospital, Paris); *Hubschman, Jean Pierre* (UCLA); *Bennett, David* (UCLA); *Taylor, Zachary* (UCLA); *Lee, Hua* (UCSB); *Brown, Elliott* (Wright State); *Grundfest, Warren S.* (UCLA); *Culjat, Martin O.* (UCLA)

ThDPo04: 16:00-17:30

Catalinas/Golden Horn

2.3.4 Optical Imaging II (Poster Session)

16:00-17:30

ThDPo04.1

Early Detection of Disease-Oriented State from Hyperspectral Tongue Images with Principal Component Analysis and Vector Rotation 3025-3028

*Yamamoto, Satoshi** (Chiba Univ.); *Tsumura, Norimichi* (Chiba Univ.); *Ogawa-Ochiai, Keiko* (Chiba Univ. Hospital); *Nakaguchi, Toshiya* (Chiba Univ.); *Kasahara, Yuji* (Chiba Univ.); *Miyake, Yoichi* (CFME, Chiba Univ.); *Namiki, Takao* (Chiba Univ.)

16:00-17:30

ThDPo04.2

Comparative Analysis of Various Brain Imaging Techniques 3029-3032

Agnihotri, Prashant (Univ. of North Dakota); *Fazel-Reza, Reza** (Univ. of North Dakota); *Kaabouch, Naima* (Univ. of North Dakota)

16:00-17:30

ThDPo04.3

An Optical-Parameters-Free Method for Locating Light Source in Deep Tissue 3033-3036

Quan, Qinghua (Shenzhen Inst. of Advanced Tech.); *zheng, zhen** (IBHE, Siat); *Wang, Lei* (Shenzhen Inst. of Advanced Tech. Chinese Academy of Sciences, Shenzhen, China)

16:00-17:30

ThDPo04.4

Corneal Graft Detection for Descemet's Stripping Automated Endothelial Keratoplasty Using Optical Coherence Tomography 3037-3040

*Lee, Beng Hai** (Inst. for Infocomm Research); *Liu, Jiang* (Inst for Infocomm Resrch, A STAR); *Tan, Zehao* (Inst. for Infocomm Research); *Heng, Eugene* (Natl. Univ. of Singapore); *Cheng, Jun* (Inst. for Infocomm Research, Agency for Science, Tech. & Research); *Tan, Ngan Meng* (A*STAR, Inst. for Infocomm Research); *Wong, Damon* (Inst. for Infocomm Research); *Trucco, Emanuele* (Univ. of Dundee); *Mehta, Jodhbir* (Singapore Eye Research Inst.); *Wong, Tien Yin* (Natl. Univ. of Singapore)

16:00-17:30

ThDPo04.5

Evaluation of Autofocus Functions of Conventional Sputum Smear Microscopy for Tuberculosis 3041-3044

Kimura Junior, Almir (Federal Univ. of Amazonas); *Costa, Marly G. F.* (Federal Univ. of Amazonas – UFAM); *Costa Filho, Cicero F. F.** (Fundacao de Apoio Inst Rio Solimoes); *Fujimoto, Luciana* (Inst. Nacional de Pesquisas da Amazonia)

16:00-17:30

ThDPo04.6

Towards a Versatile Automated Cell-Detection System for Science and Diagnostics 3045-3048

Heindl, Andreas (Medical Univ. of Vienna); *Dekan, Sabine* (Medical Univ. of Vienna); *Ellinger, Isabella** (Medical Univ. of Vienna); *Seewald, Alexander* (Seewald Solutions)

16:00-17:30

ThDPo04.7

In Vivo Imaging of Retinal Gliosis: A Platform for Diagnosis of PD and Screening of Anti-PD Compounds ... 3049-3052

*Kumarasamy, Saravana Kumar** (Inst. of Bioengineering & NanoTech.); *Ho, Gideon* (Inst. of Bioengineering & NanoTech.); *Zhang, Yugen* (Inst. of Bioengineering & NanoTech.); *Zhuo, Lang* (Inst. of Bioengineering & NanoTech.)

ThDPo05: 16:00-17:30

Catalinas/Golden Horn

2.3.5 Bioimaging I (Poster Session)

16:00-17:30

ThDPo05.1

Probing Sepsis and Sepsis-Like Conditions Using Untargeted SPIO Nanoparticles 3053-3056

Wong, Richard (Cornell Univ.); *Wang, Yi** (Cornell Univ.)

16:00-17:30 ThDPo05.3
New Reconstruction Method of Magnetoacoustic Tomography with Magnetic Induction 3061-3064
 zhang, yang* (Electrical Engineering Inst. of Chinese Academy of Sciences); Liu, Guoqiang (Chinese Academy of Sciences); Wenjing, He (Graduate School, Chinese Academy of Science)

16:00-17:30 ThDPo05.4
ORIGA-Light : An Online Retinal Fundus Image Database for Glaucoma Analysis and Research 3065-3068
 Zhang, Zhuo* (A*STAR); Yin, Fengshou (Inst. for Infocomm Research); Liu, Jiang (Inst for Infocomm Resrch, A STAR); Wong, Damon (Inst. for Infocomm Research); Tan, Ngan Meng (A*STAR, Inst. for Infocomm Research); Lee, Beng Hai (Inst. for Infocomm Research); Cheng, Jun (Inst. for Infocomm Research, Agency for Science, Tech. & Research); Wong, Tien Yin (Natl. Univ. of Singapore)

16:00-17:30 ThDPo05.5
Content Based Medical Image Retrieval Based on BEMD: Optimization of a Similarity Metric 3069-3072
 jai andaloussi, said* (Telecom Bretagne); Lamard, Mathieu (Univ. de Bretagne Occidentale); Cazuguel, Guy (Inst. Telecom/Telecom Bretagne); Tairi, Hamid (Faculty of sciences Dhar El Mahraz Fez); Meknassi, Mohamed (Faculty of science Dhar El Mhras Fez); Cochener, Béatrice (CHU Morvan); Roux, Christian (TELECOM Bretagne – INSERM)

16:00-17:30 ThDPo05.6
Automatic Detection of Luminal Borders in IVUS Images by Magnitude-Phase Histograms of Complex Brushlet Coefficients 3073-3076
 Katouzian, Amin (Columbia Univ.); Angelini, Elsa (Ecole Nat. Supérieure des Telecom); Laine, Andrew* (Columbia Univ.)

16:00-17:30 ThDPo05.7
In vitro evaluation of surface based non-invasive breast cancer screening with Digital Image based Elasto Tomography (DIET) 3077-3080
 Lotz, Thomas* (Univ. of Canterbury); Simpson, Paul D (Univ. of Canterbury); Stocker, Daniel (Univ. of Canterbury); Hann, Christopher E (Univ. of Canterbury); Chase, J. Geoffrey (Univ. of Canterbury)

ThDPo06: 16:00-17:30	Catalinas/Golden Horn
2.3.6 Bioimaging II (Poster Session)	

16:00-17:30 ThDPo06.1
Dijkstra's Algorithm Applied to 3d Skeletonization of the Brain Vascular Tree: Evaluation and Application to Symbolic Description 3081-3084
 Verscheure, Leslie* (INSERM U703 ; Univ Lille Nord de France; LAGIS FRE CNRS3303); Peyrodie, Laurent (HEI); Makni, Nasr (Inserm U703, Lagis CNRS FRE 3303); Betrouni, Nacim (INSERM); Vermandel, Maximilien (Univ. de Lille)

16:00-17:30 ThDPo06.2
Multiple Kernel Learning for Classification of Diffuse Lung Disease Using HRCT Lung Images 3085-3088
 Vo, Kiet Tuan* (The Univ. of New South Wales); Sowmya, Arcot (Univ. of New South Wales)

16:00-17:30 ThDPo06.3
Preliminary Monte Carlo Study of 18F-FDG SPECT Imaging with LaBr3: Ce Crystal-Based Gamma Cameras 3089-3092
 Alzimami, Khalid* (King Saud Univ.)

16:00-17:30 ThDPo06.4
Dental Implant Examination Based on the Log-Polar Matching of the Maxillary Radiograph Images in the Anisotropic Scale Space 3093-3096
 Cyganek, Boguslaw* (AGH Univ. of Science & Tech.); Malisz, Piotr (X-R-A-Y, Krakow, Poland)

16:00-17:30 ThDPo06.5
Segmentation of Small Animal PET/CT Mouse Brain Scans Using an MRI-Based 3D Digital Atlas: Application in a Neuroinflammation Mouse Model 3097-3100
Delzescaux, Thierry (Commissariat à l'Energie Atomique); Lebenberg, Jessica (Commissariat à l'Energie Atomique); Raguet, Hugo (Commissariat à l'Energie Atomique); Hantraye, Philippe (Commissariat à l'Energie Atomique); Souedet, Nicolas (Commissariat à l'Energie Atomique); Grégoire, Marie-Claude (Australian Nuclear Science & Tech. Organisation)*

16:00-17:30 ThDPo06.6
Towards Respiration Management in Radiation Treatment of Lung Tumors: Transferring Regions of Interest from Planning CT to Kilovoltage X-Ray Images 3101-3104
Ataer-Cansizoglu, Esra (Northeastern Univ.); Bas, Erhan (Northeastern Univ.); Yousuf, Muhammad Ali (Univ. of Maryland); You, Sheng (Northeastern Univ.); D'Souza, Warren (Univ. of Maryland School of Medicine); Erdogmus, Deniz (Oregon Health & Science Univ.)*

ThDPo07: 16:00-17:30	Catalinas/Golden Horn
2.5.4 Electrical Impedance Imaging Techniques I (Poster Session)	

16:00-17:30 ThDPo07.1
MEFS – MIND Electrical Impedance Tomography Forward Solver 3105-3108
Yang, Fei (Univ. of Minnesota); Zhang, Jie (Medical School, Univ. of Minnesota); Patterson, Robert P. (Univ. of Minnesota)*

16:00-17:30 ThDPo07.2
A Comparison between Compressed Sensing Algorithms in Electrical Impedance Tomography 3109-3112
Nasehi Tehrani, Joubin (The Univ. of Sydney); Jin, Craig (The Univ. of Sydney); McEwan, Alistair (The Univ. of Sydney); van Schaik, André (The Univ. of Sydney)*

16:00-17:30 ThDPo07.3
Finite Element TMS Modeling Toolbox for Realistic Simulation 3113-3116
Cho, Young-Sun (Kyung Hee Univ.); Suh, Hyun Sang (Kyung Hee Univ.); Lee, Won Hee (Columbia Univ.); Kim, Tae-Seong (Kyung Hee Univ.)*

ThDPo08: 16:00-17:30	Catalinas/Golden Horn
2.7.4 Image Segmentation I (Poster Session)	

16:00-17:30 ThDPo08.1
Automatic Segmentation of the Spinal Cord and the Dural Sac in Lumbar MR Images Using Gradient Vector Flow Field 3117-3120
Koh, Jaehan (Univ. at Buffalo (SUNY)); Kim, Taehyong (Univ. at Buffalo, The State Univ. of New York); Chaudhary, Vipin (Wayne State Univ.); dhillon, gurmeet (Proscan Imaging Buffalo)*

16:00-17:30 ThDPo08.3
Segmenting Echocardiography Images Using B-Spline Snake and Active Ellipse Model 3125-3128
Marsousi, Mahdi (K.N. Toosi Univ. of Tech.); Alirezaie, Javad (Ryerson Univ., Univ of Waterloo); Ahmadian, Alireza (Tehran Univ. of Medical Sciences); Kocharian, Armen (Tehran Univ. of Medical Science)*

16:00-17:30 ThDPo08.4
Vessel Network Detection Using Contour Evolution and Color Components 3129-3132
Ushizima, Daniela (Lawrence Berkeley Natl. Laboratory); Medeiros, Fátima N.S. (Federal Univ. of Ceara)*

16:00-17:30 ThDPo08.5
Coronary Artery Segmentation Using Geometric Moments Based Tracking and Snake-Driven Refinement .. 3133-3137
Zhang, Yong (IBM Almaden Research Center)*

16:00-17:30	ThDPo08.6
Impact of Tear Location on Hemodynamics in a Type B Aortic Dissection Investigated with Computational Fluid Dynamics	3138-3141
<i>Karmonik, Christof* (The Methodist Hospital Neurological Inst); Bismuth, Jean (The Methodist Hospital DeBakey Heart & Vascular Center); Redel, Thomas (Siemens AG Healthcare Sector); Anaya-Ayala, Javier (The Methodist Hospital); Davies, Mark (The Methodist Hospital Heart & Vascular Center); Shah, Dipan (The Methodist Hospital); Lumsden, Alan (The Methodist DeBakey Heart & Vascular Center)</i>	
16:00-17:30	ThDPo08.7
Automatic Tip Selection for Microtubule Dynamics Quantification	3142-3145
<i>Malavé, Mario* (Georgia Inst. of Tech.); Zhao, Xuran (Georgia Inst. of Tech.); Kong, Koon Yin (Georgia Inst. of Tech.); Marcus, Adam I (Emory Univ.); Wang, May Dongmei (Georgia Tech & Emory Univ.)</i>	
16:00-17:30	ThDPo08.8
A Fully Automatic Algorithm for Segmentation of the Breasts in DCE-MR Images	3146-3149
<i>Giannini, Valentina* (Politecnico of Turin); Vignati, Anna (FPRC-IRCC); Morra, Lia (im3d S.p.A.); Brizzi, Davide (Ospedale Evangelico Valdese, Centro di Senologia Diagnostico); Bert, Alberto (im3d S.p.A.); Sardanelli, Francesco (Univ. di Milano, Dipartimento di scienze mediche e chirurgiche; Unità di Radiologia, IRCCS Policlinico San Donato); Regge, Daniele (Istitute for Cancer research & Treatment)</i>	
16:00-17:30	ThDPo08.9
Brain Lesion Detection in MRI with Fuzzy and Geostatistical Models	3150-3153
<i>Pham, Tuan D.* (Univ. of New South Wales)</i>	
16:00-17:30	ThDPo08.10
An Improved Cylindrical FDTD Method and Its Application to Field-Tissue Interaction Study in MRI	3154-3157
<i>Chi, Jieru (Qingdao Univ.); Liu, Feng (The Univ. of Queensland); Xia, Ling (Zhejiang Univ.); Shao, Ting Ting (Zhejiang Univ.); Mason, David Glen* (Univ. of Queensland); Crozier, Stuart (The Univ. of Queensland)</i>	
16:00-17:30	ThDPo08.11
Pectoral Muscle Detection in Mammograms Based on the Shortest Path with Endpoints Learnt by SVMs ..	3158-3161
<i>Domingues, Inês* (Univ. do Porto, Faculdade de Engenharia); Cardoso, Jaime S. (INESC Porto, Faculdade de Engenharia, Univ. do Porto); Amaral, Igor (INESC Porto); Moreira, Ines (Centro de Mama – Hospital S. João, Porto); Almeida Passarinho, Pedro Miguel (Emílio de Azevedo Campos, SA); Santa Comba, Joao (Emilio de Azevedo Campos, SA); Cruz-Correia, Ricardo João (CINTESIS – Centre for Research in Health Technologies & Information Systems); Cardoso, Maria João (Porto Faculty of Medicine)</i>	
16:00-17:30	ThDPo08.12
Segmentation of Airways in Lungs Using Projections in 3-D CT Angiography Images	3162-3165
<i>Babin, Danilo* (Ghent Univ.)</i>	
ThDPo09: 16:00-17:30 Catalinas/Golden Horn	
2.4.1 X-Ray Imaging Applications – Breast, Lung, Abdominal, Dental, Thoracic (Poster Session)	
16:00-17:30	ThDPo09.1
Classification of Clusters of Microcalcifications in Digital Breast Tomosynthesis	3166-3169
<i>Ho, Pui Shan (Candy)* (Univ. of Oxford); Brady, Michael (Univ. of Oxford); Schnabel, Julia (Univ. of Oxford); Tromans, Christopher (Univ. of Oxford)</i>	
16:00-17:30	ThDPo09.2
Automatic Colon Polyp Flagging Via Geometric and Texture Features	3170-3173
<i>Fiori, Marcelo* (Univ. de la República – Uruguay); Musé, Pablo (Univ. de la República); Aguirre, Sergio (Echopixel); Sapiro, Guillermo (Univ. of Minnesota)</i>	
16:00-17:30	ThDPo09.3
Analysis of Image Quality Parameter of Conventional and Dental Radiographic Digital Images	3174-3177
<i>Mayo, Patricia (Univ. Politecnica de Valencia); Rodenas, Francisco (Univ. Politecnica de Valencia); Verdu, Gumersindo (Polytechnic Univ. of Valencia); Campayo, Juan Manuel (Hospital Clínic de València); Gallardo, Sergio* (Univ. Politecnica de Valencia)</i>	

16:00-17:30	ThDPo09.4
Anisotropic Diffusion Tensor Applied to Temporal Mammograms: An Application to Breast Cancer Risk Assessment	3178-3181
<i>Karemore, Gopal* (Univ. of Copenhagen); Brandt, Sami (Nordic Bioscience A/S); Nielsen, Mads (Univ. of Copenhagen, Denmark)</i>	
16:00-17:30	ThDPo09.5
Application of Fractal Analysis to Mammography	3182-3185
<i>Raguso, Grazia (Dept. of Mathematics, Univ. of Bari); Ancona, Antonietta ("San Paolo" Hospital of Bari); Chieppa, Loredana (Dept. of Mathematics, Univ. of Bari); L'Abbate, Samuela* (Univ. of Bari, Italy); Pepe, Maria Luisa (Dept. of Radiology, Univ. Hospital – Policlinico of Bari); Mangieri, Fabio ("San Paolo" Hospital of Bari); De Palo, Miriam (Dept. of Mathematics of Bari); Rangayyan, Raj (Univ. of Calgary)</i>	
16:00-17:30	ThDPo09.6
A Model-Based Reconstruction Method for 3-D Rotational Coronary Angiography	3186-3189
<i>Xie, Lizhe (Southeast Univ.); Hu, Yining* (Southeast Univ.); Nunes, Jean Claude (Univ. de Rennes); Bellanger, Jean-Jacques (LTSI-INSERM U642); Luo, Limin (Univ. of Southeast); Toumoulin, Christine (Univ. de Rennes I)</i>	
ThDPo10: 16:00-17:30 Catalinas/Golden Horn	
8.2.1 Biomimetic Robotics (Poster Session)	
16:00-17:30	ThDPo10.1
Insertion Experiments of a Biologically Inspired Microtextured and Multi-Part Probe Based on Reciprocal Motion	3190-3193
<i>Parittotokkaporn, Tassanai* (Imperial College London); Frasson, Luca (Imperial College London); Schneider, Andreas (STFC – Rutherford Appleton Laboratory); Davies, Brian (Imperial College London); Degenaar, Patrick (Imperial College London); Rodriguez y Baena, Ferdinando (Imperial College London)</i>	
16:00-17:30	ThDPo10.2
Incremental Learning Control of the DLR-HIT-Hand II During Interaction Tasks	3194-3197
<i>Alessio, Alessi (Univ. Campus Bio-Medico di Roma); De Falco, Rosanna (Univ. Campus Bio-Medico of Rome); Zollo, Loredana* (Campus Bio-Medico Univ.); Lonini, Luca (Frankfurt Inst. for Advanced Studies, Goethe Univ.); Guglielmelli, Eugenio (Campus Bio-Medico Univ.)</i>	
16:00-17:30	ThDPo10.3
Detailed Finite Element Simulations of Probe Insertion into Solid Elastic Material Using a Cohesive Zone Approach	3198-3201
<i>Oldfield, Matthew* (Imperial College London); Dini, Daniele (Imperial College London); Rodriguez y Baena, Ferdinando (Imperial College London)</i>	
16:00-17:30	ThDPo10.4
Development and Validation of a Numerical Model for Cross-Section Optimization of a Multi-Part Probe for Soft Tissue Intervention	3202-3205
<i>Frasson, Luca* (Imperial College London); Neubert, Julius (RWTH Aachen Univ.); Reina, Saverio (Imperial College London); Oldfield, Matthew (Imperial College London); Davies, Brian (Imperial College London); Rodriguez y Baena, Ferdinando (Imperial College London)</i>	
16:00-17:30	ThDPo10.5
Anticipatory Visual Perception As a Bio-Inspired Mechanism Underlying Robot Locomotion	3206-3209
<i>Barrera, Alejandra* (Mexico's Autonomous Inst. of Tech.); Laschi, Cecilia (Scuola Superiore Sant'Anna)</i>	
16:00-17:30	ThDPo10.6
A Portable Device to Represent Different Views to Both Eyes	3210-3213
<i>Mizuno, Fumio* (Tohoku Inst. of Tech.); Hayasaka, Tomoaki (Tohoku Univ.); Yamaguchi, Takami (Tohoku Univ.)</i>	

- 16:00-17:30 ThDPo12.1
Analytical Validation of COMSOL Multiphysics for Theoretical Models of Radiofrequency Ablation Including the Hyperbolic Bioheat Transfer Equation **3214-3217**
López Molina, Juan A. (Univ. Politécnica de Valencia); Rivera, Maria José (Univ. Politécnica de Valencia); Trujillo, Macarena (Univ. Politécnica de Valencia); García-Romero, Vicente (Univ. Politécnica de Valencia); Berjano, Enrique (Polytechnic Univ. of Valencia)*
- 16:00-17:30 ThDPo12.2
Fluence of Thulium Laser System in Skin Ablation **3218-3221**
Bilici, Temel (Boğaziçi Univ.); Tabakoglu, Ozgur (Boğaziçi Univ.); Kalaycioglu, Hamit (Bilkent Univ.); Kurt, Adnan (Teknofil Ltd. Şti.); Sennaroglu, Alphan (Koç Univ.); Gulsoy, Murat (Boğaziçi Univ.)*
- 16:00-17:30 ThDPo12.3
Temperature Dependence of Thermal Conductivity of Liver Based on Various Experiments and a Numerical Simulation for RF Ablation **3222-3228**
Watanabe, Hiroki (Waseda Univ.); Yamazaki, Nozomu (Waseda Univ.); Kobayashi, Yo (Waseda Univ.); Miyashita, Tomoyuki (Waseda Univ.); Hashizume, Makoto (Kyushu Univ.); Fujie, Masakatsu G. (Waseda Univ.)*
- 16:00-17:30 ThDPo12.4
Design and Construction of a Hyperthermia System with Improved Interaction of Magnetic Induction-Heating **3229-3232**
Huang, Chi-Fang (Tatung Univ.); Lin, Xi-Zhang (Natl. Cheng Kung Univ.); Lo, Wei-Hung (Tatung Univ.)*
- 16:00-17:30 ThDPo12.5
Heating Properties of Coaxial Needle Applicator Made of SMA for Hyperthermia Treatments **3233-3236**
Nakane, Kazuya (Meiji Univ.); Kato, Kazuo (Meiji Univ.); Mimoto, Naoki (Meiji Univ.); Shindo, Yasuhiro (Meiji Univ.)*

- 16:00-17:30 ThDPo13.1
Effects of Late Sodium Current Enhancement During LQT-Related Arrhythmias. A Simulation Study **3237-3240**
Cardona, Karen (Inst. InterUniv. de Investigación enBioingeniería y Tecnología Orientada al Ser Humano); Trenor, Beatriz (Univ. Politécnica de Valencia (I3BH)); Rajamani, Sridharan (Gilead Sciences, Palo Alto. CA.); Romero, Lucia (Univ. Politécnica de Valencia (I3BH)); Ferrero, José M (Univ. Politécnica de Valencia (I3BH)); Saiz, Javier (I3BH-UPV)*
- 16:00-17:30 ThDPo13.2
Simulations of Transport Regime in Electrodeposition in Different Viscosity Scenarios **3241-3244**
Gutman Grinbank, Sebastian (Univ. de Buenos Aires); Soba, Alejandro (Univ. de Barcelona); González, Graciela Alicia (Univ. de Buenos Aires); Díaz Constanzo, Guadalupe (Univ. de Buenos Aires); Bogo, Horacio Alejandro (Univ. de Buenos Aires); Marshall, Guillermo (Univ. de Buenos Aires)*
- 16:00-17:30 ThDPo13.3
Sex and Age Related Differences in Drug Induced QT Prolongation by Dofetilide under Reduced Repolarization Reserve in Simulated Ventricular Cells **3245-3248**
Gonzalez, Rodolfo (Univ. Politecnica de Valencia); Gomis-Tena, Julio (Univ. Politecnica de Valencia); Corrias, Alberto (Oxford Univ.); Ferrero, José M (Univ. Politécnica de Valencia (I3BH)); Rodriguez, Blanca (Oxford Univ.); Saiz, Javier (I3BH-UPV)*
- 16:00-17:30 ThDPo13.4
Comparison of Complex Fractionated Atrial Electrograms at Cellular Scale Using Numerical and Experimental Models **3249-3252**
Navoret, Nicolas (Le2i CNRS UMR 5158 Univ. of Burgundy); Xu, Binbin (Univ. de Bourgogne, FRANCE); Jacquir, Sabir (LE2I UMR CNRS 5158, Univ. de Bourgogne); Binczak, Stéphane (LE2I UMR CNRS 5158 Univ. de Bourgogne)*

16:00-17:30	ThDPo13.5
Human and Rabbit Inter-Species Comparison of Ionic Mechanisms of Arrhythmic Risk: A Simulation Study 3253-3256	
<i>Romero, Lucia (Univ. Polit�cnica de Valencia (I3BH)); Carbonell, Beatriz (Univ. Polit�cnica de Valencia (I3BH)); Trenor, Beatriz (Univ. Polit�cnica de Valencia (I3BH)); Rodriguez, Blanca (Oxford Univ.); Saiz, Javier (I3BH-UPV); Ferrero, Jos� M* (Univ. Polit�cnica de Valencia (I3BH))</i>	
16:00-17:30	ThDPo13.6
Stochastic Modelling of Cardiac Cell Structure 3257-3260	
<i>Theakston, Elizabeth Sarah* (Univ. of Auckland); Walker, Cameron Graham (Univ. of Auckland); O'Sullivan, Michael Justin (The Univ. of Auckland, New Zealand); Rajagopal, Vijayaraghavan (Univ. of Auckland)</i>	
16:00-17:30	ThDPo13.7
From in Vitro to in Silico and Back Again: Using Biological and Mathematical Synergy to Decipher Breast Cancer Cell Motility 3261-3264	
<i>Rosenthal, Devin* (Univ. of Michigan); Iyer, Harish (Univ. of Michigan); Escudero, Silvia (Univ. of Michigan); Ventura, Alejandra (Univ. of Michigan); Arruda, Ellen (Univ. of Michigan); Garikipati, Krishna (Univ. of Michigan); Merajver, Sofia (Univ. of Michigan)</i>	
ThDPo14: 16:00-17:30	Catalinas/Golden Horn
1.4.11 EEG I (Poster Session)	
16:00-17:30	ThDPo14.1
Moving Dipoles Method Detects Displacement in N2 and P3 Generation in Diffuse Axonal Injury Patients 3265-3268	
<i>Molteni, Erika* (Politecnico di Milano); Gatti, Eleonora (Politecnico di Milano – Dipartimento di Bioingegneria); Bianchi, Anna Maria (Politecnico di Milano); Cerutti, Sergio (Politecnico di Milano)</i>	
16:00-17:30	ThDPo14.2
Seizure Onset Detection Based on a Uni or Multi-Modal Intelligent Seizure Acquisition (UISA/MISA) System 3269-3272	
<i>Conradsen, Isa* (Technical Univ. of Denmark); Beniczky, Sandor (Danish Epilepsy Centre); Wolf, Peter (Danish Epilepsy Centre); Henriksen, Jonas (Technical Univ. of Denmark); Sams, Thomas (Technical Univ. of Denmark); Sorensen, Helge (Technical Univ. of Denmark)</i>	
16:00-17:30	ThDPo14.3
Automatic Sleep Staging Based on Ballistocardiographic Signals Recorded through Bed Sensors 3273-3276	
<i>Migliorini, Matteo* (Politecnico di Milano); Bianchi, Anna Maria (Politecnico di Milano); Nistic�, Domenico (Politecnico di Milano); Kortelainen, Juha Matti (VTT); Arce-Santana, Edgar (Facultad de Ciencias); Cerutti, Sergio (Politecnico di Milano); Mendez, Martin Oswaldo (Univ. Autonoma de San Luis Potosi)</i>	
16:00-17:30	ThDPo14.4
Automatic Epileptic Seizure Onset Detection Using Matching Pursuit: A Case Study 3277-3280	
<i>Sorensen, Thomas L.* (Technical Univ. of Denmark); Olsen, Ulrich L. (Technical Univ. of Denmark); Conradsen, Isa (Technical Univ. of Denmark); Henriksen, Jonas (Technical Univ. of Denmark); Kjaer, Troels Wesenberg (RigsHospitalet); Thomsen, Carsten Eckhart (Univ. of Copenhagen); Sorensen, Helge (Technical Univ. of Denmark)</i>	
16:00-17:30	ThDPo14.5
Speech Recognition Features for EEG Signal Description in Detection of Neonatal Seizures 3281-3284	
<i>Temko, Andriy* (Univ. College Cork); Marnane, Liam (Univ. College Cork); Lightbody, Gordon (Univ. College Cork); Boylan, Geraldine (Univ. College Cork)</i>	
16:00-17:30	ThDPo14.6
Feature Subset Selection for Age-Related Changes in EEG and EMG During Motor Tasks 3285-3288	
<i>Johnson, Ashley* (Georgia Inst. of Tech.); Vachtsevanos, George (Georgia Inst. of Tech.); Shinohara, Minoru (Georgia Inst. of Tech.)</i>	

16:00-17:30 ThDPo14.7
Genetic Feature Selection to Optimally Detect P300 in Brain Computer Interfaces 3289-3292
Atum, Yanina (Univ. Nacional de Entre Ríos); Gareis, Iván Emilio (Univ. Nacional de Entre Ríos);
 Gentiletti, Gerardo Gabriel (Univ. Nacional de Entre Ríos); Acevedo, Rubén Carlos (Univ. Nacional
 de Entre Ríos); Rufiner, Hugo Leonardo (Univ. Nacional de Entre Ríos)*

16:00-17:30 ThDPo14.8
An Information Transmission Measure for the Analysis of Effective Connectivity among Cortical Neurons .. 3293-3296
Law, Andrew (Univ. of Rochester); Sharma, Gaurav (Univ. of Rochester); Schieber, Marc (Univ. of Rochester)*

16:00-17:30 ThDPo14.10
Fuzzy Rule-Based Seizure Prediction Based on Correlation Dimension Changes in Intracranial EEG 3301-3304
*Rabbi, Ahmed Fazle (Univ. of North Dakota); Aarabi, Ardalan (Univ. of Manitoba);
 Fazel-Rezaei, Reza* (Univ. of North Dakota)*

ThE02: 17:30-19:00 Libertador B
2.1.3 Parallel MRI (Oral Session)

17:30-17:45 ThE02.1
GPU Accelerated FDTD Solver and Its Application in MRI 3305-3308
*Chi, Jieru (Qingdao Univ.); Liu, Feng (The Univ. of Queensland); Jin, Jin (Univ. of Queensland, Australia);
 Mason, David Glen* (Univ. of Queensland); Crozier, Stuart (The Univ. of Queensland)*

17:45-18:00 ThE02.2
Phase Unwrapping Using Region-Based Markov Random Field Model 3309-3312
Dong, Ying (Texas A&M Univ.); Ji, Jim Xiuquan (Texas A&M Univ.)*

18:00-18:15 ThE02.3
Coil Reduction in Parallel Excitation with Large Array 3313-3316
Feng, Shuo (Texas A&M Univ.); Ji, Jim Xiuquan (Texas A&M Univ.)*

18:15-18:30 ThE02.4
DWI Acquisition Schemes and Diffusion Tensor Estimation: A Simulation-Based Study 3317-3320
Aja-Fernandez, Santiago (Univ. de Valladolid); Tristan-Vega, Antonio (Univ. de Valladolid);
 Casaseca-de-la-Higuera, Pablo (Univ. de Valladolid)*

18:30-18:45 ThE02.5
High-Performance 3D Compressive Sensing MRI Reconstruction 3321-3324
Kim, Daehyun (Intel Corp.); Trzasko, Joshua (Mayo Clinic); Smelyanskiy, Mikhail (Intel Corp.);
 Haider, Clifton (Mayo Clinic); Manduca, Armando (Mayo Clinic); Dubey, Pradeep (Intel Corp.)*

18:45-19:00 ThE02.6
Cross-Sampled GRAPPA for Parallel MRI 3325-3328
*Wang, Haifeng (Univ. of Wisconsin, Milwaukee); Liang, Dong (Univ. of Wisconsin, Milwaukee); King, Kevin (GE
 Healthcare); Nagarsekar, Gajanan (Univ. of Wisconsin, Milwaukee); Ying, Leslie* (Univ. of Wisconsin)*

ThE03: 17:30-19:00 Libertador C
6.4.4 Brain-Computer/Machine Interface II (Oral Session)

17:30-17:45 ThE03.1
Cognitively Driven Brain Machine Control Using Neural Signals in the Parietal Reach Region 3329-3332
Hwang, Eun Jung (California Inst. of Tech.); Anderson, Richard A. (Caltech)*

17:45-18:00 ThE03.2
Incremental SSVEP Analysis for BCI Implementation 3333-3336
Müller, Sandra Mara Torres (Federal Univ. of Espírito Santo); Bastos, Teodiano (Univ. Federal do Espírito
 Santo); Sarcinelli-Filho, Mario (Federal Univ. of Espírito Santo)*

18:00-18:15	ThE03.3
BCI-Mediated FES Suppression of Pathological Tremor	3337-3340
<i>Rocon, Eduardo (CSIC); Gallego, Juan Alvaro* (Bioengineering Group, Consejo Superior de Investigaciones Científicas CSIC); Pons, Jose Luis (Inst. de Automática Industrial- Consejo Superior de Investigaciones Científicas)</i>	
18:15-18:30	ThE03.4
Online Performance Evaluation of Motor Imagery BCI with Augmented-Reality Virtual Hand Feedback	3341-3344
<i>Chin, Zheng Yang* (Inst. for Infocomm Research); Ang, Kai Keng (Inst. for Infocomm Research); Wang, Chuanchu (Inst. for Infocomm Research); Guan, Cuntai (Inst. for Infocomm Research)</i>	
18:45-19:00	ThE03.6
Motor Imagery Task Discrimination Using Wide-Band Frequency Spectra with Slepian Tapers	3349-3352
<i>Kamrunnahar, Mst (Kamrun)* (The Pennsylvania State Univ.); Geronimo, Andrew (The Pennsylvania State Univ.); Schiff, Steven (Pennsylvania State Univ.)</i>	
ThE04: 17:30-19:00	Retiro A
9.2.2 Rehabilitation and Prosthetic Devices (Oral Session)	
17:30-17:45	ThE04.1
Characterization of Gait Abnormalities in Parkinson's Disease Using a Wireless Inertial Sensor System ...	3353-3356
<i>Tien, Iris* (Univ. of California, Berkeley); Glaser, Steven (Univ. of California, Berkeley); Aminoff, Michael (Univ. of California, San Francisco)</i>	
17:45-18:00	ThE04.2
Using Rapid Prototyping Molds to Create Patient Specific Polymethylmethacrylate Implants in Cranioplasty	3357-3360
<i>Gerber, Nicolas* (Univ. of Bern); Stieglitz, Lennart (Neuro Surgery Dept., Inselspital Bern); Peterhans, Matthias (Univ. of Bern); Nolte, Lutz-Peter (Univ. of Bern); Raabe, Andreas (Neuro Surgery Dept., Inselspital Bern); Weber, Stefan (Univ. of Bern)</i>	
18:00-18:15	ThE04.3
Inductive Tongue Control of Powered Wheelchairs	3361-3364
<i>Lund, Morten Enemark* (Aalborg Univ.); Caltenco, Hector Alejandro (Aalborg Univ.); Johansen, Daniel (Aalborg Univ.); Lontis, Eugen Romulus (TKS A/S); Andreasen Struijk, Lotte N. S. (Aalborg Univ.); Bentsen, Bo (Center for Sensory Motor Interaction, Aalborg Univ.); Christensen, Henrik Vie (CISS, Aalborg Univ.)</i>	
18:15-18:30	ThE04.4
Clinical Evaluation of Wireless Inductive Tongue Computer Interface for Control of Computers and Assistive Devices	3365-3368
<i>Lontis, Eugen Romulus* (TKS A/S); Lund, Morten Enemark (Aalborg Univ.); Christensen, Henrik Vie (CISS, Aalborg Univ.); Bentsen, Bo (Center for Sensory Motor Interaction, Aalborg Univ.); Gaihede, Michael (Aalborg Hospital, Dept. of Otorhinolaryngology & Head & Neck Surgery); Caltenco, Hector Alejandro (Aalborg Univ.); Andreasen Struijk, Lotte N. S. (Aalborg Univ.)</i>	
18:30-18:45	ThE04.5
Evaluation of a Mobile Electrode for Electrical Stimulation of the Perineal Muscle	3369-3372
<i>da Silveira Bianchi Perez, Fabiana* (Univ. de Brasília); Barbosa da Cruz, Cleyciany (Faculdade Padrao); Araujo Soares, Fabiano (Univ. of Brasília – UnB); Carvalho, Joao Luiz Azevedo de (Univ. of Brasília); da Rocha, Adson F. (Univ. of Brasília)</i>	
18:45-19:00	ThE04.6
Evaluation Method for the Proficiency Level of an Operating Myoelectric Hand using EMG Signals	3373-3376
<i>Kita, Kahori* (ATR Computational Neuroscience Laboratories); Kato, Ryu (The Univ. of Tokyo); Yokoi, Hiroshi (Univ. of Tokyo)</i>	

ThE05: 17:30-19:00	Retiro B
6.5.3 Optical Techniques for Imaging and Perturbing Neural Activity in Vivo (Mini Symposium)	

17:30-17:45 ThE05.1
Optical Tools to Produce and Study Small Strokes in Animal Models 3377-3378
Schaffer, Chris (Cornell Univ.)*

17:45-18:00 ThE05.2
Imaging Optically Induced Neural Activity in the Brain 3379-3381
Mahadevan-Jansen, Anita (Vanderbilt Univ.)*

ThE06: 17:30-19:00	Retiro C
2.6.3 Parametric Image Reconstruction (Oral Session)	

17:30-17:45 ThE06.1
Label-Free High-Resolution Imaging of Live Cells with Deconvolved Spatial Light Interference Microscopy 3382-3385
Haldar, Justin (Univ. of Illinois at Urbana-Champaign); Wang, Zhuo (Univ. of Illinois at Urbana-Champaign); Popescu, Gabriel (Univ. of Illinois at Urbana-Champaign); Liang, Zhi-Pei (Univ. of Illinois at Urbana-Champaign)*

17:45-18:00 ThE06.2
3-D Flow Characterization and Shear Stress in a Stenosed Carotid Artery Bifurcation Model Using Stereoscopic PIV Technique 3386-3389
Kefayati, Sarah (Univ. of Western Ontario); Poepping, Tamie (Univ. of Western Ontario)*

18:00-18:15 ThE06.3
PSF Model-Based Reconstruction with Sparsity Constraint: Algorithm and Application to Real-Time Cardiac MRI 3390-3393
Zhao, Bo (Univ. of Illinois at Urbana-Champaign); Haldar, Justin (Univ. of Illinois at Urbana-Champaign); Liang, Zhi-Pei (Univ. of Illinois at Urbana-Champaign)*

18:15-18:30 ThE06.4
Denoising in Fluorescence Microscopy Using Compressed Sensing with Multiple Reconstructions and Non-Local Merging 3394-3397
Marim, Marcio (Inst. Pasteur – Télécom ParisTech); Angelini, Elsa (Ecole Nat. Supérieure des Telecom); Olivo-Marin, Jean-Christophe (Inst. Pasteur)*

18:30-18:45 ThE06.5
Microwave Tomography in the Context of Complex Breast Cancer Imaging 3398-3401
Meaney, Paul (Dartmouth College); Fanning, Margaret (Dartmouth College); di Florio-Alexander, Roberta (Dartmouth Hitchcock Medical Center); Kaufman, Peter (Dartmouth Hitchcock Medical Center); Geimer, Shireen (Dartmouth College); Zhou, Tian (Dartmouth College); Paulsen, Keith (Dartmouth College)*

18:45-19:00 ThE06.6
Avoiding Local Optima of the Joint Entropy Prior in Limited View Tomography Using a Multiresolution Scheme 3402-3405
Van de Sompel, Dominique (Univ. of Oxford); Ho, Pui Shan (Candy) (Univ. of Oxford); Brady, Michael (Univ. of Oxford)*

ThE07: 17:30-19:00	Martin Fierro 1
8.1.1 Rehabilitation Robotics II (Oral Session)	

17:30-17:45 ThE07.1
An Intention Driven Hand Functions Task Training Robotic System 3406-3409
Tong, Kai Yu, Raymond (The Hong Kong Polytechnic Univ.); Ho, Sze Kit (The Hong Kong Polytechnic Univ.); Pang, M.K. (The Hong Kong Polytechnic Univ.); Hu, Xiaoling (The Hong Kong Polytechnic Univ.); Tam, Wing Kin (The Hong Kong Polytechnic Univ.); Fung, Kai Lok (The Hong Kong Polytechnic Univ.); Wei, Xi-jun (The Hong Kong Polytechnic Univ.); Chen, P. N. (The Hong Kong Polytechnic Univ.); Chen, Mo (Zhejiang Univ.)*

17:45-18:00	ThE07.2
Abnormal Adaptation in Children Affected by Cerebral Palsy to Robot Generated Dynamic Environment	3410-3413
<i>Masia, Lorenzo* (Istituto Italiano di Tecnologia); Frascarelli, Flaminia (Pediatric Hospital Bambino Gesù); Morasso, Pietro (Univ. of Genova); Di Rosa, Giuseppe (Pediatric Hospital Bambino Gesù); Petrarca, Maurizio (Pediatric Hospital Bambino Gesù); Castelli, Enrico (Pediatric Hospital Bambino Gesù); Cappa, Paolo (Univ. La Sapienza)</i>	
18:00-18:15	ThE07.3
Design and Development of “biomechatronic Gym” for Early Detection of Neurological Disorders in Infants	3414-3417
<i>Cecchi, Francesca* (Scuola Superiore S.Anna); Serio, Stefano Marco (Scuola Superiore Sant’Anna); Del Maestro, Martina (Scuola Superiore Sant’Anna); Laschi, Cecilia (Scuola Superiore Sant’Anna); Sgandurra, Giuseppina (Scuola Superiore Sant’Anna); Cioni, Giovanni (Stella Maris Scientific Inst.); Dario, Paolo (IIT Italian Inst. of Tech.)</i>	
18:15-18:30	ThE07.4
Are Cutaneous Reflexes from the Foot Preserved in Passive Walking in a DGO?	3418-3421
<i>Duysens, Jacques* (KU-Leuven, FABER, Belgium); Bastiaanse, Catharina Maria (Dept. of Extracorporeal Circulation, Amphia Hospital Breda, Breda, the Netherlands); Dietz, Volker (Univ. Hospital Balgrist); Engelsman, Bouwina (Kuleuven); Jansen, Karen (Katholieke Univ. Leuven); Jonkers, Ilse (Katholieke Univ. Leuven)</i>	
18:30-18:45	ThE07.5
Feasibility of Dynamic Entrainment with Ankle Mechanical Perturbation to Treat Locomotor Deficit	3422-3425
<i>Ahn, Joeeun* (MIT); Hogan, Neville (Massachusetts Inst. of Tech.)</i>	
18:45-19:00	ThE07.6
In Vivo Measurement of Human Knee and Hip Dynamics Using MIMO System Identification	3426-3429
<i>Koopman, Bram* (Univ. of Twente); van Asseldonk, Edwin H.F. (Univ. of Twente); van der Kooij, Herman (Univ. of Twente)</i>	
ThE08: 17:30-19:00	Martin Fierro 2
3.11.4 Towards Future Truly Wearable Medical Devices: From Application to ASIC (Mini Symposium)	
17:30-17:45	ThE08.1
An Introduction to Future Truly Wearable Medical Devices – From Application to ASIC	3430-3431
<i>Casson, Alexander James (Imperial College London); Logesparan, Lojini* (Imperial College London); Rodriguez-Villegas, Esther (Imperial College London)</i>	
17:45-18:00	ThE08.2
Energy Harvesting for Human Wearable and Implantable Bio-Sensors	3432-3436
<i>Mitcheson, Paul* (Imperial College)</i>	
18:00-18:15	ThE08.3
Design Considerations on Ultra-Low-Power Wireless Transmitters for Wearable Medical Devices	3437-3438
<i>Manstretta, Danilo* (Univ. of Pavia)</i>	
18:15-18:30	ThE08.4
Low Power Signal Processing Electronics for Wearable Medical Devices	3439-3440
<i>Casson, Alexander James* (Imperial College London); Rodriguez-Villegas, Esther (Imperial College London)</i>	
18:30-18:45	ThE08.5
Wireless EEG Systems: Increasing Functionality, Decreasing Power	3441-3441
<i>Penders, Julien* (imec / Holst Centre); Yazicioglu, Refet Firat (IMEC); van de Molengraft, Jef (Holst Centre); Torfs, Tom (IMEC); Patki, Shrishail (Holst Center/IMEC-NL); Brown, Lindsay (Stichting IMEC Nederland); Van Hoof, Chris (IMEC)</i>	

17:30-17:45	P-Wave Characteristics after Electrical External Cardioversion: Predictive Indexes of Relapse	ThE09.1	3442-3445
	<i>Censi, Federica* (Italian Natl. Inst. of Health); Calcagnini, Giovanni (Italian Natl. Inst. of Health); Triventi, Michele (Italian Natl. Inst. of Health); Mattei, Eugenio (Italian Natl. Inst. of Health); Bartolini, Pietro (Italian Natl. Inst. of Health); Corazza, Ivan (Univ. of Bologna); Boriani, Giuseppe (Univ. of Bologna)</i>		
17:45-18:00	Development of Artificial Bionic Baroreflex System	ThE09.2	3446-3448
	<i>Sunagawa, Kenji* (Kyushu Univ.); Sugimachi, Masaru (Natl Cardio Center Research Inst)</i>		
18:00-18:15	RR-SAP Causality in Heart Transplant Recipients	ThE09.3	3449-3452
	<i>Porta, Alberto* (Univ. degli Studi di Milano); Magagnin, Valentina (Istituto Ortopedico IRCCS Galeazzi); Bassani, Tito (Politecnico di Milano); Tobaldini, Eleonora (Univ. degli Studi di Milano); Montano, Nicola (Univ. degli Studi di Milano); Van de Borne, Philippe (Hôpital Erasme)</i>		
18:15-18:30	Monitoring Aortic Stiffness in the Presence of Measurement Artifact Based on an Arterial Tube Model	ThE09.4	3453-3456
	<i>Xu, Da (Michigan State Univ.); Zhang, Guanqun (Michigan State Univ.); Olivier, Bari (Michigan State Univ.); Mukkamala, Ramakrishna* (Michigan State Univ.)</i>		
18:30-18:45	Assessment of Gravitational Stress on Heart Rate Variability During Maneuvers on High Performance Jet Flights	ThE09.5	3457-3459
	<i>Di Rienzo, Marco* (Fondazione Don Carlo Gnocchi); Castiglioni, Paolo (Fondazione Don Carlo Gnocchi ONLUS); Meriggi, Paolo (Fondazione Don Gnocchi); Rizzo, Francesco (Fondazione Don C. Gnocchi ONLUS); Cacopardo, Salvatore (Aerospace Medicine Dept. – Flight Test Center, Italian Air Force, Pratica di Mare, Rome, Italy); Guadagno, AntonGiulio (Aerospace Medicine Dept. – Flight Test Center, Italian Air Force, Pratica di Mare, Rome, Italy)</i>		
18:45-19:00	Identification of Sources of Low Frequency Variability of Arterial Blood Pressure: Cardiac Output Acts As a Buffer and Not As a Source	ThE09.6	3460-3462
	<i>Aletti, Federico* (Politecnico di Milano); Chen, Xiaoxiao (Michigan State Univ.); Sala-Mercado, Javier (Wayne State Univ. School of Medicine); Hammond, Robert (Wayne State Univ. School of Medicine); O'Leary, Donal (Wayne State Univ. School of Medicine); Cerutti, Sergio (Politecnico di Milano); Baselli, Giuseppe (Politecnico di Milano); Mukkamala, Ramakrishna (Michigan State Univ.)</i>		

17:30-17:45	Dcm-Ar: a Fast Flash-based Web-PACS Viewer for Displaying Large DICOM Images	ThE10.1	3463-3466
	<i>Arguiñarena, Emanuel Julio Cesar* (Doths Engineering S.A.); Macchi, Jose Eduardo (Tsavo Group S.R.L.); Escobar, Pedro Pablo (Univ. Nacional del Centro de la Provincia (UNICEN)); del Fresno, Mariana (PLADEMA – Univ. Nacional del Centro de la Provincia (UNICEN)); Massa, José María (UNICEN); Santiago, Martin Alejo (IFAS – Univ. Nacional del Centro de la Provincia (UNICEN))</i>		
17:45-18:00	Grid Infrastructures for Developing Mammography CAD Systems	ThE10.2	3467-3470
	<i>Ramos-Pollan, Raul* (CETA-CIEMAT); Franco Valiente, José Miguel (CETA-CIEMAT); Sevilla, Jorge (CETA-CIEMAT); Guevara López, Miguel Angel (Univ. of Porto); Gonzalez de Posada, Naimy (INEGI); Loureiro, Joanna (Faculty of Medicine, Univ. of Porto); Ramos, Isabel (Faculty of Medicine, Univ. of Porto)</i>		
18:00-18:15	Performance Analysis of Medical Video Streaming Over Mobile WiMAX	ThE10.3	3471-3474
	<i>Alinejad, Ali* (Kingston Univ.); Istepanian, Robert (Kingston Univ. London); Philip, Nada (Kingston Univ.)</i>		

18:15-18:30 ThE10.4
Regulatory Compliance Requirements for an Open Source Electronic Image Trial Management System 3475-3478
Rhodes, Colin (VirtualScopics Inc.); Moore, Steve (Washington Univ. School of Medicine); Clark, Ken (Washington Univ. School of Medicine); Maffitt, David (Washington Univ. School of Medicine); Perry, John (Private Consultant); Handzel, Toni (VirtualScopics Inc.); Prior, Fred (Washington Univ. School of Medicine)*

18:30-18:45 ThE10.5
Low-Complexity Video Encoding Method for Wireless Image Transmission in Capsule Endoscope 3479-3482
Takizawa, Kenichi (NICT); Hamaguchi, Kiyoshi (Natl. Inst. of Information & Communications Tech.)*

18:45-19:00 ThE10.6
Novel Joint Source-Channel Coding for Wireless Transmission of Radiography Images 3483-3486
Watanabe, Katsuhiro (Meiji Univ.); Takizawa, Kenichi (NICT); Ikegami, Tetsushi (Meiji Univ.)*

ThE11: 17:30-19:00 Poncho
3.1.2 Bioelectric Sensing Methods (Oral Session)

17:30-17:45 ThE11.1
Microphonics in Biopotential Measurements with Capacitive Electrodes 3487-3490
Luna-Lozano, Pablo (Univ. Politecnica de Catalunya); Pallas-Areny, Ramon (Univ. Politecnica de Catalunya)*

