

# PROGRAM IN CHRONOLOGICAL ORDER

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## WeC01 Marquis AB

### Time-Frequency Analysis (Oral Session)

13:00-13:15

[ECG Denoising with Adaptive Bionic Wavelet Transform\\*](#)

Sayadi, Omid

Sharif Univ. of Tech.

Shamsollahi, Mohammad Bagher

Sharif Univ. of Tech.

13:15-13:30

[Application of EMD As a Novel Technique for the Study of Tremor Time Series\\*](#)

Rocon de Lima, Eduardo

Inst. de Automática Industrial

Pons, Jose Luis

Inst. de Automática Industrial- Consejo Superior de Investigacio

13:30-13:45

[ECG Denoising Based on the Empirical Mode Decomposition](#), pp. 1-4

Weng, Binwei

Univ. of Delaware, USA

Blanco-Velasco, Manuel

Univ. of Alcalá, Spain

Barner, Kenneth E.

Univ. of Delaware, USA

13:45-14:00

[Contribution to Structural Intensity Tool : Application to the Cancellation of ECG Interference in](#)

[Diaphragmatic EMG](#), pp. 5-8

AITHOCINE, Elise

Lab. TIMC Univ. Joseph Fourier

Gumery, Pierre-Yves

Lab. TIMC Univ. Joseph Fourier

Meignen, Sylvain

Lab. LMC Univ. Joseph Fourier

Heyer, Laurent

Hôpital Lariboisière

Lavault, Yves

Lab. TIMC Univ. Joseph Fourier

Gottfried, Stewart

MCGill Univ. health centre

14:00-14:15

[Intracranial Pressure Variation Associated with Changes in End-Tidal CO<sub>2</sub>](#), pp. 9-12

Kim, Sunghan

Portland State Univ.

McNames, James

Portland State Univ.

Goldstein, Brahm

Oregon Health & Science Univ.

14:15-14:30

[Vergence Variability: A Key to Understanding Oculomotor Adaptability?\\*](#)

Petrock, Anne Marie

New Jersey Inst. of Tech.

Alvarez, Tara

New Jersey Inst. of Tech.

Reisman, Stanley

New Jersey Inst. of Tech.

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## WeC02

Marquis C

### Functional Magnetic Resonance Imaging (Oral Session)

13:00-13:15

[Probing Fast Neuronal Interaction Using Fmri](#), pp. 13-16

Zhang, Nanyin

Univ. of Minnesota

Zhu, Xiao-Hong

Univ. of Minnesota

Chen, Wei

Univ. of Minnesota

13:15-13:30

***Receive Coil Arrays and Parallel Imaging for Functional Magnetic Resonance Imaging of the Human Brain***, pp. 17-20

de Zwart, Jacco A  
van Gelderen, Peter  
Duyn, Jeff H

National Inst. of Health  
National Inst. of Health  
National Inst. of Health

13:30-13:45

***The Neuroscientific Exploitation of High-Resolution Functional Magnetic Resonance Imaging***, pp. 21-24

Kriegeskorte, Nikolaus  
Bandettini, Peter A.

NIMH  
NIMH

13:45-14:00

***Spatial Dependence of CBV-Fmri: A Comparison between VASO and Contrast Agent Based Methods***, pp. 25-28

Jin, Tao  
Kim, Seong-Gi

Univ. of Pittsburgh  
Univ. of Pittsburgh

14:00-14:15

***4D Functional Imaging in the Freely Moving Rat***, pp. 29-32

Holzer, Matthew  
Muller, Robert  
Barry, Jeremy  
Barbour, Randall  
Schmitz, Christoph  
Pei, Yaling  
Graber, Harry  
Abdul, Rehman-Ansari

SUNY Downstate  
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SUNY Downstate  
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SUNY Downstate  
SUNY Downstate

14:15-14:30

***Exploring Nociceptive Response by BOLD Fmri in Alpha-Chloralose Anesthetized Rats***, pp. 33-36

Shih, Yen-Yu  
Chen, You-Yin  
Chen, Jin-May  
Lung, Yun  
Chen, Jun-Ying  
Chang, Chen  
Chen, Jyh-Cheng  
Jaw, Fu-Shan

National Taiwan Univ.  
National Chiao-Tung Univ.  
National Taiwan Univ.  
National Taiwan Univ.  
National Taiwan Univ.  
Acad. Sinica  
National Yang-Ming Univ.  
National Taiwan Univ.

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**WeC03**

SoHo-Herald

**System Biology Approaches to Cancer Drug Discovery** (Minisymposium)

Organizer: Crowell, James A.  
Organizer: Gohagan, John

National Cancer Inst.  
National Cancer Inst.

13:00-13:15

***Systems Biology in Drug Discovery (I)***, pp. 37-37

Kunkel, Eric

BioSeek, Inc.

13:15-13:30

***Computational Causal Reasoning Models of Mechanisms of Androgen Stimulation in Prostate Cancer (I)***, pp. 38-39

Pratt, Dexter

Genstruct, Inc

13:30-13:45

***Modeling Breast Cell Cycle Regulation - Overcoming Drug Resistance (I)***, pp. 40-43

Arlt, Dorit

German Cancer Res. Center

13:45-14:00

***Simulation of Biochemical Networks - Cellular Networks As Dynamic Control Systems (I)***, pp. 44-50

Sauro, Herbert

Keck Graduate Inst.

14:00-14:15

***Cell System Perturbation for Time-Resolved Quantification of Tyrosine Phosphorylation in Complex Samples (I)***, pp. 51-52

White, Forest

MIT

14:15-14:30

***A Data-Driven Computational Model of the ErbB Receptor Signaling Network (I)***, pp. 53-54

Schoeberl, Birgit

Merrimack Pharmaceuticals

**WeC04**

Ziegfeld

**Pharmacokinetics and Dynamics: Glucose Sensors and Diabetes Control (Oral Session)**

13:00-13:15

***Reconstructing by Deconvolution Plasma Glucose from Continuous Glucose Monitoring Sensor Data***, pp. 55-58

Facchinetti, Andrea  
Sparacino, Giovanni  
Zanderigo, Francesca  
Cobelli, Claudio

Univ. of Padova  
Univ. of Padova  
Univ. of Padova  
Univ. of Padova

13:15-13:30

***Clinical Validation of a Model-Based Glycaemic Control Design Approach and Comparison to Other Clinical Protocols***, pp. 59-62

Chase, Geoff  
Shaw, Geoffrey M  
Hann, Christopher E  
LeCompte, Aaron  
Lonergan, Timothy  
Willacy, Michael  
Wong, Xing-Wei  
Lin, Jessica  
Lotz, Thomas

Univ. of Canterbury  
Christchurch Hospital  
Univ. of Canterbury  
Univ. of Canterbury  
Univ. of Canterbury  
Univ. of Canterbury  
Univ. of Canterbury  
Univ. of Canterbury  
Univ. of Canterbury

13:30-13:45

***A Dual-Rate Kalman Filter for Continuous Glucose Monitoring***, pp. 63-66

Kuure-Kinsey, Matthew  
Palerm, Cesar C.  
Bequette, B Wayne

Rensselaer Pol. Inst.  
Univ. of California Santa Barbara  
Rensselaer Pol. Inst.

13:45-14:00

***Automated Glucose Control in the ICU: Effect of Nutritional Protocol and Measurement Error***, pp. 67-70

Wilinska, Malgorzata Elzbieta  
Chassin, Ludovic J  
Hovorka, Roman

Univ. of Cambridge  
Univ. of Cambridge  
Univ. of Cambridge

14:00-14:15

***Clinical Assessment and Mathematical Modeling of the Accuracy of Continuous Glucose Sensors (CGS)***, pp. 71-74

Kovatchev, Boris P  
King, Christopher R  
Breton, Marc D.  
Anderson, Stacey M  
Clarke, William L

Univ. of Virginia  
Univ. of Virginia  
Univ. of Virginia  
Univ. of Virginia  
Univ. of Virginia

<b>WeC05</b>	Duffy-Columbia
<b>Applied Neural Computing I (Special Session)</b>	
13:00-13:15	
<b><i>Phase Synchrony Measurement in Motor Cortex for Classifying Single-Trial EEG During Motor Imagery</i></b> , pp. 75-78	
Wang, Yijun	Tsinghua Univ.
Hong, Bo	Tsinghua Univ.
Gao, Xiaorong	Tsinghua Univ.
Gao, Shangkai	Tsinghua Univ.
13:15-13:30	
<b><i>Using Single-Trial EEG to Estimate the Timing of Target Onset During Rapid Serial Visual Presentation</i></b> , pp. 79-82	
Luo, An	Columbia Univ.
Sajda, Paul	Columbia Univ.
<b>WeC06</b>	Empire Hudson
<b>Biomechanics I (Oral Session)</b>	
13:00-13:15	
<b><i>High-Resolution Ultrasound Elastography of Articular Cartilage in Vitro (I)*</i></b>	
Ginat, Daniel	Columbia Univ.
Hung, Gilberto	Columbia Univ.
Konofagou, Elisa	Columbia Univ.
Gardner, Thomas	Columbia Univ.
13:15-13:30	
<b><i>Mechanical Mechanisms for Thrombosis in Microcirculation</i></b> , pp. 83-86	
Liu, Qin	The City Coll. of New York
Fu, Bingmei	The City Coll. of New York
13:30-13:45	
<b><i>Biomechanics of Side Impact Injuries: Evaluation of Seat Belt Restraint System, Occupant Kinematics and Injury Potential</i></b> , pp. 87-90	
Kumaresan, Srirangam	Biomechanics Inst.
Sances, Jr., Anthony	Biomechanics Inst.
Carlin, Fred	Biomechanics Inst.
Frieder, Russell	Biomechanics Inst.
Friedman, Keith	Friedman Res.
Renfroe, David	The Engineering Inst.
13:45-14:00	
<b><i>3D Finite Element Analysis of the Frictional Behavior of the Human Fingertip</i></b> , pp. 91-94	
Yoshida, Hiroaki	National Inst. of Advanced Industrial Science and Tech.
Tada, Mitsunori	National Inst. of Advanced Industrial Science and Tech.
Mochimaru, Masaaki	National Inst. of Advanced Industrial Science and Tech.
14:00-14:15	
<b><i>Femoral Fracture Risk Assessment after Intensity Modulated Radiation Therapy (IMRT) for the Treatment of Soft Tissue Sarcoma Using a Novel Mathematical Model</i></b> , pp. 95-98	
Song, Yan	Univ. of Houston
Wang, Song	New Jersey Inst. of Tech.
Chan, Maria	Memorial Sloan-Kettering Cancer Center
Chandra, Burman	Memorial Sloan-Kettering Cancer Center
Atam, Dhawan	New Jersey Inst. of Tech.
Song, Yulin	Memorial Sloan-Kettering Cancer Center

14:15-14:30

**Macroscopic Modeling and Identification of the Human Neuromuscular Network**, pp. 99-105

Nakamura, Yoshihiko

Univ. of Tokyo

Katsu, Yamane

Univ. of Tokyo

Murai, Akihiko

Univ. of Tokyo

**WeC07**

Cantor-Jolson

**Biomedical Information Network: Networking and Wireless Integration of Medical Devices on a Common and Shared Infrastructure** (Minisymposium)

Organizer: Frisch, Paul

Memorial Sloan-Kettering Cancer Center

13:00-13:15

**Development and Implementation of a Biomedical Information Network (I)**, pp. 106-108

Miodownik, Saul

Memorial Sloan Kettering Cancer Center

Frisch, Paul

Memorial Sloan-Kettering Cancer Center

Booth, Paul

Memorial Sloan Kettering Cancer Center

13:15-13:30

**Design of an Enterprise Physiological Data and Clinical Alarm Management Solution (I)**, pp. 109-112

Frisch, Paul

Memorial Sloan Kettering Cancer Center

Miodownik, Saul

Memorial Sloan Kettering Cancer Center

Booth, Paul

Memorial Sloan Kettering Cancer Center

Lui, Wei

Memorial Sloan Kettering Cancer Center

13:30-13:45

**Event Management to Improve Patient Safety, Quality and Efficiency (I)**, pp. 113-116

McNeal, Michael

Emergin, Inc.

Harmon, Michael

Emergin, Inc.

13:45-14:00

**Alarm Enhancement Systems for Ventilators (I)\***

Glinski, Robert

Cardiopulmonary Corp.

Frisch, Paul

Memorial Sloan-Kettering Cancer Center

14:00-14:15

**Application of RFID in an Integrated Healthcare Environment (I)**, pp. 117-120

Booth, Paul

Memorial Sloan Kettering Cancer Center

Frisch, Paul

Memorial Sloan Kettering Cancer Center

Miodownik, Saul

Memorial Sloan Kettering Cancer Center

14:15-14:30

**Intelligent Alarm Processing into Clinical Knowledge (I)\***

Laramée, Craig

Binghamton Univ.

Lesperance, Leann

Binghamton Univ.

Gause, Donald C.

Thomas J. Watson School of Engineering, Binghamton Univ. SUNY Binghamton

McLeod, Kenneth

State Univ. of New York

**WeC09**

Gramercy-Olmstead

**Optical Coherence Tomography** (Oral Session)

13:00-13:15

**High Speed and Ultrahigh Resolution Optical Coherence Tomography\***

Fujimoto, James

Massachusetts Inst. of Tech.

13:15-13:30

**Advances in Contrast Enhancement for Optical Coherence Tomography (I)**, pp. 121-124

Boppart, Stephen

Univ. of Illinois at Urbana-Champaign

13:30-13:45

**Optical Coherence Tomography Using Rapidly Swept Lasers (I)**, pp. 125-128

Yun, S. H. (Andy)

Harvard Medical School and Massachusetts General Hospital

13:45-14:00

***Optical Coherence Tomography for Noninvasive Diagnosis of Epithelial Cancers (I)***, pp. 129-132

Pan, Yingtian

State Univ. of New York , Stony Brook

14:00-14:15

***Comparison of Two and Three-Dimensional Optical Tomographic Image Reconstructions of Human***

***Finger Joints (I)\****

Song, Rong

Columbia Univ.

Klose, Alexander

Columbia Univ.

Scheel, Alexander K.

Georg-August-Univ. Göttingen

Netz, Uwe J.

Charité - Univ. Berlin

Beuthan, Jürgen

Charité - Univ. Berlin

Hielscher, Andreas

Columbia Univ.

14:15-14:30

***Automated Extended Volume Imaging of Tissue Using Confocal and Optical Microscopy***, pp. 133-136

Sands, Gregory

The Univ. of Auckland

Gerneke, Dane

The Univ. of Auckland

Small, Bruce

Univ. of Auckland

LeGrice, Ian

Univ.

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**WeC10**

Astor Ballroom

**System Theory in Medical Diagnostic Devices (Minisymposium)**

Organizer: Baura, Gail

CardioDynamics

13:00-13:15

***System Theory in Medical Diagnostic Devices: An Overview (I)***, pp. 137-139

Baura, Gail

CardioDynamics

13:15-13:30

***Computer-Aided Auscultation of the Heart: From Anatomy and Physiology to Diagnostic***

***Decision Support (I)***, pp. 140-143

Watrous, Raymond

Zargis Medical Corp.

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**WeC11**

Musicbox-Majestic

**Image-Guided Surgery and Treatment I (Oral Session)**

13:00-13:15

***Assistance to Planning in Deep Brain Stimulation: Data Fusion Method for Locating Anatomical Targets in MRI***, pp. 144-147

Villeger, Alice

ERIM, INSERM, Auvergne Univ.

Ouchchane, Lemlih

ERIM and Univ. Hospital of Clermont-Ferrand

Lemaire, Jean-Jacques

ERIM and Univ. Hospital of Clermont-Ferrand

Boire, Jean-Yves

ERIM and Univ. Hospital of Clermont-Ferrand

13:15-13:30

***Laparoscopic Image Analysis for Robotic Arm Guidance***, pp. 148-151

Gketsis, Zacharias E.

Tech. Univ. of Crete, Greece

Tzagkas, Dimitrios

Tech. Univ. of Crete

Hatzilias, Petros

District Hospital of Chania, Greece

Zervakis, Michalis

Tech. Univ. of Crete, Greece

13:30-13:45

***The Treatment of Extensive Scalp Lesions Combining Electrons with***

***Intensity-Modulated Photons***, pp. 152-155

Chan, Maria

Memorial Sloan-Kettering Cancer Center

Song, Yulin

Memorial Sloan-Kettering Cancer Center

Burman, Chandra

Memorial Sloan-Kettering Cancer Center

Chui, Chen

Memorial Sloan-Kettering Cancer Center

Schupak, Karen

Memorial Sloan-Kettering Cancer Center

13:45-14:00

**Path Planning for Virtual Bronchoscopy**, pp. 156-159

Negahdar, Mohamadreza  
Ahmadian, Alireza  
Navab, Nassir

Tehran Univ. of Medical Sciences (TUMS)  
Tehran Univ. of Medical Sciences  
Tech. Univ. of München

14:00-14:15

**MRI Alone Simulation for Conformal Radiation Therapy of Prostate Cancer:**

**Technical Aspects**, pp. 160-163

Pasquier, David  
Betrouni, Nacim  
Vermandel, Maximilien  
Lacornerie, Thomas  
Lartigau, Eric  
Rousseau, Jean

Centre O. Lambret, Univ. Lille 2  
Inst. de Tech. Médicale  
Univ. de Lille  
CRLCC O. Lambret  
CRLCC Centre Oscar Lambret  
INSERM - Univ. de Lille 2

14:15-14:30

**An All-Ultrasound-Based System for Sonication and Real-Time Monitoring of Temperature and Ablation**, pp. 164-167

Maleke, Caroline  
Konofagou, Elisa

Columbia Univ.  
Columbia Univ.

**WeC12**

Palace Wintergarden

**Coordination Physiological Rhythms Part 1: Fundamentals and Circadian Rhythms (Minisymposium)**

Organizer: Hoyer, Dirk

Friedrich Schiller Univ.

13:00-13:15

*The Circadian Timing System, a Coordinator of Life Processes. Implications for the Rhythmic Delivery of Cancer Therapeutics (I)\**

LEVI, Francis

INSERM and Univ. Paris Sud

13:15-13:30

**Importance of Circadian Rhythms for Regulation of the Cardiovascular System – Studies in Animal and Man (I)**, pp. 168-170

Lemmer, Björn

Ruprecht Karls Univ.

13:30-13:45

**Cancer Symptom Complexes Related to Alterations in Molecular Circadian Axis Signaling (I)**, pp. 171-172

Rich, Tyvin

Univ. of Virginia

13:45-14:00

**Physiologically Based Modelling of Circadian Control on Cell Proliferation (I)**, pp. 173-176

Clairambault, Jean

Inst. National de Recherche en Informatique et en

**WeC14**

Chelsea-Gotham

**New Techniques in Rehabilitation I (Minisymposium)**

Organizer: Dewald, Julius P. A.

Northwestern Univ.

13:00-13:15

**Source of Work Area Reduction Following Hemiparetic Stroke and Preliminary Intervention Using the ACT 3D System (I)**, pp. 177-180

Sukal, Theresa  
Ellis, Michael  
Dewald, Julius P. A.

Northwestern Univ.  
Northwestern Univ.  
Northwestern Univ.

13:15-13:30

**Cortico-Muscular Communication During the Generation of Static Shoulder Abduction Torque in Upper Limb Following Stroke (I)**, pp. 181-184

Yao, Jun  
Dewald, Julius P. A.

Northwestern Univ.  
Northwestern Univ.

13:30-13:45

***Inverse-Dynamics Based Assessment of Gait Using a Robotic Orthosis (I)***, pp. 185-188

Hidler, Joseph  
Neckel, Nathan

Catholic Univ. of America  
Catholic Univ. of America

13:45-14:00

***Design of a Compliantly Actuated Exo-Skeleton for an Impedance Controlled Gait Trainer Robot (I)***, pp. 189-193

van der kooij, herman  
ekkelenkamp, ralf  
veneman, Jan

Univ. of twente  
Univ. of twente  
Univ. of twente

14:00-14:15

***New Multi-Channel Transcutaneous Electrical Stimulation Technology for Rehabilitation (I)***, pp. 194-197

Keller, Thierry  
Lawrence, Marc  
Kuhn, Andreas  
Morari, Manfred

ETH Zurich  
ETH Zurich  
ETH Zurich  
Swiss Federal Inst. of Tech.

**WeC15**

O'Neill

**Cardiopulmonary Models I: Critical Care (Oral Session)**

13:00-13:15

***Comprehensive Physiological Cardiovascular Model Enables Automatic Correction of Hemodynamics in Patients with Acute Life-Threatening Heart Failure***, pp. 198-201

UEMURA, KAZUNORI  
Kamiya, Atsunori  
Shimizu, Shuji  
Shishido, Toshiaki  
Sugimachi, Masaru  
Sunagawa, Kenji

National Cardio. Center Res. Inst.  
National Cardiovascular Center Res. Inst.  
National Cardiovascular Center Res. Inst.  
National Cardiovascular Center Res. Inst.  
Natl Cardio Center Res. Inst.  
Kyushu Univ.

13:15-13:30

***A Human Cardiopulmonary Model: Extension to LV Dysfunction***, pp. 202-204

Luo, Chuan  
Ware, David  
Zwischenberger, Joseph B.  
Clark, John W.

Rice Univ.  
UT Medical Branch  
Univ. of Texas Medical Branch  
Rice Univ.

13:30-13:45

***Bayesian Networks for Cardiovascular Monitoring***, pp. 205-209

Roberts, Jennifer  
Parlikar, Tushar  
Heldt, Thomas  
Verghese, George

Massachusetts Inst. of Tech.  
Massachusetts Inst. of Tech.  
Massachusetts Inst. of Tech.  
Massachusetts Inst. of Tech.

13:45-14:00

***Screening Parameters of Pulmonary and Cardiovascular Integrated Model with Sensitivity Analysis***, pp. 210-213

Kubo, Hajime  
Harada, Tatsuya  
Mori, Taketoshi  
Sato, Tomomasa

The Univ. of Tokyo  
The Univ. of Tokyo  
the Univ. of Tokyo  
the Univ. of Tokyo

14:00-14:15

***Continuous Cardiac Output and Left Atrial Pressure Monitoring by Pulmonary Artery Pressure Waveform Analysis***, pp. 214-217

Mukkamala, Ramakrishna  
Lu, Zhenwei

Michigan State Univ.  
Michigan State Univ.



14:15-14:30

**Hardware Acceleration for Real Time Simulation of Physiological Systems**, pp. 218-223

Tirat-Gefen, Yosef Gavriel  
Pimentel, Julio

Castel Res. Inc.  
Laval Univ.

**WeC16**

Musicbox-Majestic

**Advances in Medical Infrared Imaging** (Minisymposium)

Organizer: Diakides, Nicholas A.

Advanced Concepts Analysis, Inc.

14:45-15:00

**Functional Infrared Imaging in Medicine: A Quantitative Diagnostic Approach (I)**, pp. 224-227

Merla, Arcangelo  
Romani, Gian Luca

Univ. of Chieti-Pescara, Fondazione "Univ. G. D'Annunzio",  
Univ. of Chieti-Pescara, Fondazione "Univ. G. D'Annunzio",

15:00-15:15

**Counting Heartbeats at a Distance (I)**, pp. 228-231

Sun, Nanfei  
Pavlidis, Ioannis

Univ. of Houston  
Univ. of Houston

15:15-15:30

**Using Quantitative Imaging Techniques to Assess Vascularity in AIDS-Related Kaposi's Sarcoma (I)**, pp. 232-235

Vogel, Abby  
Dasgeb, Bahar  
Hassan, Moinuddin  
Amyot, Franck  
Chernomordik, Victor  
Tao, Yang  
Demos, Stavros  
Wyvill, Kathleen Marczyk  
Little, Richard  
Yarchoan, Robert  
Gandjbakhche, Amir

National Inst. of Health - NICHD  
National Inst. of Health - NICHD  
National Inst. of Health - NICHD  
National Inst. of Health - NICHD  
National Inst. of Health - NICHD  
Univ. of Maryland  
Lawrence Livermore National Lab.  
National Inst. of Health - NCI  
National Inst. of Health - NCI  
National Inst. of Health - NCI  
National Inst. of Health - NICHD

15:30-15:45

**Multicolor Quantum-Well Infrared Detectors (I)\***

Wiecek, Boguslaw

Tech. Univ. of Lodz

15:45-16:00

**High Resolution Microbolometer System for Passive and Active Thermography (I)\***

Wiecek, Boguslaw

Tech. Univ. of Lodz

16:00-16:15

**Adopting the DICOM Standard for Medical Infrared Images (I)**, pp. 236-239

Schaefer, Gerald  
Huguet, Jordi  
Zhu, Shao Ying  
Plassmann, Peter  
Ring, Francis

Nottingham Trent Univ.  
Nottingham Trent Univ.  
Univ. of Derby  
Univ. of Glamorgan  
Univ. of Glamorgan

**WeD01**

Marquis AB

**Special Session: Linear and Nonlinear Analysis** (Oral Session)

14:45-15:00

**Nonlinear Spectrum Compression for the Hearing Impaired Via a Frequency-Domain Processing Algorithm**, pp. 240-243

Paarmann, Larry

Wichita State Univ.

15:00-15:15

***Validation and Improved Registration of Bone Segmentation Using Contour Coherency***, pp. 244-247  
Greenspan, Michael Queen's Univ.  
Wang, Liping Ingrid Queen's Univ.  
Ellis, Randy Harvard Univ.

15:15-15:30

***Biochemical Signal Detection in Miniaturized Fluidic Systems by Integrated Microresonator***, pp. 248-251  
Fraser, James M. Queen's Univ.  
Yam, Scott Queen's Univ.  
Loock, Hans-Peter Queen's Univ.  
Barnes, Jack Queen's Univ.  
Yastrubchak, Oksana Queen's Univ.  
Chiu, Olivia Queen's Univ.  
Oleschuk, Richard Queen's Univ.  
Wilson, Mark Queen's Univ.  
Qian, Chen Queen's Univ.

15:30-15:45

***Lower Limb Muscle Synergies During Gait in Humans\****  
Morin, Evelyn Queen's Univ.

15:45-16:00

***Dynamics of a Sensory Signaling Network in a Unicellular Eukaryote***, pp. 252-255  
Foster, Kenneth William Syracuse Univ.  
Josef, Keith Syracuse Univ.  
Saranak, Jureepan syracuse Univ.  
Tuck, Ned Syracuse Univ.

16:00-16:15

***Applications of Nonlinear System Identification in Molecular Biology***, pp. 256-259  
Korenberg, Michael Queen's Univ.

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**WeD02**

Marquis C

**MRI: Instrumentation and Analysis (Oral Session)**

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14:45-15:00

***Gradient Distortion Correction for Low Frequency Current Density Imaging***, pp. 260-263  
Yan, Charles Xiao Bo Univ. of Toronto  
DeMonte, Tim P. Field Metrica Inc.  
Joy, Michael L. Univ. of Toronto

15:00-15:15

***A Parallel FDTD Scheme for Electromagnetic Analysis and Design of MRI System***, pp. 264-267  
Wang, Hua The Univ. of Queensland  
Trakic, Adnan The Univ. of Queensland  
Xia, Ling Zhejiang Univ.  
Crozier, Stuart The Univ. of Queensland  
Liu, Feng The Univ. of Queensland  
Bialkowski, Marek Edward The Univ. of Queensland

15:15-15:30

***Tailoring Magnetic Field Gradient Design to Magnet Cryostat Geometry***, pp. 268-271  
Trakic, Adnan The Univ. of Queensland  
Liu, Feng The Univ. of Queensland  
Sanchez Lopez, Hector The Univ. of Queensland  
Wang, Hua The Univ. of Queensland  
Crozier, Stuart The Univ. of Queensland

15:30-15:45

***Numerical Evaluation of Radio Frequency Power Deposition in Human Models During MRI***, pp. 272-275  
STUCHLY, Maria Univ. of Victoria  
Abrishamkar, Houman Univ. of Victoria  
Strydom, Marie Luise Univ. of British Columbia

15:45-16:00

***An Analysis of RF Pulse Apodization in Parallel Spatially Selective Excitation***, pp. 276-279  
Liu, Yinan Texas A&M Univ.  
Ji, Jim Xiuquan Texas A&M Univ.

16:00-16:15

***A Novel Digital Magnetic Resonance Imaging Spectrometer***, pp. 280-283  
Liu, Zhengmin Univ. of Science and Tech. of China  
Zhao, Cong Univ. of Science and Tech. of China  
Zhou, Heqin Univ. of Science and Tech. of China  
Feng, Huanqing Univ. of Science and Tech. of China

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**WeD03**

SoHo-Herald

**Neuromuscular Control: Peripheral Mechanisms (Oral Session)**

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14:45-15:00

***EMG Reaction in Muscles about the Knee to Passive Velocity, Acceleration and Jerk Manipulations***, pp. 284-287  
Fee, James W., Jr. Alfred I. duPont Hospital for Children  
Miller, Freeman Alfred I. duPont Hospital for Children  
Lennon, Nancy Alfred I. duPont Hospital for Children

15:00-15:15

***Identification of Time-Varying Intrinsic and Reflex Joint Stiffness***, pp. 288-291  
Giesbrecht, Heidi Irene McGill Univ.  
Baker, Mackenzie McGill Univ.  
Ludvig, Daniel McGill Univ.  
Wagner, Ross McGill Univ.  
Kearney, Robert Edward McGill Univ.

15:15-15:30

***Real-Time Estimation of Intrinsic and Reflex Stiffness***, pp. 292-295  
Ludvig, Daniel McGill Univ.  
Kearney, Robert Edward McGill Univ.

15:30-15:45

***Decomposition of a Parallel Cascade Model of Ankle Stiffness Using Subspace Methods***, pp. 296-299  
Zhao, Yong McGill Univ.  
Kearney, Robert Edward McGill Univ.

15:45-16:00

***Regulation of Multijoint Stretch Reflexes During Interactions with Stiff and Compliant Environments***, pp. 300-302  
Perreault, Eric Northwestern Univ.  
Chen, Kuifu China Agricultural Univ.  
Lewis, Gwyn Rehabilitation Inst. of Chicago

16:00-16:15

***Comparison of Neuromuscular Abnormalities between Upper and Lower Extremities in Hemiparetic Stroke***, pp. 303-306  
Mirbagheri, Mehdi Northwestern Univ.  
Alibiglou, Laila RIC/UIC  
Thajchayapong, M RIC/NU  
Lilaonitkul, Thanan RIC/NU  
Rymer, William Zev Northwestern & Rehab Inst. of Chicago

**WeD04** Ziegfeld**Pharmacokinetics and Dynamics: Glucose-Insulin Modeling in Health and Diabetes (Oral Session)**

14:45-15:00

**Mixed Meal Simulation Model of Glucose-Insulin System**, pp. 307-310Dalla Man, Chiara  
Rizza, Robert  
Cobelli, ClaudioUniv. of Padova  
Mayo Clinic  
Univ. of Padova

15:00-15:15

**Computational Model of Glucose Homeostasis During Exercise**, pp. 311-314Kim, Jaeyeon  
Saidel, Gerald  
Kirwan, John  
Cabrera, MarcoCase Western Res. Univ.  
Case Western Res. Univ.  
Case Western Res. Univ.  
Case Western Res. Univ.

15:15-15:30

**Bio-Behavioral Control, Glucose Variability, and Hypoglycemia-Associated Autonomic Failure in Type 1 Diabetes (T1DM)**, pp. 315-318Breton, Marc D.  
Farhy, Leon S  
Penberthy, Jennifer K  
Kovatchev, Boris PUniv. of Virginia  
Univ. of virginia  
Univ. of Virginia  
Univ. of Virginia

15:30-15:45

**Robust Parameter Estimation in a Model for Glucose Kinetics in Type 1 Diabetes Subjects**, pp. 319-322Palerm, Cesar C.  
Rodriguez-Fernandez, Maria  
Bevier, Wendy  
Zisser, Howard  
Banga, Julio R.  
Jovanovic, Lois  
Doyle, FrancisUniv. of California Santa Barbara  
IIM-CSIC (Spanish Council for Scientific Res.  
Sansum Diabetes Res. Inst.  
Sansum Diabetes Res. Inst.  
IIM-CSIC (Spanish Council for Scientific Res.  
Sansum Diabetes Res. Inst.  
Univ. of California Santa Barbara

15:45-16:00

**Mixed Meal Modeling and Disturbance Rejection in Type I Diabetic Patients**, pp. 323-326Roy, Anirban  
Parker, RobertUniv. of Pittsburgh  
Univ. of Pittsburgh**WeD05** Duffy-Columbia**Applied Neural Computing II (Special Session)**

14:45-15:00

**Spatiotemporal Source Tuning Filter Bank for Multiclass EEG Based Brain Computer Interfaces**, pp. 327-330Acharya, Soumyadipta  
Mollazadeh, Mohsen  
Murari, Kartikeya  
Thakor, NitishJohns Hopkins Univ.  
Johns Hopkins Univ.  
Johns Hopkins Univ.  
Johns Hopkins Univ.**WeD06** Empire Hudson**Surgical Robotics I (Oral Session)**

14:45-15:00

**Development of a Compliant Device for Minimally Invasive Surgery**, pp. 331-334Meier, Petra  
Oberthuer, Siegfried  
Lang, MichaelTech. Univ. Ilmenau  
Tech. Univ. Ilmenau  
TU Ilmenau

15:00-15:15

***Micromanipulator for Enhancing Surgeon's Dexterity in Cochlear Atraumatic Surgery***, pp. 335-338

Savall, Joan

CEIT

Manrique, Manuel

Univ. of Navarra Medical School

Echeverria, Mikel

CEIT

Ares, Mikel

CEIT

15:15-15:30

***Improved Traction for a Mobile Robot Traveling on the Heart***, pp. 339-342

Patronik, Nicholas

Carnegie Mellon Univ.

Ota, Takeyoshi

Univ. of Pittsburgh

Zenati, Marco

Univ. of Pittsburgh

Riviere, Cameron

Carnegie Mellon Univ.

15:30-15:45

***Theoretical Model and Design of a Device to Reduce the Influence of Environmental Factors on Refractive Surgery Outcomes***, pp. 343-346

Schena, Emiliano

Univ. of Rome Campus Bio-Medico

Silvestri, Sergio

Univ. Campus Bio-medico

Talei Franzesi, Giovanni

MIT

Carito, Pino

Campus Biomedico

Cupo, Gaetano

Campus biomedico

Ghinelli, Emiliano

MIT

15:45-16:00

***Development of a Vision Integration Framework for Laparoscopic Surgical Robot***, pp. 347-349

Shin, Jung Wook

National Cancer Center

Park, Jun Woo

National Cancer Center

Hong, Soyoung

National Cancer Center

Lee, Chul Han

National Cancer Center

Jo, Yunggho

National Cancer Center

Choi, Jaesoon

National Cancer Center

**WeD07**

Cantor-Jolson

**Cardiopulmonary Models II: Critical Care (Oral Session)**

14:45-15:00

***Integrating Data, Models, and Reasoning in Critical Care***, pp. 350-353

Heldt, Thomas

Massachusetts Inst. of Tech.

Long, William

Massachusetts Inst. of Tech.

Verghese, George

Massachusetts Inst. of Tech.

Szolovits, Peter

Massachusetts Inst. of Tech.

Mark, Roger

Massachusetts Inst. of Tech.

15:00-15:15

***Short-Term Autonomic Control of the Cardio-Respiratory System: A Summary with the Help of a Comprehensive Mathematical Model***, pp. 354-358

Ursino, Mauro

Univ. of Bologna

Magosso, Elisa

Univ. of Bologna

15:15-15:30

***Sensitivity Analysis of a Model of the Cardiovascular System***, pp. 359-362

Batzel, Jerry

Univ. Graz

Kappel, Franz

Univ. of Graz

15:30-15:45

***Heat Transfer Model of Hyperthermic Infusion of Cold Saline for Stroke Therapy***, pp. 363-366

Neimark, Matthew

Columbia Univ.

Kostas, Angelos-Arsteidis

Columbia Univ.

Laine, Andrew

Columbia Univ.

Pile-Spellman, John

Columbia Univ.

**WeD08** Brecht

**Magnetic Resonance Imaging I (Oral Session)**

14:45-15:00

***Towards High Temporal and Spatial Resolution Cardiac Imaging with Parallel MRI***, pp. 367-368  
Pai, Vinay new york Univ.

15:00-15:15

***Spiral Parallel Magnetic Resonance Imaging***, pp. 369-371  
Meyer, Craig H. Univ. of Virginia

15:15-15:30

***Accelerated Parallel Imaging by Transform Coding Data Compression with K-T SENSE***, pp. 372-372  
Tsao, Jeffrey Novartis Inst. for BioMedical Res. Inc.  
Hansen, Michael Schacht UCL Inst. of Child Health  
Kozerke, Sebastian Univ. and ETH Zurich

15:30-15:45

***Highly Accelerated Cardiovascular Magnetic Resonance Imaging: Concepts and Clinical Applications***, pp. 373-376  
Niendorf, Thoralf RWTH - Tech. Univ. Aachen  
Sodickson, Daniel K. Beth Israel Deaconess Medical Center and Harvard Medical School

15:45-16:00

***Statistical Aspects of Parallel Imaging Reconstruction***, pp. 377-380  
Raj, Ashish UCSF  
Kressler, Bryan Cornell Univ.  
Singh, Gurmeet Cornell Univ.  
Zabih, Ramin cornell Univ.  
Wang, Yi cornell Univ.

**WeD09** Gramercy-Olmstead

**Optical Imaging (Oral Session)**

14:45-15:00

***MicroCT-Guided Bioluminescence Tomography Based on the Adaptive Finite Element Tomographic Algorithm***, pp. 381-384  
Lv, Yujie Inst. of Automation, Chinese Acad. of Sciences  
Tian, Jie Inst. of Automation, Chinese Acad. of Sciences  
Cong, Wenxiang Univ. of Iowa  
Wang, Ge Univ. of Iowa  
Kumar, Durairaj Univ. of Iowa

15:00-15:15

***Characterizing 3-D Geometry of Mouse Aortic Arch Using Light Stereo-Microscopic Imaging***, pp. 385-388  
Zhu, Hui Duke Univ.  
Shih, Jessica Duke Univ.  
Long, David Duke Univ.  
Maeda, Nobuyo Univ. of North Carolina at Chapel Hill  
Hagaman, John Univ. of North Carolina at Chapel Hill  
Friedman, Morton Duke Univ.

15:15-15:30

***An Incremental and Optimized Learning Method for the Automatic Classification of Protein Crystal Images\****  
Xu, George Columbia Univ.  
Chiu, Casey Columbia Univ.  
Angelini, Elsa Ec. Nationale Superieure des Telecommunications  
Laine, Andrew Columbia Univ.

15:30-15:45

**3D Localized Photoactivation of Pa-GFP in Living Cells Using Two-Photon Interactions.**, pp. 389-391  
Diaspro, Alberto Univ. of Genoa  
Testa, Ilaria Univ. of Genoa  
Faretta, Mario European Inst. of Oncology  
Magrassi, Raffaella NANOMED - Univ. of Genoa  
Barozzi, Sara European Inst. of Oncology  
Parazzoli, Dario European Inst. of Oncology  
Vicidomini, Giuseppe Univ. of Genoa

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**WeD10**

Astor Ballroom

**The MyHeart Project - Fighting Cardiovascular Diseases by Prevention and Early Diagnosis (Minisymposium)**

Organizer: Habetha, Joerg

Philips Res. Lab.

14:45-15:00

**Advances in Textile Technologies for Unobtrusive Monitoring of Vital Parameters and Movements. (I)**, pp. 392-395

Paradiso, Rita  
De Rossi, Danilo

Milior SpA  
Univ. of Pisa

15:00-15:15

**Analysis of Sleep and Stress Profiles from Biomedical Signal Processing in Wearable Devices (I)\***

Cerutti, Sergio  
Bianchi, Anna Maria  
Reiter, Harald

Pol. Univ. of Milan  
Pol. di Milano  
Philips

15:15-15:30

**Innovative Concepts for Prevention and Disease Management of Cardiovascular Diseases (I)**, pp. 396-399

GUILLEN, SERGIO  
Sala, Pilar  
Habetha, Joerg  
Schmidt, Ralt  
ARREDONDO, MARIA TERESA

Inst. Itaca  
Inst. ITACA  
Philips Res. Lab.  
Philips  
Tech. Univ. of Madrid

15:30-15:45

**User Interaction Design and Development of a Heart Failure Management System Based on Wearable and Information Technologies (I)**, pp. 400-403

Villalba, Elena  
ARREDONDO, MARIA TERESA  
MORENO, ALBERTO  
SALVI, DARIO  
GUILLEN, SERGIO

Tech. Univ. of Madrid  
Tech. Univ. of Madrid  
Tech. Univ. of Madrid  
Tech. Univ. of Madrid  
Inst. Itaca

15:45-16:00

**The MyHeart Project – Fighting Cardiovascular Diseases by Prevention and Early Diagnosis (I)\***

Habetha, Joerg

Philips Res. Lab.

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**WeD11**

Musicbox-Majestic

**Image-Guided Surgery and Treatment II (Oral Session)**

14:45-15:00

**Towards Real-Time Registration of 4D Ultrasound Images**, pp. 404-407

Foroughi, Pezhman  
Abolmaesumi, Purang  
Hashtrudi-Zaad, Keyvan

Queen's Univ.  
Queen's Univ.  
Queen's Univ.

15:00-15:15

***Aortic Thrombus Segmentation Using Narrow Band Active Contour Model***, pp. 408-411

Das, Bipul

Mallya, Yogisha

Suryanarayanan, Srikanth

Malladi, Ravikanth

GE Global Res.

GE Global Res.

GE Global Res.

GE Global Res.

15:15-15:30

***Design and Validation of a Robotic Needle Positioning System for Small Animal Imaging Applications***, pp. 412-415

Waspe, Adam C.

Cakiroglu, H. Jason

Lacefield, James C.

Fenster, Aaron

Univ. of Western Ontario

Univ. of Western Ontario

Univ. of Western Ontario

Robarts Res. Inst.

15:30-15:45

***Identification of Anatomical Landmarks for Registration of CT and Ultrasound Images in Computer-Assisted Shoulder Arthroscopy***, pp. 416-419

Tyryshkin, Kathrin

Mousavi, Parvin

Pichora, David

Abolmaesumi, Purang

Queen's Univ.

Queen's Univ.

Kingston General Hospital

Queen's Univ.

15:45-16:00

***Finite Element Modelling of Breast Biomechanics: Directly Calculating the Reference State***, pp. 420-423

Rajagopal, Vijayaraghavan

Chung, Jae-Hoon

Nielsen, Poul

Nash, Martyn

Univ. of Auckland

Univ. of Auckland

Univ. of Auckland

Univ. of Auckland

**WeD12**

Palace Wintergarten

**Coordination Physiological Rhythms Part 2: Cardiovascular and Other Coordinated Rhythms (Minisymposium)**

Organizer: Hoyer, Dirk

Friedrich Schiller Univ.

14:45-15:00

***Why Life Oscillates – Biological Rhythms and Health (I)***, pp. 424-428

Moser, Maximilian

Humanomed Centre

15:00-15:15

***Circadian and Ultradian Rhythms in Cardiac Autonomic Modulation (I)***, pp. 429-432

Stein, Phyllis

Lundequam, Eric J

Daniel, Clauw

Freedland, Kevin E

Carney, Robert M

Domitrovich, Peter P

Washington Univ.

Washington Univ.

Univ. of Michigan

Washington Univ.

Washington Univ.

Washington Univ.

15:15-15:30

***Association between Short Term and Long Term Communication in Pathological Autonomic Control (I)***, pp. 433-436

Hoyer, Dirk

Friedrich Schiller Univ.

15:30-15:45

***Coupled Oscillators: Complex but Not Complicated Cardiovascular and Brain Interactions (I)***, pp. 437-440

Stefanovska, Aneta

Lancaster Univ.

15:45-16:00

***Coupled Oscillators Approach in Analysis of Physiological Data (I)***, pp. 441-444

Rosenblum, Michael

Cimponeriu, Laura

Pikovsky, Arkady

Potsdam Univ.

Univ. of Patras

Potsdam Univ.



16:00-16:15

***Scale-Invariant Aspects of Physiologic Dynamics across Sleep Stages and Circadian Phases (I)***, pp. 445-448

Plamen, Ivanov

Boston Univ.

**ThA01**

Marquis AB

**Signal Processing and Modeling in Biological Systems II (Oral Session)**

09:00-09:15

***Insulin Secretion Rate and B-Cell Sensitivity from Oral Glucose Tolerance Test in Normotensive and Normoglycemic Humans***, pp. 449-450

Di Nardo, Francesco

Pol. Univ. of Marche

Cerasa, Pamela

Pol. Univ. of Marche

Casagrande, Fabrizio

Pol. Univ. of Marche

Boemi, Massimo

Italian National Inst. of Res. and Care on Aging (INRCA-IRCCS)

Morosini, Pierpaolo

"C. G. Mazzoni" General Hospital

Burattini, Roberto

Pol. Univ. of Marche

09:15-09:30

***Robust Blood-Glucose Control Using Mathematica***, pp. 451-454

Kovacs, Levente

Budapest Univ. of Tech. and Ec.

Palancz, Bela

Budapest Univ. of Tech. and Ec.

Benyo, Balazs Istvan

Szechenyi Istvan Univ. Gyor

Torok, Laszlo

Budapest Univ. of Tech. and Ec.

Benyo, Zoltan

Budapest Univ. of Tech. and Ec.

09:30-09:45

***Aspects of Nonlinear Dielectric Spectroscopy of Biological Cell Suspensions***, pp. 455-458

McLellan, Christopher J.

Carleton Univ.

Chan, Adrian D.C.

Carleton Univ.

Goubran, Rafik A.

Carleton Univ.

09:45-10:00

***Regularization of Body Core Temperature Prediction During Physical Activity***, pp. 459-463

Gribok, Andrei

U.S. Army Medical Res. and Materiel Command

McKenna, Thomas

U.S. Army Medical Res. and Materiel Command

Reifman, Jaques

U.S. Army Medical Res. and Materiel Command

10:00-10:15

***Integrative Analysis of Intracranial Pressure and R-R Interval Signals: A Study of ICP B-Wave Using Causal Coherence***, pp. 464-467

Hu, Xiao

Univ. of California, Los Angeles

Nenov, Valeriy

Univ. of California, Los Angeles

Bergsneider, Marvin

Univ. of California, Los Angeles

10:15-10:30

***Enhanced Parameter Estimation with GLLS and the Bootstrap Monte Carlo Method for Dynamic SPECT***, pp. 468-471

Wen, Lingfeng

Univ. of Sydney

Eberl, Stefan

Royal Prince Alfred Hospital

Feng, Dagan

The Univ. of Sydney

**ThA02**

Marquis C

**MRI: Novel Applications (Oral Session)**

09:00-09:15

***Magnetic Steering of Iron Oxide Microparticles Using Propulsion Gradient Coils in MRI***, pp. 472-475

Mathieu, Jean-Baptiste

Ec. Pol. de Montreal

Martel, Sylvain

Ec. Pol. de Montreal

09:15-09:30

***Cell Number Quantification of USPIO-Labeled Stem Cells by MRI: An in Vitro Study***, pp. 476-479

Cheung, Jerry S.  
Chow, April M.  
Hui, Edward S.  
Yang, Jian  
Tse, H. F.  
Wu, Ed X.

