15:30-17:00
Short-Term Heart Rate Dynamics of Women During Labor ........................................... 1929-1932
Reyes Lagos, Jose Javier* (UAM Iztapalapa); Peña Castillo, Miguel Ángel (UAM IZTAPALAPA);
Echeverria Arjonilla, Juan Carlos (UAM IZTAPALAPA); Garcia González, María Teresa (UAM IZTAPALAPA);
Ortiz-Pedroza, Ma Rocio (Univ. Autónoma Metropolitana-Iztapalapa); Vargas García, Carlos (CIMIGen);
Gonzalez-Camarena, Ramon (Univ. Autonoma Metropolitana)

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The Effect of Electrocardiographic Lead Choice on RR Time Series .............................. 1933-1936
Garcia-Gonzalez, Miguel A.* (Univ. Politécnica de Catalunya); Ramos-Castro, Juan (Univ. Politecnica de Catalunya); Fernandez-Chimeno, Mireya (Technical Univ. of Catalonia)

15:30-17:00
Cerebral Near-Infrared Spectroscopy Analysis in Preterm Infants with Intraventricular Hemorrhage .... 1937-1940
Zhang, Ying (Univ. of New South Wales); Chan, Gregory S H* (The Univ. of New South Wales);
Tracy, Mark (Westmead Hospital); Lee, Qim Yi (The Univ. of New South Wales); Hinder, Murray (Nepean Hospital); Savkin, Andrey (Univ. of New South Wales); Lovell, Nigel (Univ. of New South Wales)

15:30-17:00
A Method for Characterizing Circadian Changes in QT Intervals of Diabetic Patients ................. 1941-1944
Seki, Ryota (Hosei Univ.); Yoshino, Kunihiro (Hosei Univ.); Yana, Kazuo* (Hosei Univ.);
Ono, Takuya (Nippon Medical School)

15:30-17:00
Autonomic Nervous System Driven Cardiomyocytes in Vitro .......................................... 1945-1948
Takeuchi, Akimasa* (The Univ. of Tokyo); Mori, Masahide (The Univ. of Tokyo); Kitagawa, Kana (The Univ. of Tokyo); Shimba, Kenta (Univ. of Tokyo); Takayama, Yuzo (Univ. of Tokyo); Moriguchi, Hiroyuki (Univ. of Tokyo); Miwa, Kelko (Nagoya Univ.); Kotani, Kiyoshi (Univ. of Tokyo); Lee, Jong-Kook (Nagoya Univ.); Noshiro, Makoto (Kitasato Univ.); Jimbo, Yasuhiro (Univ. of Tokyo)

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Oscillatory Patterns of Respiration: Consequences for the Stability and Control of Cardiac Electrophysiology ................................................................. 1949-1952
Western, David* (Univ. College London); Hanson, Ben Mark (Univ. College London, UK);
Gill, Jaswinder (St. Thomas Hospital); Taggart, Peter (Univ. College London)

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Effect of Atrioventricular Conduction on Heart Rate Variability ..................................... 1953-1956
Ahmad, Talha Jamal (King Abdullah Univ. of Science & Tech.); Ali, Hussnain* (Univ. of Texas at Dallas);
Khan, Shoab (CASE-Ctr. for Advanced Studies)

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Robust Heart Rate Measurement with Phonocardiogram by On-Line Template Extraction and Matching ................................................................. 1957-1960
Chen, Yu-Hsin* (Natl. Taiwan Univ.); Chen, Hong-Hui (Natl. Taiwan Univ.);
Chen, Tung-Chien (Natl. Taiwan Univ.); Chen, Liang-Gee (NTU)

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Effects of RF Fields Emitted from Smart Phones on Cardio-Respiratory Parameters: A Preliminary Provocation Study ................................................................. 1961-1964
Kwon, Min Kyung (Yonsei Univ.); Nam, Ki Chang (Yonsei Univ. College of Medicine); Lee, Da Som (Yonsei Univ.); Jang, Kyung Hwan (Yonsei Univ.); Kim, Deok Won* (Yonsei Univ. College of Medicine)
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<td>Multiscale Analysis of Acceleration and Deceleration of the Instantaneous Heart Rate Using Symbolic Dynamics</td>
<td>Cysarz, Dirk* (Univ. of Witten/Herdecke); Edelhäuser, Friedrich (Univ. of Witten/Herdecke); Van Leeuwen, Peter (Chair Radiology/Microtherapy, Univ. of Witten/Herdecke)</td>
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<td>Experimental Jet Lag Causes Sympathoexcitation via Oxidative Stress through AT1 Receptor in the Brainstem</td>
<td>Kishi, Takuya* (Kyushu Univ. Graduate School of Medical sciences); Sunagawa, Kenji (Kyushu Univ.)</td>
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<td>Time-Frequency Heart Rate Variability Characteristics of Young Adults During Physical, Mental and Combined Stress in Laboratory Environment</td>
<td>Taelman, Joachim (Katholieke Univ. Leuven); Vandeput, Steven (Dept. of Elec. Eng., Division SCD-SISTA, Katholieke Univ. Leuven, Leuven 3001, Belgium); Gilgorijevic, Ivan* (Katholieke Univ. Leuven); Spaepen, Arthur (Katholieke Univ. Leuven); Van Huffel, Sabine (Katholieke Univ. Leuven)</td>
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<td>Determining the Effects of Electrical Stimulation on Functional Recovery of Denervated Rat Gastrocnemius Muscle Using Motor Unit Number Estimation</td>
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Innovative Pattern Reversal Displays for Visual Electrophysiological Studies
Toft-Nielsen, Jonathon, A* (Univ. of Miami); Bohorquez, Jorge (Univ. of Miami); Ozdamar, Ozcan (Univ. of Miami)