17:45-18:00 ThE11.2
A 64-Channel Readout ASIC for Nanowire Biosensor Array with Electrical Calibration Scheme 3491-3494
Chai, Kevin T. C. (IME); Choe, Kunil (Yale Univ., Connecticut, USA); Bernal, Olivier D. (Univ. of Toulouse INP-LOSE); Gopalakrishnan, Pradeep K. (RV-VLSI Design Center, Bangalore, India); Zhang, Guo Jun (Inst. of Microelectronics, A*STAR (Agency for Science, Tech. & Research), Singapore); Kang, Tae goo (Inst. of Microelectronics, A*STAR (Agency for Science, Tech. & Research), Singapore); Je, Minkyu (Inst. of Microelectronics, Agency of Science, Tech. & Research, Singapore)*

18:00-18:15 ThE11.3
Cole Parameter Estimation from Electrical Bioconductance Spectroscopy Measurements 3495-3498
Seoane, Fernando (Univ. of Borås); Buendia, Ruben (Univ. of Alcala); Gil Pita, Roberto (Univ. of Alcala)*

18:15-18:30 ThE11.4
Surface Acoustic Wave Resonators As Novel Tools for Multiparametric Blood Analysis 3499-3502
Guhr, Glen (IFW Dresden); Brünig, Raimund (IFW Dresden); Schmidt, Hagen (IFW Dresden); Weihnacht, Manfred (IFW Dresden); Siegert, Gabriele (Inst. for Clinical Chemistry & Laboratory Medicine); Gehrisch, Siegmund (Inst. for Clinical Chemistry & Laboratory Medicine)*

18:30-18:45 ThE11.5
Flexible PDMS -Based Dry Electrodes for Electro-Optic Acquisition of ECG Signals in Wearable Devices 3503-3506
Fernandes, Mariana S. (Univ. of Minho); Mendes, Paulo M. (Univ. of Minho); Correia, Higino (Univ. of Minho); Ram, Rajeev J. (Massachusetts Inst. of Tech.); Lee, Kevin S. (Massachusetts Inst. of Tech.)*

18:45-19:00 ThE11.6
High-K Dielectric Fabrication Process to Minimize Mobile Ionic Penetration 3507-3510
Parent, David (San Jose State Univ.); Davis, Janet (EE SJSU); Basham, Eric (Univ. of California, Santa Cruz)*

ThE12: 17:30-19:00 Rio de Plata
6.2.5 EMG Processing (Oral Session)

17:30-17:45 ThE12.1
Synergy Matrices to Extract Fluid Wrist Motion Intents Via Surface Electromyography 3511-3514
Choi, Changmok (KAIST); Kim, Jung (Korea Advanced Inst. of Science & Tech.)*

17:45-18:00 ThE12.2
Myoelectric Control of a Powered Knee Prosthesis for Volitional Movement During Non-Weight-Bearing Activities 3515-3518
Ha, Kevin H. (Vanderbilt Univ.); Varol, Huseyin Atakan (Vanderbilt Univ.); Goldfarb, Michael (Vanderbilt Univ.)*

18:00-18:15	ThE12.3
Principal Components of Frequency Domain Electromyograms for Muscular Fatigue Analysis 3519-3522	
<i>Jesus, Igor Ramathur (Federal Univ. of Rio de Janeiro); Mello, Roger Gomes Tavares (Naval School, Brazilian Navy); Nadal, Jurandir* (Federal Univ. of Rio de Janeiro)</i>	
18:15-18:30	ThE12.4
Torque Prediction Using Stimulus Evoked EMG and Its Identification for Different Muscle Fatigue States in SCI Subjects 3523-3526	
<i>Zhang, Qin* (Univ. of Montpellier 2); Hayashibe, Mitsuhiro (INRIA); Papaioordanidou, Maria (Univ. of Montpellier 1, France); Fraisse, Philippe (Univ. of Montpellier 2, France); Fattal, Charles (PROPARG); Guiraud, David (INRIA)</i>	
18:30-18:45	ThE12.5
Filterbank Spectral Estimators for the Analysis of Surface EMG Signals During Isometric Contractions 3527-3530	
<i>Alty, Steve (King's College London); Georgakis, Apostolos* (King's College London)</i>	
18:45-19:00	ThE12.6
Recognition of Forearm Muscle Activity by Continuous Classification of Multi-Site Mechanomyogram Signals 3531-3534	
<i>Alves, Natasha* (Univ. of Toronto); Chau, Tom (Univ. of Toronto)</i>	

ThE13: 17:30-19:00	Gomez Losada
8.6.1 Sub-Cellular, Cellular, Tissue Level Mechanics (Oral Session)	

17:30-17:45	ThE13.1
BEM Simulations of Rayleigh Wave Propagation in Media with Microstructural Effects: Application to Long Bones 3535-3538	
<i>Papacharalampopoulos, Alexios (Dept. of Mechanical Engineering & Aeronautics, Univ. of Patras, Greece); Vavva, Maria* (Dept. of Material Science & Engineering, Univ. of Ioannina, Greece); Protopappas, Vasilios C. (Univ. of Patras); Polyzos, Demosthenes (Univ. of Patras); Fotiadis, Dimitrios I. (Univ. of Ioannina)</i>	
17:45-18:00	ThE13.2
Low-Power Circuits Design for the Wireless Force Measurement System of the Total Knee Arthroplasty 3539-3542	
<i>Chen, Hong* (Tsinghua Univ.); Liu, Ming (Tsinghua Univ.); Jia, Chen (Tsinghua Univ.); Zhang, Chun (Dept. of Electronic Engineering, Tsinghua Univ., Beijing, P. R. China, 100084); Wang, Zhihua (Tsinghua Univ.); Wan, Weiye (Imeth Tsinghua Univ.)</i>	
18:00-18:15	ThE13.3
Role of Substrate Microstructure on Osteogenic Differentiation of Mesenchymal Stem Cells 3543-3545	
<i>Jabbari, Esmail* (Univ. of South Carolina)</i>	
18:15-18:30	ThE13.4
Fabrication and Characterization of Tough Elastomeric Fibrous Scaffolds for Tissue Engineering Applications 3546-3548	
<i>Sant, Shilpa (Harvard Medical School); Khademhosseini, Ali* (Harvard-MIT)</i>	

ThE14: 17:30-19:00	Auditorium
5.1.4 The Pressure-Volume Relationship (Mini Symposium)	

17:30-17:45	ThE14.1
Implantable Hemodynamic Monitors: Can Be Conductance Catheter System Successfully Implemented? 3549-3552	
<i>Herrera, Myriam Cristina* (Univ Nacional de Tucumán); Olivera, Juan Manuel (Bioengineering Dept.-Facet- Univ. Nacional de Tucuman); Gómez López, María de los Angeles (Electrical, Electronic & Computational Engineering Dept.-FACET-Univ. Nacional de Tucumán)</i>	
17:45-18:00	ThE14.2
Physiological Significance of Pressure-Volume Relationship: A Load-Independent Index and a Determinant of Pump Function 3553-3553	
<i>Sugimachi, Masaru* (Natl Cardio Center Research Inst); Sunagawa, Kenji (Kyushu Univ.); Uemura, Kazunori (Natl. Cardio. Center Research Inst); Shishido, Toshiaki (Natl. Cardiovascular Center Research Inst.)</i>	

18:00-18:15	ThE14.3
The Pressure-Volume Relationship of the Heart: Past, Present and Future 3554-3555	
<i>Sunagawa, Kenji* (Kyushu Univ.)</i>	
18:15-18:30	ThE14.4
Accuracy Considerations in Catheter Based Estimation of Left Ventricular Volume 3556-3558	
<i>Pearce, John Anthony* (Univ. of Texas at Austin); Porterfield, John (Univ. of Texas – Austin); Larson, Erik (The Univ. of Texas at Austin); Valvano, Jonathan (Univ. of Texas at Austin); Feldman, Marc D. (Univ. of Texas Health Science Center at San Antonio)</i>	

Friday, 3 September 2010

FrA01: 09:15-10:45	Libertador A
1.2.2 Cardiorespiratory Signal Processing and Modeling for Clinical Patient Monitoring: Non-Invasive Applications (Oral Session)	

09:15-09:30	FrA01.1
Robust Pulse Wave Velocity Estimation by Application of System Identification to Proximal and Distal Arterial Waveforms 3559-3562	
<i>Xu, Da (Michigan State Univ.); Ryan, Kathy (US Army Inst. of Surgical Research); Rickards, Caroline (Univ. of Texas at San Antonio); Zhang, Guanqun (Michigan State Univ.); Convertino, Victor (U.S. Army Inst. of Surgical Research); Mukkamala, Ramakrishna* (Michigan State Univ.)</i>	

09:30-09:45	FrA01.2
Psychophysiological Signals Associated with Affective States 3563-3566	
<i>Mauri, Maurizio* (IULM Univ. of Milan); Magagnin, Valentina (Istituto Ortopedico IRCCS Galeazzi); Cipresso, Pietro (Applied Tech. for Neuro-Psychology Lab, Istituto Auxologico Italiano & IULM Univ. of Milan); Mainardi, Luca (Politecnico di Milano); Brown, Emery N (MGH-Harvard Medical School-MIT); Cerutti, Sergio (Politecnico di Milano); Villamira, Marco Alessandro (IULM Univ. of Milan); Barbieri, Riccardo (MGH-Harvard Medical School-MIT)</i>	

09:45-10:00	FrA01.3
A Differential Autoregressive Modeling Approach within a Point Process Framework for Non-Stationary Heartbeat Intervals Analysis 3567-3570	
<i>Chen, Zhe (Harvard Medical School/MIT); Purdon, Patrick L (Massachusetts General Hospital); Brown, Emery N (MGH-Harvard Medical School-MIT); Barbieri, Riccardo* (MGH-Harvard Medical School-MIT)</i>	

10:00-10:15	FrA01.4
Assessing the Severity and Improving the Understanding of Sleep-Related Breathing Disorders in Heart Failure Patients 3571-3574	
<i>Pinna, Gian Domenico* (S. Maugeri Foundation, IRCCS); La Rovere, Maria Teresa (S. Maugeri Foundation, IRCCS); Robbi, Elena (S. Maugeri Foundation, IRCCS); Maestri, Roberto (S. Maugeri Foundation, IRCCS)</i>	

10:15-10:30	FrA01.5
Respiration Effect on Single and Multi Lead ECG Delineation Strategies 3575-3578	
<i>Noriega Alemán, Maikel* (Zaragoza Univ. & CIBER-BBN); Martínez, Juan Pablo (Univ. of Zaragoza); Laguna, Pablo (Zaragoza Univ. & CIBER-BBN); Romero Pérez, Daniel (Zaragoza Univ. & CIBER-BBN); Almeida, Rute (CIBER de Biogeniería, Biomateriales y Nanomedicina)</i>	

10:30-10:45	FrA01.6
Time-Varying Spectral Analysis for Comparison of HRV and PPG Variability During Tilt Table Test 3579-3582	
<i>Gil, Eduardo* (Zaragoza Univ. & CIBER-BBN); Orini, Michele (Univ. of Zaragoza); Bailon, Raquel (Univ. of Zaragoza); Vergara, Jose Maria (Miguel Servet Children Hospital); Mainardi, Luca (Politecnico di Milano); Laguna, Pablo (Zaragoza Univ. & CIBER-BBN)</i>	

FrA02: 09:15-10:45	Libertador B
5.1.5 Targeting the Arterial Wall: Hypertension, Diabetes, Atherosclerotic Plaques, Cryografts and Endothelial Dysfunction (Mini Symposium)	
09:15-09:30	FrA02.1
Non Invasive Vascular Evaluation and Subclinical Atherosclerosis: A New Perspective to Evaluate Cardiovascular Risk	3583-3583
<i>Forcada, Pedro* (Hospital Austral, Buenos Aires, Argentina)</i>	
09:30-09:45	FrA02.2
Arterial Evaluation in Type 2 Diabetes Mellitus	3584-3584
<i>Christen, Alejandra Inés* (Favaloro Foundation Univ. Hospital)</i>	
09:45-10:00	FrA02.3
Response of Human Coronary Arteries at Different Mechanical Conditions	3585-3588
<i>Atienza, Jose* (Technical Univ. of Madrid)</i>	
10:00-10:15	FrA02.4
The Evolution of Tissue Engineered Vascular Grafts: From Research to Clinical Practice	3589-3589
<i>McAllister, Todd* (Cytograft Inc, USA)</i>	
10:15-10:30	FrA02.5
Post-Implant Evaluation of the Anastomotic Biomechanical Coupling between Human Native Arteries and Arterial Cryografts Implanted in Lower-Limb Revascularization Procedures	3590-3590
<i>Bia, Daniel* (School of Medicine, Republic Univ.)</i>	
FrA03: 09:15-10:45	Libertador C
3.11.1 Wearable Systems: From Enabling Technology to Applications (Oral Session)	
09:15-09:30	FrA03.1
High-Density EMG E-Textile Systems for the Control of Active Prostheses	3591-3593
<i>Farina, Dario* (Aalborg Univ.); Lorrain, Thomas (Aalborg Univ.); Negro, Francesco (Aalborg Univ., Aalborg, Denmark); Jiang, Ning (Aalborg Univ.)</i>	
09:30-09:45	FrA03.2
Fire Fighters and Rescuers Monitoring through Wearable Sensors: The ProeTEX Project	3594-3597
<i>Magenes, Giovanni* (Univ. of Pavia); Curone, Davide (Univ. degli Studi di Pavia); Caldani, Laura (Smartex srl); Secco, Emanuele Lindo (Eucentre)</i>	
09:45-10:00	FrA03.3
Towards a Smart Glove: Arousal Recognition Based on Textile Electrodermal Response	3598-3601
<i>Lanata, Antonio (Univ. of Pisa); Valenza, Gaetano (InterDept.al Research Center "E. Piaggio", Univ. of Pisa); Scilingo, Enzo Pasquale (Univ. of Pisa); De Rossi, Danilo* (Univ. of Pisa)</i>	
10:00-10:15	FrA03.4
PSYCHE: Personalised Monitoring Systems for Care in Mental Health	3602-3605
<i>Paradiso, Rita* (Smartex srl); Bianchi, Anna Maria (Politecnico di Milano); Lau, King Tong (Dublin City Univ.); Scilingo, Enzo Pasquale (Univ. of Pisa)</i>	
10:15-10:30	FrA03.5
Automatic Detection of Sleep Macrostructure Based on a Sensorized T-Shirt	3606-3609
<i>Bianchi, Anna Maria* (Politecnico di Milano); Mendez, Martin Oswaldo (Univ. Autonoma de San Luis Potosi)</i>	
FrA04: 09:15-10:45	Retiro A
2.4.3 X-Ray CT (Oral Session)	
09:15-09:30	FrA04.1
Improved Disparity Based Image Processing in 3D CT Subtractive Angiography	3610-3613
<i>Jan, Jiri* (Brno Univ. of Tech.); Malinsky, Milos (Brno Univ. of Tech.); Peter, Roman (Brno Univ. of Tech.); Ourednicek, Petr (Philips Nederland)</i>	

09:30-09:45 FrA04.2
ECG Gated Reconstruction for 3-D Rotational Coronary Angiography 3614-3617
Hu, Yining (Southeast Univ.); Xie, Lizhe (Southeast Univ.); Nunes, Jean Claude (Univ. de Rennes);
 Bellanger, Jean-Jacques (LTSI-INSERM U642); Toumoulin, Christine (Univ. de Rennes I)*

09:45-10:00 FrA04.3
Modeling of the Lung Nodules for Detection in LDCT Scans 3618-3621
*Farag, Amal (Univ. of Louisville); Elhabian, Shireen (Univ. of Louisville); Graham, James (Univ. of Louisville);
 Farag, Aly A.* (Univ. of Louisville); Elshazly, Salwa (Univ. of Louisville); Falk, Robert (Jewish Hospital);
 Mahdi, Hani (Ain Shams Univ.); Abdelmunim, Hossam (Ain Shams Univ.); Al-Ghaafary, Sahar (Ain Shams Univ.)*

10:00-10:15 FrA04.4
Supersampling in PET. a Concept for Improvement of the Resolution of Positron Emission Tomography .. 3622-3625
Assentoft, Joergen Erik (Aalborg Univ. Hospital); Andreassen, Arne (Inst. of Anatomy, Univ. of Aarhus,
 Denmark); Thomsen, Jesper Skovhus (Univ. of Aarhus)*

10:15-10:30 FrA04.5
**New Reconstruction Algorithm, Distance Dependent Exact, with Reduced Statistical
 Alpha Error, Dedicated to Emission Tomography with Large and Long Hole Collimator** 3626-3629
Jeanguillaume, Christian (Univ. d'Angers); Simonnet, Richard (Univ. d'Angers);
 Rakotonirina, Hervé (CHU d'Angers); Loeb, Jean-Jacques (Univ. d'Angers)*

10:30-10:45 FrA04.6
New Principles in Nuclear Medicine Imaging: A Full Aperture Stereoscopic Imaging Technique 3630-3633
Strocovsky, Sergio Gerardo (Comisión Nacional de Energía Atómica); Otero, Dino (Univ. Tecnológica Nacional)*

FrA05: 09:15-10:45	Retiro B
1.5.3 Principal Component Analysis (Oral Session)	

09:15-09:30 FrA05.1
A Real-Time Cardiac Surface Tracking System Using Subspace Clustering 3634-3637
Singh, Vimal (Univ. of Minnesota); Tewfik, Ahmed (Univ. of Minnesota);
 Gowreesunker, B. Vikram (Texas Instruments Inc.)*

09:30-09:45 FrA05.2
**Analysis of Intracranial Pressure Recordings: Comparison of PCA and Signal Averaging Based
 Filtering Methods and Signal Period Estimation** 3638-3641
Calisto, Andrea (Univ. of Messina); Galeano, Massimiliano (Univ. of Messina); Bramanti, Alessia (Univ. of
 Messina); Angileri, Flavio Filippo (Univ. of Messina); Campobello, Giuseppe (Univ. of Messina);
 Serrano, Salvatore (Univ. of Messina); Azzerboni, Bruno (Univ. of Messina)*

09:45-10:00 FrA05.3
Nonlinear Feature Extraction Using Kernel Principal Component Analysis with Non-Negative Pre-Image ... 3642-3645
Kallas, Maya (Univ. de Technologie de Troyes (France) & Univ. Libanaise (Lebanon)); Honeine, Paul (Univ.
 de Technologie de Troyes); Richard, Cédric (Laboratoire Fizeau (UMR CNRS 6525), Observatoire de la Côte
 d'Azur, Univ. de Nice Sophia-Antipolis, France); Amoud, Hassan (Lebanese Univ.); Francis, Clovis (Laboratoire
 d'analyse des systèmes (LASYS), Univ. Libanaise, Faculté de Génie 1, Liban)*

10:00-10:15 FrA05.4
**Optimum Principal Components for Spatial Filtering of EEG to
 Detect Imaginary Movement by Coherence** 3646-3649
*Zanotelli, Tiago (Univ. Federal de Minas Gerais); Tierra-Criollo, Carlos Julio (Univ. Federal de Minas Gerais);
 Santos Filho, Sady Antonio* (Univ. Federal de Minas Gerais)*

10:15-10:30 FrA05.5
Gait Initiation Evaluation after Deep Brain Stimulation for Parkinson's Disease: A 7-Year Follow-Up 3650-3653
Muniz, Adriane Mara de Souza (Physical Education Collage of Brazilian Army); Liu, Wen (Univ. of Kansas
 Medical Center); Liu, Hongzeng (Univ. of Missouri-Kansas City); Lyons, Kelly E. (Univ. of Kansas Medical
 Center); Pahwa, Rajesh (Univ. of Kansas Medical Center); Nadal, Jurandir (Federal Univ. of Rio de Janeiro)*

10:30-10:45

FrA05.6

Acoustical Detection of Venous Stenosis in Hemodialysis Patients Using Principal Component Analysis .. 3654-3657

Munguia M., Marco* (Natl. Univ. of Engineering); Vásquez, Pablo (Lund Univ.);
Mattsson, Elisabeth (Skane Univ. Hospital); Mandersson, Bengt (Lund Univ.)

FrA06: 09:15-10:45

Retiro C

1.4.1 Signal Pattern Classification I (Oral Session)

09:15-09:30

FrA06.1

Non-Negative Blind Source Separation Techniques for Tumor Tissue Typing Using HR-MAS Signals 3658-3661

Croitor Sava, Anca* (Katholieke Univ. Leuven, ESAT-SCD-Biomed); Sima, Diana (Katholieke Univ. Leuven);
Martinez-Bisbal, M Carmen (Univ. de Valencia); Celda, Bernardo (Univ. de Valencia
); Van Huffel, Sabine (Katholieke Univ. Leuven)

09:30-09:45

FrA06.2

Acoustical Screening for Obstructive Sleep Apnea During Wakefulness 3662-3665

Montazeripouragha, Amanallah* (Univ. of Manitoba); Moussavi, Zahra (Univ. of Manitoba)

09:45-10:00

FrA06.3

Unsupervised Classification of Respiratory Sound Signal into Snore/No-Snore Classes 3666-3669

Azarbarzin, Ali* (The Univ. of Manitoba); Moussavi, Zahra (Univ. of Manitoba)

10:00-10:15

FrA06.4

Acoustic Mapping of the Lung Based on Source Localization of Adventitious Respiratory Sound Components 3670-3673

Sen, Ipek (Bogazici Univ.); Saraclar, Murat (Bogazici Univ.); Kahya, Yasemin P.* (Bogazici Univ.)

10:15-10:30

FrA06.5

Abnormal Pattern Detection in Wireless Capsule Endoscopy Images Using Nonlinear Analysis in RGB Color Space 3674-3677

Charisis, Vasileios* (Aristotle Univ. of Thessaloniki); Hadjileontiadis, Leontios (Aristotle Univ. of Thessaloniki); Liatsos, Christos (Athens Univ.); Mavrogiannis, Christos (Athens Univ.);
Sergiadis, George (Aristotle Univ. of Thessaloniki)

10:30-10:45

FrA06.6

Classification of Elderly As Fallers and Non-Fallers Using Velocity of Centre of Pressure Displacement 3678-3681

Hewson, David J* (Univ. de technologie de Troyes); Singh, Neeraj Kumar (INRIA Lorraine);
Snoussi, Hichem (UTT); Duchêne, Jacques (UTT)

FrA07: 09:15-10:45

Martin Fierro 1

8.1.2 Rehabilitation Robotics III (Oral Session)

09:15-09:30

FrA07.1

Graph-Based Methodology for the Kinematic Synthesis of Wearable Assistive Robots for the Lower Limbs 3682-3685

Sergi, Fabrizio* (Campus bio-Medico Univ.); Accoto, Dino (Campus Bio-Medico Univ.);
Tagliamonte, Nevio Luigi (Univ. Campus Bio-Medico di Roma); Carpino, Giorgio (Campus Bio-Medico Univ.);
Guglielmelli, Eugenio (Campus Bio-Medico Univ.)

09:30-09:45

FrA07.2

RUPERT Closed Loop Control Design 3686-3689

Zhang, Hang (Arizona State Univ.); Balasubramanian, Sivakumar (Imperial College London);
Wei, Ruihua (Tongji Univ.); Austin, Hiroko (Arizona State Univ.); Buchanan, Sharon (Arizona State Univ.);
Herman, Richard (Banner Good Samaritan Medical Center); He, Jiping* (Arizona State Univ.)

09:45-10:00

FrA07.3

Gesture Therapy: A Vision-Based System for Upper Extremity Stroke Rehabilitation 3690-3693

Sucar, Luis Enrique (INAOE); Luis, Roger (INAOE); Leder, Ron* (Univ. Nacional Autonoma de Mexico);
Hernandez, Jorge (Inst. Nacional de Neurologia Y Neurocirugia Manuel Velasco Suarez);
Sanchez, Israel (INNN)

10:00-10:15 FrA07.4
A Portable Rehabilitation Device for the Hand **3694-3697**
Iqbal, Jamshed (Univ. of Genoa – Italian Inst. of Tech. (IIT)); Tsagarakis, Nikos (Italian Inst. of Tech.); Fiorilla, Angelo Emanuele (Italian Inst. of Tech. (IIT), Univ. of Genoa); Caldwell, Darwin G. (Italian Inst. of Tech.)*

10:15-10:30 FrA07.5
Stabilizing Unstable Object by Means of Kinematic Redundancy **3698-3702**
Masia, Lorenzo (Istituto Italiano di Tecnologia); Squeri, Valentina (Univ. of Genova); Saha, Devjani (Rehab. Inst. of Chicago); Burdet, Etienne (Imperial College London); Sandini, Giulio (Univ. of Genoa); Morasso, Pietro (Univ. of Genova)*

10:30-10:45 FrA07.6
A Prototype of a Novel Energy Efficient Variable Stiffness Actuator **3703-3706**
Visser, Ludo C. (Univ. of Twente); Carloni, Raffaella (Univ. of Twente); Klijnstra, Feite (Univ. of Twente); Stramigioli, Stefano (Univ. of Twente)*

FrA08: 09:15-10:45 2.8.1 Multimodal Image Fusion (Oral Session)	Martin Fierro 2
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09:15-09:30 FrA08.1
3D Handheld Laser Scanner Based Approach for Automatic Identification and Localization of EEG Sensors **3707-3710**
Koessler, Laurent (Centre de Recherche en Automatique de Nancy (CRAN), Nancy-Univ., CNRS & Centre Hospitalier Univ. de Nancy, Servic); Cecchin, Thierry (Nancy-Univ.); Ternisien, Eric (Centre de Recherche en Automatique de Nancy (CRAN), Nancy-Univ., CNRS); Maillard, Louis (Centre de Recherche en Automatique de Nancy (CRAN), Nancy-Univ., CNRS & Centre Hospitalier Univ. de Nancy, Servic)*

09:30-09:45 FrA08.2
A Non Rigid Registration and Deformation Algorithm for Ultrasound and MR Images to Guide Prostate Cancer Therapies **3711-3714**
Makni, Nasr (Inserm U703, Lagis CNRS FRE 3303); Toumi, Ichrak (Inserm U703); Puech, Philippe (INSERM U703); Issa, Mohamed (Inserm U703); Mordon, Serge (INSERM U703, Univ Lille Nord de France, Lille Univ. Hospital); Betrouni, Nacim (INSERM)*

09:45-10:00 FrA08.3
2D/3D Registration for X-Ray Guided Bronchoscopy Using Distance Map Classification **3715-3718**
Xu, Di (Johns Hopkins Univ. School of Medicine); Xu, Sheng (Philips Research North America); Herzka, Daniel (Johns Hopkins Univ. School of Medicine); Yung, Rex (Pulmonary Oncology, Johns Hopkins School of Medicine); Berghtholdt, Martin (Philips Research Europe, Hamburg); Gutiérrez, Luis F. (Philips Healthcare); McVeigh, Elliot (Johns Hopkins Univ.)*

10:00-10:15 FrA08.4
Registration Method for Displaying Electromagnetically Tracked Devices in Fluoroscopic Images **3719-3722**
Bisplinghoff, Stefan (RWTH Aachen Univ.); de la Fuente, Matias (RWTH Aachen Univ.); Becker, Michael (Univ. Hospital Aachen, Internal Medicine I); Radermacher, Klaus (RWTH Aachen Univ., Chair of Medical Engineering)*

10:15-10:30 FrA08.5
Analysis of the Relationship between Interictal Electrical Source Imaging and PET Hypometabolism **3723-3726**
Person, Christophe (Nancy-Univ.); Koessler, Laurent (Centre de Recherche en Automatique de Nancy (CRAN), Nancy-Univ., CNRS & Centre Hospitalier Univ. de Nancy, Servic); Louis-Dorr, Valerie (Nancy-Univ.); Wolf, Didier (Nancy-Univ.); Maillard, Louis (Centre de Recherche en Automatique de Nancy (CRAN), Nancy-Univ., CNRS & Centre Hospitalier Univ. de Nancy, Servic); Marie, Pierre-Yves (Centre Hospitalier Univ. de Nancy, Service de Médecine Nucléaire)*

10:30-10:45 FrA08.6
Medical Image Fusion Using the Convolution of Meridian Distributions **3727-3730**
Agrawal, Mayank (Univ. of Bristol, UK); Tsakalides, Panagiotis (Univ. of Crete & FORTH-ICS); Achim, Alin (Univ. of Bristol)*

09:15-09:30		FrA09.1
	Nanotechnology Based Targeted Drug Delivery	3731-3732
	<i>Ruggiero, Carmelina* (Univ. of Genova); Pastorino, Laura (Univ. of Genova); Herrera Sandoval, Oscar Leonardo (Univ. of Genoa & Central Univ.)</i>	
09:30-09:45		FrA09.2
	Effect of Sustained Release of Bone Morphogenetic Protein on Osteogenic Expression of Mesenchymal Stem Cells	3733-3735
	<i>Jabbari, Esmaiel* (Univ. of South Carolina)</i>	
09:45-10:00		FrA09.3
	Effect of Fluorescent Tags on Translocation through Nanochannels	3736-3738
	<i>Goyal, Swati (Univ. of Texas at Arlington); Kim, Young-Tae (Univ. of Texas at Arlington); Iqbal, Samir M* (Univ. of Texas at Arlington)</i>	
10:00-10:15		FrA09.4
	Self-Assembly and Recrystallization of Bacterial S-Layer Proteins of Bacillus Sphaericus and Bacillus Thuringiensis on Silicone, Mica and Quartz Crystal Supports	3739-3742
	<i>Habibi, Neda (Univ. of Genova); Caneva Soumetz, Federico (Univ. of Genova); Giulianelli, Massimo (Univ. degli studi di Genova); Pastorino, Laura (Univ. of Genova); Herrera Sandoval, Oscar Leonardo (Univ. of Genoa & Central Univ.); Sbrana, Francesca (Univ. of Genova, DIBE); Raiteri, Roberto (Univ. of Genova); Ruggiero, Carmelina* (Univ. of Genova)</i>	
10:15-10:30		FrA09.5
	Is a Single Cell Sensor Possible?	3743-3746
	<i>Halak, Basel* (Newcastle Univ.); Yakovlev, Alex (Newcastle Univ.); O'Neill, Anthony (Newcastle Univ.)</i>	
10:30-10:45		FrA09.6
	Powering Biomedical Devices with Body Motion	3747-3750
	<i>Romero, Edwar* (Michigan Technological Univ.); Warrington, Robert O. (Michigan Technological Univ.); Neuman, Michael (Michigan Technological Univ.)</i>	

09:15-09:30		FrA10.1
	In-Vitro Platform to Study Ultrasound As Source for Wireless Energy Transfer and Communication for Implanted Medical Devices	3751-3754
	<i>Mazzilli, Francesco* (EPFL); Peisino, Michela (EPFL-STI-IMT-LPM); Mitouassiyou, Rostand (HEIG-VD); Cotté, Benjamin (INSERM); Thoppay, Prakash (EPFL); Lafon, Cyril (INSERM); Favre, Patrick (HEIG-VD); Meurville, Eric (EPFL); Dehollain, Catherine (Ecole Polytechnique Federale de Lausanne)</i>	
09:30-09:45		FrA10.2
	Mass Casualty Incident Surveillance and Monitoring Using Identity Aware Video Analytics	3755-3758
	<i>Yu, Xunyi* (Univ. of Massachusetts, Amherst); Ganz, Aura (Univ. of Massachusetts, Amherst)</i>	
09:45-10:00		FrA10.3
	SHIMMER™: An Extensible Platform for Physiological Signal Capture	3759-3762
	<i>Burns, Adrian (Intel); Doheny, Emer (Intel); Greene, Barry R.* (Intel); Foran, Tim (St.James's Hospital); Leahy, Dan (Univ. of Limerick); O'Donovan, Karol (Intel Corp.); McGrath, Michael James (Intel Ireland Ltd)</i>	
10:00-10:15		FrA10.4
	Wireless Medical Sensor Measurements of Fatigue in Patients with Multiple Sclerosis	3763-3767
	<i>Yu, Fei* (The Univ. of Southern Denmark); Bilberg, Arne (The Univ. of Southern Denmark); Stenager, Egon (The Univ. of Southern Denmark)</i>	

10:15-10:30	FrA10.5
RMAIS: RFID-Based Medication Adherence Intelligence System	3768-3771
<i>McCall, Corey* (Univ. of Central Florida); Maynes, Branden (Univ. of Central Florida); Zou, Cliff (Univ. of Central Florida); Zhang, Ning (Univ. of Central Florida)</i>	
10:30-10:45	FrA10.6
Wearable Shoe-Based Device for Rehabilitation of Stroke Patients	3772-3775
<i>Edgar, S. Ryan* (Clarkson Univ.); Swyka, Timothy (Clarkson Univ.); Fulk, George (Clarkson Univ.); Sazonov, Edward (Univ. of Alabama)</i>	

FrA11: 09:15-10:45	Poncho
5.1.1 Coronary Blood Flow Dynamics and Measurement (Oral Session)	

09:15-09:30	FrA11.1
Effect of the Valsalva Maneuver on Cardiac-Coronary Interaction Assessed by Wave Intensity Analysis	3776-3779
<i>Rolandj, M. Cristina* (Academic Medical Center, Univ. of Amsterdam)</i>	
09:30-09:45	FrA11.2
Coronary Flow Reserve in Mice: Effects of Age, Coronary Disease, and Vascular Loading	3780-3783
<i>Hartley, Craig J.* (Baylor College of Medicine); Reddy, Anilkumar K. (Baylor College of Medicine); Michael, Lloyd H. (Baylor College of Medicine); Entman, Mark L. (Baylor College of Medicine); Chintalagattu, Vishnu (MD Anderson Cancer Center); Khakoo, Aarif Y. (MD Anderson Cancer Center); Taffet, George E. (Baylor College of Medicine)</i>	
09:45-10:00	FrA11.3
Noninvasive Transthoracic and Transesophageal Doppler Echocardiographic Measurements of Human Coronary Blood Flow Velocity: In Vitro Flow Phantom Validation	3784-3787
<i>Greene, Ernest* (NMHU)</i>	
10:00-10:15	FrA11.4
A Patient-Specific Method for the Evaluation of Wall Shear Stress in Human Coronary Arteries	3788-3791
<i>Salvucci, Fernando* (Univ. Favaloro); Perazzo, Carlos (Favaloro Univ.); Gurfinkel, Enrique (Fundación Favaloro); Armentano, Ricardo Luis (Favaloro Univ.); Barra, Juan (Favaloro Univ.)</i>	
10:15-10:30	FrA11.5
Mechanical Properties of Human Coronary Arteries	3792-3795
<i>Claes, Els (Technical Univ. of Madrid (UPM)); Atienza, Jose* (Technical Univ. of Madrid); Guinea, Gustavo (Technical Univ. of Madrid (UPM)); Rojo, Francisco (Technical Univ. of Madrid (UPM)); Bernal, Jose Manuel (Hospital Marqués de Valdecilla); Revuelta, J.M. (Hospital Marqués de Valdecilla); Elices, Manuel (Technical Univ. of Madrid (UPM))</i>	
10:30-10:45	FrA11.6
Study of the Autonomic Response in Hemodialysis Patients with Different Fluid Overload Levels	3796-3799
<i>Ferrario, Manuela* (Politecnico di Milano); Moissl, Ulrich (Fresenius Medical Care, Deutschland, GmbH); Garzotto, Francesco (Dep. Nephrology Dialysis & Transplantation, San Bortolo Hospital); Signorini, Maria G. (Politecnico di Milano); Cruz, Dinna (Dep. Nephrology Dialysis & Transplantation, San BortoloHospital); Tetta, Ciro (Ulrich.Moissl@fmc-ag.com); Ronco, Claudio (Dep. Nephrology Dialysis & Transplantation, San Bortolo Hospital); Gatti, Emanuele (Fresenius Medical Care Deutschland GmbH); Cerutti, Sergio (Politecnico di Milano)</i>	

FrA12: 09:15-10:45	Rio de Plata
7.1.2 Cell Mechanics/Cell-Material Interfaces/Drug Delivery (Oral Session)	

09:15-09:30	FrA12.1
Poly(N-Isopropylacrylamide) Beads Synthesis with Nanoparticles Embedded for the Implementation of Shrinkable Medical Microrobots for Biomedical Applications	3800-3803
<i>Lapointe, Jacinthe (Ecole Polytechnique de Montreal); Martel, Sylvain* (Ecole Polytechnique de Montreal)</i>	

09:30-09:45	FrA12.2
The Influence of Surface Properties of Plasma-Etched Polydimethylsiloxane (PDMS) on Cell Growth and Morphology 3804-3807	
<i>Pennisi, Cristian Pablo* (Aalborg Univ.); Zachar, Vladimir (Aalborg Univ.); Gurevich, Leonid (Aalborg Univ.); Patriciu, Andrei (Neurodan A/S); Struijk, Johannes (Aalborg Univ.)</i>	
09:45-10:00	FrA12.3
Geometric Order in Proliferating Epithelia: Impact of Rearrangements and Cleavage Plane Orientation 3808-3811	
<i>Naveed, Hammad (Univ. of Illinois at Chicago); Li, Yingzi (Univ. of Illinois at Chicago); Kachalo, Sema (Univ. of Illinois at Chicago); Liang, Jie* (Univ. of Illinois at Chicago)</i>	
10:00-10:15	FrA12.4
Combinations of Hydrostatic Pressure and Shear Stress Influence Morphology and Adhesion Molecules in Cultured Endothelial Cells 3812-3815	
<i>Nakadate, Hiromichi* (Tokyo Metropolitan Univ.); Minamitani, Haruyuki (Keio Univ.); Aomura, Shigeru (Tokyo Metropolitan Univ.)</i>	
10:15-10:30	FrA12.5
Modeling the Effects of Nanoparticles on Neuronal Cells: From Ionic Channels to Network Dynamics ... 3816-3819	
<i>Busse, Michael* (Saarland Univ. Hospital); Kraegeloh, Annette (Leibniz – Inst. for New Materials, Saarbruecken, Germany); Stevens, David (Dept. of Physiology at Saarland Univ. Hospital, Homburg, Germany); Cavellius, Christian (Leibniz – Inst. for New Materials, Saarbruecken, Germany.); Rettig, Jens (Dept. of Physiology at Saarland Univ. Hospital, Homburg, Germany); Arzt, Eduard (Leibniz – Inst. for New Materials, Saarbruecken, Germany); Strauss, Daniel J. (Comp. Diagn. & Biocyb. Unit)</i>	
10:30-10:45	FrA12.6
The Development of a New Computational Model for the Electromechanics of the Human Ventricular Myocyte 3820-3823	
<i>Oliveira, Bernardo Lino de* (Federal Univ. of Juiz de Fora); Sundnes, Joakim (Simula Research Laboratory); Weber dos Santos, Rodrigo (Univ. Federal de Juiz de Fora)</i>	

FrA13: 09:15-10:45	Gomez Losada
11.1.4 Standards (Mini Symposium)	

09:15-09:30	FrA13.1
Developing IEEE Medical Device Standards: A Case Study, Wearable Cuffless Blood Pressure Measuring Devices 3824-3824	
<i>Carey, Carole C.* (U.S. Food & Drug Administration); Zhang, Yuan-Ting (The Chinese Univ. of Hong Kong)</i>	

FrA14: 09:15-10:45	Auditorium
6.1.7 Penetrating and Non-Penetrating Micro-Electrode Arrays in the Treatment of Human Pathology (Mini Symposium)	

09:15-09:30	FrA14.1
Mining Terabytes of Submillimeter-Resolution ECoG Datasets for Neurophysiologic Biomarkers 3825-3826	
<i>Viventi, Jonathan (Univ. of Pennsylvania); Blanco, Justin (Univ. of Pennsylvania); Litt, Brian* (Univ. of Pennsylvania)</i>	

09:30-09:45	FrA14.2
Classification of spoken words using surface local field potentials 3827-3830	
<i>Greger, Bradley* (Univ. of Utah); Kellis, Spencer (Univ. of Utah); Miller, Kai J (Univ. of Washington); Thomson, Kyle (Univ. of Utah); Brown, Richard (Univ. of Utah); House, Paul (Univ. of Utah)</i>	

09:45-10:00	FrA14.3
Activity Patterns in Ensembles of Single Neurons During Interictal, Pre-Ictal and Ictal States in Human Focal Epilepsy *	
<i>Truccolo, Wilson* (Brown Univ.); Donoghue, Jacob (Dept. of Neurology, Massachusetts General Hospital); Keller, Corey J. (Dept. of Neurology, Massachusetts General Hospital); Cole, Andrew J. (Dept. of Neurology, Massachusetts General Hospital, Harvard Medical School); Eskandar, Emad (Massachusetts General Hospital); Madsen, Joseph (Children's Hospital Boston, Harvard Medical School); Anderson, William S. (Dept. of Neurosurgery, Brigham & Women's Hospital, Boston, MA); Hochberg, Leigh (VA / Brown U. / Harvard Med. School); Cash, Sydney (Massachusetts General Hospital)</i>	

10.1.2 Personal Health Systems (Poster Session)

10:45-12:15

FrBPo01.1

Performance Assessment on Different Measurement Positions for Monitoring HR/RR During Sleep 3831-3834

Liu, Zhaoqin* (Univ. of Aizu); Jiang, Linlin (Univ. of Aizu); Chen, Wenxi (Univ. of Aizu);
Nemoto, Tetsu (Univ. of Kanazawa)

10:45-12:15

FrBPo01.2

Multimodal Localization in the Context of a Medical Telemonitoring System 3835-3838

Guettari, Toufik (it-sudparis); Paulo, Cavalcante (it-sudparis); Boudy, Jerome (it-sudparis); Medjahed, Hamid
(esigete); Istrate, Dan* (ESIGETEL); Jean-Louis, Baldinger (it-sudparis); Imad, Belfeki (it-sudparis);
Opitz, Martin (AKG Acoustics GmbH); Maly-Parsy, Matthias (AKG)

10:45-12:15

FrBPo01.3

SAR Evaluations of Mobile Phone Close to a Pacemaker Implanted in Human Body 3839-3842

Watanabe, Ryohei* (Chiba Univ.); Saito, Kazuyuki (Chiba Univ.); Watanabe, Soichi (Nat'l Inst of Information &
Comms Tech); Takahashi, Masaharu (Chiba Univ.); Ito, Koichi (Chiba Univ.)

10:45-12:15

FrBPo01.4

A System to Promote Self Behaviors of Patients with Coronary Heart Disease 3843-3846

Ottaviano, Manuel* (Technical Univ. of Madrid); Vera-Muñoz, Cecilia (Univ. Politécnica de Madrid (UPM));
Salvi, Dario (Technical Univ. of Madrid); Arredondo, María Teresa (Technical Univ. of Madrid)

10:45-12:15

FrBPo01.5

Implementation of an iPhone as a Wireless Accelerometer for Quantifying Gait Characteristics 3847-3851

LeMoyne, Robert* (UCLA); Mastroianni, Timothy (Cognition Engineering); Cozza, Michael (Converge Robotics
Corp.); Coroian, Cristian (UCLA)

10:45-12:15

FrBPo01.6

From Pain to Stress Evaluation Using Heart Rate Variability Analysis:**Development of an Evaluation Platform 3852-3855**

De jonckheere, Julien (CHRU de Lille); Logier, Regis* (CHRU de Lille); Jounwaz, Reza (Inserm, Univ. of Lille 2,
Lille Univ. Hospital); Jeanne, Mathieu (CHRU de Lille)

10:45-12:15

FrBPo01.7

Promoting Interaction Amongst Autistic Adolescents Using Robots 3856-3859

Costa, Sandra* (Univ. of Minho); Santos, Cristina (Univ. of Minho); Soares, Filomena (Univ. of Minho);
Ferreira, Manuel Joao (Univ. of Minho); Moreira, Fatima (APPACDM)

10:45-12:15

FrBPo01.8

Processing of Wearable Sensor Data on the Cloud – A Step towards Scaling of**Continuous Monitoring of Health and Well-Being 3860-3863**

Biswas, Jit (Inst. for Infocomm Research); Maniyeri, Jayachandran (Inst. for Infocomm Research);
Palit, Henry Novianus (A*STAR Inst. of High Performance Computing); Foo, Yong Siang (Inst. of High
Performance Computing); Gopalakrishnan, Kavitha (Inst. For Infocomm Research); Lau, Lik Seng (A*Star
Singapore); Shue, Louis (Inst. for Infocomm Research); Li, Xiaorong (Inst. of High Performance Computing,
Singapore); Phua, Jiliang Eugene* (Inst. for Infocomm Research)

10:45-12:15

FrBPo01.9

A Basic Study for Patch Type Ambulatory 3-Electrode ECG Monitoring System for the Analysis of**Acceleration Signal and the Limb Leads and Augmented Unipolar Limb Leads Signal 3864-3867**

Jang, Yongwon* (Electronics & Telecom Research Inst.); Noh, Hyung Wook (Electronics & Telecommunications
Research Inst.); Lee, InBum (ETRI); Song, Yoonseon (Electronics & Telecom Research Inst);
Shin, Seungchul (ETRI); Lee, Sooyeul (Electronics & Telecom Research Inst)

10:45-12:15

FrBPo01.10

Biomedical Signals Monitoring Based in Mobile Computing 3868-3871

Serigioli, Nilton* (UFABC); Reina Muñoz, Rodrigo (UFABC, Centro de Engenharia e Ciências Sociais)

10:45-12:15 FrBPo01.11
Modeling the Human Body Shape in Bioimpedance Vector Measurements 3872-3874
Kim, Chul-Hyun (Kyung Hee Univ.); Park, Jae Hyeon (Korea Natl. Sport Univ.); Kim, Hyeojin (Soonchunhyang Univ.); Chung, Sochung (Konkuk Univ. Hospital); Park, Seung-Hun (Kyung Hee Univ.)*

10:45-12:15 FrBPo01.12
iWander: An Android Application for Dementia Patients 3875-3878
Sposaro, Frank (Florida State Univ.); Danielson, Justin (Florida State Univ.); Tyson, Gary (Florida State Univ.)*

FrBPo02: 10:45-12:15	Catalinas/Golden Horn
10.1.3 Health Information System Integration and Electronic Health Records II (Poster Session)	

10:45-12:15 FrBPo02.1
Multi-I/O – A Middleware Multi Input and Output for Access Devices: A Case Study Applied the Biomedical Devices 3879-3882
Teixeira Lacerda, João Marcos (Univ. Federal do Rio Grande do Norte); Guerreiro, Ana Maria G. (Federal Univ. of Rio Grande do Norte); Valentim, Ricardo Alexsandro de Medeiros (Federal Univ of Rio Grande do Norte); Bezerra, Heitor U. (Federal Univ. of Rio Grande do Norte); Brandão, Gláucio Bezerra (Federal Univ. of Rio Grande do Norte); Ribeiro, Anna Giselle (Univ. Federal do Rio Grande do Norte); Maia, Cicilia (UERN & FMC); Araújo, Bruno G. de (IFRN); Heliana Bezerra, Soares (UFRN)*

10:45-12:15 FrBPo02.2
Differences in the Laboratory Parameters of Obese and Healthy Hungarian Children and Their Use in Automatic Classification 3883-3886
Ferenci, Tamas (Budapest Univ. of Tech. & Economics); Kovacs, Levente (Budapest Univ of Tech & Economics); Almássy, Zsuzsanna (Dept. of Pediatrics, Heim Pál Children's Hospital, Budapest, Hungary); Szilagyi, Laszlo (Budapest Univ of Tech & Economics); Benyo, Balazs Istvan (Szechenyi Istvan Univ.); Benyo, Zoltan (Budapest Univ of Tech & Economics)*

10:45-12:15 FrBPo02.3
Statewide Validation of a Patient Admissions Prediction Tool 3887-3890
Boyle, Justin (CSIRO ICT Centre); Le Padellec, Remy (Univ. of South Brittany, France); Ireland, Derek (CSIRO ICT Centre)*

10:45-12:15 FrBPo02.4
Embedding Patients Confidential Data in ECG Signal for Healthcare Information Systems 3891-3894
Ibaida, Ayman (RMIT Univ.); Khalil, Ibrahim (RMIT Univ.); Al-Shammary, Dhiah (RMIT Univ.)*

10:45-12:15 FrBPo02.5
A Pilot Study to Examine the Relationship of 3D Pain Drawings with Objective Measures in Mobility Impaired People Suffering from Low Back-Pain 3895-3898
Spyridonis, Fotios (Brunel Univ.); Ghinea, Gheorghita (Brunel Univ.)*

10:45-12:15 FrBPo02.6
Custom HL7 V3 Message Provider using Web Services Security Features 3899-3902
Voos, Javier Alfredo (U.T.N. Facultad Regional Córdoba); Riva, Guillermo Gaston (UTN – FRC (Univ. Tecnológica Nacional – Facultad Regional Cordoba)); Zerbini, Carlos Alberto (Univ. Tecnológica Nacional, Grupo de Ingenieria Clinica); Centeno, Carlos Augusto (Univ. Tecnológica Nacional – Facultad RegionalCordoba); Gonzalez, Eduardo (UTN – FRC (Grupo Ingenieria Clinica, Univ. Tecnológica Nacional – Facultad Regional Cordoba))*

10:45-12:15 FrBPo02.7
Web-Based Healthcare Hand Drawing Management System 3903-3906
Hsieh, Sheau-Ling (Natl. Chiao Tung Univ.); Weng, Yung-Ching (Natl. Taiwan Univ.); Chen, Chi-Huang (Natl. Taiwan Univ.); Hsu, Kai-Ping (Natl. Taiwan Univ.); Lin, Jeng-Wei (Tunghai Univ.); Lai, Feipei (Natl. Taiwan Univ.)*

10:45-12:15 FrBPo02.8
Secondary Use of EHR Data for Correlated Comorbidity Prevalence Estimate 3907-3910
Stakic, Srdjan (Advanced Systems Guild LLC)*

10:45-12:15 FrBPo02.9
Standardization Proposal to Pharmaceutical Compounded Forms Elaboration – Information System 3911-3914
Moro, Claudia (PUCPR – Pontifical Catholic Univ. of Parana); Okuyama, Sybelle (PUCPR)*