The Univ. of Hong Kong  
The Univ. of Hong Kong  
The Univ. of Hong Kong  
The Univ. of Hong Kong  
Univ. of Hong Kong  
The Univ. of Hong Kong

09:30-09:45

***The Correlated Network of Acupuncture Effect: A Functional Connectivity Study***, pp. 480-483

Qin, Wei  
Tian, Jie  
Hu, Jin

CASIA  
Inst. of Automation, Chinese Acad. of Sciences  
Inst. of Automation, Chinese Acad. of Sciences

09:45-10:00

***Ultrasound Accelerated Bone Tissue Engineering Monitored with Magnetic Resonance Microscopy***, pp. 484-488

Moinnes, Jessy  
Vidula, Neelima  
Halim, Nadia  
Othman, Shadi

Univ. of Illinois at Chicago  
Univ. of Illinois at Chicago  
Univ. of Illinois at Chicago  
Univ. of Illinois at Chicago

10:00-10:15

***Combination 3D TOP with 2D PC MRA Technique for Cerebral Blood Flow Volume Measurement***, pp. 489-492

Guo, Gang  
Wu, RenHua  
Zhang, YunPing  
Guan, JinTian  
Guo, YueLin  
Chen, XiaoKe  
terBrugger, Karel  
Mikulis, David

Shantou Univ. Medical Coll.  
Shantou Univ. Medical Coll.  
Shantou Univ. Medical Coll.  
Huazhong Univ. of Sci & Tech.  
Shantou Univ. Medical Coll.  
Shantou Univ. Medical Coll.  
The Toronto Western Hospital, Univ. of Toronto  
The Toronto Western Hospital, Univ. of Toronto

10:15-10:30

***Partially Parallel MR Spectroscopic Imaging of Gliomas at 3T***, pp. 493-496

Ozturk-Isik, Esin  
Banerjee, Suchandrima  
Majumdar, Sharmila  
Nelson, Sarah

Univ. of California, San Francisco  
Univ. of California, San Francisco  
Univ. of California, San Francisco  
Univ. of California, San Francisco

**ThA03**

SoHo-Herald

**Adaptive, Parametric and Optimal Filtering II (Oral Session)**

09:00-09:15

***Comparing Unscented and Extended Kalman Filter Algorithms in the Rigid-Body Point-Based Registration***, pp. 497-500

Hedjazi Moghari, Mehdi  
Abolmaesumi, Purang

Queens Univ.  
Queen's Univ.

09:15-09:30

***Epileptic Spike Detection Using a Kalman Filter Based Approach***, pp. 501-504

Tzallas, Alexandros  
Oikonomou, Vaggelis  
Fotiadis, Dimitrios I.

Univ. of Ioannina  
Univ. of Ioannina  
Univ. of Ioannina

09:30-09:45

***A Labview-Based GUI for the Measurement of Otoacoustic Emissions***, pp. 505-508

Wu, Ye  
McNamara, David  
Ziarani, Alireza

Clarkson Univ.  
Clarkson Univ.  
Clarkson Univ.

09:45-10:00

***A Robust Tool for Newborn Infant Cry Analysis***, pp. 509-512

Manfredi, Claudia  
Bocchi, Leonardo  
Tocchioni, Valentina

Univ. degli Studi di Firenze, Firenze, Italy  
Univ. degli Studi di Firenze, Firenze, Italy  
Univ. degli Studi di Firenze, Firenze, Italy

10:00-10:15

***LMS-Based Active Noise Cancellation Methods for Fmri Using Sub-Band Filtering***, pp. 513-516

Abdollahzadeh Milani, Ali  
Panahi, Issa  
Briggs, Richard

Univ. of Texas at Dallas  
Univ. of Texas at Dallas  
UT Southwestern

10:15-10:30

***Adaptive Compression of Respiratory and Swallowing Sounds***, pp. 517-520

Yadollahi, Azadeh  
Moussavi, Zahra  
Yahampath, Pradeepa

Univ. of Manitoba  
Univ. of Manitoba  
Univ. of Manitoba

**ThA04**

Ziegfeld

**Functional Musculoskeletal Tissue Engineering - Bone Tissue Engineering (Oral Session)**

09:00-09:15

***Production of Osteoclasts from Human Adipose Tissue under Chemically-Defined Conditions\****

Ogle, Roy  
Ogle, Rebecca  
Tholpady, Ashok  
Sefcik, Lauren  
Botchwey, Edward

Univ. of Virginia  
Univ. of Virginia  
Univ. of Virginia  
Univ. of Virginia  
Univ. of Virginia

09:15-09:30

***Induction of Osteoblast Differentiation Markers in Human Dermal Fibroblasts: Potential Application to Bone Tissue Engineering***, pp. 521-524

Hee, Christopher  
Nicoll, Steven

Univ. of Pennsylvania  
Univ. of Pennsylvania

09:30-09:45

***In Vivo Evaluation of a Tri-Phasic Composite Scaffold for Anterior Cruciate Ligament-To-Bone Integration***, pp. 525-528

Spalazzi, Jeffrey  
Dagher, Elias  
Doty, Stephen  
Guo, Edward  
Rodeo, Scott  
Lu, Helen

Columbia Univ.  
Hospital for Special Surgery  
Hospital for Special Surgery  
Columbia Univ.  
Hospital for Special Surgery  
Columbia Univ.

09:45-10:00

***Proliferative Capacity and Osteogenic Differentiation Behavior of Novel Dura Stem Cells\****

Petrie, Caren  
Ogle, Roy  
Botchwey, Edward

Univ. of Virginia  
Univ. of Virginia  
Univ. of Virginia

10:00-10:15

***In Vitro and in Vivo Evaluation of a Novel Polymer-Ceramic Composite Scaffold for Bone Tissue Engineering***, pp. 529-530

Khan, Yusuf  
El-Amin, Saadiq  
Laurencin, Cato T

Univ. of Virginia  
Univ. of Virginia  
Univ. of Virginia

10:15-10:30

***Functional Tissue Engineering – the Articular Cartilage Paradigm\****

Mow, Van

ThA05	Duffy-Columbia
<b>Advances in Sensor Technology I (Oral Session)</b>	
09:00-09:15	
<b>FRET Evidence That an Isoform of Caspase-7 Binds but Does Not Cleave Its Substrate</b> , pp. 531-534	
Li, Isaac	Univ. of Toronto
Chiang, Jui-Hsuan(Jason)	Univ.
Truong, Kevin	Univ. of Toronto
09:15-09:30	
<b>An Impedimetric Sensor for Monitoring the Growth of Staphylococcus Epidermidis</b> , pp. 535-538	
Oliver, Louise Mary	Univ. of Ulster
Dunlop, Patrick SM	Univ. of Ulster
Byrne, John A	Univ. of Ulster
Blair, Ian	Univ. of Ulster
Boyle, Maria	Royal Coll. of Surgeons Ireland
McGuigan, Kevin G	Royal Coll. of Surgeons Ireland
McAdams, Eric T	Univ. of Ulster
09:30-09:45	
<b>Effect of Incus Removal on Middle Ear Acoustic Sensor for a Fully Implantable Cochlear Prosthesis</b> , pp. 539-542	
Zurcher, Mark	Case Western Res. Univ.
Young, Darrin	Case Western Res. Univ.
Semaan, Maroun	Univ. Hospitals of Cleveland
Megerian, Cliff	Univ. Hospitals of Cleveland
Ko, Wen	Case Western Res. Univ.
09:45-10:00	
<b>Video-Rhino-Hygrometer (VRH)</b> , pp. 543-546	
Setola, Roberto	Univ. CAMPUS Bio-Medico di Roma
Casale, Manuele	Univ. CAMPUS Bio-Medico
Cusimano, Valerio	Univ. CAMPUS Bio-Medico
Soda, Paolo	Univ. CAMPUS Bio-Medico
Salvinelli, Fabrizio	Univ. CAMPUS Bio-Medico
10:00-10:15	
<b>The Use of a Two Channel Doppler Radar Sensor for the Characterization of Heart Motion Phases</b> , pp. 547-550	
Muehlsteff, Jens	Philips
Thijs, Jeroen A.J.	Philips
Pinter, Robert	Philips
10:15-10:30	
<b>Method and Apparatus for Intra-Esophageal Cough Detection</b> , pp. 551-554	
Hogan, Jennifer A.	Univ. of Calgary
Mintchev, Martin P.	Univ. of Calgary

ThA06	Empire Hudson
<b>Surgical Robotics II (Oral Session)</b>	
09:00-09:15	
<b>Needle Insertion Force Estimation Model Using Procedure-Specific and Patient-Specific Criteria</b> , pp. 555-558	
Podder, Tarun	Univ. of Rochester Medical Center
Sherman, Jason	Univ. of Rochester
Messing, Edward	Univ. of Rochester
Rubens, Deborah	Univ. of Rochester
Fuller, Dave	Univ. of Rochester
Ng, Wan-Sing	Nanyang Tech. Univ.
Brasacchio, Ralph	Univ. of Rochester
Yu, Yan	Univ. of Rochester Medical Center

09:15-09:30

***Toward Effective Needle Steering in Brain Tissue***, pp. 559-562

Engh, Johnathan  
Podnar, Gregg  
Kondziolka, Douglas  
Riviere, Cameron

Univ. of Pittsburgh  
Carnegie Mellon Univ.  
Univ. of Pittsburgh  
Carnegie Mellon Univ.

09:30-09:45

***Efficacy of Prostate Stabilizing Techniques During Brachytherapy Procedure***, pp. 563-566

Sherman, Jason  
Podder, Tarun  
Misic, Vladimir  
Fu, Lei  
Fuller, Dave  
Winey, Brian  
Messing, Edward  
Rubens, Deborah  
Strang, John  
Brasacchio, Ralph  
Yu, Yan

Univ. of Rochester  
Univ. of Rochester Medical Center  
Univ. of Rochester  
Univ. of Rochester  
Univ. of Rochester  
Univ. of Rochester  
Univ. of Rochester  
Univ. of Rochester  
Univ. of Rochester  
Univ. of Rochester  
Univ. of Rochester Medical Center

09:45-10:00

***Dynamic Augmented Reality for Sensory Substitution in Robot-Assisted Surgical Systems.***, pp. 567-570

Akinbiyi, Takintope  
Reiley, Carol  
Saha, Sunipa  
Burschka, Darius  
Hasser, Christopher  
Yuh, David  
Okamura, Allison

Johns Hopkins Univ.  
Johns Hopkins Univ.  
Johns Hopkins Univ.  
Tech. Univ. Munchen  
Intuitive Surgical  
Johns Hopkins Univ.  
Johns Hopkins Univ.

**ThA07**

Cantor-Jolson

**Cellular and Tissue Cardiac Electrophysiology (Oral) (Oral Session)**

09:00-09:15

***Imaging Cellular Calcium Dysfunction in the Heart Using Multi-Modal Optical Mapping***, pp. 571-575

Hoeker, Gregory  
Laurita, Kenneth  
Katra, Rodolphe

MetroHealth Campus, Case Western Res. Univ.  
MetroHealth Campus, Case Western Res. Univ.  
MetroHealth Campus, Case Western Res. Univ.

09:15-09:30

***Acquired Cell-To-Cell Coupling and "Cardiac-Like" Calcium Oscillations in Adult Stem Cells in a Cardiomyocyte Microenvironment***, pp. 576-579

Muller-Borer, Barbara  
Cascio, Wayne  
Gwyn, Esch  
Grisham, Joe  
Anderson, Page  
Malouf, Nadia

Brody School of Medicine at East Carolina Univ.  
Brody School of Medicine at East Carolina Univ.  
The Univ. of North Carolina at Chapel Hill  
The Univ. of North Carolina at Chapel Hill  
Duke Univ.  
The Univ. of North Carolina at Chapel Hill

09:30-09:45

***How to Explain Why "Unequal Anisotropy Ratios" Is Important Using Pictures but No Mathematics***, pp. 580-583

Roth, Bradley

Oakland Univ.

09:45-10:00

***Multilevel Homogenization Applied to the Cardiac Bidomain Equations***, pp. 584-587

Austin, Travis  
Trew, Mark  
Pullan, Andrew

Univ. of Auckland  
Univ. of Auckland  
Univ. of Auckland

10:00-10:15

***Atrial Action Potential Heterogeneity Measured by Unipolar Electrograms***, pp. 588-589

Vigmond, Edward  
Tsoi, Vincent  
Page, Pierre

Univ. of Calgary  
Univ. of Calgary  
Univ. of Montreal/Sacre-Coeur Hospital

**ThA08**

Juilliard

**Computational Neurophysiology (Oral Session)**

09:00-09:15

***Assessment of Effective Connectivity among Cortical Regions Based on a Neural Mass Model***, pp. 590-594

Zavaglia, Melissa  
Astolfi, Laura  
Babiloni, Fabio  
Ursino, Mauro

Univ. of Bologna  
Univ. of Rome  
Univ. of Rome  
Univ. of Bologna

09:15-09:30

***Behaviorally Modulated Filter Model for the Thalamic Reticular Nucleus***, pp. 595-598

Scaglione, Alessandro  
Moxon, Karen

Drexel Univ.  
Drexel Univ.

09:30-09:45

***Efficient Model-Based Design of Neurophysiological Experiments***, pp. 599-602

Lewi, Jeremy  
Butera, Robert  
Paninski, Liam

Georgia Inst. of Tech.  
Georgia Inst. of Tech.  
Columbia Univ.

09:45-10:00

***A New 3D Finite Element Model of Extracellular Action Potentials Recording with a Microelectrode in a Tissue Slice***, pp. 603-606

Moulin, Céline  
Gličre, Alain

CEA (Commissariat à l'énergie atomique)  
Commissariat à l'Énergie Atomique

10:00-10:15

***Significance of Pacemaker vs. Non-Pacemaker Neurons in an Excitatory Rhythmic Network***, pp. 607-608

Purvis, Liston  
Wright, Terrence Michael  
Smith, Jeffrey  
Butera, Robert

Georgia Inst. of Tech.  
Emory Univ.  
NINDS/NIH  
Georgia Inst. of Tech.

10:15-10:30

***Synaptic Amplification in Motoneurons: Computational and Mechanistic Implications***, pp. 609-611

Shapiro, Nicholas  
Lee, Robert

Georgia Inst. of Tech.  
Emory Univ.

**ThA09**

Gramercy-Olmstead

**Cardiac Mechanics (Oral Session)**

09:00-09:15

***Reproducing Nonlinear Force Velocity Relation of Myocardial Tissue by a Nonlinear Parallel Elastic Component***, pp. 612-615

Nobuaki, Yutaka  
Kamei, Yu  
Lu, Jianyin  
Shimayoshi, Takao  
Ishikawa, Satoshi  
Amano, Akira  
Kotera, Hidetoshi  
Matsuda, Tetsuya

Kyoto Univ.  
Kyoto Univ.  
Kyoto Univ.  
ASTEM Res. Inst. of Kyoto  
Mechanical Design & Analysis co  
Kyoto Univ.  
Kyoto Univ.  
Kyoto Univ.

09:15-09:30

***Estimation of Elastic and Viscous Properties of the Left Ventricle Based on Annulus Plane***

***Harmonic Behavior***, pp. 616-619

Kheradvar, Arash  
Milano, Michele  
Gorman, Robert  
gorman, III, Joseph H  
Gharib, Morteza

California Inst. of Tech.  
California Inst. of Tech.  
Univ. of Pennsylvania School of Medicine  
Univ. of Pennsylvania School of Medicine  
California Inst. of Tech.

09:30-09:45

***Continuous Left Ventricular Ejection Fraction Monitoring by Central Aortic Pressure***

***Waveform Analysis***, pp. 620-623

Mukkamala, Ramakrishna  
Kuiper, Jacob  
Sala-Mercado, Javier  
Hammond, Robert  
Kim, Jong-Kyung  
W, Stephenson, Larry  
O'Leary, Donal

Michigan State Univ.  
Michigan State Univ.  
Wayne State Univ. School of Medicine  
Wayne State Univ. School of Medicine  
Wayne State Univ. School of Medicine  
Wayne State Univ.  
Wayne State Univ. School of Medicine

09:45-10:00

***Stress Distribution in a Rotationally Symmetric and a Measurement Based Left Ventricular***

***Shape Model***, pp. 624-627

Takada, Yasuhiro  
Amano, Akira  
Lu, Jianyin  
Shimayoshi, Takao  
Ishikawa, Satoshi  
Matsuda, Tetsuya  
Kotera, Hidetoshi

Graduate School of Informatics, Kyoto Univ.  
Kyoto Univ.  
Kyoto Univ.  
ASTEM Res. Inst. of Kyoto  
Mechanical Design & Analysis co  
Kyoto Univ.  
Kyoto Univ.

10:00-10:15

***Model-Based Screening of Wall Motion Measures for Detection of Ischemia in Three-Dimensional***

***Cardiac Images***, pp. 628-631

Herz, Susan  
Ingrassia, Christopher  
Costa, Kevin  
Holmes, Jeffrey

Columbia Univ.  
Columbia Univ.  
Columbia Univ.  
Columbia Univ.

10:15-10:30

***Imaging the Mechanics and Electromechanics of the Heart\****

Konofagou, Elisa

Columbia Univ.

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**ThA11**

Belasco

**Cellular and Molecular Engineering (Oral Session)**

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09:00-09:15

***Microenvironments That Promote Microvascular Function\****

Tien, Joe

Boston Univ.

09:15-09:30

***Lateral Diffusion and Self-Interactions of the Outer Hair Cell Protein Prestin\****

Raphael, Robert

Rice Univ.

09:30-09:45

***Multiple Automated Minibioreactor System for Multifunctional Screening in Biotechnology***, pp. 632-635

Fontova, Andreu	Tech. Univ. of Catalonia
Soley, Albert	Autonomous Univ. of Barcelona (UAB)
Galvez, Jordi	Autonomous Univ. of Barcelona (UAB)
Sarro, Enric	Autonomous Univ. of Barcelona (UAB)
Lecina, Marti	Autonomous Univ. of Barcelona (UAB)
Rosell, Javier	Tech. Univ. of Catalonia
Riu, Pere J	Tech. Univ. of Catalonia (UPC)
Cairo, Jordi Joan	Autonomous Univ. of Barcelona (UAB)
Godia, Francesc	Autonomous Univ. of Barcelona
Bragos, Ramon	Tech. Univ. of Catalonia (UPC)

09:45-10:00

***High Cell Density Three-Dimensional Neural Co-Cultures Require Continuous Medium***

***Perfusion for Survival***, pp. 636-639

Cullen, Kacy	Georgia Inst. of Tech.
Vukasinovic, Jelena	Georgia Inst. of Tech.
Glezer, Ari	Georgia Inst. of Tech.
LaPlaca, Michelle	Georgia Inst. of Tech.

10:00-10:15

***The Use of an 'Effective Potential' to Describe the Directed Motion of a Two-State***

***Molecular Motor***, pp. 640-643

Han, Yingrong	Hebei Univ. of Tech.
ZHAN, Yong	Hebei Univ. of Tech.
Zhao, Tongjun	Hebei University of Tech.
AN, Hailong	Hebei Univ. of Tech.
Zhang, Suhua	Hebei University of Tech.
Liu, Hui	Hebei University of Tech.
Zhang, Yuhong	Hebei University of Tech.
Zheng, Yan	Hebei Univ. of Tech.
Zhuo, Yizhong	China Inst. of Atomic Energy

**ThA12**

Palace Wintergarden

**Neural Microsystems and Instrumentation (Oral Session)**

09:00-09:15

***Development of a Multichannel System for Intrinsic Cardiac Neural Recording\****

Dubeau, Simon	Univ. of Montreal
Vinet, Alain	Univ. de Montréal
Richer, Louis-Philippe	Univ. of Montreal
Guardo, Robert	Ec. Pol. de Montréal
Armour, John Andrew	Centre de recherche Hôpital Sacré-Coeur de Montréal

09:15-09:30

***Transcutaneous Battery Recharging by Volume Conduction and Its Circuit Modeling***, pp. 644-647

Tang, Zhide	Chongqing Univ.
Sclabassi, Robert	Univ. of Pittsburgh
Hackworth, Steven A.	Univ. of Pittsburgh
Zhao, Jun	Univ. of Pittsburgh
Sun, Caixin	Chongqing Univ.
Sun, Mingui	Univ. of Pittsburgh



09:30-09:45

***Light-Addressable Planar Electrode with Hydrogenated Amorphous Silicon and Low-Conductive Passivation Layer for Stimulation of Cultured Neurons***, pp. 648-651

Suzurikawa, Jun	The Univ. of Tokyo
Takahashi, Hirokazu	Univ. of Tokyo
Takayama, Yuzo	The Univ. of Tokyo
Warisawa, Shin'ichi	The Univ. of Tokyo
Mitsuishi, Mamoru	The Univ. of Tokyo
Nakao, Masayuki	Univ. of Tokyo
Jimbo, Yasuhiko	The Univ. of Tokyo

09:45-10:00

***A Switched-Capacitor Neural Preamplifier with an Adjustable Pass-Band for Fast Recovery Following Stimulation***, pp. 652-655

Gusmeroli, Riccardo	DEI, Pol. di Milano - IU.NET
Bonfanti, Andrea	DEI, Pol. di Milano - IU.NET
Borghi, Tommaso	DEI, Pol. di Milano - IU.NET
S. Spinelli, Alessandro	DEI, Pol. di Milano - IU.NET
Baranauskas, Gytis	Pol. di Milano

10:00-10:15

***An Adaptive Multiple-Input Multiple-Output Analog-To-Digital Converter for High Density Neuroprosthetic Electrode Arrays***, pp. 656-659

Chakrabartty, Shantanu	Michigan State Univ.
Gore, Amit	Michigan State Univ.
Oweiss, Karim	Michigan State Univ.

10:15-10:30

***Preliminary Study of Multichannel Flexible Neural Probes Coated with Hybrid Biodegradable Polymer***, pp. 660-663

Kato, Yasuhiro	The Univ. of Tokyo
Saito, Itsuro	The Univ. of Tokyo
Hoshino, Takayuki	The Univ. of Tokyo
Suzuki, Takafumi	The Univ. of Tokyo
Mabuchi, Kunihiko	The Univ. of Tokyo

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**ThA13**

Brecht

**Special Session: Neural Imaging and Sensing II (Oral Session)**

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09:00-09:15

***Imaging Odor Coding and Synaptic Plasticity in the Mammalian Brain with a Genetically-Encoded Probe***, pp. 664-667

McGann, John	Boston Univ.
Pérez, Nicolás	Boston Univ.
Wachowiak, Matt	Boston Univ.

09:15-09:30

***Combining Optical Imaging and Computational Modeling to Analyze Structure and Function of Living Neurons***, pp. 668-670

Losavio, Brad	Baylor Coll. of Medicine
Reddy, Duemani	Rice Univ.
Colbert, Costa	Univ. of Houston
Kakadiaris, Ioannis	Univ. of Houston
Saggau, Peter	Baylor Coll. of Medicine

09:30-09:45

**Directed Transfer Function Analysis of Fmri Data to Investigate Network Dynamics**, pp. 671-674

Deshpande, Gopikrishna  
LaConte, Stephen  
Peltier, Scott James  
Hu, Xiaoping

Georgia Inst. of Tech. and Emory Univ.  
Georgia Inst. of Tech. and Emory Univ.  
Georgia Inst. of Tech. and Emory Univ.  
Georgia Inst. of Tech. and Emory Univ.

**ThA14**

Chelsea-Gotham

**Therapeutic Devices 1 (Oral Session)**

09:00-09:15

**Sequential Activation of Multiple Grounding Pads Reduces Skin Heating**, pp. 675-678

Haemmerich, Dieter  
Schutt, David J.

Medical Univ. of South Carolina  
Medical Univ. of South Carolina

09:15-09:30

**A Lorentz-Force Actuated Autoloading Needle-Free Injector**, pp. 679-682

Hemond, Brian  
Wendell, Dawn  
Hogan, N. Catherine  
Taberner, Andrew  
Hunter, Ian

Massachusetts Inst. of Tech.  
Massachusetts Inst. of Tech.  
Massachusetts Inst. of Tech.  
Massachusetts Inst. of Tech.  
Massachusetts Inst. of Tech.

09:30-09:45

**Non-Invasive Transcranial Ultrasound Therapy Guided by CT-Scans**, pp. 683-687

Marquet, Fabrice  
Pernot, Mathieu  
Montaldo, Gabriel  
Aubry, Jean-François  
Tanter, Mickaël  
Fink, Mathias

CNRS UMR7587  
CNRS  
CNRS  
CNRS  
CNRS  
CNRS

09:45-10:00

**In-Vivo Non-Invasive Motion Tracking and Correction in High Intensity Focused Ultrasound Therapy**, pp. 688-691

Marquet, Fabrice  
Pernot, Mathieu  
Montaldo, Gabriel  
Aubry, Jean-François  
Tanter, Mickaël  
Fink, Mathias

CNRS UMR7587  
CNRS  
CNRS  
CNRS  
CNRS  
CNRS

10:00-10:15

**New Computer-Based Cognitive Function Test for the Elderly**, pp. 692-694

Tamura, Toshiyo

Chiba Univ. School of Engineering

10:15-10:30

**Feasibility Study of TheraDrive: A Low-Cost, Game-Based Environment for the Delivering of Upper Arm Stroke Therapy**, pp. 695-698

Johnson, Michelle J.  
Ramachandran, Brinda  
Paranjape, Ruta P.  
Kosasih, Judith B.

Medical Coll. of Wisconsin/Marquette Univ.  
Marquette Univ.  
Marquette Univ.  
Medical Coll. of Wisconsin

**ThA15**

O'Neill

**Cardiac Imaging I (Oral Session)**

09:00-09:15

**Visualization of Propagation of Pulse Vibration Along the Heart Wall and Imaging of Its Propagation Speed**, pp. 699-702

Kanai, Hiroshi

Tohoku Univ. Graduate School of Engineering

09:15-09:30

***Improved Signal-To-Noise Ratio in Parallel Coronary Artery Magnetic Resonance Angiography Using Graph Cuts Based Bayesian Reconstruction***, pp. 703-706

Singh, Gurmeet	Cornell Univ.
Nguyen, Thanh	Weill Medical Coll. of Cornell Univ.
Kressler, Bryan	Cornell Univ.
Spincemaille, Pascal	Weill Medical Coll. of Cornell Univ.
Raj, Ashish	UCSF
Zabih, Ramin	cornell Univ.
Wang, Yi	cornell Univ.

09:30-09:45

***Tracking Endocardium Using Optical Flow Along Iso-Value Curve***, pp. 707-710

Duan, Qi	Columbia Univ.
Angelini, Elsa	Ec. Nationale Superieure des Telecommunications
Homma, Shunichi	Columbia Univ.
Laine, Andrew	Columbia Univ.

09:45-10:00

***Extraction and Tracking of MRI Tagging Sheets Using a 3D Gabor Filter Bank***, pp. 711-714

Qian, Zhen	Rutgers Univ. New Brunswick
Metaxas, Dimitris	Rutgers Univ. New Brunswick
Axel, Leon	NYU Medical Center

10:00-10:15

***Real-Time Measurement System for the Evaluation of the Intima Media Thickness with a New Edge Detector***, pp. 715-718

Faita, Francesco	Italian National Res. Council
Gemignani, Vincenzo	Italian National Res. Council
Bianchini, Elisabetta	Univ. of Pisa
Giannarelli, Chiara	Univ. of Pisa
Demi, Marcello	Italian National Res. Council

10:15-10:30

***Semi-Automated Analysis of Coronary Flow Doppler Images:***

***Validation with Manual Tracings***, pp. 719-722

Magagnin, Valentina	Pol. of Milan
Caiani, Enrico	Pol. of Milan
Delfino, Luigi	Istituto ortopedico Galeazzi-Univ. degli studi di Milano
Champlon, Christine	Pol. of Milan
Cerutti, Sergio	Pol. Univ. of Milan
Turiel, Maurizio	Istituto ortopedico Galeazzi-Univ. degli studi di Milano

**ThB01**

Marquis AB

**Principal Component Analysis, Independent Components Analysis II (Oral Session)**

10:45-11:00

***A Combined SPM-ICA Approach to Fmri***, pp. 723-726

Penney, Todd John Michael	Univ. of Alberta
Koles, Zoltan	Univ. of Alberta

11:00-11:15

***Functional Classification of Schizophrenia Using Feed Forward Neural Networks\****

Jafri, Madiha	Hartford Hospital
Calhoun, Vince	Olin Neuropsychiatry Res. Center, Yale Univ.

11:15-11:30

***Observing Frequency Content Time Evolution of Independent Hippocampal Signals***, pp. 727-730

Tanskanen, Jarno Mika Antero	Tampere Univ. of Tech.
Mikkonen, Jarno Eelis	Univ. of Jyväskylä
Hyttinen, Jari	Tampere Univ. of Tech.
Penttonen, Markku	Univ. of Kuopio

11:30-11:45

*Latency Characteristics of the Auditory N1 Component Using an Iterative Independent Component Analysis Procedure\**

Zouridakis, George  
Diaz, Javier

Univ. of Houston  
Univ. Houston

11:45-12:00

***Blind Source Separation of Neural Recordings and Control Signals***, pp. 731-734

Tesfayesus, Wondimeneh  
Durand, Dominique

Case Western Res. Univ.  
Case Western Res. Univ.

12:00-12:15

***Recovery of Multiple Fibers Per Voxel by ICA in DTI Tractography***, pp. 735-738

Singh, Manbir  
Wong, Chi Wah

Univ. of Southern California  
Univ. of Southern California

**ThB02**

Marquis C

**MRI: Novel Methods** (Oral Session)

10:45-11:00

***Motion Artifact Suppression in Breath Hold 3D Contrast Enhanced Magnetic Resonance Angiography Using ECG Ordering***, pp. 739-742

Spincemaille, Pascal  
Xi Hai, Zhao  
Cheng, Liuquan  
Prince, Martin  
Wang, Yi

Weill Medical Coll. of Cornell Univ.  
Chinese PLA General Hospital  
Chinese PLA General Hospital  
Weill Medical Coll. of Cornell Univ.  
cornell Univ.

11:00-11:15

***High-Precision Absolute Positioning of Medical Instruments in MRI Systems***, pp. 743-746

Aboussouan, Eric  
Martel, Sylvain

Ec. Pol. de Montreal  
Ec. Pol. de Montreal

11:15-11:30

***Partially-Parallel, Susceptibility-Weighted MR Imaging of Brain Vasculature at 7 Tesla Using Sensitivity Encoding and an Autocalibrating Parallel Technique***, pp. 747-750

Lupo, Janine  
Banerjee, Suchandrima  
Kelley, Douglas  
Xu, Duan  
Vigneron, Daniel  
Majumdar, Sharmila  
Nelson, Sarah

Univ. of California, San Francisco  
Univ. of California, San Francisco-Univ. Berkeley  
GE Healthcare  
Univ. of California, San Francisco  
Univ. of California, San Francisco  
Univ. of California, San Francisco  
Univ. of California, San Francisco

11:30-11:45

***Auto-Calibrated Dynamic Parallel MRI with Phase-Sensitive Data***, pp. 751-754

Son, Jong Bum  
Ji, Jim Xiuquan

Texas A&M Univ.  
Texas A&M Univ.

11:45-12:00

***On the Complimentarity of SENSE and GRAPPA in Parallel MR Imaging***, pp. 755-758

Hoge, W Scott  
Brooks, Dana

Brigham and Women's Hospital and Harvard Medical School  
Northeastern Univ.

12:00-12:15

***Nosologic Maps of Brain Tumor Images Obtained from Combination of Different MRI Modalities***, pp. 759-762

Martin-Landrove, Miguel

Univ. Central de Venezuela

**ThB03**

SoHo-Herald

**Non Linear Dynamics in Biological Signals I (Oral Session)**

10:45-11:00

***A Computationally Simple and Robust Method to Detect Determinism in a Time Series***, pp. 763-766

Lu, Sheng

State Univ. of New York at Stony Brook

Ju, Kihwan

State Univ. of New York at Stony Brook

Kanters, Jorgen  
chon, kiUniv. of Copenhagen, and Copenhagen Heart Arrhythmia Res. Center  
State Univ. of New York at Stony Brook

11:00-11:15

***Approximated Mutual Information Training for Speech Recognition Using Myoelectric Signals***, pp. 767-770

Guo, Huajian

Carleton Univ.

Chan, Adrian

Carleton Univ.

11:15-11:30

***Very Low Frequency Modulation in Renal Autoregulation***, pp. 771-774

Siu, Kin Lung

SUNY at Stony Brook

Sung, Biin

SUNY at Stony Brook

Moore, Leon C.

SUNY at Stony Brook

Birzgalis, Aija  
chon, kiSUNY at Stony Brook  
State Univ. of New York at Stony Brook**ThB04**

Ziegfeld

**Functional Musculoskeletal Tissue Engineering - Soft Tissue Engineering (Oral Session)**

10:45-11:00

***Fibroblastic Differentiation of Human Mesenchymal Stem Cells Using Connective Tissue Growth Factor***, pp. 775-778

Lee, Chang Hun

Columbia Univ.

Moioli, Eduardo

Columbia Univ.

Mao, Jeremy

Columbia Univ.

11:00-11:15

***The Effect of Applied Compressive Loading on Tissue-Engineered Cartilage Constructs Cultured with TGF- $\beta$  3***, pp. 779-782

Lima, Eric G

Columbia Univ.

Bain, Liming

Columbia Univ.

Mauck, Robert

Univ. of Pennsylvania

Byers, Benjamin A.

NIAMS, NIH

Tuan, Rocky S.

National Inst. of Arthritis, Musculoskeletal &amp; Skin Diseases Nat

Ateshian, Gerard

Columbia Univ.

Hung, Clark

Columbia Univ.

11:15-11:30

***Role of Cell-Cell Interactions on the Regeneration of Soft Tissue to Bone Interface***, pp. 783-786

Lu, Helen

Columbia Univ.

Wang, I-Ning

Columbia Univ.

11:30-11:45

***Engineering of Fiber-Reinforced Tissues with Anisotropic Biodegradable Nanofibrous Scaffolds***, pp. 787-790

Nerurkar, Nandan

Univ. of Pennsylvania

Baker, Brendon

Univ. of Pennsylvania

Chen, Chiu-Yu

Univ. of Pennsylvania

Elliott, Dawn

Univ. of Pennsylvania

Mauck, Robert

Univ. of Pennsylvania

11:45-12:00

**Enhanced Cell Growth and Differentiation on Zebrafish Fertilized Egg Chorions As Extracellular Matrix of Embryonic Carcinoma (EC) Stem Cells\***

Chae, Su Kyoung  
Kang, Ji Yoon  
Lee, Sang Ho  
Ryu, Sung-Shin  
Hwang, Chang Nam  
Lee, Chang Ha  
Lee, Jin Woo  
Kim, Tae Song

Microsystem Res. Center, Korea Inst. of Science and Tech.  
Microsystem Res. Center, Korea Inst. of Science and Tech.  
Korea Univ.  
Microsystem Res. Center, Korea Inst. of Science and Tech.  
School of Life Sciences and Biotechnology, Korea Univ.  
Microsystem Res. Center, Korea Inst. of Science and Tech.  
Microsystem Res. Center, Korea Inst. of Science and Tech.  
Microsystem Res. Center, Korea Inst. of Science and Tech.

12:00-12:15

**Synthesis and Characterization of Novel Injectable, Biodegradable and in Situ Crosslinkable Poly(hexa Methylene carbonate-Fumarate), Poly (hexamethylene Carbonate-Acrylate) and Poly(ethylene Glycol Fumarate-Co Hexamethylene Carbonate-Fumarate) Scaffolds** *For*, pp. 791-794

Sharifi, Shahriar  
Mirzadeh, Hamid  
Imani, Mohammad  
Atai, Mohammad  
Ziaee, Farshid  
Bakhshi, Raheleh

Amirkabir Univ. of Tech.  
Iran Pol. and Petrochemical Inst.  
Iran Pol. and Petrochemical Inst.  
Iran Pol. and Petrochemical Inst.  
Iran Pol. and Petrochemical Inst.  
Iran Pol. and Petrochemical Inst.

**ThB05**

Duffy-Columbia

**Fiber Optic and Photonic Sensors (Oral Session)**

10:45-11:00

**Peptide-Nanoparticle Hybrid SERS Probe for Dynamic Detection of Active Cancer Biomarker Enzymes**, pp. 795-798

Liu, Gang

Univ. of California at Berkeley

11:00-11:15

**Noninvasive Measurement of Total Hemoglobin and Hemoglobin Derivatives Using Multiwavelength Pulse Spectrophotometry -In Vitro Study with a Mock Circulatory System**, pp. 799-802

Suzaki, Hironori  
Kobayashi, Naoki  
Nagaoka, Takashi  
Iwasaki, Kiyotaka  
Umezumi, Mitsuo  
Takeda, Sunao  
Togawa, Tatsuo

Waseda Univ.  
Nihon Kohden Corp.  
Shizuoka Cancer Center Res. Inst.  
Waseda Univ.  
Waseda Univ. Graduate School  
Nihon Kohden Corp.  
Waseda Univ.

11:15-11:30

**An Optical Fiber Photoplethysmographic System for Central Nervous System Tissue**, pp. 803-806

Phillips, Justin  
Kyriacou, Panayiotis  
George, Kuriakose Joshi  
Priestley, John  
Langford, Richard

St Bartholomew's Hospital  
City Univ.  
Queen Mary, Univ. of London  
Queen Mary, Univ. of London  
St Bartholomew's Hospital

11:30-11:45

**Optical Dialysis Adequacy Sensor: Contribution of Chromophores to the Ultra Violet Absorbance in the Spent Dialysate**, pp. 807-810

Lauri, Kai  
Tanner, Risto  
Luman, Merike  
Jerotškaja, Jana  
Fridolin, Ivo

Tallinn Univ. of Tech.  
National Inst. of Chemical Physics and Biophysics  
North-Estonian Regional Hospital  
Tallinn Univ. of Tech.  
Centre of Biomedical Engineering

11:45-12:00

***Fiber-Optic Immuno-Biosensor for Rapid and Accurate Detection of Nerve Growth Factor in Human Blood***, pp. 811-814

Tang, Liang  
Cha, Yong-Mei  
Li, Hongmei  
Chen, Peng-sheng  
Lin, Shien-Fong

Cedars-Sinai Medical Center  
Mayo Clinic Coll. of Medicine  
Cedars-Sinai Medical Center  
Cedars-Sinai Medical Center  
Cedars-Sinai Medical Center

12:00-12:15

***Pulse Oximeter Improvement with an ADC-DAC Feedback Loop and a Radial Reflectance Sensor***, pp. 815-818

Thompson, David  
Wareing, Austin  
Day, Dwight  
Warren, Steve

Kansas State Univ.  
Kansas State Univ.  
Kansas State Univ.  
Kansas State Univ.

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**ThB06**

Empire Hudson

**Surgical Robotics III (Oral Session)**

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10:45-11:00

***Development of a Surgical Simulator for Laparoscopic Esophageal Procedures***, pp. 819-822

Choi, Changmok  
Han, Hyonyung  
An, Bummo  
Kim, Jung

Korea Advanced Inst. of Science and Tech.  
Korea Advanced Inst. of Science and Tech.  
Korea Advanced Inst. of Science and Tech.  
Korea Advanced Inst. of Science and Tech.

11:00-11:15

***Model Based Control Algorithms for Robotic Assisted Beating Heart Surgery***, pp. 823-828

Bebek, Ozkan  
Cavusoglu, M. Cenk

Case Western Res. Univ.  
Case Western Res. Univ.

11:15-11:30

***Analysis of the Surgery Task for the Force Feedback Amplification in the Minimally Invasive Surgical System***, pp. 829-832

Pitakwatchara, Phongsan  
Warisawa, Shin'ichi  
Mitsuishi, Mamoru

The Univ. of Tokyo  
The Univ. of Tokyo  
The Univ. of Tokyo

11:30-11:45

***Haptic Rendering & Perception Studies for Laparoscopic Surgery Simulation***, pp. 833-836

McColl, Ryan  
Brown, Ian  
Seligman, Cory  
Lim, Fabian  
Alsaraira, Amer

Monash Univ.  
Monash Univ.  
Monash Univ.  
Monash Univ.  
Monash Univ.

11:45-12:00

***Multi-Sensory Force/deformation Cues for Stiffness Characterization in Soft-Tissue Palpation***, pp. 837-840

Tavakoli, Mahdi  
Aziminejad, Arash  
Patel, Rajni  
Moallem, Mehrdad

CSTAR, London Health Sciences Centre  
CSTAR, London Health Sciences Centre  
CSTAR, London Health Sciences Centre  
CSTAR, London Health Sciences Centre

<b>ThB07</b>	Cantor-Jolson
<b>Functional Cardiac Tissue Engineering (Oral Session)</b>	
10:45-11:00	
<b><i>Cardiac Arrhythmogenesis and Temperature</i></b> , pp. 841-844	
Shah, Ujas	Stony Brook Univ.
Bien, Harold	Stony Brook Univ.
Entcheva, Emilia	Stony Brook Univ.
11:00-11:15	
<b><i>Controllable Bio-Microactuator Powered by Muscle Cells*</i></b>	
Akiyama, Yoshitake	Tokyo Univ. of Agriculture and Tech.
11:15-11:30	
<b><i>Characterization of Electrical Stimulation Electrodes for Cardiac Tissue Engineering</i></b> , pp. 845-848	
Tandon, Nina	Columbia Univ.
Vunjak-Novakovic, Gordana	Columbia Univ.
11:30-11:45	
<b><i>Engineered Cardiac Tissues for in Vitro Assessment of Contractile Function and Repair Mechanisms</i></b> , pp. 849-852	
Kim, Do Eun	Columbia Univ.
Lee, Eun Jung	Columbia Univ.
Martens, Timothy	Columbia Univ.
Kara, Rina	Columbia Univ.
Chaudhry, Hina	Columbia Univ.
Itescu, Silviu	Columbia Univ.
Costa, Kevin	Columbia Univ.
11:45-12:00	
<b><i>Biomechanics of Engineered Heart Valve Tissues</i></b> , pp. 853-854	
Sacks, Michael	Univ. of Pittsburgh
<b>ThB08</b>	Juilliard
<b>Special Session: Neural Imaging and Sensing I (Oral Session)</b>	
10:45-11:00	
<b><i>Quantum Dot-FRET Systems for Imaging of Neuronal Action Potentials</i></b> , pp. 855-858	
Nadeau, Jay Louise	McGill Univ.
Clarke, Samuel	McGill Univ.
Hollmann, Annette	McGill Univ.
Bahcheli, Daniel	McGill Univ.
11:00-11:15	
<b><i>A New Multimodal Imaging Strategy for Integrating Fmri with EEG</i></b> , pp. 859-862	
Liu, Zhongming	Univ. of Minnesota
He, Bin	Univ. of Minnesota
<b>ThB09</b>	Gramercy-Olmstead
<b>Coronary Blood Flow (Oral Session)</b>	
10:45-11:00	
<b><i>Ultrasonic Doppler Vibrometry: Measurement of Left Ventricular Wall Vibrations Associated with Coronary Artery Disease</i></b> , pp. 863-866	
Sikdar, Siddhartha	Univ. of Washington
Beach, Kirk	Univ. of Washington
Goldberg, Steven	Univ. of Washington
Lidstrom, Matthew	Univ. of Washington
Kim, Yongmin	Univ. of Washington



11:00-11:15

**Arterial Pulse Wave Velocity in Coronary Arteries**, pp. 867-870

Aguado-Sierra, Jazmin  
Parker, Kim H.  
Davies, Justin E.  
Francis, Darrel  
Hughes, Alun D.  
Mayet, Jamil

Imperial Coll. London  
Imperial Coll. London  
ICCH, St. Mary's Hospital, Imperial Coll. London  
ICCH, St. Mary's Hospital, Imperial Coll. London  
ICCH, St. Mary's Hospital, Imperial Coll. London  
ICCH, St. Mary's Hospital, Imperial Coll. London

11:15-11:30

**Two-Dimensional Computational Fluid Dynamic Analysis of Wall Shear Stress**

**Distribution in Left Coronary Artery**, pp. 871-874

Smith, Sahid  
Wesson, G. Dale  
Austin, Shawn  
Moore, Carl

Florida Agricultural and Mechanical Univ.  
Florida Agricultural and Mechanical Univ.  
Florida Agricultural and Mechanical Univ.  
Florida Agricultural and Mechanical Univ.

11:30-11:45

**Numerical Investigation of Blood Flow in a Sequential Aorto-Coronary Bypass Graft Model**, pp. 875-878

Sankaranarayanan, Meena  
Ghista, Dhanjoo  
Chua, Leok Poh  
Tan, Yong Seng

Inst. for Infocomm Res.  
Nanyang Tech. Univ.  
Nanyang Tech. Univ.  
National Heart Center

11:45-12:00

**Non-Invasive Measurement of Coronary Flow Reserve in Mice by Doppler Ultrasound\***

Hartley, Craig J.  
Reddy, Anilkumar K.  
Michael, Lloyd H.  
Entman, Mark L.  
Madala, Sridhar  
Taffet, George E.

Baylor Coll. of Medicine  
Baylor Coll. of Medicine  
Baylor Coll. of Medicine  
Baylor Coll. of Medicine  
Indus Inst.  
Baylor Coll. of Medicine

**ThB11**

Belasco

**Student Paper Competition I (Special Session)**

10:45-11:00

**Non-Invasive Diagnosing Malignant Melanoma by Multi-Spectral Optical Nevoscope\***

Wang, Song  
Dhawan, Atam

New Jersey Inst. of Tech.  
New Jersey Inst. of Tech.

11:00-11:15

**Psychophysics of Prosthetic Vision: I. Visual Scanning and Visual Acuity\***

Chen, Spencer Chin-Yu  
Hallum, Luke E.  
Suanning, Gregg  
Lovell, Nigel H

Univ. of New South Wales  
Univ. of New South Wales  
The Univ. of Newcastle  
Univ. of New South Wales

11:30-11:45

**Wavelet Compression of Multichannel ECG Data by Enhanced Set Partitioning in Hierarchical Trees Algorithm\***

SharifAhmadian, Ershad

Shahed Univ.

11:45-12:00

**Semi-Automated Analysis of Coronary Flow Doppler Images: Validation with Manual Tracings\***

Magagnin, Valentina  
Caiani, Enrico  
Delfino, Luigi  
Champlon, Christine  
Cerutti, Sergio  
Turiel, Maurizio

Pol. of Milan  
Pol. of Milan  
Istituto ortopedico Galeazzi-Univ. degli studi di Milano  
Pol. of Milan  
Pol. Univ. of Milan  
Istituto ortopedico Galeazzi-Univ. degli studi di Milano

12:00-12:15

*LF/(LF+HF) Index in Ventricular Repolarization Variability Related and Unrelated to Heart Rate Variability\**

Altuve, Miguel  
Sara Wong, Castañeda  
Passariello, Gianfranco  
Carrault, Guy  
Hernandez, Alfredo

Simon Bolivar Univ.  
Univ. Simon Bolivar  
Univ. Simón Bolívar  
Univ. de Rennes 1  
LTSI. INSERM U642

**ThB12**

Palace Wintergarden

**Characterization of Electrode-Electrode Interfaces for Neural Stimulation I (Oral Session)**

10:45-11:00

*Modeling the Electrode-Electrolyte Interface for Recording and Stimulating Electrodes*, pp. 879-881

Troy, John  
Cantrell, Donald Robinson  
Taflove, Allen  
Ruoff, Rodney S.

Northwestern Univ.  
Northwestern Univ.  
Northwestern Univ.  
Northwestern Univ.

11:00-11:15

*In Vivo and in Vitro Differences in the Charge-Injection and Electrochemical Properties of Iridium*

*Oxide Electrodes*, pp. 882-885

Cogan, Stuart F.