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Effects of Auditory Selective Attention on Chirp Evoked Auditory Steady State Responses
Bohr, Andreas* (Systems Neuroscience & NeuroTech. Unit); Bernarding, Corinna (Computational Diagnostics & Biocybernetics Unit); Strauss, Daniel J. (Comp. Diagn. & Biocyb. Unit); Corona-Strauss, Farah I. (Saarland Univ. Hospital)

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Instrumented Toys for Studying Power and Precision Grasp Forces in Infants
Serio, Stefano Marco* (Scuola Superiore Sant'Anna); Cecchi, Francesca (Scuola Superiore Sant'Anna); Boldrini, Elisa (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.)

15:30-17:00
HRV and EEG Based Indicators of Stress in Children with Asperger Syndrome in Audio-Visual Stimulus Test
Tiinanen, Suvi* (Univ. of Oulu); Määttä, Antti (Univ. of Oulu); Silferhuth, Minna (Univ. of Oulu); Suominen, Kalervo (Oulu Univ. Hospital); Jansson-Verkasalo, Era (Univ. of Oulu); Seppänen, Tapio (Univ. of Oulu)

15:30-17:00
A Computerized Perimeter for Assessing Modality-Specific Visual Field Loss
Calabro, Finnegan J. (Boston Univ.); Vaina, Lucia* (Brain & Vision Research Lab, Boston Univ. Dept. of Biomedical Eng., Boston, MA & Harvard Medical School, Ma)

15:30-17:00
Computational Modeling to Evaluate Helical Electrode Designs
Cowley, Anthony (Cyberonics Inc.); Szlavik, Robert* (California Polytechnic State Univ.)

15:30-17:00
Analysis of Complexity Based EEG Features for the Diagnosis of Alzheimer's Disease
Staudinger, Tyler (Rowan Univ.); Polikar, Robi* (Rowan Univ.)

15:30-17:00
A Modelling Study on Transmission of the Central Oscillator in Tremor by a Motor Neuron Pool
Rocon, Eduardo* (CSIC)

15:30-17:00
Vibrotactile Pattern Perception As a Method for the Assessment of Brain Dysfunction
Mortimer, Bruce John Peter* (Eng. Acoustics Inc.)

15:30-17:00
Development of Intelligent Model to Determine Favorable Wheelchair Tilt and Recline Angles for People with Spinal Cord Injury
Fu, Jicheng* (Univ. of Central Oklahoma); Jan, Yih-Kuen (Univ. of Oklahoma Health Sciences Ctr.); Jones, Maria (Univ. of Oklahoma Health Sciences Ctr.)

15:30-17:00
Laser Speckle Imaging Reveals Multiple Aspects of Cerebral Vascular Responses to Whole Body Mild Hypothermia in Rats
Li, Nan* (Johns Hopkins Univ.); Thakor, Nitish (Johns Hopkins Univ.); Jia, Xiaofeng (Johns Hopkins School of Medicine)