10:45-12:15	FrBPo02.10
A New Paradigm for Telehealth Implementation 3915-3918	
<i>Dilmaghani, Reza* (King's College London, Univ. of London)</i>	
10:45-12:15	FrBPo02.11
Building an Information Security Strategy for EHR: Guidelines for Assessing the Current Situation 3919-3922	
<i>Mohammad, Yara* (Brunel Univ.); Stergioulas, Lampros (Brunel Univ.)</i>	
FrBPo03: 10:45-12:15	Catalinas/Golden Horn
8.7.2 Biomechanics (Poster Session)	
10:45-12:15	FrBPo03.1
Young's Modulus Measurement of the Porcine Ligamentum Flavum for Evaluating the Deformation During Epidural Insertion 3923-3925	
<i>Naemura, Kiyoshi* (Tokyo Univ. of Tech.)</i>	
10:45-12:15	FrBPo03.2
Finite Element Model of a Greater Trochanteric Reattachment System 3926-3929	
<i>Bourgeois, Yan* (École de Technologie Supérieure; Hôpital du Sacré-Coeur); Petit, Yvan (École de Technologie Supérieure); Laflamme, Yves (Hôpital du Sacré-Coeur)</i>	
10:45-12:15	FrBPo03.3
Finite Element Analysis of an Acetabular Trial Implant 3930-3933	
<i>Levasseur, Annie (Imaging & Orthopaedic Research Laboratort); Petit, Yvan* (École de Technologie Supérieure); Dansereau, Mathieu (École de technologie supérieure); Fernandes, Julio (Univ. of Montréal)</i>	
10:45-12:15	FrBPo03.4
The Shape of the Acetabular Cartilage Surface and Its Role in Hip Joint Contact Stress 3934-3937	
<i>Gu, Dong-Yun* (Shanghai Ninth People's Hospital); Dai, Kerong (Shanghai Second Medical Univ.); Chen, Yazhu (Shanghai jiaotong Univ.); Hu, Fei (Shanghai Jiaotong Univ.)</i>	
10:45-12:15	FrBPo03.5
In Vitro Kinematic Measurements of the Patellar Tendon in Two Different Types of Posterior-Stabilized Total Knee Arthroplasties 3938-3941	
<i>Zhu, Zhonglin (Tsinghua Univ.); Ding, Hui (Tsinghua Univ.); Dang, Xiao (Tsinghua Univ.); Tang, Jing (Beijing Ji Shui Tan Hospital the 4th Medical College of Peking Univ.); Zhou, Yixin (Beijing Ji Shui Tan Hospital the 4th Medical College of Peking Univ.); Wang, Guangzhi* (Tsinghua Univ.)</i>	
10:45-12:15	FrBPo03.6
Developing a 6-DOF Robot to Investigate Multi-Axis ACL Injuries under Valgus Loading Coupled with Tibia Internal Rotation 3942-3945	
<i>Ren, Yupeng (Rehab. Inst. of Chicago); Jacobs, Benjamin J. (Northwestern Univ.); Zhang, Liqun* (Northwestern Univ.)</i>	
10:45-12:15	FrBPo03.7
Angle Estimation of Human Femora in a Three-Dimensional Virtual Environment 3946-3949	
<i>Casciaro, Mariano Ezequiel* (Univ. Favaloro); Ritacco, Lucas E (Hospital Italiano); Milano, Federico (Univ. de Buenos Aires, Univ. Tecnológica Nacional); Risk, Marcelo (Univ. de Buenos Aires); Craiem, Damian (Favaloro Univ.)</i>	
10:45-12:15	FrBPo03.8
Muscular Activity During Dynamic Squats in Patients with ACL Reconstruction 3950-3953	
<i>Braidot, Ariel Andrés* (Univ. Nacional de Entre Ríos, Facultad de Ingeniería); Ceaglio, Sebastián Hipólito (Facultad de Ingeniería, Univ. Nacional de Entre Ríos); Alberto, Federico Matías (Univ. Nacional de Entre Ríos); Catalfamo, Paola Andrea Lucia (Univ. Nacional de Entre Ríos, Facultad de Ingeniería)</i>	
10:45-12:15	FrBPo03.9
Evaluation of Fall and Fall Recovery in a Simulated Seismic Environment: A Pilot Study 3954-3957	
<i>Abu-Faraj, Ziad* (American Univ. of Science & Tech.); Akar, Hassan (American Univ. of Science & Tech.); Assaf, Elie (American Univ. of Science & Tech.); Al-Qadiri, Mohamad (American Univ. of Science & Tech.); Youssef, Elssy (American Univ. of Science & Tech.)</i>	

10:45-12:15	FrBPo03.10
A Single Camera Stereographic Imaging System for Tracking Upper Limb Motions	3958-3961
<i>Eastwood-Sutherland, Caillin* (Univ. of Tasmania); Gale, Timothy John (Univ. of Tasmania)</i>	
10:45-12:15	FrBPo03.11
Bi-Planar Postural Stability Model: Fitting Model Parameters to Patient Data Automatically	3962-3965
<i>Sovol, Andrew (Marquette Univ.); Bustamante Valles, Karla* (Marquette Univ.); Riedel, Susan (Marquette Univ.); Harris, Gerald (Marquette Univ.)</i>	
FrBPo04: 10:45-12:15	
1.2.14 Signal Processing in Physiological Systems V (Poster Session)	
Catalinas/Golden Horn	
10:45-12:15	FrBPo04.1
sBCI: Fast Detection of Steady-State Visual Evoked Potentials	3966-3969
<i>Valbuena, Diana* (Friedrich-Wilhelm-Bessel Inst.); Volosyak, Ivan (Univ. of Bremen); Graser, Axel (Univ. of Bremen)</i>	
10:45-12:15	FrBPo04.2
Investigation of Muscle Behavior During Different Functional Electrical Stimulation Profiles Using Mechanomyography	3970-3973
<i>Scheeren, Eduardo Mendonça* (Federal Technological Univ. of Paraná); Nogueira-Neto, Guilherme (State Univ. of Campinas); Krueger-Beck, Eddy (Federal Technological Univ. of Paraná); Button, Vera Lúcia da Silveira Nantes (State Univ. of Campinas); Nohama, Percy (Univ. Tecnológica Federal do Paraná)</i>	
10:45-12:15	FrBPo04.3
A Fuzzy Logic-Based System for Anaesthesia Monitoring	3974-3977
<i>Mirza, Mansoor (Auckland Univ. of Tech.); GholamHosseini, Hamid* (Auckland Univ. of Tech.); Harrison, Michael (Univ. of Auckland)</i>	
10:45-12:15	FrBPo04.4
Application of Crisp and Fuzzy Clustering Algorithms for Identification of Hidden Patterns from Plethysmographic Observations on the Radial Pulse	3978-3981
<i>Karamchandani, Sunil* (IIT Bombay); HD, Mustafa (IIT Bombay); Desai, Uday B (IIT Bombay); Merchant, Shabbir (IIT Bombay); Jindal, G.D. (BARC, Mumbai)</i>	
10:45-12:15	FrBPo04.5
Characterization of Bone Tissue Using Microstrip Antennas	3982-3985
<i>Domingues Barros, Jannayna* (Federal Univ. of Rio Grande do Norte); Oliveira Júnior, José Josemar (Federal Univ. of Rio Grande do Norte); Gonçalves da Silva, Sandro (Federal Univ. of Rio Grande do Norte)</i>	
10:45-12:15	FrBPo04.6
Clustering Evoked Potential Signals Using Subspace Methods	3986-3989
<i>Tome, Ana Maria* (Univ. de Aveiro); Teixeira, Ana Rita (Univ. de Aveiro); Figueiredo, Nuno (Univ. de Aveiro); Georgieva, Petia (Univ. de Aveiro); Santos, Isabel (Univ. de Aveiro); Lang, Elmar W. (Univ. of Regensburg)</i>	
10:45-12:15	FrBPo04.7
An Energy Ratio Based Measure for F-Wave Backfiring Rate Estimation	3990-3993
<i>Kong, Xuan* (NEUROMetrix); Gozani, Shai (Neurometrix Inc)</i>	
10:45-12:15	FrBPo04.8
Evaluation of the Sleep Quality Based on Bed Sensor Signals: Time-Variant Analysis	3994-3997
<i>Mendez, Martin Oswaldo* (Univ. Autonoma de San Luis Potosi); Migliorini, Matteo (Politecnico di Milano); Kortelainen, Juha Matti (VTT); Nisticò, Domenico (Politecnico di Milano); Arce-Santana, Edgar (Facultad de Ciencias); Cerutti, Sergio (Politecnico di Milano); Bianchi, Anna Maria (Politecnico di Milano)</i>	
FrBPo05: 10:45-12:15	
1.4.12 EEG II (Poster Session)	
Catalinas/Golden Horn	
10:45-12:15	FrBPo05.1
Feature Analysis of Epileptic EEG Using Nonlinear Prediction Method	3998-4001
<i>Meng, Qingfang* (Shandong Univ., PRChina)</i>	

10:45-12:15	FrBPo05.2
Quantifying Electrode Position Effects in EEG Data with Lempel-Ziv Complexity	4002-4005
<i>Costa, Ernane Jose Xavier* (Univ. of São Paulo); Tech, Adriano Rogerio Bruno (Univ. of São Paulo); Céspedes Arce, Aldo Ivan (USP); Sousa Silva, Ana Carolina (Univ. de São Paulo)</i>	
10:45-12:15	FrBPo05.3
Diagnosis of Psychiatric Disorders Using EEG Data and Employing a Statistical Decision Model	4006-4009
<i>Khodayari-Rostamabad, Ahmad* (McMaster Univ.); Reilly, James (McMaster Univ.); Hasey, Gary (McMaster Univ.); de Bruin, Hubert (McMaster Univ.); MacCrimmon, Duncan (McMaster Univ.)</i>	
10:45-12:15	FrBPo05.4
Reduction of Irrelevant and Redundant Data from TFRs for EEG Signal Classification	4010-4013
<i>Avendaño-Valencia, Luis David (Univ. Nacional de Colombia); Martínez-Vargas, J.D. (Univ. Nacional de Colombia); Giraldo, Eduardo* (Univ. Tecnológica de Pereira); Castellanos-Dominguez, Germán (Univ. Nacional de Colombia)</i>	
10:45-12:15	FrBPo05.5
Consistent Sparse Representations of EEG ERP and ICA Components Based on Wavelet and Chirplet Dictionaries	4014-4019
<i>Qiu, Jun-Wei (Natl. Chiao Tung Univ.); Zao, John Kar-Kin* (Natl. Chiao Tung Univ.); Wang, Peng-Hua (Natl. Taipei Univ.); Chou, Yu-Hsiang (Natl. Chiao Tung Univ.)</i>	
10:45-12:15	FrBPo05.6
Wavelet Transform and Cross-Correlation As Tools for Seizure Prediction	4020-4023
<i>Botero, Claudia Cristina* (Univ. de São Paulo); Fonoff, Eric Talamoni (Univ. de São Paulo); Godoi, Antônio Carlos (Univ. de São Paulo); Ballester, Gerson (Univ. de São Paulo); Ramírez-Fernández, Francisco Javier (Univ. de São Paulo)</i>	
10:45-12:15	FrBPo05.7
Rat's Hippocampal Field Potentials Feature Extraction of Wake and Sleep Stages in Euclidean Space	4024-4027
<i>dos Santos, Vítor (Laboratório de Automação Hospitalar e Bioengenharia – Univ. Federal do Rio Grande do Norte); Souza, Bryan da Costa* (Univ. Federal do Rio Grande do Norte); Belchior, Hindiael (Edmond & Lily Safra – Intl. Inst. of Neuroscience of Natal); Duarte D. Neto, Adriaio (Univ. Federal do Rio Grande do Norte)</i>	
FrBPo06: 10:45-12:15	Catalinas/Golden Horn
1.9.4 Nonstationary Processing of Biomedical Signals (Poster Session)	
10:45-12:15	FrBPo06.1
Fractional Fourier-Based Filter for Denoising Elastograms	4028-4031
<i>SUBRAMANIAM, SUBA* (KING'S COLLEGE LONDON); Hon, Tsz Kin (King's College of London); Georgakis, Apostolos (KING'S COLLEGE LONDON); Papadakis, George (King's College London)</i>	
10:45-12:15	FrBPo06.2
On Detecting Determinism and Nonlinearity in Microelectrode Recording: Signals Approach Based on Non-Stationary Surrogate Data Methods	4032-4035
<i>Guarin, Diego Luis* (Univ. Tecnológica de Pereira); Orozco, Alvaro (Univ. Tecnológica de Pereira); Delgado, Edilson (Inst. tecnológico Metropolitano); Guijarro, Enrique (Polytechnic Univ. of Valencia)</i>	
10:45-12:15	FrBPo06.3
STFT-Based Denoising of Biomechanical Impact Signals	4036-4039
<i>Hon, Tsz Kin* (King's College of London); Subramaniam, Suba (King's College London); Georgakis, Apostolos (King's College London)</i>	
10:45-12:15	FrBPo06.4
Towards High Accuracy Classification of MER Signals for Target Localization in Parkinson's Disease ..	4040-4043
<i>Pinzon Morales, Ruben Dario* (Univ. Tecnológica de Pereira); Orozco, Alvaro (Univ. Tecnológica de Pereira); Carmona Villada, Hans (Univ. tecnologica de Pereira); Castellanos-Dominguez, Germán (Univ. Nacional de Colombia)</i>	
10:45-12:15	FrBPo06.5
Dynamic Speech Parameterization for Text-Independent Phone Segmentation	4044-4047
<i>Cherniz, Analía Soledad* (Facultad de Ingeniería. Univ. Nacional de Entre Ríos); Torres, María E. (Univ. Nacional de Entre Ríos); Rufiner, Hugo Leonardo (Univ. Nacional de Entre Ríos)</i>	

10:45-12:15 FrBPo06.6
Heart Rate Estimation on a Beat-To-Beat Basis Via Ballistocardiography – A Hybrid Approach 4048-4051
Friedrich, David (Technical Univ. of Aachen (RWTH)); Aubert, Xavier (Philips Research Laboratories Europe, Aachen, GERMANY); Fuehr, Hartmut (Univ. of Tech., Aachen (RWTH)); Brauers, Andreas (Philips Research Europe Laboratories)*

FrBPo07: 10:45-12:15 Catalinas/Golden Horn
2.7.6 Image Segmentation III (Poster Session)

10:45-12:15 FrBPo07.1
Detection of Vertebral Plateaus in Lateral Lumbar Spinal X-Ray Images with Gabor Filters 4052-4055
Alvarez Ribeiro, Eduardo (Univ. of São Paulo); Nogueira-Barbosa, Marcello (Univ. of Sao Paulo); Rangayyan, Raj (Univ. of Calgary); Azevedo-Marques, Paulo Mazzoncini (Univ. of São Paulo)*

10:45-12:15 FrBPo07.2
Biospeckle Image Stack Process Based on Artificial Neural Networks 4056-4059
Meschino, Gustavo Javier (Univ. Nacional de Mar del Plata); Murialdo, Silvia Elena (Univ. Nacional de Mar del Plata); Passoni, Lucía Isabel (Univ. Nacional de Mar del Plata); Rabal, Héctor (CIOP); Trivi, Marcelo (CIOP)*

10:45-12:15 FrBPo07.3
Skull Segmentation in 3D Neonatal MRI Using Hybrid Hopfield Neural Network 4060-4063
Daliri Fallah Abadi, Mahdi (K. N. Toosi Univ. of Tech.); Abrishami Moghaddam, Hamid (K. N. Toosi Univ. of Tech.); Ghadimi, Sona (Univ. de Picardie Jules Verne); Momeni, Maryam (K. N. Toosi Univ. of Tech.); Harirchi, Farshad (K. N. Toosi Univ. of Tech.); Masoumeh, Giti (Tehran Univ. of Medical sciences)*

10:45-12:15 FrBPo07.4
Spherical Vision Cameras in a Semi-Autonomous Wheelchair System 4064-4067
Nguyen, Jordan Son (Univ. of Tehcnology, Sydney); Su, Steven Weidong (Univ. of Tech., Sydney); Nguyen, Hung T. (Univ. of Tech., Sydney)*

10:45-12:15 FrBPo07.5
Multimodal Method for Cell Membrane Extraction in Hepatic Histological Images 4068-4071
Matsushita, Nobumitsu (Shibaura Inst. of Tech.); Takahashi, Masanobu (Shibaura Inst. of Tech.); Nakano, Masayuki (Tokyo Women's Medical Univ.)*

10:45-12:15 FrBPo07.6
Diffusion Tensor Driven Contour Closing for Cell Microinjection Targeting 4072-4075
Becattini, Gabriele (Italian Inst. of Tech.); Mattos, Leonardo (IIT – Italian Inst. of Tech.); Caldwell, Darwin G. (Italian Inst. of Tech.)*

10:45-12:15 FrBPo07.7
Study of Geometrical Uncertainty Stemming from Different Reconstruction Procedures on the Flow Field for a Peripheral Bypass Graft 4076-4079
Gambaruto, Alberto M (CEMAT / Dept Mathematics, Inst. Superior Tecnico, UTL)*

10:45-12:15 FrBPo07.8
Atlas-Based Segmentation of Brain Tumor Images Using a Markov Random Field-Based Tumor Growth Model and Non-Rigid Registration 4080-4083
Bauer, Stefan (Univ. of Bern); Bardyn, Thibaut (Univ. of Bern); Büchler, Philippe (Univ. of Bern); Reyes, Mauricio (MEM Research Center, Univ. Bern)*

FrBPo08: 10:45-12:15 Catalinas/Golden Horn
2.7.9 Image Classification I (Poster Session)

10:45-12:15 FrBPo08.1
A Novel Detection Strategy for Abnormalities in WCE Video Clips 4084-4087
Zhao, Qian (The Chinese Univ. of Hong Kong)*

10:45-12:15 FrBPo08.2
Characterization of Border Structure Using Fractal Dimension in Melanomas 4088-4091
Carbonetto, Sebastian Horacio (Univ. of Buenos Aires); Lew, Sergio Eduardo (Univ. of Buenos Aires)*

10:45-12:15	FrBPo08.3
Radiologist Model for Cardiac Rest Period Determination Based on Fuzzy Rule	4092-4095
<i>Arief, Zainal* (Nara Inst. of Science & Tech.); Sato, Tetsuo (Nara Inst of Science & Tech); Okada, Tomohisa (Kyoto Univ. Graduate School of Medicine); Kuhara, Shigehide (Toshiba Medical Systems Corp., Otawara, Japan); Kanao, Shotaro (Kyoto Univ. Graduate School of Medicine, Kyoto, Japan.); Togashi, Kaori (Kyoto Univ. Graduate School of Medicine, Kyoto, Japan.); Minato, Kotaro (Nara Inst. of Science & Tech.)</i>	
10:45-12:15	FrBPo08.4
Closed Angle Glaucoma Detection in RetCam Images	4096-4099
<i>Cheng, Jun* (Inst. for Infocomm Research, Agency for Science, Tech. & Research); Liu, Jiang (Inst for Infocomm Resrch, A STAR); Lee, Beng Hai (Inst. for Infocomm Research); Wong, Damon (Inst. for Infocomm Research); Yin, Fengshou (Inst. for Infocomm Research); Aung, Tin (Singapore Eye Research Inst.); Baskaran, Mani (Singapore Eye Research Inst.); Shamira, Perera (Singapore Eye Research Inst.); Wong, Tien Yin (Natl. Univ. of Singapore)</i>	
10:45-12:15	FrBPo08.5
Towards Automatic Detection of Age-Related Macular Degeneration in Retinal Fundus Images	4100-4103
<i>Liang, Ziyang (I2R); Wong, Damon* (Inst. for Infocomm Research); Liu, Jiang (Inst for Infocomm Resrch, A STAR); Chan, Kap Luk (Nanyang Technological Univ.); Wong, Tien Yin (Natl. Univ. of Singapore)</i>	
10:45-12:15	FrBPo08.6
Symbolic Learning Supporting Early Diagnosis of Melanoma	4104-4107
<i>Surowka, Grzegorz* (Jagiellonian Univ.)</i>	
10:45-12:15	FrBPo08.7
An Open Data Mining Framework for the Analysis of Medical Images: Application on Obstructive Nephropathy Microscopy Images	4108-4111
<i>Doukas, Charalampos* (Univ. of the Aegean); Goudas, Theodosios (Univ. of Central Greece); Fischer, Simon (Rapid-I GmbH); Mierswa, Ingo (Rapid-I GmbH); Chatzioannou, Aristotelis (Natl. Hellenic Research Foundation); Maglogiannis, Ilias (Univ. of Central Greece)</i>	
10:45-12:15	FrBPo08.8
Context-Based Interpolation of 3-D Medical Images	4112-4115
<i>Alipour, Sahar* (McMaster Univ.); Wu, Xiaolin (McMaster Univ.); Shirani, Shahram (McMaster Univ.)</i>	
FrBPo09: 10:45-12:15	Catalinas/Golden Horn
6.2.6 Analysis of Neural Signals I (Poster Session)	
10:45-12:15	FrBPo09.1
The FitzHugh-Nagumo Model: Firing Modes with Time-Varying Parameters and Parameter Estimation ..	4116-4119
<i>Faghih, Rose T.* (MIT); Savla, Ketan (MIT); Dahleh, munther (MIT); Brown, Emery N (MGH-Harvard Medical School-MIT)</i>	
10:45-12:15	FrBPo09.2
Application of a Null-Beamformer to Source Localisation in MEG Data of Deep Brain Stimulation	4120-4123
<i>Mohseni, Hamid* (Oxford Univ.)</i>	
10:45-12:15	FrBPo09.3
Predicting Lower Limb Muscular Activity During Standing and Squatting Using Spikes of Primary Motor Cortical Neurons in Monkeys	4124-4127
<i>Zhang, Hang* (Arizona State Univ.); Ma, Chaolin (Arizona State Univ.); He, Jiping (Arizona State Univ.)</i>	
10:45-12:15	FrBPo09.4
Estimating Sparse Volterra Models Using Group L1-Regularization	4128-4131
<i>Song, Dong* (Univ. of Southern California); Wang, Haonan (Colorado State Univ.); Berger, Theodore (Univ. of Southern California)</i>	

10:45-12:15 FrBPo09.5
Nonlinear Analysis of Movement-Related Changes in Human Subthalamic Local Field Potentials 4132-4135
*Wei, Chun-Shu** (Natl. Chiao Tung Univ.); *Tsai, Chon-Haw* (China Medical Univ. Hospital); *Chiou, Shang-Ming* (China Medical Univ. Hospital); *Hseu, Yi-Ting* (China Medical Univ. Hospital); *Liu, Ta-Wei* (Natl. Chiao Tung Univ.); *Lai, Hsin-Yi* (Natl. Chiao Tung Univ.); *Chien, Ting-Fang* (Natl. Chiao Tung Univ.); *Kuo, Yi-Hsuan* (Natl. Chiao Tung Univ.); *Zhao, Wan-Ting* (Natl. Hsin-Chu Univ. of Education); *Tang, Yu-Shun* (Natl. Chiao Tung Univ.); *Su, Sheng-Yuan* (Natl. Chiao Tung Univ.); *Chen, You-Yin* (Natl. Chiao-Tung Univ.)

10:45-12:15 FrBPo09.6
Neuronal Functional Connectivity Dynamics in Cortex: An MSC-Based Analysis 4136-4139
*Li, Lin** (Univ. of Florida); *Park, Il* (Univ. of Florida); *Seth, Sohan* (Univ. of Florida); *Sanchez, Justin C.* (Univ. of Florida); *Principe, Jose* (Univ. of Florida)

10:45-12:15 FrBPo09.7
Analysis of Neural Interaction in Motor Cortex During Reach-To-Grasp Task Based on Dynamic Bayesian Networks 4140-4143
*Sang, Dong** (Inst. of Automation, Chinese Academy of Sciences); *Iv, bin* (Inst. of Automation, Chinese Academy of Sciences); *He, Huiguang* (Inst. of Automation, Chinese Academy of Sciences); *He, Jiping* (Arizona State Univ.); *Wang, Feiyue* (Inst. of Automation, Chinese Academy of Sciences)

FrBPo10: 10:45-12:15	Catalinas/Golden Horn
6.3.2 Brain Physiology and Modeling (Poster Session)	

10:45-12:15 FrBPo10.1
System Identification of Local Field Potentials under Deep Brain Stimulation in a Healthy Primate 4144-4147
*Pedoto, Gilda** (Univ. of Sannio); *santaniello, sabato* (Johns Hopkins Univ.); *Montgomery, Erwin* (Univ. of Alabama at Birmingham); *Gale, John* (Cleveland Clinic); *Fiengo, Giovanni* (Univ. of Sannio); *Glielmo, Luigi* (Univ. of Sannio); *Sarma, Sridevi V.* (Johns Hopkins Univ.)

10:45-12:15 FrBPo10.2
Mirrored High Gamma Cortical Activity During Finger Tap Imitation 4148-4151
*Qian, Tianyi** (Tsinghua Univ.); *Hong, Bo* (Tsinghua Univ.); *Zhou, WenJing* (Tsinghua Univ.); *Gao, Shangkai* (Tsinghua Univ.)

10:45-12:15 FrBPo10.3
Point Process Models Show Temporal Dependencies of Basal Ganglia Nuclei under Deep Brain Stimulation 4152-4155
*Saxena, Shreya** (Johns Hopkins Univ.); *Santaniello, Sabato* (Johns Hopkins Univ.); *Montgomery, Erwin* (Univ. of Alabama at Birmingham); *Gale, John* (Cleveland Clinic); *Sarma, Sridevi V.* (Johns Hopkins Univ.)

10:45-12:15 FrBPo10.4
A Biologically Plausible Model for Same/Different Discrimination 4156-4159
Rey, Hernan Gonzalo (Univ. of Buenos Aires); *Gutnisky, Diego* (Janelia Farm – Howard Hughes Medical Inst.); *Zanutto, Silvano** (Inst. de Ingeniería Biomédica FI-UBA; IBYME-CONICET)

10:45-12:15 FrBPo10.5
Real-Time Experiment Interface for Biological Control Applications 4160-4163
Lin, Risa (Georgia Inst. of Tech.); *Bettencourt, Jonathan* (Weill Cornell Medical College); *White, John* (Univ. of Utah); *Christini, David* (Weill Cornell Medical College); *Butera, Robert** (Georgia Inst. of Tech.)

10:45-12:15 FrBPo10.6
A Subthreshold aVLSI Implementation of the Izhikevich Simple Neuron Model 4164-4167
*Rangan, Venkat** (Qualcomm Inc.); *Ghosh, Abhishek* (UCLA); *Aparin, Vladimir* (Qualcomm Inc.); *Cauwenberghs, Gert* (Univ. of California San Diego)

6.4.6 Brain-Computer Interface I (Poster Session)

- 10:45-12:15 FrBPo11.1
RatCar: A Vehicular Neuro-Robotic Platform for a Rat with a Sustaining Structure of the Rat Body under the Vehicle **4168-4171**
Fukayama, Osamu (The Univ. of Tokyo); Suzuki, Takafumi (The Univ. of Tokyo); Mabuchi, Kunihiro (The Univ. of Tokyo)*
- 10:45-12:15 FrBPo11.2
In Search of More Robust Decoding Algorithms for Neural Prostheses, a Data Driven Approach **4172-4175**
Subasi, Erk (Inst. of Neuroinformatics, Univ. / ETH Zurich); Townsend, Benjamin (Dept. of Microsystems Engineering (IMTEK), Univ. of Freiburg); Scherberger, Hansjörg (German Primate Center)*
- 10:45-12:15 FrBPo11.3
Towards a Brain Controlled Assistive Technology for Powered Mobility **4176-4180**
Kaneswaran, Kelly (Univ. of Limerick)*
- 10:45-12:15 FrBPo11.4
Single Trial Recognition of Error-Related Potentials During Observation of Robot Operation **4181-4184**
Iturrate, Iñaki (Zaragoza Univ.); Montesano, Luis (Univ. de Zaragoza); Minguez, Javier (Zaragoza Univ.)*
- 10:45-12:15 FrBPo11.5
Two-Dimensional Auditory P300 Speller with Predictive Text System **4185-4188**
Höhne, Johannes (Berlin Inst. of Tech., Berlin, Germany); Schreuder, Evert-Jan Martijn (Berlin Inst. of Tech.); Blankertz, Benjamin (Berlin Inst. of Tech.); Tangermann, Michael (Berlin Inst. of Tech.)*
- 10:45-12:15 FrBPo11.6
Exploring Multiple Protocols for a Brain-Computer Interface Mouse **4189-4192**
Salvaris, Mathew Savas (Univ. of Essex); Cinel, Caterina (Univ. of Essex); Poli, Riccardo (Univ. of Essex); Citi, Luca (MGH / Harvard Medical School); Sepulveda, Francisco (Univ. of Essex)*
- 10:45-12:15 FrBPo11.7
A Versatile Hardware Platform for Brain Computer Interfaces **4193-4196**
García, Pablo Andrés (Facultad de Ingeniería. Univ. Nacional de La Plata); Haberman, Marcelo Alejandro (Univ. Nacional de La Plata, Facultad de Ingeniería, Dept. de electrotecnia); Spinelli, Enrique (CONICET – UNLP)*
- 10:45-12:15 FrBPo11.8
A Low-Power, Wireless, 8-Channel EEG Monitoring Headset **4197-4200**
Brown, Lindsay (Stichting IMEC Nederland); van de Molengraft, Jef (Holst Centre); Yazicioglu, Refet Firat (IMEC); Torfs, Tom (IMEC); Penders, Julien (imec / Holst Centre); Van Hoof, Chris (IMEC)*
- 10:45-12:15 FrBPo11.9
Toward BCI Wizard – Best BCI Approach for Each User **4201-4204**
Volosyak, Ivan (Univ. of Bremen); Guger, Christoph (g.tec medical engineering GmbH); Graser, Axel (Univ. of Bremen)*
- 10:45-12:15 FrBPo11.10
A Hybrid BCI System for 2-D Asynchronous Cursor Control **4205-4208**
Li, Yuanqing (South China Univ. of Tech.); Long, Jinyi (South China Univ. of Tech., Chinese); Yu, Tianyou (South China Univ. of Tech., Chinese); Yu, Zhuliang (South China Univ. of Tech., Chinese); Wang, Chuanchu (Inst. for Infocomm Research); Zhang, Haihong (Inst. for Infocomm Research); Guan, Cuntai (Inst. for Infocomm Research)*
- 10:45-12:15 FrBPo11.11
A Zero-Training Algorithm for EEG Single-Trial Classification Applied to a Face Recognition ERP Experiment **4209-4212**
Lage, Agustin (Cuban Neuroscience Center); Nieto, Juan (Australian Center for Field Robotics, Univ. of Sydney, Australia.); Quiñones, Ileana (Cuban Neuroscience Center); Martínez-Montes, Eduardo (Cuban Neuroscience Center)*

10:45-12:15 FrBPo11.12
Acquisition of Action Potentials with Ultra-Low Sampling Rates 4213-4216
Srinivasan, Lakshminarayan (Private Citizen); Varshney, Lav R. (Private Citizen);
 Kusuma, Julius (Private Citizen)*

FrBPo12: 10:45-12:15 Catalinas/Golden Horn
6.4.7 Brain-Computer Interface II (Poster Session)

10:45-12:15 FrBPo12.1
A Study on EEG Quality in Physical Movements with Steady-State Visual Evoked Potentials 4217-4220
Touyama, Hideaki (Toyama Prefectural Univ.)*

10:45-12:15 FrBPo12.2
BCI Control Using 4 Direction Spatial Visual Attention and Real-Time Fmri at 7T 4221-4225
Andersson, Patrik (Univ. Medical Center Utrecht); Ramsey, Nick (Univ. Medical Center Utrecht); Pluim, Josien
 Petra Willemijn (Univ. Medical Center Utrecht); Viergever, Max A. (Univ. Medical Center Utrecht)*

10:45-12:15 FrBPo12.3
Adaptation of Hybrid Human-Computer Interaction Systems Using EEG Error-Related Potentials 4226-4229
Chavarriaga, Ricardo (Ecole Polytechnique Federale de Lausanne); Biasiucci, Andrea (École Polytechnique
 Fédérale de Lausanne); Förster, Kilian (Wearable computing laboratory, ETHZ); Roggen, Daniel (Wearable
 computing laboratory, ETHZ); Troster, Gerhard (ETH Zurich); Millán, José del R. (Swiss Federal
 Inst. of Tech., Lausanne)*

10:45-12:15 FrBPo12.4
A Novel Co-Locational and Concurrent Fnirs/eeG Measurement System: Design and Initial Results 4230-4233
Leamy, Darren John (Natl. Univ. of Ireland Maynooth); Ward, Tomas (NUI Maynooth)*

10:45-12:15 FrBPo12.5
Post-Acute Stroke Patients Use a Brain-Computer Interface to Activate Electrical Stimulation 4234-4237
Tan, Adrian Hock Guan (Inst. for Infocomm Research); Kong, Keng He (Tan Tock Seng Hospital);
 Shee, Chengyap (Nanyang Technological Univ.); Wang, Chuanchu (Inst. for Infocomm Research);
 Guan, Cuntai (Inst. for Infocomm Research); Ang, Wei Tech (Nanyang Technological Univ.)*

10:45-12:15 FrBPo12.6
**Characteristics of Motor Imagery Based EEG-Brain Computer Interface Using
 Combined Cue and Neuro-Feedback** 4238-4241
lee, youngbum (Yonsei Univ.); Kim, Jinkwon (Yonsei Univ.); Lee, SangJoon (Yonsei Univ.);
 Lee, Myoungho (Yonsei Univ.)*

10:45-12:15 FrBPo12.7
Exploring Preprocessing Techniques in a Three-Class Brain-Computer Interface 4242-4245
Barbosa, André Freitas (Univ. Federal do Rio Grande do Norte); Souza, Bryan da Costa (Univ. Federal do Rio
 Grande do Norte); Ferro, Dayara (UFRN); Pantoja, André (Univ. Federal Rio Grande do Norte);
 Duarte D. Neto, Adriaio (Univ. Federal do Rio Grande do Norte); Pereira, Antonio (Univ. Federal
 Rio Grande do Norte); Guerreiro, Ana Maria G. (Federal Univ. of Rio Grande do Norte)*

FrC01: 14:30-16:00 Libertador A
1.2.3 Biomedical Modeling and Simulation III (Oral Session)

14:30-14:45 FrC01.1
Differential Stimulation of ON and OFF Retinal Ganglion Cells: A Modeling Study 4246-4249
Kameneva, Tatiana (NICTA, The Univ. of Melbourne); Meffin, Hamish (Natl. ICT Australia); Burkitt, Anthony
 Neville (The Univ. of Melbourne)*

14:45-15:00 FrC01.2
Statistical Modelling of Spike Libraries for Simulation of Extracellular Recordings in the Cerebellum 4250-4253
Thorbergsson, Palmi Thor (Lund Univ.); Garwicz, Martin (Lund Univ.); Schouenborg, Jens (Lund Univ.);
 Johansson, Anders (Lund Univ.)*

15:00-15:15	FrC01.3
Energy Expenditure During Human Gait. I – An Optimized Model	4254-4257
<i>Rodrigo, Silvia E.* (Medical Tech. Cabinet, Natl. Univ. of San Juan); García, Isabel (Univ. of Zaragoza, Zaragoza, Spain.); Franco, Marian (School of Health Sciences, Univ. of Zaragoza, Spain); Alonso-Vazquez, Ana (Group of Structural Mechanics & Materials Modelling, I3A, UZ, Spain.); Ambrosio, Jorge A. (Technical Superior Inst., Technical Univ. of Lisbon, Portugal.)</i>	
15:15-15:30	FrC01.4
A sEMG Model with Experimentally Based Simulation Parameters	4258-4261
<i>Wheeler, Katherine A.* (RMIT); Shimada, Hirokazu (Oita Natl. College of Tech.); Kant Kumar, Dinesh (RMIT Univ.)</i>	
15:30-15:45	FrC01.5
Two-Dimensional Estimation of the Electrohysterographic Conduction Velocity	4262-4265
<i>Rabotti, Chiara* (Eindhoven Univ. of Tech.); Mischi, Massimo (Eindhoven Univ. of Tech.)</i>	
15:45-16:00	FrC01.6
Real-Time Calculation of Knee Extension Moment and Its Evaluation	4266-4269
<i>Nam, Yoon-Su (Kangwon Natl. Univ.); Kim, Seongnam* (Kangwon Natl. Univ.)</i>	

FrC02: 14:30-16:00	Libertador B
2.1.5 MR Neuroimaging (Oral Session)	

14:30-14:45	FrC02.1
Real Time BOLD Functional MRI Neuro-Feedback Affects Functional Connectivity	4270-4273
<i>Horovitz, Silvina G* (NINDS – Natl. Inst. of Health); Berman, Brian D (NINDS – Natl. Inst. of Health); Hallett, Mark (NINDS – Natl. Inst. of Health)</i>	
14:45-15:00	FrC02.2
Mapping Local Functional Connectivity Hubs in the Human Brain	4274-4277
<i>Tomasi, Dardo* (Natl. Inst. of Health); Volkow, Nora (Natl. Inst. of Drug Abuse)</i>	
15:00-15:15	FrC02.3
PDE-Based Reconstruction of the Cerebral Cortex from MR Images	4278-4283
<i>Osechinskiy, Sergey* (Univ. of California, Irvine); Kruggel, Frithjof (Univ. of California, Irvine)</i>	
15:15-15:30	FrC02.4
Bayesian Optimization of Perfusion and Transit Time Estimation in PASL-MRI	4284-4287
<i>Santos, Nuno (Siemens, S.A., Healthcare Sector / Inst. Superior Técnico); Sanches, J. Miguel (Inst. for Systems & Robotics, NIF); Figueiredo, Patricia* (Inst. Superior Técnico / Inst. for Systems & Robotics)</i>	
15:30-15:45	FrC02.5
Shape Modeling of the Corpus Callosum	4288-4291
<i>Farag, Ahmed (Univ. of Louisville); Elhabian, Shireen (Univ. of Louisville); Abdelrahman, Mostafa (Univ. of Louisville); Graham, James (Univ. of Louisville); Farag, Aly A.* (Univ. of Louisville); Chen, Dongqing (Univ. of Louisville); Casanova, Manuel (Univ. of Louisville)</i>	

FrC04: 14:30-16:00	Retiro A
2.7.2 Image Denoising (Oral Session)	

14:30-14:45	FrC04.1
Denoising of LSFCM Images with Compensation for the Photoblinking/Photobleaching Effects	4292-4295
<i>Rodrigues, Isabel (Inst. for Systems & Robotics); Sanches, J. Miguel* (Inst. for Systems & Robotics, NIF)</i>	
14:45-15:00	FrC04.2
Local Image Enhancement for Fiducial Marker Detection in Electronic Portal Images of Prostate Radiotherapy	4296-4299
<i>Bonneau, Patrick (Univ. of Victoria); Branzan Albu, Alexandra* (Univ. of Victoria); Hilts, Michelle (BC Cancer Agency, Victoria, BC, Canada)</i>	

15:00-15:15	FrC04.3
Compton Scattered Imaging Based on the V-Line Radon Transform and Its Medical Imaging Applications 4300-4303	
<i>Nguyen, Mai K. (Univ. of CERGY-PONTOISE); Regnier, Remi (Equipes Traitement de l'Information et Systèmes); Truong, Tuong T.* (Univ. of Cergy-Pontoise); Zaidi, Habib (Geneva Univ. Hospital)</i>	
15:15-15:30	FrC04.4
Compressive Sensing for Ultrasound RF Echoes Using Alpha-Stable Distributions 4304-4307	
<i>Achim, Alin (Univ. of Bristol); Buxton, Benjamin Alan (Univ. of Bristol); Tzagkarakis, George (Univ. of Crete & FORTH-ICS); Tsakalides, Panagiotis* (Univ. of Crete & FORTH-ICS)</i>	
15:30-15:45	FrC04.5
Fusion of Multiscale Wavelet-Based Fractal Analysis on Retina Image for Stroke Prediction 4308-4311	
<i>Che Azemin, Mohd Zulfaezal (RMIT Univ.); Kant Kumar, Dinesh (RMIT Univ.); Poosapadi Arjunan, Sridhar* (RMIT Univ.)</i>	
15:45-16:00	FrC04.6
Automatic Detection of Dining Plates for Image-Based Dietary Evaluation 4312-4315	
<i>Nie, Jie* (Ocean Univ. of China); Wei, Zhiqiang (Ocean Univ. of China); Jia, Wenyan (Univ. of Pittsburgh); Li, Lu (Beihang Univ.); Fernstrom, John D. (Univ. of Pittsburgh); Sciabassi, Robert (Univ. of Pittsburgh); Sun, Mingui (Univ. of Pittsburgh)</i>	
FrC05: 14:30-16:00	Retiro B
1.6.1 Adaptive and Parametric Filtering (Oral Session)	
14:30-14:45	FrC05.1
Electromagnetic Source Imaging for Sparse Cortical Activation Patterns 4316-4319	
<i>von Ellenrieder, Nicolas* (Univ. Nacional de La Plata); Hurtado, Martín (Univ. Nacional de La Plata); Muravchik, Carlos (Univ. Nacional de La Plata)</i>	
14:45-15:00	FrC05.2
Analysis of Trial-By-Trial Variability in Stimulus-Evoked Neural Activity 4320-4322	
<i>Raman, Baranidharan* (Washington Univ.); Stopfer, Mark (Natl. Inst. of Health)</i>	
15:00-15:15	FrC05.3
Psychoacoustic Active Noise Control with ITU-R 468 Noise Weighting and Its Sound Quality Analysis 4323-4326	
<i>Bao, Hua* (Univ. of Texas at Dallas); Panahi, Issa (Univ. of Texas at Dallas)</i>	
15:15-15:30	FrC05.4
Performance Enhancement of Adaptive Active Noise Control Systems for Fmri Machines 4327-4330	
<i>Kannan, Govind* (The Univ. of Texas at Dallas); Milani, Ali (Univ. of Texas at Dallas); Panahi, Issa (Univ. of Texas at Dallas); Kehtarnavaz, Nasser (Univ. of Texas at Dallas)</i>	
15:30-15:45	FrC05.5
Improvements of Scale Fourier Linear Combiner for Impedance Cardiography Analysis 4331-4334	
<i>Dromer, Olivier (Univ. of Poitiers); Alata, Olivier* (Lab. XLIM-SIC, UMR CNRS 6172, Univ. of Poitiers); Bernard, Olivier (Univ. of Poitiers)</i>	
FrC06: 14:30-16:00	Retiro C
6.4.5 Brain-Computer/Machine Interface III (Oral Session)	
14:30-14:45	FrC06.1
Optimal Set of EEG Electrodes for Rapid Serial Visual Presentation 4335-4338	
<i>Hild II, Kenneth* (Oregon Health & Science Univ.); Mathan, Santosh (Honeywell Laboratories); Huang, Yonghong (Oregon Health & Science Univ.); Erdogmus, Deniz (Northeastern Univ.); Pavel, Michael (Oregon Health & Science Univ.)</i>	

14:45-15:00	FrC06.2
Model Development, Testing and Experimentation in a CyberWorkstation for Brain-Machine Interface Research 4339-4342	
<i>Rattanatamrong, Prapaporn* (Univ. of Florida); Raiturkar, Pooja (Univ. of Florida); Zhao, Ming (Florida Intl. Univ.); Mahmoudi, Babak (Univ. of Florida); DiGiovanna, Jack (ETH Zurich); Principe, Jose (Univ. of Florida); Figueiredo, Renato (Univ. of Florida); Sanchez, Justin C. (Univ. of Florida); Fortes, José (Univ. of Florida)</i>	
15:00-15:15	FrC06.3
Multimodal Fusion of Muscle and Brain Signals for a Hybrid-BCI 4343-4346	
<i>Leeb, Robert* (Ecole Polytechnique Fédérale de Lausanne); Sagha, Hesam (Ecole Polytechnique Fédérale de Lausanne); Chavarriaga, Ricardo (Ecole Polytechnique Federale de Lausanne); Millán, José del R. (Swiss Federal Inst. of Tech., Lausanne)</i>	
15:15-15:30	FrC06.4
Reconstructing Grasping Motions from High-Frequency Local Field Potentials in Primary Motor Cortex 4347-4350	
<i>Zhuang, Jun (Shanghai Jiao Tong Univ.); Truccolo, Wilson* (Brown Univ.); Vargas-Irwin, Carlos (Brown Univ.); Donoghue, John (Brown Univ.)</i>	
15:30-15:45	FrC06.5
Common Spatial Pattern Patches – An Optimized Filter Ensemble for Adaptive Brain-Computer Interfaces 4351-4354	
<i>Sannelli, Claudia* (Berlin Inst. of Tech., BBCI Group); Vidaurre, Carmen (Berlin Inst. of Tech.); Müller, Klaus-Robert (Berlin Inst. of Tech.); Blankertz, Benjamin (Berlin Inst. of Tech.)</i>	
FrC07: 14:30-16:00	Martin Fierro 1
8.3.3 Micro-Biorobotics (Oral Session)	
14:30-14:45	FrC07.1
MRI Visualization of a Single 15 µm Navigable Imaging Agent and Future Microrobot 4355-4358	
<i>Olamaei, Nina (École Polytechnique Montréal); Beaudoin, Gilles (Univ. de Montreal); Cheriet, Farida (Ecole Polytechnique of Montreal); Martel, Sylvain* (Ecole Polytechnique de Montreal)</i>	
14:45-15:00	FrC07.2
Tailoring the Drug Loading Capacity of Polypyrrole Films for Use in Intraocular Biomicrobots 4359-4362	
<i>Sivaraman, Kartik Mahadevan* (Multi Scale Robotics Lab, Inst. of Robotics & Intelligent Systems, ETH Zurich); Bayrakceken, Kerem (ETH Zurich); Ergeneman, Olgac (ETH Zurich); Pané Vidal, Salvador (ETH Zürich); Lühmann, Tessa (ETH Zürich, Dept. of Materials, Switzerland); Hall, Hreike (Cells & Biomaterials, Dept. of Materials, ETH); Nelson, Bradley (ETH Zurich)</i>	
15:00-15:15	FrC07.3
Cell Micromanipulation with an Active Handheld Micromanipulator 4363-4366	
<i>Cuevas Tabares, Jaime (Univ. of Valladolid); MacLachlan, Robert A.* (Carnegie Mellon Univ.); Ettensohn, Charles (Carnegie Mellon Univ.); Riviere, Cameron N (Carnegie Mellon Univ.)</i>	
15:15-15:30	FrC07.4
Effect of the Chain of Magnetosomes Embedded in Magnetotactic Bacteria and Their Motility on Magnetic Resonance Imaging 4367-4370	
<i>Felfoul, Ouajdi (École polytechnique de Montréal); Mokrani, Nisryn* (Ecole Polytechnique de Montreal); Mohammadi, Mahmood (École polytechnique de Montréal); Martel, Sylvain (Ecole Polytechnique de Montreal)</i>	
15:30-15:45	FrC07.5
Magnetotactic Bacteria Penetration into Multicellular Tumor Spheroids for Targeted Therapy 4371-4374	
<i>Mokrani, Nisryn* (Ecole Polytechnique de Montreal); Felfoul, Ouajdi (École polytechnique de Montréal); Afkhami Zarreh, Fatemeh (Ecole Polytechnique de Montreal); Mohammadi, Mahmood (École polytechnique de Montréal); Aloyz, Raquel (McGill Univ., Lady Davis Inst. for Medical Research, Cancer Segal Center of the Jewish General Hospital); Batist, Gerald (McGill Univ., Lady Davis Inst. for Medical Research, Cancer Segal Center of the Jewish General Hospital); Martel, Sylvain (Ecole Polytechnique de Montreal)</i>	
15:45-16:00	FrC07.6
A Locomotion Mechanism with External Magnetic Guidance for Active Capsule Endoscope 4375-4378	
<i>Wang, Xiaona* (The Chinese Univ. of Hong Kong); Meng, Max Q.-H. (The Chinese Univ. of Hong Kong); Chen, Xijun (The Chinese Univ. of Hong Kong)</i>	

2.8.2 Deformable Image Registration I (Oral Session)

14:30-14:45

FrC08.1

2D Mapping of Strongly Deformed Cell Nuclei Based on Contour Warping 4379-4382

De Vylder, Jonas (Ghent Univ.); Douterloigne, Koen (Ghent Univ.); Philips, Wilfried (Gent Univ.);
De Vos, Winnok (Ghent Univ.)*

14:45-15:00

FrC08.2

Deformable Registration of Retinal Fluorescein Angiogram Sequences Using Vasculature Structures ... 4383-4386

Perez-Rovira, Adria (Univ. of Dundee); Trucco, Emanuele (Univ. of Dundee); Wilson, Peter (Dept. of
Ophthalmology at Ninewells Hospital & Medical School, Dundee); Liu, Jiang (Inst for Infocomm Resrch, A STAR)*

15:00-15:15

FrC08.3

Non-Rigid Registration of Breast Images Using Feature Points 4387-4390

Zhang, Weiwei (Univ. of Oxford); Brady, Michael (Univ. of Oxford); Wessel, Carolina (Univ. of Oxford);
Ho, Pui Shan (Candy) (Univ. of Oxford)*

15:15-15:30

FrC08.4

Cephalometric Landmarks Identification Using Probabilistic Relaxation 4391-4394

Favaedi, Leila (Imperial college); Petrou, Maria (Imperial College)*

15:30-15:45

FrC08.5

2D/3D Reconstruction of a Scaled Lumbar Vertebral Model from a Single Fluoroscopic Image 4395-4398

Zheng, Guoyan (Univ. of Bern); Nolte, Lutz-Peter (Univ. of Bern); Ferguson, Stephen J. (Univ. of Bern)*

15:45-16:00

FrC08.6

A New Representation of Intensity Atlas for GPU-Accelerated Instance Generation 4399-4402

Gong, Ren Hui (Queen's Univ.); Stewart, James (Queen's Univ.); Abolmaesumi, Purang (UBC)*

3.6.1 Wearable Sensors Principle and Technology (Oral Session)

14:30-14:45

FrC09.1

Using Fitts's Law for Evaluating Tongue Drive System As a Pointing Device for Computer Access 4403-4406

Yousefi, Behnaz (Georgia Inst. of Tech.); Huo, Xueliang (Georgia Inst. of Tech.);
Ghovanloo, Maysam (Georgia Inst. of Tech.)*

14:45-15:00

FrC09.2

Early Results on Wrist Based Heart Rate Monitoring Using Mechanical Transducers 4407-4410

Buxi, Dilpreet (IMEC, Holst Centre); Penders, Julien (imec / Holst Centre); Van Hoof, Chris (IMEC)*

15:00-15:15

FrC09.3

Home Monitoring of Patients with Parkinson's Disease Via Wearable Technology and a Web-Based Application 4411-4414

*Patel, Shyamal (Harvard Medical School); Chen, Bor-rong (Harvard Univ.); Buckley, Thomas (Harvard Univ.);
Rednic, Ramona (Coventry Univ.); McClure, Doug (Partners Center for Connected Health); Tarsy, Daniel
(Harvard Medical School); Shih, Ludy (Harvard Medical School); Dy, Jennifer (Northeastern Univ.);
Welsh, Matt (Harvard Univ.); Bonato, Paolo* (Harvard Medical School)*

15:15-15:30

FrC09.4

Continuous Monitoring of Electrodermal Activity During Epileptic Seizures Using a Wearable Sensor ... 4415-4418

Poh, Ming-Zher (Massachusetts Inst. of Tech.); Loddenkemper, Tobias (Children's Hospital Boston); Swenson,
Nicholas (Massachusetts Inst. of Tech.); Goyal, Shubhi (Massachusetts Inst. of Tech.); Madsen, Joseph
(Children's Hospital Boston, Harvard Medical School); Picard, Rosalind (Massachusetts Inst. of Tech.)*

15:30-15:45

FrC09.5

Silicon Nanophotonic Devices for Integrated Lab-On-A-Chip Sensing 4419-4422

*Momeni, Babak (Georgia Tech); Yegnanarayanan, Siva (Georgia Tech); Soltani, Mohammad (Georgia Tech);
Eftekhar, Ali A. (Georgia Tech); Shah Hosseini, Ehsan (Georgia Tech); Adibi, Ali* (Georgia Tech)*