EIC Lab. Inc.

11:15-11:30

*In Vitro and in Vivo Charge Capacity of AIROF Microelectrodes*, pp. 886-889

Hu, Zhe  
Troyk, Philip  
Brawn, Tim  
Margoliash, Dan  
Cogan, Stuart

Illinois Inst. of Tech.  
Illinois Inst. of Tech.  
The Univ. of Chicago  
The Univ. of Chicago  
EIC Lab. Inc.

11:30-11:45

*Charge Injection Capacity of TiN Electrodes for an Extended Voltage Range*, pp. 890-892

Patan, Mustafa  
Shah, Tosha  
Sahin, Mesut

New Jersey Inst. of Tech.  
New Jersey Inst. of Tech.  
New Jersey Inst. of Tech.

11:45-12:00

*Optimizing Deep Brain Stimulation Parameter Selection with Detailed Models of the Electrode-Tissue Interface*, pp. 893-895

McIntyre, Cameron  
Butson, Christopher  
Maks, Christopher  
Noecker, Angela

Cleveland Clinic Foundation  
Cleveland Clinic Foundation  
Cleveland Clinic Foundation  
Cleveland Clinic Foundation

12:00-12:15

*Effects of Nano Red Elemental Selenium on Sodium Currents in Rat Dorsal Root*

*Ganglion Neurons*, pp. 896-899

Yuan, Huijun  
lin, jjarui  
Lan, Tong-han

Huazhong Univ. of Sci and Tech.  
Huazhong Univ. of Sci &Tech.  
Huazhong Univ. of Science and Tech.

**ThB14**

Chelsea-Gotham

**Wireless Sensors and Telemetry Systems 1 (Oral Session)**

10:45-11:00

***A Non Invasive Wearable Sensor for the Measurement of Brain Temperature***, pp. 900-902

DITTMAR, Andre	INSA Lyon
GEHIN, Claudine	INSA Lyon
DELHOMME, Georges	INSA Lyon
Boivin, Diane	McGill Univ.
Dumont, Guy	Univ. of British Columbia
Mott, Christopher	The Univ. of British Columbia

11:00-11:15

***Acquiring High-Rate Neural Spike Data with Hardware-Constrained Embedded Sensors***, pp. 903-907

Farshchi, Shahin	Univ. of California, Los Angeles
Pesterev, Aleksey	Univ. of California, Los Angeles
Ho, Wan-Lun	Univ. of Southern California
Judy, Jack	UCLA

11:15-11:30

***Wearable, Cuff-Less PPG-Based Blood Pressure Monitor with Novel Height Sensor***, pp. 908-911

Shaltis, Phillip	MIT
Reisner, Andrew	Massachusetts General Hospital
Asada, Harry	MIT

11:30-11:45

***A Wearable Reflectance Pulse Oximeter for Remote Physiological Monitoring***, pp. 912-915

Mendelson, Yitzhak	Worcester Pol. Inst.
Comtois, Gary	WPI
Duckworth, R James	WPI

11:45-12:00

***An Application of Capacitive Electrode for Detecting Electrocardiogram of Neonates and Infants***, pp. 916-919

Kato, Tsuyoshi	Tokyo Denki Univ.
Ueno, Akinori	Tokyo Denki Univ.
Kataoka, Sachiyo	Apprica Childcare Inst.
Hoshino, Hiroshi	Tokyo Denki Univ.
Ishiyama, Yoji	Kyorin Univ.

12:00-12:15

***Non-Invasive Respiration Rate Estimation Using Ultra-Wideband Distributed Cognitive Radar System***, pp. 920-923

Chen, Yifan	Nanyang Tech. Univ.
Gunawan, Erry	Nanyang Tech. Univ.
Low, Kay soon	Nanyang Tech. Univ.
Kim, Yongmin	Univ. of Washington
Soh, Cheong Boon	Nanyang Tech. Univ.
Leyman, Rahim	A*STAR
Lin, Lin Thi	Nanyang Tech. Univ.

**ThB15**

O'Neill

**Cardiac Imaging II (Oral Session)**

10:45-11:00

***Temporal Tracking of Coronaries in MSCTA by Means of 3D Geometrical Moments***, pp. 924-927

Laguitton, Soizic	Univ. of Rennes 1
Boldak, Cezary	Inst. of Bialystok
Bousse, Alexandre	LTSI-INSERM U642
Yang, Guanyu	Southeast Univ.
Toumoulin, Christine	Univ. de Rennes I

11:00-11:15

***Endo and Epicardium Contour Modeling Based on Markov Random Fields and Active Contours***, pp. 928-931

Cordero-Grande, Lucilio  
Casaseca-de-la-Higuera, Pablo  
Martín-Fernández, Marcos  
Alberola-López, Carlos

Univ. de Valladolid  
Univ. de Valladolid  
Univ. of Valladolid  
Univ. de Valladolid

11:15-11:30

***Automated Pericardial Fat Quantification in CT Data***, pp. 932-935

Bandekar, Alok  
Naghavi, Morteza  
Kakadiaris, Ioannis

Univ. of Houston  
Association for  
Univ. of Houston

11:30-11:45

***A Novel Segmentation Approach for Echocardiographic Images\****

BIAN, Zhengzhong  
Yu, Gang  
Yang, Yuxiang  
li, peng

Xi'an Jiaotong Univ.  
Xi'An Jiaotong Univ.  
Xi'an Jiaotong Univ.  
xi an jiaotong Univ.

11:45-12:00

***Model-Based Image Reconstruction for Dynamic Cardiac Perfusion MRI from Sparse Data***, pp. 936-941

Awate, Suyash P.  
DiBella, Edward V.R  
Tasdizen, Tolga  
Whitaker, Ross T.

Univ. of Utah  
Univ. of Utah  
Univ. of Utah  
Univ. of Utah

12:00-12:15

***Immune Cells Detection of the in Vivo Rejecting Heart in USPIO-Enhanced Magnetic Resonance Imaging***, pp. 942-945

Chang, Hsun-Hsien  
Moura, José M. F.  
Wu, Yijen L.  
Ho, Chien

Carnegie Mellon Univ.  
Carnegie Mellon Univ.  
Carnegie Mellon Univ.  
Carnegie Mellon Univ.

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**ThB16**

Musicbox-Majestic

**Biomedical Infrared Imaging (Oral Session)**

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10:45-11:00

***Analysis of Breathing Air Flow Patterns in Thermal Imaging***, pp. 946-952

Fei, Jin  
Pavlidis, Ioannis

Univ. of Houston  
Univ. of Houston

11:00-11:15

***Thermal and Geometrical Parameters Evaluation Using Thermal Wave Method\****

Owczarek, Grzegorz

National Res. Inst.

11:15-11:30

***Evaluation of Feature-Based Registration in Dynamic Infrared Imaging for Breast Cancer Diagnosis***, pp. 953-956

AGOSTINI, VALENTINA  
Delsanto, Silvia  
Molinari, Filippo  
Knaflitz, Marco

Pol. di Torino  
Pol. di Torino  
Pol. di Torino  
Pol. di Torino

11:30-11:45

***Segmentation and Landmark Identification in Infrared Images of the Human Body***, pp. 957-960

Herry, Christophe  
Frize, Monique  
Goubran, Rafik A.

Carleton Univ.  
Carleton Univ.  
Carleton Univ.

11:45-12:00

***Field-Warp Registration for Biomedical High-Resolution Thermal Infrared Images***, pp. 961-964

Tangherlini, Andrea  
Merla, Arcangelo  
Romani, Gian Luca

Univ. of Chieti-Pescara  
Univ. of Chieti-Pescara, Fondazione "Univ. G. D'Annunzio",  
Univ. of Chieti-Pescara, Fondazione "Univ. G. D'Annunzio",

12:00-12:15

***Overlay of Thermal and Visual Medical Images Using Skin Detection and Image Registration***, pp. 965-967

Schaefer, Gerald  
Tait, Roger J.  
Zhu, Shao Ying

Nottingham Trent Univ.  
Nottingham Trent Univ.  
Univ. of Derby

**ThBP1**

Westside Ballroom South

**Automation and Computer-Aided Surgery (Poster Session)**

11:30-11:45

***A Biomechanical Model of the Pelvic Cavity: First Steps***, pp. 968-971

RUBOD, Chrystle  
BOUKERROU, Malik  
Rousseau, Jean  
VIARD, Romain  
BRIEU, Mathias  
DUBOIS, Patrick

Univ. Hospital  
Univ. Hospital  
INSERM - Univ. de Lille 2  
CHRU Lille  
Ec. Centrale de Lille  
Inserm

**ThBP2**

Westside Ballroom South

**Electrophysiological Neuroimaging - 2 (Poster Session)**

10:45-11:00

***A Comparison of Adaptive and Non-Adaptive EEG Source Localization Algorithms***, pp. 972-975

Russell, John  
Koles, Zoltan

Univ. of Alberta  
Univ. of Alberta

11:00-11:15

***Removal of Ocular Artifacts for High Resolution EEG Studies: A Simulation Study***, pp. 976-979

Babiloni, Fabio  
Marciani, Maria Grazia  
Cichocki, Andrzej  
Mattia, Donatella  
Cincotti, Febo  
Astolfi, Laura  
Salinari, Serenella  
De Vico Fallani, Fabrizio

Univ. of Rome  
Tor Vergata Univ.  
BSI RIKEN  
Fondazione Santa Lucia IRCCS  
Fondazione Santa Lucia IRCCS  
Univ. of Rome  
La Sapienza Univ.  
Univ. La Sapienza

11:15-11:30

***Neuroelectrical Source Imaging of Mu Rhythm Control for BCI Applications***, pp. 980-983

Mattiocco, Marco  
Mattia, Donatella  
Babiloni, Fabio  
Bufalari, Simona  
Sergio, Silvia  
Salinari, Serenella  
Marciani, Maria Grazia  
Cincotti, Febo

Fondazione Santa Lucia IRCCS  
Fondazione Santa Lucia IRCCS  
Univ. of Rome  
Fondazione Santa Lucia IRCCS  
La Sapienza Univ.  
La Sapienza Univ.  
Tor Vergata Univ.  
Fondazione Santa Lucia IRCCS

11:30-11:45

***Combination of Event-Related Potentials and Functional Magnetic Resonance Imaging During Single-Letter Reading***, pp. 984-987

Casarotto, Silvia	Pol. Univ. of Milan
Bianchi, Anna Maria	Pol. di Milano
Cerutti, Sergio	Pol. Univ. of Milan
Vanello, Nicola	Univ. of Pisa
Ricciardi, Emiliano	Univ. of Pisa
Gentili, Claudio	Univ. of Pisa
Sani, Lorenzo	Univ. of Pisa
Bonino, Daniela	Univ. of Pisa
Guazzelli, Mario	Univ. of Pisa
Pietrini, Pietro	Univ. of Pisa
Landini, Luigi	Univ. of Pisa
Chiarenza, Giuseppe Augusto	Az. Osp. "G. Salvini", Rho Hospital

11:45-12:00

***Brain Connectivity Structure in Spinal Cord Injured : Evaluation by Graph Analysis***, pp. 988-991

De Vico Fallani, Fabrizio	Univ. La Sapienza
Astolfi, Laura	Univ. of Rome
Salinari, Serenella	La Sapienza Univ.
Mattia, Donatella	Fondazione Santa Lucia IRCCS
Cincotti, Febo	Fondazione Santa Lucia IRCCS
Babiloni, Fabio	Univ. of Rome

12:00-12:15

***Estimation of Cortical Dipole Sources by Equivalent Dipole Layer Imaging and Independent Component Analysis***, pp. 992-995

Aoki, Naotoshi	Niigata Univ.
Hori, Junichi	Niigata Univ.
He, Bin	Univ. of Minnesota

12:00-12:15

***Cortical Connectivity Patterns During Imagination of Limb Movements in Normal Subjects and in a Spinal Cord Injured Patient***, pp. 996-999

Astolfi, Laura	Univ. of Rome
Gao, Shang kai	Tsinghua Univ.
Wu, Wei	Tsinghua Univ.
Babiloni, Fabio	Univ. of Rome
Ursino, Mauro	Univ. of Bologna
Zavaglia, Melissa	Univ. of Bologna
Cincotti, Febo	Fondazione Santa Lucia IRCCS
Mattia, Donatella	Fondazione Santa Lucia IRCCS
Mattiocco, Marco	Fondazione Santa Lucia IRCCS
Marciani, Maria Grazia	Tor Vergata Univ.
De Vico Fallani, Fabrizio	Univ. La Sapienza

12:00-12:15

***Evaluation of Cortical Imaging Techniques Based on Somatosensory Evoked Potentials***, pp. 1000-1001

Bai, Xiaoxiao	Univ. of Minnesota
Towle, V	Univ. of Chicago
He, Eric J.	Univ. of Minnesota
He, Bin	Univ. of Minnesota

12:00-12:15

***Muscle and Eye Movement Artifact Removal Prior to EEG Source Localization***, pp. 1002-1005

Hallez, Hans J.	Ghent Univ.
Vergult, Anneleen	Katholieke Univ. Leuven
Phlypo, Ronald	Ghent Univ.
Van Hese, Peter	Ghent Univ.
De Clercq, Wim	Katholieke Univ. Leuven
D'Asseler, Yves	Ghent Univ.
Van de Walle, Rik	Ghent Univ.
Vanrumste, Bart	Katholieke Univ. Leuven
Van Paesschen, Wim	Katholieke Univ. Leuven
Van Huffel, Sabine	Katholieke Univ. Leuven
Lemahieu, Ignace	Ghent Univ.

**ThBP3**

Westside Ballroom South

**Neural Imaging** (Poster Session)

10:45-11:00

***Boost up the Detection Sensitivity of ASL Perfusion Fmri through Support Vector Machine***, pp. 1006-1009

Wang, Ze	Univ. of Pennsylvania
Detre, John A.	Univ. of Pennsylvania
Childress, AnnaRose	Univ. of Pennsylvania

11:00-11:15

***Time-Shifted Z-Score and Student New Statistical Tests in Fmri***, pp. 1010-1013

DEWALLE, ANNE-SOPHIE	Univ. des Sciences et Tech. de Lille
Betrouni, Nacim	Inst. de Tech. Médicale
Vermandel, Maximilien	Univ. de Lille
IVANOVA, POLINA	Univ. LILLE1
Steinling, Marc	Univ. Hospital
Rousseau, Jean	INSERM - Univ. de Lille 2
Vasseur, Christian	USTL

11:15-11:30

***Functional Feature Embedded Space Mapping of Fmri Data***, pp. 1014-1017

Hu, Jin	Inst. of Automation, Chinese Acad. of Sciences
Tian, Jie	Inst. of Automation, Chinese Acad. of Sciences

11:30-11:45

***Improvement to Functional Magnetic Resonance Imaging (fMRI) Methods Using Non-Rigid Body Image Registration Methods for Correction in the Presence of Susceptibility Artifact Effects***, pp. 1018-1020

Wu, Dee	Univ. of Oklahoma Health Sciences
Guo, Yujun	Kent State Univ.
Lu, Cheng-Chang	Kent State Univ.
Suri, Jasjit	Biomedical Tech.

11:45-12:00

***A Compatible Electrocutaneous Display for Functional Magnetic Resonance Imaging Application***, pp. 1021-1024

Hartwig, Valentina	Univ. of Pisa
Cappelli, Claudia	Univ. of Pisa
Vanello, Nicola	Univ. of Pisa
Ricciardi, Emiliano	Univ. of Pisa
Scilingo, Enzo Pasquale	Univ. of Pisa
Giovannetti, Giulio	CNR
Santarelli, Filomena	CNR
Positano, Vincenzo	CNR
Landini, Luigi	Univ. of Pisa
Bicchi, Antonio	Univ. of Pisa
Pietrini, Pietro	Univ. of Pisa

12:00-12:15

***Integrated Semiconductor Optical Sensors for Chronic, Minimally-Invasive Imaging of Brain Function***, pp. 1025-1028

Lee, Thomas	Stanford Univ.
Levi, Ofer	Stanford Univ.
Cang, Jianhua	Univ. of California, San Francisco
Kaneko, Megumi	Univ. of California, San Francisco
Stryker, Michael P.	Univ. of California, San Francisco
Smith, Stephen	Stanford Univ.
Shenoy, Krishna	Stanford Univ.
Harris, James S.	Stanford Univ.

12:00-12:15

***Functional MR Imaging of the Cervical Spinal Cord by Using of Electrical Stimulation at LI4 (Hegu)***, pp. 1029-1031

Wang, WeiDong	The 2nd Hospital, Shantou Univ. Medical Coll.
Kong, KangMei	The 2nd Hospital, Shantou Univ. Medical Coll.
Xiao, YeYu	ShantouUniversity Medical Coll.
Wang, XinJia	Shantou Univ. Medical Coll.
Liang, Bing	ShantouUniversity Medical Coll.
Qi, WeiLi	Shantou Univ. Medical Coll.
Wu, RenHua	Shantou Univ. Medical Coll.

12:00-12:15

***Spatial Frequency Modulates the Human Visual Cortical Response to Temporal Frequency Variation: An Fmri Study***, pp. 1032-1035

Mirzajani, Ali	Iran Univ. of Medical Sciences & Tehran Univ. of
Oghabian, Mohammad Ali	Tehran Univ. of Medical Sciences
Riyahi-Alam, Nader	Tehran Univ. of Medical Sciences (TUMS)
Saberi, Houshang	Tehran Univ. of Medical Sciences
Firouz Nia, Kavous	Tehran Univ. of Medical Sciences
Bakhtiary, Morteza	Tehran Univ. of Medical Sciences (TUMS)

12:00-12:15

***The Brain Mapping on Reinforcement Acupuncture Stimulation at ST36 (zusanli) Evidenced by Fmri***, pp. 1036-1039

Xiao, YeYu	ShantouUniversity Medical Coll.
Chen, XiaoKe	Shantou Univ. Medical Coll.
Du, Li	Shantou Univ. Medical
Pei, RenQuan	Shantou Univ. Medical Coll.
Chen, FengYing	Shantou Univ. Medical Coll.
Liu, GuoRui	Shantou Univ. Medical Coll.
Wu, RenHua	Shantou Univ. Medical Coll.

12:00-12:15

***Multimodal Analysis of a Sustained Attention Protocol: Continuous Performance Test Assessed with Near Infrared Spectroscopy and EEG***, pp. 1040-1043

Butti, Michele	Pol. Univ. of Milan
Pastori, Aurora	IRCCS "E. Medea"
Merzagora, Anna Caterina	Drexel Univ.
Zucca, Claudio	IRCCS "E. Medea"
Bianchi, Anna Maria	Pol. di Milano
Reni, Gianluigi	Koinč s.r.l.
Cerutti, Sergio	Pol. Univ. of Milan



12:00-12:15

**Diagnosis of Brain Abnormality Using Both Structural and Functional MR Images**, pp. 1044-1047  
 Fan, Yong Univ. of Pennsylvania  
 Rao, Hengyi Univ. of Pennsylvania  
 Giannetta, Joan The Children's Hospital of Philadelphia  
 Hurt, Hallam The Children's Hospital of Philadelphia  
 Wang, Jiongjiong Univ. of Pennsylvania  
 Davatzikos, Christos Univ. of Pennsylvania  
 Shen, Dinggang Univ. of Pennsylvania

12:00-12:15

**A New Methodology Based on Q-Entropy for Breast Lesion Classification in 3-D Ultrasound Images**, pp. 1048-1051  
 Rodrigues, Paulo Sérgio National Lab. for Scientific Computing  
 Giraldi, Gilson National Lab. for Scientific Computing  
 Provenzano, Márcia Federal Univ. of Rio de Janeiro  
 Faria, Marcelo Federal Univ. of Rio de Janeiro  
 Chang, Ruey-Feng National Chung Cheng Univ.  
 Suri, Jasjit Biomedical Tech.

12:00-12:15

**Coma Duration Prediction in Diffuse Axonal Injury Analyses of Apparent Diffusion Coefficient and Clinical Prognostic Factors**, pp. 1052-1055  
 Zheng, WenBin Second hospital, Shantou Univ. Medical Coll.  
 Liu, GuoRui Shantou Univ. Medical Coll.  
 Kong, KangMei Shantou Univ. Medical Coll.  
 Wu, RenHua Shantou Univ. Medical Coll.

12:00-12:15

**Symmetry Identification Using Partial Surface Matching and Tilt Correction in 3D Brain Images**, pp. 1056-1060  
 Liu, Xin Columbia Univ.  
 Celina, Imielinska Columbia Univ.  
 Laine, Andrew Columbia Univ.  
 Connolly, Sander Columbia Univ.  
 Anthony, L. D'Ambrosio Columbia Univ.

12:00-12:15

**A New Neural Imaging Approach Using a CMOS Imaging Device**, pp. 1061-1064  
 Ng, David Nara Inst. of Science and Tech.  
 Tokuda, Takashi Nara Inst. of Science and Tech.  
 Nakagawa, Takuma Nara Inst. of Science and Tech.  
 Tamura, Hideki Nara Inst. of Science and Tech.  
 Nunoshita, Masahiro Nara Inst. of Science and Tech.  
 Ishikawa, Yasuyuki Nara Inst. of Science and Tech.  
 Shiosaka, Sadao Nara Inst. of Science and Tech.  
 Ohta, Jun Nara Inst. of Science and Tech.

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**ThBP4** Westside Ballroom South  
**Cardiac Imaging IV (Poster Session)**

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10:45-11:00

**Fast Edge-Preserving Filtering for 3D+t Echocardiographic Volume Rendering**, pp. 1065-1068  
 Yanez-Suarez, Oscar Univ. Autonoma Metropolitana - Iztapalapa  
 Lerallut, Jean-Francois Univ. de Tech. de Compiegne

11:00-11:15

***Diffusion Tensor MRI Study of Myocardium Structural Remodeling after Infarction in Porcine Model***, pp. 1069-1072

Wu, Yin  
Tse, H. F.  
Wu, Ed X.

Univ. of Hong Kong  
Univ. of Hong Kong  
The Univ. of Hong Kong

11:15-11:30

***Tangential Curved Planar Reformation for Topological and Orientation Invariant Visualization of Vascular Trees***, pp. 1073-1076

Lee, Noah  
Rasch, Matthias

Columbia Univ.  
Siemens Corp. Res.

11:30-11:45

***Unsupervised Segmentation of Cardiac PET Transmission Images for Automatic Heart Volume Extraction***, pp. 1077-1080

Juslin, Anu  
Tohka, Jussi

Tampere Univ. of Tech.  
Tampere Univ. of Tech.

11:45-12:00

***Analysis of Ventricular Contraction by Factorial Phase Imaging with Equilibrium Radionuclide Angiography***, pp. 1081-1084

Jimenez-Angeles, Luis  
Medina, Veronica  
Valdes-Cristerna, Raquel  
Vallejo-Venegas, Enrique

Univ. Autonoma Metropolitana Iztapalapa  
Univ. Autonoma Metropolitana  
Univ. Autonoma Metropolitana  
Inst. Nacional de Cardiologia Ignacio Chavez

12:00-12:15

***Software Phantom for the Synthesis of Equilibrium Radionuclide Ventriculography Images***, pp. 1085-1088

Ruiz-de-Jesus, Oscar  
Jimenez-Angeles, Luis  
Vallejo-Venegas, Enrique  
Yanez-Suarez, Oscar

Univ. Autonoma Metropolitana Iztapalapa  
Univ. Autonoma Metropolitana Iztapalapa  
Inst. Nacional de Cardiologia Ignacio Chavez  
Univ. Autonoma Metropolitana - Iztapalapa

12:00-12:15

***Coding of Echocardiographic Image by Selection of the Normalization Matrix Using Fuzzy Logic***, pp. 1089-1092

Zaghetto, Alexandre  
Assis de Oliveira Nascimento, Francisco  
dos Santos, Icaro  
da Rocha, Adson F.

Univ. of Brasilia  
Univ. of Brasilia  
Univ. of Brasilia  
Univ. of Brasilia

12:00-12:15

***Monte Carlo Simulation of 3D Mapping of Cardiac Electrical Activity with Spinning Slit Confocal Optics***, pp. 1093-1097

Hwang, Seong-min  
Choi, Bum-Rak  
Salama, Guy

Univ. of Pittsburgh, School of Medicine  
Tulane Univ.  
Univ. of Pittsburgh, School of Medicine

12:00-12:15

***Arterial Viscoelasticity: A Fractional Derivative Model***, pp. 1098-1101

Craiem, Damian  
Armentano, Ricardo Luis

Favaloro Univ.  
Favaloro Univ.

**Bioelectromagnetism (Poster Session)**

10:45-11:00

***Analysing Specificity of a Bipolar EEG Measurement***, pp. 1102-1105

Väisänen, Juho  
 Ryyänen, Outi R. M.  
 Hyttinen, Jari  
 Malmivuo, Jaakko

Tampere Univ. of Tech.  
 Tampere Univ. of Tech.  
 Tampere Univ. of Tech.  
 Tampere Univ. of Tech.

11:00-11:15

***Mutual Information of Tri-Polar Concentric Ring Electrodes***, pp. 1106-1109

Besio, W. G.  
 Koka, Kanthaiah

Louisiana Tech. Univ.  
 Louisiana Tech. Univ.

11:15-11:30

***Effect of Source Depth on the Specificity of Bipolar EEG Measurements***, pp. 1110-1113

Ryyänen, Outi R. M.  
 Väisänen, Juho  
 hyttinen, jari  
 Malmivuo, Jaakko

Tampere Univ. of Tech.  
 Tampere Univ. of Tech.  
 Tampere Univ. of Tech.  
 Tampere Univ. of Tech.

11:30-11:45

***Three-Dimensional Finite-Difference EEG Forward Problem Solution on High Performance Computers***, pp. 1114-1117

Mininel, Stefano  
 Vatta, Federica  
 Collaone, Andrea  
 Bruno, Paolo  
 Inchingolo, Paolo

Univ. of Trieste  
 Univ. of Trieste  
 Univ. of Trieste  
 Univ. of Trieste  
 Univ. of Trieste

11:45-12:00

***TMS Effect on Visual Search Task***, pp. 1118-1120

Ge, Sheng  
 Matsuoka, Akira  
 Iramina, Keiji  
 Ueno, Shoogo

Kyushu Univ.  
 Kyushu Univ.  
 Kyushu Univ. Japan  
 the Univ. of Tokyo

12:00-12:15

***A FDM Anisotropic Formulation for EEG Simulation***, pp. 1121-1125

Bruno, Paolo  
 hyttinen, jari  
 Inchingolo, Paolo  
 Magrofuoco, Alberto  
 Mininel, Stefano  
 Vatta, Federica

Univ. of Trieste  
 Tampere Univ. of Tech.  
 Univ. of Trieste  
 Univ. of Trieste  
 Univ. of Trieste  
 Univ. of Trieste

12:00-12:15

***Basic Study on a Lower-Energy Defibrillation Method Using Computer Simulation and Cultured Myocardial Cell Models\****

Yaguchi, Aya  
 Nagase, Kazuya  
 Ishikawa, Mitsukuni  
 Iwasaka, Takehiro  
 Odagaki, Masato  
 Hosaka, Hidehiro

tokyo denki Univ.  
 Tokyo Denki Univ.  
 Tokyo Denki Univ.  
 Tokyo Denki Univ.  
 Tokyo Denki Univ.  
 Tokyo Denki Univ.

**Electrical Impedance Imaging II (Poster Session)**

10:45-11:00

*Forward Problem of Three Dimensional EIT in the Thorax Model\**

Wu, Huanli	Hebei Univ. of Tech.
Xu, Guizhi	Hebei Univ. of Tech.
Zhang, Shuai	Hebei Univ. of Tech.
Yang, Shuo	Hebei Univ. of Tech.
Li, Ying	Hebei Univ. of Tech.
Yan, Weili	Hebei Univ. of Tech.

11:00-11:15

*Resistivity Parameters Estimation Based on 2D Real Head Model Using Improved Differential Evolution Algorithm\**

Li, Ying	Hebei Univ. of Tech.
Xu, Guizhi	Hebei Univ. of Tech.
Guo, Lei	Hebei Univ. of Tech.
Wang, Lei	Hebei Univ. of Tech.
Yang, Shuo	Hebei Univ. of Tech.
Rao, Liyun	The Methodist Hospital Res. Inst.
He, Renjie	Univ. of Texas Medical School at Houston
Yan, Weili	Hebei Univ. of Tech.

11:15-11:30

***Capacitive Electrodes in Electroencephalography***, pp. 1126-1129

von Ellenrieder, Nicolas	Univ. Nacional de La Plata
Spinelli, Enrique	Univ. Nacional de La Plata
Muravchik, Carlos	Univ. Nacional de La Plata

11:30-11:45

***Tissue Conductivity Estimation in Two-Dimension Head Model Based on Support Vector Machine***, pp. 1130-1133

Wu, Youxi	Hebei Univ. of Tech.
Guo, Lei	Hebei Univ. of Tech.
Dong, Guoya	Hebei Univ. of Tech.
Wu, Qing	Hebei Univ. of Tech.
Shen, Xueqin	Hebei Univ. of Tech.
Xu, Guizhi	Hebei Univ. of Tech.
Yan, Weili	Hebei Univ. of Tech.

11:45-12:00

*Using Polynomial Curve Fitting Method to Improve Image Quality in EIT\**

Zhang, Jianjun	Hebei Univ. of Tech.
Xu, Guizhi	Hebei Univ. of Tech.
Zhao, Quanming	Hebei Univ. of Tech.
Yan, Weili	Hebei Univ. of Tech.

12:00-12:15

***EIT Images with Improved Spatial Resolution Using a Realistic Head Model***, pp. 1134-1137

Dong, Guoya	Hebei Univ. of Tech.
Bayford, Richard H.	Middlesex Univ.
Liu, Hesheng	Tsinghua Univ.
Zhou, Ying	Hebei Univ. of Tech.
Yan, Weili	Hebei Univ. of Tech.

10:45-11:00

***Estimation of Locomotion Speed and Directions Changes to Control a Vehicle Using Neural Signals from the Motor Cortex of Rat***, pp. 1138-1141Fukayama, Osamu  
Taniguchi, Noriyuki  
Suzuki, Takafumi  
Mabuchi, KunihikoThe Univ. of Tokyo  
The Univ. of Tokyo  
The Univ. of Tokyo  
The Univ. of Tokyo

11:00-11:15

***EEG Features Extraction for Motor Imagery***, pp. 1142-1145Cososchi, Stefan  
Strungaru, Rodica  
Ungureanu, Alexandru  
Ungureanu, MihaelaPol. Univ. of Bucharest  
Pol. Univ. of Bucharest  
Pol. Univ. of Bucharest  
Pol. Univ. of Bucharest

11:15-11:30

***Combination of Frequency Bands in EEG for Feature Reduction in Mental Task Classification***, pp. 1146-1149Abdollahi, Farnaz  
Nasrabadi, AliAmirkabir Univ. of Tech.  
shahed Univ.

11:30-11:45

***Localization of FFA Using SSVEP-Based Binocular Rivalry***, pp. 1150-1153Wang, Ruiping  
Zhang, Yajing  
Wu, Wei  
Liu, Hesheng  
Gao, Xiaorong  
Gao, ShangkaiBeijing Jiaotong Univ.  
Tsinghua Univ.  
Tsinghua Univ.  
Tsinghua Univ.  
Tsinghua Univ.  
Tsinghua Univ.

11:45-12:00

***Coherence Analysis Over the Latent Period of Epileptogenesis Reveal That High-Frequency Communication Is Increased across Hemispheres in an Animal Model of Limbic Epilepsy***, pp. 1154-1156Simonotto, Jennifer D.  
Myers, Stephen  
Furman, Michael D.  
Norman, Wendy  
Liu, Zhao  
DeMarse, Thomas B.  
Carney, Paul  
Ditto, William L.Univ. of Florida  
Univ. of Florida  
Univ. of Florida  
Univ. of Florida  
Univ. of Florida  
Univ. of Florida  
Univ. of Florida  
Univ. of Florida

12:00-12:15

***Single Trial P300 Detection Based on the Empirical Mode Decomposition***, pp. 1157-1160Solis-Escalante, Teodoro  
Yanez-Suarez, Oscar  
Gentiletti, Gerardo GabrielUniv. Autonoma Metropolitana-Iztapalapa  
Univ. Autonoma Metropolitana - Iztapalapa  
Univ. Nacional de Entre Rios

12:00-12:15

***An Effective BCI Speller Based on Semi-Supervised Learning***, pp. 1161-1164Li, Huiqi  
Li, Yuanqing  
Guan, CuntaiInst. for Infocomm Res.  
Inst. for Infocomm Res.  
Inst. for Infocomm Res.

12:00-12:15

***A Non-Parametric Bayesian Approach to Spike Sorting***, pp. 1165-1168Wood, Frank  
Goldwater, Sharon  
Black, Michael J.Brown Univ.  
Brown Univ.  
Brown Univ.

12:00-12:15

***Psychophysics of Prosthetic Vision: III. Stochastic Rendering, the Phosphene Image, and Perception***, pp. 1169-1172

Hallum, Luke E.  
Cloherty, Shaun L.  
Taubman, David S.  
Suanning, Gregg  
Lovell, Nigel H

Univ. of New South Wales  
Univ. of New South Wales  
Univ. of New South Wales  
The Univ. of Newcastle  
Univ. of New South Wales

12:00-12:15

***Possible Macroscopic Indicators of Neural Maturation in Subcortical Auditory Pathways in School-Age Children***, pp. 1173-1176

Dietmar, Hecker  
Delb, Wolfgang  
Corona, Farah I.  
Strauss, Daniel J.

Computational Diagnostics and Biocybernetics Unit  
Computational Diagnostics and Biocybernetics Unit  
Computational Diagnostics and Biocybernetics Unit  
Computational Diagnostics and Biocybernetics Unit

12:00-12:15

***Source Estimation of Contrast-Related Perception Based on Frequency-Tagged Binocular Rivalry***, pp. 1177-1180

Zhang, Yajing  
Wang, Ruiping  
Hong, Bo  
Gao, Xiaorong  
Gao, Shangkai

Tsinghua Univ.  
Beijing Jiaotong Univ.  
Tsinghua Univ.  
Tsinghua Univ.  
Tsinghua Univ.

12:00-12:15

***A Pilot Studies in Dynamic Profile of Multi Parameters of EEG in a Rat Model of Transient Middle Cerebral Artery Occlusion***, pp. 1181-1184

Zhang, Shaomin  
Tong, Kai Yu, Raymond  
Zhang, Hengyi  
Hu, Xiaoling  
Zheng, Xiaoxiang

Zhejiang Univ.  
The Hong Kong Pol. Univ.  
Zhejiang Univ.  
The Hong Kong Pol. Univ.  
Zhejiang Univ.

12:00-12:15

***Power Demodulation of Local Field Potential Recordings***, pp. 1185-1188

Pearson, Sean  
McNames, James

Portland State Univ.  
Portland State Univ.

**ThBP8**

Westside Ballroom South

**Sensorimotor and Neuromuscular Systems 2 (Poster Session)**

10:45-11:00

***Non-Asymptotical Postural Stabilization Strategy During Human Quiet Stance***, pp. 1189-1192

Yasutake, Youko  
Taniguchi, Satoshi  
Nomura, Taishin

Osaka Univ.  
Osaka Univ.  
Osaka Univ.

11:00-11:15

***Estimation of Optimal Location of EEG Reference Electrode for Motor Imagery Based BCI Using Fmri***, pp. 1193-1196

Choi, Sang Han  
Lee, Minho  
Wang, Yijun  
Hong, Bo

Kyungpook National Univ.  
Kyungpook National Univ.  
Tsinghua Univ.  
Tsinghua Univ.

11:15-11:30

***Can a Kinetic Optimization Criterion Predict Both Arm Trajectory and Final Arm Posture?***, pp. 1197-1200  
Wada, Yasuhiro  
Yamanaka, Kazuhiro  
Soga, Yousuke  
Tsuyuki, Kimitaka  
Kawato, Mitsuo

Nagaoka Univ. of Tech.  
Nagaoka Univ. of Tech.  
Nagaoka Univ. of Tech.  
Nagaoka Univ. of Tech.  
ATR Computational Neuroscience Lab.

11:30-11:45

***A Method for Monitoring Intra-Cortical Motor Cortex Responses in an Animal Model of Ischemic Stroke***, pp. 1201-1203

Jensen, Winnie  
Rousche, Patrick J  
Chiganos, Terry C

Aalborg Univ. DK  
Univ. of Illinois at Chicago, US  
Univ. of Illinois at Chicago, US

11:45-12:00

***EMG-Based Detection of Inspiration in the Rat Diaphragm Muscle***, pp. 1204-1207

Dow, Douglas Eric  
Mantilla, Carlos B  
Zhan, Wen-Zhi  
Sieck, Gary C

Mayo Clinic Coll. of Medicine  
Mayo Clinic Coll. of Medicine  
Mayo Clinic Coll. of Medicine  
Mayo Clinic Coll. of Medicine

12:00-12:15

***Movement Time Planning in Human Movement with Via-Points***, pp. 1208-1211

Saito, Hisashi  
Tsubone, Tadashi  
Wada, Yasuhiro

Nagaoka Univ. of Tech.  
Nagaoka Univ. of Tech.  
Nagaoka Univ. of Tech.

12:00-12:15

***An Autonomous, Broadband, Multi-Channel Neural Recording System for Freely Behaving Primates***, pp. 1212-1215

Linderman, Michael  
Gilja, Vikash  
Santhanam, Gopal  
Afshar, Afsheen  
Ryu, Stephen  
Meng, Teresa  
Shenoy, Krishna

Stanford Univ.  
Stanford Univ.  
Stanford Univ.  
Stanford Univ.  
Stanford Univ.  
Stanford Univ.  
Stanford Univ.

**ThBP9**

Westside Ballroom South

**Sensory-Motor Assessment: Gait** (Poster Session)

10:45-11:00

***HMM-Fuzzy Model for Recognition of Gait Changes Due to Trip-Related Falls***, pp. 1216-1219

Hassan, Rafiul  
Begg, Rezaul  
Taylor, Simon  
Kumar, Dinesh Kant

The Univ. of Melbourne  
Victoria Univ.  
Victoria Univ.  
Rmit Univ.

11:00-11:15

***Gait Energy Efficiency in Children with Cerebral Palsy***, pp. 1220-1223

Rosen, Sarah  
Tucker, Carole  
Lee, Samuel

Drexel Univ.  
Shriners Hospital for Children  
Shriners Hospital for Children

11:15-11:30

***Locomotor Disorders in Patients at Early Stages of Parkinson's Disease:***

***A Quantitative Analysis***, pp. 1224-1227

Ferrarin, Maurizio  
Carpinella, Ilaria  
Rabuffetti, Marco  
Calabrese, Elena  
Mazzoleni, Paolo  
Nemni, Raffaello

Foundation Don Carlo Gnocchi Onlus IRCCS  
Foundation Don Carlo Gnocchi Onlus IRCCS  
Foundation Don Carlo Gnocchi Onlus IRCCS  
Foundation Don Carlo Gnocchi Onlus IRCCS  
Foundation Don Carlo Gnocchi Onlus IRCCS  
Foundation Don Carlo Gnocchi Onlus IRCCS

11:30-11:45

***A Model-Based Approach for Assessing Parkinsonian Gait and Effects of Levodopa and Deep***

***Brain Stimulation***, pp. 1228-1231

Cho, Catherine  
Osaki, Yasuhiro  
Kunin, Mikhail  
Cohen, Bernard  
Olanow, C Warren  
Raphan, Theodore

Mount Sinai School of Medicine  
Mount Sinai School of Medicine  
Brooklyn Coll. CUNY  
Mount Sinai School of Medicine  
Mount Sinai School of Medicine  
Brooklyn Coll. of the City Univ. of New York

11:45-12:00

***Effects on Normal Gait of a New Active Knee Orthosis for Hemiparetic Gait Retraining***, pp. 1232-1235

Patel, Shyamal  
Patriitti, Ben  
Nikitczuk, Jason  
Weinberg, Brian  
Della Croce, Ugo  
Mavroidis, Constantinos  
Bonato, Paolo

Harvard Medical School  
Harvard Medical School  
Northeastern Univ.  
Northeastern Univ.  
Univ. of Sassari  
Northeastern Univ.  
Harvard Medical School

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**ThBP10**

Westside Ballroom South

**Applied Neurocomputing, 1** (Poster Session)

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10:45-11:00

***Loudness Normalization for Cochlear Implant Using Pulse-Rate Modulation to Convey Mandarin Tonal Information: A Model-Based Study***, pp. 1236-1239

Chen, Fei  
Zhang, Yuan-Ting

The Chinese Univ. of Hong Kong  
The Chinese Univ. of Hong Kong

11:00-11:15

***An Offline/Real-Time Artifact Rejection Strategy to Improve the Classification of Multi-Channel***

***Evoked Potentials\****

Gupta, Lalit  
Kook, Hyunseok  
Molfese, Dennis  
Lyytinen, Heikki  
Fadem, K.C

Southern Illinois Univ.  
Southern Illinois Univ.  
Univ. of Louisville  
Univ. of Jyvaskyla  
Neuronetrix, Inc.

11:15-11:30

***Subthalamic Nucleus Deep Brain Stimulation: Accurate Axonal Threshold Prediction with Diffusion***

***Tensor Based Electric Field Models***, pp. 1240-1243

Chaturvedi, Ashutosh  
Butson, Christopher  
Cooper, Scott  
McIntyre, Cameron

Case Western Res. Univ.  
Cleveland Clinic  
Cleveland Clinic Foundation  
Cleveland Clinic Foundation



11:30-11:45

***Hardware Considerations of a Spatial Filter for Decorrelating High-Density Multielectrode Neural Recordings***, pp. 1244-1247

Thomson, Kyle  
Oweiss, Karim

Michigan State Univ.  
Michigan State Univ.

11:30-11:45

***Affective State Control for Neuroprostheses***, pp. 1248-1251

Doyle, Thomas E.  
Kucerovsky, Z.  
Ieta, Adrian

McMaster Univ.  
Univ. of Western Ontario  
Murray State Univ.

**ThBP11**

Westside Ballroom South

**EMG Analysis (Poster Session)**

10:45-11:00

***Multi-Receiver Precision Decomposition of Intramuscular EMG Signals***, pp. 1252-1255

Nawab, Syed Hamid  
Wotiz, Robert  
De Luca, Carlo J.

Boston Univ.  
Boston Univ.  
Boston Univ.

11:00-11:15

***How Much Can We Trust the Electromechanical Delay Estimated by Using Electromyography?***, pp. 1256-1259

Conforto, Silvia  
Mathieu, Pierre A.  
Schmid, Maurizio  
Bibbo, Daniele  
Florestal, Joel R.  
D'Alessio, Tommaso

Univ. Roma TRE  
Univ. de Montréal, Canada  
Univ. Roma TRE  
Univ. Roma TRE  
Univ. de Montréal, Canada  
Univ. Roma TRE

11:15-11:30

***Resolution of Superpositions in EMG Signals Using Belief Propagation: Results for the Known Constituent Problem***, pp. 1260-1263

Koch, Volker Maximillian  
McGill, Kevin  
Loeliger, Hans-Andrea

ETH Zurich  
VA Palo Alto Health Care System  
ETH Zurich

**ThBP12**

Westside Ballroom South

**Neural Engineering (Poster Session)**

10:45-11:00

***A Four Command BCI System Based on the SSVEP Protocol***, pp. 1264-1267

Maggi, Luca  
Parini, Sergio  
Piccini, Luca  
Panfili, Guido  
Andreoni, Giuseppe

Pol. di Milano  
Pol. di Milano  
Pol. di Milano  
Pol. di Milano  
Pol. di Milano

11:00-11:15

***A Comparison of Neural Feature Extraction Methods for Brain Machine Interfaces***, pp. 1268-1272

Gilmour, Tim  
Krishnan, Lavanya  
Gaumont, Roger  
Clement, Ryan

The Pennsylvania State Univ.  
The Pennsylvania State Univ.  
The Pennsylvania State Univ.  
The Pennsylvania State Univ.

11:15-11:30

***Low-Cost Motivated Rehabilitation System for Post-Operation Exercises\****

Novak, Daniel  
Brutovsky, Jan

Czech Tech. Univ. in Prague  
Czech Tech. Univ. in Prague

11:30-11:45

***A Behavior Study of the Effects of Visual Feedback on Motor Output***, pp. 1273-1276

Hou, Wensheng

Bioengineering Inst. of Chongqing Univ.

Zheng, Jun

Queens Coll. - City Univ. of New York

Jiang, Yingtao

Univ. of Nevada

Shen, Shan

Univ. of Surrey

Sterr, Annette

Univ. of Surrey

Szameitat, André J.

Univ. of Surrey

van Loon, Monique

Univ. of Surrey

11:45-12:00

***Finite Element Modeling of Electric Field Effects of TASER Devices on Nerve and Muscle***, pp. 1277-1279

Panescu, Dorin

St. Jude Medical

Kroll, Mark

Cal Pol. Univ. San Luis Obispo

Efimov, Igor

Washington Univ.

Sweeney, James

Arizona State Univ.

12:00-12:15

***A Fmri Study of the Cross-Modal Interaction in the Brain with an Adaptable EMG Prosthetic***

***Hand with Biofeedback***, pp. 1280-1284

Hernandez Arieta, Alejandro

Univ. of Tokyo

Kato, Ryu

The Univ. of Tokyo

Yokoi, Hiroshi

Univ. of Tokyo

Arai, Tamio

The Univ. of Tokyo

12:00-12:15

***Effects of Prolonged Stimulation at the Electrode-Retina Interface***, pp. 1285-1287

Ray, Aditi

Univ. of Southern California

Chan, Leanne

Univ. of Southern California

Thomas, Biju

Univ. of Southern California

Weiland, James

Univ. of Southern California

12:00-12:15

***Curative Effect of General Geomagnetic Therapy***, pp. 1288-1290

Rotov, Anton

Central Clinical Air Forth Hospital

Garilevich, Boris

Central Clinical Air Forth Hospital

Zubkov, A. D.

Central Air-Force Clinical Hospital

Olefir, Yu. V.

Central Air Force Clinical Hospital

Andriyanov, Yuri

TRINITI

12:00-12:15

***Two Channel EEG Thought Pattern Classifier***, pp. 1291-1294

Craig, Daniel Ashley

Univ. of Tech. Sydney

Nguyen, Hung

Univ. of Tech. Sydney

Burchey, Harold Andrew

Univ. of Tech. Sydney

12:00-12:15

***Electrooculogram Based System for Computer Control Using a Multiple Feature***

***Classification Model***, pp. 1295-1298

Kherlopian, Armen

Columbia Univ.

Sajda, Paul

Columbia Univ.

Gerrein, Joseph

Univ. of California, San Diego

Yue, Minerva

Columbia Univ.

Kim, Kristina

Columbia Univ.

Kim, Ji Won

New York Medical Coll.

Sukumaran, Madhav

Columbia Univ.

10:45-11:00

***Model Order Selection for Quantification of a Multi-Exponential Magnetic Resonance Spectrum***, pp. 1299-1302

Devos, Andy	Katholieke Univ. Leuven
Bergans, Niki	Katholieke Univ. Leuven
Dresselaers, Tom	Katholieke Univ. Leuven
De Brabanter, Jos	K.U.Leuven
Sima, Diana	Katholieke Univ. Leuven
Vanhamme, Leentje	Katholieke Univ. Leuven
Vanstapel, Florent	Katholieke Univ. Leuven
Van Hecke, Paul	Katholieke Univ. Leuven
Van Huffel, Sabine	Katholieke Univ. Leuven

11:00-11:15

***Time-Frequency Evaluation of Segmentation Methods for Neonatal EEG Signals***, pp. 1303-1306

Wong, Lisa	The Univ. of Auckland
Abdulla, Waleed H.	The Univ. of Auckland

11:15-11:30

***The EEG Measurement Technique under Exercising***, pp. 1307-1310

Hosaka, Naoya	Tokai Univ.
Koyama, Akira	Tokai Univ.
Tanaka, Junya	Tokai Univ.
Magatani, Kazushige	TOKAI Univ.