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Characterization of the Tendon Vibration Reflex Response in Hemi-Spastic Stroke Individuals
Suresh, Nina* (Rehabilitation Inst. of Chicago); Wang, Inga (Univ. of Wisconsin-Milwaukee); Heckman, Heckman (Feinberg School of Medicine, Northwestern Univ., Dept. of Physiology); Rymer, William Zev (Northwest. & Rehab Inst of Chicago)
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<td>Cotic, Marija* (Univ. of Toronto); Zalay, Osbert (Univ. of Toronto); Valiante, Taufik A. (Univ. of Toronto); Carlen, Peter L. (Univ. of Toronto); Bardakjian, Berj Luther (Univ. of Toronto)</td>
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<td>Capturing the State Transitions of Seizure-Like Events Using</td>
<td>Guirgis, Mima* (Univ. of Toronto); Serletis, Demitre (Univ. of Toronto); Carlen, Peter L. (Univ. of Toronto); Bardakjian, Berj Luther (Univ. of Toronto)</td>
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<td>Employing Neuronal Networks to Investigate the Pathophysiological</td>
<td>Abuhassan, Kamal* (Univ. of Ulster); Coyle, Damien (Univ. of Ulster); Maguire, Liam (Univ. of Ulster)</td>
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<td>Absolute Position Calculation for a Desktop Mobile Rehabilitation</td>
<td>Zabaleta, Haritz* (Tecnalia Research &amp; Innovation); Keller, Thierry (Tecnalia Research &amp; Innovation); Veneman, Jan Frederik (Univ. of Twente); Perry, Joel C. (Fatonik-Tecnalia); Valencia, David (Tecnalia Research &amp; Innovation)</td>
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<td>Robot Based on Three Optical Mouse Sensors</td>
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<td>An Advanced Rehabilitation Robotic System for Augmenting Healthcare</td>
<td>Hu, John (Hstar Technologies); Lim, Yi-Je* (Hstar Technologies); Ding, Ye (Hstar Technologies); Paluska, Daniel (Hstar Technologies); Solochek, Aaron (Hstar Technologies); Laffery, David (Hstar Technologies); Bonato, Paolo (Harvard Medical School)</td>
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<td>Test for Selecting Upper Limb Robot Treatment in Stroke Patients:</td>
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<td>Offaxis Neuromuscular Training of Knee Injuries Using an Offaxis</td>
<td>Lee, Song Joo* (Rehabilitation Inst. of Chicago); Ren, Yupeng (Rehabilitation Inst. of Chicago); Geiger, François (RIC); Chang, Alison (Northwestern Univ., Dept. of Physical Therapy &amp; Human Movement Sciences); Press, Joel (Rehabilitation Inst. of Chicago); Zhang, Li-Qun (Northwestern Univ.)</td>
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<td>Robotic Elliptical Trainer</td>
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<td>Improvement of Gait &amp; Muscle Strength with Functional Electrical</td>
<td>Mahadevappa, Manjunatha* (Indian Inst. of Technology); Sabut, Sukanta (SMST, Indian Inst. of Technology, Kharagpur); Kumar, Ratnesh (Natl. Inst. for the Orthopaedically Handicapped); Sikdar, Chanda (NIOH)</td>
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<td>Stimulation in Sub-Acute &amp; Chronic Stroke Patients</td>
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<td>Young's Modulus Measurement on Pig Trachea and Bronchial Airways</td>
<td>Wang, Jau-Yi* (King's College of London)</td>
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<td>Evaluation of a Wearable Tele-Echography Robot System: FASTele in a</td>
<td>Ito, Keiichiro* (Waseda Univ.); Tsuruta, Koichi (Waseda Univ.); Sugano, Shigeki (Waseda Univ.); Iwata, Hiroyasu (Waseda Univ.)</td>
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<td>Vehicle Using a Mobile Network</td>
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15:30-17:00 Design of a Telerobot for Percutaneous Instrument Distal Tip Repositioning 2097-2100
Walsh, Conor* (Massachusetts General Hospital); Slocum, Alexander (MIT);
Gupta, Rajiv (Massachusetts General Hospital)

15:30-17:00 Accuracy of Navigated Control Concepts Using an Er: Yag-Laser for Cavity Preparation 2101-2106
Wolff, Regine* (Technische Univ. München); Weitz, Jochen (Technische Univ. München);
Poitzsch, Luise (Technische Univ. München); Hohlweg-Majert, Bettina (Technische Univ. München);
Deppe, Herbert (Technische Univ. München); Lueth, Tim (Technical Univ. of Munich)

15:30-17:00 Virtually Transparent Epidermal Imagery for Laparo-Endoscopic Single-Site Surgery 2107-2110
Sun, Yu* (Univ. of South Florida); Anderson, Adam (Brigham Young Univ.);
Castro, Cristian (Univ. of south Florida); Lin, Bingxiong (Univ. of South Florida);
Gitlin, Richard (USF)

15:30-17:00 Reconfigurable MRI-Guided Robotic Surgical Manipulator: Prostate Brachytherapy and Neurosurgery Applications 2111-2114
Su, Hao* (Worcester Polytechnic Inst.); fordachita, iulian (Johns Hopkins Univ.);
Yan, Xiaohan (Worcester Polytechnic Inst.); Fischer, Gregory (Worcester Polytechnic Inst.)