10.7.1 Health Information System Integration and Electronic Health Records I (Oral Session)

- 14:30-14:45 FrC10.1
The Deployment of Information Systems and Information Technology in Field Hospitals 4423-4426
Crowe, Ian (Coventry Univ.); Naguib, Raouf (Coventry Univ.)*
- 14:45-15:00 FrC10.2
In a Hospital: An Electrical Safety and Information System 4427-4430
Barbosa, Andréa (Univ. Federal da Grande Dourados); Iaione, Fabio (Univ. Federal da Grande Dourados)*
- 15:00-15:15 FrC10.3
Development of a Personal Electronic Health Record Card in the United Kingdom 4431-4435
Rybynok, Victor (City Univ., London); Kyriacou, Panayiotis (City Univ.); Binnersley, Jackie (Coventry Univ.); Woodcock, Andree (Coventry Univ.)*
- 15:15-15:30 FrC10.4
Semantic Similarity Measure in Biomedical Domain Leverage Web Search Engine 4436-4439
Chen, Chi-Huang (Natl. Taiwan Univ.); Hsieh, Sheau-Ling (Natl. Chiao Tung Univ.); Weng, Yung-Ching (Natl. Taiwan Univ.); Chang, Wen-Yung (Natl. Chiao Tung Univ.); Lai, Feipei (Natl. Taiwan Univ.)*
- 15:30-15:45 FrC10.5
A New XML-Aware Compression Technique for Improving Performance of Healthcare Information Systems Over Hospital Networks 4440-4443
Al-Shammary, Dhiah (RMIT Univ.); Khalil, Ibrahim (RMIT Univ.)*

6.1.3 Impaired Attention: Drowsiness and Microsleeps (Oral Session)

- 14:30-14:45 FrC11.1
Estimation of Alertness Levels with Changes in Decibel Scale Wavelength of EEG During Dual-Task Simulation of Auditory Sonar Target Detection 4444-4447
Poosapadi Arjunan, Sridhar (RMIT Univ.); Kant Kumar, Dinesh (RMIT Univ.); Jung, Tzyy-Ping (Univ. of California San Diego)*
- 14:45-15:00 FrC11.2
Behavioural Microsleeps in Normally-Rested People 4448-4451
Innes, Carrie R. H. (Canterbury District Health Board); Poudel, Govinda (Univ. of Otago); Signal, T. L. (Massey Univ.); Jones, Richard D. (Van der Veer Inst.)*
- 15:00-15:15 FrC11.3
The Relationship between Behavioural Microsleeps, Visuomotor Performance and EEG Theta 4452-4455
Poudel, Govinda (Univ. of Otago); Innes, Carrie R. H. (Canterbury District Health Board); Bones, P. J. (Univ. of Canterbury); Jones, Richard D. (Van der Veer Inst.)*
- 15:15-15:30 FrC11.4
Evaluation of PERCLOS Based Current Fatigue Monitoring Technologies 4456-4459
Sommer, David (Univ. of Applied Sciences Schmalkalden); Golz, Martin (Univ. of Applied Sciences Schmalkalden)*
- 15:30-15:45 FrC11.5
Improving Classification Rates for Use in Fatigue Countermeasure Devices Using Brain Activity 4460-4463
Tran, Yvonne (Univ. of Tech., Sydney); Craig, Ashley (Univ. of Tech., Sydney); Wijesuriya, Nirupama (The Univ. of Sydney); Nguyen, Hung T. (Univ. of Tech., Sydney)*
- 15:45-16:00 FrC11.6
Wireless Physiological Monitoring and Ocular Tracking: 3D Calibration in a Fully-Immersive Virtual Health Care Environment 4464-4467
Zhang, Lelin (UC San Diego); Chi, Yu (UCSD); Edelstein, Eve (UC San Diego); Schulze, Jurgen (UC San Diego); Gramann, Klaus (UC San Diego); Velasquez, Alvaro (HMC Architects); Cauwenberghs, Gert (Univ. of California San Diego); Macagno, Eduardo (UC San Diego)*

6.7.3 Neural Rehabilitation – Robotics (Oral Session)

14:30-14:45

FrC12.1

Development of Body Weight Support Gait Training System Using Antagonistic**Bi-Articular Muscle Model 4468-4471**

Shibata, Yoshiyuki (Shibaura Inst. of Tech.); Shingo, Imai (Shibaura Inst. of Tech.); Nobutomo, Tatsuya (Shibaura Inst. of Tech.); Miyoshi, Tasuku (Iwate Univ.); Yamamoto, Shin-ichiroh (Shibaura Inst. of Tech.)*

14:45-15:00

FrC12.2

Bio Cooperative Robotic Platform for Motor Function Recovery of the Upper Limb after Stroke 4472-4475

Rodriguez, Carlos (Fundacion CARTIF); Fraile, Juan carlos (Fundacion CARTIF); Rivera farina, Pedro (Fundacion CARTIF); Pérez Turiel, Javier (Valladolid Univ.)*

15:00-15:15

FrC12.3

A Telepresence Robotic System Operated with a P300-Based Brain-Computer Interface: Initial Tests with ALS Patients 4476-4480

Escolano, Carlos (Univ. of Zaragoza); Ramos Murguialday, Ander (Fatronik Tecnalia Germany/Inst. of Medical Psychology & Behavioral Neurobiology); Matuz, Tamara (Inst. of Medical Psychology & Behavioral Neurobiology); Birbaumer, Niels (Eberhard-Karls-Univ.); Minguez, Javier (Zaragoza Univ.)*

15:15-15:30

FrC12.4

Efficacy of Robotic Rehabilitation of Ankle Impairments in Children with Cerebral Palsy 4481-4484

Wu, Yi-Ning (Rehab. Inst. of Chicago); Ren, Yupeng (Rehab. Inst. of Chicago); Hwang, Miriam (Korea Univ. College of Medicine); Gaebler-Spira, Deborah (Northwestern Univ.); Zhang, Liqueun (Northwestern Univ.)*

15:30-15:45

FrC12.5

Hand Function Recovery in Chronic Stroke with HEXORR Robotic Training: A Case Series 4485-4488

Godfrey, Sasha Blue (Catholic Univ. of America); Schabowsky, Chris (Catholic Univ.); Holley, Rahsaan (Natl. Rehabilitation Hospital); Lum, Peter (Natl. Rehabilitation Hospital, Catholic Univ. of America, Veteran Affairs)*

15:45-16:00

FrC12.6

Gravity Compensation of an Upper Extremity Exoskeleton 4489-4493

Moubarak, Salam (INSA Lyon, Univ. de Lyon); Pham, Minh Tu (Inst. Natl. des Sciences Appliquées (INSA de Lyon)); Moreau, Richard (INSA-Lyon); Redarce, Tanneguy (Inst. Natl. des Sciences Appliquées (INSA de Lyon))*

6.9.1 Musculoskeletal Models for Understanding the Neural Control of Unimpaired Movement (Oral Session)

14:30-14:45

FrC13.1

Neuro-Mechanical Control Using Differential Stochastic Operators 4494-4497

Sanger, Terence David (Univ. of Southern California)*

14:45-15:00

FrC13.2

Modeling the Biomechanical Constraints on the Feedforward Control of Endpoint Stiffness 4498-4501

Hu, Xiao (Northwestern Univ.); Murray, Wendy (Northwestern Univ.); Perreault, Eric (Northwestern Univ.)*

15:00-15:15

FrC13.3

Understanding Complex Muscles in the Rat Hindlimb: Activations and Actions 4502-4505

Tresch, Matthew (Northwestern Univ.)*

15:15-15:30

FrC13.4

Towards a Neuronal Network Controller for Vertical Jumping from Different Initial Squat Depths 4506-4509

Bobbert, Maarten (VU Univ., Amsterdam, The Netherlands)*

15:30-15:45

FrC13.5

Optimality in Neuromuscular Systems 4510-4516

Theodorou, Evangelos (Univ. of Southern California); Valero-Cuevas, Francisco (Univ. of Southern California)*

15:45-16:00 FrC13.6
A Predictive Model of the Isometric Force Response of the Locust Extensor Muscle 4517-4520
Wilson, Emma Denise (Univ. of Southampton); Rustighi, Emiliano (Univ. of Southampton);*
Newland, Philip Leslie (Univ. of Southampton); Mace, Brian (Univ. of Southampton)

FrC14: 14:30-16:00 Auditorium
6.3.3 Advances in Neurocomputation (Mini Symposium)

14:30-14:45 FrC14.1
Mapping Visual Stimuli to Perceptual Decisions Via Sparse Decoding of Mesoscopic Neural Activity 4521-4521
Sajda, Paul (Columbia Univ.)*

14:45-15:00 FrC14.2
Assessment of Lower Extremity Motor Adaptation Via an Extension of the Force Field Adaptation Paradigm 4522-4525
Cajigas, Iahn (MIT); Goldsmith, Mary (Boston Univ.); Duschau-Wicke, Alexander (ETH & Univ. Zurich);
Riener, Robert (ETH & Univ. Zurich); Smith, Maurice (Johns Hopkins Univ.); Brown, Emery N (MGH-Harvard
Medical School-MIT); Bonato, Paolo (Harvard Medical School)*

15:00-15:15 FrC14.3
Prefrontal Cortex Deletion Affects the Dopaminergic Neural Firing Complexity in Nicotine-Treated Ventral Tegmental Area 4526-4529
Akay, Metin (Univ. of Houston)*

FrDPo01: 16:00-17:30 Catalinas/Golden Horn
10.8.2 Emerging Topics in Health Information Technology and Telemedicine (Poster Session)

16:00-17:30 FrDPo01.1
A Domain Model of a Clinical Reading Center – Design and Implementation 4530-4533
Lotz, Gunnar (Univ. of Tuebingen); Peters, Tobias (STZ-eyetrial at the Centre for Ophthalmology, Univ. of Tuebingen); Zrenner, Eberhart (Univ. of Tuebingen); Wilke, Robert (Univ. of New South Wales)*

16:00-17:30 FrDPo01.2
TongueWise: Tongue-Computer Interface Software for People with Tetraplegia 4534-4537
Caltenco, Hector Alejandro (Aalborg Univ.); Andreasen Struijk, Lotte N. S. (Aalborg Univ.);*
Breidegard, Björn (Certec – Division of Rehabilitation Engineering Research, Lund Univ., Sweden)

16:00-17:30 FrDPo01.3
Smartphone Based Face Recognition Tool for the Blind 4538-4541
Kramer, Kevin (Advanced Medical Electronics Corp.); Hedin, Daniel (Advanced Medical Electronics);*
Rolkosky, David (Advanced Medical Electronics Corp.)

16:00-17:30 FrDPo01.4
User Inspection of National Taiwan University's Telehealth Care System 4542-4545
Wu, Pei Hsuan (Univ. of Victoria); Chen, Chi-Huang (Natl. Taiwan Univ.); Chen, Huai-Te (Natl. Taiwan Univ.);
Shu, Che-Hsuan (Natl. Taiwan Univ.); Lin, Feng-Sheng (Natl. Taiwan Univ.); Wang, Yi-Van (Natl. Taiwan Univ.);
Li, Hao-Jhun (Natl. Taiwan Univ.); Wu, Yuan-Ting (Natl. Taiwan Univ.); Lai, Feipei (Natl. Taiwan Univ.)*

FrDPo02: 16:00-17:30 Catalinas/Golden Horn
1.2.13 Signal Processing in Physiological Systems VI (Poster Session)

16:00-17:30 FrDPo02.1
The Effect of Wavelet-Based Filtering and Data Set Length on the Fractal Scaling of Cardiorespiratory Variability 4546-4549
BuSha, Brett (The College of New Jersey)*

16:00-17:30	FrDPo02.2
Arterial Pressure and Diameter Waveforms Analysis by Means of Wavelet Transform: Application to Artery De-Endothelization 4550-4553	
<i>Zajarevich, Nicolas Mariano (CEILAP (CITEFA-CONICET)); Bia, Daniel (School of Medicine, Republic Univ.); Pessana, Franco Martin (Favaloro Univ.); Codnia, J (Citefa); Armentano, Ricardo Luis* (Favaloro Univ.)</i>	
16:00-17:30	FrDPo02.3
Variable Optimisation of Medical Image Data by the Learning Bayesian Network Reasoning 4554-4557	
<i>Orun, Ahmet (Univ. of Birmingham); Aydin, Nizamettin* (Yildiz Technical Univ.)</i>	
16:00-17:30	FrDPo02.4
Application of Frequency and Sample Entropy to Discriminate Long-Term Recordings of Paroxysmal and Persistent Atrial Fibrillation 4558-4561	
<i>Alcaraz Martinez, Raul (Univ. of Castilla-La Mancha); Sandberg, Frida (Lund Univ.); Sornmo, Leif (Lund Univ.); Rieta, J. J.* (Univ. Politecnica de Valencia)</i>	
16:00-17:30	FrDPo02.5
An Asynchronous BMI System for Online Single-Trial Detection of Movement Intention 4562-4565	
<i>Ibáñez, Jaime* (Consejo Superior de Investigaciones Científicas CSIC); Serrano, José Ignacio (Bioengineering Group, Consejo Superior de Investigaciones Científicas CSIC); del Castillo, María Dolores (Bioengineering Group, Consejo Superior de Investigaciones Científicas CSIC); Barrios, Luis J. (Bioengineering Group, Consejo Superior de Investigaciones Científicas CSIC)</i>	
16:00-17:30	FrDPo02.6
Heart Murmur Classification with Feature Selection 4566-4569	
<i>Kumar, Dinesh (Univ. of Coimbra); de Carvalho, Paulo (Univ. of Coimbra); Antunes, Manual (Univ. of Coimbra); Paiva, Rui Pedro* (Univ. of Coimbra); Henriques, Jorge (Univ. of Coimbra)</i>	
16:00-17:30	FrDPo02.7
Oscillations in the Evaluation of Fractal Dimension of RR Intervals Time Series 4570-4573	
<i>Muñoz-Diosdado, Alejandro* (UPIBI-IPN); Gálvez-Coyt, Gonzalo (UPIBI, Inst. Politécnico Nacional MEXICO); Perez Uribe, Brenda Magdalena (UPIBI-IPN)</i>	
16:00-17:30	FrDPo02.8
Improving Discriminality in Heart Rate Variability Analysis Using Simple Artifact and Trend Removal Preprocessors 4574-4577	
<i>Lee, Ming-Yuan (Natl. Chung Cheng Univ.); Yu, Sung-Nien* (Natl. Chung Cheng Univ.)</i>	
16:00-17:30	FrDPo02.9
Computer-Aided Auscultation to Diagnose Renal Artery Stenosis 4578-4581	
<i>Lund, Morten Enemark* (Aalborg Univ.); Schmidt, Samuel Emil (Aalborg Univ.); Struijk, Johannes (Aalborg Univ.); Buur, Tom (Aalborg Hospital)</i>	
16:00-17:30	FrDPo02.10
PPG Delineator for Real-Time Ubiquitous Applications 4582-4585	
<i>Farooq, Umar* (Kyung Hee Univ.); Park, Jang Ho (Kyunghee Univ.); Park, Seung-Hun (Kyung Hee Univ.)</i>	
16:00-17:30	FrDPo02.11
A New Method for Automatic Delineation of ECG Fiducial Points Based on the Phasor Transform 4586-4589	
<i>Martinez Rodrigo, Arturo (Univ. de Castilla-La Mancha); Alcaraz Martinez, Raul* (Univ. of Castilla-La Mancha); Rieta, J. J. (Univ. Politecnica de Valencia)</i>	

FrDPo03: 16:00-17:30

Catalinas/Golden Horn

1.4.13 EMG (Poster Session)

16:00-17:30	FrDPo03.1
Application of Empirical Mode Decomposition and Teager Energy Operator to EEG Signals for Mental Task Classification 4590-4593	
<i>Kaleem, Muhammad Farhat* (Ryerson Univ.)</i>	
16:00-17:30	FrDPo03.2
Measurement of distal EMG Signals using a Wearable Device for Reading Facial Expressions 4594-4597	
<i>Gruebler, Anna* (Univ. of Tsukuba); Suzuki, Kenji (Univ. of Tsukuba)</i>	

16:00-17:30	FrDPo03.3
Reducing Electrocardiographic Artifacts from Electromyogram Signals with Independent Component Analysis	4598-4601
<i>Costa Junior, José Dilermando (Biomedical Engineering Program – Federal Univ. of Rio de Janeiro); Ferreira, Danton Diego (Federal Univ. of Lavras); Nadal, Jurandir (Federal Univ. of Rio de Janeiro); Miranda de Sá, Antonio Mauricio* (Federal Univ. of Rio de Janeiro)</i>	
16:00-17:30	FrDPo03.4
Merging PK/PD Information in a Minimally Parameterized Model of the NeuroMuscular Blockade	4602-4605
<i>Silva, Margarida M. (Faculdade de Ciências – Univ. do Porto); Almeida, Juliana (Faculdade de Ciências da Univ. do Porto); Wigren, Torbjorn (Uppsala Univ.); Mendonça, Teresa* (Faculdade de Ciencias, Univ. do Porto)</i>	
16:00-17:30	FrDPo03.5
Tracking Whole Hand Kinematics Using Extended Kalman Filter	4606-4609
<i>Fu, Qiushi* (Arizona State Univ.); Santello, Marco (Arizona State Univ.)</i>	
16:00-17:30	FrDPo03.6
Surface Electromyogram Signals Classification Based on Bispectrum	4610-4613
<i>Orosco, Eugenio (Univ. Nacional de San Juan); Soria, Carlos (Univ. Nacional de San Juan); Lopez, Natalia M* (Univ. Nacional de San Juan); di Sciascio, Fernando (Univ. Nacional de San Juan)</i>	
16:00-17:30	FrDPo03.7
Fractal Feature of sEMG from Flexor Digitorum Superficialis Muscle Correlated with Levels of Contraction During Low-Level Finger Flexions	4614-4617
<i>Poosapadi Arjunan, Sridhar* (RMIT Univ.); Kant Kumar, Dinesh (RMIT Univ.); Naik, Ganesh R (Royal Melbourne Univ. of Tech)</i>	
16:00-17:30	FrDPo03.8
Decrement of Uterine Myometrial Burst Duration As a Correlate to Active Labor: A Hilbert Phase Approach	4618-4621
<i>Govindan, Rathinaswamy* (UAMS); Vairavan, Srinivasan (Univ. of Arkansas at Little Rock); Furdea, Adrian (Univ. of Tübingen); Murphy, Pamela (Univ. of Arkansas for Medical Sciences); Preissl, Hubert (Univ. of Tübingen); Eswaran, Hari (Univ of Arkansas for Medical Sci)</i>	
16:00-17:30	FrDPo03.9
Fourier and Wavelet Spectral Analysis of EMG Signals in Maximal Constant Load Dynamic Exercise	4622-4625
<i>Costa, Marcelo Vitor da (Univ. Estadual de Londrina); Pereira, Lucas Adriano (Univ. Estadual de Londrina); Oliveira, Ricardo Santos (Univ. Estadual de Londrina); Pedro, Rafael Evangelista (Univ. Estadual de Londrina); Camata, Thiago (Univ. Estadual de Londrina); Abrão, Taufik (Univ. Estadual de Londrina); Brunetto, Maria Angélica de Oliveira Camargo (Univ. Estadual de Londrina); Altimari, Leandro Ricardo* (Univ. Estadual de Londrina)</i>	
16:00-17:30	FrDPo03.10
Evaluation of a Game Controller Using Human Stiffness Estimated from Electromyogram	4626-4631
<i>Watanabe, Masato* (Tokyo Inst. of Tech.); Yamamoto, Taisuke (Sony); Kambara, Hiroyuki (Tokyo Inst. of Tech.); Koike, Yasuharu (Tokyo Inst. of Tech.)</i>	
16:00-17:30	FrDPo03.11
Wavelet Analysis for Support Vector Machine Classification of Motor Unit Action Potentials	4632-4635
<i>Dobrowolski, Andrzej P.* (Military Univ. of Tech.); Wierzbowski, Mariusz (Faculty of Electronics, Military Univ. of Tech., Warsaw, Poland); Tomczykiewicz, Kazimierz (Military Inst. of Health Service)</i>	

FrDPo04: 16:00-17:30

Catalinas/Golden Horn

1.9.2 Data Mining and Signal Analysis (Poster Session)

16:00-17:30	FrDPo04.1
Spike Detection in Extracellular Recordings by Hybrid Blind Beamforming	4636-4641
<i>Natora, Michal* (TU Berlin); Franke, Felix (Technische Univ. Berlin); Obermayer, Klaus (Technische Univ. Berlin)</i>	

16:00-17:30	FrDPo04.2
Improving the Classification Rate of Labor vs. Normal Pregnancy Contractions by Using EHG Multichannel Recordings	4642-4645
<i>Hassan, Mahmoud* (UTC-France); Terrien, Jeremy (Reykjavik Univ.); Alexandersson, Asgeir (Faculty of Medicine, Univ. of Iceland, Reykjavik, Iceland); Marque, Catherine (Univ. of Tech. of Compiègne); Karlsson, Brynjar (Reykjavik Univ.)</i>	
16:00-17:30	FrDPo04.3
Partial Directed Coherence Estimated on Stereo-EEG Signals in Patients with Taylor's Type Focal Cortical Dysplasia	4646-4649
<i>Varotto, Giulia* (Fondazione IRCCS Istituto Neurologico C. Besta, via Celoria 11, Milano, Italy); Franceschetti, Silvana (Fondazione IRCCS Istituto Neurologico C. Besta, via Celoria 11, Milano, Italy); Spreafico, Roberto (Fondazione IRCCS Istituto Neurologico C. Besta, via Celoria 11, Milano, Italy); Tassi, Laura (Fondazione IRCCS Istituto Neurologico C. Besta, via Celoria 11, Milano, Italy); Panzica, Ferruccio (Fondazione IRCCS Istituto Neurologico C. Besta Milano, Italy)</i>	
16:00-17:30	FrDPo04.4
A Yarus-Style Experiment to Determine Auditory Attention	4650-4653
<i>Kidmose, Preben (WIDEX); Rank, Mike Lind (Widex A/S); Ungstrup, Michael (Widex A/S); Looney, David* (Imperial College London); Park, Cheolsoo (Imperial College London); Mandic, Danilo (Imperial College)</i>	
16:00-17:30	FrDPo04.5
Evaluation of an Alternative Definition for the Apnea-Hypopnea Index	4654-4657
<i>Otero, Abraham* (San Pablo CEU); Félix Lamas, Paulo (Univ. of Santiago de Compostela); Rodriguez Presedo, Jesus Maria (Univ. of Santiago de Compostela); Zamarrón, Carlos (Hospital Clínico Univ.)</i>	
16:00-17:30	FrDPo04.6
Automatic K-Complexes Detection in Sleep EEG Recordings Using Likelihood Thresholds	4658-4661
<i>Devuyst, Stéphanie* (Faculté polytechnique de Mons); Dutoit, Thierry (Faculté polytechnique de Mons); Stenuit, Patricia (CHU Vésale); Kerkhofs, Myriam (CHU Vésale)</i>	
16:00-17:30	FrDPo04.7
Evolved Fuzzy Reasoning Model for Hypoglycaemic Detection	4662-4665
<i>Ling, Steve (Univ. of Tech. Sydney); Nuryani, Nuryani* (Univ. of Tech. Sydney); Nguyen, Hung T. (Univ. of Tech., Sydney)</i>	
16:00-17:30	FrDPo04.8
Trial Pruning for Classification of Single-Trial EEG Data During Motor Imagery	4666-4669
<i>Wang, Boyu* (Univ. of Macau); Wong, Chi Man (Univ. of Macau); Wan, Feng (Univ. of Macau)</i>	
16:00-17:30	FrDPo04.9
ECG Data-Acquisition and Classification System by Using Wavelet-Domain Hidden Markov Models	4670-4673
<i>Reis Gomes, Pedro Miguel Pinto* (Lusiada Univ.); Soares, Filomena (Univ. of Minho); Correia, Higino (Univ. of Minho); Lima, Carlos Manuel Gregorio Santos (Univ. of Minho)</i>	
16:00-17:30	FrDPo04.10
A New Approach to Discriminative HMM Training for Pathological Voice Classification	4674-4677
<i>Sarria-Paja, Milton Orlando (Inst. Tecnológico Metropolitano); Castellanos-Dominguez, Germán (Univ. Nacional de Colombia); Delgado, Edilson* (Inst. Tecnológico Metropolitano)</i>	

FrDPo05: 16:00-17:30	Catalinas/Golden Horn
1.9.3 Data Mining in Biosignals (Poster Session)	

16:00-17:30	FrDPo05.1
Spectral Spatio-Temporal Template Extraction from EEG Signals	4678-4682
<i>Ostadabbas, Sarah* (Univ. of Texas at Dallas); Jafari, Roozbeh (Univ. of Texas at Dallas)</i>	
16:00-17:30	FrDPo05.2
Creating Symbolic Representations of Electroencephalographic Signals: An Investigation of Alternate Methodologies on Intracranial Data	4683-4686
<i>Balakrishnan, Guha* (Univ. of Michigan- Ann Arbor); Shueb, Ali (Massachusetts Inst. of Tech.); Syed, Zeeshan (Univ. of Michigan)</i>	

16:00-17:30	FrDPo05.3
An Integrated Domain Specific Language for Post-Processing and Visualizing Electrophysiological Signals in Java	
Strasser, Torsten* (Centre for Ophthalmology, Univ. of Tuebingen, Tuebingen); Peters, Tobias (STZ-eyetrial at the Centre for Ophthalmology, Univ. of Tuebingen); Jägle, Herbert (Univ. Eye Clinic Regensburg); Zrenner, Eberhart (Univ. of Tuebingen); Wilke, Robert (Univ. of New South Wales)	4687-4690
16:00-17:30	FrDPo05.4
Tunnel Morph Model for Time Frequency Bio-Signal Waveform Processing	
Zheng, Gang* (Tianjin Univ. of Tech.); Lian, Shi liu (Tianjin Univ. of Tech.); Mou, Shan ling (Tianjin Univ. of Tech.); Qi, Jia (Tianjin Univ. of Tech.)	4691-4694
16:00-17:30	FrDPo05.5
Classification of Holter Registers by Dynamic Clustering Using Multi-Dimensional Particle Swarm Optimization	
Kiranyaz, Serkan* (Tampere Univ. of Tech.); Ince, Turker (Izmir Univ. of Economics); Pulkkinen, Jenni (Tampere Univ. of Tech.); Gabbouj, Moncef Gabbouj (Tampere Univ. of Tech.)	4695-4698
16:00-17:30	FrDPo05.6
Syllable-Based Speech Recognition Using EMG	
Lopez-Larraz, Eduardo* (Univ. of Zaragoza); Martinez Mozos, Oscar (Univ. of Zaragoza); Antelis, Javier M. (Univ. of Zaragoza); Minguez, Javier (Zaragoza Univ.)	4699-4702
16:00-17:30	FrDPo05.7
Shape Analysis and Clustering of Surface EMG Data	
Boudaoud, Sofiane* (Univ. of Tech. of Compiègne (UTC)); Ayachi, Fouaz (UTC, Univ. de technologie de compiègne); Marque, Catherine (Univ. of Tech. of Compiègne)	4703-4706
16:00-17:30	FrDPo05.8
Complex-Valued Spatial Filters for Task Discrimination	
Falzon, Owen* (Univ. of Malta); Camilleri, Kenneth Patrick (Univ. of Malta); Muscat, Joseph (Univ. of Malta)	4707-4710
16:00-17:30	FrDPo05.9
A New Multiclass Multivariate Group Comparison Test: Application to Drug Safety	
Tohmé, Mireille (Clin Data Mgmt.); Lengellé, Régis* (Univ. of Tech. of Troyes); Freytag, Virginie (Clin Data Mgmt.)	4711-4714
FrDPo06: 16:00-17:30	Catalinas/Golden Horn
2.2.3 Ultrasound (Poster Session)	
16:00-17:30	FrDPo06.1
An Alpha-Stable Model for Ultrasound Speckle Statistics in Skin	
Pereyra, Marcelo A. * (Univ. of Toulouse-UMR CNRS 5505); Batatia, Hadj (Univ. of Toulouse-UMR CNRS 5505)	4715-4718
16:00-17:30	FrDPo06.2
Role of Fuzzy Pre-Classifier for High Performance Segmentation of Longitudinal Carotid Ultrasound Images	
Molinari, Filippo* (Politecnico di Torino); Gaetano, Laura (Politecnico di Torino); Balestra, Gabriella (Politecnico di Torino); Suri, Jasjit (Biomedical Technologies)	4719-4722
16:00-17:30	FrDPo06.3
Ultrasound Biomicroscopy for In Vivo Architectural Characterization of Gastrocnemius Muscle from Rats ..	
Peixinho, Carolina Carneiro* (Federal Univ. of Rio de Janeiro); Resende, Célia M. C. (Federal Univ. of Rio de Janeiro); Oliveira, Liliam Fernandes de (Federal Univ. of Rio de Janeiro); Machado, Joao Carlos (Federal Univ. of Rio de Janeiro)	4723-4726
16:00-17:30	FrDPo06.4
Automatic Localization and Segmentation of Colelithiasis Crystals in Ultrasound Images	
Carvalho, Fabricio, F.* (Federal Univ. of Sergipe); Bensebaa, kamel (Federal Univ. of Sergipe)	4727-4730

16:00-17:30	FrDPo06.5
Automatic Segmentation of the Cerebellum of Fetuses on 3D Ultrasound Images, Using a 3D Point Distribution Model	4731-4734
<i>Gutierrez Becker, Benjamin (CCADET, UNAM); Arambula Cosio, Fernando* (Univ. Nacional Autonoma de Mexico); Guzman Huerta, Mario E (Natl. Inst. of Perinatal Medicine, Mexico); Benavides-Serralde, Jesus Andres (Natl. Inst. of Perinatal Medicine, Mexico)</i>	
16:00-17:30	FrDPo06.6
Improvement of Speckle Noise Reduction Using Multi-Resolutional Coherence Measurement in Ultrasound Image	4735-4739
<i>Kwon, Ju Won* (Korea Advanced Inst. of Science & Tech. (KAIST)); Ro, Yong Man (Korea Advanced Inst. of Science & Tech.)</i>	
16:00-17:30	FrDPo06.7
An Additive and Lossless Watermarking Method Based on Invariant Image Approximation and Haar Wavelet Transform	4740-4743
<i>Pan, Wei (Telecom Bretagne); Coatrieux, Gouenou* (ENST Bretagne – Inserm); Cuppens, Nora (Telecom Bretagne); Cuppens, Frédéric (Telecom Bretagne); Roux, Christian (TELECOM Bretagne – INSERM)</i>	
FrDPo07: 16:00-17:30 Catalinas/Golden Horn	
2.7.5 Image Segmentation IV (Poster Session)	
16:00-17:30	FrDPo07.1
Segmentation for Classification of Gastroenterology Images	4744-4747
<i>Coimbra, Miguel (Inst. de Telecomunicações / Univ. do Porto); Riaz, Farhan* (Univ. do Porto); Areia, Miguel (Portuguese Inst. of Oncology); Areia, Miguel (Portuguese Oncology Inst. – Coimbra); Ribeiro, Mario Dinis (Univ. do Porto)</i>	
16:00-17:30	FrDPo07.2
A Spectral K-Means Approach to Bright-Field Cell Image Segmentation	4748-4751
<i>Bradbury, Laura (Univ. of Waterloo); Wan, Justin* (Univ. of Waterloo)</i>	
16:00-17:30	FrDPo07.3
Soft Thresholding for Medical Image Segmentation	4752-4755
<i>Aja-Fernandez, Santiago* (Univ. de Valladolid); Vegas-Sanchez-Ferrero, Gonzalo (Univ. de Valladolid); Martin-Fernandez, Miguel Angel (Univ. de Valladolid)</i>	
16:00-17:30	FrDPo07.4
Stery-Hand: A New Device to Support Hand Disinfection	4756-4759
<i>Szilagyi, Laszlo* (Budapest Univ of Tech & Economics); Lehotsky, Ákos (Dept. of Control Engineering & Information Tech., Budapest Univ. of Tech. & Economics, Hungary); Nagy, Melinda (Budapest Univ. of Tech. & Economics); Haidegger, Tamas (Budapest Univ. of Tech. & Economics); Benyo, Balazs Istvan (Szechenyi Istvan Univ.); Benyo, Zoltan (Budapest Univ of Tech & Economics)</i>	
16:00-17:30	FrDPo07.5
Manual Measurement of Retinal Bifurcation Features	4760-4764
<i>Al-Diri, Bashir (The Univ. of Lincoln); Hunter, Andrew* (Univ. of Lincoln); Steel, David (Sunderland Eye Infirmary); Maged, Habib (Sunderland Eye Infirmary)</i>	
16:00-17:30	FrDPo07.6
Multi Scale and Slice-Based Approach for Automatic Spine Detection	4765-4768
<i>Zhang, Yong* (IBM Almaden Research Center)</i>	
16:00-17:30	FrDPo07.7
Inter-Greedy Technique for Fusion of Different Carotid Segmentation Boundaries Leading to High-Performance IMT Measurement	4769-4772
<i>Molinari, Filippo* (Politecnico di Torino); Zeng, Guang (Mayo Clinic); Suri, Jasjit (Biomedical Technologies)</i>	
16:00-17:30	FrDPo07.8
Morphological Segmentation for Sagittal Plane Image Analysis	4773-4776
<i>Bezerra, Francisco Nivando (Inst. Federal de Educação Ciência e Tecnologia); Paula Jr, Ialis Cavalcante* (Federal Univ. of Ceará); Medeiros, Fátima N.S. (Federal Univ. of Ceara); Ushizima, D M (Lawrence Berkeley Natl. Lab); Cintra, Luis Henrique (Somma Physioterapy Center)</i>	

16:00-17:30	FrDPo07.9
Three Dimensional Template Matching Segmentation Method for Motile Cells in 3D+t Video Sequences 4777-4780	
<i>Pimentel, Jaime Arturo (Univ. Nacional Autónoma de México); Corkidi, Gabriel* (Inst. de Biotecnología, UNAM)</i>	
16:00-17:30	FrDPo07.11
Pectoral Muscle Detection in Mammograms Based on Polar Coordinates and the Shortest Path 4781-4784	
<i>Cardoso, Jaime S. (INESC Porto, Faculdade de Engenharia, Univ. do Porto); Domingues, Inês* (Univ. do Porto, Faculdade de Engenharia); Amaral, Igor (INESC Porto); Moreira, Ines (Centro de Mama – Hospital S. João, Porto); Almeida Passarinho, Pedro Miguel (Emílio de Azevedo Campos, SA); Santa Comba, Joao (Emilio de Azevedo Campos, SA); Cruz-Correia, Ricardo João (CINTESIS – Centre for Research in Health Technologies & Information Systems); Cardoso, Maria João (Porto Faculty of Medicine)</i>	
16:00-17:30	FrDPo07.12
Airborne Asbestos Fibers Detection in Microscope Images Using Re-Initialization Free Active Contours 4785-4788	
<i>Theodosiou, Zenonas* (Cyprus Univ. of Tech.); Tsapatsoulis, Nicolas (Cyprus Univ. of Tech.); Bujak-Pietrek, Stella (Nofer Inst. of Occupational Medicine); Szadkowska-Stanczyk, Irena (Nofer Inst. of Occupational Medicine)</i>	
FrDPo08: 16:00-17:30	Catalinas/Golden Horn
2.7.7 Image Segmentation V (Poster Session)	
16:00-17:30	FrDPo08.1
Temporal Segmentation of Lung Region MR Image Sequences Using Hough Transform 4789-4792	
<i>Tavares, Renato Seiji (Escola Politecnica da Univ. de Sao Paulo); Sato, André Kubagawa (Escola Politecnica da Univ. de Sao Paulo); Tsuzuki, Marcos de Sales Guerra* (Escola Politecnica da Univ. de Sao Paulo); Gotoh, Toshiyuki (Yokohama Natl. Univ.); Kagei, Seiichiro (Yokohama Natl. Univ.); Iwasawa, Tae (Kannagawa Cardiovascular & Respiratory Centre)</i>	
16:00-17:30	FrDPo08.2
An Improved Gradient Vector Flow Algorithm for Optic Disc Segmentation 4793-4796	
<i>Zhou, Huiyu (Queen's Univ. Belfast); Schaefer, Gerald* (Loughborough Univ.); Liu, Tangwei (Guangxi Medical Univ.); Lin, Faquan (Guangxi Medical Univ.)</i>	
16:00-17:30	FrDPo08.3
Efficient Liver Surgery Planning in 3D Based on Functional Segment Classification and Volumetric Information 4797-4800	
<i>Debarba, Henrique G. (Univ. de Caxias do Sul e Univ. Federal do Rio Grande do Sul); Zanchet, Dinamar (Univ. Federal de Ciências da Saúde de Porto Alegre); Fracaro, Daiane (Univ. de Caxias do Sul); Maciel, Anderson* (Univ. de Caxias do Sul); Kalil, Antonio N. (Univ. Federal de Ciências da Saúde de Porto Alegre)</i>	
16:00-17:30	FrDPo08.4
Detecting Tubular Structures Via Direct Vector Field Singularity Characterization 4801-4804	
<i>Cabuk, Aytekin Durmus (Bogazici Univ.); Alpay, Erdenay (Bogazici Univ.); Acar, Burak* (Bogazici Univ.)</i>	
16:00-17:30	FrDPo08.5
Decoupled External Forces in a Predictor-Corrector Segmentation Scheme for LV Contours in Tagged MR Images 4805-4808	
<i>Garcia-Barnes, Jaume* (Computer Vision Center); Andaluz, Albert (Computer Vision Center); Carreras, Francesc (Hospital de Sant Pau); Gil, Debora (Computer Vision Center)</i>	
16:00-17:30	FrDPo08.6
Improved Gradient Vector Flow for Robust Shape Estimation in Medical Imaging 4809-4812	
<i>Nascimento, Jacinto* (Inst. Superior Técnico)</i>	
16:00-17:30	FrDPo08.7
Segmentation of Cell Clumps for Quantitative Analysis 4813-4816	
<i>Li, Simon* (Univ. of Oxford); Buehnenmann, Claudia (Univ. of Oxford); Hassan, Bass (Univ. of Oxford); Noble, J Alison (Univ. of Oxford)</i>	
16:00-17:30	FrDPo08.8
Mixture Model-Based Approach for Optic Cup Segmentation 4817-4820	
<i>Tan, Ngan Meng* (A*STAR, Inst. for Infocomm Research); Liu, Jiang (Inst for Infocomm Resrch, A STAR); Wong, Damon (Inst. for Infocomm Research); Yin, Fengshou (Inst. for Infocomm Research); Lim, Joo Hwee (Inst. for Infocomm Research); Wong, Tien Yin (Natl. Univ. of Singapore)</i>	

6.2.7 Analysis of Neural Signals II (Poster Session)

16:00-17:30

FrDPo09.1

A Machine Learning Based Method for Classification of Fractal Features of Forearm**Semg Using Twin Support Vector Machines 4821-4824***Naik, Ganesh R* (Royal Melbourne Univ. of Tech); Poosapadi Arjunan, Sridhar (RMIT Univ.)*

16:00-17:30

FrDPo09.2

Time Robust Movement Direction Decoding in Local Field Potentials Using Channel Ranking 4825-4828*Tadipatri, Vijay Aditya* (Univ. of Minnesota); Tewfik, Ahmed (Univ. of Minnesota); Gowreesunker, B. Vikram (Texas Instruments Inc.); Ashe, James (Univ. of Minnesota); Pellizzer, Giuseppe (VA Medical Center); Gupta, Rahul (Medtronic, Inc.)*

16:00-17:30

FrDPo09.3

The Excitation Functional for Magnetic Stimulation of Fibers 4829-4833*Suarez-Bagnasco, Diego* (School of Medicine, CLAEH, Punta del Este – Uruguay); Armentano, Ricardo Luis (Favaloro Univ.); Suarez-Antola, Roberto (Catholic Univ. of Uruguay)*

16:00-17:30

FrDPo09.4

Assessment of Nonlinear Interactions in Event-Related Potentials (ERPs) Elicited by Stimuli**Presented at Short Inter-Stimulus Intervals 4834-4837***Mitsis, Georgios D.* (Univ. of Cyprus); Iannetti, Gian Domenico (Univ. College London)*

16:00-17:30

FrDPo09.5

The Minimum Interval for Confident Spike Sorting: A Sequential Decision Method 4838-4841*Hebert, Paul* (California Inst. of Tech.); Burdick, Joel W. (Caltech)*

16:00-17:30

FrDPo09.6

Study of Neuronal Networks Development from In-Vitro Recordings:**A Granger Causality Based Approach 4842-4845***Lamanna, Jacopo (Politecnico di Milano); Esposti, Federico (Politecnico di Milano); Signorini, Maria G.* (Politecnico di Milano)***6.6.1 Neuromuscular Systems I (Poster Session)**

16:00-17:30

FrDPo10.1

Improvement in Off-Axis Neuromuscular Control through Pivoting Elliptical Training:**Implication for Knee Injury Prevention 4846-4849***Lee, Song Joo* (Northwestern Univ., Rehab. Inst. of Chicago); Ren, Yupeng (Rehab. Inst. of Chicago); Geiger, François (RIC); Chang, Alison (Northwestern Univ., Dept. of Physical Therapy & Human Movement Sciences); Press, Joel (Rehab. Inst. of Chicago); Zhang, Liqun (Northwestern Univ.)*

16:00-17:30

FrDPo10.2

Robust Outlier Detection in High-Density Surface Electromyographic Signals 4850-4853*Marateb, Hamid Reza (Laboratorio di Ingegneria del Sistema Neuromuscolare (LISiN), Dipartimento di Elettronica, Politecnico di Torino); Rojas, Mónica* (Technical Univ. of Catalonia); Mañanas, Miquel Angel (Technical Univ. of Catalonia (UPC)); Merletti, Roberto (Dipartimento di Elettronica, Politecnico di Torino)*

16:00-17:30

FrDPo10.3

Controlling Swing Foot Center of Mass and Toe Trajectory to Minimize Tripping Risk 4854-4857*Nagano, Hanatsu (Victoria Univ.); Begg, Rezaul* (Victoria Univ.); Sparrow, William (Victoria Univ.)*

16:00-17:30

FrDPo10.4

Energy Expenditure During Human Gait. II – Role of Muscle Groups 4858-4861*Rodrigo, Silvia E.* (Medical Tech. Cabinet, Natl. Univ. of San Juan); García, Isabel (Univ. of Zaragoza, Zaragoza, Spain.); Franco, Marian (School of Health Sciences, Univ. of Zaragoza, Spain); Alonso-Vazquez, Ana (Group of Structural Mechanics & Materials Modelling, I3A, UZ, Spain.); Ambrosio, Jorge A. (Technical Superior Inst., Technical Univ. of Lisbon, Portugal.)*

16:00-17:30	FrDPo10.5
Fasciated Nerve-Muscle Explants for in Vitro Comparison of Magnetic and Electrical Neuromuscular Stimulation	4862-4865
<i>Goetz, Stefan* (TU Muenchen); Helling, Florian (TU Muenchen); Emrich, Daniela (LMU Muenchen); Weyh, Thomas (TU Muenchen); Herzog, Hans-Georg (TU Muenchen)</i>	
16:00-17:30	FrDPo10.6
Dynamic Simulation of Perturbation Responses in a Closed-Loop Virtual Arm Model	4866-4869
<i>Du, Yu Fan (Shanghai Jiao Tong Univ.); He, Xin (Shanghai Jiao Tong Univ.); Lan, Ning* (Shanghai Jiao Tong Univ.)</i>	
16:00-17:30	FrDPo10.7
An EMG-Driven Musculoskeletal Model for the Estimation of Biomechanical Parameters of Wrist Flexors	4870-4873
<i>Colacino, Francesco Maria* (Univ. of Southampton); Rustighi, Emiliano (Univ. of Southampton); Mace, Brian (Univ. of Southampton)</i>	
16:00-17:30	FrDPo10.8
Evaluation of Motor Unit Placement Algorithms for EMG Simulation	4874-4877
<i>Hamilton-Wright, Andrew* (Mount Allison Univ.); Navallas, Javier (Univ. Publica de Navarra); Stashuk, Daniel William (Univ. of Waterloo)</i>	
16:00-17:30	FrDPo10.9
Discrimination of EMG and Acceleration Measurements between Patients with Parkinson's Disease and Healthy Persons	4878-4881
<i>Rissanen, Saara Mirjami (Univ. of Eastern Finland); Kankaanpää, Markku Juhani (Kuopio Univ. Hospital); Tarvainen, Mika (Univ. of Eastern Finland); Meigal, Alexander (Petrozavodsk State Univ.); Nuutinen, Juho (Univ. Hospital of Kuopio); Jäkälä, Pekka Artti (Finnish Brain Research & rehabilitation Center Neuron, Kuopio, Finland); Airaksinen, Veikko Olavi Pietari (Kuopio Univ. Hospital); Karjalainen, Pasi, A* (Univ. of Eastern Finland)</i>	
16:00-17:30	FrDPo10.10
A Mixed FES/EMG System for Real Time Analysis of Muscular Fatigue	4882-4885
<i>Yochum, Maxime (LE2I UMR CNRS 5158 Univ. de Bourgogne); Binczak, Stéphane* (LE2I UMR CNRS 5158 Univ. de Bourgogne); Bakir, Toufik (LE2I UMR CNRS 5158 Univ. de Bourgogne); Jacquir, Sabir (LE2I UMR CNRS 5158, Univ. de Bourgogne); Lepers, Romuald (INSERM U887, Univ. de Bourgogne)</i>	
16:00-17:30	FrDPo10.11
A Study on the Forearm Muscular Reflexes During Grasping for Prosthetic Applications	4886-4889
<i>Soma, Hirokazu* (Chiba Univ.); Horiuchi, Yuse (Chiba Univ.); Gonzalez Vargas, Jose Eduardo (Chiba Univ.); Yu, Wenwei (Univ. of Chiba)</i>	
16:00-17:30	FrDPo10.12
On the Feasibility of Learning to Predict Minimum Toe Clearance under Different Walking Speeds	4890-4893
<i>Lai, Tze Huei, Daniel (Victoria Univ.); Shilton, Alistair (The Univ. of Melbourne); Begg, Rezaul* (Victoria Univ.)</i>	

FrDPo11: 16:00-17:30	Catalinas/Golden Horn
6.6.2 Neuromuscular Systems II (Poster Session)	

16:00-17:30	FrDPo11.1
Neuromuscular Properties of Different Spastic Human Joints Vary Systematically	4894-4897
<i>Mirbagheri, Mehdi* (Northwestern Univ./RIC); Settle, Krista (Rehab. Inst. of Chicago)</i>	
16:00-17:30	FrDPo11.2
A Novel Dynamic Sensing of Wearable Digital Textile Sensor with Body Motion Analysis	4898-4901
<i>Yang, Chang-Ming (Ming Yang Biomedical Corp.); Lin, Zhan-Sheng (Industrial Tech. Research Inst.); Hu, Chang-Lin* (Industrial Tech. Research Inst.)</i>	
16:00-17:30	FrDPo11.3
An EMG-Based Handwriting Recognition through Dynamic Time Warping	4902-4905
<i>Huang, Gan (Shanghai Jiao Tong Univ.); Zhang, Dingguo* (Shanghai Jiao Tong Univ.)</i>	

16:00-17:30	FrDPo11.4
A Foot Drop Correcting FES Envelope Design Method Using Tibialis Anterior EMG During Healthy Gait with a New Walking Speed Control Strategy 4906-4909	
Chen, Mo* (Zhejiang Univ.); Wang, Qing Bo (Zhejiang Univ.); Lou, Xin Xin (Zhejiang Univ.); Xu, Kai (Zhejiang Univ.); Zheng, Xiao Xiang (Zhejiang Univ.)	
16:00-17:30	FrDPo11.5
A Methodological Study for the Multifactorial Assessment of Motor Adaptation: Integration of Kinematic and Neural Factors 4910-4913	
Molteni, Erika* (Politecnico di Milano); Preatoni, Ezio (Politecnico di Milano); Cimolin, Veronica (Politecnico di Milano – Dipartimento di Bioingegneria); Bianchi, Anna Maria (Politecnico di Milano); Galli, Manuela (Politecnico di Milano); Rodano, Renato (Politecnico di Milano – Dipartimento di Bioingegneria)	
16:00-17:30	FrDPo11.6
Intrinsic, Reflex and Voluntary Contributions to Task-Dependent Joint Stiffness 4914-4917	
Ludvig, Daniel* (McGill Univ.); Kearney, Robert Edward (McGill Univ.)	
16:00-17:30	FrDPo11.7
Predicting Losses of Balance During Upright Stance: Evaluation of a Novel Approach Based on Wearable Accelerometers 4918-4921	
Turcato, Andrea (Univ. of Pavia); Ramat, Stefano* (Univ. di Pavia)	
16:00-17:30	FrDPo11.8
Electromyographic Evaluation of Muscle Recovery after Isometric Fatigue 4922-4925	
Peixoto, Luciana Roberta Tenorio* (Univ. of Brasilia); da Rocha, Adson F. (Univ. of Brasilia); Carvalho, Joao Luiz Azevedo de (Univ. of Brasilia); Goncalves, Carlos Alberto (Univ. of Brasilia)	
FrDPo12: 16:00-17:30	Catalinas/Golden Horn
6.8.3 Clinical Neuroengineering – Neurological Disorders and Neurophysiology (Poster Session)	
16:00-17:30	FrDPo12.1
Muscle Activation Improvement During Stroke Rehabilitation by Using Treadmill Training at Ischemia Rat 4926-4929	
Li, Le (The Hong Kong Polytechnic Univ.); Rong, Wei (Dept of HTI, The Hong Kong Polytechnic Univ.); Ke, Zheng (The Hong Kong Polytechnic Univ.); Hu, Xiaoling (The Hong Kong Polytechnic Univ.); Yip, Shea Ping (The Hong Kong Polytechnic Univ.); Tong, Kai Yu, Raymond* (The Hong Kong Polytechnic Univ.)	
16:00-17:30	FrDPo12.2
Detection of Nocturnal Hypoglycemic Episodes Using EEG Signals 4930-4933	
Nguyen, Hung T.* (Univ. of Tech., Sydney); Jones, Timothy (Princess Margaret Hospital for Children)	
16:00-17:30	FrDPo12.3
Non-Linear Recurrence Analysis of NREM Human Sleep Microstructure Discloses Deterministic Oscillation Patterns Related to Sleep Stage Transitions and Sleep Maintenance 4934-4937	
Priano, Lorenzo (Univ. of Torino); Saccomandi, Fabio (INRIM); Mauro, Alessandro (Univ. of Torino); Guiot, Caterina* (Univ.)	
16:00-17:30	FrDPo12.4
Optimal Pulse Shapes for Magnetic Stimulation of Fibers: An Analytical Approach Using the Excitation Functional 4938-4941	
Suarez-Bagnasco, Diego* (School of Medicine, CLAEH, Punta del Este – Uruguay); Armentano, Ricardo Luis (Favaloro Univ.)	
16:00-17:30	FrDPo12.6
Histogram Based Quantification of Spinal Cord Injury Level Using Somatosensory Evoked Potentials .. 4942-4945	
Mir, Hasan* (American Univ. of Sharjah); Al-Nashash, Hasan (American Univ. of Sharjah); Kerr, Douglas (Johns Hopkins Univ.); Thakor, Nitish (Johns Hopkins Univ.); All, Angelo (Johns Hopkins Univ.)	
16:00-17:30	FrDPo12.7
EEG Feature Selection Using Mutual Information and Support Vector Machine: A Comparative Analysis ... 4946-4949	
Guerrero-Mosquera, Carlos* (Univ. Carlos III de Madrid); Verleysen, Michel (Univ. Catholique de Louvain – UCL); Navia Vazquez, Ángel (Univ. Carlos III of Madrid)	

16:00-17:30 FrDPo12.8
A Closed-Loop Brain Computer Interface for Real-Time Seizure Detection and Control 4950-4953
Liang, Sheng-Fu (Natl. Cheng Kung Univ.); Shaw, Fu-Zen (Natl. Cheng Kung Univ.); Young, Chung-Ping (Natl. Cheng Kung Univ.); Chang, Da-Wei (Natl. Cheng Kung Univ.); Liao, Yi-Cheng (Natl. Cheng Kung Univ.)*

16:00-17:30 FrDPo12.9
Implementation of an iPhone for Characterizing Parkinson's Disease Tremor Through a Wireless Accelerometer Application 4954-4958
LeMoyné, Robert (UCLA); Mastroianni, Timothy (Cognition Engineering); Cozza, Michael (Converge Robotics Corp.); Coroian, Cristian (UCLA)*

FrE01: 17:30-19:00 Libertador A
1.2.4 Biomedical Modeling and Simulation IV (Oral Session)

17:30-17:45 FrE01.1
Calculation of Photon Path Changes Due to Scatter in Monte Carlo Simulations 4959-4962
Phillips, Justin (City Univ.); Kyriacou, Panayiotis (City Univ.); Jones, Deric (City Univ.)*

17:45-18:00 FrE01.2
Flow Behavior and Applicability of Models for Different Hemodynamic States 4963-4966
Cymberknop, Leandro Javier (Univ. Tecnológica Nacional – Facultad Regional Buenos Aires); Pessana, Franco (FICEN, Favaloro Univ.); Armentano, Ricardo Luis (Favaloro Univ.); Furfaro, Alejandro (Electronic Dept., Buenos Aires Regional Faculty, Natl. Technological Univ.)*

18:00-18:15 FrE01.3
Linear Parameter Varying System Based Modeling of Hemodynamic Response to Profiled Hemodialysis .. 4967-4970
Javed, Faizan (Univ. of New South Wales); Savkin, Andrey (Univ. of New South Wales); Chan, Gregory S H (The Univ. of New South Wales); Mackie, James (Prince of Wales Hospital, Sydney); Lovell, Nigel H (Univ. of New South Wales)*

18:15-18:30 FrE01.4
Cardiac Output and Stroke Volume Estimation Using a Hybrid of Three Windkessel Models 4971-4974
Arai, Tatsuya (Massachusetts Inst. of Tech.); Lee, Kichang (Massachusetts Inst. of Tech.); Cohen, Richard (Harvard Univ.-Massachusetts Inst. of Tech.)*

18:30-18:45 FrE01.5
Development of a System to Measure Local Measurement Conditions Around Textile Electrodes 4975-4978
Kim, Saim (RWTH Aachen Univ.); Oliveira, Joana (RWTH Aachen Univ.); Beckmann, Lisa (RWTH Aachen Univ.); Leonhardt, Steffen (RWTH Aachen Univ.)*

18:45-19:00 FrE01.6
Sensor Calibration Models for a Non-Invasive Blood Glucose Measurement Sensor 4979-4982
Stemmann, Meike (Lund Univ.); Ståhl, Fredrik (Lund Univ.); Lallemand, Jordane (Ondalys); Renard, Eric (Hospitaller Univ. de Montpellier); Johansson, Rolf (Lund Univ.)*

FrE02: 17:30-19:00 Libertador B
2.5.2 Electrical Impedance Imaging Techniques II (Oral Session)

17:30-17:45 FrE02.1
A Study of Forward Problem of Magnetoacoustic Tomography with Magnetic Induction 4983-4986
Wenjing, He (Graduate School, Chinese Academy of Science); Liu, Guoqiang (Chinese Academy of Sciences); Zhang, Yang (Electrical Engineering Inst. of Chinese Academy of Sciences); Xiaoping, Zeng (Inst. of Electrical Engineering of Chinese Academy of Sciences, Beijing, China)*

17:45-18:00 FrE02.2
Experimental Verification of Contrast Mechanism in Magnetic Resonance Electrical Impedance Tomography (MREIT) 4987-4990
Kim, Young Tae (Kyung Hee Univ.); Oh, Tong In (Kyunghee Univ.); Woo, Eung Je (Kyung Hee Univ.)*

18:00-18:15 FrE02.3
Towards Non-Invasive EIT Imaging of Domains with Deformable Boundaries 4991-4995
Kantartzis, Panagiotis (City Univ. London); Kunothe, Angela (Univ. Paderborn);*
Pabel, Roland (Univ. of Paderborn); Liatsis, Panos (City Univ.)