11:30-11:45

***Influence of Sinusoidally Modulated Visual Stimuli at Extremely Low Frequency Range on the Human EEG Activity***, pp. 1311-1314

Cvetkovic, Dean	RMIT Univ.
Simpson, David	Swinburne Univ.
Cosic, Irena	RMIT Univ.

11:45-12:00

***A Model-Based Approach to Attention and Sensory Integration in Postural Control of Older Adults***, pp. 1315-1318

Mahboobin, Arash	Univ. of Pittsburgh
Loughlin, Patrick	Univ. of Pittsburgh
Redfern, Mark	Univ. of Pittsburgh

12:00-12:15

***Assessment of Preprocessing on Classifiers Used in the P300 Speller Paradigm***, pp. 1319-1322

Mirghasemi, Hamed	Sharif Univ. of Tech.
Shamsollahi, Mohammad Bagher	Sharif Univ. of Tech.
Fazel-Rezai, Reza	Univ. of Manitoba

12:00-12:15

***On Spatio-Temporal Dependency Changes in Epileptic Intracranial EEG: A Statistical Assessment\****

Hegde, Anant	Univ. of Florida
Principe, Jose	Univ. of Florida
Sackellares, J. Chris	L3-100 McKnight Brain Inst.

12:00-12:15

***An Evaluation of Autoregressive Spectral Estimation Model Order for Brain-Computer Interface Applications***, pp. 1323-1326

Krusienski, Dean	Wadsworth Center
McFarland, Dennis	Wadsworth Center
Wolpaw, Jonathan	Wadsworth Center

12:00-12:15

***Finite Element Analysis and Experimental Study on Mechanism of Brain Injury Using Brain Model***, pp. 1327-1330

Ishikawa, Ryo  
Kato, Kazuo

Meiji Univ.  
Meiji Univ.

12:00-12:15

***Event-Related Potential Studies of Attention to Shape under Different Stimuli Tasks\****

Xu, Guizhi  
Zhang, Ying  
Hou, Huijuan  
Wang, Lei  
Yan, Weili

Hebei Univ. of Tech.  
Hebei Univ. of Tech.  
Hebei Univ. of Tech.  
Hebei Univ. of Tech.  
Hebei Univ. of Tech.

12:00-12:15

***Development of the Input Equipment for a Computer Using Surface EMG***, pp. 1331-1334

Ando, Keiichi  
Nagata, Kentaro  
Kitagawa, Daisuke  
Shibata, Naoki  
Yamada, Masafumi  
Magatani, Kazushige

TOKAI Univ.  
TOKAI Univ.  
Univ. of Tokai  
Univ. of Tokai  
Kanagawa Rehabilitation Center  
TOKAI Univ.

12:00-12:15

***Evaluation of Techniques for the Study of Electromyographic Signals***, pp. 1335-1338

Monteiro de Andrade, Marcelino  
Carvalho do Carmo, Jake  
Assis de Oliveira Nascimento, Francisco  
Camapum, Juliana Fernandes  
dos Santos, Icaro  
Mochizuki, Luis  
da Rocha, Adson Ferreira

Univ. of Brasília  
Univ. de Brasília.  
Univ. of Brasilia  
Univ. de Brasília  
Univ. of Brasilia  
Univ. de São Paulo  
Univ. of Brasilia

12:00-12:15

***Hand Motion Estimation by EMG Signals Using Linear Multiple Regression Models***, pp. 1339-1342

Kitamura, Toru  
Tsujiuchi, Nobutaka  
Koizumi, Takayuki

Doshisha Univ.  
Doshisha Univ.  
Doshisha Univ.

12:00-12:15

***3D Dynamic Computer Model of the Head-Neck Complex***, pp. 1343-1346

Sierra Bueno, Daniel Alfonso  
Enderle, John D.

Univ. of Connecticut, Univ. Industrial de Santander (Col)  
Univ. of Connecticut

12:00-12:15

***A Nonlinear System Model of Isometric Force***, pp. 1347-1350

Stitt, Joseph  
Newell, Karl

Pennsylvania State Univ.  
Pennsylvania State Univ.

**ThBP14**

Westside Ballroom South

**Biomedical Signal Processing and Physiological Modeling II (Poster Session)**

10:45-11:00

***The Measurement Technique Ofhuman's Bio-Signals***, pp. 1351-1354

Saeki, Yasuhiro

TOKAI Univ.

11:00-11:15

***Stress Detection in Computer Users Based on Digital Signal Processing of Noninvasive Physiological Variables***, pp. 1355-1358

Zhai, Jing  
Barreto, Armando

Florida International Univ.  
Florida International Univ.

11:15-11:30

***Automatic Quantitative Evaluation of Emotions in E-Learning Applications***, pp. 1359-1362

Scotti, Stefano	Pol. of Milan
Mauri, Maurizio	Massachusetts Inst. of Tech.
Barbieri, Riccardo	MGH-Harvard Medical School-MIT
Jawad, Bassam	Royal Inst. of Tech.
Mainardi, Luca	Pol. di Milano
Cerutti, Sergio	Pol. Univ. of Milan
Brown, Emery N	MGH-Harvard Medical School-MIT
Villamira, Marco Alessandro	IULM Univ. of Milan

11:30-11:45

***LF/(LF+HF) Index in Ventricular Repolarization Variability Correlated and Uncorrelated with Heart***

***Rate Variability***, pp. 1363-1366

Altuve, Miguel	Univ. Simon Bolivar
Sara Wong, Castañeda	Univ. Simon Bolivar
Passariello, Gianfranco	Univ. Simón Bolívar
Carrault, Guy	Univ. de Rennes 1
Hernandez, Alfredo	LTSI. INSERM U642

11:45-12:00

***Morphological Heart Arrhythmia Detection Using Hermitian Basis Functions and***

***Knn Classifier***, pp. 1367-1370

Karimifard, Saeed	Tehran Univ. of Medical Science
Ahmadian, Alireza	Tehran Univ. of Medical Sciences
Khoshnevisan, Mohammad	Griffith Univ.
Nambakhsh, Mohammad Saleh	Tehran Univ. of Medical Science

12:00-12:15

***Adaptive Template Filtering Method for MRI***, pp. 1371-1374

Guo, Lei	Hebei Univ. of Tech.
Liu, Xuena	Hebei Univ. of Tech.
Wu, Youxi	Hebei Univ. of Tech.
Li, Ying	Hebei Univ. of Tech.
Xu, Guizhi	Hebei Univ. of Tech.
Yan, Weili	Hebei Univ. of Tech.

12:00-12:15

***Estimating Arterial Stiffness Using Transmission Line Model***, pp. 1375-1378

Leung, Mande	Univ. of British Columbia
Dumont, Guy	Univ. of British Columbia
Sandor, George G. S.	British Columbia's Children Hospital
Potts, James	British Columbia's Children Hospital

12:00-12:15

***Efficacy of Using Mean Arterial Blood Pressure Sequence for Three-Element Windkessel***

***Model Estimation***, pp. 1379-1382

Gehalot, Piyush	Univ. of Texas at Arlington
Zhang, Rong	Univ. of Texas Southwestern Medical Center at Dallas
Mathew, Aby	Joint Programme ( UT Arlington and UT Southwestern, Dallas)
Behbehani, Khosrow	Univ. of Texas at Arlington

12:00-12:15

***Simulation of the Generation and Processing of Doppler Ultrasound Fetal Heart Signals to Obtain***

***Directional Motion Information***, pp. 1383-1386

Mansor, Wahidah	Univ. Teknologi MARA
Crowe, John	Univ. of Nottingham
Woolfson, Malcolm	Univ. of Nottingham
Hayes-Gill, Barrie	Univ. of Nottingham
Blanchfield, Peter	Univ. of Nottingham
Bister, Michel	Univ. of Nottingham

12:00-12:15

***A Model-Based Study of Relationship between Timing of Second Heart Sound and Systolic***

***Blood Pressure***, pp. 1387-1390

Zhang, Xin-Yu

The Chinese Univ. of Hong Kong, Shenzhen Univ.

Zhang, Yuan-Ting

The Chinese Univ. of Hong Kong

12:00-12:15

***A Novel Approach to Pulse Pressure Variation Estimation***, pp. 1391-1393

Austin, Daniel

OIT

Staats, Christian

Oregon Inst. of Tech.

Aboy, Mateo

Oregon Inst. of Tech.

12:00-12:15

***Maternal ECG Removal from Non-Invasive Fetal ECG Recordings***, pp. 1394-1397

Vullings, Rik

Eindhoven Univ. of Tech.

Peters, Christiaan Hendrik Leonard

Máxima Medical Center

Mischi, Massimo

Eindhoven Univ. of Tech.

Oei, S. Guid

Maxima Medisch Centrum, Veldhoven

Bergmans, Johannes Wilhelmus Maria

Eindhoven Univ. of Tech.

**ThC01**

Marquis AB

**Time-Frequency Analysis in Cardiovascular System (Oral Session)**

14:00-14:15

***A Time-Frequency Approach for the Analysis of Normal and Arrhythmia Cardiac Signals\****

Mahmoud, Seedahmed

RMIT Univ.

Fang, Qiang

RMIT Univ.

Davidovic, Dragomir

Vinca Inst. of Nuclear Sciences

Cosic, Irena

RMIT Univ.

14:15-14:30

***Comparison of Different Wavelet Subband Features in the Classification of ECG Beats Using***

***Probabilistic Neural Network***, pp. 1398-1401

Chen, Ying-Hsiang

National Chung Cheng Univ.

Yu, Sung-Nien

National Chung Cheng Univ.

14:30-14:45

***Cardiac Rhythm Detection and Classification by WOLA Filterbank Analysis of***

***EGM Signals***, pp. 1402-1405

Sheikhzadeh Nadjar, Hamid

AMI Semiconductor Canada Company

Brennan, Robert

AMI Semiconductor Canada Company

So, Simon Sai-Man

AMI Semiconductor

14:45-15:00

***Frequency Tracking of Atrial Fibrillation Using Hidden Markov Models***, pp. 1406-1409

Nilsson, Frida

Lund Univ.

Stridh, Martin

Lund Univ.

Sornmo, Leif

Lund Univ.

15:00-15:15

***Detection of S1 and S2 Heart Sounds by High Frequency Signatures***, pp. 1410-1416

Kumar, Dinesh

Univ. of Coimbra

Carvalho, Paulo

Univ. of Coimbra

Antunes, Manuel

Univ. of Coimbra

Henriques, Jorge

Univ. of Coimbra

Eugénio, Luís

Univ. Hospital of Coimbra

Schmidt, Ralf

Philips Res. Lab.

Habetha, Joerg

Philips Res. Lab.

15:15-15:30

***A Simple Non-Physiological Artifact Filter for Invasive Arterial Blood Pressure Monitoring:***

***A Study of 1852 Trauma ICU Patients***, pp. 1417-1420

Cao, Hanqing  
Norris, Patrick  
Ozdas, Asli  
Jenkins, Judy  
Morris, John A

Vanderbilt Univ. Medical Center  
Vanderbilt Univ. Div. of Trauma  
Vanderbilt Univ. Medical Center  
Vanderbilt Univ. Div. of Trauma  
Vanderbilt Univ. Medical Center

**ThC02**

Marquis C

**Image Registration I (Oral Session)**

14:00-14:15

***Automatic Correspondence Using the Enhanced Hexagonal Center-Based Inner Search***

***Algorithm for Point-Based Dental Image Registration***, pp. 1421-1424

Economopoulos, Theodoros  
Asvestas, Pantelis  
Matsopoulos, George K.  
Gröndahl, Kerstin  
Gröndahl, Hans-Goran

Inst. of Communication & Computer Systems  
Inst. of Communication & Computer Systems  
Inst. of Communication & Computer Systems  
Faculty of Odontology, The Sahlgrenska Acad. at Göteborg  
Faculty of Odontology, The Sahlgrenska Acad. at Göteborg Univ.

14:15-14:30

***Hardware Implementation of Hierarchical Volume Subdivision-Based Elastic Registration***, pp. 1425-1428

Dandekar, Omkar  
Walimbe, Vivek  
Shekhar, Raj

Univ. of Maryland  
The Ohio State Univ.  
Univ. of Maryland

14:30-14:45

***Multi-Modal Medical Image Registration Based on Adaptive Combination of Intensity and***

***Gradient Field Mutual Information***, pp. 1429-1432

Liu, Jiangang  
Tian, Jie  
Dai, Yakang

Chinese Acad. of Science  
Inst. of Automation, Chinese Acad. of Sciences  
Chinese Acad. of Science

14:45-15:00

***A Robust Technique for 2D-3D Registration***, pp. 1433-1436

Gong, Ren Hui  
Abolmaesumi, Purang  
Stewart, James

Queen's Univ.  
Queen's Univ.  
Queen's Univ.

15:00-15:15

***Rapid Multi-Modality Preregistration Based on SIFT Descriptor***, pp. 1437-1440

Chen, Jian  
Tian, Jie

Inst. of automation, Chinese Acad. of sciences  
Inst. of Automation, Chinese Acad. of Sciences

15:15-15:30

***Statistical Bilateral Asymmetry Measurement in Brain Images***, pp. 1441-1445

Liu, Xin  
Ogden, Todd  
Celina, Imielinska  
Laine, Andrew  
Rosiene, Joel  
Connolly, Sander  
Anthony, L. D'Ambrosio

Columbia Univ.  
Columbia Univ.  
Columbia Univ.  
Columbia Univ.  
Eastern Connecticut State Univ.  
Columbia Univ.  
Columbia Univ.

**ThC03**

SoHo-Herald

**Non Linear Dynamics in Cardio-Respiratory System I (Oral Session)**

14:00-14:15

***Influence of Autonomic Impairment on Blood-Pressure and Heart-Rate Scaling Structures***, pp. 1446-1449

Castiglioni, Paolo	Fondazione Don C. Gnocchi ONLUS
Merati, Giampiero	Univ. of Milan
Veicsteinas, Arsenio	Univ. of Mialn
Parati, Gianfranco	Istituto Auxologico Italiano
Di Rienzo, Marco	Fondazione Don Carlo Gnocchi

14:15-14:30

***Further Study of the Asymmetry for Multifractal Spectra of Heartbeat Time Series***, pp. 1450-1453

Muñoz-Diosdado, Alejandro	Inst. Pol. Nacional México
Del Río-Correa, José Luis	Univ. Autónoma Metropolitana

14:30-14:45

***Time-Variant Analysis of Nonlinear Stability and Bispectral Measures to Quantify the Development of Fetal Sleep States***, pp. 1454-1457

Schwab, Karin	Friedrich Schiller Univ. Jena
Groh, Tobias	Friedrich Schiller Univ. Jena
Schwab, Matthias	Friedrich Schiller Univ. Jena
Witte, Herbert	Friedrich Schiller Univ.

14:45-15:00

***New Indexes from the Fetal Heart Rate Analysis for the Identification of Severe Intra Uterine Growth Restricted Fetuses***, pp. 1458-1461

Ferrario, Manuela	Pol. di Milano
Signorini, Maria G.	Pol. di Milano
Magenes, Giovanni	Univ. of Pavia

15:00-15:15

***Respiratory Flow Signal Analysis Using Approximate Entropy and Sample Entropy\****

Chaparro, Javier	Univ. Central
Giraldo, Beatriz	Tech. Univ. of Catalonia (UPC)
Caminal, Pere	Tech. Univ. of Catalonia (UPC)
Benito, Salvador	Hospital de la Santa Creu i Sant Pau
Diaz, Ivan	Hospital de la Santa Creu i Sant Pau
Ballesteros, D	Hospital Univ. de Getafe
López-Rodriguez, L	Hospital Univ. de <getafe

15:15-15:30

***Information Flow to Assess Cardiorespiratory Interactions in Patients on Weaning Trials***, pp. 1462-1465

Vallverdu, Montserrat	Tech. Univ. of Catalonia (UPC)
Tibaduiza, Oscar	Tech. Univ. of Catalonia (UPC)
Claria, Francesc	Lleida Univ.
Hoyer, Dirk	Friedrich Schiller Univ.
Giraldo, Beatriz	Tech. Univ. of Catalonia (UPC)
Benito, Salvador	Hospital de la Santa Creu i Sant Pau
Caminal, Pere	Tech. Univ. of Catalonia (UPC)

**ThC04**

Ziegfeld

**Nanomedicine and Bio-Nanostructures (Oral Session)**

14:00-14:15

***Advanced Metal Nanostructure Design for Surface Plasmon Photonic Bandgap Biosensor Device\****

Chiu, Nan Fu	National Taiwan Univ.
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14:15-14:30

***Metallization of Surface Attached Actin Networks***, pp. 1466-1469

Springer, Michael  
Leon, Jeffrey  
Qiao, Tiecheng  
Hammerschmidt, Jon  
McGrath, James

Univ. of Rochester  
Eastman Kodak  
Eastman Kodak  
Eastman Kodak  
Univ. of Rochester

14:30-14:45

***Labeling and Imaging of Human Mesenchymal Stem Cells with Quantum Dot Bioconjugates During Proliferation and Osteogenic Differentiation in Long Term***, pp. 1470-1473

Shah, Bhranti  
Clark, Paul  
Stroscio, Michael  
Mao, Jeremy

Columbia Univ.  
Univ. of Illinois at Chicago  
Univ. of Illinois at Chicago  
Columbia Univ.

14:45-15:00

***Layer-By-Layer Adsorption of Biocompatible Polyelectrolytes Onto Dexamethasone Aggregates***, pp. 1474-1477

Stewart-Clark, Skylar  
Roldan, Jorge  
Mills, David  
Lvov, Yuri

Louisiana Tech. Univ.  
Louisiana Tech. Univ.  
Louisiana Tech. Univ.  
Louisiana Tech. Univ.

15:00-15:15

***Quantification of Quantum Dots in HUVECs by Confocal Laser Scanning Microscopy***, pp. 1478-1481

Chen, Weiwei  
Liu, Ping  
Zhang, Aili  
Ren, Jichun  
Xu, Lisa Xuemin

Shanghai Jiaotong Univ.  
Shanghai Jiao Tong Univ.  
Shanghai Jiao Tong Univ.  
Shanghai Jiao Tong Univ.  
Shanghai Jiaotong Univ.

**ThC05**

Duffy-Columbia

**Applications of Wearable Technology** (Oral Session)

14:00-14:15

***Development of Measuring System to Measure Standing Pose of the Foot Using Distributed Triaxial Force Sensor***, pp. 1482-1486

Nishi, Akimi  
Tanaka, Noriko  
Tsujiuchi, Nobutaka  
Koizumi, Takayuki  
Oshima, Hiroko  
Minato, Kotaro  
Yoshida, Masaki  
Tsutiya, Yotaro

Doshisha Univ.  
Nara Inst. of Science and Tech.  
Doshisha Univ.  
Doshisha Univ.  
Doshisha Univ.  
Nara Inst. of Science and Tech.  
Osaka Electro-Communication Univ.  
Tecgihan Corp.

14:15-14:30

***The Cuffless Arterial Blood Pressure Estimation Based on the Timing-Characteristics of Second Heart Sound***, pp. 1487-1488

Wong, Mico Yee Man  
Zhang, Xin-Yu  
Zhang, Yuan-Ting

The Chinese Univ. of Hong Kong  
The Chinese Univ. of Hong Kong  
The Chinese Univ. of Hong Kong

14:30-14:45

***Dependence of Anticipatory Postural Adjustments for Step Initiation on Task Movement Features: A Study Based on Dynamometric and Accelerometric Data***, pp. 1489-1492

Rocchi, Laura	Univ. of Bologna
Mancini, Martina	Univ. of Bologna
Chiari, Lorenzo	Univ. of Bologna
Cappello, Angelo	Univ. of Bologna

14:45-15:00

***Human Balance Estimation Using a Wireless 3D Acceleration Sensor Network***, pp. 1493-1496

Similä, Heidi	VTT, Tech. Res. Centre of Finland
Kaartinen, Jouni	VTT
Lindholm, Juha Mikko	VTT
Saarinen, Ari	Rokua Rehabilitation Centre
Mahjneh, Ibrahim	Univ. of Oulu and MHSO hospital

15:00-15:15

***Wearable Kinesthetic System for Joint Knee Flexion-Extension Monitoring in Gait Analysis***, pp. 1497-1500

Tesconi, Mario	Univ. of Pisa
Scilingo, Enzo Pasquale	Univ. of Pisa
Barba, Pierluigi	Univ. of Pisa
De Rossi, Danilo	Univ. of Pisa

15:15-15:30

***Identification of Tasks Performed by Stroke Patients Using a Mobility Assistive Device***, pp. 1501-1504

Bonato, Paolo	Harvard Medical School
Hester, Todd	Harvard Medical School
Sherrill, Delsey M.	Harvard Medical School
Hamel, Mathieu	Inst. Univ. de Geriatrie de Sherbrooke
Perreault, Karine	Inst. Univ. de Geriatrie de Sherbrooke
Boissy, Patrick	Inst. Univ. de Geriatrie de Sherbrooke

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**ThC06**

Empire Hudson

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**Surgical Robotics IV (Oral Session)**

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14:00-14:15

***A Novel Surgical Robot Design: Minimizing the Operating Envelope within the Sterile Field***, pp. 1505-1508

Peine, William	Purdue Univ.
Dachs, Gregory	Purdue Univ.

14:15-14:30

***Stereo Display of 3D Ultrasound Images for Surgical Robot Guidance***, pp. 1509-1512

Novotny, Paul	Harvard Univ.
Kettler, Daniel	Harvard Univ.
Jordan, Petr	Harvard Univ.
Dupont, Pierre	Boston Univ.
Del Nido, Pedro	Children's Hospital Boston
Howe, Robert	Harvard Univ.

14:30-14:45

***Hysteroscopic Simulator for Training and Educational Purposes***, pp. 1513-1516

Lim, Fabian	Monash Univ.
Brown, Ian	Monash Univ.
McColl, Ryan	Monash Univ.
Seligman, Cory	Monash Univ.
Alsaraira, Amer	Monash Univ.

**ThC07**

Cantor-Jolson

**Biomechanics II (Oral Session)**

14:00-14:15

***Geometric Modeling of Living Tissue for Subject-Specific Finite Element Analysis\****

Tada, Mitsunori

National Inst. of Advanced Industrial Science and Technology

Yoshida, Hiroaki

National Inst. of Advanced Industrial Science and Technology

Mochimaru, Masaaki

National Inst. of Advanced Industrial Science and Technology

14:15-14:30

***The Correlation Comparison of Vertebral Axial Rotation Relative to Curvature and Torsion in Scoliosis by Simplified 3D Spine Model***, pp. 1517-1520

Lin, Hong

TSRHC

14:30-14:45

***Two-Dimensional Axisymmetric Model for the Sensitivity Analysis of a Chronic Drug Infusion into the Brain***, pp. 1521-1524

Stiles, David

Medtronic

Gwost, Douglas

Medtronic

14:45-15:00

***A Dynamic Model of the Upper Extremities for Quantitative Assessment of Lofstrand Crutch-Assisted Gait***, pp. 1525-1528

Slavens, Brooke

Marquette Univ.

Sturm, Peter

Shriners Hospitals for Children

Wang, Mei

Marquette Univ.

Harris, Gerald

Marquette Univ.

15:00-15:15

***First Clinical Trials of Using Knee Stabilisers with Adaptable Kinematics for Functional Treatment of Periarticular Fractures - Experimental Research and Computer Simulation***, pp. 1529-1532

Choromanski, Wlodzimierz

Warsaw Univ. of Tech.

Dobrzynski, Grzegorz

Warsaw Univ. of Tech.

Deszczynski, Jaroslaw

Warsaw Medical School

15:15-15:30

***Modeling and Simulation of Physical Performance of a External Unilateral Mechatronic Orthopaedic Fixator – Bone System***, pp. 1533-1536

Lesniewska, Agnieszka

Warsaw Univ. of Tech.

Choromanski, Wlodzimierz

Warsaw Univ. of Tech.

Deszczynski, Jaroslaw

Warsaw Medical School

Dobrzynski, Grzegorz

Warsaw Univ. of Tech.

**ThC08**

Juilliard

**Special Session on Cardiac Imaging (Oral Session)**

14:00-14:15

***Review of Myocardial Motion Estimation Methods from Optical Flow Tracking on Ultrasound Data***, pp. 1537-1540

Angelini, Elsa

Ec. Nationale Superieure des Telecommunications

Gerard, Olivier

Philips

14:15-14:30

***A Segmentation and Tracking System for 4D Cardiac Tagged MR Images***, pp. 1541-1544

Metaxas, Dimitris

Rutgers Univ.

Axel, Leon

NYU Medical Center

Qian, Zhen

Rutgers Univ. New Brunswick

Huang, Xiaolei

Rutgers Univ. New Brunswick

14:30-14:45

***Imaging Cardiac Mechanics: What Information Do We Need to Extract from Cardiac Images?***, pp. 1545-1547

Holmes, Jeffrey  
Costa, Kevin

Columbia Univ.  
Columbia Univ.

14:45-15:00

***Generation of a Cardiac Shape Model from CT Data***, pp. 1548-1551

Lorenz, Cristian  
von Berg, Jens

Philips Res. Lab. Europe - Hamburg  
Philips Res. Lab. Europe - Hamburg

15:00-15:15

***Detection of Murine Infarcts Using Myocardial Elastography at Both High Temporal and Spatial Resolution***, pp. 1552-1555

Luo, Jianwen  
Fujikura, Kana  
Konofagou, Elisa

Columbia Univ.  
Columbia Univ.  
Columbia Univ.

**ThC09**

Gramercy-Olmstead

**Tissue and Organ Level Cardiac Electrophysiology (Oral Session)**

14:00-14:15

***Modulation of Shock-End Virtual Electrode Polarisation As a Direct Result of 3D Fluorescent Photon Scattering***, pp. 1556-1559

Bishop, Martin  
Rodriguez, Blanca  
Trayanova, Natalia  
Gavaghan, David

Univ. of Oxford  
Oxford Univ.  
Tulane Univ.  
Univ. of Oxford

14:15-14:30

***Propagation and Electrical Impedance Changes Due to Ischemia, Hypoxia and Reperfusion in Mouse Hearts***, pp. 1560-1563

Liang, Qiansheng  
Sohn, Kwanghyun  
Punske, Bonnie

Univ. of Utah  
Univ. of Utah  
Univ. of Utah

14:30-14:45

***Intra-Myocardial Cusp Waves and Their Manifestation in Optical Mapping Signals***, pp. 1564-1567

Bernus, Olivier  
Zemlin, Christian W  
Matiukas, Arvydas  
Hyatt, Christopher J.  
Pertsov, Arkady M.

SUNY Upstate Medical Univ.  
SUNY Upstate Medical Univ.  
SUNY Upstate Medical Univ.  
SUNY Upstate Medical Univ.  
SUNY Upstate Medical Univ.

14:45-15:00

***Arrhythmia Source Localization from Intravenous and Transthoracic Catheter Measurements***, pp. 1568-1571

Yilmaz, Bulent  
Cunedioglu, Ugur  
Cakir, Oguzhan

Baskent Univ.  
Baskent Univ.  
Baskent Univ.

15:00-15:15

***Multisite Interstitial Stimulation for Cardiac Micro-Impedance Measurements***, pp. 1572-1575

Pollard, Andrew E  
Barr, Roger

Univ. of Alabama at Birmingham  
Duke Univ.

<b>ThC10</b>	Astor Ballroom
<b>Technical Issues of Image Registration in PET-CT and SPECT-CT Systems (Minisymposium)</b>	
Organizer: Zuckier, Lionel	New Jersey Medical School, Nuclear Medicine
Organizer: Zanzonico, Pat	New Jersey Medical School, Nuclear Medicine
Organizer: Nehmeh, Sadek	New Jersey Medical School, Nuclear Medicine
14:00-14:15	
<b><i>New Applications of Planar Image Fusion in Clinical Nuclear Medicine and Radiology (I)</i></b> , pp. 1576-1579	
Zuckier, Lionel	New Jersey Medical School, Nuclear Medicine
Koncicki, Holly	New Jersey Medical School, UMDNJ
14:15-14:30	
<b><i>Introduction to Clinical and Laboratory (Small-Animal) Image Registration and Fusion (I)</i></b> , pp. 1580-1583	
Zanzonico, Pat	Memorial Sloan-Kettering Cancer Center
Nehmeh, Sadek	Memorial Sloan-Kettering Cancer Center
14:30-14:45	
<b><i>Broad-Spectrum Multi-Modality Image Registration: From PET, CT, and MRI to Autoradiography, Microscopy, and Beyond (I)</i></b> , pp. 1584-1588	
Zanzonico, Pat	Memorial Sloan-Kettering Cancer Center

<b>ThC11</b>	Belasco
<b>Student Paper Competition II (Special Session)</b>	
14:00-14:15	
<b><i>Accelerating Large Cardiac Bidomain Simulations by Arnoldi Preconditioning*</i></b>	
Deo, Makarand	Univ. of Calgary
Bauer, Steffen	National organization of metrology
Plank, Gernot	Medical Univ. of Graz
Vigmond, Edward	Univ. of Calgary
14:15-14:30	
<b><i>Delayed Termination Following Pacing Induced Shifts from Monomorphic to Polymorphic Ventricular Tachycardia: Implications for Antitachycardia Pacing*</i></b>	
Byrd, Israel	Univ. of Alabama at Birmingham
Pollard, Andrew E	Univ. of Alabama at Birmingham
Kay, Matthew	The George Washington Univ.
14:30-14:45	
<b><i>Quantitative Analysis of QRS Detection Algorithms Based on the First Derivative of the ECG*</i></b>	
Arzeno, Natalia	Massachusetts Inst. of Tech.
Poon, Chi-Sang	Massachusetts Inst. of Tech.
Deng, Zhi-De	MIT
14:45-15:00	
<b><i>Subthalamic Nucleus Deep Brain Stimulation: Accurate Axonal Threshold Prediction with Diffusion Tensor Based Electric Field Models*</i></b>	
Chaturvedi, Ashutosh	Case Western Res. Univ.
Butson, Christopher	Cleveland Clinic
Cooper, Scott	Cleveland Clinic Foundation
McIntyre, Cameron	Cleveland Clinic Foundation
15:00-15:15	
<b><i>Three-Dimensional Ventricular Activation Imaging by Means of Equivalent Current Source Modeling and Estimation*</i></b>	
Liu, Zhongming	Univ. of Minnesota
Liu, Chenguang	Univ. of Minnesota
He, Bin	Univ. of Minnesota

**Neural Informatics and Signal Processing I (Oral Session)**

14:00-14:15

***Feature Extraction and Subset Selection for Classifying Single-Trial ECoG During Motor Imagery***, pp. 1589-1592Wei, Qingguo  
Gao, Xiaorong  
Gao, ShangkaiTsinghua Univ.  
Tsinghua Univ.  
Tsinghua Univ.

14:15-14:30

***Multi-Site Stimulation Quiets Network-Wide Spontaneous Bursts and Enhances Functional Plasticity in Cultured Cortical Networks***, pp. 1593-1596Madhavan, Radhika  
Chao, Zenas  
Wagenaar, Daniel  
Bakkum, Douglas  
Potter, SteveGeorgia Inst. of Tech.  
Georgia Inst. of Tech.  
Univ. of California, San Diego  
Georgia Inst. of Tech.  
Georgia Inst. of Tech.

14:30-14:45

***Integration of Differences in EEG Analysis Reveals Changes in Human EEG Caused by Microwave***, pp. 1597-1600Bachmann, Maie  
Lass, Jaanus  
Kalda, Jaan  
Säkki, Maksim  
Tomson, Ruth  
Tuulik, Viiu  
Hinrikus, HiieTallinn Univ. of Tech.  
Tallinn Univ. of Tech.  
Tallinn Univ. of Tech.  
Tallinn Univ. of Tech.  
Tallinn Univ. of Tech.  
Tallinn Univ. of Tech.  
Tallinn Univ. of Tech.

14:45-15:00

***Assessing Temporal and Spatial Evolution of Clusters of Functionally Interdependent Neurons Using Graph Partitioning Techniques***, pp. 1601-1604Oweiss, Karim  
Jin, Rong  
Chen, FeilongMichigan State Univ.  
Michigan State Univ.  
Michigan state Univ.

15:00-15:15

***Pre-Ictal Entropy Analysis of Microwire Data from an Animal Model of Limbic Epilepsy***, pp. 1605-1607Mishra, Mitushi  
Jones, Britta  
Simonotto, Jennifer D.  
Furman, Michael D.  
Norman, Wendy  
Liu, Zhao  
DeMarse, Thomas B.  
Carney, Paul R.  
Ditto, William L.Univ. of Florida  
Univ. of Florida  
Univ. of Florida  
Univ. of Florida  
Univ. of Florida  
Univ. of Florida  
Univ. of Florida  
Univ. of Florida  
Univ. of Florida

15:15-15:30

***Improved Linear BMI Systems Via Population Averaging***, pp. 1608-1611DiGiovanna, Jack  
Sanchez, Justin  
Principe, JoseUniv. of Florida  
Univ. of Florida  
Univ. of Florida

**ThC13** Brecht

**Therapeutic Neural Engineering (Minisymposium)**

Organizer: Bardakjian, Berj Luther Univ. of Toronto  
Organizer: Kearney, Robert Edward McGill Univ.  
Organizer: Sajda, Paul Columbia Univ.  
Organizer: Durand, Dominique Case Western Res. Univ.

14:00-14:15

***Direct Current Brain Polarization\****

Wassermann, Eric National Inst. of Neurological Disorders and Stroke

14:15-14:30

***Seizure Control with Applied Electric Fields: From Brain Slices to Chronic Application***, pp. 1612-1615

Sunderam, Sridhar Pennsylvania State Univ.  
Chernyy, Nick Pennsylvania State Univ.  
Mason, Jonathan Pennsylvania State Univ.  
Peixoto, Nathalia George Mason Univ.  
Weinstein, Steven L. Children's National Medical Center  
Schiff, Steven J. Pennsylvania State Univ.  
Gluckman, Bruce J. Pennsylvania State Univ.

14:30-14:45

***Rational Modulation of Neuronal Processing with Applied Electric Fields***, pp. 1616-1619

Bikson, Marom The City Coll. of New York  
Radman, Thomas The City Coll. of New York  
Datta, Abhishek The City Coll. of New York

14:45-15:00

***Mechanisms and Therapeutic Effects of Magnetic Stimulation***, pp. 1620-1623

Amassian, Vahe SUNY Downstate Medical Center  
Maccabee, Paul SUNY Downstate Medical Center

15:00-15:15

***Suppression of Neural Activity with High Frequency Stimulation In-Vitro***, pp. 1624-1625

Durand, Dominique Case Western Res. Univ.  
Jensen, Alicia Case Western Res. Univ.  
Bikson, Marom City Coll. of New York

**ThC16** Musicbox-Majestic

**Neural Stimulation and Prostheses I (Oral Session)**

14:00-14:15

***Modeling and Engineering Aspects of ChannelRhodopsin2 System for Neural Photostimulation***, pp. 1626-1629

Nikolic, Konstantin Imperial Coll. London  
Degenaar, Patrick Imperial Coll. London  
Toumazou, Christofer Imperial Coll. London

14:15-14:30

***An Implanted Myoelectrically-Controlled Neuroprosthesis for Upper Extremity Function in Spinal Cord Injury***, pp. 1630-1633

Kilgore, Kevin MetroHealth Medical Center  
Hart, Ronald Louis Stokes VA Medical Center  
Montague, Fred Case Western Res. Univ.  
Anne, Bryden Case Western Res. Univ.  
Keith, Michael MetroHealth Medical Center  
Hoyen, Harry MetroHealth Medical Center  
Sams, Carol MetroHealth Medical Center  
Peckham, Hunter Case Western Res. Univ.

14:30-14:45

***Psychophysics of Prosthetic Vision: II. Stochastic Sampling, the Phosphene Image, and Noise***, pp. 1634-1637

Hallum, Luke E.  
Chen, Spencer Chin-Yu  
Cloherty, Shaun L  
Lovell, Nigel H

Univ. of New South Wales  
Univ. of New South Wales  
Univ. of New South Wales  
Univ. of New South Wales

14:45-15:00

***Microelectronic Retinal Prosthesis: III. a New Method for Fabrication of High-Density Hermetic Feedthroughs***, pp. 1638-1641

Suaning, Gregg  
Lavoie, Phil  
Armitage, Timothy  
Forrester, Jennifer  
Lovell, Nigel H

The Univ. of Newcastle  
The Univ. of Newcastle  
The Univ. of Newcastle  
The Univ. of Newcastle  
Univ. of New South Wales

15:00-15:15

***The Growth of Loudness Functions Measured in Cochlear Implant Listeners Using Absolute Magnitude Estimation and Compared Using Akaike's Information Criterion***, pp. 1642-1644

Sanpetrino, Nicole  
Smith, Robert

Syracuse Univ.  
Syracuse Univ.

**ThEP2**

Westside Ballroom South

**Biomedical Signal Processing and Physiological Modeling III (Poster Session)**

16:30-18:30

***Optical Flow Computation and Visualization in Spherical Context. Application on 3D+t Bio-Cellular Sequences.***, pp. 1645-1648

Rekik, Wafa  
Béréziat, Dominique  
Dubuisson, Séverine

Pierre et Marie Curie Univ.  
Pierre et Marie Curie Univ. Lab. d'informatique de Paris6  
Pierre et Marie Curie Univ. Lab. d'informatique de Paris 6

16:30-18:30

***Software Suite for Finite Difference Method Models***, pp. 1649-1652

Arola, Tuukka  
Hannula, Markus  
Narra Girish, Nathaniel  
Malmivuo, Jaakko  
Hytinen, Jari

Tampere Univ. of Tech.  
Tampere Univ. of Tech.  
Tampere Univ. of Tech.  
Tampere Univ. of Tech.  
Tampere Univ. of Tech.

16:30-18:30

***Signal Noise Ratio of Small Intestine Myoelectrical Signal Recording from External Surface***, pp. 1653-1656

Martinez-de-Juan, Jose Luis  
Garcia-Casado, Javier  
Ye, Yiyao  
Guardiola, Jose L  
Ponce, Jose Luis

Centro de investigación e Innovación en Bioingeniería. Univ. Pol.  
Centro de investigación e Innovación en Bioingeniería. Univ. Pol.  
Centro de investigación e Innovación en Bioingeniería. Univ. Pol.  
Centro de investigación e Innovación en Bioingeniería. Univ. Pol.  
Hospital Univ. La Fe

16:30-18:30

***The Characteristics of Metabolic Activity Based on Regularization Method***, pp. 1657-1660

Liu, Hai  
Jiang, Guotai

Tongji Univ.  
Tongji Univ.



16:30-18:30

***Relationship between Electrohysterogram and Internal Uterine Pressure:  
A Preliminary Study***, pp. 1661-1664

Rabotti, Chiara  
Mischi, Massimo  
van Laar, Judith  
aelen, Paul  
Oei, S. Guid  
Bergmans, Johannes Wilhelmus Maria

Eindhoven, Tech. Univ.  
Eindhoven Univ. of Tech.  
Eindhoven Tech. Univ.  
Eindhoven Tech. Univ.  
Maxima Medisch Centrum, Veldhoven  
Eindhoven Univ. of Tech.

16:30-18:30

***Assessment of Acute Skin Irritation in Rabbits Using Electrical Impedance Model***, pp. 1665-1668

Ferreira, Daniele M.  
Silva, Celia S.  
Souza, Marcio N.

Federal Univ. of Rio de Janeiro  
Federal Univ. of Rio de Janeiro  
Federal Univ. of Rio de Janeiro

16:30-18:30

***Pathological Voice Assessment***, pp. 1669-1673

Dibazar, Alireza  
Berger, Theodore  
Narayanan, Shrikanth

Univ. of Southern Claifornia  
Univ. of Southern California  
Univ. of Southern California

**ThEP3**

Westside Ballroom South

**Biomedical Signal Processing I: Time-Frequency and Wavelet Analysis (Poster Session)**

16:30-18:30

***A Comparison of Real-Time Performance of Signal Processing Algorithms for Minimum Latency  
Detection of Hypovolemic States***, pp. 1674-1677

Jovanov, Emil  
Cox, Paul  
Saul, J. Philip  
Salinas, Jose  
Ryan, Kathy  
Convertino, Victor

Univ. of Alabama in Huntsville  
PERL Res.  
Medical Univ. of South Carolina  
U.S. Army Inst. of Surgical Res.  
US Army Inst. of Surgical Res.  
US Army Inst. of Surgical Res.

16:30-18:30

***Quick ECG Analysis for On-Line Holter Monitoring Systems***, pp. 1678-1681

Szilagyi, Laszlo  
Szilagyi, Sandor Miklos  
Fordos, Gergely  
Benyo, Zoltan

Budapest Univ.  
Sapientia - Hungarian Science Univ. of Transylvania  
Budapest Univ. of Tech. and Ec.  
Budapest Univ. of Tech. and Ec.

16:30-18:30

***Multiwavelet Design for Cardiac Signal Processing***, pp. 1682-1685

Peeters, Ralf  
Karel, Joël  
Westra, Ronald  
Haddad, Sandro  
Serdijn, Wouter

Univ. Maastricht  
Univ. Maastricht  
Univ. Maastricht  
Delft Univ. of Tech.  
Delft Univ. of Tech.

16:30-18:30

***Matching a Wavelet to ECG Signal***, pp. 1686-1689

Takla, George  
Loparo, Kenneth  
Nair, Bala

Cleveland Clinic  
Case Western Res. Univ.  
Cleveland Clinic

16:30-18:30

***Time-Frequency Analysis for Arrhythmia Discrimination Using Human Atrium Electrogram***, pp. 1690-1693

Shin, Hang Sik  
Lee, Chungkeun  
Choo, Benjamin Youngmin  
Lee, Myoungho

Yonsei Univ.  
Yonsei Univ.  
Yonsei Univ.  
Yonsei Univ.

16:30-18:30

***Heart Sounds Interference Cancellation in Lung Sounds***, pp. 1694-1697

Charleston-Villalobos, Sonia  
Domínguez-Robert, Luis Felipe  
González-Camarena, Ramón  
Aljama-Corrales, Angel Tomás

Univ. Autónoma Metropolitana  
Univ. Autónoma Metropolitana  
Univ. Autónoma Metropolitana  
Univ. Autónoma Metropolitana

16:30-18:30

***Soluble CD40L versus Myocyte Enhancer Factor: Predicting a Prominent Marker for Cardiovascular Disease.***, pp. 1698-1701

De Trad, Chafia

United Arab Emirates Univ.

16:30-18:30

***Detection of Fast Fiber Recruitment by Multiresolution Analysis of Surface Electromyograms***, pp. 1702-1703

NOGUCHI, Yoshio

Saga Univ.

16:30-18:30

***Extracting Effective Features of SEMG Using Continuous Wavelet Transform***, pp. 1704-1707

Kilby, Jeff  
GholamHosseini, Hamid

Auckland Univ. of Tech.  
Auckland Univ. of Tech.

16:30-18:30

***Vibromyographic Quantification of Voluntary Isometric Contractile Force in the Brachioradialis***, pp. 1708-1710

Cole, Jason  
Madhavan, Guruprasad  
McLeod, Kenneth

State Univ. of New York  
State Univ. of New York  
State Univ. of New York

16:30-18:30

***Walk Detection with a Kinematic Sensor: Frequency and Wavelet Methods***, pp. 1711-1714

BARRALON, Pierre  
Noury, Norbert  
Vuillerme, Nicolas

Univ. Joseph Fourier  
Univ. Joseph Fourier Grenoble  
UMR CNRS 5525

16:30-18:30

***Wavelet Transform for Rabbit EEG with Vagus Nerve Electric Stimulation***, pp. 1715-1718

Chen, Zhaoyang  
Hao, Hongwei  
Li, Luming  
Dong, Jie

Tsinghua Univ.  
Tsinghua Univ.  
Tsinghua Univ.  
Tsinghua Univ.

16:30-18:30

***Wavelet Filtering of the P300 Components in Evoked Related Potentials***, pp. 1719-1722

Ayoubian Markazi, Seyedehmina  
Qazi, Saad  
Stergioulas, Lampros  
bunce, david  
Ramchurn, Anusha

Brunel Univ.  
Brunel Univ.  
Brunel Univ.  
Brunel Univ.  
Univ. of London

16:30-18:30

***Optimal Denoising of Brainstem Auditory Evoked Response (baer) for Automatic Peak Identification and Brainstem Assessment***, pp. 1723-1726

Jacquín, Arnaud  
Causevic, Elvir  
John, E. Roy  
Prichep, Leslie

Brainscope Company, Inc.  
Brainscope Company, Inc.  
NYU  
NYU

16:30-18:30

***Identification of Speech Transients Using Variable Frame Rate Analysis and Wavelet Packets***, pp. 1727-1730

Rasetshwane, Daniel  
Boston, J Robert  
Li, Ching-Chung

Univ. of Pittsburgh  
Univ. of Pittsburgh  
Univ. of Pittsburgh

16:30-18:30

*Seizure Detection in EEG Signals: A Comparison of Different Approaches\**

Mohseni, Hamid Reza  
Shamsollahi, Mohammad Bagher  
Maghsoudi, Arash

Sharif Univ. of Tech.  
Sharif Univ. of Tech.  
Sharif Univ. of Tech.

16:30-18:30

*Auditory Wavelet Transform Based on Auditory Wavelet Families*, pp. 1731-1734

Salimpour, Yousef  
Abolhassani, Mohammad Djavad

Tehran Univ. of Medical Science  
Tehran Univ. of Medical Science

**ThEP4**

Westside Ballroom South

**Biomechanics** (Poster Session)

16:30-18:30

*A Novel Finite Element Method Based Biomechanical Model for HIT-Robot Assisted Orthopedic Surgery System*, pp. 1735-1738

Jia, Zhiheng  
Du, Zhijiang  
wang, monan

Harbin Inst. of Tech.  
Harbin Inst. of Tech.  
Harbin Inst. of Tech.