15:30-17:00 Surgical Assistance for Instruments' Power Control Based on Navigation and Neuromonitoring 2115-2118
Shi, Jiaxi* (Technical Univ. Munich); Strauss, Gero (Univ. of Leipzig);
Heininger, Sebastian (Technical Univ. Munich & ERGOSURG GmbH);
Lueth, Tim (Technical Univ. of Munich)

15:30-17:00 Sensors Management in Robotic Neurosurgery: The ROBOCAST Project 2119-2122
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Enquobahrie, Andinet (Kitware Inc); Ferrigno, Giancarlo (Politecnico di Milano);
De Momi, Elena (Politecnico di Milano)

8.6.29 Surgical Robotics and Image Guided Surgery (Poster Session)
15:30-17:00 Elastic Properties and Yield Stress of Fetal Membranes 2123-2126
Wittenberg, George* (Dept. of Veterans Affairs; Univ. of Maryland)

15:30-17:00 A Chance-Constrained Approach to Preoperative Planning of Robotics-Assisted Interventions 2127-2130
Azimian, Hamidreza* (Univ. of Western Ontario);
Patel, Rajni (London Health Sciences Ctr.);
Naish, Michael D. (The Univ. of Western Ontario, Lawson Health Research Inst.)

15:30-17:00 ECM versus ICP for Point Registration 2131-2135
Xie, Weiguo* (Univ. of Bern); Nolle, Lutz-Peter (Univ. of Bern); Zheng, Guoan (Univ. of Bern)

15:30-17:00 Development of a StandAlone Surgical Haptic Arm 2136-2139
Jones, Daniel (Worcester Polytechnic Inst.); Lewis, Andrew (Worcester Polytechnic Inst.);
Fischer, Gregory* (Worcester Polytechnic Inst.)

15:30-17:00 Conceptual Design of a Miniaturized Hybrid Local Actuator for Minimally Invasive Robotic Surgery (MIRS) Instruments 2140-2143
Saedi, Saeed (Sharif Univ. of Tech. Intl. Campus); Mirbagheri, Alireza (Sharif Univ. of Tech.);
Farahmand, Farzam* (Sharif Univ. of Tech.)
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<td>Method, Accuracy and Limitation of Computer Interaction in the Operating Room by a Navigated Surgical Instrument</td>
<td>Hurka, Florian* (Technical Univ. Munich &amp; ERGOSURG GmbH); Wenger, Thomas (Technical Univ. Munich &amp; ERGOSURG GmbH); Heininger, Sebastian (Technical Univ. Munich &amp; ERGOSURG GmbH); Lueth, Tim (Technical Univ. of Munich)</td>
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<td>Technical Accuracy of an O-Arm Registered Surgical Navigator</td>
<td>Koivukangas, Tapani* (Univ. of Oulu); Katisko, Jani Petri Antton (Oulu Univ. Hospital); Koivukangas, John Perti (Oulu Univ. Hospital)</td>
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<td>A Robotics-Based Flat-Panel Ultrasound Device for Continuous Intraoperative Transcutaneous Imaging</td>
<td>Gumprecht, Jan* (Technische Univ. München); Bauer, Thomas (Technische Univ. München); Stolzenburg, Jens-Uwe (Univ. of Leipzig); Lueth, Tim (Technical Univ. of Munich)</td>
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<td>Active Tracking and Dynamic Dose Delivery for Robotic Couch in Radiation Therapy</td>
<td>Buzurovic, Ivan* (Thomas Jefferson Univ.); Yu, Yan (Thomas Jefferson Univ. Hospital); Podder, Tarun (Thomas Jefferson Univ.)</td>
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<td>Development of a Triage Engine Enabling Behavior Recognition and Lethal Arrhythmia Detection for Remote Health Care System</td>
<td>Sugano, Hiroto (Osaka City Univ.); Hara, Shinsuke* (Osaka City Univ.); Tsujio, Tetsuo (Osaka City Univ.); Nakajima, Shigeyoshi (Osaka City Univ.); Inoue, Tadayuki (Osaka City Univ.); Kozaki, Takaaki (Osaka City Univ.); Nakamura, Hajime (Osaka City Univ.); Takeuchi, Kazuhide (Osaka City Univ.)</td>
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<td>Eye-Screen Distance Monitoring for Computer Use</td>
<td>Gale, Timothy John* (Univ. of Tasmania); Eastwood-Sutherland, Caillinn (Univ. of Tasmania)</td>
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<td>Onboard Tagging for Smart Medical Devices</td>
<td>Li, Kejia (Kansas State Univ.); Warren, Steve* (Kansas State Univ.)</td>
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<td>Development of an Integrated Obesity Management Waist Belt System Composed of Calorie Tracking and Waist Circumference Measuring Module for Long Term Monitoring</td>
<td>Jang, Yongwon* (Elec. &amp; Telecom Research Inst.); Noh, Hyung Wook (Elec. &amp; Telecommunications Research Inst.); Lee, InBum (ETRI); Song, Yoonseon (Elec. &amp; Telecom Research Inst.); Lee, Sooyeul (Elec. &amp; Telecom Research Inst)</td>
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<td>UWB-WBAN Sensor Node Design</td>
<td>Yuce, Mehmet Rasit* (Univ. of Newcastle); Ho, Chee Keong (Univ. of Newcastle, Australia)</td>
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<td>Radio Frequency Identification (RFID) in Medical Environment: Gaussian Derivative Frequency Modulation (GDFM) as a Novel Modulation Technique with Minimal Interference Properties</td>
<td>Rieche, Mare* (Ilmenau Univ. of Tech.); Komensky, Tomáš (Ilmenau Univ. of Tech.); Husar, Peter (Ilmenau Univ. of Tech.)</td>
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<td>Scalable Customization of Atrial Fibrillation Detection in Cardiac Monitoring Devices: Increasing Detection Accuracy through Personalized Monitoring in Large Patient Populations</td>
<td>Jang, Kuk Jin* (Princeton Univ.); Balakrishnan, Guha (Univ. of Michigan – Ann Arbor); Syed, Zeeshan (Univ. of Michigan); Verma, Naveen (Princeton Univ.)</td>
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Towards Wireless Emotional Valence Detection from EEG
Brown, Lindsay (Stichting IMEC Nederland); Grundlehner, Bernard (Holst Ctr.); Penders, Julien* (imec)