18:15-18:30 FrE02.4
Electrical Impedance Tomography Reconstruction Using a Monotonicity Approach
Based on a Prior Knowledge 4996-4999
Flores-Tapia, Daniel (CancerCare Manitoba); Pistorius, Stephen (CancerCare Manitoba / Univ. of Manitoba)*

18:30-18:45 FrE02.5
A Fisher Information Matrix Interpretation of the NOSER Algorithm in Electrical Impedance Tomography .. 5000-5005
Hashemzadeh, Parham (Middlesex Univ.); Kantartzis, Panagiotis (City Univ. London); Zifan, Ali (City Univ.);*
Liatsis, Panos (City Univ.); Nordebo, Sven (School of Computer Science, Physics & Mathematics, Linnaeus
Univ.); Bayford, Richard H. (Middlesex Univ.)

18:45-19:00 FrE02.6
Polar Decomposition Radio-Frequency Current Density Imaging 5006-5009
Ma, Angela W. (Univ. of Toronto); Wang, Dinghui (Univ. of Toronto); DeMonte, Tim P. (Field Metrica Inc.);*
Nachman, Adrian I. (Univ. of Toronto); Joy, Michael L.G. (Univ. of Toronto)

FrE03: 17:30-19:00 3.5.2 Wireless Sensors and Systems (Oral Session)	Libertador C
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17:30-17:45 FrE03.1
Experimental Demonstration of Noncontact Pulse Wave Velocity Monitoring Using Multiple
Doppler Radar Sensors 5010-5013
Lu, Li (Texas Tech Univ.); Li, Changzhi (Texas Tech Univ.); Lie, Donald (Texas Tech Univ.)*

17:45-18:00 FrE03.2
Preliminary Characterization of a Glucose-Sensitive Hydrogel 5014-5017
Beier, Brooke (Purdue Univ.); Brandner, Eric (Purdue Univ.); Musick, Katherine (Purdue Univ.);*
Matsumoto, Akira (Univ. of Tokyo); Nauman, Eric (Purdue Univ.); Irazoqui, Pedro (Purdue Univ.)

18:00-18:15 FrE03.3
Towards Unobtrusive in Vivo Monitoring of Patients Prone to Falling 5018-5021
Karel, Joël (Maastricht Univ.); Senden, Rachel (Maastricht Univ.); Janssen, Joep (Maastricht Univ.);*
Savelberg, Hans (Maastricht Univ.); Grimm, B. (Atrium MC Heerlen); Heyligers, I.C. (Atrium MC Heerlen);
Peeters, Ralf (Univ. Maastricht); Meijer, Kenneth (NUTRIM School of Nutrition, Toxicology & Metabolism,
Maastricht Univ. Medical Centre)

18:15-18:30 FrE03.4
Wireless Transmission of Cardiac Action Potentials with Ultrasonically
Guided Insertion of Silicon Probes 5022-5025
Shen, Ching-Ping (Cornell Univ.); Ramkumar, Abhishek (Cornell Univ.); Lal, Amit (Cornell Univ.);*
Gilmour, Robert (Cornell Univ.)

18:30-18:45 FrE03.5
Introducing Knowledge of Wearing Compression Stockings on the Skin Blood Flow by
Using μ Hematron Device 5026-5029
Toumi, Dareen (INSA Lyon); Gehin, Claudine (INSA Lyon); Grenier, Etienne (INSA Lyon);*
Dittmar, Andre (INSA Lyon); McAdams, Eric (Univ. of Ulster)

18:45-19:00 FrE03.6
A Miniature, Wearable Activity/Fall Monitor to Assess the Efficacy of Mobility Therapy for Children
with Cerebral Palsy During Everyday Living 5030-5033
Smith, Warren (California State Univ., Sacramento); Bagley, Anita (Shriners Hospitals for Children)*

2.7.12 Image Segmentation II (Oral Session)

17:30-17:45

FrE04.1

Real Time Mri Prostate Segmentation Based on Wavelet Multiscale Products Flow Tracking 5034-5037

Flores-Tapia, Daniel (CancerCare Manitoba); Niranjan, Venugopal (Univ. of Manitoba); Thomas, Gabriel (Univ. of Manitoba); McCurdy, Boyd (CancerCare Manitoba); Ryner, Lawrence (Inst. of Biodiagnostics); Pistorius, Stephen (CancerCare Manitoba / Univ. of Manitoba)*

17:45-18:00

FrE04.2

Brain Volume Segmentation in Newborn Infants Using Multi-Modal MRI with a Low Inter-Slice Resolution 5038-5041

Despotovic, Ivana (Gent Univ.)*

18:00-18:15

FrE04.3

Multiphase Level Set Algorithm for Coupled Segmentation of Multiple Regions.**Application to MRI Segmentation 5042-5045**

Merino-Caviedes, Susana (Univ. de Valladolid); Pérez, María Teresa (Univ. of Valladolid); Martín-Fernandez, Marcos (Univ. of Valladolid)*

18:15-18:30

FrE04.4

A Novel Object-Oriented Stereo Matching on Multi-Scale Superpixels for Low-Resolution Depth Mapping ... 5046-5049

Tong, Hanyang (Zhejiang Univ. of Tech.); Liu, Sheng (Zhejiang Univ. of Tech.); Liu, Nianjun (Natl. ICT Australia Limited); Barnes, Nick (NICTA Canberra Research Center)*

18:30-18:45

FrE04.5

Analysis of Lipid Vesicle Populations from Microscopy Video Sequences 5050-5053

Zupanc, Jernej (Faculty of Computer & Information Science); Bas, Erhan (Northeastern Univ.); Erdogmus, Deniz (Northeastern Univ.)*

18:45-19:00

FrE04.6

Improving a CAD System Using Bilateral Information 5054-5057

Tortajada, Meritxell (Univ. of Girona); Oliver, Arnau (Univ. of Girona); Díez, Yago (Univ. of Girona); Martí, Robert (Univ. of Girona); Freixenet, Jordi (Univ. of Girona); Vilanova, Joan Carles (Univ. of Girona)*

6.7.4 Neurorehabilitation – Prosthesis (Oral Session)

17:30-17:45

FrE05.1

Selection of Sampling Rate for EMG Pattern Recognition Based Prosthesis Control 5058-5061

Li, Guanglin (Shenzhen Inst. of Advanced Tech., Chinese Academy of Sciences); Li, Yaonan (Purdue Univ.); Zhang, Zhiyong (Shenzhen Inst. of Advanced Tech.); Geng, Yanjuan (Shenzhen Inst. of Advanced Tech.); Zhou, Rui (Shenzhen Inst. of Advanced Tech)*

17:45-18:00

FrE05.2

A Multigrasp Hand Prosthesis for Transradial Amputees 5062-5065

Dalley, Skyler (Vanderbilt Univ.); Wiste, Tuomas (Vanderbilt Univ.); Varol, Huseyin Atakan (Vanderbilt Univ.); Goldfarb, Michael (Vanderbilt Univ.)*

18:00-18:15

FrE05.3

Structural Preservation of Deafferented Cortex Induced by Electrical Stimulation of a Sensory**Peripheral Nerve 5066-5069**

Herrera-Rincón, Celia (Complutense Univ. of Madrid); Torets, Carlos (Complutense Univ. of Madrid); Sanchez-Jimenez, Abel (Complutense Univ. of Madrid); Avendaño, Carlos (Faculty of Medicine, Autonomous Univ. of Madrid); Guillen, Pedro (Complutense Univ. of Madrid); Panetsos, Fivos (Complutense Univ. of Madrid)*

18:15-18:30	FrE05.4
Acquisition of Myoelectric Signals to Control a Hand Prosthesis with Implantable Epimysial Electrodes 5070-5073	
<i>Ruff, Roman* (Fraunhofer Inst. für Biomedizinische Technik); Poppendieck, Wigand (Fraunhofer Inst. für Biomedizinische Technik); Gail, Alexander (German Primate Center & the Bernstein Center for Computational Neuroscience); Westendorff, Stephanie (German Primate Center & the Bernstein Center for Computational Neuroscience); Russold, Michael (Otto Bock Healthcare Products GmbH); Lewis, Sören (Otto Bock Healthcare Products GmbH); Meiners, Thomas (Werner-Wicker-Klinik); Hoffmann, Klaus-Peter (Fraunhofer Inst.)</i>	
18:30-18:45	FrE05.5
Rechargeable Wireless EMG Sensor for Prosthetic Control 5074-5076	
<i>Lichter, Patrick (Koronis Biomedical Technologies); Riehle, Timothy (Koronis Biomed. Technologies Corp.); Anderson, Shane (Koronis Biomedical Technologies); Hedin, Daniel* (Advanced Medical Electronics); Lange, Erik (PYXIS Integrated Technologies, LLC)</i>	
18:45-19:00	FrE05.6
Toward Improved Sensorimotor Integration and Learning Using Upper-Limb Prosthetic Devices 5077-5080	
<i>Gillespie, R. Brent* (Univ. of Michigan); Contreras-Vidal, José (Univ. of Maryland); Shewokis, Patricia A (Drexel Univ.); O'Malley, Marcia K. (Rice Univ.); Brown, Jeremy (Univ. of Michigan); Agashe, Harshavardhan (Univ. of Maryland-College Park); Gentili, Rodolphe (Univ. of Maryland); Davis, Alicia (Univ. of Michigan)</i>	
FrE06: 17:30-19:00	Retiro C
1.4.4 Biomedical Signal Classification IV (Oral Session)	
17:30-17:45	FrE06.1
Automatic Annotation of Actigraphy Data for Sleep Disorders Diagnosis Purposes 5081-5084	
<i>Domingues, Alexandre* (Inst. Superior Técnico); Adamec, Ondrej (VSB Technical Univ. of Ostrava); Paiva, Teresa (Inst. Superior Técnico); Sanches, J. Miguel (Inst. for Systems & Robotics, NIF)</i>	
17:45-18:00	FrE06.2
Automatic Detection of a Phases of the Cyclic Alternating Pattern During Sleep 5085-5088	
<i>Mariani, Sara* (Politecnico di Milano); Bianchi, Anna Maria (Politecnico di Milano); Manfredini, Elena (Politecnico di Milano, Dept. of Biomedical Engineering); Rosso, Valentina (Sleep Disorders Centre, Dept. of Neurology, Univ. of Parma, Parma, Italy); Mendez, Martin Oswaldo (Univ. Autonoma de San Luis Potosi); Parrino, Liborio (Sleep Disorders Centre, Dept. of Neurology, Univ. of Parma, Parma, Italy); Matteucci, Matteo (Politecnico di Milano); Grassi, Andrea (Sleep Disorders Centre, Dept. of Neurology, Univ. of Parma, Parma, Italy); Cerutti, Sergio (Politecnico di Milano); Terzano, Mario Giovanni (Sleep Disorders Centre, Dept. of Neurology, Univ. of Parma, Parma, Italy)</i>	
18:00-18:15	FrE06.3
Sleep/Wake Detection Based on Cardiorespiratory Signals and Actigraphy 5089-5092	
<i>Devot, Sandrine* (Philips Research Europe); Dratwa, Reimund (Philips Research Europe); Naujokat, Elke (Philips Research Europe Laboratories)</i>	
18:15-18:30	FrE06.4
REM Behaviour Disorder Detection Associated with Neurodegenerative Diseases 5093-5096	
<i>Kempfner, Jacob* (Technical Univ. of Denmark); Sorensen, Gertrud Laura (Technical Univ. of Denmark); Zoetmulder, Marielle (Danish Centre for Sleep Medicing); Jennum, Poul (Danish Centre for Sleep Medicing); Sorensen, Helge (Technical Univ. of Denmark)</i>	
18:30-18:45	FrE06.5
Automated Polysomnogram Artifact Compensation Using the Generalized Singular Value Decomposition Algorithm 5097-5100	
<i>Fairley, Jacqueline (Emory Univ.); Johnson, Ashley* (Georgia Inst. of Tech.); Georgoulas, George (Univ. of Patras); Vachtsevanos, George (Georgia Inst. of Tech.)</i>	
18:45-19:00	FrE06.6
The Mean Value of the Descriptors of the Pathological Events Recorded on the Polysomnogram As a Support Tool in the Diagnosis of SAHS 5101-5104	
<i>Otero, Abraham* (San Pablo CEU); Félix Lamas, Paulo (Univ. of Santiago de Compostela); Rodríguez Álvarez, Miguel (Univ. of Santiago de Compostela); Zamarrón, Carlos (Hospital Clínico Univ.)</i>	

8.7.1 Modeling and Biomechanics (Oral Session)

17:30-17:45

FrE07.1

Comparison of Two Commercial Patellofemoral Prostheses by Means of Computational Modeling 5105-5108

Muller, Cobus* (Stellenbosch Univ.); Scheffer, Cornie (Stellenbosch Univ.); Erasmus, P. J. (Stellenbosch Medi-clinic); Dillon, Edwin (Stellenbosch Medi-clinic); Elvin, Alex (Univ. of the Witwatersrand)

17:45-18:00

FrE07.2

Force Feedback in Limb Lengthening 5109-5112

Wee, Jinyong (Drexel Univ.); Rahman, Tariq* (Nemours); Seliktar, Rahamim (Drexel Univ.); Akins, Robert (Nemours – A.I. duPont Hospital for Children); Levine, David (Univ. of Pennsylvania); Richardson, Dean (Univ. of Pennsylvania); Dodge, George (Univ. of Pennsylvania); Thabet, Ahmed (Benha Medical School); Holmes, Lauren (A.I. duPont Hospital for Children); Mackenzie, William (A.I. duPont Hospital for Children)

18:00-18:15

FrE07.3

Contact Stresses in a Patient-Specific Unicompartmental Knee Replacement 5113-5116

Van Den Heever, Dawie (Stellenbosch Univ.); Scheffer, Cornie* (Stellenbosch Univ.); Erasmus, P. J. (Stellenbosch Medi-clinic); Dillon, Edwin (Stellenbosch Medi-clinic)

18:15-18:30

FrE07.4

The Sacroiliac Spine – Computer Simulation of Motion and Modeling of the Ligaments 5117-5120

Buford, Jr., William L* (The Univ of Texas Medical Branch); Moulton, Darrell (Univ of Texas Medical Branch); Gugala, Zbigniew (Univ of Texas Medical Branch); Lindsey, Ronald (Univ of Texas Medical Branch)

18:30-18:45

FrE07.5

Self-Powered Instrumented Knee Implant for Early Detection of Postoperative Complications 5121-5124

Almouahed, Shaban* (Inst. Télécom – Télécom Bretagne); Gouriou, Manuel (Inst. Télécom – Télécom Bretagne); Hamitouche, Chafiaâ (Ecole Natl.e Supérieure des Télécommunications de Bretagne); Stindel, Eric (Univ. de Bretagne Occidentale); Roux, Christian (TELECOM Bretagne – INSERM)

18:45-19:00

FrE07.6

Repeatability of an Off-The-Shelf, Full Body Inertial Motion Capture System During Clinical Gait Analysis 5125-5128

Scheffer, Cornie* (Stellenbosch Univ.); Cloete, Teunis (Stellenbosch Univ.)

2.9.1 EEG Neuroimaging (Oral Session)

17:30-17:45

FrE08.1

Sources of Non-Physiologic Noise in Simultaneous EEG-fMRI Data: a phantom study 5129-5132

Politte, David (Washington Univ. School of Medicine); Prior, Fred (Washington Univ. School of Medicine); Ponton, Curtis (Compumedics Neuroscan Inc.); Nolan, Tracy (Washington Univ. School of Medicine); Larson-Prior, Linda* (Washington Univ. in St. Louis)

17:45-18:00

FrE08.2

Detection of EEG Electrodes in Brain Volumes 5133-5136

Graffigna, Juan Pablo* (Univ. Nacional de San Juan); Gómez, María Eugenia (Univ. Nacional de San Juan); Bustos, José Javier (Univ. Nacional de San Juan, Argentina)

18:00-18:15

FrE08.3

Localization of Class-Related Mu-Rhythm Desynchronization in Motor Imagery Based**Brain-Computer Interface Sessions 5137-5140**

Haufe, Stefan* (Berlin Inst. of Tech.); Tomioka, Ryota (The Univ. of Tokyo); Dickhaus, Thorsten (Berlin Inst. of Tech.); Sannelli, Claudia (Berlin Inst. of Tech., BBCI Group); Blankertz, Benjamin (Berlin Inst. of Tech.); Nolte, Guido (Fraunhofer FIRST); Müller, Klaus-Robert (Berlin Inst. of Tech.)

18:15-18:30

FrE08.4

DYNAMO: Dynamic Multi-Model Source Localization Method for EEG And/or MEG 5141-5144

Antelis, Javier M.* (Univ. of Zaragoza); Minguez, Javier (Zaragoza Univ.)

18:30-18:45 FrE08.5
Variation-Based Sparse Cortical Current Density Imaging in Estimating Cortical Sources with MEG Data ... 5145-5148
Ding, Lei (Univ. of Oklahoma); Zhu, Min (Univ. of Oklahoma); Zhang, Wenbo (Minnesota Epilepsy Group); Dickens, Deanna (Minnesota Epilepsy Group)*

18:45-19:00 FrE08.6
3D Reconstruction of Wireless Capsule Endoscopy Images 5149-5152
Fan, Yichen (The Chinese Univ. of Hong Kong); Meng, Max Q.-H. (The Chinese Univ. of Hong Kong); Li, Baopu (The Chinese Univ. of Hong Kong)*

FrE09: 17:30-19:00 Ombu A
5.5.1 Cardiovascular Imaging (Oral Session)

17:30-17:45 FrE09.1
Using Magnetic Resonance Imaging Measurements for the Determination of Local Wave Speed and Arrival Time of Reflected Waves in Human Ascending Aorta 5153-5156
Li, Ye (Brunel Univ.); Borlotti, Alessandra (Brunel Univ., London, UK); Hickson, Stacey (Univ. of Cambridge); McEnery, Carmel (Univ. of Cambridge); Wilkinson, Ian (Cambridge Univ.); Khir, Ashraf (Brunel Univ.)*

17:45-18:00 FrE09.2
Structured Light Imaging of Epicardial Mechanics 5157-5160
Laughner, Jacob (Washington Univ. in St. Louis); Gong, Yuanzheng (Iowa State Univ.); Filas, Benjamin (Washington Univ. in St. Louis); Zhang, Song (Iowa State Univ.); Efimov, Igor (Washington Univ. in St. Louis)*

18:00-18:15 FrE09.3
Observation of Capillary Flow in Human Skin During Tissue Compression Using CCD Video-Microscopy .. 5161-5164
Shibata, Masahiro (Shibaura Inst. of Tech.); Yamakoshi, Takehiro (Kanazawa Univ.); Yamakoshi, Ken-ichi (Kanazawa Univ.); Komeda, Takashi (Shibaura Inst. of Tech.)*

18:15-18:30 FrE09.4
A New Gradient-Based Algorithm for Edge Detection in Ultrasonic Carotid Artery Images 5165-5168
Morsy, Ahmed (Cairo Univ.); De Groot, Eric (AMC Vascular Imaging); Hassan, Ahmed (Cairo Univ.)*

18:30-18:45 FrE09.5
Silicone Rubber Trileaflet Valve Assessment Using Cardiovascular Magnetic Resonance Imaging 5169-5172
Garcia, Julio (Laval Univ.); Kadem, Lyes (Concordia Univ.); Pibarot, Philippe (Laval Univ.)*

18:45-19:00 FrE09.6
Patient Based Abdominal Aortic Aneurysm Rupture Risk Prediction Combining Clinical Visualizing Modalities with Fluid Structure Interaction Numerical Simulations 5173-5176
Xenos, Michalis (Stony Brook Univ., Dept of Biomedical Engineering); Rambhia, Suraj (Stony Brook Univ., Dept of Biomedical Engineering); Alemu, Yared (Stony Brook Univ., Dept of Biomedical Engineering); Einav, Shmuel (Tel Aviv & Stony Brook Univ.); Ricotta, John (Washington Hospital Center, Dept. of Surgery); Labropoulos, Nicos (Stony Brook Univ., Dept of Surgery); Tassiopoulos, Apostolos (Stony Brook Univ., Dept of Surgery); Bluestein, Danny (Stony Brook Univ.)*

18:45-19:00 FrE09.7
Multiscale Imaging of the Human Heart: Building the Foundation for Human Systems Physiology and Translational Medicine 5177-5180
Efimov, Igor (Washington Univ. in St. Louis); Fedorov, Vadim (Washington Univ. in St. Louis); Glukhov, Alexey (Washington Univ. in St. Louis); Lou, Qing (Washington Univ. in St. Louis); Ambrosi, Christina (Washington Univ. in St. Louis); Janks, Deborah (Washington Univ. in St. Louis); Hucker, William (Washington Univ. in St. Louis); Kurian, Thomas (Washington Univ. in St. Louis); Schuessler, Richard (Washington Univ. in St. Louis); Moazami, Nader (Washington Univ. in St. Louis)*

FrE10: 17:30-19:00 Ombu B
10.1.1 Personal Health Systems and Pervasive Health (Oral Session)

17:30-17:45 FrE10.1
E-Textile Platforms for Rehabilitation 5181-5184
Paradiso, Rita (Smartex srl); Cالدani, Laura (Smartex srl); Pacelli, Maria (Smartex s.r.l.); Negro, Francesco (Aalborg Univ., Aalborg, Denmark); Farina, Dario (Aalborg Univ.)*

17:45-18:00	FrE10.2
Energy Expenditure Estimation Using Triaxial Accelerometry and Barometric Pressure Measurement .. 5185-5188	
<i>Voleno, Matteo (Politecnico di Milano); Redmond, Stephen James* (Univ. of New South Wales); Cerutti, Sergio (Politecnico di Milano); Lovell, Nigel H (Univ. of New South Wales)</i>	
18:00-18:15	FrE10.3
A Sensor Middleware for Integration of Heterogeneous Medical Devices 5189-5192	
<i>Brito, Mario (CISUC, Centre for Informatics & Systems, Univ. of); Vale, Leandro (Univ. of Coimbra); de Carvalho, Paulo* (Univ. of Coimbra); Henriques, Jorge (Univ. of Coimbra)</i>	
18:15-18:30	FrE10.4
Behavioral Pattern Detection from Personalized Ambient Monitoring 5193-5196	
<i>Amor, James* (Univ. of Southampton); James, Christopher (Univ. of Warwick)</i>	
18:30-18:45	FrE10.5
A System for Monitoring Cardiac Vibration, Respiration, and Body Movement in Bed Using an Infrared 5197-5200	
<i>Maki, Hiromichi* (Hiroshima Inst. of Tech.); Ogawa, Hidekuni (Hiroshima Inst. of Tech.); Tsukamoto, Sosuke (Hiroshima Inst. of Tech.); Yonezawa, Yoshiharu (Hiroshima Inst. of Tech.); Caldwell, Morton (Caldwell Biomedical Electronics)</i>	
18:45-19:00	FrE10.6
Predicting Severity of Parkinson's Disease from Speech 5201-5204	
<i>Asgari, Meysam (The Center for Spoken Language Understanding, OHSU); Shafran, Izhak* (The Center for Spoken Language Understanding, OHSU)</i>	
FrE11: 17:30-19:00	Poncho
5.7.1 Cardiovascular and Respiratory Engineering in the ICU (Oral Session)	
17:30-17:45	FrE11.1
Estimated Venous Return Surface and Cardiac Output Curve Precisely Predicts New Hemodynamics after Volume Change 5205-5208	
<i>Sugimachi, Masaru* (Natl Cardio Center Research Inst); Sunagawa, Kenji (Kyushu Univ.); Uemura, Kazunori (Natl. Cardio. Center Research Inst); Kamiya, Atsunori (Natl. Cardiovascular Center Research Inst.); Shimizu, Shuji (Natl. Cardiovascular Center Research Inst.); Inagaki, Masashi (Natl. Cardiovascular Research Inst.); Shishido, Toshiaki (Natl. Cardiovascular Center Research Inst.)</i>	
17:45-18:00	FrE11.2
Model-Based Data Integration in Clinical Environments 5209-5212	
<i>Heldt, Thomas* (Massachusetts Inst. of Tech.); Verghese, George (Massachusetts Inst. of Tech.)</i>	
18:00-18:15	FrE11.3
Heuristics to Determine Ventilation Times of ICU Patients from the MIMIC-II Database 5213-5216	
<i>Cao, Hanqing* (Philips Research North America); Lee, K. P. (Philips Research); Ennett, Colleen M. (Philips Research North America); Eshelman, Larry J (Philips Research); Nielsen, Larry (Philips Healthcare); Saeed, Mohammed (MIT); Gross, Brian (Philips Healthcare)</i>	
18:15-18:30	FrE11.4
Evaluation of Monitoring Cardiac Output by Long Time Interval Analysis of a Radial Arterial Blood Pressure Waveform Using the MIMIC II Database 5217-5217	
<i>Zhang, Guanqun (Michigan State Univ.); Mukkamala, Ramakrishna* (Michigan State Univ.)</i>	
18:30-18:45	FrE11.5
Preliminary Study of Physiological Control for the Undulation Pump Ventricular Assist Device 5218-5221	
<i>Saito, Itsuro* (The Univ. of Tokyo); Ishii, Kohei (The Univ. of Tokyo); Isoyama, Takashi (The Univ. of Tokyo); Ono, Toshiya (The Univ. of Tokyo); Nakagawa, Hidemoto (The Univ. of Tokyo); Shi, Wei (The Univ. of Tokyo); Inoue, Yusuke (The Univ. of Tokyo); Abe, Yusuke (The Univ. of Tokyo)</i>	
18:45-19:00	FrE11.6
Automated Drug Delivery System for the Management of Hemodynamics and Cardiac Energetic in Acute Heart Failure 5222-5225	
<i>Uemura, Kazunori (Natl. Cardio. Center Research Inst); Sugimachi, Masaru* (Natl Cardio Center Research Inst); Kawada, Toru (Nat. Cardiovascular Center Res Inst); Sunagawa, Kenji (Kyushu Univ.)</i>	

6.9.3 Human Performance Modeling (Oral Session)

17:30-17:45

FrE12.1

Different Models for Predicting Driving Performance in People with Brain Disorders 5226-5229

Innes, Carrie R. H.* (Canterbury District Health Board); Lee, Dominic (Univ. of Canterbury); Chen, Chen (Univ. of Canterbury); Ponder-Sutton, Agate (Univ. of Canterbury); Jones, Richard D. (Van der Veer Inst.)

17:45-18:00

FrE12.2

Model-Based Inference of Cognitive Processes from Unobtrusive Gait Velocity Measurements 5230-5233

Austin, Daniel (Univ. of Southern California); Leen, Todd (Oregon Health & Science Univ.); Hayes, Tamara (Oregon Health & Science Univ.); Kaye, Jeffrey A. (Oregon Health & Science Univ.); Jimison, Holly (Oregon Health & Science Univ.); Pavel, Michael* (Oregon Health & Science Univ.)

18:00-18:15

FrE12.3

Models of Cognitive Performance Based on Home Monitoring Data 5234-5237

Jimison, Holly* (Oregon Health & Science Univ.); McKanna, James (Oregon Health & Science Univ.); Kyle, Ambert (Oregon Health & Science Univ.); Hagler, Stuart (Oregon Health & Science Univ.); Hatt, William J (Oregon Health & Science Univ., Central Campus); Pavel, Michael (Oregon Health & Science Univ.)

18:15-18:30

FrE12.4

Cognitive Performance Modeling Based on General Systems Performance Theory 5238-5241

Kondraske, George* (Univ. of Texas at Arlington)

18:30-18:45

FrE12.5

Arm Path Fragmentation and Spatiotemporal Features of Hand Reaching in Healthy**Subjects and Stroke Patients 5242-5245**

Liebermann, Dario G.* (PT Dept – Sackler Faculty of Medicine, Univ. of Tel Aviv); McIntyre, Joseph (Centre d'Etude de la Sensorimotricité, CNRS – Univ. Paris Descartes, France); Levin, Mindy F. (School of Physical & Occupational Therapy, Faculty of Medicine, McGill Univ., Montreal, Canada); Weiss, Patrice (Tamar) (Dept. of Occupational Therapy, Faculty of Social Welfare & Health Sciences, Univ. of Haifa, Haifa, Israel); Berman, Sigal (Dept. of Industrial Engineering & Mgmt., Ben Gurion Univ. of the Negev, Beer Sheva, Israel)

18:45-19:00

FrE12.6

Human Strategies in Balancing an Inverted Pendulum with Time Delay 5246-5249

Lupu, Mircea Florian (Univ. of Pittsburgh); Sun, Mingui* (Univ. of Pittsburgh); Askey, David (Energid Technologies Corp.); Xia, Ruiping (Creighton Univ.); Mao, Zhi-Hong (Univ. of Pittsburgh)

3.5.1 Wearable Sensor Application (Oral Session)

17:30-17:45

FrE13.1

Wireless Control of Smartphones with Tongue Motion Using Tongue Drive Assistive Technology 5250-5253

Kim, Jeonghee (Georgia Inst. of Technology); Huo, Xueliang (Georgia Inst. of Tech.); Ghovanloo, Maysam* (Georgia Inst. of Tech.)

17:45-18:00

FrE13.2

Wireless Fabric Patch Sensors for Wearable Healthcare 5254-5257

Yoo, Hoi-Jun (KAIST); Yoo, Jerald* (MIT); Yan, Long (KAIST)

18:00-18:15

FrE13.3

Development of a Sleep Apnea Event Detection Method Using Photoplethysmography 5258-5261

Suzuki, Takuji* (Toshiba Corp.); Kameyama, Ken-ichi (Toshiba); Inoko, Yoshimi (The Nippon Dental Univ. School of Life Dentistry at Niigata); Tamura, Toshiyo (Chiba Univ.)

18:15-18:30

FrE13.4

A Low-Power Asynchronous ECG Acquisition System in CMOS Technology 5262-5265

Hwang, Sungkil (Tufts Univ.); Trakimas, Michael (Tufts Univ.); Sonkusale, Sameer* (Tufts Univ.)

FrE14: 17:30-19:00	Auditorium
10.1.4 Latest Developments on Personal Health Systems for Management of Patients with Chronic Diseases I (Mini Symposium)	
17:30-17:45	FrE14.1
Care Assessment Platform: An ICT-Enabled Home Care Model for Secondary Prevention of Cardiovascular Diseases 5266-5266	
<i>Karunanithi, Mohanraj* (CSIRO ICT Centre); Varnfield, Marlien (Australian e-Health Research Centre (AEHRC)); Ding, Hang (CSIRO); Garcia, Elsa (AEHRC); Whittaker, Frank (CAAIR); Sarela, Antti (goACT Pty Ltd)</i>	
17:45-18:00	FrE14.2
Telehealth Technologies for Managing Chronic Disease – Experiences from Australia and the UK 5267-5269	
<i>Lovell, Nigel H* (Univ. of New South Wales); Redmond, Stephen James (Univ. of New South Wales); Basilakis, Jim (Univ. of NSW); Shany, Tal (Univ. of New South Wales); Celler, Branko George (Univ. of New South Wales)</i>	
18:00-18:15	FrE14.3
A Diabetes Management System Empowering Patients to Reach Optimised Glucose Control: From Monitor to Advisor 5270-5271	
<i>Poulsen, Jens Ulrik* (Novo Nordisk A/S); Chauchard, Fabien (Ondalys, 34730 Prades Le Lez, France); Johansson, Rolf (Lund Univ.); Pogose, Mike (Toumaz Tech. Ltd, Abingdon, OX14 4RY England); Saudek, František (Inst. for Clinical & Experimental Medicine, Prague, Czech Republic)</i>	
18:15-18:30	FrE14.4
Personal Health Systems – Opportunities and Barriers for Adoption 5272-5272	
<i>Korhonen, Ilkka (Nokia); Mattila, Elina (VTT); van Gils, Mark* (VTT Tech Research Centre of Finland)</i>	
Saturday, 4 September 2010	
SaA01: 09:15-10:45	Libertador A
1.2.5 Signal Processing in Physiological Systems VII (Oral Session)	
09:15-09:30	SaA01.1
Hidden State Dynamics in Laser Doppler Vibrometry Measurements of the Carotid Pulse Under Resting Conditions 5273-5276	
<i>Kaplan, Alan D.* (Washington Univ. in St. Louis); O’Sullivan, Joseph A. (Washington Univ. in St. Louis); Sirevaag, Erik J. (Washington Univ. in St. Louis); Kristjansson, Sean D. (Washington Univ. in St. Louis); Lai, Po-Hsiang (Washington Univ. in St. Louis); Rohrbaugh, John W. (Washington Univ. in St. Louis)</i>	
09:30-09:45	SaA01.2
Pulse Wave Velocity in Patients with Severe Head Injury: A Pilot Study 5277-5281	
<i>Shahsavari, Sima* (Chalmers Univ. of Tech.); McKelvey, Tomas (Chalmers Univ. of Tech.); Eriksson-Ritzén, Catherine (Sahlgrenska Univ. Hospital); Rydenhag, Bertil (Sahlgrenska Univ. Hospital)</i>	
09:45-10:00	SaA01.3
Relative Blood Volume Monitoring During Hemodialysis in End Stage Renal Disease Patients 5282-5285	
<i>Ion Titapiccolo, Jasmine (Politecnico di Milano); Ferrario, Manuela* (Politecnico di Milano); Garzotto, Francesco (Dep. Nephrology Dialysis & Transplantation, San Bortolo Hospital); Cruz, Dinna (Dep. Nephrology Dialysis & Transplantation, San BortoloHospital); Moissl, Ulrich (Fresenius Medical Care, Deutschland, GmbH); Tetta, Ciro (Ulrich.Moissl@fmc-ag.com); Ronco, Claudio (Dep. Nephrology Dialysis & Transplantation, San Bortolo Hospital); Signorini, Maria G. (Politecnico di Milano); Cerutti, Sergio (Politecnico di Milano)</i>	
10:00-10:15	SaA01.4
Atrial Fibrillation Disorganization Is Reduced by Catheter Ablation: A Standard ECG Study 5286-5289	
<i>Bonizzi, Pietro* (Univ. of Nice-Sophia Antipolis); Meste, Olivier (UNSA-CNRS); Zarzoso, Vicente (Univ. de Nice – CNRS)</i>	
10:15-10:30	SaA01.5
Visualizing the Electrocardiogram through Orbital Transform 5290-5293	
<i>Illanes-Manriquez, Alfredo* (Univ. Austral de Chile); Jiménez, Raúl (Univ. de Concepción); Dinamarca, Gustavo (Univ. de Concepción); Jiménez, Claudia (Univ. de Concepción); Lecannelier, Eduardo (Hospital G. Grant Benavente)</i>	

10:30-10:45 SaA01.6
Relationship between Heart Rate Variability Using Lorenz Plot and Sleep Level 5294-5297
Hagiwara, Hiroshi (Ritsumeikan Univ.)*

SaA02: 09:15-10:45 Libertador B
2.2.1 Doppler Ultrasonic Imaging (Oral Session)

09:15-09:30 SaA02.1
High Range Resolution Medical Acoustic Vascular Imaging with Frequency Domain Interferometry 5298-5301
Taki, Hirofumi (Kyoto Univ.); Taki, Kousuke (Dept. of Anatomy, Shiga Univ. of Medical Science); Sakamoto, Takuya (Dept. of Communications & Computer Engineering, Kyoto Univ.); Yamakawa, Makoto (Advanced Biomedical Engineering Research Unit, Kyoto Univ.); Shiina, Tsuyoshi (Kyoto Univ.); Sato, Toru (Kyoto Univ.)*

09:30-09:45 SaA02.2
Understanding the Vascular Environment of Myofascial Trigger Points Using Ultrasonic Imaging and Computational Modeling 5302-5305
Sikdar, Siddhartha (George Mason Univ.); Ortiz, Robin (Natl. Inst. of Health); Gebreab, Tadesse (Natl. Inst. of Health Clinical Center); Gerber, Lynn (George Mason Univ.); Shah, Jay (Natl. Inst. of Health Clinical Center)*

09:45-10:00 SaA02.3
Non-Invasive Hemodynamic State Monitoring Using Ultrasound 5306-5309
Dentinger, Aaron M. (GE Global Research); Hocter, Ralph T. (GE Global Research)*

10:00-10:15 SaA02.4
Measurement of Tendon Velocities Using Vector Tissue Doppler Imaging : A Feasibility Study 5310-5313
Eranki, Avinash (George Mason Univ.); Bellini, Lindsey (Natl. Inst. of Health); Prosser, Laura (Natl. Inst. of Health); Bland, Daniel (Natl. Inst. of Health); Damiano, Diane (Natl. Inst. of Health); Sikdar, Siddhartha (George Mason Univ.)*

10:15-10:30 SaA02.5
Separation of Preterm Infection Model from Normal Pregnancy in Mice Using Texture Analysis of Second Harmonic Generation Images 5314-5317
Yousefi, Siamak (Univ. of Texas at Dallas); Kehtarnavaz, Nasser (Univ. of Texas at Dallas); Akins, Meredith (Univ. of Texas Southwestern Medical Center); Luby-Phelps, Kate (The Univ. of Texas Southwestern Medical Center); mahendroo, mala (Univ. of Texas Southwestern Medical Center)*

SaA03: 09:15-10:45 Libertador C
3.12.1 Implantable Sensors Principle and Technology (Oral Session)

09:15-09:30 SaA03.1
Probing Protein Binding Spectra with Fourier Microfluidics 5318-5321
Mastrangelo, Carlos (Univ. of Utah); Williams, Layne (Univ. of Utah, Dept. of Electrical & Computer Engineering); Ghosh, Tridib (Univ. of Utah, Dept. of Bioengineering)*

09:30-09:45 SaA03.2
A Miniaturized Device for Wireless FSCV Monitoring of Dopamine in an Ambulatory Subject 5322-5325
Roham, Masoud (Case Western Reserve Univ.); Covey, Daniel (Illinois State Univ.); Daberkow, David (Illinois State Univ.); Ramsson, Eric (Illinois State Univ.); Howard, Christopher (Illinois State Univ.); Garriss, Paul (Illinois State Univ.); Mohseni, Pedram (Case Western Reserve Univ.)*

09:45-10:00 SaA03.3
A Novel Pulse-Based Modulation Technique for Wideband Low Power Communication with Neuroprosthetic Devices 5326-5329
Ghovanloo, Maysam (Georgia Inst. of Tech.); Inanlou, Farzad (Georgia Inst. of Tech.); Kiani, Mehdi (Georgia Inst. of Tech.)*

10:00-10:15 SaA03.4
Microsystems Technology in Radiation Therapy 5330-5333
ziaie, babak (Purdue Univ.); Maleki, Teimour (Purdue Univ.)*

10:15-10:30 SaA03.5
CMOS/Microfluidic Lab-On-Chip for Cells-Based Diagnostic Tools 5334-5337
 Sawan, Mohamad* (Ecole Polytechnique); Miled, Amine (Ecole Polytechnique);
 Ghafar-Zadeh, Ebrahim (Ecole Polytechnique)

SaA04: 09:15-10:45 Retiro A
2.7.13 Image Segmentation VI (Oral Session)

09:15-09:30 SaA04.1
Segmenting the Sepal and Shoot Apical Meristem of Arabidopsis Thaliana 5338-5342
 Cunha, Alexandre* (California Inst. of Tech.); Roeder, Adrienne H.K. (California Inst. of Tech.);
 Tobin, Cory J. (California Inst. of Tech.); Meyerowitz, Elliot M. (California Inst. of Tech.)

09:30-09:45 SaA04.2
Automatic Identification of Internal Carotid Artery from 3DRA Images 5343-5346
 Bogunovic, Hrvoje* (Univ. Pompeu Fabra, Barcelona); Pozo, Jose Maria (Univ. Pompeu Fabra, Barcelona);
 Cardenes, Ruben (Univ. Pompeu Fabra, Barcelona); Frangi, Alejandro (Univ. Pompeu Fabra)

09:45-10:00 SaA04.3
Identification of Lobar Fissures in Pathological Lungs 5347-5350
 Wei, Qiao (Univ. of Calgary); Hu, Yaoping* (The Univ. of Calgary); MacGregor, J. H. (Foothills Medical Center);
 Gelfand, Gary (Foothills Medical Center)

10:00-10:15 SaA04.4
Automatic Liver Segmentation from CT Scans Based on a Statistical Shape Model 5351-5354
 Zhang, Xing (Inst. of Automation, Chinese Academy of Sciences); Tian, Jie* (Chinese Academy of Sciences);
 Deng, Kexin (Inst. of Automation Chinese Academy of Sciences); Wu, Yongfang (Inst. of Automation, Chinese
 Academy of Sciences); Li, Xiuli (Inst. of Automation, Chinese Academy of Sciences)

10:15-10:30 SaA04.5
**Learning-Based Approach for the Automatic Detection of the Optic Disc in
 Digital Retinal Fundus Photographs** 5355-5358
 Wong, Damon* (Inst. for Infocomm Research); Liu, Jiang (Inst for Infocomm Resrch, A STAR);
 Tan, Ngan Meng (A*STAR, Inst. for Infocomm Research); Yin, Fengshou (Inst. for Infocomm Research);
 Lee, Beng Hai (Inst. for Infocomm Research); Wong, Tien Yin (Natl. Univ. of Singapore)

10:30-10:45 SaA04.6
Automatic Detection of Posterior Subcapsular Cataract Opacity for Cataract Screening 5359-5362
 Li, Huiqi* (Inst. for Infocomm Research); Lim, Joo Hwee (Inst. for Infocomm Research); Liu, Jiang (Inst for
 Infocomm Resrch, A STAR); Wong, Damon (Inst. for Infocomm Research); Foo, Yongfeng (Natl. Univ. of
 Singapore); Sun, Ying (Natl. Univ. of Singapore); Wong, Tien Yin (Natl. Univ. of Singapore)

SaA05: 09:15-10:45 Retiro B
1.7.1 Blind Source Separation (Oral Session)

09:15-09:30 SaA05.1
In Vivo Snapshot Hyperspectral Image Analysis of Age-Related Macular Degeneration 5363-5366
 Lee, Noah* (Columbia Univ.); Wielaard, Jim (Columbia Univ.); Fawzi, Amani (Univ. of Southern California, Doheny
 Eye Inst.); Sajda, Paul (Columbia Univ.); Laine, Andrew (Columbia Univ.); Martin, Gabriel (Reichert Ophthalmic
 Instruments Inc.); Humayun, Mark (Univ. of Southern California); Smith, R Theodore (Columbia Univ.)

09:30-09:45 SaA05.2
Comparison of Source Separation Techniques for Multilead T-Wave Alternans Detection in the ECG 5367-5370
 Monasterio, Violeta* (Univ. of Zaragoza); Clifford, Gari (Massachusetts Inst. of Tech.);
 Martinez, Juan Pablo (Univ. of Zaragoza)

09:45-10:00 SaA05.3
Reference Estimation in EEG Recordings 5371-5374
 Ranta, Radu* (Nancy-Univ.); Salido-Ruiz, Ricardo (CRAN, Nancy Univ.); Louis-Dorr, Valerie (Nancy-Univ.)

10:00-10:15	SaA05.4
Multi-Dimensional PARAFAC2 Component Analysis of Multi-Channel EEG Data Including Temporal Tracking	5375-5378
<i>Weis, Martin* (Ilmenau Univ. of Tech.); Husar, Peter (Ilmenau Univ. of Tech.); Jannek, Dunja (Ilmenau Univ. of Tech.); Roemer, Florian (Ilmenau Univ. of Tech.); Guenther, Thomas (Ilmenau Univ. of Tech.); Haardt, Martin (Ilmenau Univ. of Tech.)</i>	
10:15-10:30	SaA05.5
EEG Sensor Selection by Sparse Spatial Filtering in P300 Speller Brain-Computer Interface	5379-5382
<i>Rivet, Bertrand (Grenoble Univ.); Cecotti, Hubert (INPG/CNRS UMR 5216); Phlypo, Ronald* (INPG/CNRS UMR 5216); Bertrand, Olivier (INSERM); Maby, Emmanuel (INSERM); Mattout, Jérémie (INSERM)</i>	
10:30-10:45	SaA05.6
Automatic Artifact Removal from EEG – A Mixed Approach Based on Double Blind Source Separation and Support Vector Machine	5383-5386
<i>Bartels, Georg (ShanghaiJiaoTong Univ.); Shi, Lichen (Shanghai Jiao Tong Univ.); Lu, Bao-Liang* (Shanghai Jiao Tong Univ.)</i>	
SaA06: 09:15-10:45	Retiro C
1.4.2 Signal Pattern Classification II (Oral Session)	
09:15-09:30	SaA06.1
Combining EMD with ICA for Extracting Independent Sources from Single Channel and Two-Channel Data	5387-5390
<i>Mijovic, Bogdan* (Katholieke Univ. Leuven); De Vos, Maarten (KU Leuven); Gligorijevic, Ivan (Katholieke Univ. Leuven); Van Huffel, Sabine (Katholieke Univ. Leuven)</i>	
09:30-09:45	SaA06.2
Sleep Stage Transitions in Chronic Fatigue Syndrome Patients with or without Fibromyalgia	5391-5394
<i>Kishi, Akifumi* (The Univ. of Tokyo); Natelson, Benjamin H. (Beth Israel Medical Center); Togo, Fumiharu (Natl. Inst. of Occupational Safety & Health); Struzik, Zbigniew R. (The Univ. of Tokyo); Rapoport, David M. (NYU School of Medicine); Yamamoto, Yoshiharu (The Univ. of Tokyo)</i>	
09:45-10:00	SaA06.3
Linear and Nonlinear Analysis of Autonomic Regulation of Heart Rate Variability in Healthy First-Degree Relatives of Patients with Schizophrenia	5395-5398
<i>Voss, Andreas* (Univ. of Applied Sciences Jena); Schulz, Steffen (Univ. of Applied Sciences Jena); Bär, Karl-Jürgen (Friedrich-Schiller-Univ. of Jena)</i>	
10:00-10:15	SaA06.4
Evaluation of an ECG Heartbeat Classifier Designed by Generalization-Driven Feature Selection	5399-5402
<i>Llamedo, Mariano* (Zaragoza Univ.); Martínez, Juan Pablo (Univ. of Zaragoza)</i>	
10:15-10:30	SaA06.5
Development of a Novel Border Detection Method for Melanocytic and Non-Melanocytic Dermoscopy Images	5403-5406
<i>Norton, Kerri-Ann* (Rutgers Univ.); Iyatomi, Hitoshi (Hosei Univ.); Celebi, M. Emre (Louisiana State Univ in Shreveport); Schaefer, Gerald (Loughborough Univ.); Tanaka, Masaru (Tokyo Women's Medical Univ., Medical Center East); Ogawa, Koichi (Hosei Univ.)</i>	
10:30-10:45	SaA06.6
Classification of Melanocytic Skin Lesions from Non-Melanocytic Lesions	5407-5410
<i>Iyatomi, Hitoshi* (Hosei Univ.); Norton, Kerri-Ann (Rutgers Univ.); Celebi, M. Emre (Louisiana State Univ in Shreveport); Schaefer, Gerald (Loughborough Univ.); Tanaka, Masaru (Tokyo Women's Medical Univ., Medical Center East); Ogawa, Koichi (Hosei Univ.)</i>	

8.3.4 Surgical Robotics (Oral Session)

09:15-09:30

SaA07.1

Design and Control of a Robotic System for Assistive Laser Phonomicrosurgery **5411-5415**

Mattos, Leonardo* (IIT – Italian Inst. of Tech.); Caldwell, Darwin G. (Italian Inst. of Tech.);
Dellepiane, Massimo (Univ. of Genoa – ENT Dept.); Grant, Edward (NC State Univ.)