16:30-18:30

*Development of a Parametric Finite Element Model of Lower Cervical Spine in Sagittal Plane*, pp. 1739-1741

Haghpanahi, Mohammad  
Mapar, Reza

Iran Univ. of Science and Tech.  
Islamic Azad Univ. Science and Res. Branch

16:30-18:30

*Towards the Investigation of Kinematic Parameters from an Integrated Measurement Unit for the Classification of the Rising from the Chair*, pp. 1742-1745

Giansanti, Daniele  
Maccioni, Giovanni  
Macellari, Velio  
Costantini, Giovanni  
Carota, Massimo

Dipartimento di Tecnologie e Salute  
Istituto Superiore di Sanitf  
Istituto Superiore di Sanitf  
Univ. of Rome "Tor Vergata"  
Univ. of Rome "Tor Vergata"

16:30-18:30

*Sequence Design and Software Environment for Real-Time Navigation of a Wireless Ferromagnetic Device Using MRI System and Single Echo 3D Tracking*, pp. 1746-1749

Chanu, Arnaud  
Aboussouan, Eric  
Tamaz, Samer  
Martel, Sylvain

Ec. Pol. de Montreal  
École Pol. de Montreal (EPM)  
École Pol. de Montréal  
Ec. Pol. de Montreal

16:30-18:30

*Ferromagnetic Artifacts in MRI: Minimization of Motion Effects in Long TR Acquisitions*, pp. 1750-1753

Aboussouan, Eric  
Martel, Sylvain

Ec. Pol. de Montreal  
Ec. Pol. de Montreal

16:30-18:30

*Fluid/Structure Interaction Applied to the Simulation of Abdominal Aortic Aneurysms*, pp. 1754-1757

Pélerin, Jean-Luc  
Kulik, Carine  
Goksu, Cemil  
Coatrieux, jean louis  
Michel, Rochette

ANSYS France SAS  
Univ. Rennes I  
Univ. Rennes I  
INSERM-Univ. Rennes 1  
ANSYS France SAS

16:30-18:30

*Biomechanical Modeling of Semicircular Canals for Fabricating a Biomimetic Vestibular System*, pp. 1758-1761

Ciaravella, Gaetano  
Laschi, Cecilia  
Dario, Paolo

IMT Lucca Inst. for Advanced Studies  
Scuola Superiore Sant'Anna  
Scuola Superiore Sant'Anna

16:30-18:30

***Fast and Efficient Radiological Interventions Via a Graphical User Interface Commanded Magnetic Resonance Compatible Robotic Device***, pp. 1762-1767

Ozcan, Alpay  
Christoforou, Eftychios  
Brown, Daniel  
Tsekos, Nikolaos

Washington Univ. in Saint Louis  
Washington Univ. in Saint Louis  
Washington Univ. in Saint Louis  
Washington Univ. in Saint Louis

**ThEP5**

Westside Ballroom South

**Cardiorespiratory Variability III (Poster Session)**

16:30-18:30

***Real-Time Evaluation of Spectral Heart Rate Variability***, pp. 1768-1771

Thong, Tran

Oregon Health & Science Univ.

16:30-18:30

***Time-Evolution of Cardiovascular Variability During Autonomic Function Tests in Physiological Investigations***, pp. 1772-1775

Singh, Dilbag  
Saini, B. S.  
Kumar, Vinod  
Deepak, K. K.

Dr. B. R. Ambedkar National Inst. of Tech.  
Dr. B. R. Ambedkar National Inst. of Tech.  
IIT Roorkee  
All India Inst. of Medical Sciences

16:30-18:30

***Effect of Respiration in Heart Rate Variability (HRV) Analysis***, pp. 1776-1779

Aysin, Benhur  
Aysin, Elif

ANSAR Group Inc.  
ANSAR Inc.

16:30-18:30

***Heart Rate Variability and Autonomic Nerve Activities in Ambulatory Dogs***, pp. 1780-1783

Song, Juan  
Ogawa, Masahiro  
Tan, Alex  
Chen, Peng-sheng  
Lin, Shien-Fong

Cedars-Sinai Medical Center  
Cedars-Sinai Medical Center  
Cedars-Sinai Medical Center  
Cedars-Sinai Medical Center  
Cedars-Sinai Medical Center

16:30-18:30

***A Comparative Study of Fetal Heart Rate Variability Analysis Techniques***, pp. 1784-1787

Hopkins, Paul  
Outram, Nicholas  
Löfgren, Nils  
Ifeachor, Emmanuel  
Rosen, Karl G

Univ. of Plymouth  
Univ. of Plymouth  
Univ. Coll. of Borís  
Univ. of Plymouth  
Neoventa Medical

16:30-18:30

***Quantitative Analysis of QRS Detection Algorithms Based on the First Derivative of the ECG***, pp. 1788-1791

Arzeno, Natalia  
Poon, Chi-Sang  
Deng, Zhi-De

Massachusetts Inst. of Tech.  
Massachusetts Inst. of Tech.  
Massachusetts Inst. of Tech.

16:30-18:30

***Effect of Considering Constant Variance Time-Frequency Autoregressive Models for HRV Analysis***, pp. 1792-1795

Gaitan-Gonzalez, Mercedes  
Carrasco-Sosa, Salvador  
Gonzalez-Camarena, Ramon  
Yanez-Suarez, Oscar

Univ. Autonoma Metropolitana - Iztapalapa  
Univ. Autonoma Metropolitana - Iztapalapa  
Univ. Autonoma Metropolitana - Iztapalapa  
Univ. Autonoma Metropolitana - Iztapalapa

16:30-18:30

***Change in Complexity of Fetal Heart Rate Variability***, pp. 1796-1798

Padhye, Nikhil

The Univ. of Texas Health Science Center

Brazdeikis, Audrius

Univ. of Houston

Verklan, M. Terese

The Univ. of Texas Health Science Center at Houston

16:30-18:30

***Time Constant of Heart Rate Recovery after Low Level Exercise As a Useful Measure of Cardiovascular Fitness***, pp. 1799-1802

Wang, Lu

Univ. of New South Wales

Su, Steven Weidong

Univ. of Tech. Sydney

Celler, Branko George

Univ. of New South Wales

**ThEP6**

Westside Ballroom South

**Cardiopulmonary Modeling** (Poster Session)

16:30-18:30

***New Model to Estimate Mean Blood Pressure by Heart Rate with Stroke Volume***

***Changing Influence***, pp. 1803-1805

Al-Jumaily, Adel

Faculty of Engineering, Univ. of Tech. Sydney

Al-Jaafreh, Moha'med

Univ. of Tech. Sydney

16:30-18:30

***Modeling Systolic Pressure Variation Due to Positive Pressure Ventilation***, pp. 1806-1809

Messerges, Joanne

GE Healthcare

16:30-18:30

***Modeling Blood Flow in the Gastrointestinal System***, pp. 1810-1813

Mabotuwana, Thusitha De Silva

Univ. of Auckland

Cheng, Leo K

The Univ. of Auckland

Smith, Nicolas

Univ. of Auckland

Pullan, Andrew

Univ. of Auckland

16:30-18:30

***Simplified Distributed-Parameter Model of Brachial-Radial Arteries for Noninvasive***

***Determination of Mechanical Characteristics of Vessel***, pp. 1814-1817

Ferreira, Arthur

Federal Univ. of Rio de Janeiro

Barbosa Filho, José

National Inst. of Cardiology

Souza, Marcio N.

Federal Univ. of Rio de Janeiro

16:30-18:30

***Transpulmonary Dilution System Identification for Pulmonary Blood Volume Measurements by***

***Contrast Echocardiography***, pp. 1818-1821

Mischi, Massimo

Eindhoven Univ. of Tech.

Korsten, Erik

Eindhoven Univ. of Tech.

16:30-18:30

***Blind Identification of the Central Aortic Pressure Waveform from Multiple Peripheral Arterial***

***Pressure Waveforms***, pp. 1822-1825

Swamy, Gokul

Michigan State Univ.

Ling, Qi

Michigan State Univ.

Tongtong, Li

Michigan State Univ.

Mukkamala, Ramakrishna

Michigan State Univ.

**Advances in Sensor Technology 3 (Poster Session)**

16:30-18:30

***Enobio – First Tests of a Dry Electrophysiology Electrode Using Carbon Nanotubes***, pp. 1826-1829

Ruffini, Giulio	Starlab Barcelona SL
Dunne, Stephen	Starlab Barcelona SL
Farrés, Esteve	Starlab Barcelona SL
Watts, Paul C.P.	Univ. of Surrey
Mendoza, Ernest	Univ. of Surrey
Silva, S. Ravi P.	Univ. of Surrey
Grau, Carles	Univ. of Barcelona
Marco, Josep	Univ. of Barcelona
Fuentemilla, Lluís	Univ. of Barcelona
Vandecasteele, Bjorn	IMEC

16:30-18:30

***Modeling of the Bioactivated Nanopore Devices***, pp. 1830-1833

H. Talasaz, AmirAli	Stanford Univ.
Liu, Yang	Stanford Univ.
Ronaghi, Mostafa	Stanford Univ.
W. Davis, Ronald	Stanford Univ.

16:30-18:30

***SPR and AFM Study of Engineered Biomolecule Immobilisation Techniques.\****

Craig, Ian	Univ. of Ulster
McLaughlin, James	Univ. of Ulster

16:30-18:30

***Evaluation of Driver Stress Using Biomarker in Motor-Vehicle Driving Simulator***, pp. 1834-1837

Yamaguchi, Masaki	Univ. of Toyama
Wakasugi, Junichi	Univ. of Toyama
Sakakima, Josaku	Univ. of Toyama

16:30-18:30

***Cell Trapping in Activated Micropores for Functional Analysis***, pp. 1838-1841

H. Talasaz, AmirAli	Stanford Univ.
A. Powell, Ashley	Stanford Univ.
Stahl, Patrick	Stanford Univ.
Ronaghi, Mostafa	Stanford Univ.
S. Jeffrey, Stefanie	Stanford Univ.
Mindrinos, Michael	Stanford Univ.
W. Davis, Ronald	Stanford Univ.

16:30-18:30

***Development of MAb-Based Immunochromatographic Assay for Cadmium from Biological Samples***, pp. 1842-1845

Sasaki, Kazuhiro	Central Res. Inst. of Electric Power Industry
Tawarada, Kei	The Kansai Electric Power Co., Inc.
Okuhata, Hiroshi	The Kansai Electric Power Co., Inc.
Miyasaka, Hitoshi	The Kansai Electric Power Co., Inc.
Okuyama, Akira	EnBioTec Lab. Co., Ltd.
Maruyama, Yukinao	EnBioTec Lab. Co., Ltd.
Ohmura, Naoya	Central Res. Inst. of Electric Power Industry

16:30-18:30

***Electrolyte Pulse Current Measurements by CnuMOS with Microsecond and Thermal Voltage Resolution***, pp. 1846-1849

Jacquot, Blake	Cornell Univ.
Munoz, Nini	Cornell Univ.
Kan, Edwin	Cornell Univ.

16:30-18:30

***An Investigation into the Suitability of Using Three Electronic Nose Technologies for the Detection and Discrimination of Bacteria Types***, pp. 1850-1853

Green, Geoffrey  
Chan, Adrian  
Goubran, Rafik A.

Carleton Univ.  
Carleton Univ.  
Carleton Univ.

16:30-18:30

***Novel Long-Term Implantable Blood Pressure Monitoring System with Reduced Baseline Drift***, pp. 1854-1857

Cong, Peng  
Hoit, Brian  
Young, Darrin  
Ko, Wen

Case Western Res. Univ.  
Case Western Res. Univ.  
Case Western Res. Univ.  
Case Western Res. Univ.

16:30-18:30

***Performance Analysis and Early Validation of a Bi-Modal Ultrasound Transducer***, pp. 1858-1861

Lanatif, Antonio  
Scilingo, Enzo Pasquale  
Francesconi, Raffaello  
De Rossi, Danilo

Faculty of Engineering, Univ. of Pisa  
Faculty of Engineering, Univ. of Pisa  
CNR Inst. of Clinical Physiology Italian National  
Faculty of Engineering, Univ. of Pisa

16:30-18:30

***The Effect of a Distributed Mass Loading on the Frequency Response of a MEMS Mesh Resonator***, pp. 1862-1865

Bartkovsky, Michael  
Liao, Anna  
Fedder, Gary K.  
Przybycien, Todd  
Hauan, Steinar

Carnegie Mellon Univ.  
Carnegie Mellon Univ.  
Carnegie Mellon Univ.  
Carnegie Mellon Univ.  
Carnegie Mellon Univ.

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**ThEP8**

Westside Ballroom South

**Magenetic Resonance Imaging** (Poster Session)

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16:30-18:30

***Fast Magnetic Resonance Spectroscopic Imaging at 3 Tesla Using Autocalibrating Parallel Technique***, pp. 1866-1869

Banerjee, Suchandrima  
Ozturk-Isik, Esin  
Nelson, Sarah  
Majumdar, Sharmila

Univ. of California, San Francisco-Univ. of California, Berkeley  
Univ. of California, San Francisco  
Univ. of California, San Francisco  
Univ. of California, San Francisco

16:30-18:30

***Quantitative Analysis of White Matter on DTI Images of Patients with Tinnitus: Preliminary Report***, pp. 1870-1872

Yoo, Done-Sik  
Choi, Woo Young  
Lee, Sooyeul  
Jeong, Ji-Wook  
Lee, Jeong Won  
Kim, Seunghwan  
Chang, Yongmin

Electronics & Telecommunications Res. Inst. (ETRI)  
Myongji Univ.  
Electronics & Telecommunications Res. Inst. (ETRI)  
Electronics & Telecommunications Res. Inst. (ETRI)  
Electronics & Telecommunications Res. Inst. (ETRI)  
Electronics & Telecommunications Res. Inst. (ETRI)  
Kyungpook National Univ.

16:30-18:30

***Can We Use 1H MRS Shimming Values to Obtain 31P Spectra?***, pp. 1873-1876

Wu, RenHua  
Guo, Gang  
Zhang, YunPing  
Tran, Hien  
terBrugge, Karel  
Mikulis, David

Shantou Univ. Medical Coll.  
Shantou Univ. Medical Coll.  
Shantou Univ. Medical Coll.  
Univ. of Toronto  
The Toronto Western Hospital, Univ. of Toronto  
The Toronto Western Hospital, Univ. of Toronto

16:30-18:30

**Functional Magnetic Resonance Mapping of Motor Cortex in Patients with Mass Lesions Near Primary Motor and Sensory Cortices**, pp. 1877-1880

Chen, XiaoKe	Shantou Univ. Medical Coll.
Xiao, YeYu	ShantouUniversity Medical Coll.
Zheng, WenBin	the second affiliated hospital of shan tou Univ.
Chen, FengYing	Shantou Univ. Medical Coll.
Wu, RenHua	Shantou Univ. Medical Coll.

16:30-18:30

**Prediction of Hemorrhagic Transformation after Acute Ischemic Stroke Using Hyperintense MCA Sign on Post-Gd T1WI**, pp. 1881-1884

Guo, Gang	Shantou Univ. Medical Coll.
Wu, RenHua	Shantou Univ. Medical Coll.
Zhang, YunPing	Shantou Univ. Medical Coll.
Mikulis, David	The Toronto Western Hospital, Univ. of Toronto
terBrugger, Karel	The Toronto Western Hospital. Univ. of Toronto

16:30-18:30

**Morphology and Morphometry in Chronic Spinal Cord Injury Assessed Using Diffusion Tensor Imaging and Fuzzy Logic**, pp. 1885-1888

Ellingson, Benjamin	Marquette Univ.
Schmit, Brian D.	Marquette Univ.
Prost, Robert	Medical Coll. of Wisconsin
Ulmer, John	Medical Coll. of Wisconsin

**ThEP9**

Westside Ballroom South

**Magnetic Resonance Imaging II (Poster Session)**

16:30-18:30

**MRI Induced Heating of Pacemaker Leads: Effect of Temperature Probe Positioning and Pacemaker Placement on Lead Tip Heating and Local SAR**, pp. 1889-1892

Mattei, Eugenio	Italian National Inst. of Health
Calcagnini, Giovanni	Italian Natiol Inst. of Health
Censi, Federica	Italian National Inst. of Health
Triventi, Michele	Italian National Inst. of Health
Bartolini, Pietro	Italian National Inst. of Health
Bassen, Howard	Food and Drug Administration
Kainz, Wolfgang	Food and Drug Administration

16:30-18:30

**A Magnetization Mapping Approach for Passive Shim Design in MRI**, pp. 1893-1896

Sanchez Lopez, Hector	The Univ. of Queensland
Liu, Feng	The Univ. of Queensland
Trakic, Adnan	The Univ. of Queensland
Crozier, Stuart	The Univ. of Queensland

16:30-18:30

**A Low-Cost Scalable Multichannel Digital Receiver for Magnetic Resonance Imaging**, pp. 1897-1900

Dalal, Ishaan	The Cooper Union for the Advancement of Science and Art
Kirpalani, Ashwin	The Cooper Union for the Advancement of Science and Art
Fontaine, Fred	The Cooper Union for the Advancement of Science and Art

16:30-18:30

**Inside-Out NMR Probe for Portable Spectrometry**, pp. 1901-1903

Le Bec, Gael	ENSIEG
Yonnet, Jean-Paul	ENSIEG
Raouf, Kosai	Univ. Joseph Fourier



16:30-18:30	<b>Slotted Surface Coil with Reduced G-Factor for SENSE Imaging</b> , pp. 1904-1906	
	Ocegueda, Karelia	UAM, Iztapalapa
	Rodriguez, Alfredo O	UAM Iztapalapa
16:30-18:30	<b>Noise Analysis for Multi-Slice Radio Frequency Current Density Imaging</b> , pp. 1907-1910	
	Wang, Dinghui	Univ. of Toronto
	DeMonte, Tim P.	Field Metrica Inc.
	Joy, Michael L.	Univ. of Toronto
	Nachman, Adrian I.	Univ. of Toronto
16:30-18:30	<b>Spin Relaxation Laws for Quantitative MRI of Hyperpolarized Spins</b> , pp. 1911-1915	
	Wu, Xizeng	Univ. of Alabama at Birmingham
16:30-18:30	<b>Magnetic Resonance Elastography with Twin Drivers for High Homogeneity and Sensitivity</b> , pp. 1916-1919	
	Zheng, Ying	The Univ. of Hong Kong
	Chan, Queenie C. C.	The Univ. of Hong Kong
	Yang, Edward	Univ. of Hong Kong
16:30-18:30	<b>Influence of Moving Sensation by Turning Over Frequency</b> , pp. 1920-1923	
	ISHIHARA, SHINYA	TOKAI Univ.
	SAWADA, Keisuke	Tokai Univ.
	MAENO, Masato	Tokai Univ.
	ISHIDA, Tomohiro	Tokai Univ.
	Yanashima, Kenji	Tokai Univ.
	Magatani, Kazushige	Tokai Univ.
16:30-18:30	<b>Simulated Dataset for Verification and Validation of DT-MRI Analyzing Tools</b> , pp. 1924-1927	
	Goksel, Dilek	Bogazici Univ.
	Ozkan, Mehmed	Bogazici Univ.
16:30-18:30	<b>Quantification of Brain Creatine Concentration Using PRESS Sequence and LCMoDel: Comparison with HPLC Method</b> , pp. 1928-1931	
	Lin, Yan	Shantou Univ. Medical Coll.
	Zhang, YunPing	Shantou Univ. Medical Coll.
	Xiao, ZhuangWei	Shantou Univ. Medical Coll.
	Li, Hui	Shantou Univ. Medical Coll.
	Shen, Jerry	Shantou Univ.
	Chen, XiaoKe	Shantou Univ. Medical Coll.
	Huang, Kai	Shantou Univ.
	Wu, RenHua	Shantou Univ. Medical Coll.

<b>ThEP10</b>	Westside Ballroom South
<b>Optical Imaging and Microscopy (Poster Session)</b>	

16:30-18:30	<b>Accounting for Point Source Propagation Properties in 3D Fluorescence OPT*</b>	
	Darrell, Alexander	Foundation for Res. & Tech. Hellas and Univ. of Oxford
	Meyer, Heiko	Foundation for Res. & Tech. Hellas
	Brady, Mike	Univ. of Oxford
	Ripoll, Jorge	Foundation for Res. & Tech. Hellas
	Marias, Kostas	Foundation for Res. & Tech. Hellas
	Anikitos, Garofalakis	Foundation for Res. & Tech. Hellas
16:30-18:30	<b>Modulated Imaging in Layered Media*</b>	
	Weber, Jessie	Univ. of California, Irvine, Beckman LaserInstituteand Medical C

16:30-18:30

***Subsurface Bioimaging Using Angular Domain Optical Backscattering Illumination***, pp. 1932-1936

VASEFI, FARTASH  
Chan, Paulman K. Y.  
Kaminska, Bozena  
Chapman, Glenn H.

SIMON FRASER Univ.  
SIMON FRASER Univ.  
SIMON FRASER Univ.  
SIMON FRASER Univ.

16:30-18:30

***Development of a Finger Joint Phantom for Evaluation of Frequency Domain Measurement Systems (I)***, pp. 1937-1940

Netz, Uwe J.  
Scheel, Alexander K.  
Beuthan, Jürgen  
Hielscher, Andreas

Charité Berlin  
Georg-August-Univ. Göttingen  
Charité Berlin  
Columbia Univ. New York

16:30-18:30

***Oximetry Considerations in the Small Source Detector Separation Limit***, pp. 1941-1943

Winey, Brian  
Yu, Yan

Univ. of Rochester  
Univ. of Rochester Medical Center

16:30-18:30

***Combining Near Infrared Spectroscopy and Functional MRI During Continuous Performance Test in Healthy Subjects***, pp. 1944-1947

Butti, Michele  
Pastori, Aurora  
Merzagora, Anna Caterina  
Bianchi, Anna Maria  
Bardoni, Alessandra  
Branca, Vincenzo  
Costa, Antonella  
Cerutti, Sergio  
Reni, Gianluigi

Pol. Univ. of Milan  
IRCCS "E. Medea"  
Drexel Univ.  
Pol. di Milano  
IRCCS "E. Medea"  
Ospedale Maggiore Pol. IRCCS "Mangiagalli e Regina Elena",  
Ospedale Maggiore Pol. IRCCS "Mangiagalli e Regina Elena",  
Pol. Univ. of Milan  
Koinč s.r.l.

16:30-18:30

***Elastic Registration for Auto-Fluorescence Image Averaging***, pp. 1948-1951

Kubecka, Libor  
Jan, Jiri  
Kolar, Radim  
Jirik, Radovan

Brno Univ. of Tech.  
Brno Univ. of Tech.  
Brno Univ. of Tech.  
Brno Univ. of Tech.

16:30-18:30

***MIBIC: Mutual Information Based Image Clearance Algorithm for Enhanced Visualization of Cellular Structures\****

kockara, sinan  
Dagtas, Serhan  
Ali, Nawab

Univ. of Arkansas at Little Rock  
UALR  
UALR

16:30-18:30

***A Technique to Compensate the Eye Movement in Dark Adaptometry Exams***, pp. 1952-1955

Azevedo, Dario F.G. de  
Helegda, Sergio  
S. Glock, Flavio  
Russomano, Thais  
Fabrício Pereira, Léo

Pontifícia Univ. Católica  
Pontifícia Univ. Católica do Rio Grande do Sul  
Pontifícia Univ. Católica do Rio Grande do Sul  
PUCRS  
IPCT - Inst. de Pesquisas Cientificas e Tecnologicas

16:30-18:30

***Stochastic Decomposition Method for Detection of Epithelium Dysplasia and Inflammation Using White Light Spectroscopy Imaging***, pp. 1956-1959

Taslidere, Ezgi  
Cohen, Fernand S.

Drexel Univ.  
Drexel Univ.

16:30-18:30

***System for the Validation of Cell-Tracking Algorithms Using On-Demand Simulated Optical Microscope Images***, pp. 1960-1963

Moufarrej, Bechara  
Martel, Sylvain

Ec. Pol. de Montreal  
Ec. Pol. de Montreal

16:30-18:30

***Tracking Endothelial Cells Using Multiframe Point Correspondence***, pp. 1964-1967

Lamberti, Fabrizio  
Montrucchio, Bartolomeo

Pol. di Torino  
Pol. di Torino

16:30-18:30

***Measurement of 2-D SpO<sub>2</sub> Distribution in Skin Tissue by Multispectral Imaging with Depth Selectivity Control***, pp. 1968-1971

Arimoto, Hidenobu

Natl Inst. of Advd Industrial Sci & Tech.

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**ThEP11**

Westside Ballroom South

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**X-Ray, CT, PET, SPECT, Ultrasound and Infrared Imaging (Poster Session)**

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16:30-18:30

***Detecting Microcalcifications in Digital Mammograms Using Wavelet Domain Hidden Markov Tree Model***, pp. 1972-1975

Regentova, Emma  
Zhang, Lei  
Zheng, Jun  
Veni, Gopalkrishna

Univ. of Nevada, Las Vegas  
Univ. of Nevada, Las Vegas  
Queens Coll. - City Univ. of New York  
UNLV

16:30-18:30

***Automatic Registration of CT Volumes and Dual-Energy Digital Radiography for Detection of Cardiac and Lung Diseases***, pp. 1976-1979

Fei, Baowei  
Chen, Xiang  
Wang, Hesheng  
Sabol, John  
DuPont, Elena  
Gilkesson, Robert

Case Western Res. Univ.  
Case Western Res. Univ.  
Case Western Res. Univ.  
GE Medical Systems  
Univ. Hospitals of Cleveland  
Univ. Hospitals of Cleveland

16:30-18:30

***Distal Radius Bone Mineral Density Estimation Using the Filling Factor of Trabecular Bone in the X-Ray Image***, pp. 1980-1982

Lee, Sooyeul  
Jeong, Ji-Wook  
Lee, Jeong Won  
Yoo, Done-Sik  
Kim, Seunghwan

Electronics & Telecom Res. Inst.  
Electronics and Telecommunications Res. Inst. (ETRI)  
Electronics and Telecommunications Res. Inst.  
Electronics and Telecommunications Res. Inst.  
Electronics and Telecommunications Res. Inst. (ETRI)

16:30-18:30

***The GGO Lesions Detected by Computer-Aided Detection System on Chest MDCT Images***, pp. 1983-1985

Lee, Jeong Won  
Jeong, Ji-Wook  
Lee, Sooyeul  
Yoo, Done-Sik  
Kim, Seunghwan

Electronics and Telecommunications Res. Inst.  
Electronics and Telecommunications Res. Inst. (ETRI)  
Electronics & Telecom Res. Inst.  
Electronics and Telecommunications Res. Inst.  
Electronics and Telecommunications Res. Inst. (ETRI)

16:30-18:30

***Design and Evaluation of a 2D Array PIN Photodiode Bump Bonded to Readout IC for the Low Energy X-Ray Detector***, pp. 1986-1989

Yuk, Sunwoo  
Park, Shin Woong  
Yi, Yun

Korea Univ.  
Korea Univ.  
Korea Univ.

16:30-18:30

***Polycrystalline CdZnTe Thick Films for Low Energy X-Ray: System Evaluation***, pp. 1990-1993

Yuk, Sunwoo

Korea Univ.

Park, Shin Woong

Korea Univ.

Yi, Yun

Korea Univ.

16:30-18:30

***Study of Digital Mammographic Equipments by Phantom Image Quality***, pp. 1994-1996

Verdú, Gumersindo

Pol. Univ. of Valencia

Mayo, Patricia

Pol. Univ. of Valencia

Rodenas, Francisco

Pol. Univ. of Valencia

16:30-18:30

***Deformable Registration of Prone and Supine Colons for CT Colonography***, pp. 1997-2000

Suh, Jung W.

Virginia Tech.

Wyatt, Christopher Lee

Virginia Tech.

16:30-18:30

***Detection of Lung Cancer with Phase-Contrast X-Ray Imaging Using Synchrotron Radiation***, pp. 2001-2004

Liu, Ping

Shanghai Jiao Tong Univ.

Sun, Jianqi

Shanghai Jiao Tong Univ.

Guan, Yijing

Shanghai Jiao Tong Univ.

Zhang, Guilin

Shanghai Inst. of Applied Physics, Chinese Acad. of Science

Xu, Lisa Xuemin

Shanghai Jiaotong Univ.

16:30-18:30

***Temporal Resolution of  $nt$ PET Using Either Arterial or Reference Region-Derived Plasma Input Functions***, pp. 2005-2008

Normandin, Marc

Purdue Univ.

Morris, Evan

Indiana Univ. Univ. Indianapolis

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## **ThEP12**

Westside Ballroom South

### **Methods and Applications in Bioinformatics and Systems Biology (Poster Session)**

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16:30-18:30

***Modelling and Simulation of the TLR4 Pathway with Coloured Petri Nets***, pp. 2009-2012

Täubner, Claudia

Tech. Univ. of Braunschweig

Mathiak, Brigitte

Tech. Univ. of Braunschweig

Kupfer, Andreas

Tech. Univ. of Braunschweig

Fleischer, Nina

Tech. Univ. of Braunschweig

Eckstein, Silke

Tech. Univ. of Braunschweig

16:30-18:30

***Discrete Stochastic Simulation of Cell Signaling: Comparison of Computational Tools***, pp. 2013-2016

Manninen, Tiina

Tampere Univ. of Tech.

Mäkiraatikka, Eeva

Tampere Univ. of Tech.

Ylipää, Antti

Tampere Univ. of Tech.

Pettinen, Antti

Tampere Univ. of Tech.

Leinonen, Kalle

Tampere Univ. of Tech.

Linne, Marja-Leena

Tampere Univ. of Tech.

16:30-18:30

***Computation Intelligent for Eukaryotic Cell-Cycle Gene Network***, pp. 2017-2020

Wu, Shing-Jen

Da-Yeh Univ.

Wu, Cheng-Tao

Da-Yeh Univ.

Lee, Tsu-Tian

National Chiao-Tung Univ.

16:30-18:30

**Pluggable Application Server Framework**, pp. 2021-2024

Wang, Hao

Tan, Feng

Sabnis, Amit

Fu, Xuezheng

Volarath, Patra

Harrison, Robert W.

Georgia State Univ. Dept. of Computer Science

Georgia State Univ. Dept. of Computer Science

Georgia State Univ. Dept. of Biology

georgia state Univ. Dept. of Computer Science

Georgia State Univ. Dept. of Chemistry

Georgia State Univ. Dept. of Computer Science and Biology

16:30-18:30

**E. Coli Promoter Prediction Using Feed-Forward Neural Networks**, pp. 2025-2027

Zhang, Fan

Kuo, Michael

Brunkhorst, Adrian

Univ. of California San Diego Medical Center

Univ. of California San Diego

UCSD

16:30-18:30

**A Mathematical Model Relating Chromosome Aberrations to Cancer Progression**, pp. 2028-2031

Ying, Hao

DiPierdomenico, Julia

Lin, Feng

Heng, Henry

Wayne State Univ.

Wayne State Univ.

Wayne State Univ.

Wayne State Univ.

16:30-18:30

**Simulation of the Cell Cycle Using a Pathway of the G1Phase and Cell's Behavior Research\***

Christodoulou, Manolis

Louvros, Nikos

Tech. Univ. of Crete

Tech. Univ. of Crete

16:30-18:30

**Robust Mixture Model Clustering of DNA Binding Sites**, pp. 2032-2035

Liu, Sheng

Song, Qing

Cao, Aize

Yang, Xulei

Wu, Yilei

Nanyang Tech. Univ.

Nanyang Tech. Univ.

Vanderbilt Univ.

Nanyang Tech. Univ.

Nanyang Tech. Univ.

16:30-18:30

**Association between Pathways in Regulatory Networks**, pp. 2036-2040

Kluger, Yuval

Kluger, Harriet

Tuck, David

NYU School of Medicine

Yale Univ.

Yale

16:30-18:30

**Bayesian Dynamic Multivariate Models for Inferring Gene Interaction Networks**, pp. 2041-2044

Liang, Yulan

Kelemen, Arpad

State Univ. of New York at Buffalo

Niagara Univ.

16:30-18:30

**Biological Evolution: Distribution and Convergence Analysis of Amino Acids**, pp. 2045-2048

Bouaynaya, Nidhal

Schonfeld, Dan

UIC

Univ. of Illinois at Chicago

**ThEP13**

Westside Ballroom South

**Wireless Sensors and Telemetry Systems 4 (Poster Session)**

16:30-18:30

**A New Platform Based on IEEE802.15.4 Wireless Inertial Sensors for Motion Caption and Assessment\***

Brunetti, Fernando

Pons, Jose Luis

Inst. de Automática Industrial- Consejo Superior de Investigacion

Inst. de Automática Industrial- Consejo Superior de Investigacion

16:30-18:30

**Miniature Wireless Measurement Node for ECG Signal Transmission in Home Area Network**, pp. 2049-2052

Vehkaoja, Antti

Verho, Jarmo

Lekkala, Jukka

Tampere Univ. of Tech.

Tampere Univ. of Tech.

Tampere Univ. of Tech.

16:30-18:30

***Design and Implementation of a Wireless (Bluetooth) Four Channel Bio-Instrumentation Amplifier and Digital Data Acquisition Device with User-Selectable Gain, Frequency, and Driven Reference***, pp. 2053-2056

Cosmanescu, Alin Petre  
Miller, Benjamin  
Magno, Terence  
Ahmed, Assad  
Kremenec, Ian

The Cooper Union for the Advancement of Science and Art  
The Cooper Union for the Advancement of Science and Art  
The Cooper Union for the Advancement of Science and Art  
The Cooper Union for the Advancement of Science and Art  
The Cooper Union for the Advancement of Science and Art

16:30-18:30

***Mobile Remote Monitoring of Biological Signals***, pp. 2057-2059

da Rocha, Murilo Fraga  
Azevedo, Dario F.G. de  
Russomano, Thais  
Figueira, Márcio Vieira  
Helegda, Sergio

Pontifical Catholic Univ. of Rio Grande do Sul  
Pontifícia Univ. Católica  
PUCRS  
Pontifical Catholic Univ. of Rio Grande do Sul  
Pontifícia Univ. Católica do Rio Grande do Sul

16:30-18:30

***Contactless and Unobtrusive Measurement of Heart Rate in Home Environment***, pp. 2060-2063

Zakrzewski, Mari  
Kolinummi, Arto  
Vanhala, Jukka

Tampere Univ. of Tech.  
Tampere Univ. of Tech.  
Tampere Univ. of Tech.

16:30-18:30

***PERSEIA: A Biomedical Wireless Sensor Network to Support Healthcare Delivery for the Elderly and Chronically Ill***, pp. 2064-2066

Jiménez-Fernández, Silvia  
Araujo, Álvaro  
Cobo, Antonio  
del Pozo, Francisco  
Nieto-Taladriz, Octavio  
de Toledo, Paula  
Moya, José M.

Tech. Univ. of Madrid  
Tech. Univ. of Madrid  
Tech. Univ. of Madrid  
Tech. Univ. of Madrid  
Tech. Univ. of Madrid  
Tech. Univ. of Madrid  
Tech. Univ. of Madrid

16:30-18:30

***Low-Power Wireless Medical Sensor Platform***, pp. 2067-2070

Dolgov, Arseny  
Zane, Regan

Univ. of Colorado  
Univ. of Colorado

16:30-18:30

***BPSK & QPSK Modulated Data Communication for Biomedical Monitoring Sensor Network***, pp. 2071-2074

Wegmueller, Marc Simon  
Oberle, Michael  
Kuster, Niels  
Fichtner, Wolfgang

ETH Zurich  
Foundation for Res. on Information Tech. in Society (  
Foundation for Res. on Information Tech. in Society (  
ETH Zurich

16:30-18:30

***Generic Controller Dedicated to Telemetry-Controlled Microsystems***, pp. 2075-2078

Sodagar, Amir M.  
Wise, Kensall  
Najafi, Khalil

Univ. of Michigan  
Univ. of Michigan, Ann Arbor  
Univ. of Michigan

**ThEP14**

Westside Ballroom South

**Cellular and Functional Tissue Engineering (Poster Session)**

16:30-18:30

***A Kinematics-Based Method for Generating Cartilage Maps and Deformations in the Multi-Articulating Wrist Joint from CT Images***, pp. 2079-2082

Marai, Georgeta Elisabeta  
Crisco, Joseph  
Laidlaw, David

Brown Univ.  
Brown Univ.  
Brown Univ.

16:30-18:30

***In Vivo Biomechanical Evaluations of the Medial Gastrocnemius: Changes in Muscle Properties in Stroke Survivors***, pp. 2083-2086

Gao, Fan  
Zhang, Liqun

Rehabilitation Inst. of Chicago  
Northwestern Univ.

16:30-18:30

***Gene Expression of Four Adhesive Proteins in the Early Healing of Bone Defect and Bone-Implant Interface***, pp. 2087-2090

ZHANG, Ting  
XIA, Haibin  
Wang, Yining  
PENG, Cong  
LI, Yu Hong  
PAN, Xinhua

School of Stomatology, Wuhan Univ.  
School of Stomatology, Wuhan Univ.  
School & Hospital of Stomatology, Wuhan Univ.  
School of Stomatology, Wuhan Univ.  
School of Stomatology, Wuhan Univ.  
School & Hospital of Stomatology, Wuhan Univ.

16:30-18:30

***In Vitro Degradation Behavior of Photopolymerized PEG Hydrogels As Tissue Engineering Scaffold***, pp. 2091-2093

Xin, Antonio X  
Gaydos, Celeste  
Mao, Jeremy

Columbia Univ.  
UIC  
Columbia Univ.

16:30-18:30

***Mineral Trioxide Aggregate in Endodontic Treatment for Immature Teeth***, pp. 2094-2097

Hatibovic-Kofman, Sahza  
Raimundo, Lin  
Chong, Lawrence  
Moreno, Jorge  
Zheng, Lei

The Univ. of Western Ontario  
The Univ. of Western Ontario  
The Univ. of Western Ontario  
The Univ. of Western Ontario  
The Univ. of Western Ontario

16:30-18:30

***Finite Element Modeling Following Partial Meniscectomy: Effect of Various Size of Resection***, pp. 2098-2101

Vadher, Sharadsinh  
Nayeb-Hashemi, Hamid  
Canavan, Paul  
Warner, Grant

Northeastern Univ.  
Northeastern Univ.  
Northeastern Univ.  
Northeastern Univ.

16:30-18:30

***Realistic Computational Modeling for Hybrid Biopolymer Microcantilevers***, pp. 2102-2105

Kim, Jinseok  
Park, Jungyul  
Ryu, Suk-Kyu  
Baek, Jeongeun  
Park, Sewan  
Kim, Hyeon Cheol  
Chun, Kukjin  
Park, Sukho

Korea Inst. of Science and Tech.  
Korea Inst. of Science and Tech.  
Korea Inst. of Science and Tech.  
Korea Inst. of Science and Tech.  
Seoul National Univ.  
Seoul National Univ.  
Seoul National Univ.  
Korea Inst. of Science & Tech.

16:30-18:30

***Four versus Two-Electrode Measurement Strategies for Cell Growing and Differentiation Monitoring Using Electrical Impedance Spectroscopy***, pp. 2106-2109

Bragos, Ramon  
Sarro, Enric  
Fontova, Andreu  
Soley, Albert  
Cairo, Jordi Joan  
Bayes-Genis, Antoni  
Rosell, Javier

Tech. Univ. of Catalonia (UPC)  
Autonomous Univ. of Barcelona (UAB)  
Tech. Univ. of Catalonia  
Autonomous Univ. of Barcelona (UAB)  
Autonomous Univ. of Barcelona (UAB)  
Hospital de la Santa Creu i Sant Pau  
Tech. Univ. of Catalonia

16:30-18:30

**Rapid Prototyping of Patterned Poly-L-Lysine Microstructures**, pp. 2110-2113

Kim, Jiwan

Univ. of Wisconsin-Madison

Williams, Justin

Univ. of Wisconsin-Madison

**FrA01**

Marquis AB

**Signal Processing and Modeling in Biological Systems I (Oral Session)**

09:00-09:15

**Boolean Modeling of Neural Systems with Point-Process Inputs and Outputs**, pp. 2114-2117

Marmarelis, Vasilis

Univ. of Southern California

Zanos, Theodoros

Univ. of Southern California

Courellis, Spiros

Univ. of Southern California

Berger, Theodore

Univ. of Southern California

09:15-09:30

**Unbiased Identification of Finite Impulse Response Linear Systems Operating in**

**Closed-Loop**, pp. 2118-2121

Westwick, David

Univ. of Calgary

Perreault, Eric

Northwestern Univ.

09:30-09:45

**The Generation Mechanisms and Repeatability of 2F1-F2 Distortion Product Otoacoustic Emissions: Study on Normally Hearing Subjects**, pp. 2122-2125

Parazzini, Marta

Istituto di Ingegneria Biomedica CNR

Wilson, Hanna

Royal Gwent Hospital

Bell, Steven

Inst. of Sound and Vibration Res. Univ. of Southampton

Tognola, Gabriella

Istituto di Ingegneria Biomedica CNR

Ravazzani, Paolo

Istituto di Ingegneria Biomedica CNR

Lutman, Mark E.

Inst. of Sound and Vibration Res. Univ. of Southampton

09:45-10:00

**Observations from Chaotic Analysis of Sleep EEGs**, pp. 2126-2129

Kassebaum, John

Stellar Wind Development, LLC

Foresman, Brian

Indiana Univ. Medical Center

Talavage, Thomas

Purdue Univ.

Eberhart, Russell

Purdue School of Engineering and Tech. IUPUI

10:00-10:15

**Separable Least Squares Identification of Long Memory Block Structured Models:**

**Application to Lung Tissue Viscoelasticity**, pp. 2130-2133

Westwick, David

Univ. of Calgary

Suki, Bela

Boston Univ.

10:15-10:30

**Optimal Feature Selection for Seizure Detection: A Subspace Based Approach**, pp. 2134-2137

Ozkurt, Tolga Esat

Univ. of Pittsburgh

Sun, Mingui

Univ. of Pittsburgh

Akgul, Tayfun

Istanbul Tech. Univ.

Sclabassi, Robert

Univ. of Pittsburgh

**FrA02**

Marquis C

**Nerve Stimulation As a Clinical Rehabilitation Technique (Oral Session)**

09:00-09:15

**Combined Peripheral and Cortical Neural Stimulation in Motor Neurorehabilitation\***

Sinkjaer, Thomas

Aalborg Univ.

Mrachacz-Kersting, Natalie

The Univ. of Auckland



09:15-09:30

***Modulation in Spinal Circuits and Corticospinal Connections Following Nerve Stimulation and Operant Conditioning***, pp. 2138-2141

Thompson, Aiko K.

Wadsworth Center, NY State Dept. Health

Stein, Richard B.

Univ. of Alberta

Chen, Xiang Yang

Wadsworth Center, NY State Dept. Health and SUNY Albany

Wolpaw, Jonathan R.

Wadsworth Center, NY State Dept. Health and SUNY Albany

09:30-09:45

***Electrical Stimulation Augmented Rehabilitation of Hemiparetic Gait\****

Sinkjaer, Thomas

Aalborg Univ.

09:45-10:00

***Transcutaneous Electrical Stimulation Technology for Functional Electrical Therapy Applications***, pp. 2142-2145

Popovic, Milos R.

Univ. of Toronto

10:00-10:15

***Hybrid Assistive Systems for Rehabilitation: Lessons Learned from Functional Electrical Therapy in Hemiplegics***, pp. 2146-2149

Popovi\_., Dejan

Aalborg Univ.

Popovi\_., Mirjana

Aalborg Univ.

10:15-10:30

***Dynamic Balance Training with Sensory Electrical Stimulation in Chronic Stroke Patients***, pp. 2150-2153

Worms, Georg

Univ. of Glasgow

Matja;\_., Zlatko

Inst. for Rehabilitation, Republic of Slovenia

Gollee, Henrik

Univ. of Glasgow

Cikajlo, Imre

Inst. for Rehabilitation, Republic of Slovenia

Goljar, Nika

Inst. for Rehabilitation, Republic of Slovenia

Hunt, Kenneth J.

Univ. of Glasgow

**FrA03**

SoHo-Herald

**Neural Networks and Support Vector Machines in Biological Signal Processing (Poster Session)**

09:00-09:15

***Multiple ECG Beats Recognition in the Frequency Domain Using Grey Relational Analysis***, pp. 2154-2158

Lin, Chia-Hung

Kao-Yuan Inst. of Tech.

Du, Yi Chun

National Cheng Kung Univ.

Chen, Yung-Fu

China Medical Univ.

Chen, Tainsong

National Cheng Kung Univ.

09:15-09:30

***Robustness of Support Vector Machine-Based Classification of Heart Rate Signals***, pp. 2159-2162

Kampouraki, Argyro

Univ. of Ioannina

Nikou, Christophoros

Univ. of Ioannina

Manis, George

Univ. of Ioannina

09:30-09:45

***Intelligent Arrhythmia Detection and Classification Using ICA***, pp. 2163-2166

Azemi, Asad

Penn State Univ.

Sabzevari, Vahid Reza

Islamic Azad Univ. of Mashhad

Khademi, Morteza

Ferdowsi Univ. of Mashhad

Gholizade, Hossein

ferdowsi

Kiani, Arman

Ferdowsi Univ. of Mashhad, Iran

Dastgheib, zeinab

Ferdowsi Univ.

09:45-10:00

***Adaptive Neuro-Fuzzy Inference System for Analysis of Doppler Signals***, pp. 2167-2170

Ubeyli, Elif Derya

TOBB Ec. and Tech. Univ.

10:00-10:15

***Effect of Feature and Channel Selection on EEG Classification***, pp. 2171-2174

Al-Ani, Ahmed  
Al-Sukker, Akram

Univ. of Tech. Sydney  
Univ. of Tech. Sydney

10:15-10:30

***Reducing the Number of Channels for an Ambulatory Patient-Specific EEG-Based Epileptic Seizure Detector by Applying Recursive Feature Elimination***, pp. 2175-2178

Glassman, Elena  
Guttag, John

MIT  
MIT

10:15-10:30

***Detection of Bursts in the EEG of Post Asphyctic Newborns***, pp. 2179-2182

Löfhede, Johan  
Löfgren, Nils  
Thordstein, Magnus  
Flisberg, Anders  
Kjellmer, Ingemar  
Lindecrantz, Kaj

Univ. Coll. of Borås  
Univ. Coll. of Borås  
Unit of Clinical Neurophysiology, Sahlgrenska Univ. Hospital  
Goteborg Univ.  
Goteborg Univ.  
Univ. Coll. of Borås

10:15-10:30

***Creating a Nonparametric Brain-Computer Interface with Neural Time-Series Prediction Preprocessing***, pp. 2183-2186

Coyle, Damien  
McGinnity, T. Martin  
Prasad, Girijesh

Univ. of Ulster  
Univ. of Ulster  
Univ. of Ulster

10:15-10:30

***Early Driver Fatigue Detection from Electroencephalography Signals Using Artificial Neural Networks***, pp. 2187-2190

King, Leslie  
Nguyen, Hung  
Lal, Sara

Univ. of Tech. Sydney  
Univ. of Tech. Sydney  
Univ. of Tech. Sydney

10:15-10:30

***Unspoken Vowel Recognition Using Facial Electromyogram***, pp. 2191-2194

Poosapadi Arjunan, Sridhar  
Kant Kumar, Dinesh  
Yau, Wai Chee  
Weghorn, Hans

RMIT Univ.  
RMIT Univ.  
RMIT Univ.  
BA-Univ. of cooperative education

10:15-10:30

***Patients on Weaning Trials from Mechanical Ventilation Classified with Neural Networks and Feature Selection***, pp. 2195-2198

Giraldo, Beatriz  
Arizmendi, Carlos  
Romero, Enrique  
Alquezar, René  
Caminal, Pere  
Benito, Salvador  
Ballesteros, D

Tech. Univ. of Catalonia (UPC)  
Tech. Univ. of Catalonia (UPC)  
Tech. Univ. of Catalonia (UPC)  
Tech. Univ. of Catalonia (UPC)  
Tech. Univ. of Catalonia (UPC)  
Hospital de la Santa Creu i Sant Pau  
Hospital Univ. de Getafe

10:15-10:30

***Speech Sound Classification and Detection of Articulation Disorders with Support Vector Machines and Wavelets***, pp. 2199-2202

Georgoulas, George  
Georgopoulos, Voula  
Stylios, Chrysostomos

Univ. of Patras  
Tech. Educal Inst. of Patras  
Univ. of Patras

10:15-10:30

***The Effect of Electrode Displacements on Pattern Recognition Based Myoelectric Control***, pp. 2203-2206  
Hargrove, Levi Univ. of New Brunswick  
Engelhart, Kevin Univ. of New Brunswick  
Hudgins, Bernard Univ. of New Brunswick

10:15-10:30

***Novel Method of Using Dynamic Electrical Impedance Signals for Noninvasive Diagnosis of Knee Osteoarthritis***, pp. 2207-2210  
Gajre, Suhas SGGSI&T, Nanded and CBME, Indian Inst. of Tech. Delhi  
Anand, Sneha CBME, Indian Inst. of Tech. Delhi  
Singh, U PMR, All India Inst. of Medical Sciences New Delhi  
Saxena, Rajendra CBME, Indian Inst. of Tech. Delhi

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**FrA04**

Ziegfeld

**Micro Robotics (Oral Session)**

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09:00-09:15

***Capsular Locomotive Microrobot for Gastrointestinal Tract***, pp. 2211-2214  
Park, Sukho Korea Inst. of Science & Tech.  
Hyunjun, Park KIST  
Sungjin, Park KIST  
Jee, Changyeol KIST  
Kim, Jinseok Korea Inst. of Science and Tech.  
Kim, Byungkyu Korea Inst. of Science & Tech.