Improving the Reliability of Wireless Body Area Networks
Arrobo, Gabriel* (USF); Gitlin, Richard (USF)

A Mixed Signal ECG Processing Platform with an Adaptive Sampling ADC for Portable Monitoring Applications
Kim, Hyeyeung* (imec); Yazicioglu, Refet Firat (IMEC); Van Hoof, Chris (IMEC)

Battery Friendly Packet Transmission for Body Sensor Networks
Li, Hong-Gang (Shenzhen Inst. of Advanced Tech., Chinese Acad. of Sciences); Li, Ye* (Shenzhen Inst. of Advanced Tech., Chinese Acad. of Sciences)

Power Allocation Strategies to Minimize Energy Consumption in Wireless Body Area Networks
Kailas, Aravind* (The Univ. of North Carolina at Charlotte)

RiBOMS: RFID-Based Object Management System for Home Environments
Iraola, Hodei (Univ. of Massachusetts); Schafer, James (Univ. of Massachusetts Amherst); Yu, Xunyi (Univ. of Massachusetts); Ganz, Aura* (Univ. of Massachusetts, Amherst)

A Warning System Based on the RFID Technology for Running-Out of Injection Fluid
Huang, Chi-Fang* (Tatung Univ.); Lin, Jen-Hung (Inst. of Communication Eng., Tatung Univ.)

Continuous Remote Vital Sign/Environment Monitoring for Returning Soldier Adjustment Assessment
Gene, Sahika* (General Electric Global Research Ctr.); Cleary, Daniel J (General Electric Global Research); Yardibi, Tarik (General Electric Global Research); Wood, Joseph C (Dept. of Clinical Investigation, Dwight David Eisenhower Army Medical Ctr.); Stachura, Max E. (Ctr. for Telehealth, Medical College of Georgia); Astapova, Elena V. (Ctr. for Telehealth, Medical College of Georgia)

Building Smart Sensor Nodes according to IEEE 1451.3 Standard
Costa, Murilo (Pontifical Catholic Univ. of Goias); Corre da Silva Neto, Olegario (Pontifical Catholic Univ. of Goiás); Ferreira, José Olimpio (Pontifical Catholic Univ. of Goiás); da Rocha, Adson F. (Univ. of Brasilia); Barbosa, Talles* (Pontifical Catholic Univ. of Goiás)

Interoperable and Diligent Body Area Networks Over IEEE802.15.6 for Real-Time Monitoring
Kuroda, Masahiro* (Natl. Inst. of Information & Comm); Tochikubo, Osamu (Yokohama City Univ.); Takizawa, Kenichi (NICT); Kaneda, Isami (NJ Techno); Shibata, Yoshiharu (Advanced Medical)

CARER: Efficient Dynamic Sensing for Continuous Activity Monitoring
Au, Lawrence (Univ. of California, Los Angeles); Bui, Alex (Univ. of California, Los Angeles); Batalin, Maxim (Univ. of California, Los Angeles); Xu, Xiaoyu* (Univ. of California, Los Angeles); Kaiser, William (Univ. of California, Los Angeles)

Gait Assessment in Parkinson’s Disease Patients through a Network of Wearable Accelerometers in Unsupervised Environments
Cancela, Jorge* (Univ. Politécnica de Madrid); Pastorino, Matteo (Univ. Politecnica de Madrid); Arredondo, María Teresa (Technical Univ. of Madrid); Pansera, Mario (Univ. Politecnica de Madrid); Pastor, Laura (Univ. Politécnica de Madrid); Villagra, Federico (Univ. of Navarra); Pastor, María A. (Univ. of Navarra, Ctr. for Applied Medical Research); Gonzalez-Marcos, Ana Pilar (Technical Univ. of Madrid)
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Low-Power Sensor Module for Long-Term Activity Monitoring
Leuenberger, Kaspar* (ETH Zuerich); Gassert, Roger (ETH Zurich)

15:30-17:00 WeP29.21
Path-Loss Estimation of Wireless Channels in Capsule Endoscopy from X-Ray CT Images
Takizawa, Kenichi* (NICT); Hamaguchi, Kiyoshi (Natl. Inst. of Information & CommunicationsTech.);
Hagiwara, Hiroaki (Yokohama City Univ.)