09:30-09:45

SaA07.2

Target Motion Compensation in MRI-Guided Prostate Biopsy with Static Images **5416-5419**

Tadayyon, Hadi (Queen's Univ., School of Computing); Lasso, Andras* (Queen's Univ.);
Gill, Sean (Queen's Univ.); Kaushal, Aradhana (Natl. Cancer Inst.); Guion, Peter (Natl. Cancer Inst.);
Fichtinger, Gabor (Johns Hopkins Univ.)

09:45-10:00

SaA07.3

Retinal Vessel Cannulation with an Image-Guided Handheld Robot **5420-5423**

Becker, Brian C.* (Carnegie Mellon Univ.); Voros, Sandrine (Johns Hopkins Univ.); Lobes, Louis A. (Univ. of
Pittsburgh Medical Center); Handa, James T (Johns Hopkins Univ.); Hager, Gregory D (Johns Hopkins Univ.);
Riviere, Cameron N (Carnegie Mellon Univ.)

10:00-10:15

SaA07.4

Targeting Error Simulator for Image-Guided Prostate Needle Placement **5424-5427**

Lasso, Andras* (Queen's Univ.); Avni, Shachar (Queen's Univ., School of Computing);
Fichtinger, Gabor (Johns Hopkins Univ.)

10:15-10:30

SaA07.5

Application of the HeartLander Crawling Robot for Injection of a Thermally Sensitive Anti-Remodeling Agent for Myocardial Infarction Therapy **5428-5431**

Chapman, Michael (Univ. of Pittsburgh); López González, Jose Luis (Univ. of Valladolid); Goyette, Brina (Carnegie Mellon Univ.); Fujimoto, Kazuro (Univ. of Pittsburgh); Ma, Zuwei (Univ. of Pittsburgh); Wagner, William R (Univ. of Pittsburgh); Zenati, Marco (Harvard Medical School); Riviere, Cameron N* (Carnegie Mellon Univ.)

10:30-10:45

SaA07.6

Needle Steering System Using Duty-Cycled Rotation for Percutaneous Kidney Access **5432-5435**

Wood, Nathan* (Carnegie Mellon Univ.); Shahrour, Khaled (Univ. of Pittsburgh); Ost, Michael (Univ. of Pittsburgh); Riviere, Cameron N (Carnegie Mellon Univ.)

6.7.1 Musculoskeletal Models as a Guide for Rehabilitation Interventions (Oral Session)

09:15-09:30

SaA08.1

Computational Hypothesis Testing for Neuromuscular Systems **5436-5439**

Kutch, Jason* (Univ. of Southern California); Valero-Cuevas, Francisco (Univ. of Southern California)

09:30-09:45

SaA08.2

Probabilistic Musculoskeletal Modeling of the Knee: A Preliminary Examination of an ACL-Reconstruction **5440-5443**

Barry, Megan (Northwestern Univ.); Kwon, Tae-Hyun (Northwestern Univ.); Dhaher, Yasin* (Northwestern Univ.)

09:45-10:00

SaA08.3

Predictive Simulation of Gait in Rehabilitation **5444-5447**

Ackermann, Marko* (Centro Univ. da FEI); van den Bogert, Antonie J. (Cleveland Clinic)

10:00-10:15

SaA08.4

Adaptive Terminal Sliding Mode Control of Ankle Movement Using Functional Electrical Stimulation of Agonist-Antagonist Muscles **5448-5451**

Nekoukar, Vahab (Neuromuscular Control Systems Lab., Neural Tech. Research Centre, Dept. of Biomedical Engineering, Iran Univ. of); Erfanian, Abbas* (Iran Univ. of Science & Tech.)

10:15-10:30 SaA08.5
Model of Postural Control System Applied in Parkinson's Disease Patients 5452-5455
Nogueira, Santiago (Laboratorio de Otoneurología); Ferreira, Enrique D. (Univ. Católica del Uruguay); Geisinger, Dario (Laboratory of Otoneurology); San Román, María Cecilia (Lab. of Otoneurology. British Hospital.); Suarez, Hamlet (Laboratory of Otoneurology)*

10:30-10:45 SaA08.6
Model to Estimate Hamstrings Behavior in Cerebral Palsy Patients: As a Pre-Surgical Clinical Diagnosis Tool 5456-5459
Ravera, Emiliano Pablo (Univ. Nacional de Entre Ríos, Facultad de Ingeniería); Crespo, Marcos (FLENI, Inst. for Neurological Research); Catalfamo, Paola Andrea Lucia (Univ. Nacional de Entre Ríos, Facultad de Ingeniería); Braidot, Ariel Andrés (Univ. Nacional de Entre Ríos, Facultad de Ingeniería)*

SaA09: 09:15-10:45 Ombu A
6.1.1 Models and Methods Inferring Neural Circuits (Oral Session)

09:15-09:30 SaA09.1
Causal Neuronal Networks Provide Functional Signatures of Stimulus Encoding 5460-5463
Eldawlatly, Seif (Michigan State Univ.); Oweiss, Karim (Michigan State Univ.)*

09:30-09:45 SaA09.2
Changes of Hippocampal CA3-CA1 Population Nonlinear Dynamics across Different Training Sessions in Rats Performing a Memory-Dependent Task 5464-5467
Chan, Rosa H. M. (Univ. of Southern California); Song, Dong (Univ. of Southern California); Hampson, Robert (Wake Forest Univ.); Deadwyler, Sam (Wake Forest Univ.); Berger, Theodore (Univ. of Southern California)*

09:45-10:00 SaA09.3
Quantitative Analysis of Neural Plasticity in Motorcortex During Functional Recovery Post Spinal Cord Injury 5468-5471
Huo, Yan (Beijing Inst. of Tech.); Li, Ping (Beijing Inst. of Tech.); Ma, Chaolin (Arizona State Univ.); Zhang, Hang (Arizona State Univ.); Lv, bin (Inst. of Automation, Chinese Academy of Sciences); He, Jiping (Arizona State Univ.)*

10:00-10:15 SaA09.4
A Theory about a Role of the Hyperdirect Pathway in Pattern Expression by the Basal Ganglia 5472-5475
Jourdan, Ivan (Facultad de Ingeniería. Univ. de Buenos Aires); Barttfeld, Pablo (Inst. de Ingeniería Biomédica-facultad de Ingeniería, UBA); Zanutto, Silvano (Inst. de Ingeniería Biomédica FI-UBA; IBYME-CONICET)*

10:15-10:30 SaA09.5
Can We Infer Subthalamic Nucleus Spike Trains from Intranuclear Local Field Potentials? 5476-5479
Michmizos, Kostis (Natl. Technical Univ. of Athens); Nikita, Konstantina (Natl. Technical Univ. of Athens)*

10:30-10:45 SaA09.6
ATP Consumption and Neural Electrical Activity: A Physiological Model for Brain Imaging 5480-5483
Gafaniz, Rita (Inst. for Systems & Robotics); Sanches, J. Miguel (Inst. for Systems & Robotics, NIF)*

SaA10: 09:15-10:45 Ombu B
10.2.2 Mobile Health (Oral Session)

09:15-09:30 SaA10.1
Development of Mobile Psychiatry for Bipolar Disorder Patients 5484-5487
Prociow, Pawel (Univ. of Nottingham); Crowe, John (Univ. of Nottingham)*

09:30-09:45 SaA10.2
A Novel Method to Detect Heart Beat Rate Using a Mobile Phone 5488-5491
Pelegiris, Panagiotis (Brunel Univ.); Banitsas, Konstantinos (Brunel Univ.); Orbach, Tuvi (Health-Smart); Marias, Kostas (Foundation for Res. & Tech. Hellas)*

09:45-10:00	SaA10.3
An Internet-Based System for Home Monitoring of Respiratory Muscle Disorders	5492-5495
<i>Silva Junior, Evert* (Univ. do Estado do Rio de Janeiro); Esteves, Guilherme (Univ. do Estado do Rio de Janeiro); Faria, Alvaro Camilo Dias (Univ. do Estado do Rio de Janeiro); Melo, Pedro Lopes (Univ. do Estado do Rio de Janeiro)</i>	
10:00-10:15	SaA10.4
A Mobile Communications System for Home-Visit Medical Services: The Electronic Doctor's Bag	5496-5499
<i>Yoshizawa, Makoto* (Tohoku Univ.); Yambe, Tomoyuki (Tohoku Univ.); Saijo, Yoshifumi (Tohoku Univ.); Sugita, Norihiro (Tohoku Univ.); Sugai, Telma Keiko (Tohoku Univ.); Abe, Makoto (Tohoku Univ.)</i>	
10:15-10:30	SaA10.5
A Cardiod Based Technique to Identify Cardiovascular Diseases Using Mobile Phones and Body Sensors	5500-5503
<i>Sufi, Fahim (RMIT Univ.); Khalil, Ibrahim* (RMIT Univ.); Tari, Zahir (RMIT Univ.)</i>	
10:30-10:45	SaA10.6
Mobile Middleware for Wireless Body Area Network	5504-5507
<i>Chen, Xiang* (Inst. for Infocomm Research); Waluyo, Agustinus Borgy (Monash Univ.); Pek, Isaac (Inst. for Infocomm Research); Yeoh, Wee Soon (Inst. for Infocomm Research)</i>	
SaA11: 09:15-10:45	
4.1.1 Algorithms and Computational Tools for Proteomics and Gene Expression Profiling (Oral Session)	
Poncho	
09:15-09:30	SaA11.1
Protein Surface Functional Description	5508-5511
<i>Cristea, Paul Dan* (Univ. Politehnic of Bucharest); Tuduce, Rodica (Univ. Politehnic of Bucharest); Arsene, Octavian (Politehnic Univ. of Bucharest)</i>	
09:30-09:45	SaA11.2
Predictability of Protein Subcellular Locations by Pattern Recognition Techniques	5512-5515
<i>Jaramillo Garzón, Jorge Alberto* (Univ. Nacional de Colombia); Perera, Alexandre (Univ. Politècnica de Catalunya); Castellanos-Dominguez, Germán (Univ. Nacional de Colombia)</i>	
09:45-10:00	SaA11.3
Adaptive Threshold for Detecting Differentially Expressed Genes in Microarray Data – A Simulation Study to Investigate Its Performance	5516-5519
<i>Fukuoka, Yutaka* (Tokyo Medical & Dental Univ.); Inaoka, Hidenori (Kitasato Univ.); Noshiro, Makoto (Kitasato Univ.)</i>	
10:00-10:15	SaA11.4
Towards a Digital Model of Zebrafish Embryogenesis. Integration of Cell Tracking and Gene Expression Quantification	5520-5523
<i>Castro Gonzalez, Carlos* (Univ. Politécnica de Madrid); Luengo-Oroz, Miguel Angel (Univ. Politécnica de Madrid); Duloquin, Louise (CNRS); Savy, Thierry (Ecole Polytechnique); Melani, Camilo (Univ. de Buenos Aires); Desnoullez, Sophie (CNRS); Ledesma-Carbayo, Maria J. (Univ. Politécnica de Madrid); Bourguine, Paul (Ecole Polytechnique); Peyrieras, Nadine (CNRS); Santos, Andres (Univ. Politécnica Madrid)</i>	
10:15-10:30	SaA11.5
Accurate Samples for Testing Mass Spectrometry Based Peptide Quantification Algorithms	5524-5528
<i>Carrillo, Brian* (McGill Univ.); Laboissiere, Sylvie (McGill Univ. & Genome Quebec Innovation Centre Proteomics Platform); Nadon, Robert (Dept. of Human Genetics at McGill Univ.); Kearney, Robert Edward (McGill Univ.)</i>	
10:30-10:45	SaA11.6
An Information Theory-Based Tool for Characterizing the Interaction Environment of a Protein	5529-5532
<i>Massanet-Vila, Raimon* (Univ. Politècnica de Catalunya); Gallardo-Chacón, Joan-Josep (CIBER Bioengineering, Biomaterials, & Nanomedicine); Caminal, Pere (Technical Univ. of Catalonia (UPC)); Perera, Alexandre (Univ. Politècnica de Catalunya)</i>	

6.8.2 Neurological Disorders (Oral Session)

09:15-09:30

SaA13.1

Quantitative Description of the State of Awareness of Patients in Vegetative and Minimally Conscious State**5533-5536**

Wieser, Martin* (ETH Zurich); Buettler, Lilith (HUMAINE Clinic); Koenig, Alexander (ETH Zurich); Riener, Robert (ETH & Univ. Zurich)

09:30-09:45

SaA13.2

Predicting Temporal Lobe Epileptic Seizures Based on Zero-Crossing Interval Analysis in Scalp EEG ..**5537-5540**

Shahidi Zandi, Ali (The Univ. of British Columbia); Tafreshi, Reza* (Texas A&M Univ. at Qatar); Javidan, Manouchehr (Univ. of British Columbia & Vancouver General Hospital); Dumont, Guy (Univ. of British Columbia)

09:45-10:00

SaA13.3

Epileptic Seizure Detection – An AR Model Based Algorithm for Implantable Device**5541-5544**

Kim, Hyunchul (Univ. of California Santa Cruz); Rosen, Jacob* (Univ. of California – Santa Cruz)

10:00-10:15

SaA13.4

A Novel Morphology-Based Classifier for Automatic Detection of Epileptic Seizures**5545-5548**

Yadav, Rajeev* (Concordia Univ.); Agarwal, Rajeev (Concordia Univ.); Swamy, M.N.S. (Concordia Univ.)

10:15-10:30

SaA13.5

Clinical Study of Neurorehabilitation in Stroke Using EEG-Based Motor Imagery Brain-Computer Interface with Robotic Feedback**5549-5552**

Ang, Kai Keng* (Inst. for Infocomm Research); Guan, Cuntai (Inst. for Infocomm Research); Chua, Karen Sui Geok (Tan Tock Seng Hospital Rehabilitation Centre); Ang, Beng Ti (Natl. Neuroscience Inst.); Kuah, Christopher Wee Keong (Tan Tock Seng Hospital Rehabilitation Centre); Wang, Chuanchu (Inst. for Infocomm Research); Phua, Koksoon (Inst. for Infocomm Research); Chin, Zheng Yang (Inst. for Infocomm Research); Zhang, Haihong (Inst. for Infocomm Research)

10:30-10:45

SaA13.6

A Neural Repair Treatment with Gait Training Improves Motor Function Recovery after Spinal Cord Injury ...**5553-5556**

Ma, Chaolin (Arizona State Univ.); He, Jiping* (Arizona State Univ.)

SaBPo01: 10:45-12:15

Catalinas/Golden Horn

2.7.8 Image Classification IV (Poster Session)

10:45-12:15

SaBPo01.1

Small Bowel Tumors Detection in Capsule Endoscopy by Gaussian Modeling of Color Curvelet Covariance Coefficients**5557-5560**

Lima, Carlos Manuel Gregorio Santos* (Univ. of Minho); Barbosa, Daniel (Univ. of Minho); Martins, Maria Manuel (Univ. of Minho)

10:45-12:15

SaBPo01.2

Boosting Instance Prototypes to Detect Local Dermoscopic Features**5561-5564**

Situ, Ning (Univ. of Houston); Yuan, Xiaojing (Univ. of Houston); Zouridakis, George* (Univ. of Houston)

10:45-12:15

SaBPo01.3

Classification of Apoptosis Using Advanced Clustering Techniques on Digital Microscopic Images**5565-5568**

Tasoylis, Sotirios (Univ. of Central Greece); Doukas, Charalampos* (Univ. of the Aegean); Maglogiannis, Ilias (Univ. of Central Greece); Plagianakos, Vassilis (Univ. of Central Greece)

10:45-12:15

SaBPo01.4

Recognizing Physical Activity from Ego-Motion of a Camera**5569-5572**

Zhang, Hong (Beihang Univ.); Li, Lu (Beihang Univ.); Jia, Wenyan (Univ. of Pittsburgh); Fernstrom, John D. (Univ. of Pittsburgh); Sclabassi, Robert (Univ. of Pittsburgh); Sun, Mingui* (Univ. of Pittsburgh)

10:45-12:15

SaBPo01.5

Parallel Nonlinear Analysis of Weighted Brain's Gray and White Matter Images for Alzheimer's Dementia Diagnosis**5573-5576**

Razavian, Seied-Mohammad-Javad (Sharif Univ. of Tech.); Torabi, Meysam* (Univ. of California, Berkeley)

10:45-12:15	SaBPo01.6
Computer-Aided Diagnosis of Breast Cancer from Magnetic Resonance Imaging Examinations by Custom Radial Basis Function Vector Machine	5577-5580
<i>Levman, Jacob Evan Daniel* (Sunnybrook Health Sciences Centre, Univ. of Toronto); Martel, Anne (Sunnybrook Health Sciences Centre, Univ. of Toronto)</i>	
10:45-12:15	SaBPo01.7
A Preliminary Study of Moment-Based Texture Analysis for Medical Images	5581-5584
<i>Wu, Ke* (Southeast Univ. China); Garnier, Carole (Univ. de Rennes1); Coatrieux, Jean Louis (INSERM-Univ. Rennes 1); Shu, Huazhong (Southeast Univ.)</i>	
10:45-12:15	SaBPo01.8
SVM Based Colon Polyps Classifier in a Wireless Active Stereo Endoscope	5585-5588
<i>Ayoub, Jad (CNRS ENSEA Univ. Cergy Pontoise); Granado, Bertrand* (ENSEA – CNRS – Univ. Cergy Pontoise); Mohanna, Yasser (Faculty of Sciences I, Lebanese Univ.); Romain, Olivier (UPMC)</i>	
10:45-12:15	SaBPo01.9
Curvatures with Uncertainties Derived in Conformal Space to Characterize Tendon Microstructure	5589-5592
<i>Harvey, Ann K.* (Oxford Univ.); Szilágyi, Tünde (Univ. of Oxford); Brady, Michael (Univ. of Oxford); Thompson, Mark (Oxford Univ.); Joshi, Niranjana (Oxford Univ.)</i>	
10:45-12:15	SaBPo01.10
Using PCA and LVQ Neural Network for Automatic Recognition of Five Types of White Blood Cells	5593-5596
<i>Roshani Tabrizi, Pooneh* (Tehran); Rezaatofghi, Seyed Hamid (Univ. of Tehran, Iran); Yazdanpanah, Mohammad Javad (Tehran)</i>	
10:45-12:15	SaBPo01.11
Genetic Algorithm and Image Processing for Osteoporosis Diagnosis	5597-5600
<i>Jennane, Rachid* (Univ. of Orleans); almhdie, Ahmad (Univ. of Orleans); Hambli, Ridha (Univ. of Orleans); Ucan, Osman Nuri (Univ. of Istanbul); Benhanou, Claude-Laurent (Centre Hospitalier Régional d'Orléans)</i>	
10:45-12:15	SaBPo01.12
Automatic Learning of Spatial Patterns for Diagnosis of Skin Lesions	5601-5604
<i>Zortea, Maciel* (Univ. of Tromsø); Skrvseth, Stein Olav (Norwegian Centre for Integrated Care & Telemedicine); Godtliebsen, Fred (Univ. of Tromsø)</i>	
SaBPo02: 10:45-12:15 Catalinas/Golden Horn	
2.7.10 Rigid-Body Image Registration I (Poster Session)	
10:45-12:15	SaBPo02.1
Registration of 2D Point Sets by Complex Translation and Rotation Operations	5605-5607
<i>Sahin, Ismet* (Univ. of Maryland)</i>	
10:45-12:15	SaBPo02.2
A Semi-Automatic Method for Positioning a Femoral Bone Reconstruction for Strict View Generation ...	5608-5611
<i>Milano, Federico* (Univ. de Buenos Aires, Univ. Tecnológica Nacional); Ritacco, Lucas E (Hospital Italiano); Gomez, Adrian (Hospital Italiano de Buenos Aires); Gonzalez Bernaldo de Quirós, Fernán (Hospital Italiano de Buenos Aires); Risk, Marcelo (Univ. de Buenos Aires)</i>	
10:45-12:15	SaBPo02.3
Pre-Reconstruction Rigid Body Registration for Positron Emission Tomography: An Initial Validation against Ground Truth	5612-5615
<i>Nordberg, Peter* (Univ. of Oxford); Declerck, Jerome (Siemens Molecular Imaging); Brady, Michael (Univ. of Oxford)</i>	
10:45-12:15	SaBPo02.4
Multimodal Target Correction by Local Bone Registration: A PET/CT Evaluation	5616-5619
<i>Oliveira-Santos, Thiago* (ISTB – Inst. for Surgical Tech. & Biomechanics); Weitzel, Thilo (Dept. of Nuclear Medicine, Inselspital Bern, 3010 Bern, Switzerland); Klaeser, Bernd (Dept. of Nuclear Medicine, Inselspital Bern, 3010 Bern, Switzerland); Krause, Thomas (Univ. of Bern, 3010 Bern, Switzerland); Nolte, Lutz-Peter (Univ. of Bern); Weber, Stefan (Univ. of Bern); Reyes, Mauricio (MEM Research Center, Univ. Bern)</i>	

10:45-12:15 SaBPo02.5
Postoperative Evaluation of Surgery for Craniosynostosis Based on Image Registration Techniques 5620-5623
Elias de Oliveira, Marcelo (Univ. of Bern); Hallila, Harri (Dept. of Electronics, School of Science & Tech., Aalto Univ.); Ritvanen, Antti (Dept. of Electronics, School of Science & Tech., Aalto Univ.); Büchler, Philippe (Univ. of Bern); Paulasto, Mervi (Dept. of Electronics, School of Science & Tech., Aalto Univ.); Hukki, Jyri (Cleft Palate & Craniofacial Center, Dept. of Plastic Surgery, Helsinki Univ. Hospital)*

10:45-12:15 SaBPo02.6
FMRI 3D Registration Based on Fourier Space Subsets Using Neural Networks 5624-5627
Freire, Luis C. (Escola Superior de Tecnologia da Saúde de Lisboa, Inst. Politécnico de Lisboa); Godinho, Fernando (Atomimedical, Laboratório de Medicina Nuclear, Lda); Gouveia, Ana Isabel (Univ. da Beira Interior, CICS)*

10:45-12:15 SaBPo02.7
A Torsional Eye Movement Calculation Algorithm for Low Contrast Images in Video-Oculography 5628-5631
Jansen, Stephan (Maastricht Univ.); Kingma, Herman (Univ. Hospital Maastricht); Peeters, Ralf (Univ. Maastricht); Westra, Ronald (Univ. Maastricht)*

SaBPo03: 10:45-12:15	Catalinas/Golden Horn
2.9.2 Functional Image Analysis (Poster Session)	

10:45-12:15 SaBPo03.1
Analysis of Foveal Avascular Zone in Colour Fundus Images for Grading of Diabetic Retinopathy Severity 5632-5635
Ahmad Fadzil, Mohamad Hani (Univ. Teknologi Petronas); Adi Nugroho, Hanung (Gadjah Mada Univ.)*

10:45-12:15 SaBPo03.2
Automated Indexation of Metabolic Changes in Alzheimer's Mice Using a Voxel-Wise Approach Combined to an MRI-Based 3D Digital Atlas 5636-5639
Lebenberg, Jessica (Commissariat à l'Energie Atomique); Hérard, Anne-Sophie (Commissariat à l'Energie Atomique); Dubois, Albertine (Commissariat à l'Energie Atomique); Dhenain, Marc (Commissariat à l'Energie Atomique); Hantraye, Philippe (Commissariat à l'Energie Atomique); Delzescaux, Thierry (Commissariat à l'Energie Atomique)*

10:45-12:15 SaBPo03.3
Fmri Measurement of Brain Activities to Major and Minor Chords and Cadence Sequences 5640-5643
Nemoto, Iku (Tokyo Denki Univ.); Fujimaki, Takuya (Tokyo Denki Univ.); Wang, Li-qun (Tokyo Denki Univ.)*

10:45-12:15 SaBPo03.4
Automatic Blood Vessel Localization in Small Field of View Eye Images 5644-5648
Bansal, Mayank (Sarnoff Corp.); Kuthirummal, Sujit (Sarnoff Corp.); Eledath, Jayan (Sarnoff Corp.); Sawhney, Harpreet (Sarnoff Corp.); Stone, Richard (Univ. of Pennsylvania)*

10:45-12:15 SaBPo03.5
Support System for the Preventive Diagnosis of Hypertensive Retinopathy 5649-5652
Ortiz, Daniel (Pontificia Univ. Javeriana); Cubides, Mauricio (Pontificia Univ. Javeriana); Suarez, Andres (Pontificia Univ. Javeriana); Zequera Diaz, Martha Lucia (Pontificia Univ. Javeriana); Quiroga, Julian (Pontificia Univ. Javeriana); Gomez, Jorge (Pontificia Univ. Javeriana); Arroyo, Nubia (COLMEDICA)*

10:45-12:15 SaBPo03.6
Automatic Immunostaining Vessel Image Filtering for Visual Search Efficiency 5653-5656
Tsou, Chi-Hsuan (Natl. Taiwan Univ.); Lu, Yi-Chien (Dept. of Medical Imaging Natl. Taiwan Univ. Hospital & College of Medicine, Taipei, Taiwan); Yuan, Ang (Natl. Taiwan Univ. Hospital); Chang, Yeun-Chung (Dept. of Medical Imaging Natl. Taiwan Univ. Hospital & College of Medicine, Taipei, Taiwan); Chen, Jyh-Horng (Natl. Taiwan Univ.)*

10:45-12:15 SaBPo03.7
A Robust Volumetric Feature Extraction Approach for 3D Neuroimaging Retrieval 5657-5660
Liu, Sidong (Univ. of Sydney); Cai, Weidong (Univ. of Sydney); Wen, Lingfeng (Univ. of Sydney); Eberl, Stefan (Royal Prince Alfred Hospital); Fulham, Michael (Royal Prince Alfred Hospital); Feng, Dagan (The Univ. of Sydney)*

10:45-12:15 SaBPo03.8
Comparison and Analysis of Nonlinear Algorithms for Compressed Sensing in MRI 5661-5664
 Yu, Yeyang* (the Univ. of Queensland); Hong, Mingjian (ChongQing Univ.); Liu, Feng (The Univ. of Queensland); Wang, Hua (The Univ. of Queensland); Crozier, Stuart (The Univ. of Queensland)

SaBPo04: 10:45-12:15 Catalinas/Golden Horn
2.9.3 Neuroimaging (Poster Session)

10:45-12:15 SaBPo04.1
Tractography Clustering for Fiber Selection in ROI-Based Diffusion Tensor Studies 5665-5668
 de Luis-García, Rodrigo* (Univ. of Valladolid); Alberola-López, Carlos (Univ. de Valladolid)

10:45-12:15 SaBPo04.2
Low-Parametric Induced Current – Magnetic Resonance Electrical Impedance Tomography for Quantitative Conductivity Estimation of Brain Tissues Using a Priori Information: A Simulation Study 5669-5672
 De Geeter, Nele* (Univ. of Ghent, Faculty of Engineering); Crevecoeur, Guillaume (Ghent Univ., Dept. Electrical Energy, Systems & Automation); Dupré, Luc (Ghent Univ., Dept. Electrical Energy, Systems & Automation)

10:45-12:15 SaBPo04.3
Fmri Headtracking Using a Single Camera and a Lightweight Fiducial 5673-5676
 MacFarlane, Duncan* (The Univ. of Texas at Dallas); Wildey, Chester (The Univ. of Texas at Dallas)

10:45-12:15 SaBPo04.4
On the Distinguishability of HRF Models in Fmri 5677-5680
 Silvestre, Carlos (Inst. Superior Tecnico); Figueiredo, Patricia* (Inst. Superior Técnico / Inst. for Systems & Robotics); Rosa, Paulo (Inst. Superior Tecnico)

10:45-12:15 SaBPo04.5
Wideband MRI: Theoretical Analysis and Its Applications 5681-5684
 Wu, Edzer L.* (Natl. Taiwan Univ.); Chen, Jyh-Horng (Natl. Taiwan Univ.); Chiueh, Tzi-Dar (Natl. Taiwan Univ.)

10:45-12:15 SaBPo04.6
Brain Activation in Complex Partial Seizures During Switching from a Goal-Directed Task to a Resting State: Comparison of Fmri Maps to the Default Mode Network 5685-5688
 Karmonik, Christof* (The Methodist Hospital Neurological Inst); dulay, Mario (The Methodist Hospital); Verma, Amit (The Methodist Hospital); Yen, Christopher (The Methodist Hospital); Grossman, Robert (The Methodist Hospital)

10:45-12:15 SaBPo04.7
In vivo MRI Study of the Visual System in Normal, Developing and Injured Rodent Brains 5689-5692
 Chan, Kevin C. (The Univ. of Hong Kong); Cheung, Matthew M. (The Univ. of Hong Kong); Xing, Kai (The Univ. of Hong Kong); Zhou, Iris Yuwen (The Univ. of Hong Kong); Chow, April M. (The Univ. of Hong Kong); Lau, Condon (The Univ. of Hong Kong); So, Kwok-fai (The Univ. of Hong Kong); Wu, Ed X.* (The Univ. of Hong Kong)

10:45-12:15 SaBPo04.8
A Three-Coil RF Probe-Head at 2.35 T: Potential Applications to the ²³Na and to the Hyperpolarized ¹²⁹Xe MRI in Small Animals 5693-5699
 Asfour, Aktham* (Grenoble Univ.)

10:45-12:15 SaBPo04.9
Integrated Software for Brain Imaging Detection of Epileptogenic Zones in Refractory Epilepsy 5700-5703
 Mottini, Alejandro* (Univ. de la República); Miceli, Franco (Univ. de la República Oriental del Uruguay – Facultad de Ingeniería); Albín, Germán (Facultad de Ingeniería, Univ. de la República); Fernández, Alicia (Univ. de la República); Nuñez, Margarita (Univ. de la República); Ferrando, Rodolfo (Facultad de Medicina, Univ. de la República)

10:45-12:15 SaBPo04.10
Multiple-Model Set-Valued Observers: A New Tool for HRF Model Selection in Fmri 5704-5707
 Silvestre, Carlos (Inst. Superior Tecnico); Figueiredo, Patricia* (Inst. Superior Técnico / Inst. for Systems & Robotics); Rosa, Paulo (Inst. Superior Tecnico)

10:45-12:15 SaBPo04.11
Joint Fmri Brain Activation Detection and Segmentation Using Level Sets 5708-5711
Silveira, Margarida (Inst. Superior Técnico); Figueiredo, Patricia (Inst. Superior Técnico / Inst. for Systems & Robotics)*

10:45-12:15 SaBPo04.12
Image Resolution Improvement Based on Sinogram Super-Resolution in PET 5712-5715
Jeong, Kye Young (KAIST); Choi, Kyuha (KAIST); Nam, Woo Hyun (KAIST); Kim, Ji Hye (KAIST); Ra, Jong Beom (KAIST)*

SaBPo05: 10:45-12:15 Catalinas/Golden Horn
2.9.4 Cardiac Image Analysis (Poster Session)

10:45-12:15 SaBPo05.1
Estimation of Coronary Length-Volume Allometric Relations of Human Arteries Invivo Using CT 5716-5719
Casciaro, Mariano Ezequiel (Univ. Favaloro); Craiem, Damian (Favaloro Univ.); Graf, Sebastián (Favaloro Univ.); Gurfinkel, Enrique (Fundación Favaloro); Armentano, Ricardo Luis (Favaloro Univ.)*

10:45-12:15 SaBPo05.2
Analysis of the Helix and Transverse Angles of the Muscle Fibers in the Myocardium Based on Diffusion Tensor Imaging 5720-5723
Muñoz-Moreno, Emma (Univ. Pompeu Fabra); Cardenes, Ruben (Univ. Pompeu Fabra, Barcelona); Frangi, Alejandro (Univ. Pompeu Fabra, Barcelona); Frangi, Alejandro (Univ. Pompeu Fabra)*

10:45-12:15 SaBPo05.3
A Qualitative and Quantitative Study of Coronary Artery MRA 5724-5727
Velut, Jérôme (Univ. de Rennes 1); Lentz, Pierre-Axel (CHU Pontchaillou); Philipot, Clément (Univ. de Rennes 1); Garcia, Marie-Paule (Univ. de Rennes 1); Toumoulin, Christine (Univ. de Rennes 1)*

10:45-12:15 SaBPo05.4
Exploratory Data Analysis of Image Texture and Statistical Features on Myocardium and Infarction Areas in Cardiac Magnetic Resonance Images 5728-5731
Engan, Kjersti (Univ. of Stavanger); Eftestøl, Trygve (Univ. of Stavanger); Ørn, Stein (Stavanger Univ. Hospital); Kvaløy, Jan Terje (Univ. of Stavanger); Woie, Leik (Stavanger Univ. Hospital, Stavanger, Norway)*

10:45-12:15 SaBPo05.5
Factor Analysis of Ventricular Contraction Using SPECT-ERNA Images 5732-5735
Rojas Ordus, Diana (Univ. Autonoma Metropolitana Iztapalapa); Jimenez-Angeles, Luis (Inst. Nacional de Cardiología Ignacio Chávez); Hernandez, Salvador (Inst. Nacional de Cardiología); Valdes-cristerna, Raquel (Univ. Autonoma Metropolitana)*

SaBPo06: 10:45-12:15 Catalinas/Golden Horn
3.1.6 Mechanical Sensors (Poster Session)

10:45-12:15 SaBPo06.1
Portable Nanoparticle Quantization Using a Resizable Nanopore Instrument – the IZON Qnano 5736-5739
Garza-Licudine, Edolfo (Univ. of California, Santa Cruz); Deo, Darrel (Univ. of California, Santa Cruz); Yu, Samuel S C (Izon Science, MacDiarmid Inst. for Advanced Materials & NanoTech.); Uz-Zaman, Asma (Univ. of California, Santa Cruz); Dunbar, William B. (Univ. of California, Santa Cruz)*

10:45-12:15 SaBPo06.2
Ac Biosusceptometry As a Method for Measuring Gastric Contraction 5740-5743
Agostinho, Marcelo (Univ. Estadual Paulista-Unesp)*

10:45-12:15 SaBPo06.3
Effect of Pressurization Methods on the Accuracy of Wrist Blood Pressure Measurement 5744-5747
Kim, Jong Pal (Samsung Advanced Inst. of Tech.); Bae, Sang Kon (Samsung Advanced Inst of Tech); Kim, Youn Ho (Samsung Advanced Inst. of Tech.); Kang, KyoungHo (Samsung Advanced Inst. of Tech.); Ko, Byung-Hoon (Samsung Advanced Inst. of Tech.); Kim, Seok (Samsung Advanced Inst. of Tech.); Shin, Kunsoo (Samsung Advanced Inst of Tech)*

10:45-12:15	SaBPo06.4
Insole with Pressure Control and Tissue Neoformation Induction Systems for Diabetic Foot	5748-5751
<i>Reis, Maria do Carmo dos (Univ. of Brasília); Araujo Soares, Fabiano (Univ. of Brasília – UnB); da Rocha, Adson F.* (Univ. of Brasília); Carvalho, Joao Luiz Azevedo de (Univ. of Brasília); S. F. R. Rodrigues, Suelia (UnB-Gama Faculty, Univ. of Brasília)</i>	
10:45-12:15	SaBPo06.5
Electronic System for Monitoring the Frequency and Pressure of Mastication: Study and Approach for Its Design	5752-5755
<i>Nakamura, Orlando (Univ. Tecnológica del Perú); García Romero, Daniel (Univ. Tecnológica del Perú); Yabar Escribanel, Leopoldo Félix* (Univ. Tecnológica del Perú)</i>	
10:45-12:15	SaBPo06.6
Ultrasound User-Identification for Wireless Sensor Networks	5756-5759
<i>Shahid, Bilal (Univ. of New South Wales); Kannan, Anushiya Arunachalam (Univ. of New South Wales); Lovell, Nigel H* (Univ. of New South Wales); Redmond, Stephen James (Univ. of New South Wales)</i>	
10:45-12:15	SaBPo06.7
Experimental Validation of a Polyvinylidene Fluoride Sensing Element in a Tactile Sensor	5760-5763
<i>Yahud, Shuhaida (Univ. of New South Wales); Dokos, Socrates* (Univ. of New South Wales); Morley, John William (Univ. of Western Sydney); Lovell, Nigel H (Univ. of New South Wales)</i>	
10:45-12:15	SaBPo06.8
Point-Type Non-Contact Stiffness Sensing of Soft Tissue with Coupling Effect	5764-5767
<i>Tanaka, Nobuyuki* (Osaka Univ.); Uchida, Ryohei (Osaka Univ.); Higashimori, Mitsuru (Osaka Univ.); Tadakuma, Kenjiro (Osaka Univ.); Kaneko, Makoto (Osaka Univ.)</i>	
10:45-12:15	SaBPo06.9
Opto-Electronic System for Detection of Flat Foot by Using Estimation Techniques: Study and Approach of Design	5768-5771
<i>Luis, Navarro (Univ. Nacional Mayor de San Marcos); Huamaní, Robinson (Univ. Tecnológica del Perú); Yabar Escribanel, Leopoldo Félix* (Univ. Tecnológica del Perú)</i>	
10:45-12:15	SaBPo06.10
Test System for Clinical Force Platforms	5772-5775
<i>Blanchard, German* (Univ. de Valparaíso, Chile.)</i>	

SaBPo07: 10:45-12:15	Catalinas/Golden Horn
3.1.7 Photonics (Poster Session)	

10:45-12:15	SaBPo07.1
A Study of Opto-Physiological Modeling to Quantify Tissue Absorbance in Imaging Photoplethysmography	5776-5779
<i>Hu, Sijung* (Loughborough Univ.); Zheng, Jia (Loughborough Univ.); Azorin Peris, Vicente (Loughborough Univ.)</i>	
10:45-12:15	SaBPo07.2
New Ear Sensor for Mobile, Continuous and Long Term Pulse Oximetry	5780-5783
<i>Buschmann, Johannes (Buschmann Labor- und Medizintechnik); Huang, Jin* (Buschmann Labor- und Medizintechnik)</i>	
10:45-12:15	SaBPo07.3
Time-Resolved Diffuse Reflectance Measurement Carried Out on the Head of an Adult at Large Source-Detector Separation	5784-5786
<i>Liebert, Adam* (Inst of Biocybernetics & Biomed Eng); Sawosz, Piotr (Inst. of Biocybernetics & Biomedical Engineering); Kacprzak, Michal (Inst. of Biocybernetics & Biomedical Engineering); Weigl, Wojciech (Dept. of Anesthesiology & Intensive Care, Medical Univ. of Warsaw); Botwicz, Marcin (Inst. of Biocybernetics & Biomedical Engineering); Maniewski, Roman (Inst of Biocybernetics & Biomed Engr)</i>	
10:45-12:15	SaBPo07.4
Design of a 3D Surface Scanner Prototype Suitable for MR	5787-5790
<i>Cavalleri, Matteo* (IRCCS E.MEDEA); Romei, Marianna (IRCCS “E.Medea”); Reni, Gianluigi (IRCCS)</i>	

10:45-12:15 SaBPo07.5
Concentration of Uric Acid Removed During Dialysis. Estimated by Multi Wavelength and Processed Ultra Violet Absorbance Spectra 5791-5794
Jerotskaja, Jana (Tallinn Univ. of Tech.); Uhlin, Fredrik (Univ. Hospital, Linköping); Lauri, Kai (Tallinn Univ. of Tech.); Tanner, Risto (Natl. Inst. of Chemical Physics & Biophysics); Luman, Merike (North-Estonian Regional Hospital); Fridolin, Ivo (Centre of Biomedical Engineering)*

10:45-12:15 SaBPo07.6
An Integrated Imaging Microscope for Untethered Cortical Imaging in Freely-Moving Animals 5795-5798
Murari, Kartikeya (Johns Hopkins Univ.); Etienne-Cummings, Ralph (Johns Hopkins Univ.); Cauwenberghs, Gert (Univ. of California San Diego); Thakor, Nitish (Johns Hopkins Univ.)*

SaBPo08: 10:45-12:15	Catalinas/Golden Horn
1.4.10 Biomedical Signal Classification VI (Poster Session)	

10:45-12:15 SaBPo08.1
Towards Error-Free Interaction 5799-5802
Tsoneva, Tsvetomira (Philips Research); Bieger, Jordi (Philips Research); Garcia-Molina, Gary Nelson (Philips Research Europe)*

10:45-12:15 SaBPo08.2
A Comparison of Monopolar and Bipolar Recordings for SSVEP Detection 5803-5806
Diez, Pablo Federico (Univ. Nacional de San Juan); Mut, Vicente (Univ. Nacional de San Juan); Laciár, Eric (Univ. Nacional de San Juan); Avila Perona, Enrique Mario (Natl. Univ. of San Juan)*

10:45-12:15 SaBPo08.3
Single-Trial Classification of Auditory Event-Related Potentials Elicited by Stimuli from Different Spatial Directions 5807-5810
Fuentes Cabrera, Alvaro Rodrigo (Aalborg Univ.); Hoffmann, Pablo (Aalborg Univ.)*

10:45-12:15 SaBPo08.4
Mutual Information-Based Fisher Discriminant Analysis for Feature Extraction and Recognition with Applications to Medical Diagnosis 5811-5814
Shadvar, Ali (Iran Univ. of Science & Tech. (IUST), Dept. of Biomedical Engineering); Erfanian, Abbas (Iran Univ. of Science & Tech.)*

10:45-12:15 SaBPo08.5
Prototype of a Wearable System for Remote Fetal Monitoring During Pregnancy 5815-5818
Fanelli, Andrea (Politecnico di Milano); Ferrario, Manuela (Politecnico di Milano); Piccini, Luca (Politecnico di Milano); Andreoni, Giuseppe (Politecnico di Milano); Matrone, Giulia (Univ. of Pavia); Magenes, Giovanni (Univ. of Pavia); Signorini, Maria G. (Politecnico di Milano)*

SaBPo09: 10:45-12:15	Catalinas/Golden Horn
6.7.5 Neural Rehabilitation Technologies I (Poster Session)	

10:45-12:15 SaBPo09.1
Effectiveness of Functional Electrical Stimulation (FES)-Robot Assisted Wrist Training on Persons after Stroke 5819-5822
Hu, Xiaoling (The Hong Kong Polytechnic Univ.); Tong, Kai Yu, Raymond (The Hong Kong Polytechnic Univ.); Li, Rui (Dept. of HTI, The Hong Kong Polytechnic Univ.); Chen, Mo (Zhejiang Univ.); Xue, Jingjing (Dept. of HTI, The Hong Kong Polytechnic Univ.); Ho, Sze Kit (The Hong Kong Polytechnic Univ.); Chen, P. N. (The Hong Kong Polytechnic Univ.)*

10:45-12:15 SaBPo09.2
The Influence of Orthopaedic Implants on Patient Tolerance of Neuromuscular Electrical Stimulation (NMES) 5823-5826
Broderick, Barry (Natl. Univ. of Ireland Galway); Kennedy, Cian (Univ. Hospital Galway); Breen, Paul (Natl. Univ. of Ireland Galway); Kearns, Stephen R. (Natl. Univ. of Ireland, Galway, Univ. Road, Galway, Ireland & Galway Univ. Hospitals, Galway, Ireland.); O'Laighin, Gearoid (Natl. Univ. of Ireland Galway)*

10:45-12:15	SaBPo09.3
Electrocutaneous Stimulation System for Braille Reading	5827-5830
<i>Echenique, Ana Maria* (Facultad de Ingeniería, Univ. Nacional de San Juan); Graffigna, Juan Pablo (Univ. Nacional de San Juan); Mut, Vicente (Univ. Nacional de San Juan)</i>	
10:45-12:15	SaBPo09.4
Cochlear Implant Design for Better Representation of Basilar Membrane Mechanics	5831-5834
<i>Varsavsky, Andrea* (The Univ. of Melbourne)</i>	
10:45-12:15	SaBPo09.5
Non-Invasive Muscle Force Assessment Apparatus for Use in the Intensive Care Unit	5835-5838
<i>Durfee, William* (Univ. of Minnesota)</i>	
10:45-12:15	SaBPo09.6
Surface EMG Analysis of Tibialis Anterior Muscle in Walking with FES in Stroke Subjects	5839-5842
<i>Sabut, Sukanta (SMST, Indian Inst. of Technology, Kharagpur); Kumar, Ratnesh (Natl. Inst. for the Orthopaedically Handicapped); Prasanna, Lenka (Natl. Inst. for the Orthopaedically Handicapped); Mahadevappa, Manjunatha* (Indian Inst. of Technology, Kharagpur)</i>	
10:45-12:15	SaBPo09.7
H-Reflex Measurement and a Simulation Model for Interpreting the Effect of an Auxiliary Electrical Stimulation on FES	5843-5846
<i>Baoping, Yuan (AIST); Gomez Tames, Jose David (Chiba Univ.); Gonzalez Vargas, Jose Eduardo (Chiba Univ.); Yu, Wenwei* (Univ. of Chiba); Ino, Shuichi (Natl. Inst. of Advanced Industrial Science and Tech.)</i>	
10:45-12:15	SaBPo09.8
Estimation of Finger Postures to Control a Manipulator Device for Playing a Trumpet Using Electromyographic Signals with External Triggers	5847-5850
<i>Kobayashi, Yutaro* (Univ. of Tokyo); Fukayama, Osamu (The Univ. of Tokyo); Suzuki, Takafumi (The Univ. of Tokyo); Mabuchi, Kunihiro (The Univ. of Tokyo)</i>	
10:45-12:15	SaBPo09.9
Effects of Simultaneous Vibrations to Two Tendons on the Velocity of Induced Illusory Movement	5851-5853
<i>Yaguchi, Hiroaki* (The Univ. of Tokyo); Fukayama, Osamu (The Univ. of Tokyo); Suzuki, Takafumi (The Univ. of Tokyo); Mabuchi, Kunihiro (The Univ. of Tokyo)</i>	
10:45-12:15	SaBPo09.10
Assessment of the Assistive Performance of an Ankle Exerciser using Electromyographic Signals	5854-5858
<i>Saglia, Jody A.* (Italian Inst. of Tech.); Tsagarakis, Nikos (Italian Inst. of Tech.); Dai, Jian S. (King's College London, Univ. of London); Caldwell, Darwin G. (Italian Inst. of Tech.)</i>	
10:45-12:15	SaBPo09.11
A Variable Structure Pantograph Mechanism for Comprehensive Upper Extremity Haptic Movement Training	5859-5862
<i>Oblak, Jakob (Univ. Rehabilitation Inst., Republic of Slovenia); Perry, Joel C. (Fatronik-Tecnalia); Jung, Je Hyung (Fatronik-tecnalia); Cikajlo, Imre (Univ. Rehabilitation Inst., Republic of Slovenia); Keller, Thierry (Fatronik-Tecnalia); Matjačić, Zlatko* (Univ. Rehabilitation Inst., Republic of Slovenia)</i>	

SaBPo10: 10:45-12:15	Catalinas/Golden Horn
6.7.6 Neural Rehabilitation Technologies II (Poster Session)	

10:45-12:15	SaBPo10.1
Preliminary Investigation of Test-Retest Reliability of a Robotic Assessment of Parkinson's Disease	5863-5866
<i>Brewer, Bambi* (Univ of Pittsburgh); Pradhan, Sujata (Univ. of Washington)</i>	
10:45-12:15	SaBPo10.2
Hand Spring Operated Movement Enhancer (HandSOME) Device for Hand Rehabilitation after Stroke ...	5867-5870
<i>Brokaw, Elizabeth* (The Catholic Univ. of America); Lum, Peter (Natl. Rehabilitation Hospital, Catholic Univ. of America, Veteran Affairs); Holley, Rahsaan (Natl. Rehabilitation Hospital)</i>	

- 10:45-12:15 SaBPo10.3
Tactile Communication Using a CO₂ Flux Stimulation for Blind or Deafblind People 5871-5874
da Cunha, José Carlos (Universidade Positivo); Bordignon, Luiz Alberto (Univ. Positivo); Nohama, Percy (Univ. Tecnológica Federal do Paraná)*
- 10:45-12:15 SaBPo10.4
Current Research of C-Sight Visual Prosthesis for the Blind 5875-5878
Wu, Kaijie (Shanghai Jiao Tong Univ.); Zhang, Chun (Dept. of Electronic Engineering, Tsinghua Univ., Beijing, P. R. China, 100084); Huang, Weichang (Shanghai Jiao Tong Univ.); Wang, Guohe (Peking Univ.)*
- 10:45-12:15 SaBPo10.5
Discrete Cortical Responses from Multi-Site Supra-Choroidal Electrical Stimulation in the Feline Retina 5879-5882
Suaning, Gregg (The Univ. of New South Wales); Kisban, Sebastian Aron (Univ. of Freiburg); Chen, Spencer Chin-Yu (Univ. of New South Wales); Byrnes-Preston, Phil J. (The Univ. of New South Wales); Dodds, Christopher William Douglas (Univ. of New South Wales); Tsai, David (Univ. of New South Wales); Matteucci, Paul (Univ. of New South Wales); Herwik, Stanislav (Univ. of Freiburg); Morley, John William (Univ. of Western Sydney); Lovell, Nigel H (Univ. of New South Wales); Paul, Oliver (Univ. of Freiburg); Stieglitz, Thomas (Univ. of Freiburg); Ruther, Patrick (Univ. of Freiburg)*
- 10:45-12:15 SaBPo10.6
A CMOS-Based Multichip Flexible Retinal Stimulator for Simultaneous Multi-Site Stimulation 5883-5886
Tokuda, Takashi (Nara Inst of Science & Tech.); Sagawa, Yuki (Nara Inst. of Science & Tech.); Noda, Toshihiko (Nara Inst. of Science & Tech.); Sasagawa, Kiyotaka (Nara Inst. of Science & Tech.); Nishida, Kentaro (Osaka Univ.); Fujikado, Takashi (Osaka Univ.); Ohta, Jun (Nara Inst. of Science & Tech.)*
- 10:45-12:15 SaBPo10.7
Correction for Chinese Character Patterns Formed by Simulated Irregular Phosphene Map 5887-5890
Dai, Cong (Shanghai Jiao Tong Univ.); Lu, Manman (Shanghai Jiao Tong Univ.); Zhao, Ying (Shanghai Jiao Tong Univ.); Lu, Yanyu (Shanghai Jiao Tong Univ.); Zhou, Chuanqing (Shanghai Jiao Tong Univ.); Chen, Yao (Shanghai Jiao Tong Univ.); Ren, Qiushi (Shanghai Jiaotong Univ.); Chai, Xinyu (Shanghai JiaoTong Univ., China)*
- 10:45-12:15 SaBPo10.8
Higher-Order Sliding Mode Control of Leg Power in Paraplegic FES-Cycling 5891-5894
Farhoud, Aidin (Iran Univ. of Science & Tech. (IUST)); Erfanian, Abbas (Iran Univ. of Science & Tech.)*
- 10:45-12:15 SaBPo10.9
Vision Based Interface: An Alternative Tool for Children with Cerebral Palsy 5895-5898
Gonzalez, Magdalena (UNSJ); Mulet, Debora (UNSJ); Perez Berenguer, Maria Elisa (UNSJ); Soria, Carlos (Univ. Nacional de San Juan); Mut, Vicente (Univ. Nacional de San Juan)*
- 10:45-12:15 SaBPo10.10
Mixed Reality Rehabilitation for Stroke Survivors Promotes Generalized Motor Improvements 5899-5902
Duff, Margaret (Arizona State Univ.); Chen, Yinpeng (Arizona State Univ.); Attygalle, Suneth (Arizona State Univ.); Sundaram, Hari (Arizona State Univ.); Rikakis, Thanassis (Arizona State Univ.)*
- 10:45-12:15 SaBPo10.11
Enhancement of Bend Sensor Properties as Applied in a Glove for Use in Neurorehabilitation Settings 5903-5906
Oess, Ninja P. (Univ. of Zurich, Balgrist Univ. Hospital); Van Hedel, Hubertus J. A. (Univ. of Zurich, Balgrist Univ. Hospital); Wanek, Johann (Univ. of Zurich, Balgrist Univ. Hospital)*
- 10:45-12:15 SaBPo10.12
Dynamic Range Considerations When Designing PC Sound Card Based Audiometric Systems to Test Human Hearing 5907-5910
Ellingson, Roger M. (Dept. of Veterans Affairs); Dille, Marilyn L. (Dept. of Veterans Affairs)*