09:15-09:30

***Towards Active Capsular Endoscopy: Preliminary Results on a Legged Platform***, pp. 2215-2218  
Menciassi, Arianna Scuola Superiore Sant'Anna  
Stefanini, Cesare Scuola Superiore Sant'Anna  
Orlandi, Giovanni Scuola Superiore Sant'Anna  
Quirini, Marco Scuola Superiore Sant'Anna  
Dario, Paolo Scuola Superiore Sant'Anna

09:30-09:45

***Robust Contact Detection in Micromanipulation Using Computer Vision Microscopy***, pp. 2219-2222  
Wang, Wenhui Univ. of Toronto  
Liu, Xinyu Univ. of Toronto  
Sun, Yu University of Toronto

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**FrA05**

Duffy-Columbia

**Monitoring Sensors and Systems I (Oral Session)**

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09:00-09:15

***Applications of a Textile-Based Wearable System for Vital Signs Monitoring***, pp. 2223-2226  
Di Rienzo, Marco Fondazione Don Carlo Gnocchi  
Rizzo, Francesco Fondazione Don C. Gnocchi ONLUS  
Meriggi, Paolo Fondazione Don Gnocchi  
Bordoni, Bruno Fondazione Don Gnocchi ONLUS  
Brambilla, Gabriella Fondazione Don C. Gnocchi, ONLUS  
Ferratini, Maurizio Fondazione Don C. Gnocchi, ONLUS  
Castiglioni, Paolo Fondazione Don C. Gnocchi ONLUS

09:15-09:30

***Measurement of Human Gastric Motility by Near-Infrared Light for the Assessment of Chronic Mental Stress***, pp. 2227-2230  
Teppej, Hayashi Ritsumeikan Univ.  
Shiozawa, Naruhiro Ritsumeikan Univ.  
Makikawa, Masaaki Ritsumeikan Univ.

09:30-09:45

***A Multi-Channel Femtoampere-Sensitivity Conductometric Array for Biosensing Applications\****

Gore, Amit Michigan State Univ.  
Chakrabartty, Shantanu Michigan State Univ.  
Pal, Sudeshna Michigan State Univ.  
Alocilja, Evangelyn Michigan State Univ.

09:45-10:00

***Measurement of Blood Urea Based in Optical Sensing by Employ in Hemodialysis***, pp. 2231-2234

Martinez Chavez, Gustavo Adolfo UDEFA

10:00-10:15

***Robust Overnight Monitoring of Human Vital Signs by a Non-Contact Respiration and Heartbeat Detector***, pp. 2235-2238

Li, Changzhi Univ. of Florida  
Lin, Jenshan Univ. of Florida  
Xiao, Yanming Univ. of Florida

10:15-10:30

***Long-Term Characterization of Electrode Materials for Surface Electrodes in Biopotential Recording***, pp. 2239-2242

Hoffmann, Klaus-Peter Fraunhofer Inst. für Biomedizinische Tech. IBMT  
Ruff, Roman Fraunhofer Inst. für Biomedizinische Tech. IBMT  
Poppendieck, Wigand Fraunhofer Inst. für Biomedizinische Tech. IBMT

**FrA06**

Empire Hudson

**Diffusion Tensor Imaging (Oral Session)**

09:00-09:15

***Simulation of the MRI Measurement of Diffusion in Realistic Neural Tissue Models***, pp. 2243-2244

Frank, Lawrence Univ. of California San Diego

09:15-09:30

***Hybrid Diffusion Imaging (HYDI)***, pp. 2245-2248

Alexander, Andrew Univ. of Wisconsin  
Wu, Yu-Chien Univ. of Wisconsin  
Venkat, Pradeep Univ. of Wisconsin

09:30-09:45

***Comparison of Brain White Matter Fiber Orientation Measurements Based on Diffusion Tensor Imaging and Light Microscopy***, pp. 2249-2251

Anderson, Adam Vanderbilt Univ.  
Choe, Ann Vanderbilt Univ.  
Stepniewska, Iwona Vanderbilt Univ.  
Colvin, Daniel Vanderbilt Univ.

09:45-10:00

***Characterization of Mouse Brain and Its Development Using Diffusion Tensor Imaging and Computational Techniques***, pp. 2252-2255

Zhang, Jiangyang Johns Hopkins Univ. School of Medicine  
Richards, Linda J. Univ. of Queensland School of Biomedical Sciences and The Queens  
Miller, Michael Johns Hopkins Univ.  
Yarowksy, Paul Univ. of Maryland School of Medicine  
van Zijl, Peter Johns Hopkins Univ. School of Medicine  
Mori, Susumu Johns Hopkins Univ. School of Medicine

10:00-10:15

***Characterization of Anomalous Diffusion from MR Signal May Be a New Probe to Tissue Microstructure***, pp. 2256-2259

Ozarslan, Evren  
Basser, Peter  
Shepherd, Timothy  
Thelwall, Peter  
Vemuri, Baba  
Blackband, Stephen

National Inst. of Health  
National Inst. of Health  
Univ. of Florida  
Newcastle Univ.  
Univ. of Florida  
Univ. of Florida

10:15-10:30

***An Information Theoretic Approach Characterizing Diffusion Anisotropy in Diffusion-Weighted Magnetic Resonance Images***, pp. 2260-2263

Metwalli, Nader  
LaConte, Stephen  
Hu, Xiaoping

Georgia Inst. of Tech. and Emory Univ.  
Emory Univ.  
Emory Univ. and Georgia Inst. of Tech.

**FrA07**

Cantor-Jolson

**Cardiac Arrhythmias (Oral Session)**

09:00-09:15

***Calcium Transients Influences Action Potential Amplitudes in Ventricular Fibrillation***, pp. 2264-2267

Choi, Bum-Rak  
Liu, Tong  
Salama, Guy

Tulane Univ.  
Univ. of Pittsburgh  
Univ. of Pittsburgh

09:15-09:30

***Epicardial Rotors in Panoramic Optical Maps of Fibrillating Swine Ventricles***, pp. 2268-2271

Kay, Matthew  
Rogers, Jack

The George Washington Univ.  
Univ. of Alabama in Birmingham

09:30-09:45

***Role of Cellular Uncoupling in Arrhythmogenesis in Ischemia Phase 1B***, pp. 2272-2275

Jie, Xiao  
Rodriguez, Blanca  
Trayanova, Natalia

Tulane Univ.  
Oxford Univ.  
Tulane Univ.

09:45-10:00

***Field Stimulation of Cells in Suspension: Use of a Hybrid Finite Element Method***, pp. 2276-2279

Ying, Wenjun  
Pourtaheri, Navid  
Henriquez, Craig

Duke Univ.  
Duke Univ.  
Duke Univ.

10:00-10:15

***Vulnerability to Electric Shocks in the Regionally-Ischemic Ventricles***, pp. 2280-2283

Rodriguez, Blanca  
Tice, Brock  
Blake, Robert  
Gavaghan, David  
Trayanova, Natalia

Univ. of Oxford  
Tulane Univ.  
Tulane Univ.  
Univ. of Oxford  
Tulane Univ.

**FrA08**

Juilliard

**Neural Informatics and Signal Processing II (Oral Session)**

09:00-09:15

***Separation of Subcortical Component from Cortical Auditory Evoked Potential by Independent Component Analysis***, pp. 2284-2287

Takahashi, Hirokazu  
Nakao, Masayuki  
Kaga, Kimitaka

Univ. of Tokyo  
Univ. of Tokyo  
Univ. of Tokyo

09:15-09:30

**Multi-Channel Recordings of the Motor Activity from the Spinal Cord of Behaving Rats**, pp. 2288-2291  
Prasad, Abhishek  
Sahin, Mesut  
New Jersey Inst. of Tech.  
New Jersey Inst. of Tech.

09:30-09:45

**Electrocorticographic Signal Classification Based on Time-Frequency Decomposition and Nonparametric Statistical Modeling**, pp. 2292-2295  
Dat, Tran Huy  
Shue, Louis  
Guan, Cuntai  
Inst. for Infocomm Res.  
Inst. for Infocomm Res.  
Inst. for Infocomm Res.

09:45-10:00

**Enhanced Hybrid Electromyogram / Eye Gaze Tracking Cursor Control System for Hands-Free Computer Interaction**, pp. 2296-2299  
Chin, Craig A.  
Barreto, Armando  
Florida International Univ.  
Florida International Univ.

10:00-10:15

**Modeling Hippocampal Nonlinear Dynamic Transformations with Principal Dynamic Modes**, pp. 2300-2303  
Courellis, Spiros  
Zanos, Theodoros  
Hsiao, Min-Chi  
Hampson, Robert  
Deadwyler, Sam  
Berger, Theodore  
Marmarelis, Vasilis  
Univ. of Southern California  
Univ. of Southern California  
Univ. of Southern California  
Wake Forest Univ.  
Wake Forest Univ.  
Univ. of Southern California  
Univ. of Southern California

10:15-10:30

**The Use of the Wavelet Transform in EMG M-Wave Pattern Classification**, pp. 2304-2307  
Salvador, Jillian  
de Bruin, Hubert  
McMaster Univ.  
McMaster Univ.

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**FrA09**

Gramercy-Olmstead

**Healthcare Decision Support Systems I (Oral Session)**

09:00-09:15

**Predicting Probability of Mortality in the Neonatal Intensive Care Unit**, pp. 2308-2311  
Zhou, Dajie  
Frize, Monique  
Univ. of Ottawa  
Carleton Univ.

09:15-09:30

**Eye Stiffness Measurement by Probe Contact Method**, pp. 2312-2315  
Kurita, Yuichi  
Kempf, Roland  
Iida, Yoshichika  
Kaneko, Makoto  
Sugimoto, Eiichiro  
Tsukamoto, Hidetoshi  
Mishima, Hiromu  
Hiroshima Univ.  
Hiroshima Univ.  
Hiroshima Univ.  
Hiroshima Univ.  
Chugoku Rousai Hospital  
Hiroshima Univ.  
Hiroshima Univ.

09:30-09:45

**A Comparison of Methodologies for Fuzzy Expert System Creation - Application to Arrhythmic Beat Classification**, pp. 2316-2319  
Tsipouras, Markos G.  
Exarchos, Themis P.  
Fotiadis, Dimitrios I.  
Univ. of Ioannina  
Unit of Medical Tech. and Intelligent Information  
Univ. of Ioannina

09:45-10:00

**Computerized Detection of Lung Tumors in PET/CT Images**, pp. 2320-2323

Jafar, Iyad  
Ying, Hao  
Shields, Anthony  
Muzik, Otto

Wayne State Univ.  
Wayne State Univ.  
Wayne State Univ.  
Wayne State Univ.

10:00-10:15

**Identifying Risk Factors for Two Complication Types for Neonatal Intensive Care Patients (NICU)**, pp. 2324-2327

Frize, Monique  
Walker, Robin  
Ibrahim, Doaa

Carleton Univ.  
Children Hospital of Eastern Ontario  
Ottawa Univ.

10:15-10:30

**Implementation of a Burn Scar Assessment System by Ultrasound Techniques**, pp. 2328-2331

Du, Yi Chun  
Lin, Chih-Ming  
Chen, Yung-Fu  
Chen, Chung-Lin  
Chen, Tainsong

National Cheng Kung Univ.  
National Cheng Kung Univ.  
China Medical Univ.  
National Cheng Kung Univ.  
National Cheng Kung Univ.

**FrA10**

Astor Ballroom

**Segmentation, Classification, Counting, and Feature Computation (Oral Session)**

09:00-09:15

**A 3D Level Sets Method for Segmenting the Mouse Spleen and Follicles in Volumetric MicroCT Images**, pp. 2332-2336

Price, Jeffery  
Aykac, Deniz  
Wall, Jonathan

Oak Ridge National Lab.  
Oak Ridge National Lab.  
Univ. of Tennessee Graduate School of Medicine

09:15-09:30

**3D Prostate Boundary Segmentation from Ultrasound Images Using 2D Active Shape Models**, pp. 2337-2340

Hodge, Adam Christopher  
Ladak, Hanif Mohamed

The Univ. of Western Ontario  
The Univ. of Western Ontario

09:30-09:45

**Segmentation of Prostate from 3-D Ultrasound Volumes Using Shape and Intensity Priors in Level Set Framework**, pp. 2341-2344

Yang, Fuxing  
Suri, Jasjit  
Fenster, Aaron

Diagnostic Ultrasound, Bothell, WA  
Biomedical Tech.  
Robarts Res. Inst.

09:45-10:00

**Automated Angiogenesis Quantification through Advanced Image Processing Techniques**, pp. 2345-2348

Doukas, Charalampos  
Maglogiannis, Ilias  
Chatziioannou, Aristotle  
Papapetropoulos, Andreas

Univ. of the Aegean  
Univ. of the Aegean  
National Hellenic Res. Foundation  
School of Pharmacy, Univ. of Patras

10:00-10:15

**Automatic Classification of Images with Appendiceal Orifice in Colonoscopy Videos**, pp. 2349-2352

Cao, Yu  
Liu, Danyu  
Tavanapong, Wallapak  
Wong, Johnny S  
Oh, JungHwan  
de Groen, Petrus (Piet) Cornelius

Iowa State Univ.  
Iowa State Univ.  
Iowa State Univ.  
Iowa State Univ.  
Univ. of North Texas  
Mayo Clinic

10:15-10:30

**Extraction of the Number of Peroxisomes in Yeast Cells by Automated Image Analysis**, pp. 2353-2356  
Niemistö, Antti  
Selinummi, Jyrki  
Saleem, Ramsey  
Shmulevich, Ilya  
Aitchison, John  
Yli-Harja, Olli  
Tampere Univ. of Tech.  
Tampere Univ. of Tech.  
Inst. for Systems Biology  
Inst. for Systems Biology  
Inst. for Systems Biology  
Tampere Univ. of Tech.

**FrA11**

Belasco

**Student Paper Competition III (Special Session)**

09:00-09:15

*Modulation of Shock-End Virtual Electrode Polarisation As a Direct Result of 3D Fluorescent Photon Scattering\**

Bishop, Martin  
Rodriguez, Blanca  
Trayanova, Natalia  
Gavaghan, David  
Univ. of Oxford  
Oxford Univ.  
Tulane Univ.  
Univ. of Oxford

09:15-09:30

*High-Precision Absolute Positioning of Medical Instruments in MRI Systems\**

Aboussouan, Eric  
Martel, Sylvain  
École Pol. de Montreal (EPM)  
Ec. Pol. de Montreal

09:30-09:45

*Esophageal Electric Fields Are Correlated to Atrial Defibrillation Thresholds: Towards Patient-Specific Optimization of External Atrial Defibrillation\**

Fitch, David  
Soberman, Judith  
de Jongh Curry, Amy  
The Univ. of Memphis  
Univ. of Tennessee Health Science Center  
The Univ. of Memphis

09:45-10:00

*Automated Non-Invasive Detection of Pumping States in an Implantable Rotary Blood Pump\**

Karantonis, Dean Michael  
Cloherty, Shaun L  
Mason, David G  
Salamonsen, Robert F  
Ayre, Peter Joseph  
Lovell, Nigel H  
UNSW  
Univ. of New South Wales  
Ventracor Ltd  
Alfred Hospital  
Ventracor Ltd  
Univ. of New South Wales

10:00-10:15

*Correlation between Live and Post Mortem Skull Conductivity Measurements\**

Wendel, Katrina  
Malmivuo, Jaakko  
Tampere Univ. of Tech.  
Tampere Univ. of Tech.

**FrA12**

Palace Wintergarden

**Biomaterials and Cell-Biomaterial Interactions (Oral Session)**

09:00-09:15

*Biomimetic Nano-Structured Scaffolds\**

Ma, Peter  
Univ. of Michigan

09:15-09:30

*Engineered Osteogenesis with Angiogenesis\**

Mao, Jeremy  
Columbia Univ.



09:30-09:45

***Engineered Microenvironments to Investigate Cellular Behavior***, pp. 2357-2357

Raghavan, Srivatsan  
Nelson, Celeste  
Sniadecki, Nathan  
Lim, Emerson  
Chen, Christopher

Univ. of Pennsylvania  
Johns Hopkins Univ.  
Univ. of Pennsylvania  
Johns Hopkins Univ.  
Univ. of Pennsylvania

09:45-10:00

***A Novel Use for Capillary Channel Fibers: Enhanced Engineered Tissue Systems***, pp. 2358-2361

Burg, Karen  
Brunson, Douglas

Clemson Univ.  
Clemson Univ.

10:00-10:15

***Biocompatibility of Candidate Materials for the Realization of Medical Microdevices***, pp. 2362-2365

Pouponneau, Pierre  
Yahia, LHocine  
Merhi, Yahye  
Epure, Laura Mery  
Martel, Sylvain

Ec. Pol. de Montreal  
Ec. Pol. de Montreal  
Montreal Heart Inst.  
Ec. Pol. de Montreal  
Ec. Pol. de Montreal

10:15-10:30

***Characterization of the Mechanical Properties and Mineral Distribution of the Anterior Cruciate Ligament-To-Bone Insertion Site***, pp. 2366-2369

Moffat, Kristen  
Sun, Wan-Hsuan  
Chahine, Nadeen  
Pena, Paul  
Doty, Stephen  
Hung, Clark  
Ateshian, Gerard  
Lu, Helen

Columbia Univ.  
Columbia Univ.  
Columbia Univ.  
Columbia Univ.  
Hospital for Special Surgery  
Columbia Univ.  
Columbia Univ.  
Columbia Univ.

**FrA13**

Brecht

**Optical Tomographic Imaging I (Oral Session)**

09:00-09:15

***Computationally Efficient Methods for Incorporation of Spectral Priors in 3-D Optical Tomography\****

Srinivasan, Subhadra  
Pogue, Brian  
Leblond, Frederic

Dartmouth Coll.  
Dartmouth Coll.  
Advanced Res. Tech. Inc.

09:15-09:30

***In-Vivo Lung Cancer Imaging in Mice Using 360 Deg Free-Space Fluorescence***

***Molecular Tomography***, pp. 2370-2372

Deliolanis, Nikolaos

Massachusetts General Hospital, Harvard Medical School

09:30-09:45

***Absorption and Fluorescence Diffuse Optical Tomography in the Spatial Frequency Domain Using Modulated Imaging (I)\****

Cuccia, David

Univ. of CA, Irvine

**FrA14**

Chelsea-Gotham

**Neural Injury (Oral Session)**

09:00-09:15

***Conduction Velocity Distribution Estimation Using the Collision Technique for Assessing***

***Carpal Tunnel Syndrome***, pp. 2373-2376

Sundar, Swarna  
Gonzalez-Cueto, Jose A.

Dalhousie Univ.  
Dalhousie Univ.

09:15-09:30

***Efficacy of Electrotactile Vestibular Substitution in Patients with Bilateral Vestibular and Central Balance Loss\****

Danilov, Yuri  
Skinner, Kimberly  
Tyler, Mitchell  
Bach-y-Rita, Paul

Wicab, Inc.  
Wicab, Inc.  
UW-Madison  
UW-Madison, Wicab, Inc.

09:30-09:45

***Use of the Finite Element Method to Assess Impact of Current on Forearm and Wrist During an Electrical Accident***, pp. 2377-2379

Morse, Michael  
Morse, Jennifer

Univ. of San Diego  
None

09:45-10:00

***Kinematics of Electrically Elicited Eyelid Movement***, pp. 2380-2383

Sachs, Nicholas  
Chang, Eli  
Weiland, James

Doheny Eye Inst. Univ. of Southern California  
Doheny Eye Inst. Univ. of Southern California  
Doheny Eye Inst. Univ. of Southern California

10:00-10:15

***High Rate Shear Insult Delivered to Cortical Neurons Produces Heterogeneous Membrane Permeability Alterations***, pp. 2384-2387

LaPlaca, Michelle  
Prado, Gustavo  
Cullen, Kacy  
Irons, Hillary

Georgia Inst. of Tech.  
Georgia Inst. of Tech.  
Georgia Inst. of Tech.  
Georgia Inst. of Tech.

**FrA15**

O'Neill

**Ultrasound Imaging I (Oral Session)**

09:00-09:15

***Automatic Image-Based Gating for 4D Ultrasound***, pp. 2388-2391

Karadayi, Kerem  
Hayashi, Tetsuya  
Kim, Yongmin

Univ. of Washington  
Hitachi Medical Corp.  
Univ. of Washington

09:15-09:30

***Characterization of Carotid Atherosclerotic Plaques Using Frequency-Based Texture Analysis and Bootstrap***, pp. 2392-2395

Stoitsis, John  
Tsiaparas, Nikos  
Golemati, Spyretta  
Nikita, Konstantina

National Tech. Univ. of Athens  
National Tech. Univ. of Athens  
National Tech. Univ. of Athens  
National Tech. Univ. of Athens

09:30-09:45

***Classification of the Stages of Hyperplasia in Breast Ducts by Analyzing Different Depths and Segmentation of Ultrasound Breast Scans into Ductal Areas***, pp. 2396-2399

Taslidere, Ezgi  
Cohen, Fernand S.  
Georgiou, Georgia

Drexel Univ.  
Drexel Univ.  
European Patent Office

09:45-10:00

***Detection of Prostate Cancer from RF Ultrasound Echo Signals Using Fractal Analysis***, pp. 2400-2403

Moradi, Mehdi  
Abolmaesumi, Purang  
Isotalo, Phil  
Siemens, David Robert  
Sauerbrei, Eric  
Mousavi, Parvin

Queen's Univ.  
Queen's Univ.  
Kingston General Hospital  
Kingston General Hospital  
Kingston General Hospital  
Queen's Univ.

10:00-10:15

***User-Independent Plaque Characterization and Accurate IMT Measurement of Carotid Artery Wall Using Ultrasound***, pp. 2404-2407

Delsanto, Silvia  
Molinari, Filippo  
LIBONI, WILLIAM  
Giustetto, Pierangela  
BADALAMENTI, SERGIO  
Suri, Jasjit

Pol. di Torino  
Pol. di Torino  
GRADENIGO HOSPITAL  
Presidio Sanitario Gradenigo  
GRADENIGO HOSPITAL  
Biomedical Tech.

10:15-10:30

***Coded Excitation and Annular Arrays for High-Frequency Ultrasound Imaging***, pp. 2408-2411

Mamou, Jonathan  
Ketterling, Jeffrey A.

Riverside Res. Inst.  
Riverside Res. Inst.

**FrA16**

Musicbox-Majestic

**Bio-Robotics I (Oral Session)**

09:00-09:15

***A Method for Online Estimation of Human Arm Dynamics***, pp. 2412-2416

Mobasser, Farid  
Hashtrudi-Zaad, Keyvan

Queen's Univ.  
Queen's Univ.

09:15-09:30

***A Supervised Feature Projection for Real-Time Multifunction Myoelectric Hand Control***, pp. 2417-2420

Chu, Jun-Uk  
Moon, Inhyuk  
Mun, Mu-Seong

Korea Orthopedics & rehabilitation Engineering Center  
Dong-Eui Univ.  
Korea Orthopedics & Rehabilitation Engineering Center

09:30-09:45

***Towards Hybrid Swimming Microrobots: Bacteria Assisted Propulsion of Polystyrene Beads***, pp. 2421-2424

Behkam, Bahareh  
Sitti, Metin

Carnegie Mellon Univ.  
Carnegie Mellon Univ.

09:45-10:00

***FlexCVA: A Continuously Variable Actuator for Active Orthotics***, pp. 2425-2428

Horst, Robert W.  
Marcus, Richard

Tibion Corp.  
Tibion Corp.

10:00-10:15

***Catastrophe and Stability Analysis of a Cable-Driven Actuator***, pp. 2429-2433

Sulzer, James  
Peshkin, Michael  
Patton, James (Jim)

Northwestern Univ.  
Northwestern Univ.  
Rehabilitation Inst. of Chicago and Northwestern Univ.

**FrB01**

Marquis AB

**Time-Frequency Analysis in Central Nervous System (Oral Session)**

10:45-11:00

***Wavelet Analysis for EEG Feature Extraction in Deception Detection***, pp. 2434-2437

Merzagora, Anna Caterina  
Bunce, Scott  
Izzetoglu, Meltem  
Onaral, Banu

Drexel Univ.  
Drexel Univ. Coll. of Medicine  
Drexel Univ.  
Drexel Univ.

11:00-11:15

***Modeling the Time-Varying Microstructure of Simulated Sleep EEG Spindles Using Time-Frequency***

***Analysis Methods***, pp. 2438-2441

Xanthopoulos, Petros  
Golemati, Spyretta  
Sakkalis, Vangelis  
Ktonas, Periklis  
Zervakis, Michalis  
Soldatos, Constantin

Tech. Univ. of Crete  
Univ. of Athens  
Tech. Univ. of Crete - Foundation for Res. and  
Univ. of Athens  
Tech. Univ. of Crete, Greece  
Medical School, Univ. of Athens

11:15-11:30

***Nonlinear Dynamic Neural Network for Text-Independent Speaker Identification Using Information***

***Theoretic Learning Technology***, pp. 2442-2445

Lu, Bing  
Yamada, Walter Mas  
Berger, Theodore

Univ. of Southern California  
Univ. of Southern California  
Univ. of Southern California

11:30-11:45

***Estimation of the Time-Varying Cortical Connectivity Patterns by the Adaptive Multivariate***

***Estimators in High Resolution EEG Studies***, pp. 2446-2449

Astolfi, Laura  
Babiloni, Fabio  
Mattiocco, Marco  
De Vico Fallani, Fabrizio  
Cincotti, Febo  
Mattia, Donatella  
Marciani, Maria Grazia

Univ. of Rome  
Univ. of Rome  
Fondazione Santa Lucia IRCCS  
Univ. La Sapienza  
Fondazione Santa Lucia IRCCS  
Fondazione Santa Lucia IRCCS  
Tor Vergata Univ.

11:45-12:00

***Relation between Wavelet-Biopotential Likeness and Wavelet Compression of***

***Biopotential Trains***, pp. 2450-2453

Martinez-Bonetti, Jose Alejandro  
Escudero-Urbe, Apolo Z.  
Adan-Martinez, Xicotencatl

Inst. Nacional de Astrofísica Óptica y Electrónica  
Inst. Nacional de Astrofísica Óptica y Electrónica  
Inst. Nacional de Astrofísica Óptica y Electrónica

12:00-12:15

***Analysis of Event Related Potentials Using PCA and Matching Pursuit on the***

***Time-Frequency Plane***, pp. 2454-2457

Aviyente, Selin  
Bernat, Edward  
Malone, Stephen  
Iacono, William

Michigan State Univ.  
Univ. of Minnesota  
Univ. of Minnesota  
Univ. of Minnesota

**FrB03**

SoHo-Herald

**Applications of Neural Networks to Biosignal Analysis II (Oral Session)**

10:45-11:00

***EOG and EMG: Two Important Switches in Automatic Sleep Stage Classification***, pp. 2458-2461

Estrada, Edson  
Nazeran, Homayoun  
Barragan, Jaime  
Burk, John R.  
Lucas, Edgar A  
Behbehani, Khosrow

The Univ. of Texas at El Paso  
The Univ. of Texas at El Paso  
Univ. of Texas at El Paso  
Sleep Consultants Inc.  
Sleep Consultants Inc.  
Univ. of Texas at Arlington

11:00-11:15

***Sleep State Scoring in Infants from Respiratory and Activity Measurements***, pp. 2462-2465

Sazonova, Nadezhda  
Sazonov, Edward  
Schuckers, Stephanie  
Tan, Bozhao

West Virginia Univ.  
Clarkson Univ.  
Clarkson Univ.  
Clarkson Univ.

11:15-11:30

***Double-Blind Comparison of Survival Analysis Models Using a Bespoke Web System***, pp. 2466-2469

Taktak, Azzam Fouad George  
Setzkorn, Christian  
Damato, Bertil

Royal Liverpool Univ. Hospital  
Royal Liverpool Univ. Hospital  
Royal Liverpool Univ. Hospital

11:30-11:45

***RBF Network Based on Artificial Immune Algorithm for Regional Head Conductivity Estimation***, pp. 2470-2473

Dong, Guoya  
Zhou, Ying  
Qiu, Zhiliang  
Yan, Weili

Hebei Univ. of Tech.  
Hebei Univ. of Tech.  
Hebei Univ. of Tech.  
Hebei Univ. of Tech.

11:45-12:00

***Statistically Rigorous Human Movement Onset Detection with the Maximal Information Redundancy Criterion***, pp. 2474-2477

Van Dijck, Gert  
Van Hulle, Marc  
Van Vaerenbergh, Jo

Katholieke Univ. Leuven  
K.U.Leuven  
Center for Multidisciplinary Approach and Tech.

12:00-12:15

***Automatic Assessment of Voice Quality According the GRBAS Scale***, pp. 2478-2481

Sáenz-Lechón, Nicolás  
Godino-Llorente, Juan Ignacio  
Osma-Ruiz, Víctor  
Blanco-Velasco, Manuel  
Cruz-Roldán, Fernando

Univ. Pol. de Madrid  
Univ. Pol. de Madrid  
Univ. Pol. de Madrid  
Univ. of Alcalá  
Univ. de Alcalá

**FrB04**

Ziegfeld

**Micro Fluidics** (Oral Session)

10:45-11:00

***Evaluation of Silicon and Polymer Substrates for Fabrication of Integrated Microfluidic Microsystems for DNA Extraction and Amplification***, pp. 2482-2485

Gheorghe, Marin  
Blionas, Spyridon  
Ragoussis, Ioannis  
Galvin, Paul

TYNDALL  
INTRACOM S.A.  
Univ. of Oxford  
TYNDALL

11:00-11:15

***PDMS and Its Suitability for Analytical Microfluidic Devices***, pp. 2486-2489

Kuncova-Kallio, Johana  
Kallio, Pasi

Tampere Univ. of Tech.  
Tampere Univ. of Tech.

11:15-11:30

***Hybrid Silicon/Silicone (polydimethylsiloxane) Microsystem for Cell Culture***, pp. 2490-2493

Blain Christen, Jennifer  
Andreou, Andreas

Johns Hopkins Univ.  
Johns Hopkins Univ.

11:30-11:45

***Modeling of Particle Interactions in DNA-Laden Flows at the Microscale\****

Trebotich, David  
Miller, Gregory  
Bybee, Michael

Lawrence Livermore National Lab.  
Univ. of California, Davis  
Univ. of Illinois at Urbana-Champaign

11:45-12:00

***Magnetic Microactuators for MEMS-Enabled Ventricular Catheters for Hydrocephalus***, pp. 2494-2497

Lee, Selene

Univ. of California, Los Angeles

Vasquez, Daniel James

Univ. of California, Los Angeles

Bergsneider, Marvin

Univ. of California, Los Angeles

Judy, Jack

UCLA

12:00-12:15

***Droplet Screens in Nanovolumes Using Static Conditions***, pp. 2498-2501

Wu, Liang L.

Univ. of California, Irvine

XU, WEI

Univ. of California, Irvine

Bachman, Mark

Univ. of California, Irvine

Li, G.P.

Univ. of California, Irvine

**FrB05**

Duffy-Columbia

**Wearable Sensors and Devices 2 (Oral Session)**

10:45-11:00

***A Reconfigurable Neural Signal Processor (NSP) for Brain Machine Interfaces***, pp. 2502-2505

Darmanjian, Shalom

Univ. of Florida

Cieslewski, Grzegorz

Univ. of Florida

Morrison, Scott

Texas Inst.

Dang, Benjamin

Lockheed Martin ISS

Gugel, Karl

Univ. of Florida

Principe, Jose

Univ. of Florida

11:00-11:15

***In Vivo RF Powering for Advanced Biological Research***, pp. 2506-2509

Zimmerman, Mark

Case Western Res. Univ.

Chaimanonart, Nattapon

Case Western Res. Univ.

Young, Darrin

Case Western Res. Univ.

11:15-11:30

***Characterization of a Novel Data Glove Based on Textile Integrated Sensors***, pp. 2510-2513

Tognetti, Alessandro

Univ. of Pisa

Carbonaro, Nicola

Univ. of pisa

Zupone, Giuseppe

Univ. of pisa

De Rossi, Danilo

Univ. of Pisa

11:30-11:45

***Contactless Sensors for Surface Electromyography***, pp. 2514-2517

Gourmelon, Lena

Philips Res.

Langereis, Geert

Philips Res.

11:45-12:00

***Development and Evaluation of a Wireless Interface for Inputting Characters***

***Using Laplacian EMG***, pp. 2518-2521

Miyazawa, Kenji

Tokyo Denki Univ.

Ueno, Akinori

Tokyo Denki Univ.

Mori, Hiroki

Utsunomiya Univ.

Hoshino, Hiroshi

Tokyo Denki Univ.

Noshiro, Makoto

Kitasato Univ.

12:00-12:15

***A Localization Method Using 3-Axis Magnetoresistive Sensors for Tracking of***

***Capsule Endoscope***, pp. 2522-2525

Wang, Xiaona

The Chinese Univ. of Hong Kong

Meng, Max Qinghu

The Chinese Univ. of Hong Kong

Hu, Chao

The Chinese Univ. of Hong Kong

**Image Reconstruction (Oral Session)**

10:45-11:00

***4D Vascular Tree Reconstruction Using Moving Grid Deformation***, pp. 2526-2529

xue, jiaxing	Univ. of Texas at Arlington
Gao, Jean	Univ. of Texas at Arlington
Arbique, Gary	UT Southwestern Medical Center at Dallas
Michel, Saint-Cyr	UT Southwestern Medical Center at Dallas
Brown, Spencer	UT Southwestern Medical Center at Dallas

11:00-11:15

***Maximum-Likelihood Estimation of Detector Response for PET Image Reconstruction***, pp. 2530-2533

Qi, Jinyi	Univ. of California, Davis
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11:15-11:30

***A Reconstruction Algorithm for Helical CT Imaging on PI-Planes***, pp. 2534-2537

Liang, Hongzhu	Nanyang Tech. Univ.
Zhang, Cishen	Nanyang Tech. Univ.
Yan, Ming	Nanyang Tech. Univ.

11:30-11:45

***Computing the 3-D Structure of Viruses from Unoriented Cryo Electron Microscope Images:******A Fast Algorithm for a Statistical Approach***, pp. 2538-2541

Lee, Junghoon	Purdue Univ.
Zheng, Yili	Purdue Univ.
Doerschuk, Peter C.	Purdue Univ.

11:45-12:00

***3D Breast Microwave Imaging Based on Wavefront Reconstruction***, pp. 2542-2545

Flores-Tapia, Daniel	Univ. of Manitoba
Thomas, Gabriel	Univ. of Manitoba
Ashtari, Ali	Univ. of Manitoba
Pistorius, Stephen	CancerCare Manitoba

12:00-12:15

***A New Method for PET Image Reconstruction Using Fourier-Wavelet Moment***, pp. 2546-2549

Hu, Yining	Southeast Univ.
Zhou, Jian	Southeast Univ.
Shu, Huazhong	Southeast Univ.
Luo, Limin	Univ. of Southeast
Coatrieux, jean louis	INSERM-Univ. Rennes 1

**Forward and Inverse Problems in Cardiac Electrophysiology (Oral Session)**

10:45-11:00

***A Wavefront-Based Constraint for Potential Surface Solutions in Inverse Electrocardiography (I)***, pp. 2550-2553

Ghodrati, Alireza	Draeger Medical Systems, Inc
Keely, Andrew	Northeastern Univ.
Tadmor, Gilead	Northeastern Univ.
MacLeod, Robert	Univ. of Utah
Brooks, Dana	Northeastern Univ.

11:00-11:15

***A Software Framework for Solving Bioelectrical Field Problems Based on Finite Elements (I)***, pp. 2554-2557

Sachse, Frank	Univ. of Utah
Cole, Martin	Univ. of Utah
Stinstra, Jeroen	Univ. of Utah

11:15-11:30

***Meshless Methods in Potential Inverse Electrocardiography***, pp. 2558-2559

Wang, Yong  
Rudy, Yoram

Washington Univ. in Saint Louis  
Washington Univ. in Saint Louis

11:30-11:45

***Estimates of Endocardial Potentials from Non-Contact Intracavitary Probes***, pp. 2560-2563

Throne, Robert  
Olson, Lorraine  
Windle, John  
Schweitzer, Jeff  
Voth, Eric

Rose-Hulman Inst. of Tech.  
Rose-Hulman Inst. of Tech.  
Univ. of Nebraska  
St. Jude Medical, Inc  
St. Jude Medical, Inc

11:45-12:00

***Image Based Modeling of Defibrillation in Children (I)***, pp. 2564-2567

Jolley, Matthew  
Triedman, John  
Westin, Carl-Fredrik  
Weinstein, David  
MacLeod, Robert  
Brooks, Dana

Children's Hospital Boston  
Children's Hospital Boston  
Brigham and Women's Hospital, Harvard Medical School  
Univ. of Utah  
Univ. of Utah  
NorthEastern Univ.

12:00-12:15

***Myocardial Electrical Impedance Correlates with Ischemic ECG ST-Segment Changes in Humans***, pp. 2568-2569

Dzwonczyk, Roger  
Sun, Benjamin  
del Rio, Carlos  
Howie, Michael

The Ohio State Univ.  
The Ohio State Univ.  
The Ohio State Univ.  
The Ohio State Univ.

**FrB08**

Juilliard

**Neural Informatics and Signal Processing 4 (Oral Session)**

10:45-11:00

***A Semi-Supervised SVM Learning Algorithm for Joint Feature Extraction and Classification in Brain Computer Interfaces***, pp. 2570-2573

Li, Yuanqing  
Guan, Cuntai

Inst. for Infocomm Res.  
Inst. for Infocomm Res.

11:00-11:15

***Development of EOG-Based Communication System Controlled by Eight-Directional Eye Movements***, pp. 2574-2577

Yamagishi, Kenji  
Hori, Junichi  
Miyakawa, Michio

Univ.  
Niigata Univ.  
Niigata Univ.

11:15-11:30

***Detection of High Frequency Oscillations with Teager Energy in an Animal Model of Limbic Epilepsy***, pp. 2578-2580

Nelson, Ryan  
Myers, Stephen  
Simonotto, Jennifer D.  
Furman, Michael D.  
Spano, Mark L.  
Norman, Wendy  
Liu, Zhao  
DeMarse, Thomas B.  
Carney, Paul  
Ditto, William L.

Univ. of Florida  
Univ. of Florida  
Univ. of Florida  
Univ. of Florida  
NSWC  
Univ. of Florida  
Univ. of Florida  
Univ. of Florida  
Univ. of Florida



11:30-11:45

***A Space-Time-Frequency Analysis Approach for the Classification Motor Imagery EEG Recordings in a Brain Computer Interface Task***, pp. 2581-2584

Ince, Nuri Firat  
Tewfik, Ahmed  
Arica, Sami

Univ. of Minnesota  
Univ. of Minnesota  
Cukurova Univ.

11:45-12:00

***Large-Scale Inverse and Forward Modeling of Adaptive Resonance in the Tinnitus Decompensation***, pp. 2585-2588

Low, Yin Fen  
Trenado, Carlos  
Delb, Wolfgang  
DAmelio, Roberto  
Falkai, Peter  
Strauss, Daniel J.

Computational Diagnostics and Biocybernetics Unit  
Computational Diagnostics and Biocybernetics Unit  
Computational Diagnostics and Biocybernetics Unit  
Computational Diagnostics and Biocybernetics Unit  
Computational Diagnostics and Biocybernetics Unit  
Computational Diagnostics and Biocybernetics Unit

12:00-12:15

***Laminar Analysis of Movement Direction Information in Local Field Potentials of the Rat Motor Cortex***, pp. 2589-2592

Gage, Gregory J.  
Kawahara, Chie  
Ross, Shani  
Marzullo, Timothy  
Kipke, Daryl

Univ. of Michigan  
Univ. of Michigan  
Univ. of Michigan  
Univ. of Michigan  
Univ. of Michigan

**FrB09**

Gramercy-Olmstead

**Healthcare Information Management I (Oral Session)**

10:45-11:00

***An Integrated System Supporting Training in Medical and Administrative Decision Making in the Emergency Department***, pp. 2593-2596

Spyropoulos, Vasileios  
Tzavaras, Aris  
Botsivaly, Maria  
Moschidis, Manolis  
Koutsourakis, Konstantinos

Tech. Education Inst. of Athens  
Tech. Educational Inst. of Athens  
Tech. Educational Inst. of Athens  
Tech. Educational Inst. of Athens  
Tech. Educational Inst. of Athens

11:00-11:15

***JPEG2000 vs. Full Frame Wavelet Packet Compression for Smart Card Medical Records***, pp. 2597-2600

Azpiroz-leeahan, Joaquin  
Lerallut, Jean-Francois

Univ. Autonoma Metropolitana  
Univ. de Tech. de Compiegne

11:15-11:30

***PACS through Web Compatible with DICOM Standard and WADO Service: Advantages and Implementation***, pp. 2601-2605

Koutelakis, George  
Lymperopoulos, Dimitrios

Univ. of Patras  
Univ. of Patras

11:30-11:45

***Terminology and Global Standardization of Endoscopic Information: Minimal Standard Terminology (MST)***, pp. 2606-2609

Fujino, Masayuki A.  
Bito, Shigeru  
Takei, Kazuko  
Mizuno, Shigeto  
Yokoi, Hideto

Univ. of Yamanashi  
Seafic Software Corp.  
Seafic Software Corp.  
Nara Hospital, Kinki Univ. School of Medicine  
Kagawa Univ. Hospital

11:45-12:00

***Modeling a Web-Based Information System for Managing Clinical Information in Hemophilia Care***, pp. 2610-2613

Teixeira, Leonor  
Ferreira, Carlos Manuel Santos  
Sousa Santos, Beatriz  
Martins, Natália

Univ. of Aveiro  
Univ. of Aveiro  
Univ. of Aveiro  
Hospital of Coimbra

12:00-12:15

***Using Semantic Technologies to Promote Interoperability between Electronic Healthcare Records' Information Models***, pp. 2614-2617

Fernández-Breis, Jesualdo Tomás  
Vivancos-Vicente, Pedro José  
Menárguez-Tortosa, Marcos  
Moner, David  
Maldonado, José Alberto  
Valencia-García, Rafael  
Miranda-Mena, Teddy Gonzalo

Univ. of Murcia  
Univ. of Murcia  
Univ. of Murcia  
Tech. Univ. of Valencia  
Tech. Univ. of Valencia  
Univ. of Murcia  
IMET

**FrB10**

Astor Ballroom

**Image Analysis: Applications I (Oral Session)**

10:45-11:00

***Detection of Lesions in Retina Photographs Based on the Wavelet Transform***, pp. 2618-2621

QUELLEC, Gwenole  
Lamard, Mathieu  
JOSSELIN, Pierre-Marie  
Cazuguel, Guy  
Cochener, Béatrice  
Roux, Christian

GET/ENST Bretagne  
Univ. de Bretagne Occidentale  
Centre Hospitalier Univ. de Brest  
GET/ENST Bretagne  
CHU Morvan  
ENST Bretagne - INSERM

11:00-11:15

***On Diffusion Tensor Estimation***, pp. 2622-2625

Niethammer, Marc  
San Jose Estepar, Raul  
Bouix, Sylvain  
Shenton, Martha  
Westin, Carl-Fredrik

Brigham and Women's Hospital, Harvard Medical School  
Lab. of Mathematics in Imaging, Brigham and Women's Hospital, Ha  
Psychiatry Neuroimaging Lab.  
Brigham and Women's Hospital, Harvard Medical School  
Brigham and Women's Hospital, Harvard Medical School

11:15-11:30

***A Kernel-Based Approach for User-Guided Fiber Bundling Using Diffusion Tensor Data***, pp. 2626-2629

San Jose Estepar, Raul  
Kubicki, Marek  
Shenton, Martha  
Westin, Carl-Fredrik

Lab. of Mathematics in Imaging, Brigham and Women's Hospital, Ha  
Brigham and Women's Hospital  
Brigham and Women's Hospital, Harvard Medical School  
Brigham and Women's Hospital, Harvard Medical School

11:30-11:45

***UWB Microwave Breast Cancer Detection: Generalized Models and Performance Prediction***, pp. 2630-2633

Chen, Yifan  
Gunawan, Erry  
Kim, Yongmin  
Low, Kay soon  
Soh, Cheong Boon  
Lin, Lin Thi

Nanyang Tech. Univ.  
Nanyang Tech. Univ.  
Univ. of Washington  
Nanyang Tech. Univ.  
Nanyang Tech. Univ.  
Nanyang Tech. Univ.

11:45-12:00

***Simultaneous Registration and Landmark Detection***, pp. 2634-2637

Bond, Sarah  
Brady, Michael

Oxford Univ.  
Oxford Univ.

12:00-12:15

**Information-Theoretic Feature Detection in Ultrasound Images**, pp. 2638-2642

Slabaugh, Greg  
Unal, Gozde  
Chang, Ti-Chiun

Siemens Corp. Res.  
Siemens Corp. Res.  
Siemens Corp. Res.

**FrB11**

Belasco

**Student Design Competition (Special Session)**

10:45-11:00

**The Design and Testing of an Epi-Retinal Vision Prosthesis Neurostimulator Capable of Concurrent Parallel Stimulation\***

Dommel, Norbert Brian  
Wong, Yan Tat  
Byrnes-Preston, Phil J.  
Lehmann, Torsten  
Lovell, Nigel H  
Suaning, Gregg

Univ. of New South Wales  
Univ. of New South Wales  
The Univ. of New South Wales  
Univ. of New South Wales  
Univ. of New South Wales  
The Univ. of Newcastle

11:00-11:15

**Ultrasound-Guided Noninvasive Measurement of a Patient's Central Venous Pressure\***

Aggarwal, Vikram  
Chatterjee, Aniruddha  
Cho, Yoonju  
Cheung, Dickson

Johns Hopkins Univ.  
Johns Hopkins Univ.  
Johns Hopkins Univ.  
Bayview Medical Center, Johns Hopkins Univ.

11:15-11:30

**Electrooculogram Based System for Computer Control Using a Multiple Feature Classification Model\***

Kherlopian, Armen  
Sajda, Paul  
Gerrein, Joseph  
Yue, Minerva  
Kim, Kristina  
Kim, Ji Won  
Sukumaran, Madhav

Columbia Univ.  
Columbia Univ.  
Univ. of California, San Diego  
Weill Medical Coll. Cornell Univ.  
Columbia Univ.  
New York Medical Coll.  
Columbia Univ.