15:30-17:00 WeP29.22
Long-Term Performance of a CE-Approved Telemetric Intracranial Pressure Monitoring
Kiefer, Michael* (Saarland Univ., Medical School); Antes, Sebastian (Saarland Univ., Medical School);
Schmitt, Melanie (Saarland Univ., Medical School); Krause, Inga (Helmholtz-Inst., RWTH Aachen);
Eymann, Regina (Saarland Univ., Medical School)

17:15-17:30 WeD12.1
Improving Care for Veterans: Telemedicine & Electronic Information Exchange
Kennedy, Sean* (Massachusetts General Hospital); Fredman, Steffany (Massachusetts General Hospital)

9.3.19 Psycho Behavioral Monitoring and Cyber Therapy in Mental Disorders (Minisymposium)
Chair: Paradiso, Rita (Smartex srl)
Co-Chair: De Rossi, Danilo (Univ. of Pisa)

17:15-17:30 WeD16.1
Wearable Monitoring Systems for Psychological and Physiological State Assessment in a Naturalistic Environment
Paradiso, Rita* (Smartex srl); Faetti, Tommaso (Smartex s.r.l.)

17:30-17:45 WeD16.2
Affective Computing and Autism
Picard, Rosalind* (Massachusetts Inst. of Tech.)

17:45-18:00 WeD16.3
Neuroscience, Virtual Reality and Neurorehabilitation: Brain Repair As a Validation of Brain Theory
Verschure, Paul F M J* (SPECS, ICREA & Univ. Pompeu Fabra)

4.2.4 Systems Models in Biology I (Minisymposium)
Chair: Tidor, Bruce (Massachusetts Inst. of Tech.)
Co-Chair: Weiss, Ron (MIT)

16:30-17:00 WeD26.1
A Light-Based Feedback Controller for Generating User-Defined Intracellular Signaling Dynamics
Toettcher, Jared E.* (Univ. of California, San Francisco); Gong, Delquin (Delquin Gong);
Lim, Wendell A. (Wendell A. Lim); Weiner, Orion D. (Orion D. Weiner)

17:15-17:45 WeD26.2
Sloppy Models, Information Geometry, and Data Fitting
Transtrum, Mark* (Cornell Univ., Lab. of Atomic & Solid State Physics);
Sethna, James (Cornell Univ., Lab. of Atomic & Solid State Physics)

17:45-18:15 WeD26.3
Optimal Experimental Design for Model Identification in Systems Biology
Hagen, David R.* (MIT)
**Thursday, 1 September 2011**

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<td>Finding Physiological Responses in Vestibular Evoked Potentials</td>
<td>St. George AB Westin</td>
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<td>08:15-08:30</td>
<td>Vestibular Implants: The First Steps in Humans</td>
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<td>08:30-08:45</td>
<td>Ethical Issues in the Development of a Vestibular Prosthesis</td>
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<td>08:45-09:00</td>
<td>Secret Laws of the Labyrinth</td>
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<td>09:00-09:15</td>
<td>Nonlinear Galilean Vestibular Receptive Fields</td>
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<td>09:15-09:30</td>
<td>Vestibular Prosthesis Tested in Rhesus Monkeys</td>
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**ThA02: 08:00-09:30**

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<td>Chronic Cuff Electrode Recordings from Walking Göttingen Mini-Pigs</td>
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<td>Compact Wireless Neural Recording System for Small Animals Using Silicon-Based Probe Arrays</td>
<td>St. George CD Westin</td>
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<td>09:00-09:15</td>
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<tr>
<td>09:00-09:15</td>
<td>ThA03.5</td>
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EEG-Based Upper Alpha Neurofeedback Training Improves Working Memory Performance

Escolano, Carlos* (Univ. of Zaragoza); Aguilar Herrero, Monica (Bit&Brain Technologies S.L.); Minguez, Javier (Zaragoza Univ.)