SaBPo11: 10:45-12:15

Catalinas/Golden Horn

6.7.7 Neural Rehabilitation Technologies III (Poster Session)

- 10:45-12:15 SaBPo11.1
Perturbation-Based Measurement of Real and Imaginary Parts of Human Arm's Mechanical Impedance 5911-5914
Mousavi Hondori, Hossein (Nanyang Technological Univ.); Ling, Shih-Fu (Nanyang Technological Univ.)*

10:45-12:15 SaBPo11.2
Visual Error Augmentation Enhances Learning in Three Dimensions 5915-5918
 Sharp, Ian* (Univ. of Illinois at Chicago, RIC); Patton, James (Jim) (Rehab Inst. of Chicago & U. of Illinois at Chicago); Huang, Felix (Rehab. Inst. of Chicago)

10:45-12:15 SaBPo11.3
Restoration of Useful Vision up to Letter Recognition Capabilities Using Subretinal Microphotodiodes 5919-5922
 Benav, Heval* (Univ. of Tuebingen); Bartz-Schmidt, Karl Ulrich (Univ. of Tuebingen); Besch, Dorothea (Univ. of Tuebingen); Bruckmann, Anna (Univ. of Tuebingen); Gekeler, Florian (Univ. of Tuebingen); Greppmaier, Udo (Retina Implant AG); Harscher, Alex (Retina Implant AG); Kibbel, Steffen (Retina Implant AG); Kusnyerik, Akos (Semmelweis Univ., Budapest); Peters, Tobias (STZ-eyetrial at the Centre for Ophthalmology, Univ. of Tuebingen); Sachs, Helmut (Klinikum Friedrichstadt, Dresden); Stett, Alfred (Natural & Medical Sciences Inst., Reutlingen); Stingl, Katarina (Univ. of Tuebingen); Wilhelm, Barbara (Univ. of Tuebingen); Wilke, Robert (Univ. of New South Wales); Wrobel, Walter (Retina Implant AG); Zrenner, Eberhart (Univ. of Tuebingen)

10:45-12:15 SaBPo11.4
Dependability: A Challenge for Electrical Medical Implant 5923-5926
 Le Floch, Fanny (Univ. Montpellier II – LIRMM); Cathebras, Guy* (Univ. Montpellier II); Bernard, Serge (CNRS); Soulier, Fabien (Univ. Montpellier II)

10:45-12:15 SaBPo11.5
Engineering Evaluation of the Energy-Storing Orthosis FES Gait System 5927-5930
 Kangude, Abhijit (Univ. of Minnesota); Burgstahler, Brett (Univ. of Minnesota); Durfee, William* (Univ. of Minnesota)

SaBPo12: 10:45-12:15	Catalinas/Golden Horn
2.7.14 Deformable Image Registration II (Poster Session)	

10:45-12:15 SaBPo12.1
Symmetric Multi-Scale Image Registration 5931-5934
 Mohagheghian, Fahimeh (Tehran Univ.); Ahmadian, Alireza (Tehran Univ. of Medical Sciences); Saberi, Hooshang (Imam Hospital, Research Center for Science & Tech. in Medicine); Alirezaie, Javad* (Ryerson Univ., Univ of Waterloo)

10:45-12:15 SaBPo12.2
Registering a Non-Rigid Multi-Sensor Ensemble of Images 5935-5938
 Kim, Hwa Young (Univ. of Waterloo); Orchard, Jeff* (Univ. of Waterloo)

10:45-12:15 SaBPo12.3
Statistical Shape Modeling of Pathological Scoliotic Vertebrae: A Comparative Analysis 5939-5942
 Elias de Oliveira, Marcelo* (Univ. of Bern); Reutlinger, Christoph (Univ. Bern); Zheng, Guoyan (Univ. of Bern); Hasler, Carol-Claudius (UKBB – Basel); Büchler, Philippe (Univ. of Bern)

10:45-12:15 SaBPo12.4
Multiple Registration of Coronal and Sagittal MR Temporal Image Sequences Based on Hough Transform 5943-5946
 Stevo, Neylor Antunes (Escola Politecnica da Univ. de Sao Paulo); Sato, André Kubagawa (Escola Politecnica da Univ. de Sao Paulo); Tsuzuki, Marcos de Sales Guerra* (Escola Politecnica da Univ. de Sao Paulo); Gotoh, Toshiyuki (Yokohama Natl. Univ.); Kagei, Seiichiro (Yokohama Natl. Univ.); Iwasawa, Tae (Kannagawa Cardiovascular & Respiratory Centre)

10:45-12:15 SaBPo12.5
NURBS for the Geometrical Modeling of a New Family of Compact-Supported Radial Basis Functions for Elastic Registration of Medical Images 5947-5950
 García-Pérez, Verónica* (Univ. of Valladolid); Tristan-Vega, Antonio (Univ. de Valladolid); Aja-Fernandez, Santiago (Univ. de Valladolid)

10:45-12:15 SaBPo12.6
A Hybrid Multimodal Non-Rigid Registration of MR Images Based on Diffeomorphic Demons 5951-5954
 Lu, Huanxiang* (Inst. for Surgical Tech. & Biomechanics, Univ. of Bern); Cattin, Philippe C. (Medical Image Analysis Center (MIAC), Univ. of Basel); Reyes, Mauricio (MEM Research Center, Univ. Bern)

10:45-12:15

SaBPo12.7

Spatio-Temporal Registration of Cardiac Perfusion MRI Exams using High-Dimensional**Mutual Information 5955-5958**

Hamrouni, Sameh* (Inst. TELECOM / TELECOM SudParis); Rougon, Nicolas (Inst. TELECOM / TELECOM SudParis); Prêteux, Françoise (ARTEMIS Dept. / TELECOM SudParis)

SaC01: 14:30-16:00

Libertador A

1.2.6 Signal Processing in Physiological Systems VIII (Oral Session)

14:30-14:45

SaC01.1

EEG Complexity During Sleep: On the Effect of Micro and Macro Sleep Structure 5959-5962

Chouvarda, Ioanna* (Aristotle Univ.); Rosso, Valentina (Sleep Disorders Centre, Dept. of Neurology, Univ. of Parma, Parma, Italy); Mendez, Martin Oswaldo (Univ. Autonoma de San Luis Potosi); Bianchi, Anna Maria (Politecnico di Milano); Parrino, Liborio (Sleep Disorders Centre, Dept. of Neurology, Univ. of Parma, Parma, Italy); Grassi, Andrea (Sleep Disorders Centre, Dept. of Neurology, Univ. of Parma, Parma, Italy); Terzano, Mario Giovanni (Sleep Disorders Centre, Dept. of Neurology, Univ. of Parma, Parma, Italy); Cerutti, Sergio (Politecnico di Milano); Maglaveras, Nikolaos (Aristotle Univ. of Thessaloniki)

14:45-15:00

SaC01.2

Coherence in Depth Electrodes During Induction of Deep Anesthesia 5963-5966

Silfverhuth, Minna* (Univ. of Oulu, WellTech Oulu Inst.); Kortelainen, Jukka (Univ. of Oulu); Sonkajärvi, Eila (Univ. of Oulu); Suominen, Kalervo (Oulu Univ. Hospital); Alahuhta, Seppo (Univ. of Oulu); Jäntti, Ville (Seinäjäki Central Hospital & Tampere Univ. of Tech.); Seppänen, Tapio (Univ. of Oulu)

15:00-15:15

SaC01.3

Interpretation of the Approximate Entropy Using Fixed Tolerance Values As a Measure of Amplitude**Variations in Biomedical Signals 5967-5970**

Sarlabous, Leonardo* (Univ. Politècnica de Catalunya (UPC)); Torres, Abel (Univ. Politècnica de Catalunya); Fiz Fernandez, José Antonio (Navarra Hospital); Gea, Joaquim (IMIM- Hospital del Mar, UPF, CIBERES); Martínez-Llorens, Juana M. (IMIM- Hospital del Mar, UPF, CIBERES); Morera Prat, Jose (Hospital Univ. Germans Trias i Pujol); Jané, Raimon (Univ. Politècnica de Catalunya)

15:15-15:30

SaC01.4

Assessment of the Depth of Anesthesia Based on Symbolic Dynamics of the EEG 5971-5974

Tupaika, Nadine (Univ. Politècnica de Catalunya); Vallverdu, Montserrat* (Univ. Politècnica de Catalunya); Jospin, Mathieu (Technical Univ. of Catalonia (UPC)); Jensen, Erik Weber (Morpheus Medical); Struys, Michel (Ghent Univ. Hospital); Vereecke, Hugo (Ghent Univ. Hospital); Voss, Andreas (Univ. of Applied Sciences Jena); Caminal, Pere (Technical Univ. of Catalonia (UPC))

15:30-15:45

SaC01.5

Frequency Domain Surface Emg Sensor Fusion for Estimating Finger Forces 5975-5978

Potluri, Chandra Sekhar* (Idaho State Univ.); Kumar, Parmod (Idaho State Univ.); Anugolu, Madhavi (Idaho State Univ.); Urfer, Alex (Idaho State Univ.); Naidu, D Subbaram (Idaho State Univ.); Schoen, Marco P. (Idaho State Univ.)

15:45-16:00

SaC01.6

Fourier and Wavelet Spectral Analysis of EMG Signals in Isometric and**Dynamic Maximal Effort Exercise 5979-5982**

Dantas, José Luiz (Univ. Estadual de Londrina); Camata, Thiago* (Univ. Estadual de Londrina); Brunetto, Maria Angélica de Oliveira Camargo (Univ. Estadual de Londrina); Moraes, Antônio Carlos de (Univ. de Campinas); Abrão, Taufik (Univ. Estadual de Londrina); Altimari, Leandro Ricardo (Univ. Estadual de Londrina)

SaC02: 14:30-16:00

Libertador B

2.2.2 Therapeutic Ultrasound (Oral Session)

14:30-14:45

SaC02.1

Influence of Temperature Variations on the Average Grayscale of B-Mode**Images of HIFU-Induced Lesions 5983-5986**

Marquez Villalobos, Salomon Elieser* (Centro de Investigacion y de Estudios Avanzados del Politecnico Nacional); Leija, Lorenzo (Centro de Investigacion y de Estudios Avanzados del Inst. Politecnico Nacional); Vera, Arturo (Centro de Investigacion y de Estudios Avanzados del Inst. Politecnico Nacional)

14:45-15:00	SaC02.2
Miniaturized Ultrasound Imaging Probes Enabled by CMUT Arrays with Integrated Frontend Electronic Circuits 5987-5990	
<i>Oralkan, Omer (Stanford Univ.); Nikoozadeh, Amin (Stanford Univ.); Wygant, Ira (Stanford Univ.); Zhuang, Steve (Stanford Univ.); Gencel, Mustafa (Stanford Univ.); Choe, Jung Woo (Stanford Univ.); Stephens, Douglas N. (Univ. of California); de la Rama, Alan (St. Jude Medical); Chen, Peter (St. Jude's Medical); Lin, Feng (General Electric Global Research); Dentinger, Aaron M. (GE Global Research); Wildes, Douglas (GE Global Research); Thomenius, Kai E. (GE Global Research); Shivkumar, Kalyanam (Univ. of California); Mahajan, Aman (Univ. of California); Seo, Chi Hyung (Univ. of Washington); O'Donnell, Matthew (Univ. of Washington); Truong, Uyen (OHSU); Sahn, David J. (Oregon Health & Science Univ.); Khuri-Yakub, Butrus T. (Pierre)* (Stanford Univ.)</i>	
15:00-15:15	SaC02.3
A New Ultrasound Imaging Concept for Laparoscopy in Urology 5991-5994	
<i>Gumprecht, Jan* (Technische Univ. München); Maier, Thomas (Technische Univ. München); Stolzenburg, Jens-Uwe (Univ. of Leipzig); Lueth, Tim (Technical Univ. of Munich)</i>	
15:15-15:30	SaC02.4
Computer Assisted Biopsy of Breast Tumors 5995-5998	
<i>Arambula Cosio, Fernando* (Univ. Nacional Autonoma de Mexico); Lira Berra, Eric (UNAM); Hevia-Montiel, Nidiyare (Centro de Ciencias Aplicadas y Desarrollo Tecnológico, Univ. Nacional Autonoma de Mexico); Garcia Segundo, Cresencio (Optical & Electric Sensors Lab., CCADET, UNAM); Garduño, Edgar (Dept. of Computer Science, IIMAS, UNAM); Alvarado Gonzalez, Montserrat (Dept. of Computer Science, IIMAS, UNAM); Quispe, Rosa Maria (Optical & Electric Sensors Lab., CCADET, UNAM); Reyes Ramirez, Bartolome (Image Analysis Lab., CCADET, UNAM); Hazan Lasri, Eric (Natl. Inst. of Rehabilitation)</i>	
15:30-15:45	SaC02.5
Study of Superficial Basal Cell Carcinomas and Bowen Disease by Qualitative and Quantitative Ultrasound Biomicroscopy Approach 5999-6002	
<i>Petrella, Lorena Itati (Biomedical Engineering Program – COPPE – Federal Univ. of Rio de Janeiro); Coelho A Pereira, Wagner* (Univ. Federal do Rio de Janeiro); A. Valle, Heliomar (Gaffrée & Guinle Univ. Hospital, State Federal Univ. of Rio de Janeiro); Issa, Paulo Roberto (Gaffrée & Guinle Univ. Hospital, State Federal Univ. of Rio de Janeiro); Martins, Carlos J. (Gaffrée & Guinle Univ. Hospital, State Federal Univ. of Rio de Janeiro); Machado, Joao Carlos (Federal Univ. of Rio de Janeiro)</i>	
15:45-16:00	SaC02.6
Modeling and Simulation of Ultrasound Fields Generated by 2D Phased Array Transducers for Medical Applications 6003-6006	
<i>Matrone, Giulia* (Univ. of Pavia); Quaglia, Fabio (STMicroelectronics); Magenes, Giovanni (Univ. of Pavia)</i>	

SaC03: 14:30-16:00	Libertador C
6.2.2 Analysis of Neural Signals III (Oral Session)	

14:30-14:45	SaC03.1
Time-Domain Features of Epileptic Spikes As Potential Bio-Markers of the Epileptogenesis Process 6007-6010	
<i>Huneau, Clément* (INSERM; Univ. de Rennes 1; LTSI); Demont-Guignard, Sophie (INSERM; Univ. de Rennes 1; LTSI); Benquet, Pascal (CNRS; Univ. de Rennes 1; UMR6026); Martin, Benoit (INSERM; Univ. de Rennes 1; LTSI); WENDLING, Fabrice (INSERM – Univ. de Rennes 1)</i>	
14:45-15:00	SaC03.2
Eigenbrains: The Free Vibrational Modes of the Brain As a New Representation for EEG 6011-6014	
<i>Poli, Riccardo* (Univ. of Essex); Citi, Luca (MGH / Harvard Medical School); Salvaris, Mathew Savas (Univ. of Essex); Cinel, Caterina (Univ. of Essex); Sepulveda, Francisco (Univ. of Essex)</i>	
15:00-15:15	SaC03.3
Brain Surface Electrode Co-Registration Using MRI and X-Ray 6015-6018	
<i>Miller, Kai J* (Univ. of Washington); Hebb, Adam O. (Univ. of Washington); Hermes, Dora (Univ. Medical Center Utrecht); denNijs, Marcel (Univ. of Washington); Ojemann, Jeffrey G (Univ. of Washington); Rao, Rajesh PN (Univ. of Washington)</i>	

15:15-15:30	SaC03.4
A Case Study on the Relation between Electroencephalographic and Electrocorticographic Event-Related Potentials	6019-6022
<i>Krusienski, Dean* (Univ. of North Florida); Shih, Jerry (Mayo Clinic)</i>	
15:30-15:45	SaC03.5
Spatio-Temporal Clustering of Firing Rates for Neural State Estimation	6023-6026
<i>Brockmeier, Austin* (Univ. of Florida); Park, Il (Univ. of Florida); Mahmoudi, Babak (Univ. of Florida); Sanchez, Justin C. (Univ. of Florida); Principe, Jose (Univ. of Florida)</i>	
15:45-16:00	SaC03.6
Low-Dimensional Neural Features Predict Muscle EMG Signals	6027-6033
<i>Rivera-Alvidrez, Zuley* (Stanford); Kalmar, Rachel S. (Stanford); Ryu, Stephen (Stanford Univ.); Shenoy, Krishna (Stanford Univ.)</i>	
SaC04: 14:30-16:00	
9.7.1 Clinical Engineering (Oral Session)	
Retiro A	
14:30-14:45	SaC04.1
Diagnostic Performance of the Forced Oscillation Technique in the Detection of Early Respiratory Changes in Rheumatoid Arthritis	6034-6037
<i>Faria, Alvaro Camilo Dias* (Univ. do Estado do Rio de Janeiro); Lopes, Agnaldo (Univ. do Estado do Rio de Janeiro); Jansen, José (Univ. do Estado do Rio de Janeiro); Melo, Pedro Lopes (Univ. do Estado do Rio de Janeiro)</i>	
14:45-15:00	SaC04.2
Robust Closed-Loop Control of Propofol Administration Using WAVCNS Index as the Controlled Variable	6038-6041
<i>Hahn, Jin-Oh* (Univ. of British Columbia); Dumont, Guy (Univ. of British Columbia); Ansermino, J. Mark (British Columbia's Children's Hospital)</i>	
15:00-15:15	SaC04.3
Clinical Engineering Development in the Uruguayan Public Health System	6042-6045
<i>Di Virgilio, Valerio* (PAHO Argentina); Ambrois, Gonzalo (ASSE Uruguay)</i>	
15:15-15:30	SaC04.4
Morphological Descriptors As Rupture Indicators in Middle Cerebral Artery Aneurysms	6046-6049
<i>Valencia, Carolina (Univ. Pompeu Fabra); Villa-Uriol, Maria Cruz (Univ. Pompeu Fabra); Pozo, Jose Maria (Univ. Pompeu Fabra, Barcelona); Frangi, Alejandro (Univ. Pompeu Fabra, Barcelona); Frangi, Alejandro* (Univ. Pompeu Fabra)</i>	
15:30-15:45	SaC04.5
Development of Modified Intraoperative Examination Monitor for Awake Surgery (IEMAS) System for Awake Craniotomy During Brain Tumor Resection	6050-6053
<i>Yoshimitsu, Kitaro* (Tokyo Women's Medical Univ.); Suzuki, Takashi (Tokyo Women's Medical Univ.); Muragaki, Yoshihiro (Tokyo Women's Medical Univ.); Chernov, Mikhail (Tokyo Women's Medical Univ.); Iseki, Hiroshi (Tokyo Women's Medical Univ.)</i>	
15:45-16:00	SaC04.6
A Framework of Medical Equipment Management System for In-House Clinical Engineering Department	6054-6057
<i>Chien, Chia-Hung* (Nat'l. Taiwan Univ.); Huang, Yi-You (Nat'l. Taiwan Univ.); Chong, Fok-Ching (Nat'l. Taiwan Univ.)</i>	
SaC05: 14:30-16:00	
1.7.2 Neural Networks in Biosignal Processing and Classification II (Oral Session)	
Retiro B	
14:30-14:45	SaC05.1
Multimodal EEG, MRI and PET Data Fusion for Alzheimer's Disease Diagnosis	6058-6061
<i>Polikar, Robi* (Rowan Univ.); Tilley, Christopher (Rowan Univ.); Hillis, Brendan (Rowan Univ.); Clark, Christopher (Univ. of Pennsylvania)</i>	

14:45-15:00	SaC05.2
Dynamic Neural Network Detection of Tremor and Dyskinesia from Wearable Sensor Data	6062-6065
<i>Cole, Bryan* (Boston Univ.); Roy, Serge (Boston Univ.); De Luca, Carlo J. (Boston Univ.); Nawab, Syed Hamid (Boston Univ.)</i>	
15:00-15:15	SaC05.3
Multichannel Surface EMG Based Estimation of Bilateral Hand Kinematics During Movements at Multiple Degrees of Freedom	6066-6069
<i>Muceli, Silvia* (Aalborg Univ.); Jiang, Ning (Aalborg Univ.); Farina, Dario (Aalborg Univ.)</i>	
15:15-15:30	SaC05.4
Multi-Parameter Analysis of ECG and Respiratory Flow Signals to Identify Success of Patients on Weaning Trials	6070-6073
<i>Correa, Lorena* (Univ. Nacional de San Juan); Laciari, Eric (Univ. Nacional de San Juan); Mut, Vicente (Univ. Nacional de San Juan); Giraldo, Beatriz (Univ. Politècnica de Catalunya); Torres, Abel (Univ. Politècnica de Catalunya)</i>	
15:30-15:45	SaC05.5
Diagnosis of Brain Tumours from Magnetic Resonance Spectroscopy Using Wavelets and Neural Networks	6074-6077
<i>Arizmendi, Carlos* (Technical Univ. of Catalonia (UPC)); Hernandez-Tamames, Juan Antonio (Univ. Rey Juan Carlos); Vellido, Alfredo (Dept. de Llenguatges i Sistemes Informatics, Univ. Politècnica de Catalunya); Romero, Enrique (Technical Univ. of Catalonia (UPC)); del Pozo, Francisco (Univ. Politecnica de Madrid)</i>	
15:45-16:00	SaC05.6
Development of a Pediatric Cardiac Computer Aided Auscultation Decision Support System	6078-6082
<i>Pretorius, Eugene* (Diacoustic Medical Devices (Pty) Ltd.)</i>	
SaC06: 14:30-16:00	Retiro C
1.4.5 Biomedical Signal Classification V (Oral Session)	
14:30-14:45	SaC06.1
An Integrative Model of the Surface EMG in Pathological Tremor	6083-6086
<i>Dideriksen, Jakob* (Aalborg Univ., Denmark); Farina, Dario (Aalborg Univ.)</i>	
14:45-15:00	SaC06.2
Parkinson's Disease Identification through Optimum-Path Forest	6087-6090
<i>Spadotto, Andre Augusto (Univ. of Sao Paulo); Guido, Rodrigo Capobianco (Univ. of Sao Paulo); Papa, Joao Paulo (Sao Paulo State Univ.); Papa, Joao Paulo* (Univ. of Campinas)</i>	
15:00-15:15	SaC06.3
Influence of Evoked Response Latency and Amplitude on Stimulus Artifact Removal	6091-6094
<i>Oyama, Alberto (Univ. of Sao Paulo); Itiki, Cinthia* (Escola Politecnica of the Univ. of Sao Paulo)</i>	
15:15-15:30	SaC06.4
Automatic Detection of Layer Activation Order in Information Processing Pathways of Rat Barrel Cortex under Mechanical Whisker Stimulation	6095-6098
<i>Mahmud, Mufti* (Univ. of Padova); Maschietto, Marta (NeuroChip Laboratory, Univ. of Padova); Girardi, Stefano (NeuroChip Laboratory, Univ. of Padova); Bertoldo, Alessandra (Univ. of Padova); Vassanelli, Stefano (NeuroChip Laboratory, Univ. of Padova)</i>	
15:30-15:45	SaC06.5
Exploring High-Frequency Oscillation As a Marker of Brain Ischemia Using S-Transform	6099-6102
<i>Wu, Dan* (Johns Hopkins Univ.); Bezerianos, Anastasios (Univ. of Patras); Zhang, Huaijian (Zhejiang Univ.); Jia, Xiaofeng (Johns Hopkins School of Medicine); Thakor, Nitish (Johns Hopkins Univ.)</i>	
15:45-16:00	SaC06.6
Using Pre-Treatment EEG Data to Predict Response to SSRI Treatment for MDD	6103-6106
<i>Khodayari-Rostamabad, Ahmad* (McMaster Univ.); Reilly, James (McMaster Univ.); Hasey, Gary (McMaster Univ.); de Bruin, Hubert (McMaster Univ.); MacCrimmon, Duncan (McMaster Univ.)</i>	

SaC07: 14:30-16:00		Martin Fierro 1
11.3.1 Student Session: Negotiating Your First BME Job: Do's and Don'ts in Academia, Private Sector and Government (Mini Symposium)		
14:30-14:45		SaC07.1
Negotiating Your First BME Job: Do's and Don'ts in Academia, Private Sector and Government 6107-6109		
<i>Linte, Cristian A.* (Robarts Research Inst.)</i>		
SaC08: 14:30-16:00		Martin Fierro 2
2.7.15 Image Classification II (Oral Session)		
14:30-14:45		SaC08.1
Ultrasonographic Characterization and Identification of Symptomatic Carotid Plaques 6110-6113		
<i>Seabra, Jose Carlos* (Inst. Superior Tecnico, Lisboa NIF); Pedro, Luis Mendes (Faculdade de Medicina de Lisboa); Sanches, J. Miguel (Inst. for Systems & Robotics, NIF)</i>		
14:45-15:00		SaC08.2
Edge-Based Partial Volume Averaging Estimation for FLAIR MRI with White Matter Lesions 6114-6117		
<i>Khademi, April* (Univ. of Toronto); Venetsanopoulos, Anastasios (Ryerson Univ.); Moody, Alan R. (Sunnybrook Health Sciences Centre, Dept. of Medical Imaging)</i>		
15:00-15:15		SaC08.3
Exploratory Matrix Factorization for PET Image Analysis 6118-6121		
<i>Kodewitz, Andreas (Univ. of Regensburg); Keck, Ingo (Univ. of Regensburg); Tome, Ana Maria (Univ. de Aveiro); Lang, Elmar W.* (Univ. of Regensburg)</i>		
15:15-15:30		SaC08.4
Automatic Analysis of Macroarrays Images 6122-6125		
<i>Caridade, Cristina M. R.* (Inst. Superior de Engenharia de Coimbra); Marcal, Andre R. S. (Faculdade de Ciencias, Univ. do Porto); Mendonça, Teresa (Faculdade de Ciencias, Univ. do Porto); Albuquerque, Pedro Miguel da Silva (IBMC – Inst. de Biologia Molecular e Celular); Mendes, Marta V. (IBMC – Inst. for Molecular & Cell Biology); Tavares, Fernando (Inst. for Molecular & Cell Biology)</i>		
15:30-15:45		SaC08.5
Grouping a Few Sets of Normally Distributed Voxels of SPECT Volumes in Discrimination between Alzheimer Dementia and Controls 6126-6129		
<i>Yin, Tang-Kai* (Natl. Univ. of Kaohsiung); Chiu, Nan-Tsing (Natl. Cheng Kung Univ.); Pai, Ming-Chyi (Natl. Cheng Kung Univ.)</i>		
15:45-16:00		SaC08.6
Modeling Spatial Relation in Skin Lesion Images by the Graph Walk Kernel 6130-6133		
<i>Situ, Ning (Univ. of Houston); Wadhawan, Tarun (Univ. of Houston); Yuan, Xiaojing (Univ. of Houston); Zouridakis, George* (Univ. of Houston)</i>		
SaC09: 14:30-16:00		Ombu A
5.10.2 Obstructive Sleep Apnea (Oral Session)		
14:30-14:45		SaC09.1
Autonomic and Metabolic Effects of OSA in Childhood Obesity 6134-6137		
<i>Oliveira, Flavia* (Univ. of Southern California); Tran, Winston (Univ. of Southern California); Lesser, Daniel (Rady Childrens Hospital San Diego); Bhatia, Rajeev (Childrens Hospital Los Angeles); Ortega, Ricardo (Childrens Hospital Los Angeles); Mittelman, Steven (Childrens Hospital Los Angeles); Keens, Thomas (Childrens Hospital Los Angeles, Univ. of Southern California); Davidson Ward, Sally (Univ. of Southern California); Khoo, Michael (Univ. of Southern California)</i>		
14:45-15:00		SaC09.2
Regular and Non Regular Snore Features As Markers of SAHS 6138-6141		
<i>Mesquita, Joana* (Univ. Politècnica de Catalunya); Fiz Fernandez, José Antonio (Navarra Hospital); Solà-Soler, Jordi (Univ. Politècnica de Catalunya); Morera Prat, Jose (Hospital Univ. Germans Trias i Pujol); Jané, Raimon (Univ. Politècnica de Catalunya)</i>		

15:00-15:15	SaC09.3
Automatic Non-Invasive Differentiation of Obstructive and Central Hypopneas with Nasal Airflow Compared to Esophageal Pressure 6142-6145	
<i>Morgenstern, Christian* (Inst. de Bioenginyeria de Catalunya); Schwaibold, Matthias (MCC-Med GmbH & Co KG); Randerath, Winfried (Klinikum Bethanien); Bolz, Armin (Univ. of Karlsruhe); Jané, Raimon (Univ. Politècnica de Catalunya)</i>	
15:15-15:30	SaC09.4
Nocturnal Sound Analysis for the Diagnosis of Obstructive Sleep Apnea 6146-6149	
<i>Ben-Israel, Nir* (Ben-Gurion Univ.); Zigel, Yaniv (Ben-Gurion Univ.); Tarasiuk, Ariel (Ben-Gurion Univ.)</i>	
15:30-15:45	SaC09.5
Development of a Continuous Multisite Accelerometry System for Studying Movements During Sleep 6150-6153	
<i>Terrill, Philip Ian* (Univ. of Queensland); Mason, David Glen (Univ. of Queensland); Wilson, Stephen (Univ. of Queensland)</i>	
15:45-16:00	SaC09.6
Pediatric Obstructive Sleep Apnea Severity Assessment Using Pulse Oximetry and Dual RIP Bands 6154-6157	
<i>Mason, David Glen* (Univ. of Queensland); Iyer, Kartik (Mater Children's Hospital, Univ. of Queensland); Terrill, Philip Ian (Univ. of Queensland); Wilson, Stephen (Univ. of Queensland); Suresh, Sadasivam (Mater Children's Hospital)</i>	
SaC10: 14:30-16:00	Ombu B
10.5.3 Decision Support Methods II (Oral Session)	
14:30-14:45	SaC10.1
An Accurate and Interpretable Model for BCCT.core 6158-6161	
<i>Oliveira, Hélder P.* (INESC Porto, Faculdade de Engenharia, Univ. do Porto); T. Magalhaes, Andre (Oporto Medical School – Portugal); Cardoso, Maria João (Porto Faculty of Medicine); Cardoso, Jaime S. (INESC Porto, Faculdade de Engenharia, Univ. do Porto)</i>	
14:45-15:00	SaC10.2
SeyeS – Support System for Preventing the Development of Ocular Disabilities in Leprosy 6162-6165	
<i>Girardi, Dennys Robson* (Pontificia Univ. Católica do Paraná/FAE Centro Univ.); Moro, Claudia (PUCPR – Pontifical Catholic Univ. of Parana); Bulegon, Hugo (Health Tech. Postgraduate Program – Pontifical Catholic Univ.)</i>	
15:00-15:15	SaC10.3
A Guideline-Based Decision Support System for Generating Referral Recommendations from Routinely Recorded Home Telehealth Measurement Data 6166-6169	
<i>Mohktar, Mas Sahidayana* (Univ. of Malaya); Basilakis, Jim (Univ. of NSW); Redmond, Stephen James (Univ. of New South Wales); Lovell, Nigel H (Univ. of New South Wales)</i>	
15:15-15:30	SaC10.4
Hybrid Cost-Sensitive Fuzzy Classification for Breast Cancer Diagnosis 6170-6173	
<i>Schaefer, Gerald (Loughborough Univ.); Nakashima, Tomoharu* (Osaka Prefecture Univ.)</i>	
15:30-15:45	SaC10.5
Compression-Based Aggregation Model for Medical Web Services 6174-6177	
<i>Al-Shammary, Dhiah (RMIT Univ.); Khalil, Ibrahim* (RMIT Univ.)</i>	
15:45-16:00	SaC10.6
Activity-Based Process Mining for Clinical Pathways Computer Aided Design 6178-6181	
<i>Fernandez-Llatas, Carlos* (Univ. Politecnica de Valencia); Meneu, Teresa (Polytechnic Univ. of Valencia); Benedí, Jose Miguel (ITI – Univ. Politecnica de Valencia); Traver, Vicente (Inst. ITACA)</i>	

4.1.2 Algorithms and Tools for Genome Analysis (Oral Session)

14:30-14:45

SaC11.1

Learning in Glaucoma Genetic Risk Assessment 6182-6185

Zhang, Zhuo* (A*STAR); Liu, Jiang (Inst for Infocomm Resrch, A STAR); Kwoh, Chee Keong (Nanyang Tech. Univ., Singapore); Sim, Xueling (Centre for Molecular Epidemiology, Yong Loo Lin School of Medicine, Natl. Univ. of Singapore); Tay, Wan Ting (Singapore Eye Research Inst., Singapore); Tan, Yong Hua (Nanyang Technological Univ. (NTU), Inst. For Infocomm Research (I2R)); Yin, Fengshou (Inst. for Infocomm Research); Wong, Tien Yin (Natl. Univ. of Singapore)

14:45-15:00

SaC11.2

Single Nucleotide Polymorphism Selection Using Independent Component Analysis 6186-6189

Nahlawi, Layan* (Queen's Univ.); Mousavi, Parvin (Queen's Univ.)

15:00-15:15

SaC11.3

Benchmarking of Gene Prediction Programs for Metagenomic Data 6190-6193

Yok, Non* (Drexel Univ.); Rosen, Gail (Drexel Univ.)

15:15-15:30

SaC11.4

A Computationally Fast Measure of Epistasis for 2 SNPs and a Categorical Phenotype 6194-6197

Antoniades, Athos (Univ. of Cyprus); Matthews, Paul (Glaxo Smith Kline); Pattichis, Constantinos* (Univ. of Cyprus); Galwey, Nicholas (Glaxo Smith Kline)

15:30-15:45

SaC11.5

Regulatory Network of Micrnas in RAW 264.7 Macrophage Cells 6198-6201

Garmire, Lana* (Univ. of California at San Diego)

15:45-16:00

SaC11.6

Polymerase Chain Reaction (PCR) and Sequence Specific Oligonucleotide Probes (SSOP) Genotyping Assay for Detection of Genes Associated with Rheumatoid Arthritis and Multiple Sclerosis 6202-6205

Nikolaou, Konstantina (Univ. of Ioannina); Kalatzis, Fanis (Univ. of Ioannina); Giannakeas, Nikolaos (Univ. of Ioannina); Markoula, Sofia (Univ. of Ioannina); Chatzikyriakidou, Anthi (Univ. of Ioannina); Georgiou, Ioannis (Univ. of Ioannina); Fotiadis, Dimitrios I.* (Univ. of Ioannina)

6.7.2 Recent and Emerging Rehabilitation Approaches (Oral Session)

14:30-14:45

SaC12.1

Peripheral Nerve Signal Recording and Processing for Artificial Limb Control 6206-6209

Wodlinger, Brian* (Case Western Reserve Univ.); Durand, Dominique (Case Western Reserve Univ.)

14:45-15:00

SaC12.2

Epileptic Seizure Onset Detection Prior to Clinical Manifestation 6210-6213

Salam, Muhammad Tariqus* (École Polytechnique de Montréal); Sawan, Mohamad (Ecole Polytechnique); Nguyen, Dang (Notre-Dame Hospital)

15:00-15:15

SaC12.3

Development of an Implantable Transverse Intrafascicular Multi-Channel Electrode (TIME) System for Relieving Phantom Limb Pain 6214-6217

Jensen, Winnie (Center for Sensory-Motor Interaction); Micera, Silvestro* (Scuola Superiore Sant'Anna); Navarro, Xavier (Univ. Autònoma de Barcelona); Stieglitz, Thomas (Univ. of Freiburg); Guiraud, David (INRIA); Divoux, Jean-Louis (MXM Neuromedics); Rossini, Paolo Maria (Campus Biomedico Univ.); Yoshida, Ken (Indiana Univ.-Purdue Univ. Indianapolis)

15:15-15:30

SaC12.4

Wireless Distributed Architecture for Therapeutic Functional Electrical Stimulation : A Technology to Design Network-Based Muscle Control 6218-6221

Toussaint, Mickael* (LIRMM CNRS)

15:30-15:45	SaC12.5
Command of an Upper Extremity FES System Using a Simple Set of Commands 6222-6225	
<i>Cornwell, Andrew* (Case Western Reserve Univ.); Kirsch, Robert (Case Western Reserve Univ.)</i>	
15:45-16:00	SaC12.6
Interleaved Multichannel Epimysial Stimulation for Eliciting Smooth Contraction of Muscle with Reduced Fatigue 6226-6229	
<i>Hughes, Aaron* (Georgia Inst. of Tech.); Guo, Liang (Georgia Inst. of Tech.); DeWeerth, Stephen P. (Georgia Tech/Emory Univ.)</i>	
SaC13: 14:30-16:00 Gomez Losada	
6.9.2 Advanced Instrumentation for Neural Prosthetic Devices (Oral Session)	
14:30-14:45	SaC13.1
Molecular Photovoltaic Structures for Optical Activation of Excitable Cells: Current Advances and Perspectives 6230-6232	
<i>Pennisi, Cristian Pablo* (Aalborg Univ.)</i>	
14:45-15:00	SaC13.2
A Wearable System for the Visually Impaired 6233-6236	
<i>Pradeep, Vivek* (Univ. of Southern California); Medioni, Gerard (Univ. of Southern California); Weiland, James (Univ. of Southern California)</i>	
15:00-15:15	SaC13.3
Science and Technology of Biocompatible Thin Films for Implantable Biomedical Devices 6237-6242	
<i>Li, Wei (Argonne Natl. Lab); Bernd, Kabius (Argonne Natl. Lab); Auciello, Orlando* (Argonne Natl. Lab)</i>	
15:15-15:30	SaC13.4
Spatial Characterization of Electric Potentials Generated by Pulsed Microelectrode Arrays 6243-6246	
<i>Kandagor, Vincent (The Univ. of Tennessee-Knoxville); Cela, Carlos J. (Univ. of Utah); Sanders, Charlene (Oak Ridge Natl. Lab); Greenbaum, Elias* (ORNL); Lazzi, Gianluca (Univ. of Utah); Humayun, Mark (Univ. of Southern California); Zhou, David (Second Sight Medical Products, Inc); Castro, Richard (Second Sight Medical Products); Gaikwad, Sanjay (Second Sight Medical Products); Little, James S (Second Sight Medical Products Inc)</i>	
15:30-15:45	SaC13.5
Signal processing for a vestibular neurostimulator 6247-6247	
<i>Rubinstein, Jay T.* (Univ. of Washington); Nie, Kaibao (Univ. of Washington); Bierer, Steven (Univ. of Washington); Ling, Leo (Univ. of Washington); Phillips, James O. (Univ. of Washington)</i>	
SaDPo01: 16:00-17:30 Catalinas/Golden Horn	
11.2.3 Societal Impact and Safety (Poster Session)	
16:00-17:30	SaDPo01.1
The Role of Biomedical Engineering in Health System Improvement and Nation's Development 6248-6251	
<i>Schneider, Jr., Bertoldo* (Federal Univ. of Tech. – Parana – Brazil); Schneider, Fabio Kurt (Federal Univ. of Tech. Parana); Dallabona, Carlos Alberto (Federal Univ. of Tech. – Parana)</i>	
16:00-17:30	SaDPo01.2
The Telemetric and Holter ECG Warehouse Initiative (THEW): A Data Repository for Quantitative Electrocardiography and Cardiac Safety 6252-6255	
<i>Couderc, Jean-Philippe* (Univ. of Rochester)</i>	
16:00-17:30	SaDPo01.3
The Concept for Integration of Thermal Imaging Systems with Personal Protective Equipment 6256-6259	
<i>Owczarek, Grzegorz* (Natl. Research Inst.); Gralewicz, Grzegorz (Central Inst. for Labour Protection – Natl. Research Inst.); Wolska, Agnieszka (Central Inst. for Labour Protection-Natl. Research Inst.)</i>	
16:00-17:30	SaDPo01.4
UV Protective Textile Clothing for Workers Exposed to Natural and Artificial UV Radiation 6260-6263	
<i>Wolska, Agnieszka (Central Inst. for Labour Protection-Natl. Research Inst.); Owczarek, Grzegorz* (Natl. Research Inst.); Bartkowiak, Grażyna (Central Inst. for labour Protection – Natl. research Inst.); Poscik, Adam (Central Inst. for Labour Protection Natl. Research Inst.)</i>	

2.7.11 Rigid-Body Image Registration II (Poster Session)

16:00-17:30

SaDPo02.1

Integration of Model-Based Weighting into an ICP Variant to Account for Measurement Errors in Intra-Operative A-Mode Ultrasound-Based Registration 6264-6267

Fieten, Lorenz Johannes (RWTH Aachen Univ.); Radermacher, Klaus (RWTH Aachen Univ., Chair of Medical Engineering); Kernenbach, Manuel Andreas (RWTH Aachen Univ.); Heger, Stefan (RWTH Aachen Univ.)*

16:00-17:30

SaDPo02.2

A Computationally Efficient Approach for 2D-3D Image Registration 6268-6271

Haque, Md. Nazmul (The Univ. of New South Wales); Pickering, Mark (The Univ. of New South Wales); Biswas, Moyuresh (The Univ. of New South Wales); Frater, Michael (The Univ. of New South Wales); Scarvell, Jennie (The Canberra Hospital); Smith, Paul (The Canberra Hospital)*

16:00-17:30

SaDPo02.3

Temporal Registration for Low-Quality Retinal Images of the Murine Eye 6272-6275

Andreou, Lenos (Univ. of Bristol); Achim, Alin (Univ. of Bristol)*

16:00-17:30

SaDPo02.4

Medical Image Registration Using Tsallis Entropy in Statistical Parametric Mapping (SPM) 6276-6279

Amaral-Silva, Henrique (Univ. of São Paulo); Murta Jr., Luiz Otavio (Univ. of Sao Paulo); Wichert-Ana, Lauro (Univ. of São Paulo); Sakamoto, Américo (Univ. of São Paulo); Azevedo-Marques, Paulo Mazzoncini (Univ. of São Paulo)*

16:00-17:30

SaDPo02.5

An Integrated Software Solution for Multi-Modal Mapping of Morphological and Functional Ocular Data 6280-6283

Troeger, Eric (Univ. of Tuebingen, Tuebingen, Germany); Sliesoraityte, Ieva (Univ. of Tuebingen); Charbel Issa, Peter (Univ. of Oxford); Scholl, Hendrik Peter Nicolas (Wilmer Eye Inst., Johns Hopkins Univ., Baltimore, Maryland, USA); Zrenner, Eberhart (Univ. of Tuebingen); Wilke, Robert (Univ. of New South Wales)*

16:00-17:30

SaDPo02.6

Validation through Accuracy Prediction in Neuroimage Registration 6284-6287

Pizzorni Ferrarese, Francesca (Univ. of Verona); Simonetti, Flavio (Univ. of Verona); Menegaz, Gloria (Univ. of Siena)*

16:00-17:30

SaDPo02.7

A Comparison of the 3D Kinematic Measurements Obtained by Single-Plane 2D-3D Image Registration and RSA 6288-6291

Abdullah Al, Muhit (The Univ. of New South Wales); Pickering, Mark (The Univ. of New South Wales); Ward, Tom (The Canberra Hospital); Scarvell, Jennie (The Canberra Hospital); Smith, Paul (The Canberra Hospital)*

1.4.8 Biomedical Signal Classification VII (Poster Session)

16:00-17:30

SaDPo03.1

Performance of Combined Support Vector Machine and Principal Component Analysis in Recognizing Infant Cry with Asphyxia 6292-6295

Sahak, Rohilah (Univ. Teknologi Mara); Mansor, Wahidah (Univ. Teknologi Mara); Lee, Khuan Y. (Univ. Teknologi Mara); Zabidi, Azlee (Univ. Teknologi Mara); Mohd Yassin, Ahmad Ihsan (Univ. Teknologi Mara)*

16:00-17:30

SaDPo03.2

Analysis of Spontaneous MEG Activity in Mild Cognitive Impairment Using Spectral Entropies and Disequilibrium Measures 6296-6299

Bruña, Ricardo (Biomedical Engineering Group (GIB), Univ. of Valladolid); Poza, Jesús (Univ. of Valladolid); Gomez, Carlos (Univ. of Valladolid, CIF: Q4718001C); Fernandez, Alberto (Univ. Complutense de Madrid); Hornero, Roberto (Univ. of Valladolid)*

16:00-17:30	SaDPo03.3
Doppler Based Identification of Uterine Artery and Umbilical Artery for Monitoring Pregnancy	6300-6303
<i>Vajinepalli, Pallavi* (Philips Electronics India Ltd); Gupta, Lalit (Philips Electronics India Ltd.); Naik, Sarif Kumar (Philips Electronics India Ltd); Sisodia, Rajendra Singh (Philips Research Asia – Bangalore); Firtion, Celine (Philips Electronics India Ltd)</i>	
16:00-17:30	SaDPo03.4
Diversity-Based Selection of Components for Fusion Classifiers	6304-6307
<i>Gupta, Lalit (Southern Illinois Univ.); Kota, Srinivas* (Southern Illinois Univ.); Molfese, Dennis (Univ. of Louisville); Vaidyanathan, Ravi (Univ. of Bristol)</i>	
16:00-17:30	SaDPo03.5
Performance of Dynamic Features in Classifying Scalp Epileptic Interictal and Normal EEG	6308-6311
<i>Bao, Forrest Sheng* (Texas Tech Univ.); Li, Ya-Liang (Singapore Mgmt. Univ.); Hu, Jing (Jiangsu Provincial Hospital of Chinese Medicine); Gao, Jue-Ming (Jiangsu Provincial Hospital of Chinese Medicine)</i>	
16:00-17:30	SaDPo03.6
Acoustics Based Assessment of Respiratory Diseases Using GMM Classification	6312-6316
<i>Mayorga Ortiz, Pedro* (Inst. Tecnológico de Mexicali & CSULB); Druzgalski, Christopher (CSULB); Morelos, Raul (Inst. Tecnológico de Mexicali); González Arriaga, Oscar Hugo (Inst. Tecnológico de Mexicali); Vidales, Jorge (Inst. Tecnológico de Mexicali)</i>	
16:00-17:30	SaDPo03.7
Reconstruction of Cortical Sources Activities for Online Classification of Electroencephalographic Signals	6317-6320
<i>Fruitet, Joan* (INRIA); Clerc, Maureen (INRIA)</i>	
16:00-17:30	SaDPo03.8
On Improvement of Detection of Obstructive Sleep Apnea by Partial Least Square-based Extraction of Dynamic Features	6321-6324
<i>Sepúlveda-Cano, Lina María (Univ. Nacional de Colombia Sede Manizales); Travieso-González, Carlos (Univ. de Las Palmas de Gran Canaria); Godino-Llorente, Juan Ignacio (Univ. Politécnica de Madrid); Castellanos-Dominguez, Germán* (Univ. Nacional de Colombia)</i>	
16:00-17:30	SaDPo03.9
A Bayesian Approach for Epileptic Seizures Detection with 3D Accelerometers Sensors	6325-6328
<i>Jallon, Pierre* (CEA Grenoble)</i>	
16:00-17:30	SaDPo03.10
A Comparison of Different Dimensionality Reduction and Feature Selection Methods for Single Trial ERP Detection	6329-6332
<i>Lan, Tian (Oregon Health & Science Univ.); Erdogmus, Deniz* (Northeastern Univ.); Black, Lois (Oregon Health & Science Univ.); Van Santen, Jan (Oregon Health & Science Univ.)</i>	

SaDPo04: 16:00-17:30	Catalinas/Golden Horn
1.4.9 Biomedical Signal Classification VIII (Poster Session)	

16:00-17:30	SaDPo04.1
A Wavelet Approach for Unsupervised Nystagmus Analysis on ENG and VOG Recordings	6333-6336
<i>Jansen, Stephan* (Maastricht Univ.); Kingma, Herman (Univ. Hospital Maastricht); Peeters, Ralf (Univ. Maastricht)</i>	
16:00-17:30	SaDPo04.2
Examining the Adverse Effects of Limb Position on Pattern Recognition Based Myoelectric Control	6337-6340
<i>Scheme, Erik* (Univ. of New Brunswick); Fougner, Anders (Norwegian Univ. of Science & Tech.); Stavdahl, Oyvind (Norwegian Univ. of Science & Tech.); Chan, Adrian (Carleton Univ.); Englehart, Kevin (Univ. of New Brunswick)</i>	
16:00-17:30	SaDPo04.3
A Computational Environment for Long-Term Multi-Feature and Multi-Algorithm Seizure Prediction	6341-6344
<i>Teixeira, César* (CISUC, Univ. of Coimbra); Direito, Bruno (FCTUC, Univ. of Coimbra); Costa, Rui (School of Informatics, The Univ. of Edinburgh, UK); Valderrama, Mario (ICM Research Center); Feldwisch-Drentrup, Hinnerk (Univ. of Freiburg); Nikolopoulos, Stavros (ICM Research Center); Le Van Quyen, Michel (ICM Research Center); Schelter, Bjorn (Albert-Ludwigs Univ.); Dourado, António (FCTUC, Univ. of Coimbra)</i>	

16:00-17:30	SaDPo04.4
Three-Dimensional Gesture Comparison Using Curvature Analysis of Position and Orientation	6345-6348
<i>Pham, Minh Tu* (Inst. Natl. des Sciences Appliquées (INSA de Lyon)); Moreau, Richard (INSA-Lyon); Boulanger, Pierre (Univ. of Alberta)</i>	
16:00-17:30	SaDPo04.5
Intelligent Artifact Classification for Ambulatory Physiological Signals	6349-6352
<i>Sweeney, Kevin Thomas* (NUI Maynooth); Leamy, Darren John (Natl. Univ. of Ireland Maynooth); Ward, Tomas (NUI Maynooth); McLoone, Sean F. (Natl. Univ. of Ireland, Maynooth)</i>	
16:00-17:30	SaDPo04.6
Automatic Detection of EEG Artefacts Arising from Head Movements	6353-6356
<i>O'Regan, Simon* (Univ. College Cork, Ireland); Faul, Stephen (Univ. College Cork); Marnane, Liam (Univ. College Cork)</i>	
16:00-17:30	SaDPo04.7
Fluctuating EMG Signals: Investigating Long-Term Effects of Pattern Matching Algorithms	6357-6360
<i>Kaufmann, Paul* (Univ. of Paderborn); Englehart, Kevin (Univ. of New Brunswick); Platzner, Marco (Univ. of Paderborn)</i>	
16:00-17:30	SaDPo04.8
Classification of Protein Profiles Using Fuzzy Clustering Techniques: An Application in Early Diagnosis of Oral, Cervical and Ovarian Cancer	6361-6364
<i>Karemore, Gopal* (Univ. of Copenhagen); Mullick, Jhinuk (Safdarjang Hospital); Sujatha, R. (Center for Atomic & Molecular Physics, Manipal Univ., India); C, Santhosh (Manipal Univ.)</i>	
16:00-17:30	SaDPo04.9
Dynamic Channel Selection to Reduce Computational Burden in Seizure Detection	6365-6368
<i>Faul, Stephen* (Univ. College Cork)</i>	
16:00-17:30	SaDPo04.10
SVM Detection of Epileptiform Activity in Routine EEG	6369-6372
<i>Kelleher, Daniel* (Univ. College Cork); Temko, Andriy (Univ. College Cork); Nash, Derek (Univ. College Cork); McNamara, Brian (Univ. College Cork); Marnane, Liam (Univ. College Cork)</i>	
SaDPo05: 16:00-17:30 Catalinas/Golden Horn	
3.11.2 Textile Systems (Poster Session)	
16:00-17:30	SaDPo05.1
Wearable Monitoring of Lumbar Spine Curvature by Inertial and E-Textile Sensory Fusion	6373-6376
<i>Bartalesi, Raphael (Univ. of Pisa); Lorussi, Federico (Univ. of Pisa); De Rossi, Danilo* (Univ. of Pisa); Tesconi, Mario (Univ. of Pisa); Tognetti, Alessandro (Univ. of Pisa)</i>	
16:00-17:30	SaDPo05.2
A New Washable Low-Cost Garment for Everyday Fall Detection	6377-6380
<i>Niazmand, Khalil* (Technische Univ. München); Jehle, Claudius (Technische Univ. München); D'Angelo, Lorenzo Tancredi (Technische Univ. Muenchen); Lueth, Tim (Technical Univ. of Munich)</i>	
16:00-17:30	SaDPo05.3
Emerging Low Energy Wearable Body Sensor Networks Using Patch Sensors for Continuous Healthcare Applications	6381-6384
<i>Yoo, Jerald* (MIT); Yoo, Hoi-Jun (KAIST)</i>	
16:00-17:30	SaDPo05.4
Textile Electrode Straps for Wrist-To-Ankle Bioimpedance Measurements for Body Composition Analysis. Initial Validation and Experimental Results	6385-6388
<i>Márquez Ruiz, Juan Carlos (Chalmers Univ. of Tech.); Ferreira Gonzalez, Javier* (Royal Inst. of Tech.); Buendia, Ruben (Univ. of Alcalá); Seoane, Fernando (Univ. of Borås); Lindecrantz, Kaj (Royal Inst. of Tech.)</i>	
16:00-17:30	SaDPo05.5
The Ear As a Location for Wearable Vital Signs Monitoring	6389-6392
<i>He, David Da* (Massachusetts Inst. of Tech.); Winokur, Eric S. (Massachusetts Inst. of Tech.); Heldt, Thomas (Massachusetts Inst. of Tech.); Sodini, Charles G. (Massachusetts Inst. of Tech.)</i>	

16:00-17:30 SaDPo05.6
bioLights: Light Emitting Wear for Visualizing Lower-Limb Muscle Activity 6393-6396
 Igarashi, Naoto* (Univ. of Tsukuba); Suzuki, Kenji (Univ. of Tsukuba); Kawamoto, Hiroaki (Univ. of Tsukuba);
 Sankai, Yoshiyuki (Univ. of Tsukuba)

16:00-17:30 SaDPo05.8
Implementation of Array Sensor Module for a Radial Artery Tonometry 6397-6400
 Shin, Ki-Young* (Korea Electorechnology Research Inst.); Jeon, Sung Chae (Korea Electorechnology Research
 Inst.); Nam, Ki Chang (Korea Electrotech Resrch Inst.); Huh, Young (Korea ElectroTech. Resrch Inst)

16:00-17:30 SaDPo05.9
Development of a Wearable Vital Signs Monitor for Healthcare 6401-6404
 Gallego, Jonathan (Univ. de Antioquia); Lemos, Diego* (Univ. de Antioquia); Meneses, Gustavo (Univ. of
 Antioquia); Hernandez, Alher Mauricio (Univ. of Antioquia)

16:00-17:30 SaDPo05.10
**A Stretchable Electrode Array for Non-Invasive, Skin-Mounted Measurement of Electrocardiography
 (ECG), Electromyography (EMG) and Electroencephalography (EEG)** 6405-6408
 Ma, Rui* (Univ. of Illinois, Urbana-Champaign); Kim, Dae-Hyeong (Univ. of Illinois at Urbana Champaign);
 McCormick, Martin (Univ. of Illinois – Urbana-Champaign); Coleman, Todd (UIUC, Dept of ECE &
 Neuroscience Program); Rogers, John (Univ. of Illinois)

SaDPo06: 16:00-17:30	Catalinas/Golden Horn
3.12.2 Implantable Systems (Poster Session)	

16:00-17:30 SaDPo06.1
A New System Design of the Multi-View Micro-Ball Endoscopy System 6409-6412
 Gu, Yingke (Tsinghua Univ.); Xie, Xiang (Tsinghua Univ.); Li, Guolin* (Tsinghua Univ.); Sun, Tianjia (Tsinghua
 Univ.); Zhang, Qiang (Tsinghua Univ.); Wang, Ziqiang (Tsinghua Univ.); Wang, Zhihua (Tsinghua Univ.)