**FrB12**

Palace Wintergarden

**Biomaterials and Cell-Biomaterial Interactions - Stem Cells (Oral Session)**

10:45-11:00

**Matrix Elasticity Directs Stem Cell Lineage Specification\***

Discher, Dennis  
Engler, Adam

Univ. of Pennsylvania  
Univ. of Pennsylvania

11:00-11:15

**Chondrogenic Differentiation of Human Embryonic Germ Cell Derived Cells in Hydrogels**, pp. 2643-2646

Varghese, Shyni  
Theprungsirikul, Paranduangji  
Ferran, Angela  
Hwang, Nathaniel  
Canver, Adam  
Elisseeff, Jennifer

Johns Hopkins Univ.  
Johns Hopkins Univ.  
Johns Hopkins Univ.  
Johns Hopkins Univ.  
Johns Hopkins Univ.  
Johns Hopkins Univ.

11:15-11:30

**Chondrogenesis of Mesenchymal Stem Cells by Controlled Delivery of Transforming Growth Factor-Beta3.**, pp. 2647-2650

Moioli, Eduardo  
Mao, Jeremy

Columbia Univ.  
Columbia Univ.

11:30-11:45

***Polymer-Ceramic Composite Microsphere Scaffold Induces Osteogenic Differentiation of Human Mesenchymal Stem Cells***, pp. 2651-2654

Leong, Natalie  
Jiang, Jie  
Lu, Helen

Columbia Univ.  
Columbia Univ.  
Columbia Univ.

11:45-12:00

***The Influence of Cell-Substrate Adhesivity on the Osteogenic Differentiation of Human Mesenchymal Stem Cells\****

Briggs, Tonye  
Kohn, Joachim  
Arinzeh, Treena

New Jersey Inst. of Tech.  
Rutgers Univ.  
New Jersey Inst. of Tech.

**FrB13**

Brecht

**Optical Tomographic Imaging II (Oral Session)**

10:45-11:00

***Tumor Detection Using Bayesian Conjugate Prior in Diffuse Optical Tomography***, pp. 2655-2658

Choudhary, Heeralal  
Nehorai, Arye

Washington Univ. in St. Louis  
Washington Univ. in St. Louis

11:00-11:15

***Approximation Errors and Model Reduction in Optical Tomography***, pp. 2659-2662

Kolehmainen, Ville  
Arridge, Simon  
Kaipio, Jari  
Schweiger, Martin  
Somersalo, Erkki  
Tarvainen, Tanja  
Vauhkonen, Marko

Univ. of Kuopio  
Univ. Coll. London  
Univ. of Kuopio  
Univ. Coll. London  
Helsinki Univ. of Tech.  
Univ. of Kuopio  
Univ. of Kuopio

11:15-11:30

***Diagnosis of Vulnerable Atherosclerotic Plaques by Time-Resolved Fluorescence Spectroscopy and Ultrasound Imaging***, pp. 2663-2666

Jo, Javier Antonio

Univ. of California - Davis

11:30-11:45

***Parametric Reconstruction Method in Optical Tomography***, pp. 2667-2670

Gu, Xuejun  
Masciotti, James  
Hielscher, Andreas

Columbia Univ.  
Columbia Univ.  
Columbia Univ.

11:45-12:00

***Registering Fnr Data to Brain Surface Image Using MRI Templates***, pp. 2671-2674

Ayaz, Hasan  
Izzetoglu, Meltem  
Platek, Steven  
Bunce, Scott  
Izzetoglu, Kurtulus  
Pourrezaei, Kambiz  
Onaral, Banu

Drexel Univ.  
Drexel Univ.  
Drexel Univ.  
Drexel Univ. Coll. of Medicine  
Drexel Univ.  
Drexel Univ.  
Drexel Univ.

12:00-12:15

***Quantitative Small Animal Fluorescence Tomography Using an Ultrafast Gated Image Intensifier***, pp. 2675-2678

Patwardhan, Sachin  
Bloch, Sharon  
Achilefu, Samuel  
Culver, Joseph

Washington Univ. School of Medicine  
Washington Univ. School of Medicine  
Washington Univ. School of Medicine  
Washington Univ. School of Medicine

**FrB14**

Chelsea-Gotham

**New Techniques in Motor Rehabilitation (Oral Session)**

10:45-11:00

***A Novel Experimental System for Investigation of Cortical Activities Related to Lower Limb Movements***, pp. 2679-2682

Ma, Chaolin

Arizona State Univ.

He, Jiping

Arizona State Univ.

11:00-11:15

***Principal Component Analysis of Vertical Ground Reaction Force: A Powerful Method to Discriminate Normal and Abnormal Gait and Assess Treatment***, pp. 2683-2686

Muniz, Adriane Mara de Souza

Federal Univ. of Rio de Janeiro

Manfio, Eliane Fatima

Estacio de Sa Univ.

Andrade, Mario Cesar

State Univ. of Santa Catarina

Nadal, Jurandir

Federal Univ. of Rio de Janeiro

11:15-11:30

***Control of a Pneumatic Orthosis for Upper Extremity Stroke Rehabilitation***, pp. 2687-2693

Wolbrecht, Eric

Univ. of California, Irvine

Leavitt, John

Univ. of California, Irvine

Reinkensmeyer, David

Univ. of California

Bobrow, James

Univ. of Calif, Irvine

11:30-11:45

***Virtual Reality Applications in Improving Postural Control and Minimizing Falls***, pp. 2694-2697

Virk, Sumandeep

Ryerson Univ.

Valter McConville, Kristiina M.

Ryerson Univ.

11:45-12:00

***Limb Alignment and Kinematics Inside a Lokomat Robotic Orthosis***, pp. 2698-2701

Neckel, Nathan

Catholic Univ. of America

Wisman, Wessel

Delft Univ. of Tech.

Hidler, Joseph

Catholic Univ. of America

12:00-12:15

***Relationships between Muscle Activity and Autonomic Regulation During Cycling with a Torque-Assisted Bicycle***, pp. 2702-2705

Kiryu, Tohru

Niigata Univ.

Yamagata, Jun

Niigata Univ.

12:00-12:15

***Generalization of Motor Adaptation Skills from Bimanual-Grasp to Individual Limbs***, pp. 2706-2708

Patton, James (Jim)

Rehabilitation Inst. of Chicago and Northwestern Univ.

Hitchens, Jamie

Northwestern Univ.

**FrB15**

O'Neill

**Computational Genomics (Oral Session)**

10:45-11:00

***Hardware Accelerator for Prediction of Exons***, pp. 2709-2712

Yusuf, Adeel

Centre for Advanced studies in Engineering

Khan, Shoab

CASE - Center for Advanced Studies in Engineering

11:00-11:15

***A Cluster Based Approach for Semantic Similarity in the Biomedical Domain***, pp. 2713-2717

Al-Mubaid, Hisham

Univ. of Houston-Clear Lake

Nguyen, Hoa

The Univ. of Houston Clear Lake

**FrB16**

Musicbox-Majestic

**Bio-Robotics II (Oral Session)**

10:45-11:00

***Dimensionality Reduction of Cellular Actuator Arrays Using the Concept of Synergy for Driving a Robotic Hand***, pp. 2718-2721

Cho, Kyujin

MIT

Asada, Harry

MIT

11:00-11:15

***2D Subspaces for Sparse Control of High-DOF Robots***, pp. 2722-2725

Jenkins, Odest Chadwicke

Brown Univ.

11:15-11:30

***A Biorobotic Pectoral Fin for Autonomous Undersea Vehicles***, pp. 2726-2729

Tangorra, James

MIT

Davidson, Naomi

MIT

Madden, Peter

Harvard Univ.

Lauder, George

Harvard Univ.

Hunter, Ian

MIT

11:30-11:45

***A Cellular Control Architecture for Compliant Artificial Muscles***, pp. 2730-2733

Odhner, Lael

Massachusetts Inst. of Tech.

Ueda, Jun

MIT

Asada, Harry

MIT

11:45-12:00

***Quantification of Dynamic Property of Pneumatic Muscle Actuator for Design of Therapeutic Robot Control***, pp. 2734-2737

Balasubramanian, Sivakumar

Arizona State Univ.

Huang, He

Arizona State Univ.

He, Jiping

Arizona State Univ.

**FrBP1**

Westside Ballroom South

**Ultrasound Imaging II (Poster Session)**

10:45-11:00

***A Non-Rigid Image Registration Technique for 3D Ultrasound Carotid Images Using a "Twisting and Bending" Model***, pp. 2738-2741

Nanayakkara, Nuwan D.

Robarts Res. Inst.

Chiu, Bernard

Robarts Res. Inst.

Samani, Abbas

Univ. of Western Ontario

Spence, J. David

Univ. of Western Ontario

Samarabandu, Jagath

Univ. of Western Ontario

Fenster, Aaron

Robarts Res. Inst.

11:00-11:15

***An Implementation of Image Sharpening Based on Morphological Operations for Ubiquitous Echo***, pp. 2742-2745

Tsubai, Masayoshi

National Inst. of Advanced Industrial Science and Tech. (AIST)

Mitoda, Naoshi

ISLabo, Co., Ltd.

Fukuda, Osamu

National Inst. of Advanced Industrial Science and Tech. (AIST)

Ueno, Naohiro

National Inst. of Advanced Industrial Science and Tech. (AIST)

11:15-11:30

***Ultrasound Image Analysis for Renal Stone Tracking During Extracorporeal Shock Wave Lithotripsy***, pp. 2746-2749

Manousakas, Ioannis

I-Shou Univ.

Pu, Yong-Ren

Chang Jung Christian Univ.

Chang, C. C.

Cheng Kung Univ. Hospital

Liang, Shen-Min

National Cheng Kung Univ. Tainan, Taiwan 701

11:30-11:45

***A Qualitative and Quantitative Interaction Technique for Freehand 3D Ultrasound Imaging***, pp. 2750-2753

Dai, Yakang

Chinese Acad. of Science

Tian, Jie

Inst. of Automation, Chinese Acad. of Sciences

Xue, Jian

Chinese Acad. of Science

Liu, Jianguang

Chinese Acad. of Science

11:45-12:00

***Visualization of Unstable Regions in High PRF Doppler Using Baker Diagrams\****

MORSY, AHMED

Cairo Univ.

12:00-12:15

***Comparison of Wave-Equation versus Measurement-Processing Transducer Calibration for Ultrasonic Transmission Tomography***, pp. 2754-2757

Zacal, Jiri

Brno Univ. of Tech.

Hemzal, Dusan

Masaryk Univ. Brno

Jan, Jiri

Brno Univ. of Tech.

Filipik, Adam

Brno Univ. of Tech.

Jirik, Radovan

Brno Univ. of Tech.

Kolar, Radim

Brno Univ. of Tech.

12:00-12:15

***An Iterative Constrained Least Squares Filter for Ltrasound Image Deconvolution***, pp. 2758-2761

Yeoh, Wee Soon

Nanyang Tech. Univ.

Zhang, Cishen

Nanyang Tech. Univ.

Chen, Ming

Nanyang Tech. Univ.

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**FrBP2**

Westside Ballroom South

**Infrared/Ultrasound/SPECT/CT Imaging (Poster Session)**

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10:45-11:00

***Image Segmentation of Human Forearms in Infrared Image***, pp. 2762-2765

Yoon, Tae-Ho

Konkuk Univ.

Kim, Kyeong-Seop

Konkuk Univ.

Lee, Jeong-Whan

Konkuk Univ.

Kim, Dong-Jun

Cheongju Univ.

Song, Chul-Gyu

Chonbuk National Univ.

11:00-11:15

***Functional Infrared Imaging for Skin-Cancer Screening***, pp. 2766-2769

Buzug, Thorsten M.

RheinAhrCampus Remagen

Schumann, Steffen

RheinAhrCampus Remagen

Pfaffmann, Lucas

RheinAhrCampus Remagen

Reinhold, Uwe

Praxisklinik Bonn

Ruhlmann, Jürgen

RheinAhrCampus Remagen

11:15-11:30

***Quantitative Tool Design Using Tomographic Brain Image Processing from SPECT to Support***

***Psychiatric Diagnosis***, pp. 2770-2773

Vidal Vidal, Mery Isabel

Pontificia Univ. Católica del Perú

Piñeyro Fernández, José del Carmen Julián

Pontificia Univ. Católica del Perú

Alvarado Merino, Rosa Ysabel

Pontificia Univ. Católica del Perú

Callupe Pérez, Rocío Liliana

Pontificia Univ. Católica del Perú

11:30-11:45

***Computed Tomography of Kidney Stones for Extracorporeal Shock Wave Lithotripsy***, pp. 2774-2775

Cadena, Miguel

Univ. Autonoma Metropolitana

11:45-12:00

***Speckle Reduction in Medical Ultrasound: A Novel Scatterer Density Weighted Nonlinear Diffusion Algorithm Implemented As a Neural-Network Filter***, pp. 2776-2782

Badawi, Ahmed  
Rushdi, Muhammed

Univ. of Tennessee Knoxville  
Univ. of Miami

12:00-12:15

***Modeling and Identification of Practical Ultrasound Transducers in Ultrasound Imaging Systems***, pp. 2783-2786

Chen, Ming  
Zhang, Cishen  
Yeoh, Wee Soon

Nanyang Tech. Univ.  
Nanyang Tech. Univ.  
Nanyang Tech. Univ.

12:00-12:15

***Quantitative Wavelet Domain Image Processing of Dynamic PET Data***, pp. 2787-2790

Erlandsson, Kjell  
Jin, Yinpeng  
Wong, Andrew  
Esser, Peter  
Laine, Andrew  
Ogden, Todd  
Oquendo, Maria A  
van Heertum, Ronald  
Mann, J John  
Parsey, Ramin

Columbia Univ.  
Columbia Univ.  
Columbia Univ.  
Columbia Univ.  
Columbia Univ.  
Columbia Univ.  
Columbia Univ.  
Columbia Univ.  
Columbia Univ.  
Columbia Univ.

**FrBP3**

Westside Ballroom South

**Multi-Modality Breast Imaging (Poster Session)**

10:45-11:00

***Spiculation-Preserving Polygonal Modeling of Contours of Breast Tumors***, pp. 2791-2794

Guliatto, Denise  
Rangayyan, Raj  
Daloia de Carvalho, Juliano  
Anchieta Santiago, Sergio

Federal Univ. of Uberlandia  
Schulich School of Engineering, Univ. of Calgary  
Univ. of Uberlandia  
Univ. of Uberlandia

11:00-11:15

***Breast Density Analysis in 3-D Whole Breast Ultrasound Images***, pp. 2795-2798

Chang, Ruey-Feng  
Chang-Chien, Kuang-Che  
Takada, Etsuo  
Suri, Jasjit  
Moon, Woo Kyung  
Wu, Jeffery H.K.  
Cho, Nariya  
Wang, Yi-Fa  
Chen, Dar-Ren

National Chung Cheng Univ.  
National Chung Cheng Univ.  
Dokkyo Univ. School of Medicine  
Biomedical Tech.  
Seoul National Univ. Hospital  
Changhua Christian Hospital  
Seoul National Univ. Hospital  
National Chung Cheng Univ.  
Changhua Christian Hospital

11:15-11:30

***Automated 3D Elastic Registration for Improving Tumor Localization in Whole-Body PET-CT from Combined Scanner***, pp. 2799-2802

Walimbe, Vivek  
Dandekar, Omkar  
Mahmoud, Faaiza  
Shekhar, Raj

The Ohio State Univ.  
Univ. of Maryland  
VA Maryland Health Care System  
Univ. of Maryland

11:30-11:45

***Thermography in Psoriatic Lesion Regression\****

Owczarek, Grzegorz

National Res. Inst.



11:45-12:00

*Primary Evaluation in Nude Mouse Model with Human Breast Cancer by Thermal Texture Maps\**

Yuan, Yun-E

CHINA ARMY GENERAL HOSPITAL

Li Qi, Li Qi

Department of Molecular Biology, Inst. of Basic Medicine,

12:00-12:15

*Fusion of Vibro-Acoustography Images and X-Ray Mammography*, pp. 2803-2806

GholamHosseini, Hamid

Auckland Univ. of Tech.

Alizad, Azra

Mayo Clinic

Fatemi, Mostafa

Mayo Clinic

**FrBP4**

Westside Ballroom South

**Micro-Implanted Devices II (Poster Session)**

10:45-11:00

*Active Floating Micro Electrode Arrays (AFMA)*, pp. 2807-2810

Kim, Taehyung

Illinois Inst. of Tech.

Troyk, Philip

Illinois Inst. of Tech.

Bak, M

Microprobe

11:00-11:15

*Active Electrode Arrays by Chip Embedding in a Flexible Silicone Carrier*, pp. 2811-2815

Vanden Bulcke, Mathieu

IMEC

Baert, Kris

IMEC

Beyne, Eric

IMEC

Gonzalez, Mario

IMEC

Winters, Christophe

imec vzw

Webers, Tomas

IMEC

11:15-11:30

*Parallel Multiplexing – a Solution of Large Scale Stimulation Needed by the Retinal*

*Prostheses to Maintain the Persistence of Vision*, pp. 2816-2819

Talukder, Mohammad I.

Wayne State Univ.

Siy, Pepe

Wayne State Univ.

Auner, Gregory W.

Wayne State Univ.

11:30-11:45

*A New Micro Minimally Invasive Biopsy Tool for Molecular Analysis*, pp. 2820-2823

Cosnier, Marie-Line

CEA (Commissariat à l'Energie Atomique)

Martin, Franck

CEA (Commissariat à l'Energie Atomique)

Bouamrani, Ali

Inserm (Inst. National de la Santé et de la Recherche Médicale)

Berger, François

Hospital

Caillat, Patrice

CEA (Commissariat à l'Energie Atomique)

**FrBP5**

Westside Ballroom South

**Micro Robotics II (Poster Session)**

10:45-11:00

*Initial Design of a Bacterial Actuated Microrobot for Operations in an Aqueous Medium*, pp. 2824-2827

Andre, Walder

Ec. Pol. de Montreal

Martel, Sylvain

Ec. Pol. de Montreal

11:00-11:15

*Muscle-Actuated Power Generator Using Cultured Cardiomyocytes and Pzt Fiber\**

Morishima, Keisuke

Tokyo Univ. of Agriculture and Tech.

**FrBP6** Westside Ballroom South  
**Micro Fluidics II (Poster Session)**

10:45-11:00

**Development of Novel Ferrofluidic Pumps**, pp. 2828-2831

Baglio, Salvatore  
Andř, Bruno  
Ascia, Alberto  
Pitrone, Nicola

Univ. of Catania  
DIEES - Univ. of Catania  
DIEES - Univ. of Catania  
DIEES - Univ. of Catania

11:00-11:15

**Sub-60 Nm Nanofluidic Channels Fabricated by Glass-Glass Bonding**, pp. 2832-2835

Liao, Ke-Pan  
Yao, Nan-Kuang  
Kuo, Te-Son

National Taiwan Univ.  
Industrial Tech. Res. Inst.  
National Taiwan Univ.

11:15-11:30

**A Serial Dilution Microfluidic Device for Cytotoxicity Assays**, pp. 2836-2839

O'Neill, Adrian  
Monteiro-Riviere, Nancy  
Walker, Glenn

North Carolina State Univ.  
North Carolina State Univ.  
North Carolina State Univ.

11:30-11:45

**Virtual Wall in Microchannels**, pp. 2840-2843

XU, WEI  
Hong, xue  
Bachman, Mark  
Li, G.P.

Univ. of California, Irvine  
California State Pol. Univ.  
Univ. of California, Irvine  
Univ. of California, Irvine

**FrBP7** Westside Ballroom South  
**New Technologies for Micro Sensors II (Poster Session)**

10:45-11:00

**Stretchable Microelectrode Arrays: A Tool for Discovering Mechanisms of Functional Deficits Underlying Traumatic Brain Injury and Interfacing Neurons with Neuroprosthetics\***

Yu, Zhe  
Tsay, Candice  
Lacour, Stéphanie  
Wagner, Sigurd  
Morrison, Barclay

Columbia Univ.  
Princeton Univ.  
Univ. of Cambridge  
Princeton Univ.  
Columbia Univ.

11:00-11:15

**Microfabrication Procedure of PDMS Microbeam Array Using Photolithography for Laminin Printing and Piconewton Force Transduction on Axons**, pp. 2844-2847

Sasoglu, F.Mert  
Bohl, Andrew J.  
Layton, Bradley E.

Drexel Univ.  
Drexel Univ.  
Drexel Univ.

**FrBP8** Westside Ballroom South  
**Pulmonary Mechanics and Dynamics II (Poster Session)**

10:45-11:00

**Analysis of Simulated Heart Sounds by Intrinsic Mode Functions**, pp. 2848-2851

Charleston-Villalobos, Sonia  
Aljama-Corrales, Angel Tomás  
González-Camarena, Ramón

Univ. Autónoma Metropolitana  
Univ. Autónoma Metropolitana  
Univ. Autónoma Metropolitana

11:00-11:15

**Estimation of Tube Wall Compliance Using Pulse-Echo Acoustic Reflectometry**, pp. 2852-2855

Juan Garcia, Eduardo  
Figueroa Roldán, Héctor

Univ. of Puerto Rico - Mayagüez  
Univ. of Puerto Rico - Mayagüez

11:15-11:30

**Classifying Respiratory Sounds with Different Feature Sets**, pp. 2856-2859

Kahya, Yasemin P.  
Yeginer, Mete  
Bilgic, Bora

Bogazici Univ.  
Bogazici Univ.  
Bogazici Univ.

11:30-11:45

**Detection and Adaptive Cancellation of Heart Sound Interference in Tracheal Sounds**, pp. 2860-2863

Cortés, Sandra  
Jané, Raimon  
Torres, Abel  
Fiz Fernandez, José Antonio  
Morera Prat, Jose

Univ. Pol. de Catalunya  
Univ. Pol. de Catalunya  
Univ. Pol. de Catalunya  
Hospital Univ. Germans Trias i Pujol  
Hospital Univ. Germans Trias i Pujol

11:45-12:00

**Multi-Channel Classification of Respiratory Sounds**, pp. 2864-2867

YILMAZ, CEMILE ASLI  
Kahya, Yasemin P.

Bogazici Univ.  
Bogazici Univ.

12:00-12:15

**Direct Measurement of Airway Pressure in Ventilated Very Low Birth Weight Infants**, pp. 2868-2870

Silberberg, Ants R.  
Sandberg, Kenneth

Chalmers Univ. of Tech.  
Göteborg Univ.

12:00-12:15

**Bayesian Tracking of a Nonlinear Model of the Capnogram**, pp. 2871-2874

Op Den Buijs, Jorn  
Warner, Lizette  
Chbat, Nicolas  
Roy, Tuhin

Mayo Clinic Coll. of Medicine  
Mayo Clinic  
Philips Res. North America  
Mayo Clinic

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## FrBP9

Westside Ballroom South

### **Cardiac Function and Vascular Systems** (Poster Session)

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10:45-11:00

*Nitric Oxide Contribution to Vascular Wall Oxygen Consumption in Arterioles\**

Shibata, Masahiro  
Yamakoshi, Takehiro  
Yamakoshi, Ken-ichi

Univ. of Tokyo  
Kanazawa Univ.  
Kanazawa Univ.

11:00-11:15

**Reversal of Lower Limb Venous and Lymphatic Pooling by Passive Non-Invasive Calf Muscle**

**Pump Stimulation**, pp. 2875-2877

Madhavan, Guruprasad  
Cole, Jason  
Pierce, Carolyn  
McLeod, Kenneth

State Univ. of New York  
State Univ. of New York  
State Univ. of New York  
State Univ. of New York

11:15-11:30

**Can the Timing-Characteristics of Phonocardiographic Signal Be Used for Cuffless Systolic Blood Pressure Estimation?**, pp. 2878-2879

Wong, Mico Yee Man  
Poon, Carmen CY  
Zhang, Yuan-Ting

The Chinese Univ. of Hong Kong  
The Chinese Univ. of Hong Kong  
The Chinese Univ. of Hong Kong

11:30-11:45

**Calculation of the Mean Pressure with Less Delay for Real-Time Clinical Monitoring**, pp. 2880-2883

Ellis, Tim  
McNames, James  
Goldstein, Brahm

Portland State Univ.  
Portland State Univ.  
Oregon Health & Science Univ.

11:45-12:00

***Towards a Biomechanical-Based Method for Assessing Myocardial Tissue Viability***, pp. 2884-2887  
Linte, Cristian A. The Univ. of Western Ontario/Robarts Res.  
Wierzbicki, Marcin Robarts Res. Inst.  
Aladl, Usaf Robarts Res. Inst.  
Peters, Terry Robarts Res. Inst.  
Samani, Abbas Univ. of Western Ontario

12:00-12:15

***Model-Based Analysis of Effects of Systolic Blood Pressure on Frequency Characteristics of the Second Heart Sound***, pp. 2888-2891  
Zhang, Xin-Yu The Chinese Univ. of Hong Kong, Shenzhen Univ.  
Zhang, Yuan-Ting The Chinese Univ. of Hong Kong

12:00-12:15

***Simulation of Intra-Cardiac Catheter Complex Impedance Signals with Variable Stroke Volume***, pp. 2892-2895  
Gordon, Rauno Tallinn Univ. of Tech.

12:00-12:15

***Hydrodynamic Effects of the Partial Opening of a Trileaflet Valve***, pp. 2896-2899  
Escobedo, Carlos Innovamedica S.A. de C.V.  
Tovar, Francisco Innovamedica S.A. de C.V.  
Vilá, Alexandra Innovamedica S.A. de C.V.  
Garcia, Julio Innovamedica S.A. de C.V.  
Suarez, Bibiana Innovamedica S.A. de C.V.  
Corona, Farah Univ. Metropolitana  
Sacristan, Emilio Univ. Autónoma Metropolitana

12:00-12:15

***The Influence of Activation Time on Contraction Force of Myocardial Tissue: A Simulation Study***, pp. 2900-2903  
Lu, Jianyin Kyoto Univ.  
Nishi, Toshifumi Kyoto Univ.  
ASHIHARA, Takashi Kyoto Univ.  
Schneider, Natalie Kyoto Univ.  
Amano, Akira Kyoto Univ.  
Matsuda, Tetsuya Kyoto Univ.  
Kotera, Hidetoshi Kyoto Univ.

12:00-12:15

***Evaluation of External Cardiac Massage Performance During Hypogravity Simulation***, pp. 2904-2907  
Dalmarco, Gustavo PUCRS  
Russomano, Thais PUCRS  
Falcao, Felipe PUCRS  
Dario, Azevedo PUCRS  
Calder, Alyson Univ. of Glasgow  
Evetts, Simon Thames Valley Univ.  
Sarkar, Subhajit Univ. of Birmingham  
Moniz, Samuel Univ. do Porto

**Neural Stimulation and Prostheses 4 (Poster Session)**

10:45-11:00

***3D Realistic Head Model Simulation Based on Transcranial Magnetic Stimulation\****

Yang, Shuo

Hebei Univ. of Tech.

Xu, Guizhi

Hebei Univ. of Tech.

Wang, Lei

Hebei Univ. of Tech.

Chen, Yong

Hebei Univ. of Tech.

Wu, Huanli

Hebei Univ. of Tech.

Li, Ying

Hebei Univ. of Tech.

Yang, Qingxin

Hebei Univ. of Tech.

11:00-11:15

***On the Activation Threshold of Nerve Fibers Using Sinusoidal Electrical Stimulation***, pp. 2908-2911

Sundar, Swarna

Dalhousie Univ.

Gonzalez-Cueto, Jose A.

Dalhousie Univ.

11:15-11:30

***Optimal Target Placement for Neural Communication Prostheses***, pp. 2912-2915

Cunningham, John Patrick

Stanford Univ.

Yu, Byron M.

Stanford Univ.

Shenoy, Krishna

Stanford Univ.

11:30-11:45

***Artificial Neural Network Prediction Using Accelerometers to Control Upper Limb FES During Reaching and Grasping Following Stroke***, pp. 2916-2919

Tresadern, Phil

Univ. of Salford

Thies, Sibylle

Univ. of Salford

Kenney, Laurence

Univ. of Salford

Howard, David

Univ. of Salford

Goulermas, Yannis

Univ. of Liverpool

11:45-12:00

***A Multi-Chip-Architecture Based Flexible Stimulation Device for Retinal Prosthesis with a Flip-Chip Packaging Technique***, pp. 2920-2923

Tokuda, Takashi

Nara Inst. of Science &amp; Tech.

Kawada, Masayuki

Nara Inst. of Science &amp; Tech.

Sugitani, Sachie

Nara Inst. of Science &amp; Tech.

Taniyama, Mari

Nara Inst. of Science &amp; Tech.

Uehara, Akihiro

NIDEK Co. Ltd.

Kagawa, Keiichiro

Nara Inst. of Science &amp; Tech.

Nunoshita, Masahiro

Nara Inst. of Science &amp; Tech.

Ohta, Jun

Nara Inst. of Science &amp; Tech.

12:00-12:15

***Are There Modulated Electromagnetic Field Effects on Human Conscious Perception During Attentional Blink Test?***, pp. 2924-2927

Lass, Jaanus

Tallinn Univ. of Tech.

Rodina, Anastassia

Univ. of Patras

Riipulk, Jevgeni

Tallinn Univ. of Tech.

Hinrikus, Hiie

Tallinn Univ. of Tech.

Bachmann, Talis

Univ. of Tartu

12:00-12:15

***Hybrid Orthosis System with a Variable Hip Coupling Mechanism***, pp. 2928-2931

To, Curtis

Case Western Res. Univ.

Kobetic, Rudi

Louis Stokes Veterans Affairs Medical Center

Triolo, Ronald J.

Cleveland FES Center

12:00-12:15

***Design of a High Speed Transcutaneous Optical Telemetry Link***, pp. 2932-2935

Ackermann, D. Michael  
Smith, Brian  
Kilgore, Kevin  
Peckham, Hunter

Case Western Res. Univ.  
Case Western Res. Univ.  
MetroHealth Medical Center  
Case Western Res. Univ.

12:00-12:15

***Some Solutions to Technical Hurdles for Developing a Practical Intracortical Visual***

***Prosthesis Device***, pp. 2936-2939

Srivastava, Nishant  
Troyk, Philip

Illinois Inst. of Tech.  
Illinois Inst. of Tech.

**FrBP11**

Westside Ballroom South

**Neural Interfacing and Neurorobotics 2 (Poster Session)**

10:45-11:00

***Experiments on the Development and Use of a New Generation of Intra-Neural***

***Electrodes to Control Robotic Artefacts***, pp. 2940-2943

Micera, Silvestro  
Sergi, Pier Nicola  
Carpaneto, Jacopo  
Citi, Luca  
Bossi, Silvia  
Koch, Klaus-Peter  
Hoffmann, Klaus-Peter  
Menciassi, Arianna  
Yoshida, Ken  
Dario, Paolo

Scuola Superiore Sant'Anna  
Scuola Superiore Sant'Anna  
Scuola Superiore Sant'Anna  
Inst. for Advanced Studies on Biorobotic Engineering  
Inst. for Advanced Studies on Biorobotic Engineering  
Fraunhofer Inst. für Biomedizinische Tech.  
Fraunhofer Inst. für Biomedizinische Tech.  
Scuola Superiore Sant'Anna  
Aalborg Univ.  
Scuola Superiore Sant'Anna

11:00-11:15

***Recent Studies in the Design of a Self-Paced Brain Interface with Low False Positive Rate***, pp. 2944-2949

Fatourechi, Mehrdad  
Ward, Rabab K.  
Birch, Gary E.

Univ. of British Columbia  
Univ. of British Columbia  
Univ. of British Columbia

11:15-11:30

***A Gait Support System for Human Locomotion without Restriction of the Lower Extremities:***

***Preliminary Mechanism and Control Design***, pp. 2950-2953

Hoshino, Takayuki  
Tomono, Masanori  
Suzuki, Takafumi  
Shimojo, Makoto  
Mabuchi, Kunihiko

Univ. of Tokyo  
The Univ. of Electro-communications,  
The Univ. of Tokyo  
The Univ. of Electro-Communications  
Univ. of Tokyo

11:30-11:45

***Decoding High Level Signals for Asynchronous Brain Machine Interfaces\****

Olson, Byron  
Si, Jennie  
Silver, Jason

Arizona State Univ.  
Arizona State Univ.  
Arizona State Univ.

11:45-12:00

***Media Communication Center Using Brain Computer Interface***, pp. 2954-2957

Teo, Jin Kiat Eugene  
Huang, Alvin  
Lian, Yong  
Guan, Cuntai  
Li, Yuanqing  
Zhang, Haihong

National Univ. of Singapore, Inst. for Infocomm Res.  
National Univ. of Singapore  
National Univ. of Singapore  
Inst. for Infocomm Res. Singapore  
Inst. for Infocomm Res. Singapore  
Inst. for Infocomm Res. Singapore

12:00-12:15

***Collagenase-Aided Insertion of Intracortical Microelectrode Arrays: Evaluation of Insertion Force and Chronic Recording Performance***, pp. 2958-2961

Paralikar, Kunal  
Lawrence, Jonathan  
Clement, Ryan

The Pennsylvania State Univ.  
The Pennsylvania State Univ.  
The Pennsylvania State Univ.

12:00-12:15

***Velocity-Selective Recording from Frog Nerve Using a Multi-Contact Cuff Electrode***, pp. 2962-2965

Schuettler, Martin  
Seetohul, Vipin  
Taylor, John  
Donaldson, Nicholas de Neufville

Univ. of Freiburg  
Univ. of Bath  
Univ. of Bath  
Univ. Coll. London

12:00-12:15

***Design and Fabrication of a Flexible Substrate Microelectrode Array for Brain Machine Interfaces***, pp. 2966-2969

Patrick, Erin  
Ordonez, Matthew  
Alba, Nicolas  
Sanchez, Justin C.  
Nishida, Toshikazu

Univ. of Florida  
Univ. of Florida  
Univ. of Florida  
Univ. of Florida  
Univ. of Florida

12:00-12:15

***An Implantable Myoelectric Sensor Based Prosthesis Control System***, pp. 2970-2973

DeMichele, Glenn  
Troyk, Philip  
Kerns, Douglas  
Weir, Richard

Sigenics Inc.  
Illinois Inst. of Tech.  
Sigenics Inc.  
Northwestern Univ.

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**FrBP12**

Westside Ballroom South

**Neural Microsystems and Instrumentation 2 (Poster Session)**

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10:45-11:00

***An Integrated CMOS Bio-Potential Amplifier with a Feed-Forward DC Cancellation Topology***, pp. 2974-2977

Parthasarathy, Jayant  
Erdman, Arthur  
redish, david  
ziaie, babak

Univ. of Minnesota  
Univ. of Minnesota  
Univ. of Minnesota  
Purdue Univ.

11:00-11:15

***A Monolithic Multi-Channel Amplifier for Electrode Arrays***, pp. 2978-2981

Kerns, Douglas  
DeMichele, Glenn  
Troyk, Philip

Sigenics Inc.  
Sigenics Inc.  
Illinois Inst. of Tech.

11:15-11:30

***Neural Recording Front-End Designs for Fully Implantable Neuroscience Applications and Neural Prosthetic Microsystems***, pp. 2982-2985

Perlin, Gayatri, E.  
Sodagar, Amir M.  
Wise, Kensall

Univ. of Michigan  
Univ. of Michigan  
Univ. of Michigan, Ann Arbor

11:30-11:45

***Preliminary Study of the Thermal Impact of a Microelectrode Array Implanted in the Brain***, pp. 2986-2989

Kim, Sohee  
Normann, Richard  
Harrison, Reid  
Solzbacher, Florian

Univ. of Utah  
Univ. of Utah  
Univ. of Utah  
Univ. of Utah

11:45-12:00

**NeuroTalk™ an Interface for Multifunctional Neural Engineering ASICs**, pp. 2990-2993

Troyk, Philip	Illinois Inst. of Tech.
Detlefsen, David	Illinois Inst. of Tech.
DeMichele, Glenn	Sigenics Inc.
Kerns, Douglas	Sigenics Inc.

12:00-12:15

**A Multifunctional Neural Electrode Stimulation ASIC Using NeuroTalk™ Interface**, pp. 2994-2997

Troyk, Philip	Illinois Inst. of Tech.
Detlefsen, David	Illinois Inst. of Tech.
DeMichele, Glenn	Sigenics Inc.

12:00-12:15

**A LabVIEW Based Experiment System for the Efficient Collection and Analysis of Cyclic Voltametry and Electrode Charge Capacity Measurements**, pp. 2998-3001

Detlefsen, David	Illinois Inst. of Tech.
Troyk, Philip	Illinois Inst. of Tech.
Hu, Zhe	Illinois Inst. of Tech.

12:00-12:15

**The Measurement of Compound Neural Action Potential in Sciatic Nerve Using Microelectrode Array**, pp. 3002-3004

Lee, Chungkeun	Yonsei Univ.
Kim, Yongho	Yonsei Univ.
Shin, Hang Sik	Yonsei Univ.
Kim, Yongjun	Yonsei Univ.
Lee, Myounggho	Yonsei Univ.

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**FrBP13**

Westside Ballroom South

**Segmentation, Classification, Counting, and Feature Computation II (Poster Session)**

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10:45-11:00

**Texture-Based Classification of Hysteroscopy Images of the Endometrium**, pp. 3005-3008

Neofytou, Marios	Univ. of Cyprus
Pattichis, Marios	Univ. of New Mexico,
Pattichis, Constantinos	Univ. of Cyprus
Tanos, Vasilios	Evaggelistris Medical Center
Kyriacou, Efthymoulos	Univ. of Cyprus
Koutsouris, Dimitrios	National Tech. Univ. of Athens (NTUA)

11:00-11:15

**A Watershed Based Segmentation Method for Multispectral Chromosome Images Classification**, pp. 3009-3012

Karvelis, Petros	Univ. of Ioannina
Fotiadis, Dimitrios I.	Univ. of Ioannina
Georgiou, Ioannis	Univ. of Ioannina
Syrrou, Marika	Univ. of Ioannina

11:15-11:30

**Feature Selection, Matching, and Evaluation for Subcellular Structure Tracking**, pp. 3013-3016

Wen, Quan	The Univ. of Texas at Arlington
Gao, Jean	Univ. of Texas
Luby-Phelps, Kate	The Univ. of Texas Southwestern Medical Center

11:30-11:45

**Detection of Colon Wall Outer Boundary and Segmentation of the Colon Wall Based on Level Set Methods**, pp. 3017-3020

Van Uitert, Robert	National Inst. of Health
Bitter, Ingmar	National Inst. of Health
Summers, Ronald M.	National Inst. of Health



11:45-12:00

***Genetic Programming and Feature Selection for Classification of Breast***

***Masses in Mammograms***, pp. 3021-3024

Nandi, Robin J  
Nandi, Asoke K  
Rangayyan, Raj  
Scutt, Di

The Univ. of Liverpool  
The Univ. of Liverpool  
Schulich School of Engineering, Univ. of Calgary  
The Univ. of Liverpool

12:00-12:15

***Implicit Dual Snakes for Medical Imaging***, pp. 3025-3028

Giraldi, Gilson  
Rodrigues, Paulo Sérgio  
Suri, Jasjit

National Lab. for Scientific Computing  
National Lab. for Scientific Computing  
Biomedical Tech.

12:00-12:15

***Evaluation of Two Segmentation Methods on MRI Brain Tissue Structures***, pp. 3029-3032

Cai, Xiang  
Hou, Yu  
Li, Chang  
Lee, Jing-Huei  
Wee, William

Univ. of Cincinnati  
Univ. of Cincinnati  
Univ. of Cincinnati  
Univ. of Cincinnati  
Univ. of Cincinnati

12:00-12:15

***Single Organ Segmentation Filters for Multiple Organ Segmentation***, pp. 3033-3036

Furst, Jacob D.  
Susomboom, Ruchaneewan  
Raicu, Daneila S.

DePaul Univ.  
DePaul Univ.  
DePaul Univ.

12:00-12:15

***Towards an Automatic Coronary Artery Segmentation Algorithm***, pp. 3037-3040

Fallavollita, Pascal  
Cheriet, Farida

Ec. Pol. de Montreal  
Ec. Pol. de Montreal

**FrBP14**

Westside Ballroom South

**Image Registration II (Poster Session)**

10:45-11:00

***New Deformable Registration Technique Using Scale Space and Curve Evolution***

***Theory and a Finite Element Based Validation Framework***, pp. 3041-3044

Fahmi, Rachid  
Alaa E., Abdel-Hakim  
El baz, Ayman  
Frag, Aly A.

Univ. of Louisville  
Univ. of Louisville  
Univ. of Louisville  
Univ. of Louisville

11:00-11:15

***Efficient 3-D Medical Image Registration Using a Distributed Blackboard Architecture***, pp. 3045-3048

Tait, Roger J.  
Schaefer, Gerald  
Hopgood, Adrian A.  
Zhu, Shao Ying

Nottingham Trent Univ.  
Nottingham Trent Univ.  
Nottingham Trent Univ.  
Univ. of Derby

11:15-11:30

***Dynamic Breast MRI: Image Registration and Its Impact on Enhancement***

***Curve Estimation***, pp. 3049-3052

Hill, Andrew  
Mehnert, Andrew  
Crozier, Stuart  
Leung, Carlos  
Wilson, Stephen  
McMahon, Kerry  
Kennedy, Dominic

Univ. of Queensland  
The Univ. of Queensland  
The Univ. of Queensland  
The Univ. of Queensland  
Univ. of Queensland  
Queensland X-Ray  
Queensland X-Ray

11:30-11:45

***A New Image Similarity Measure with Reduced Sensitivity to Interpolation and Generalizability to Multispectral Image Registration***, pp. 3053-3056

Ardekani, Babak  
Bachman, Alvin

Nathan S. Kline Inst. for Psychiatric Res.  
Nathan S. Kline Inst. for Psychiatric Res.

11:45-12:00

***Comparison of Intensity Based Similarity Measures for Matching Genomic Structures in Microscopic Images of Living Cells***, pp. 3057-3061

Bhattacharya, Sambit  
Acharya, Raj  
Pliss, Artem  
Malyavantham, Kishore  
Berezney, Ronald

Fayetteville State Univ.  
Pennsylvania State Univ.  
State Univ. of New York at Buffalo  
State Univ. of New York at Buffalo  
State Univ. of New York at Buffalo

**FrBP15**

Westside Ballroom South

**Image Segmentation II (Poster Session)**

10:45-11:00

***An Automatic Method for Ground Glass Opacity Nodule Detection and Segmentation from CT Studies***, pp. 3062-3065

Zhou, Jinghao  
Chang, Sukmoon  
Metaxas, Dimitris  
Zhao, Binsheng  
Ginsberg, Michelle  
Schwartz, Lawrence

Rutgers, the State Univ. of New Jersey  
Capital Coll. Penn State Univ.  
Rutgers Univ.  
Meml Sloan-Kettering Cancer Ctr  
Memorial Sloan-Kettering Cancer Center  
Memorial Sloan-Kettering Cancer Center

11:00-11:15

***A Multiscale Tracking Algorithm for the Coronary Extraction in MSCT Angiography***, pp. 3066-3069

Yang, Guanyu  
Bousse, Alexandre  
Toumoulin, Christine  
Shu, Huazhong

Southeast Univ.  
LTSI-INSERM U642  
Univ. de Rennes I  
Southeast Univ.

11:15-11:30

***Distinguishing Lesions from Posterior Acoustic Shadowing in Breast Ultrasound Via Non-Linear Dimensionality Reduction***, pp. 3070-3073

Madabhushi, Anant  
Yang, Peng  
Rosen, Mark  
Weinstein, Susan

Rutgers Univ.  
Rutgers Univ.  
Univ. of Pennsylvania  
Univ. of Pennsylvania

11:30-11:45

***A New Automatic Technique for Left and Right-Ventricular Segmentation in Magnetic Resonance Imaging***, pp. 3074-3077

Katouzian, Amin  
Prakash, Ashwin  
Konofagou, Elisa

Columbia Univ.  
Columbia Univ.  
Columbia Univ.

11:45-12:00

***A Fuzzy-C-Means Clustering Algorithm for a Volumetric Analysis of Paranasal Sinus and Nasal Cavity Cancers***, pp. 3078-3081

Passera, Katia  
Potepan, Paolo  
Setti, Ernesto  
Vergnaghi, Daniele  
Sarti, Augusto  
Mainardi, Luca  
Cerutti, Sergio

Pol. di Milano  
Istituto Nazionale dei Tumori  
Istituto Nazionale dei Tumori  
Istituto Nazionale dei Tumori  
Pol. di Milano  
Pol. di Milano  
Pol. di Milano

12:00-12:15

***Volumetric Tumor Segmentation Using 3D Implicit Active Surfaces\****

Goffeney, Jason  
Palaniappan, Kannappan  
Figuerola, Said  
Hoffman, Timothy

Univ. of Missouri - Columbia  
Univ. of Missouri-Columbia  
Harry S. Truman Memorial Veteran's Hospital  
Harry S. Truman Memorial Veteran's Hospital

12:00-12:15

***Boundary Extraction of Breast Ultrasonic Images***, pp. 3082-3085

Shen, Jialin  
Wang, Yuanyuan  
Yu, Jianguo

Fudan Univ.  
Fudan Univ.  
Fudan Univ.

12:00-12:15

***Segmentation of 4D Cardiac Images: Investigation on Statistical Shape Models***, pp. 3086-3089

Renno, Markus  
Shang, Yan  
Sweeney, James  
Dössel, Olaf

Arizona State Univ.  
Karlsruhe Univ.  
Arizona State Univ.  
Univ. Karlsruhe (TH)

**FrC01**

Marquis AB

**Principal Component Analysis, Independent Components Analysis III (Oral Session)**

14:00-14:15

***Combining Independent Component Analysis and Backpropagation Neural Network for ECG***

***Beat Classification***, pp. 3090-3093

Yu, Sung-Nien  
Chou, Kuan-To

National Chung Cheng Univ.  
National Chung Cheng Univ.

14:15-14:30

***Analysis of Ambulatory ECG Signal***, pp. 3094-3097

Pawar, Tanmay  
Chaudhuri, Subhasis  
Duttgupta, Siddhartha

Indian Inst. of Tech. - Bombay  
Indian Inst. of Tech. - Bombay  
Indian Inst. of Tech. - Bombay

14:30-14:45

***Noise Sensitivity of a Principal Component Regression Based RT Interval Variability***

***Estimation Method***, pp. 3098-3101

Tarvainen, Mika  
Niskanen, Juha-Pekka  
Laitinen, Tomi  
Lyyra-Laitinen, Tiina  
Karjalainen, Pasi

Univ. of Kuopio  
Univ. of Kuopio  
Kuopio Univ. Hospital  
Kuopio Univ. Hospital  
Univ. of Kuopio

14:45-15:00

***Quantification of Carotid Atherosclerotic Plaque Components Using Feature Space***

***Analysis and Magnetic Resonance Imaging***, pp. 3102-3105

Karmonik, Christof  
Basto, Pamela  
Morrisett, Joel

The Methodist Hospital Res. Inst.  
Baylor Coll. of Medicine  
Baylor Coll. of Medicine

15:00-15:15

***The Maternal ECG Suppression Algorithm for Efficient Extraction of the Fetal ECG from***

***Abdominal Signal***, pp. 3106-3109

Matonia, Adam  
Jezewski, Janusz  
Horoba, Krzysztof  
Gacek, Adam  
Labaj, Pawel

Inst. of Medical Tech. and Equipment  
Inst. of Medical Tech. and Equipment  
Inst. of Medical Tech. and Equipment  
Inst. of Medical Tech. and Equipment  
The Silesian Univ. of Tech.

15:15-15:30

***Separation of Gastric Electrical Control Activity from Simultaneous MGG/EGG Recordings Using Independent Component Analysis***, pp. 3110-3113

Irimia, Andrei

Living State Physics Lab. Vanderbilt Univ.