Subject Identification through Standard EEG Signals During Resting States

De Vico Fallani, Fabrizio (Univ. Sapienza); Astolfi, Laura (Univ. of Rome); Babiloni, Fabio* (Univ. of Rome); Vecchiato, Giovanni (Univ. of Rome Sapienza)

Estimating Cortical Connectivity in Functional Near Infrared Spectroscopy Using Multivariate Autoregressive Modeling

Molavi, Behnam* (Univ. of British Columbia); Gervain, Judit (Laboratoire Psychologie de la Perception, CNRS-Paris Descartes); Dumont, Guy (Univ. of British Columbia)

Study of the Functional Hyperconnectivity between Couples of Pilots During Flight Simulation: An EEG Hyperscanning Study

Astolfi, Laura* (Univ. of Rome); Toppi, Jlenia (Univ. of Rome "Sapienza"); Babiloni, Fabio (Univ. of Rome); Vecchiato, Giovanni (Univ. of Rome Sapienza)

BOLD Correlations to Force in Precision Grip: An Event-Related Study

Sulzer, James* (Swiss Federal Inst. of Tech., Zurich (ETHZ)); Chib, Vikram (California Inst. of Tech.); Hepp-Reymond, Marie-Claude (Swiss Federal Inst. of Tech., Zurich, Univ. of Zurich); Kollias, Spyros (Univ. Hospital Zurich); Gassert, Roger (ETH Zurich)

ECoG Based Cortical Function Mapping Using General Linear Model

Qian, Tianyi* (Tsinghua Univ.); Wu, Wei (Tsinghua Univ.); Zhou, Wenjing (Tsinghua Univ.); Gao, Shangkai (Tsinghua Univ.); Hong, Bo (Tsinghua Univ.)

Task-Related MEG Source Localization via Discriminant Analysis

Zhang, Jinyin* (Carnegie Mellon Univ.); Sudre, Gustavo (Carnegie Mellon Univ.); Li, Xin (Carnegie Mellon Univ.); Wang, Wei (Univ. of Pittsburgh); Weber, Douglas (Univ. of Pittsburgh); Bagic, Anto (Univ. of Pittsburgh)
08:45-09:00  
**MusicGlove: Motivating and Quantifying Hand Movement Rehabilitation by Using Functional Grips to Play Music**  
Friedman, Nizan* (Univ. of California, Irvine); Chan, Vicky (Univ. of California in Irvine); Zondervan, Danny (Univ. of California, Irvine); Bachman, Mark (Univ. of California, Irvine); Reinkensmeyer, David J. (Univ. of California)  

09:00-09:15  
**Enhancing Motor Skill Learning with Noninvasive Brain Stimulation**  
Schambra, Heidi* (Columbia Univ.)

09:15-09:30  
**Classification of Strategies for Disturbance Attenuation in Human-Human Collaborative Tasks**  
Melendez-Calderon, Alejandro* (Imperial Collge of Science, Tech. & Medicine); Komisar, Vicki (Imperial College of Science, Tech. & Medicine); Ganesh, Gowrishankar (NICT, ATR_CNS); Burdet, Etienne (Imperial Collge of Science, Tech. & Medicine)

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**MEDIFRAME - Remote Volume Rendering Visualization Framework**  
Unterhinninghofen, Roland* (Karlsruhe Inst, of Tech. (KIT)); Giesel, Frederik (Univ. of Heidelberg); Dillmann, Rudiger (Karlsruhe Inst. of Tech. (KIT))

08:15-08:30  
**A Semantically-Aided Approach for Online Annotation and Retrieval of Medical Images**  
Kyrgiazos, George (Natl. Technical Univ. of Athens); Gerostathopoulos, Ilias (Natl. Technical Univ. of Athens (NTUA)); Kolias, Vassileios* (Natl. Technological Univ. of Athens); Stoitsis, John (Inst. of Communication); Nikita, Konstantina (Natl. Technical Univ. of Athens)

08:30-08:45  
**Biomedical Devices and Systems Security**  
Arney, David (CIMIT, Univ. of Pennsylvania); Venkatasubramanian, Krishna Kumar* (Univ. of Pennsylvania); Lee, Insup (Univ. of Pennsylvania); Sokolsky, Oleg (Univ. of Pennsylvania)

08:45-09:00  
**Assessing HIPAA Standard in Practice: PHRs Privacy Policies**  
Carrión Señor, Inmaculada (Univ. of Murcia); Fernandez Aleman, Jose Luis* (Univ. of Murcia); Toval, Ambrosio (Univ. of Murcia)

09:00-09:15  
**Study on Self Hearing Assessment Using Speech Sounds**  
Sohn, Junil* (Samsung Advanced Inst. of Tech.); Kim, Dongwook (Samsung Advanced Inst. of Tech.); Ku, Yunseo (with Samsung Advanced Inst. of Tech. (SAIT), Korea); Lee, Kyungwon (Hallym Univ. of Graduate Studies, Korea); Lee, Junghak (Hallym Univ. of Graduate Studies, Korea)