16:00-17:30 SaDPo06.2
An RF-Powered Wireless Multi-Channel Implantable Bio-Sensing Microsystem 6413-6416
 Young, Darrin* (Univ. of Utah)

16:00-17:30 SaDPo06.3
Ligament Imbalance Metrics and an Autonomous Measurement System for Post TKA 6417-6420
 Gupta, Deepak* (TELECOM Bretagne, France); Lahuec, Cyril (TELECOM Bretagne, France);
 Arzel, Matthieu (TELECOM Bretagne, France); Jezequel, Michel (TELECOM Bretagne, France);
 Hamitouche, Chafiaâ (Ecole Natl.e Supérieure des Télécommunications de Bretagne)

16:00-17:30 SaDPo06.4
A Fully Integrated Preamplifier for Cardiac Sensing in a HVCMOS Technology 6421-6424
 Jose, Lasa* (Univ. Católica del Uruguay)

16:00-17:30 SaDPo06.5
Implantable Electronics: Emerging Design Issues and an Ultra Light-Weight Security Solution 6425-6428
 Narasimhan, Seetharam* (Case Western Reserve Univ.); Wang, Xinmu (Case Western Reserve Univ.);
 Bhunia, Swarup (Case Western Reserve Univ.)

16:00-17:30 SaDPo06.6
**Sub-Cubic Millimeter Intraocular Pressure Monitoring Implant to Enable Genetic Studies on
 Pressure-Induced Neurodegeneration** 6429-6432
 Chow, Eric* (Purdue Univ., Cyberonics Inc.); Ha, Dohyuk (Purdue Univ.); Lin, Tse-Yu (Purdue Univ.);
 deVries, Wilhelmine (The Jackson Laboratory); John, Simon (The Jackson Laboratory);
 Chappell, William (Purdue Univ.); Irazoqui, Pedro (Purdue Univ.)

16:00-17:30 SaDPo06.7
Translating Electromagnetic Torque into Controlled Motion for Use in Medical Implants 6433-6436
 Pivonka, Daniel* (Stanford Univ.); Meng, Teresa (Stanford Univ.); Poon, Ada S Y (Stanford Univ.)

16:00-17:30	SaDPo06.8
A High-Power Versatile Wireless Power Transfer for Biomedical Implants	6437-6440
<i>Jiang, Hao* (San Francisco State Univ.); Zhang, Jun Min (San Francisco State Univ.); Liou, Shy Sheng (San Francisco State Univ.); Fechter, Richard (Univ. of California at San Francisco); Hirose, Shinjiro (Univ. of California at San Francisco); Harrison, Michael (Univ. of California at San Francisco); Roy, Shuvo (Univ. of California at San Francisco)</i>	
16:00-17:30	SaDPo06.9
Implantable Micropump Technologies for Murine Intracochlear Infusions	6441-6444
<i>Johnson, Dean G.* (Rochester Inst. of Tech.); Waldron, Matthew (Rochester Inst. of Tech.); Frisina, Robert D. (Univ. of Rochester School of Medicine & Dentistry); Borkholder, David A. (Rochester Inst. of Tech.)</i>	
16:00-17:30	SaDPo06.10
Adaptive Spike Detection Method Based on Capacitor Arrays Dedicated to Implantable Neural Recording Microsystems	6445-6448
<i>Barati, Saied (S. Rajaei Univ.); Sodagar, Amir M.* (Univ. of Michigan)</i>	
SaDPo07: 16:00-17:30	
3.10.1 Advances in Sensor Technology (Poster Session)	
16:00-17:30	SaDPo07.1
New Architecture for Wireless Implantable Neural Recording Microsystems Based on Frequency-Division Multiplexing	6449-6452
<i>Rajabi-Tavakkol, Alireza (S. Rajaei Univ.); Sodagar, Amir M.* (Univ. of Michigan); Refan, Mohammad H. (S. Rajaei Univ.)</i>	
16:00-17:30	SaDPo07.2
Thermal Parameters Measurement on Fire Fighter: Improvement of the Monitoring System	6453-6456
<i>Oliveira, Aurélien* (INSA Lyon); Gehin, Claudine (INSA Lyon); Massot, Bertrand (INSA Lyon); Ramon Zarate, Carolina (INSA Lyon); Dittmar, Andre (INSA Lyon); McAdams, Eric (Univ. of Ulster)</i>	
16:00-17:30	SaDPo07.3
A Novel Device with 36 Channels for Imaging and Signal Acquisition of the Gastrointestinal Tract Based on AC Biosusceptometry	6457-6460
<i>Paixão, Fabiano Carlos* (Pontificia Univ. Católica do Rio Grande do Sul); Quini, Caio Cesar (Univ. Estadual Paulista); Baffa, Oswaldo (FFCLRP-Univ. of Sao Paulo); Miranda, José Ricardo A (IBB – Univ. Estadual Paulista)</i>	
16:00-17:30	SaDPo07.4
Sensorized Guidewires with MEMS Tri-Axial Force Sensor for Minimally Invasive Surgical Applications ...	6461-6464
<i>Lou, Liang (Inst. of Microelectronics, A*STAR, Singapore); Krishna, Kotlanka R. (Inst. of Microelectronics, A*STAR, Singapore); Shao, Lichun (Inst. of Microelectronics, A*STAR, Singapore); Park, Woo-Tae* (Inst. of Microelectronics, A*STAR, Singapore); Daquan, Yu (Inst. of Microelectronics, A*STAR, Singapore); Lim, Lishiah (Inst. of Microelectronics, A*STAR, Singapore); Wee, Yongjun (Nanyang Technological Univ., Singapore); Vaidyanathan, Kripesh (Inst. of Microelectronics); Feng, Hanhua (IME, Singapore); Benjamin, S Y Chua (Natl. Univ. Hospital, Singapore); Chengkuo, Lee (Natl. Univ. of Singapore); Kwong, Dim-Lee (Inst. of Microelectronics, A*STAR, Singapore)</i>	
16:00-17:30	SaDPo07.5
Modelling and Characterization of an Instrumented Medical Needle in Sight of New Microsensor Design for Its Insertion Guidance	6465-6468
<i>Yang, Wenbin (TIMA Laboratory, CNRS – UJF – Grenoble INP); Bonvilain, Agnès* (Univ. Joseph Fourier Grenoble); BBasour, Skandar (TIMA (CNRS- Grenoble INP – UJF)); Alonso, Thierry (Laboratoire 3SR – Grenoble – France); Moreau-Gaudry, Alexandre (Univ. Joseph Fourier – Grenoble Univ. Hospital)</i>	
16:00-17:30	SaDPo07.6
Ultrasonically Actuated Silicon-Microprobe-Based Testicular Tubule Metrology	6469-6472
<i>Ramkumar, Abhishek* (Cornell Univ.); Lal, Amit (Cornell Univ.)</i>	

16:00-17:30	SaDPo07.7
Single-Cell Stimulation and Electroporation Using a Novel 0.18 μm CMOS Chip with Subcellular-Sized Electrodes	6473-6476
<i>Braeken, Dries* (IMEC); Huys, Roeland (IMEC); Loo, Josine (IMEC); Bartic, Carmen (IMEC); Borghs, Gustaaf (IMEC); Callewaert, Geert (KU Leuven Campus Kortrijk); Eberle, Wolfgang (imec)</i>	
16:00-17:30	SaDPo07.8
Development of Nanostructured Magnetic Capsules by Means of the Layer by Layer Technique	6477-6480
<i>Herrera Sandoval, Oscar Leonardo* (Univ. of Genoa & Central Univ.); Parigi, Enrico (Univ. degli studi di Genova); Habibi, Neda (Univ. of Genova); Pastorino, Laura (Univ. of Genova); Caneva Soumetz, Federico (Univ. of Genova); Ruggiero, Carmelina (Univ. of Genova)</i>	
16:00-17:30	SaDPo07.9
Characterizing Skin Using a Three-Axis Parallel Drive Force-Sensitive Micro-Robot	6481-6484
<i>Flynn, Cormac (The Univ. of Auckland); Taberner, Andrew (The Univ. of Auckland); Nielsen, Poul* (The Univ. of Auckland)</i>	
16:00-17:30	SaDPo07.10
A Linearized Current Stimulator for Deep Brain Stimulation	6485-6488
<i>Shen, Ding-Lan* (Fu Jen Catholic Univ.); Chu, Yu-Jung (Fu Jen Catholic Univ.)</i>	
16:00-17:30	SaDPo07.11
Heart Rate Detection from Single-Foot Plantar Bioimpedance Measurements in a Weighing Scale	6489-6492
<i>Díaz Cerecedo, Delia Hortensia* (Univ. Politècnica de Catalunya); Casas, Oscar (Technical Univ. of Catalonia); Pallas-Areny, Ramon (Univ. Politècnica de Catalunya)</i>	
16:00-17:30	SaDPo07.12
Dry Electrode Bio-Potential Recordings	6493-6496
<i>Gargiulo, Gaetano (The Univ. of Sydney); McEwan, Alistair (The Univ. of Sydney); Nasehi Tehrani, Joubin* (The Univ. of Sydney); Jin, Craig (The Univ. of Sydney); van Schaik, André (The Univ. of Sydney)</i>	
16:00-17:30	SaDPo07.13
Energy Estimation of Treadmill Walking Using On-Body Accelerometers and Gyroscopes	6497-6501
<i>Vathsangam, Harshvardhan* (Univ. of Southern California); Emken, Adar (Univ. of Southern California); Schroeder, Todd (Univ. of Southern California); Spruijt-Metz, Donna (Univ. of Southern California); Sukhatme, Gaurav (USC)</i>	
16:00-17:30	SaDPo07.14
Rectus Abdominis Electromyography and Mechanomyography Comparison for the Detection of Cough	6502-6505
<i>Lamraoui, Hamid* (CNRS – Grenoble INP – UJF); Bonvilain, Agnès (Univ. Joseph Fourier Grenoble); Robain, Gilberte (Er 6UMPC Univ Paris 06); Mozer, Pierre (APHP); Basrour, Skandar (TIMA (CNRS- Grenoble INP – UJF)); Cinquin, Philippe (Josep Fourier Univ.); Gumery, Pierre-Yves (Univ. joseph fourier); Moreau-Gaudry, Alexandre (Univ. Joseph Fourier – Grenoble Univ. Hospital)</i>	

SaDPo08: 16:00-17:30

Catalinas/Golden Horn

3.9.1 Microsystems Technologies (Poster Session)

16:00-17:30	SaDPo08.1
Microfluidic Based Contactless Dielectrophoretic Device: Modeling and Analysis	6506-6509
<i>Minnikanti, Saugandhika (George Mason Univ.); Reyes, Darwin R. (Natl. Inst. of Standards & Tech.); Aguilar, Ruben Claudio (Purdue Univ.); Gaitan, Michael (NIST); Pancrazio, Joseph (George Mason Univ.); Peixoto, Nathalia* (George Mason Univ.)</i>	
16:00-17:30	SaDPo08.2
A Bio-Analytical System for Rapid Cellular Electrophysiological Assays	6510-6513
<i>Fatoyinbo, Henry* (Univ. of Surrey); Gould, David (Univ. of Surrey); Labeed, Fatima (Univ of Surrey)</i>	

16:00-17:30	SaDPo08.3
Integrated Fluidic System for Bio-Molecule Separation	6514-6517
<i>FIORINI, Paolo (imec); Hiraoka, Maki (Advanced Tech. Research Laboratories, Panasonic); Zhang, Lei (imec); De Malsche, Wim (Dept. of Chemical Engineering at the VUB (Vrije Univ. Brussel)); Majeed, Bivragh (imec); SabuncuogluTezcan, Deniz (imec); Desmet, Gert (Dept. of Chemical Engineering at the VUB (Vrije Univ. Brussel)); Ichiro, Yamashita (Nara Inst. of Science & Tech., Ikoma Nara Japan); Van Hoof, Chris (IMEC); Op de Beeck, Maaïke* (IMEC)</i>	
16:00-17:30	SaDPo08.4
Rapid Monodisperse Microencapsulation of Single Cells	6518-6521
<i>Zhang, Xiaoxiao (Univ. of Hawaii at Manoa); Ohta, Aaron (Univ. of Hawaii at Manoa); Garmire, David* (Univ. of Hawaii at Manoa)</i>	
16:00-17:30	SaDPo08.5
Fully Integrated Micro-Separator with Soft Magnetic Micro-Pillar Arrays for Filtrating Lymphocytes	6522-6526
<i>Dong, Tao* (Vestfold Univ. College); Su, Qianhua (Vestfold Univ. College)</i>	
16:00-17:30	SaDPo08.6
Direct Analog-To-QRS Detection Front-End Architecture for Wearable ECG Applications	6527-6530
<i>Agarwal, Ritika (Tufts Univ.); Sonkusale, Sameer* (Tufts Univ.)</i>	
16:00-17:30	SaDPo08.7
An Asymmetric Resonant Coupling Wireless Power Transmission Link for Micro-Ball Endoscopy	6531-6534
<i>Sun, Tianjia (Tsinghua Univ.); Xie, Xiang* (Tsinghua Univ.); Li, Guolin (Tsinghua Univ.); Gu, Yingke (Tsinghua Univ.); Wang, Ziqiang (Tsinghua Univ.); Wang, Zhihua (Tsinghua Univ.)</i>	
SaDPo09: 16:00-17:30 Catalinas/Golden Horn	
3.3.1 Bioelectric Sensors (Poster Session)	
16:00-17:30	SaDPo09.1
3-D Modeling of a Carbon Nanotube Cantilever Biosensor	6535-6538
<i>Islam, Md. Saiful (Deakin Univ.); Kouzani, Abbas Z.* (Deakin Univ.); Dai, Xiujuan J. (Deakin Univ.); Michalski, Wojtek P. (CSIRO)</i>	
16:00-17:30	SaDPo09.2
A Capacitive ECG Array with Visual Patient Feedback	6539-6542
<i>Eilebrecht, Benjamin (RWTH Aachen); Schommartz, Antje (RWTH Aachen, Chair of Medical Information Tech.); Walter, Marian* (RWTH Aachen Univ.); Wartzek, Tobias (RWTH Aachen, Chair of Medical Information Tech.); Czaplik, Michael (Univ. Hospital RWTH Aachen, Dept. of Anaesthesiology); Leonhardt, Steffen (RWTH Aachen Univ.)</i>	
16:00-17:30	SaDPo09.3
bioTones: A Wearable Device for EMG Auditory Biofeedback	6543-6546
<i>Tsubouchi, Yasunori* (Univ. of Tsukuba); Suzuki, Kenji (Univ. of Tsukuba)</i>	
16:00-17:30	SaDPo09.4
An Electronic DNA Sensor Chip Using Integrated Capacitive Read-Out Circuit	6547-6550
<i>Lee, Byunghun* (KAIST)</i>	
16:00-17:30	SaDPo09.5
A Fractional Electrical Impedance Model in Detection of Occlusal Non-Cavitated Carious	6551-6554
<i>Morais, Andréa (Federal Univ. of Rio de Janeiro); Pino, Alexandre Visintainer (Federal Univ. of Rio de Janeiro); Souza, Marcio N.* (Federal Univ. of Rio de Janeiro)</i>	
16:00-17:30	SaDPo09.6
Bioimpedance Monitoring for Cryopreservation Process Control	6555-6558
<i>Olmo, Alberto (Univ. de Sevilla); Buzon, Blanca (Univ. of Seville); Yufera, Alberto* (CSIC); Risco, Ramon (Univ. of Seville)</i>	
16:00-17:30	SaDPo09.7
A Digital Driven Right Leg Circuit	6559-6562
<i>Haberman, Marcelo Alejandro (Univ. Nacional de La Plata, Facultad de Ingeniería, Dept. de electrotecnia); Spinelli, Enrique* (CONICET – UNLP)</i>	

16:00-17:30 SaDPo09.8
Hook Effect Correction and Resistance-Based Cole Fitting Prior Cole Model-Based Analysis: Experimental Validation 6563-6566
Buendia, Ruben (Univ. of Alcalá); Seoane, Fernando (Univ. of Borås); Harris, Matthew (Philips Research); Caffarel, Jennifer (Philips Research); Gil Pita, Roberto (Univ. of Alcalá)*

SaDPo10: 16:00-17:30 Catalinas/Golden Horn
6.5.2 Brain Functional Imaging II (Poster Session)

16:00-17:30 SaDPo10.1
Sliding-Window Motion Artifact Rejection for Functional Near-Infrared Spectroscopy 6567-6570
Ayaz, Hasan (Drexel Univ.); Izzetoglu, Meltem (Drexel Univ.); Shewokis, Patricia A (Drexel Univ.); Onaral, Banu (Drexel Univ.)*

16:00-17:30 SaDPo10.2
Extraction of M and P Components from the Visual Evoked Potential Using Pseudorandom Stimulation with Swept Parameter Technique 6571-6574
Momose, Keiko (Waseda Univ.)*

16:00-17:30 SaDPo10.3
MEG Brain Activities Reflecting Affection for Visual Food Stimuli 6575-6578
Kuriki, Shinya (Tokyo Denki Univ.); Miyamura, Takahiro (Tokyo Denki Univ.); Uchikawa, Yoshinori (Tokyo Denki Univ.)*

16:00-17:30 SaDPo10.4
Time Change of Perceptual Reversal of Ambiguous Figures by rTMS 6579-6582
Nojima, Kazuhisa (Kyushu University); Ge, Sheng (Kyushu Univ.); Katayama, Yoshinori (Graduate School of ISEE, Kyushu Univ.); Iramina, Keiji (Kyushu Univ.)*

SaDPo11: 16:00-17:30 Catalinas/Golden Horn
6.9.5 Human Performance (Poster Session)

16:00-17:30 SaDPo11.1
An Experimental Study on Target Recognition Using White Canes 6583-6586
Nunokawa, Kiyohiko (Tokyo Intl. Univ.); Ino, Shuichi (Natl. Inst. of Advanced Industrial Science and Tech.)*

16:00-17:30 SaDPo11.2
Off-Line and On-Line Vigilance Estimation Based on Linear Dynamical System and Manifold Learning . 6587-6590
Shi, Lichen (Shanghai Jiao Tong Univ.); Lu, Bao-Liang (Shanghai Jiao Tong Univ.)*

16:00-17:30 SaDPo11.3
Vigilance Estimation by Using Electrooculographic Features 6591-6594
Ma, Jiaxin (Shanghai Jiaotong Univ.); Shi, Lichen (Shanghai Jiao Tong Univ.); Lu, Bao-Liang (Shanghai Jiao Tong Univ.)*

16:00-17:30 SaDPo11.4
Towards an Index of Cognitive Efficacy: EEG-Based Estimation of Cognitive Load among Individuals Experiencing Cancer-Related Cognitive Decline 6595-6598
Mathan, Santosh (Honeywell Laboratories)*

16:00-17:30 SaDPo11.5
Enhancing Pilot Performance with a SymBodic System 6599-6602
Karlen, Walter (UBC); Cardin, Sylvain (Ecole Polytechnique Federale de Lausanne); Thalmann, Daniel (Ecole Polytechnique Fédérale de Lausanne (EPFL)); Floreano, Dario (Ecole Polytechnique Federale de Lausanne)*

16:00-17:30 SaDPo11.6
Assessment of Observers' Stability and Reliability – A Tool for Evaluation of Intra and Inter-Concordance in Animal Behavioral Recordings 6603-6606
Crispim-Junior, Carlos Fernando (Univ. Federal de Santa Catarina); Garcia, Vitor Augusto (Univ. Federal de Santa Catarina); Marino-Neto, José (Univ. Federal de Santa Catarina)*

16:00-17:30	SaDPo11.7
Fuzzy-Based Simulation of Real Color Blindness	6607-6610
<i>Lee, Jinmi* (Univ. de Pernambuco); dos Santos, Wellington (Univ. de Pernambuco)</i>	
16:00-17:30	SaDPo11.8
Effects of Additional Workload on Hand and Tongue Performance	6611-6614
<i>Johnson, Ashley* (Georgia Inst. of Tech.); Huo, Xueliang (Georgia Inst. of Tech.); Cheng, Chih-Wen (Georgia Inst. of Tech.); Ghovanloo, Maysam (Georgia Inst. of Tech.); Shinohara, Minoru (Georgia Inst. of Tech.)</i>	
16:00-17:30	SaDPo11.9
A Software Program for the Head Impulse Testing Device (HITD)	6615-6618
<i>Böhler, Andreas (Upper Austria Univ. for Applied Sciences); Mandalá, Marco (Univ. of Verona); Ramat, Stefano* (Univ. di Pavia)</i>	
16:00-17:30	SaDPo11.10
Development of a Data Acquisition and Analysis System for Nociceptive Withdrawal Reflex and Reflex Receptive Fields in Humans	6619-6624
<i>Biurrún Manresa, José Alberto* (Aalborg Univ.); Hansen, John (Aalborg Univ.); Andersen, Ole Kæseler (Aalborg Univ.)</i>	
16:00-17:30	SaDPo11.11
Evaluation of a Bimanual-Coordinated Upper-Limbs Training System Based on the Near Infrared Spectroscopic Signals on Brain	6625-6628
<i>Li, Chunguang* (Kochi Univ. of Tech.); Liu, Tao (Kochi Univ. of Tech.); Inoue, Yoshio (Kochi Univ. of Tech.); Shibata, Kyoko (Kochi Univ. of Tech.)</i>	
16:00-17:30	SaDPo11.12
Eye Movement Inhibits the Facilitation of Perceptual Filling-In	6629-6632
<i>Yokota, Masae* (Nagoya Bunri Univ.); Yokota, Yasunari (Gifu Univ.)</i>	
16:00-17:30	SaDPo11.13
Quantitative Evaluation Protocol for Upper Limb Motor Coordination in Patients with Ataxia	6633-6636
<i>Marini, Federico (IRCCS E. Medea, ITALY); Chwastek, Catherine (Drexel Univ., Philadelphia, PA); Romei, Marianna (IRCCS "E. Medea"); Cavalleri, Matteo* (IRCCS E. MEDEA); Bonato, Sara (IRCCS E. Medea, ITALY); Reni, Gianluigi (IRCCS)</i>	

SaE02: 17:30-19:00	Libertador B
2.3.1 MR and NIR Imaging (Oral Session)	

17:30-17:45	SaE02.1
Multispectral Transillumination Imaging of Skin Lesions for Oxygenated and Deoxygenated Hemoglobin Measurement	6637-6640
<i>D'Alessandro, Brian* (New Jersey Inst. of Tech.); Dhawan, Atam (New Jersey Inst. of Tech.)</i>	
17:45-18:00	SaE02.2
Positive Contrast MRI of Prostate Brachytherapy Seeds Based on Resonant Frequency Offset Mapping ..	6641-6644
<i>Whitehead, Gregory* (Texas A&M Univ.); Ji, Jim Xiuquan (Texas A&M Univ.)</i>	
18:00-18:15	SaE02.3
A Decoupled Circular-Polarized Volume Head Coil Pair for Studying Two Interacting Human Brains with MRI	6645-6648
<i>Lee, Ray* (Princeton Univ.)</i>	
18:15-18:30	SaE02.4
A Fourth Gradient to Overcome Slice Dependent Phase Effects of Voxel-Sized Coils in Planar Arrays ...	6649-6652
<i>Bosshard, John* (Texas A&M Univ.); Eigenbrodt, Edwin (Texas A&M Univ.); McDougall, Mary (Texas A&M Univ.); Wright, Steven M. (Texas A&M Univ.)</i>	
18:30-18:45	SaE02.5
A Desktop Imaging System for Teaching MR Engineering	6653-6656
<i>Wright, Steven M.* (Texas A&M Univ.); McDougall, Mary (Texas A&M Univ.); Bosshard, John (Texas A&M Univ.)</i>	

18:45-19:00 SaE02.6
A Novel Spiral Radiofrequency Coil for High Field Mouse Cardiac Imaging 6657-6661
Constantinides, Christakis (Assistant Professor, Univ. of Cyprus); Gkagkarellis, Stavros (Univ. of Cyprus); Angeli, Stelios (Univ. of Cyprus); Cofer, Gary (Duke Univ.)*

SaE03: 17:30-19:00 Libertador C
6.2.3 Analysis of Neural Signals IV (Oral Session)

17:45-18:00 SaE03.1
A Wavelet Approach for On-Line Spike Sorting in Tetrode Recordings 6662-6665
De Benedetti, Eugenio (Univ. of Buenos Aires); Lew, Sergio Eduardo (Univ. of Buenos Aires); Zanutto, Silvano (Inst. de Ingeniería Biomédica FI-UBA; IBYME-CONICET)*

18:00-18:15 SaE03.2
Combination of PCA and Undecimated Wavelet Transform for Neural Data Processing 6666-6669
Farashi, Sajjad (Tehran Univ. of Medical Sciences, Tehran, Iran); Abolhassani, Mohammad D (Tehran Univ. of Medical Science); Salimpour, Yousef (Tehran Univ. of Medical Science); Taghavi Kani, Mostafa (Tehran Univ. of Medical Sciences)*

18:15-18:30 SaE03.3
Extended Kalman Filtering of Point Process Observation 6670-6673
Salimpour, Yousef (Tehran Univ. of Medical Science)*

18:30-18:45 SaE03.4
Automatic Classification of Penicillin-Induced Epileptic EEG Spikes 6674-6677
Kortelainen, Jukka (Univ. of Oulu); Silfverhuth, Minna (Univ. of Oulu, WellTech Oulu Inst.); Suominen, Kalervo (Oulu Univ. Hospital); Sonkajärvi, Eila (Univ. of Oulu); Alahuhta, Seppo (Univ. of Oulu); Jäntti, Ville (Seinäjoen Central Hospital & Tampere Univ. of Tech.); Seppänen, Tapio (Univ. of Oulu)*

18:45-19:00 SaE03.5
Skin Relaxation Predicts Neural Firing Rate Adaptation in SAI Touch Receptors 6678-6681
Williams, Aaron (Univ. of Virginia); Gerling, Gregory (Univ. of Virginia); Wellnitz, Scott (Baylor College of Medicine); Bourdon, Sarah M (Baylor College of Medicine); Lumpkin, Ellen (Baylor College of Medicine)*

17:30-17:45 SaE03.6
Non-Listening Effort Related Parameters in Auditory Discrimination Paradigms 6682-6685
Bernarding, Corinna (Computational Diagnostics & Biocybernetics Unit); Strauss, Daniel J. (Comp. Diagn. & Biocyb. Unit); Latzel, Matthias (SIEMENS Audiology); Corona-Strauss, Farah I. (Saarland Univ. Hospital)*

SaE04: 17:30-19:00 Retiro A
9.3.2 Cardiovascular Diagnostic and Therapeutic Devices and Modeling (Oral Session)

17:30-17:45 SaE04.1
ZMIND – An Interactive Environment for Electrical Modeling of the Thorax 6686-6689
Yang, Fei (Univ. of Minnesota); Patterson, Robert P. (Univ. of Minnesota)*

17:45-18:00 SaE04.2
Using the Virtual Heart Model to Validate the Mode-Switch Pacemaker Operation 6690-6693
Jiang, Zhihao (Univ. of Pennsylvania); Connolly, Allison (Univ. of Pennsylvania); Mangharam, Rahul (Univ. of Pennsylvania)*

18:00-18:15 SaE04.3
Suitable Acoustic Paths to Transfer Energy in Depth Using Ultrasound 6694-6697
Cotté, Benjamin (INSERM); Lafon, Cyril (INSERM); Chapelon, Jean-Yves (INSERM U556); Dehollain, Catherine (Ecole Polytechnique Federale de Lausanne)*

18:15-18:30 SaE04.4
Design of a Fuzzy Controller for the Automation of an Extracorporeal Support System with the Use of a Simulation Environment 6698-6701
Mendoza Garcia, Alejandro (Technical Univ. Munich); Baumgartner, Benedikt (Technical Univ. Munich); Schreiber, Ulrich (German Heart Center); Eichhorn, Stefan (German Heart Center); Krane, Markus (German Heart Center); Bauernschmitt, Robert (German Heart Center); Knoll, Alois (Technical Univ. Munich)*

18:30-18:45 SaE04.5
Safety Evaluation of Magnetic Catheter Steering with an Upgraded Magnetic Resonance Imaging System 6702-6705
Martel, Sylvain (Ecole Polytechnique de Montreal); Gosselin, Frédérick P. (Ecole polytechnique de Montréal); Lalande, Viviane (Ecole polytechnique de Montréal); Bringout, Gael (Ecole Polytechnique de Montréal)*

18:45-19:00 SaE04.6
Characteristics of Smooth Muscle Cells' Shape and Proliferation Rate in Novel Short-Term Thermal Angioplasty Ex Vivo and In Vitro 6706-6708
Kunio, Mie (Keio Univ.); Shimazaki, Natsumi (Keio Univ.); Ito, Arisa (Keio Univ.); Hayashi, Tomoaki (Keio Univ.); Arai, Tsunenori (Keio Univ.)*

SaE06: 17:30-19:00 Retiro C
1.9.1 Algorithms for Data Mining and Data Processing (Oral Session)

17:30-17:45 SaE06.1
Delineation and Interpretation of Gene Networks towards Their Effect in Cellular Physiology a Reverse Engineering Approach for the Identification of Critical Molecular Players, through the Use of Controlled Biological Vocabularies 6709-6712
Moutselos, Konstantinos (Univ. of the Aegean); Maglogiannis, Ilias (Univ. of Central Greece); Chatziioannou, Aristotelis (Natl. Hellenic Research Foundation)*

17:45-18:00 SaE06.2
A Hybrid Decision Support System for the Risk Assessment of Retinopathy Development As a Long Term Complication of Type 1 Diabetes Mellitus 6713-6716
Skevofilakas, Marios (Natl. Technical Univ. of Athens); Zarkogianni, Konstantia (Natl. Technical Univ. of Athens); Karamanos, Basil (Diabetes Centre, Hippokration Hospital, V. Sofias 114,11527, Athens, Greece); Nikita, Konstantina (Natl. Technical Univ. of Athens)*

18:00-18:15 SaE06.3
Construction of Signaling Pathways and Identification of Drug Effects on the Liver Cancer Cell HepG2 6717-6720
Alexopoulos, Leonidas (Natl. Technical Univ. of Athens); Melas, Ioannis (Natl. Technical Univ. of Athens); Chairakaki, Aikaterini (Natl. Technical Univ. of Athens); Saez-Rodriguez, Julio (Harvard Medical School); Mitsos, Alexander (Massachusetts Inst. of Tech.)*

18:15-18:30 SaE06.4
Classification of Dermatological Images Using Advanced Clustering Techniques 6721-6724
Tasoylis, Sotirios (Univ. of Central Greece); Doukas, Charalampos (Univ. of the Aegean); Maglogiannis, Ilias (Univ. of Central Greece); Plagianakos, Vassilis (Univ. of Central Greece)*

18:30-18:45 SaE06.5
A New Curve Registration Technique for the Analysis of T Waves Shapes 6725-6728
Meste, Olivier (UNSA-CNRS); Rix, Hervé, Henri (Univ. of Nice-Sophia Antipolis); Dori, Guy (Dept of Medicine, Carmel Medical Center, Haifa, Israel)*

SaE08: 17:30-19:00 Martin Fierro 2
2.7.16 Image Classification III (Oral Session)

17:30-17:45 SaE08.1
Classifier-Assisted Metric for Chromosome Pairing 6729-6732
Ventura, Rodrigo (Inst. Superior Técnico); Khmelinskii, Artem (Inst. Superior Técnico Univ.); Sanches, J. Miguel (Inst. for Systems & Robotics, NIF)*

17:45-18:00 SaE08.2
Measurement of the Complex Permittivity of Microbubbles Using a Cavity Perturbation Technique for Contrast Enhanced Ultra-Wideband Breast Cancer Detection 6733-6736
Ogunlade, Olumide (Univ. of Greenwich); Chen, Yifan (Univ. of Greenwich); Kosmas, Panagiotis (Kings College London)*

18:00-18:15	SaE08.3
Fractal Analysis of Contours of Breast Masses in Mammograms Via the Power Spectra of Their Signatures 6737-6740	
<i>Rangayyan, Raj* (Univ. of Calgary); Oloumi, Faraz (Univ. of Calgary); Nguyen, Thanh Minh (Univ. of Calgary)</i>	
18:15-18:30	SaE08.4
Automated Video-Based Measurement of Eye Closure for Detecting Behavioral Microsleep 6741-6744	
<i>Malla, Amol (Fisher & Paykel Healthcare Ltd); Davidson, Paul Robert (Van der Veer Inst.); Bones, P.J. (Univ. of Canterbury); Green, Richard (Univ. of Canterbury); Jones, Richard D.* (Van der Veer Inst.)</i>	
18:30-18:45	SaE08.5
Detection of Exudates in Retinal Images Using a Pure Splitting Technique 6745-6748	
<i>Jaafar, Hussain F* (Univ. of Liverpool); Nandi, Asoke K (The Univ. of Liverpool); Al-Nuaimy, Waleed (Univ. of Liverpool)</i>	
18:45-19:00	SaE08.6
Automated Classification of Renal Cell Carcinoma Subtypes Using Bag-Of-Features 6749-6752	
<i>Raza, Syed Hussain* (Georgia Inst. of Tech.); Parry, R. Mitchell (Georgia Inst. of Tech.); Sharma, Yachna (Georgia Inst. of Tech.); Chaudry, Qaiser (Georgia Inst. of Tech.); Moffitt, Richard A. (Georgia Inst. of Tech.); Young, Andrew N (Emory Univ.); Wang, May Dongmei (Georgia Tech & Emory Univ.)</i>	
SaE09: 17:30-19:00 Ombu A	
6.1.2 Visual Prosthetics (Oral Session)	
17:30-17:45	SaE09.1
Activation of Ganglion Cell Axons Following Epiretinal Electrical Stimulation with Hexagonal Electrodes 6753-6756	
<i>Abramian, Miganoosh* (Univ. of New South Wales); Dokos, Socrates (Univ. of New South Wales); Morley, John William (Univ. of Western Sydney); Lovell, Nigel H (Univ. of New South Wales)</i>	
17:45-18:00	SaE09.2
Diamond Penetrating Electrode Array for Epi-Retinal Prosthesis 6757-6760	
<i>Ganesan, Kumaravelu* (Univ. of Melbourne, Parkville, Vic 3010, Australia); stacey, alastair (School of Physics, Univ. of Melbourne); Meffin, Hamish (Natl. ICT Australia); Lichter, Samantha (Univ. of Melbourne); Greferath, Ursula (The Univ. of Melbourne); Fletcher, Erica Lucy (The Univ. of Melbourne); Prawer, Steven (Univ. of Melbourne)</i>	
18:00-18:15	SaE09.3
Retinal Ganglion Cell (RGC) Responses to Different Voltage Stimulation Parameters in Rd1 Mouse Retina 6761-6764	
<i>Goo, Yong Sook* (Chungbuk Natl. Univ Medical Sch); Ye, Jang Hee (Chungbuk Natl. Univ Medical Sch); Ryu, Sangbaek (Yonsei Univ.); Kim, Kyung Hwan (Yonsei Univ.)</i>	
18:15-18:30	SaE09.4
Focal Activation of Primary Visual Cortex Following Supra-Choroidal Electrical Stimulation of the Retina: Intrinsic Signal Imaging and Linear Model Analysis 6765-6768	
<i>Cloherty, Shaun L* (Australian Natl. Univ.); Hietanen, Markus A (Australian Natl. Univ.); Suaning, Gregg (The Univ. of New South Wales); Ibbotson, Michael R (Australian Natl. Univ.)</i>	
18:30-18:45	SaE09.5
Conducting Polymer Electrodes for Visual Prostheses 6769-6772	
<i>Green, Rylie A.* (Univ. of New South Wales); Matteucci, Paul (Univ. of New South Wales); Chen, Spencer Chin-Yu (Univ. of New South Wales); Byrnes-Preston, Phil J. (The Univ. of New South Wales); Poole-Warren, Laura A. (Univ. of New South Wales); Lovell, Nigel H (Univ. of New South Wales); Suaning, Gregg (The Univ. of New South Wales)</i>	
SaE10: 17:30-19:00 Ombu B	
10.5.2 Decision Support Methods III (Oral Session)	
17:30-17:45	SaE10.1
Uncertainty and Complexity in Personal Health Records 6773-6776	
<i>Hudson, Donna L* (Univ. of California, San Francisco); Cohen, Maurice (Univ. of California San Francisco)</i>	

17:45-18:00	SaE10.2
Anaesthesia Synchronization Software: Target Controlled Infusion System Evaluation 6777-6780	
<i>Bressan, Nadja* (Faculdade de Engenharia (PT600 027 716)); Moreira, António paulo (Univ. of Porto – Faculty of Engineering); Amorim, Pedro (Hospital Geral de Santo António); Nunes, Catarina S (King's College London)</i>	
18:00-18:15	SaE10.3
Intelligent Clinical Decision Support Systems Based on SNOMED CT 6781-6784	
<i>Ciolko, Ewelina* (Univ. of Ontario Inst. of Tech.); Joshi, Amardeep (Univ. of Ontario Inst. of Tech.); Lu, Fletcher (Univ. of Ontario Inst. of Tech.)</i>	
18:15-18:30	SaE10.4
Real-Time Prognosis of ICU Physiological Data Streams 6785-6788	
<i>Sow, Daby* (IBM); Sun, Jimeng (IBM T.J. Watson Research Center); Hu, Jianying (IBM T.J. Watson Research Center); Ebadollahi, Shahram (IBM T.J. Watson Research Center); Biem, Alain (IBM T.J. Watson Research Center)</i>	
18:30-18:45	SaE10.5
Using Tele-Medical Electrocardiography Monitoring and Analysis for a More Immediate Prognosis to Patients of Suspect Long QT Syndrome 6789-6792	
<i>Ho, Thomas Chee Tat (Inst. for Infocomm Research); Chen, Xiang* (Inst. for Infocomm Research)</i>	
SaE11: 17:30-19:00	Poncho
4.1.4 Multiscale Modeling (Oral Session)	
17:30-17:45	SaE11.1
Integrated Approach for the Study of Anatomical Variability in the Cardiac Purkinje System: From High Resolution MRI to Electrophysiology Simulation 6793-6796	
<i>Bordas, Rafael* (Univ. of Oxford); Grau, Vicente (Univ. of Oxford); Burton, Rebecca (Univ. of Oxford); Hales, Patrick (Univ. of Oxford); Schneider, Jurgen E. (Univ. of Oxford); Gavaghan, David (Univ. of Oxford); Kohl, Peter (Univ. of Oxford); Rodriguez, Blanca (Oxford Univ.)</i>	
17:45-18:00	SaE11.2
Comparing Finite Element and Finite Difference Techniques As Applied to the Development of Diffusive Models of Glioblastoma Multiforme Growth 6797-6800	
<i>Roniotis, Alexandros (FORTH & Technical Univ. of Crete); Marias, Kostas (Foundation for Res. & Tech. Hellas); Sakkalis, Vangelis* (ICS-FORTH); Stamatakis, Georgios (Natl. Technical Univ. of Athens); Zervakis, Michalis (Technical Univ. of Crete, Greece)</i>	
18:00-18:15	SaE11.3
AngioLab: Integrated Technology for Patient-Specific Management of Intracranial Aneurysms 6801-6804	
<i>Villa-Uriol, Maria Cruz (Univ. Pompeu Fabra); Larrabide, Ignacio* (Networking Research Center on Bioengineering, Biomaterials & Nanomedicine (CIBER-BBN), Univ. Pompeu Fabra); Geers, Adrianus Johannes (Univ. Pompeu Fabra & CIBER-BBN); Pozo, Jose Maria (Univ. Pompeu Fabra, Barcelona); Bogunovic, Hrvoje (Univ. Pompeu Fabra, Barcelona); Mazzeo, Marco (Univ. Pompeu Fabra); Pedro, Omedas (Univ. Pompeu Fabra); Barbarito, Valeria (Univ. Pompeu Fabra); Carotenuto, Luigi (Univ. Pompeu Fabra); Riccobene, Chiara (Univ. Pompeu Fabra); Planes, Xavier (Univ. Pompeu Fabra); Martelli, Yves (Univ. Pompeu Fabra); Frangi, Alejandro (Univ. Pompeu Fabra)</i>	
18:15-18:30	SaE11.4
Effects of Time Varying Currents and Magnetic Fields in the Frequency Range of 1 Khz to 1 MHz to the Human Body – A Simulation Study 6805-6808	
<i>Bohnert, Julia* (Karlsruhe Inst. of Tech.); Doessel, Olaf (Karlsruhe Inst. of Tech. (KIT))</i>	
18:30-18:45	SaE11.5
Evaluation Framework for the Multilevel Macroscopic Models of Solid Tumor Growth in the Glioma Case 6809-6812	
<i>Sakkalis, Vangelis* (ICS-FORTH); Roniotis, Alexandros (FORTH & Technical Univ. of Crete); Farmaki, Christina (Inst. of Computer Science (ICS), FORTH); Karatzanis, Ioannis (Inst. of Computer Science (ICS), FORTH); Marias, Kostas (Foundation for Res. & Tech. Hellas)</i>	
18:45-19:00	SaE11.6
Towards a Realistic Dielectric Tissue Model: A Multiscale Approach 6813-6816	
<i>Huclova, Sonja* (ETH Zurich); Froehlich, Juerg (Swiss Federal Inst. of Tech. Zurich (ETH))</i>	

SaE12: 17:30-19:00		Rio de Plata
6.8.1 Clinical Neurophysiology (Oral Session)		
17:30-17:45		SaE12.1
Auditory Streaming and Listening Effort: An Event Related Potential Study		6817-6820
<i>Bernarding, Corinna* (Computational Diagnostics & Biocybernetics Unit); Corona-Strauss, Farah I. (Saarland Univ. Hospital); Latzel, Matthias (SIEMENS Audiology); Strauss, Daniel J. (Comp. Diagn. & Biocyb. Unit)</i>		
17:45-18:00		SaE12.2
Transcranial Magnetic Stimulation in the Presence of Deep Brain Stimulation Implants: Induced Electrode Currents		6821-6824
<i>Deng, Zhi-De* (Columbia Univ.); Lisanby, Sarah (Columbia Univ. / New York State Psychiatric Inst.); Peterchev, Angel V (Columbia Univ.)</i>		
18:00-18:15		SaE12.3
Habituation Analysis of Chirp vs. Tone Evoked Auditory Late Responses		6825-6828
<i>Kern, Kevin* (Saarland Univ. & Saarland Univ. of Applied Sciences); Royter, Vladislav (Saarland Univ. & Saarland Univ. of Applied Sciences); Corona-Strauss, Farah I. (Saarland Univ. Hospital); Mohamed Aminuddin, Mai Mariam (Saarland Univ Hospital); Strauss, Daniel J. (Comp. Diagn. & Biocyb. Unit)</i>		
18:15-18:30		SaE12.4
Feasibility and Performance Evaluation of Generating and Recording Visual Evoked Potentials Using Ambulatory Bluetooth Based System		6829-6832
<i>Ellingson, Roger M.* (Dept. of Veterans Affairs); Oken, Barry (Oregon Health & Science Univ.)</i>		
18:30-18:45		SaE12.5
A Kernel-Based Novelty Detection Scheme for the Ultra-Fast Detection of Chirp Evoked Auditory Brainstem Responses		6833-6836
<i>Corona-Strauss, Farah I.* (Saarland Univ. Hospital); Delb, Wolfgang (Saarland Univ. Hospital); Schick, Bernhard (Saarland Univ. Hospital); Strauss, Daniel J. (Comp. Diagn. & Biocyb. Unit)</i>		
SaE13: 17:30-19:00		Gomez Losada
11.1.3 Innovation and New Tendencies of Bioengineering in the Industry (Mini Symposium)		
17:30-17:45		SaE13.1
Erasmus Mundus Programme		*
<i>Colas, Javier* (Medtronic Iberica)</i>		
17:45-18:00		SaE13.2
Health Technopole: Innovation applied to Clinical Engineering and Health Technology Management Education		6837-6840
<i>Vilcahuaman, Luis* (Pontifical Catholic Univ. of Peru); Rivas, Rossana (Pontifical Catholic Univ. of Peru)</i>		
18:00-18:15		SaE13.3
"Hands On" in Bioengineering		6841-6841
<i>Bastos, Teodiano* (Univ. Federal do Espírito Santo); Müller, Sandra Mara Torres (Federal Univ. of Espírito Santo)</i>		
18:15-18:30		SaE13.4
Erasmus Mundus Programme: An European Oportunity for Students and Scholars		6842-6843
<i>Páez-Borrallo, José* (Univ. Politécnica de Madrid)</i>		
18:30-18:45		SaE13.5
The Biomedical Engineer As a Driver for Health Technology Innovation		6844-6846
<i>Colas, Javier* (Medtronic Iberica); Guillen, Alejandra (Medtronic Spain)</i>		

**10.1.5 Latest Developments on Personal Health Systems for
Management of Patients with Chronic Diseases II (Mini Symposium)**

17:30-17:45

SaE14.1

HeartCycle: Beyond Building Demonstrators. A Structured Approach to Develop, Implement and Validate Healthcare Innovations in Tele-Monitoring 6847-6849
Reiter, Harald (Philips)*

17:45-18:00

SaE14.2

CHRONIOUS: An Open, Ubiquitous and Adaptive Chronic Disease Management Platform for Chronic Obstructive Pulmonary Disease (COPD), Chronic Kidney Disease (CKD) and Renal Insufficiency 6850-6853
Rosso, Roberto (Tesan S.p.A.); Munaro, Giulia (Tesan S.p.A.); Salvetti, Ovidio (CNR); Colantonio, Sara (CNR); Ciancitto, Fabio (Fraunhofer IIS)*

18:00-18:15

SaE14.3

Shift from Physician-Driven Care to Patient-Managed Self Monitoring and Care for Chronic Diseases Related to Metabolic Disorders 6854-6857
Guillen, Alejandra (Medtronic Spain); Colas, Javier (Medtronic Iberica); Fico, Giuseppe (Technical Univ. of Madrid); Ardigo, Diego (Univ. of Parma); Fernandez, Duarte (Medtronic Iberica)*

18:15-18:30

SaE14.4

Tracking Motor Recovery in Stroke Survivors Undergoing Rehabilitation Using Wearable Technology .. 6858-6861
Patel, Shyamal (Harvard Medical School); Hughes, Richard (Harvard Medical School); Hester, Todd (Harvard Medical School); Stein, Joel (Columbia Univ.); Akay, Metin (Univ. of Houston); Dy, Jennifer (Northeastern Univ.); Bonato, Paolo (Harvard Medical School)*