09:15-09:30  
**WiiPD - An Approach for the Objective Home Assessment of Parkinson's Disease**  
Synnott, Jonathan* (Univ. of Ulster); Chen, Liming (Univ. of Ulster); Nugent, Chris (Univ. of Ulster); Moore, George (Univ. of Ulster)
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<td>ThA11.2</td>
<td>HealthPGS, Guiding Patients and Citizens in the Co-Production of Health</td>
<td>Meneu, Teresa* (Univ. Politècnica de Valencia); Sanchez-Calzon, Ana Belen (Univ. Politècnica de Valencia); Traver, Vicente (Inst. ITACA)</td>
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<td>ThA11.3</td>
<td>Health Guidance: Supporting Behavior Change in Personal Context</td>
<td>Kaipalinen, Kirsikka* (VTT Technical Research Ctr. of Finland)</td>
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<td>08:45-09:00</td>
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<td>Profiling and Personalization: Identifying Individual Needs to Support Healthy Behaviour</td>
<td>Honka, Anita* (VTT Technical Research Ctr. of Finland)</td>
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<td>Rules of the Game for ICT Enabled Primary Prevention — Understanding the Ecosystem</td>
<td>Traver, Vicente* (Inst. ITACA); Navarro, María Amparo (ITACA-TSB Univ. Politècnica de Valencia); Martínez-Piqueras, María (ITACA-TSB Univ. Politècnica de Valencia); Meneu, Teresa (Univ. Politècnica de Valencia)</td>
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<td>Transient Respiratory Response to Hypercapnia: Analysis via a Cardiopulmonary Simulation Model</td>
<td>Albanese, Antonio (Columbia Univ.); Chbat, Nicolas* (Philips Research North America); Ursino, Mauro (Univ. of Bologna)</td>
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<td>08:15-08:30</td>
<td>ThA12.2</td>
<td>The Impact of Gravity During Head-Up Tilt</td>
<td>Olufsen, Mette* (North Carolina State Univ.); Kaye Smith, Brittany (North Carolina State Univ.); Mehlisen, Jesper (Frederiksberg Hospital, Denmark); Ottesen, Johnny T (Roskilde Univ., Denmark)</td>
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<td>Modeling Study of the Failing Heart and its Interaction with an Implantable Rotary Blood Pump</td>
<td>Ramachandran, Deepa (Rice Univ.); Luo, Chuan (Rice Univ.); Ma, Tony (VA Medical Ctr.); Clark, John W.* (Rice Univ.)</td>
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<td>08:45-09:00</td>
<td>ThA12.4</td>
<td>Toward Online, Noninvasive, Nonlinear Assessment of Cerebral Autoregulation</td>
<td>Aoi, Mikio* (North Carolina State Univ.); Matzuka, Brett (North Carolina State Univ., Biomathematics Program); Olufsen, Mette (North Carolina State Univ.)</td>
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<td>ThA12.5</td>
<td>A Multiscale Bidirectional Coupling Framework</td>
<td>Kabilan, Senthil* (Pacific Northwest Natl. Lab.); Kuprat, Andrew (Pacific Northwest Natl. Lab.); Hlastala, Michael (Univ. of Washington, Seattle, WA); Corley, Richard (Pacific Northwest Natl. Lab.); Einstein, Daniel (Pacific Northwest Natl. Lab.)</td>
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<td>ThA12.6</td>
<td>Modeling Cardio-Respiratory System Response to Inhaled CO2 in Patients with Congestive Heart Failure</td>
<td>Batzel, Jerry (Medical Univ. Graz); Ellwein, Laura (Marquette Univ.); Olufsen, Mette* (North Carolina State Univ.)</td>
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**Robustness of Inverse Perturbation for Discrete Event Control** ................................................................. 2422-2425
Bouaynaya, Nidhal* (Univ. of Arkansas at Little Rock); Schonfeld, Dan (Univ. of Illinois at Chicago);
Shterenberg, Roman (Univ. of Alabama at Birmingham)

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**An Analytical Study of Relay Neuron's Reliability: Dependence on Input and Model Parameters** ................. 2426-2429
Agarwal, Rahul* (Johns Hopkins Univ.); Sarma, Sridevi V. (Johns Hopkins Univ.)

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**An Application of Monotone Functions Decomposition to the Reconstruction of Gene Regulatory Networks** .................................................................................................................. 2430-2433
Chang, H.J. (Imperial College London); Richard, Guilhem* (Boston Univ.); Julius, Agung (Rensselaer Polytechnic Inst.); Belta, Calin (Boston Univ.); Amar, Salomon (Boston Univ.)

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**GIST: A Gibbs Sampler to Identify Intracellular Signal Transduction Pathways** ........................................ 2434-2437
Gu, Jinghua* (Virginia Polytechnic Inst. & State Univ.); Chen, Wang (Virginia Polytechnic Inst. & State Univ.);
Shih, Le-Ming (John Hopkins Univ.); Wang, Tian-Li (John Hopkins Univ.); Wang, Yue (Virginia Polytechnic Inst. & State Univ.); Clarke, Robert (Lombardi Comprehensive Cancer Ctr., Georgetown Univ.);
Xuan, Jianhua (Virginia Polytechnic Inst. & State Univ.)