**FrC02**

Marquis C

**Image Segmentation I (Oral Session)**

14:00-14:15

***Segmenting Brain MRI Using Adaptive Mean Shift***, pp. 3114-3117

Jimenez-Alaniz, Juan Ramon

Univ. Autonoma Metropolitana

Pohl, Mauricio

Univ. Autonoma Metropolitana

Medina, Veronica

Univ. Autonoma Metropolitana

Yanez-Suarez, Oscar

Univ. Autonoma Metropolitana - Iztapalapa

14:15-14:30

***Automatic Medical Image Segmentation Using Gradient and Intensity Combined Level Set Method***, pp. 3118-3121

Liu, Shaojun

Oakland Univ.

Li, Jia

Oakland Univ.

14:30-14:45

***Automatic Segmentation of the Lungs Using Multiple Active Contours and Outlier Model***, pp. 3122-3125

Silveira, Margarida

Inst. Superior Técnico and Inst. for Systems and Robotics

Marques, Jorge

Inst. Superior Técnico and Inst. for Systems and Robotics

14:45-15:00

***A Novel Active Contour Model Using Local and Global Statistics for Vessel Extraction***, pp. 3126-3129

Sum, K. W.

Univ. of Hong Kong

Cheung, Paul Y. S.

Univ. of Hong Kong

15:00-15:15

***Maximum-Likelihood Decomposition of Overlapping and Touching M-Fish Chromosomes Using Geometry, Size and Color Information***, pp. 3130-3133

Choi, Hyohoon

The Univ. of Texas at Austin

Bovik, Alan

The Univ. of Texas at Austin

Castleman, Kenneth R.

Advanced Digital Imaging Res. LLC

15:15-15:30

***Four Dimensional MR Image Analysis of Dynamic Renography***, pp. 3134-3137

Song, Ting

Columbia Univ.

Lee, Vivian

New York Univ. Medical Center

Rusinek, Henry

New York Univ. Medical Center

Wong, Samson

New York Univ. School of Medicine

Laine, Andrew

Columbia Univ.

**FrC03**

SoHo-Herald

**Mathematical Modeling and Simulation of Molecules and Cells I (Oral Session)**

14:00-14:15

***Transcriptional Target Prediction Using Qualitative Reasoning***, pp. 3138-3141

Wang, Li-San

Univ. of Pennsylvania

Wagner, Doris

Univ. of Pennsylvania

Kwon, Chang Seob

Univ. of Pennsylvania

Su, Yanhui

Univ. of Pennsylvania

Kim, Junhyong

Univ. of Pennsylvania

14:15-14:30

***Inverting Amplifier Genetic Circuit Performance***, pp. 3142-3145

Nagaraj, Seema

Univ. of Toronto

Davies, Stephen William

Univ. of Toronto

14:30-14:45

***Stochastic Modeling of Tumor Induced Angiogenesis in a Heterogeneous Medium, the Extracellular Matrix***, pp. 3146-3149

AMYOT, Franck  
Gandjbakhche, Amir

National Inst. of health - NICHD  
National Inst. of Health

14:45-15:00

***Efficient Event-Driven Simulation of Excitable Hybrid Automata***, pp. 3150-3153

True, Mike  
Entcheva, Emilia  
Smolka, Scott  
Ye, Pei  
Grosu, Radu

SUNY at Stony Brook  
Stony Brook Univ.  
Stony Brook Univ.  
Stony Brook Univ.  
Stony Brook Univ.

15:00-15:15

***Modeling and Analysis of Force Induced Bone Growth***, pp. 3154-3157

Maldonado, Solvey  
Steffen, Borchers  
Findeisen, Rolf  
Allgöwer, Frank

Univ. of Stuttgart  
Univ. of Stuttgart  
Univ. of Stuttgart  
Univ. of Stuttgart

15:15-15:30

***Anatomically Realistic Torso Model for Studying the Relative Decay of Gastric Electrical and Magnetic Fields***, pp. 3158-3161

Cheng, Leo K  
Buist, Martin Lindsay  
Pullan, Andrew

The Univ. of Auckland  
National Univ. of Singapore  
Univ. of Auckland

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**FrC04**

Ziegfeld

**Micro-Implanted Devices** (Oral Session)

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14:00-14:15

***New Implantable Hearing Device Based on a Micro-Actuator That Is Directly Coupled to the Inner Ear Fluid***, pp. 3162-3165

Bernhard, Hans  
Stieger, Christof  
Perriard, Yves

Helbling Tech. Bern AG  
Inselspital Univ. of Berne  
Ec. Pol. Fédérale de Lausanne (EPFL)

14:15-14:30

***A Microsystem with Varying-Length Electrode Arrays for Auditory Nerve Protheses***, pp. 3166-3169

Wu, Jian  
Feng, Wei Feng  
Tang, William C.  
Zeng, Fan -Gang

Univ. of California, Irvine  
Univ. of California, Irvine  
Univ. of California, Irvine  
Univ. of California, Irvine

14:30-14:45

***A Parylene-Silicon Cochlear Electrode Array with Integrated Position Sensors***, pp. 3170-3173

Wang, Jianbai  
Gulari, Ning  
Wise, Kensall

Univ. of Michigan, Ann Arbor  
Univ. of Michigan, Ann Arbor  
Univ. of Michigan, Ann Arbor

14:45-15:00

***An Artificial Nano-Drainage Implant (ANDI) for Glaucoma Treatment***, pp. 3174-3177

Pan, Tingrui

Univ. of Minnesota

15:00-15:15

***Neural Interface Dynamics Following Insertion of Hydrrous Iridium Oxide Microelectrode Arrays***, pp. 3178-3181

Johnson, Matthew  
Langhals, Nicholas  
Kipke, Daryl

Univ. of Michigan  
Univ. of Michigan  
Univ. of Michigan

**FrC05**

Duffy-Columbia

**Diagnostic Instrumentation and Physiological Measurement 1 (Oral Session)**

14:00-14:15

***Finite Element Analysis and Experimental Verification of Multilayered Tissue Characterization Using the Thermal Technique***, pp. 3182-3185Kharalkar, Nachiket  
Valvano, JonathanUniv. of Texas at Austin  
Univ. of Texas at Austin

14:15-14:30

***Interface Pressure Monitoring for a Secured Instrumented Childbirth***, pp. 3186-3189RAMON, Carolina  
GEHIN, Claudine  
SCHMITT, Michael  
DITTMAR, AndreINSA Lyon  
INSA Lyon  
INSA Lyon  
INSA Lyon

14:30-14:45

***Ingestible Pill for Heart Rate and Core Temperature Measurement in Cattle***, pp. 3190-3193Martinez, Angel  
Schoenig, Scott  
Andresen, Daniel  
Warren, SteveKansas State Univ.  
Kansas State Univ.  
Kansas State Univ.  
Kansas State Univ.

14:45-15:00

***Dielectric Spectroscopy of Blood Cells Suspensions: Study on Geometrical Structure of Biological Cells***, pp. 3194-3197Merla, Caterina  
Liberti, Micaela  
Apollonio, Francesca  
Nervi, Clara  
D'Inzeo, GuglielmoICEmB @ La Sapienza Univ. Rome  
ICEmB@La Sapienza Univ. Rome  
ICEmB@La Sapienza Univ. Rome  
Histology and Medical Embriology Univ. of Rome "La Sapienza" an  
ICEmB@La Sapienza Univ. Rome

15:00-15:15

***Digital Lock-In Algorithm for Biomedical Spectroscopy and Imaging Instruments with Multiple Modulated Sources (I)***, pp. 3198-3201Masciotti, James  
Lasker, Joseph  
Hielscher, AndreasColumbia Univ.  
Columbia Univ.  
Columbia Univ.

15:15-15:30

***An Optimal Spot-Electrodes Array for Electrical Impedance Cardiography through Determination of Impedance Mapping of a Regional Area Along the Medial Line on the Thorax***, pp. 3202-3205Ikarashi, Akira  
Nogawa, Masamichi  
Yamakoshi, Takehiro  
Tanaka, Shinobu  
Yamakoshi, Ken-ichiIshikawa Sunrise Industries Creation Organization  
Kanazawa Univ.  
Kanazawa Univ.  
Kanazawa Univ.  
Kanazawa Univ.**FrC06**

Empire Hudson

**Signal Processing and Modeling in Biological Systems III (Oral Session)**

14:00-14:15

***Alterations in Human EEG Activity Caused by Extremely Low Frequency Electromagnetic Fields***, pp. 3206-3209Cvetkovic, Dean  
Jovanov, Emil  
Cosic, IrenaRMIT Univ.  
Univ. of Alabama in Huntsville  
RMIT Univ.

**Fluid Dynamics and Vascular Mechanics (Oral Session)**

14:00-14:15

***Angiographic Assessment of the Performance of Flow Divertors to Treat Cerebral Aneurysms***, pp. 3210-3213

Sadasivan, Chander	Univ. of Miami
Lieber, Baruch	Univ. of Miami
Cesar, Liliana	Univ. of Miami
Miskolczi, Laszlo	Memorial Healthcare System
Seong, Jaehoon	Univ. of Miami
Wakhloo, Ajay	Univ. of Massachusetts Medical School

14:15-14:30

***Wall Shear Stress Variations in Basilar Tip Aneurysms Investigated with Computational Fluid Dynamics***, pp. 3214-3217

Karmonik, Christof	The Methodist Hospital Res. Inst.
Benndorf, Goetz	The Methodist Hospital
Klucznik, Richard	The Methodist Hospital
Haykal, Hani	The Methodist Hospital
Strother, Charles	The Methodist Hospital

14:30-14:45

***Oscillatory Shear Stress Promotes Nitritive Stress Relative to Pulsatile Shear Stress: A Potential Mechanism for Athero-Prone Regions within Vascular Bifurcations\****

Hsiai, John T. K.	USC
Rouhanizadeh, Mahsa	USC
Barr, Mark L.	USC
Correa, Adria	USC
Hamilton, Ryan	USC
Tiantian Lin, Christina	USC
Alavi, Mohammad	USC
Cadenas, Enrique	USC
Juliana Hwang, Juliana	USC
Hazen, Stanley, L.	The Cleveland Clinic Foundation

14:45-15:00

***Estimation of Arterial Wall Strain Based on IVUS Image Registration***, pp. 3218-3221

Liang, Yun	Duke Univ.
Oakeson, Kevin	Medtronic
Zhu, Hui	Duke Univ.
Friedman, Morton	Duke Univ.

15:00-15:15

***Noninvasive Detection of Vessel Stiffness from Continuous Blood Pressure Recordings in Hypertensive Subjects***, pp. 3222-3225

Jurak, Pavel	Inst. of Scientific Inst. Acad. of Sciences of the Czech Republic
Halamek, Josef	Inst. of Scientific Inst. Acad. of Sciences of the Czech Republic
Somers, Virend	Mayo Clinic
Plachy, Martin	St Anne's Univ. Hospital, Brno,
Frana, Petr	St Anne's Univ. Hospital, Brno,
Leinveber, Pavel	Mayo Clinic
Soucek, Miroslav	St Anne's Univ. Hospital, Brno,
Kara, Tomas	St Anne's Univ. Hospital, Brno

**New Techniques in Rehabilitation II (Oral Session)**

14:00-14:15

***A Low Cost Human Computer Interface Based on Eye Tracking***, pp. 3226-3229Redekopp, Andrew  
Hiley, Jonathon  
Fazel-Rezai, RezaUniv. of Manitoba  
Univ. of Manitoba  
Univ. of Manitoba

14:15-14:30

***A Programmable Ramp Waveform Generator for PEMF Exposure Studies on Chondrocytes***, pp. 3230-3233Jahns, Matthew  
Durdle, Nelson  
Lou, Edmond H.  
Raso, JamesUniv. of Alberta  
Univ. of Alberta  
Glenrose Rehabilitation Hospital  
Glenrose Rehabilitation Hospital

14:30-14:45

***A High-Level Controller for Robot-Assisted Rehabilitation***, pp. 3234-3237Erol, Duygun  
Sarkar, Nilanjan  
Halder, BibhrajitVanderbilt Univ.  
Vanderbilt Univ.  
Vanderbilt Univ.

14:45-15:00

***Evaluating Reliability of Hidden Markov Models That Describe the Lifting Patterns of Chronic Lower Back Pain Patients and Controls***, pp. 3238-3241Slaboda, Jill  
Boston, J Robert  
Rudy, ThomasUniv. of Pittsburgh  
Univ. of Pittsburgh  
Univ. of Pittsburgh

15:00-15:15

***Using Remote Infrared Audible Cues to Increase Spatial Knowledge Acquisition for Persons Who Are Blind or Visually Impaired in a Multimodal Transportation Environment\****

Marston, James

Univ. of California Santa Barbara

15:15-15:30

***Towards Development of Biomechatronic Tools for Early Diagnosis of Neurodevelopmental Disorders***, pp. 3242-3245Campolo, Domenico  
Guglielmelli, Eugenio  
Keller, Flavio  
Laschi, Cecilia  
Dario, PaoloCampus Bio-Medico Univ.  
Campus Bio-Medico Univ.  
Campus Bio-Medico Univ.  
Scuola Superiore Sant'Anna  
Scuola Superiore Sant'Anna**Telemedicine, E-Medicine, and Home-Based Healthcare II (Oral Session)**

14:00-14:15

***Application of Near Field Communication for Health Monitoring in Daily Life***, pp. 3246-3249Strömmer, Esko  
Kartinen, Jouni  
Pärkkä, Juha  
Ylisaukko-oja, Arto  
Korhonen, IlkkaVTT  
VTT  
VTT  
VTT  
VTT

14:15-14:30

***Delivery of Healthcare Services Over Mobile Phones: E-Vital and CHS Paradigms***, pp. 3250-3253PRENTZA, ANDRIANA  
MAGLAVERA, STAVROULA  
Leondaridis, EleferiosInst. of Communication and Computer Systems  
POULIADIS ASSOCIATES Corp.  
NETSMART S.A.



14:30-14:45

**Quality Driven Wireless Video Transmission for Medical Applications**, pp. 3254-3257

Martini, Maria G.  
Mazzotti, Matteo

CNIT, Univ. of Bologna  
CNIT, Univ. of Bologna

14:45-15:00

**Towards E-Health Device Interoperability: The Spanish Experience in the Telemedicine Research Network**, pp. 3258-3261

De Toledo, Paula  
Galarraga, Miguel  
Martínez Ruiz, Ignacio  
Serrano, Luis  
Fernández Navajas, Julián  
Del Pozo, Francisco

Univ. Pol. de Madrid  
Public Univ. of Navarra  
Aragon Inst. for Engineering Res. (I3A), Univ. Zaragoza.  
Public Univ. of Navarra  
Aragon Inst. for Engineering Res. (I3A), Univ. of Zaragoza.  
Univ. Pol. de Madrid

15:00-15:15

**Watermarking SDK Implementation to Facilitate Integration in a Secure Healthcare Environment**, pp. 3262-3265

Tagaris, Anastassios  
Giakoumaki, Aggeliki  
Karle, Lars B.  
Koutsouris, Dimitrios

National Tech. Univ. of Athens  
National Tech. Univ. of Athens  
Eumdx Ltd  
National Tech. Univ. of Athens

15:15-15:30

**Body Sensor Network Based Context Aware QRS Detection**, pp. 3266-3269

Li, Huaming  
Tan, Jindong

Michigan Tech. Univ.  
Michigan Tech. Univ.

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**FrC10**

Astor Ballroom

**Medical Watermarking, Denoising, Resampling, Filtering, and Coding (Oral Session)**

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14:00-14:15

**Medical Image Watermarking with Tamper Detection and Recovery**, pp. 3270-3273

Zain, Jasni M.  
Fauzi, Mohammed

Univ. Coll. of Engineering & Tech. Malaysia  
International Islamic Univ. of Malaysia

14:15-14:30

**A Novel Blind Watermarking of ECG Signals on Medical Images Using EZW Algorithm**, pp. 3274-3277

Nambakhsh, Mohammad Saleh  
Ahmadian, Alireza  
Ghavami, Mohammad  
Dilmaghani, Reza  
Karimi-Fard, Saeed

Tehran Univ. of medical sciences  
Tehran Univ. of Medical Sciences  
king's Coll. London  
King's Coll. Univ. of London  
Tehran Univ. of Medical Sciences

14:30-14:45

**Simulation and Assessment of Bioinspired Visual Processing System for Epi-Retinal Prostheses**, pp. 3278-3281

Vurro, Milena  
Baselli, Giuseppe  
Orabona, Francesco  
Sandini, Giulio

Pol. of Milan  
Pol. of Milan  
Univ. of Genoa  
Univ. of Genoa

14:45-15:00

**Multiscale Penalized Weighted Least-Squares Sinogram Restoration for Low-Dose X-Ray Computed Tomography**, pp. 3282-3285

Wang, Jing  
Liang, Jerome  
Lu, Hongbing

Stony Brook Univ.  
State Univ. of New York at Stony Brook  
Fourth Military Medical Univ.

15:00-15:15

***Unbalanced 3-D Tree Structure for Region-Based Coding of Volumetric Medical Images***, pp. 3286-3289  
Cuhadar, Aysegul Carleton Univ.  
Wang, Kaibin Carleton Univ.

**FrC11**

Belasco

**Elder Care Technologies I (Oral Session)**

14:00-14:15

***Technology for Successful Aging***, pp. 3290-3293

Tyrer, Harry Univ. of Missouri - Columbia  
Alwan, Majd Med. Autom. Res. Ctr(MARC), Univ. of Virginia  
Demiris, George Univ. of Missouri-Columbia  
He, Zhihai Univ. of Missouri  
Keller, James M Univ. of Missouri  
Skubic, Marjorie Univ. of Missouri  
Rantz, Marilyn Univ. of Missouri - Columbia

14:15-14:30

***VALUE: Virtual Assisted Living Umbrella for the Elderly – User Patterns***, pp. 3294-3296

Finkelstein, Stanley Univ. of Minnesota  
Speedie, Stuart Univ. of Minnesota  
Zhou, Xinyu Univ. of Minnesota  
Ratner, Edward Univ. of Minnesota  
Potthoff, Sandra Univ. of Minnesota

14:30-14:45

***Designing for Older Adult Users of Handheld Technology***, pp. 3297-3300

Becker, Shirley Ann Florida Inst. of Tech.  
Webbe, Frank Florida Inst. of Tech.

14:45-15:00

***Trial Deployment of a Clinical Monitoring and Management System for Residential Aged Care Facilities***, pp. 3301-3304

Celler, Branko George Univ. of New South Wales  
Basilakis, Jim Univ. of New South Wales  
Budge, Marc Canberra Hospital  
Lovell, Nigel H Univ. of New South Wales

15:00-15:15

***A Simple Model of Stability Limits Applied to Sidestepping in Young, Elderly and Elderly Fallers***, pp. 3305-3308

Patton, James (Jim) Rehabilitation Inst. of Chicago and Northwestern Univ.  
Hilliard, Marjorie Feinberg School of Medicine, Northwestern Univ. IL  
Martinez, Kathy Feinberg School of Medicine, Northwestern Univ. IL  
Mille, Marie-Laure South Univ. Toulon - Var  
Rogers, Mark Northwestern Univ.

15:15-15:30

***Generic Implementation of a Distress Sound Extraction System for Elder Care***, pp. 3309-3312

Istrate, Dan ESIGETEL  
Vacher, Michel CLIPS-IMAG  
Serignat, Jean Francois CLIPS-IMAG

**FrC12** Palace Wintergarden  
**Linking Biocomputation with Nanotechnology for Personalized Medicine (Minisymposium)**

Organizer: Wang, May Dongmei Georgia Tech. and Emory Univ.

14:00-14:15

***Detecting and Quantifying Biomarkers of Risk for Colorectal Cancer Using Quantum Dots and Novel Image Analysis Algorithms (I)***, pp. 3313-3316

Bostick, Roberd Rollins School of Public Health, Emory Univ.  
Kong, Koon-Yin Georgia Inst. of Tech.  
Ahearn, Thomas U Emory Univ.  
Chaudry, Qaiser Georgia Inst. of Tech.  
Cohen, Vaunita Emory Univ.  
Wang, May D. Georgia Tech. and Emory Univ.

14:15-14:30

***Selecting Clinically-Driven Biomarkers for Cancer Nanotechnology (I)***, pp. 3317-3320

Phan, John H Georgia Inst. of Tech.  
Young, Andrew N Emory Univ.  
Wang, May Dongmei Georgia Tech. and Emory Univ.

14:30-14:45

***Automatic Microtubule Tracking for QD-Based Cell Imaging and Drug Efficacy Study (I)***, pp. 3321-3324

Kong, Koon-Yin Georgia Inst. of Tech.  
Marcus, Adam I Emory Univ.  
Hong, Jin Young Georgia Tech. and Emory Univ.  
Giannakakou, Paraskevi Weill Medical Coll. of Cornell Univ.  
Wang, May Dongmei Georgia Tech. and Emory Univ.

14:45-15:00

***Bio-Nano-Informatics: An Integrated Information Management System for Personalized Oncology (I)***, pp. 3325-3328

Stokes, Todd Georgia Inst. of Tech.  
Phan, John H. Georgia Inst. of Tech.  
Quo, Chang Feng Georgia Inst. of Tech.  
Nie, Shuming Georgia Tech. and Emory Univ.  
Wang, May Dongmei Georgia Tech. and Emory Univ.

**FrC13** Brecht  
**Image Retrieval, Visualization, and Volume Rendering (Oral Session)**

14:00-14:15

***Synthesizing Panoramic Radiographs by Unwrapping Dental CT Data***, pp. 3329-3332

Tohnak, Sirilawan The Univ. of Queensland  
Mehnert, Andrew The Univ. of Queensland  
Crozier, Stuart The Univ. of Queensland  
Mahoney, Michael The Univ. of Queensland

14:15-14:30

***Contrast Enhancement for Hypoechoic Lesions***, pp. 3333-3336

Laurain, Vincent Advanced Computer Vision GmbH - ACV  
Hoenigmann, Dieter C. Advanced Computer Vision GmbH - ACV

14:30-14:45

***Content Based Image Retrieval for MR Image Studies of Brain Tumors***, pp. 3337-3340

Dube, Shishir UCLA  
El-Saden, Suzie UCLA  
Cloughesy, Timothy UCLA  
Sinha, Usha UCLA

14:45-15:00

***A Multi-Modal 2D/3D Registration Scheme for Preterm Brain Images***, pp. 3341-3344

Vansteenkiste, Ewout Ghent Univ.

15:00-15:15

**Flattening the Abdominal Aortic Tree for Effective Visualization**, pp. 3345-3348

Won, Joong Ho  
Rubin, Geoffrey D.  
Napel, Sandy

Stanford Univ.  
Stanford Univ. School of Medicine  
Radiological Sciences Lab. - Stanford Univ. School of Medicine

15:15-15:30

**Evaluation of 3D Anatomical Surfaces Indexing for Surgery Planning**, pp. 3349-3352

Rigollé, Yoann  
Puentes, John  
Giordani, Michel  
Roux, Christian

France Telecom  
INSERM - GET ENST Bretagne  
France Telecom  
ENST Bretagne - INSERM

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**FrC14**

Chelsea-Gotham

**Characterization of Electrode-Electrode Interfaces for Neural Stimulation II (Oral Session)**

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14:00-14:15

**Iridium Sputtered at Varying Pressures and Target-Substrate-Distances Evaluated for Use As Stimulation Electrode Material**, pp. 3353-3356

Wessling, Boerge  
van Ooyen, André  
Mokwa, Wilfried  
Schnakenberg, Uwe

RWTH Aachen Univ.  
RWTH Aachen Univ.  
RWTH Aachen Univ.  
RWTH Aachen Univ.

14:15-14:30

**A MIMO Channel Approach for Characterizing Electrode-Tissue Interface in Long-Term Chronic Microelectrode Array Recordings**, pp. 3357-3360

Oweiss, Karim

Michigan State Univ.

14:30-14:45

**Optimization of Microelectrode Design for Cortical Recording Based on Thermal Noise Considerations**, pp. 3361-3364

Lempka, Scott  
Johnson, Matthew  
Barnett, David  
Moffitt, Mike  
Otto, Kevin  
Kipke, Daryl  
McIntyre, Cameron

Cleveland Clinic Foundation and Case Western Res.  
Univ. of Michigan  
Saint Louis Univ.  
Advanced Bionics Corp.  
Purdue Univ.  
Univ. of Michigan  
Cleveland Clinic Foundation

14:45-15:00

**Analysis of Capacitive Coupling within Microelectrode Array**, pp. 3365-3368

Hu, Zhe  
Troyk, Philip  
Detlefsen, David

Illinois Inst. of Tech.  
Illinois Inst. of Tech.  
Illinois Inst. of Tech.

15:00-15:15

**Boosting Linear Logistic Regression for Single Trial ERP Detection in Rapid Serial Visual Presentation Tasks**, pp. 3369-3372

Huang, Yonghong  
Erdogmus, Deniz  
Mathan, Santosh  
Pavel, Misha

Oregon Health and Science Univ.  
Oregon Health and Science Univ.  
Honeywell Lab.  
Oregon Health and Science Univ.

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**FrC15**

O'Neill

**Adaptive, Parametric and Optimal Filtering I (Oral Session)**

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14:00-14:15

**Correction of Erroneous and Ectopic Beats Using a Point Process Adaptive Algorithm**, pp. 3373-3376

Barbieri, Riccardo  
Brown, Emery N

MGH-Harvard Medical School-MIT  
MGH-Harvard Medical School-MIT

14:15-14:30

***Reconstruction of Central Aortic Pressure Waveform Using Adaptive Multi-Channel Identification***, pp. 3377-3380

Hahn, Jin-Oh  
Reisner, Andrew  
Hojman, Horacio  
Asada, Harry

MIT  
Massachusetts General Hospital  
Yale Univ. School of Medicine  
MIT

14:30-14:45

***Comparative Study of Event-Synchronous Interference Cancelling Methods***, pp. 3381-3384

Ungureanu, Mihaela  
Staude, Gerhard  
Wolf, Werner

Pol. Univ. of Bucharest  
Univ. AF Munich  
Univ. AF Munich

14:45-15:00

***Noise Reduction for Heart Sounds Using a Modified Minimum-Mean Squared Error Estimator with ECG Gating***, pp. 3385-3390

Paul, Anindya S  
Wan, Eric  
Nelson, Alex

Oregon Health and Science Univ.  
Oregon Health & Science Univ. OGI School of Science and Engineer  
Inovise Medical

15:00-15:15

***Multichannel Techniques for Motion Artifacts Removal from Electrocardiographic Signals***, pp. 3391-3394

Milanesi, Matteo  
Martini, Nicola  
Vanello, Nicola  
Positano, Vincenzo  
Santarelli, Filomena  
Paradiso, Rita  
De Rossi, Danilo  
Landini, Luigi

Univ. of Pisa  
Univ. of Pisa  
Univ. of Pisa  
CNR  
CNR  
Milior SpA  
Univ. of Pisa  
Univ. of Pisa

15:15-15:30

***An Adaptive Cusum Test Based on a Hidden Semi-Markov Model for Change Detection in Non-Invasive Mean Blood Pressure Trend***, pp. 3395-3398

Yang, Ping  
Dumont, Guy  
Ansermino, J. Mark

Univ. of British Columbia  
Univ. of British Columbia  
British Columbia's Children's Hospital

**FrC16**

Musicbox-Majestic

**Bio-Robotics III (Oral Session)**

14:00-14:15

***Towards MRI-Controlled Ferromagnetic and MC-1 Magnetotactic Bacterial Carriers for Targeted Therapies in Arteriolocapillar Networks Stimulated by Tumoral Angiogenesis***, pp. 3399-3402

Martel, Sylvain

Ec. Pol. de Montreal

14:15-14:30

***A Simple Highly Efficient Non Invasive EMG-Based HMI***, pp. 3403-3406

Vitiello, Nicola  
Olcese, Umberto  
Oddo, Calogero Maria  
Carpaneto, Jacopo  
Micera, Silvestro  
Carrozza, Maria Chiara  
Dario, Paolo

Scuola Superiore Sant'Anna  
Scuola Superiore Sant'Anna  
Scuola Superiore Sant'Anna - PISA - Italy  
Scuola Superiore Sant'Anna  
Scuola Superiore Sant'Anna  
Scuola Superiore Sant'Anna  
Scuola Superiore Sant'Anna

14:30-14:45

***Predicting Moment Arms in Diarthroidal Joints – 3D Computer Simulation Capability and Muscle-Tendon Model Validation***, pp. 3407-3410

Buford Jr, William  
Andersen, Clark

Univ. of Texas Medical Branch  
Univ. of Texas Medical Branch

14:45-15:00

***The Force Sensing Bio-Microscope: An Efficient Tool for Cells Mechanotransduction Studies.***, pp. 3411-3414

Girot, Maxime  
Boukallel, Mehdi  
Régnier, Stéphane

Univ. Pierre et Marie Curie  
Univ. Pierre et Marie Curie-Paris 6, CNRS-FRE 2507  
Univ. Pierre et Marie Curie-Paris 6, CNRS-FRE 2507

15:00-15:15

***Preliminary Investigation of Bio-Carriers Using Magnetotactic Bacteria***, pp. 3415-3418

lu, zhao  
Martel, Sylvain

Ec. Pol. de Montreal  
Ec. Pol. de Montreal

**FrD01**

Marquis AB

**Non Linear Dynamics in Biological Signals II (Oral Session)**

15:45-16:00

***Pattern Recognition of Single and Combined Motions from the Shoulder Complex***, pp. 3419-3422

Buerkle, Verena Rose  
Englehart, Kevin  
Hudgins, Bernard

Univ. of New Brunswick  
Univ. of New Brunswick  
Univ. of New Brunswick

16:00-16:15

***Effects of Force and Joint Angle on Fractal Parameters of the Myoelectric Signal***, pp. 3423-3426

Talebinejad Mohammadi, Mehran  
Chan, Adrian  
Miri, Ali  
Dansereau, Richard

Univ. of Ottawa  
Carleton Univ.  
Univ. of Ottawa  
Carleton Univ.

16:15-16:30

***Estimation of Oxygen Consumption for Moderate Exercises by Using a Hammerstein Model***, pp. 3427-3430

Su, Steven Weidong  
Wang, Lu  
Celler, Branko George  
Savkin, Andrey

Univ. of Tech. Sydney  
Univ. of New South Wales  
Univ. of New South Wales  
Univ. of New South Wales

16:30-16:45

***Nonlinear Analysis of Heart Rate Variability Signal for the Characterization of Cardiac Heart Failure Patients***, pp. 3431-3434

Signorini, Maria G.  
Ferrario, Manuela  
Marchetti, Miriam MS  
Marseglia, Alessio

Pol. di Milano  
Pol. di Milano  
Pol. di Milano  
Pol. di Milano

16:45-17:00

***Center of Mass Approximation During Walking As a Function of Trunk and Swing Leg Acceleration***, pp. 3435-3438

Betker, Aimee L.  
Szturm, Tony  
Moussavi, Zahra

Univ. of Manitoba  
Univ. of Manitoba  
Univ. of Texas at El Paso

**Biomedical Image Analysis (Oral Session)**

15:45-16:00

***3D Statistical Shape Models of Patella for Sex Classification***, pp. 3439-3445

Mahfouz, Mohamed	Univ. of Tennessee
Badawi, Ahmed	Univ. of Tennessee Knoxville
Merkl, Brandon Cole	Univ. of Tennessee
Abdel Fatah, Emam ElHak	Univ. of Tennessee
Pritchard, Emily	Univ. of Tennessee
Kesler, Katherine	Univ. of Tennessee
Moore, Megan	Univ. of Tennessee
L. Jantz, Richard	Univ. of Tennessee

16:00-16:15

***Brain Tissue Mapping and Segmentation by MRI-Based Blind Source Separation Techniques***, pp. 3446-3449

Vizel, Eldad	Tech. IIT
Orian, Ehud	Tech. IIT
Carasso, David	Tech. IIT
Zeevi, Yehoshua Y.	Tech. IIT

16:15-16:30

***Predicting Neuropsychological Development from Skull Imaging***, pp. 3450-3455

Hen-Tzu, J. L.	Univ. of Washington
Ruiz-Correa, S.	Children's National Medical Center
Shapiro, L. G.	Univ. of Washington
Cunningham, M. L.	Children's Hospital Regional Medical Center
Speltz, M. L.	Univ. of Washington
Sze, R. W.	Children's Natinal Medical Center

16:30-16:45

***Textural Assessment in Digital Mammograms***, pp. 3456-3459

Trujillo-Zamudio, Flavio Ernesto	Inst. Nacional de Medicina Nuclear
Marquez, Jorge	UNAM-CCADET

16:45-17:00

***Position Tracking of the Mouth Using Image Processing***, pp. 3460-3463

Higa, Hiroki	Univ. of the Ryukyus
Tsuha, Kazutoshi	Univ. of the Ryukyus
Onaga, Ryota	Univ. of the Ryukyus
Nakamura, Ikuo	Univ. of the Ryukyus

**Algorithm and Software System for Bioinformatics (Oral Session)**

15:45-16:00

***Bioinformatics Tools Enabling U-Statistics for Microarrays***, pp. 3464-3469

Wittkowski, Knut M.	The Rockefeller Univ.
haider, asifa	The Rockefeller Univ.
Sehayek, Ephraim	The Rockefeller Univ.
Pellegrino, Maurizio	The Rockefeller Univ.
Peshansky, Alexandre	UMDNJ
Coffran, Cameron	The Rockefeller Univ.
Coker, III, Sanford	The Rockefeller Univ.
Suárez-Fariñas, Mayte	The Rockefeller Univ.

16:00-16:15

***Combinatorial Model for Sequence and Spatial Motif Discovery in Short Sequence Fragments: Examples of Beta-Barrel Membrane Proteins***, pp. 3470-3473

Jackups, Jr, Ronald	U of Illinois at Chicago
Liang, Jie	Univ. of Illinois at Chicago

- 16:15-16:30  
***Using Suffix Tree to Discover Complex Repetitive Patterns in DNA Sequences***, pp. 3474-3477  
 He, Dan Univ. of Vermont
- 16:30-16:45  
***New Ensemble Machine Learning Method for Classification and Prediction on Gene Expression Data***, pp. 3478-3481  
 Wang, Ching Wei Univ. of Lincoln
- 16:45-17:00  
***Highly Scalable Genotype Phasing by Entropy Minimization***, pp. 3482-3486  
 Pasaniuc, Bogdan Univ. of Connecticut  
 Mandoiu, Ion Univ. of Connecticut
- 17:00-17:15  
***Improved Hierarchical Parameter Optimization Technique - Application for a Cardiac Myocyte Model***, pp. 3487-3490  
 Yamashita, Yukiko Kyoto Univ.

<b>FrD04</b>	Ziegfeld
<b>New Technologies for Micro Sensors (Oral Session)</b>	

- 15:45-16:00  
***Fabrication Techniques for Improving the Performance of PVDF-On-Silicon Ultrasonic Transducer Arrays***, pp. 3491-3494  
 Kim, Hyun-Joong Purdue Univ.
- 16:00-16:15  
***Electroporation-Induced Cell Lysis in SWLA-2 Hybridomas***, pp. 3495-3496  
 Oakley, Barbara Oakland Univ.  
 Gross, Brooks A. Oakland Univ.  
 Martens, Sara Oakland Univ.  
 Hanna, Darrin Oakland Univ.  
 Stryker, Gabrielle Oakland Univ.
- 16:15-16:30  
***Integrated CMOS Electronic System-On-Chip for Medical Sensors and Actuators***, pp. 3497-3500  
 Salem, Fathi Michigan State Univ.
- 16:30-16:45  
***Design Optimization Methodology for Dry EEG Spikes Array Electrode***, pp. 3501-3504  
 Gabran, Salam Univ. of Waterloo  
 El-Saadany, Ehab Univ. of Waterloo  
 Salama, Magdy Univ. of Waterloo
- 16:45-17:00  
***New Technology for High Throughput THz BioMEMS.***, pp. 3505-3508  
 Mille, Vianney IEMN-DHS, UMR CNRS 8520
- 17:00-17:15  
***Cell Investigation by Terahertz BioMEMS***, pp. 3509-3512  
 TREIZEBRE, Anthony Lille Univ. Inst. of Electronic Microelectronic  
 Bertrand, Bocquet Lille Univ. Inst. of Electronic Microelectronic



**Wearable Sensors and Devices I (Oral Session)**

15:45-16:00

***The Development of Wireless Sensor Network for ECG Monitoring***, pp. 3513-3516

Lin, Jun-Liang	National Chiao Tung Univ. Hsichu, Taiwan
Liu, Hsien Chieh	Taiwan Univ.
Tai, Yu-Ting	National Chiao Tung Univ.
Wu, Hsin Hsien	National Chiao Tung Univ. (Taiwan)
Hsu, Shuo-Jen	National Chiao Tung Univ.
Jaw, Fu-Shan	National Taiwan Univ.
Chen, You-Yin	National Chiao-Tung Univ.

16:00-16:15

***Signal Processing and Feature Extraction for Sleep Evaluation in Wearable Devices***, pp. 3517-3520

Bianchi, Anna Maria	Pol. di Milano
Villantieri, Omar	Pol. di Milano
Mendez, Martin	Pol. di Milano
Cerutti, Sergio	Pol. Univ. of Milan

16:15-16:30

***Adaptive Blood Pressure Estimation from Wearable PPG Sensors Using Peripheral Artery Pulse Wave Velocity Measurements and Multi-Channel Blind Identification of Local Arterial Dynamics***, pp. 3521-3524

McCombie, Devin	MIT
Asada, Harry	MIT
Reisner, Andrew	Massachusetts General Hospital

16:30-16:45

***Noise Cancellation Model Validation for Reduced Motion Artifact Wearable PPG Sensors Using MEMS Accelerometers***, pp. 3525-3528

Wood, Levi Benjamin	MIT
Asada, Harry	MIT

16:45-17:00

***Reflectance Forehead Pulse Oximetry: Effects of Contact Pressure During Walking***, pp. 3529-3532

Dresher, Russell	Worcester Pol. Inst.
Mendelson, Yitzhak	Worcester Pol. Inst.

17:00-17:15

***Testing of a HIFU Probe for the Treatment of Superficial Venous Insufficiency by Using MRI***, pp. 3533-3536

Angel, Yves	INSERM U556
Pichardo, Samuel	Sunnybrook and Women's Coll.
Salomir, Rares	INSERM U556
Chapelon, Jean-Yves	INSERM U556
Petrusca, Lorena	INSERM U556

**Applications of Neural Networks to Biosignal Analysis I (Oral Session)**

15:45-16:00

***Neural Network Models for Biosignal Analysis***, pp. 3537-3540

Cohen, Maurice	Univ. of California San Francisco
Hudson, Donna L	Univ. of California, San Francisco

16:00-16:15

***Near-Infrared Spectroscopic Measurements of Blood Analytes Using Multi-Layer Perceptron Neural Networks***, pp. 3541-3544

Kalamatianos, Dimitrios	National Univ. of Ireland
Liatsis, Panos	City Univ. London
Wellstead, Peter E.	National Univ. of Ireland

16:15-16:30

**Neural Network Based Glucose – Insulin Metabolism Models for Children with Type 1 Diabetes**, pp. 3545-3548

Mougiakakou, Stavroula  
Prountzou, Aikaterini  
Iliopoulou, Dimitra  
Nikita, Konstantina  
Vazeou, Andriani  
Bartsocas, Christos

National Tech. Univ. of Athens  
National Tech. Univ. of Athens  
National Tech. Univ. of Athens  
National Tech. Univ. of Athens  
Faculty of Nursing, Univ. of Athens  
Faculty of Nursing, Univ. of Athens

16:30-16:45

**Prediction of Wrist Angle from Sonomyography Signals with Artificial Neural Networks Technique**, pp. 3549-3552

Shi, Jun  
Zheng, Yongping  
Yan, Zhuangzhi

Shanghai Univ.  
The Hong Kong Pol. Univ.  
Shanghai Univ.

16:45-17:00

**Using a Generalized Neural Network to Identify Airway Obstructions in Anesthetized Patients Post-Operatively Based on Photoplethysmography\***

Knorr, Bethany

Dartmouth Coll.

17:00-17:15

**A Radial Basis Function Classifier for Pediatric Aspiration Detection**, pp. 3553-3556

Lee, Joon  
Blain, Stefanie  
Casas, Mike  
Kenny, Dave  
Berall, Glenn  
Chau, Tom

Univ. of Toronto and Bloorview Kids Rehab  
Univ. of Toronto and Bloorview Kids Rehab  
The Hospital for Sick Children  
The Hospital for Sick Children  
North York General Hospital and Bloorview Kids Rehab  
Univ. of Toronto and Bloorview Kids Rehab

**FrD07**

Cantor-Jolson

**Cardiorespiratory Variability I (Oral Session)**

15:45-16:00

**Circadian Rhythms of Spectral Components of Heart Rate Variability**, pp. 3557-3560

Wu, Guoqiang  
Shen, Lin-Lin  
Tang, Da-Kan  
Zheng, Da-An  
Poon, Chi-Sang

Dept.of Mechanics and Engineering Science, Fudan Univ.  
Shanghai Medical Coll. Fudan Univ.  
School of Information Science and Engineering, Fudan Univ.  
School of Information Science and Engineering, Fudan Univ.  
Massachusetts Inst. of Tech.

16:00-16:15

**Classification of Cheyne Stokes Breathing and Obstructive Sleep Apnea Using ECG**, pp. 3561-3564

Sanjee, Suhas Ramesh  
Vijendra, Sridhar  
Burk, John R.  
Lucas, Edgar A  
Behbehani, Khosrow

Univ. of Texas at Arlington  
Univ. of Texas at Arlington  
Sleep Consultants Inc.  
Sleep Consultants Inc.  
Univ. of Texas at Arlington

16:15-16:30

**Heart Rate Variability in Pediatric Obstructive Sleep Apnea**, pp. 3565-3568

Deng, Zhi-De  
Poon, Chi-Sang  
Arzeno, Natalia  
Katz, Eliot

Massachusetts Inst. of Tech.  
Massachusetts Inst. of Tech.  
Massachusetts Inst. of Tech.  
Massachusetts General Hospital

16:30-16:45

***Time-Varying Closed-Loop Modeling of Autonomic Control in Pediatric Obstructive Sleep Apnea Syndrome During Cold Face Stimulation***, pp. 3569-3571

Chaicharn, Jarree	Univ. of Southern California
Lin, Zheng	Univ. of Southern California
Chen, Maida	Childrens Hospital Los Angeles, Univ. of Southern California
Keens, Thomas	Childrens Hospital Los Angeles, Univ. of Southern California
Davidson Ward, Sally	Univ. of Southern California
Khoo, Michael	Univ. of Southern California

16:45-17:00

***Comparison of Baroreflex Sensitivity Measures for Assessing Subjects with Obstructive Sleep Apnea***, pp. 3572-3575

Ward, Seamus	Univ. Coll. Dublin
Ryan, Silke	St Vincent's Univ. Hospital
Mc Nicholas, Walter	St. Vincent's Univ. Hospital
Heneghan, Conor	Univ. Coll. Dublin

17:00-17:15

***Time-Varying Analysis of the Heart Rate Variability During REM and Non REM Sleep Stages***, pp. 3576-3579

Mendez, Martin	Pol. di Milano
Bianchi, Anna Maria	Pol. di Milano
Villantieri, Omar	Pol. di Milano
Cerutti, Sergio	Pol. Univ. of Milan

**FrD08**

Juilliard

**Neural Stimulation and Prostheses 2 (Oral Session)**

15:45-16:00

***Bio-Heat Transfer Model of Deep Brain Stimulation Induced Temperature Changes***, pp. 3580-3583

elwassif, maged	The City Coll. of New York
Kong, Qingjun	City Coll. of New York
Vazquez, marbel	The City Coll. of New York
Bikson, Marom	The City Coll. of New York

16:00-16:15

***Spiral Nerve Cuff Electrodes for an Upper Extremity Neuroprosthesis***, pp. 3584-3587

Polasek, Katharine	Case Western Res. Univ.
Hoyen, Harry	MetroHealth Medical Center
Keith, Michael	MetroHealth Medical Center
Kirsch, Robert	Case Western Res. Univ.
Tyler, Dustin	Case Western Res. Univ.

16:15-16:30

***The Role of Flexible Polymer Interconnects in Chronic Tissue Response Induced by Intracortical Microelectrodes – a Modeling and an in Vivo Study***, pp. 3588-3591

Subbaroyan, Jeyakumar	Univ. of Michigan, Ann Arbor
Kipke, Daryl	Univ. of Michigan

16:30-16:45

***Preliminary Evaluation of a Neural Prosthesis for Standing after Spinal Cord Injury with Four Contact Nerve-Cuff Electrodes for Quadriceps Stimulation***, pp. 3592-3595

Fisher, Lee	Case Western Res. Univ.
Miller, Michael	Cleveland FES Center
Nogan, Stephanie	Cleveland FES Center
Davis, John	MetroHealth Medical Center
Anderson, James	MetroHealth Medical Center
Murray, Lori	Cleveland FES Center
Tyler, Dustin	Case Western Res. Univ.
Triolo, Ronald J.	Cleveland FES Center

16:45-17:00

**Customized Selection of Frequency Maps in an Acoustic Simulation of a Cochlear Implant**, pp. 3596-3599  
Fitzgerald, Matthew  
Morbiwala, Tasnim  
Svirsky, Mario  
New York Univ. School of Medicine  
Advanced Bionics Corp.  
NYU School of Medicine

**FrD09**

Gramercy-Olmstead

**Emerging Technologies for Healthcare Delivery I (Oral Session)**

15:45-16:00

**An Adapted Gaussian Mixture Model Approach to Accelerometry-Based Movement Classification Using Time-Domain Features**, pp. 3600-3603

Allen, Felicity Ruth  
Ambikairajah, Eliathamby  
Lovell, Nigel H  
Celler, Branko George  
Univ. of New South Wales  
Univ. of New South Wales  
Univ. of New South Wales  
Univ. of New South Wales

16:00-16:15

**Automated Healthcare Data Mining Based on a Personal Dynamic Healthcare System**, pp. 3604-3607

Takeuchi, Hiroshi  
Kodama, Naoki  
Hashiguchi, Takeshi  
Hayashi, Doubun  
Takasaki Univ. of Health and Welfare  
Takasaki Univ. of Health and Welfare  
Univ. of Tokyo  
Univ. of Tokyo

16:15-16:30

**Development of a Remote Handheld Cardiac Arrhythmia Monitor**, pp. 3608-3611

Singh, Swaroop  
Hsiao, Henry  
Univ. of North Carolina at Chapel Hill  
Univ. of North Carolina at Chapel Hill

16:30-16:45

**Ambient Multi-Perceptive System with Electronic Emails for a Residential Health Monitoring System**, pp. 3612-3615

Noury, Norbert  
Villemazet, Christophe  
Fleury, Anthony  
Barralon, Pierre  
Rumeau, Pierre  
Baghai, Ramine  
TIMC-IMAG  
TIMC-IMAG  
TIMC-IMAG  
TIMC-IMAG  
CHU Toulouse  
RBI inc

16:45-17:00

**Preliminary Design of Remotely Used and Monitored Medication Dispenser**, pp. 3616-3619

Patil, Sushil  
Gale, Timothy John  
Univ. of Tasmania  
Univ. of Tasmania

17:00-17:15

**The Role of the University Hospital in the Development of Biomedical Engineering Education in Taiwan—the Experience of an Endoscopist in the Last 35 Years(1971-2006)\***

WANG, Cheng-Yi  
Chien, Chia-Hung  
Huang, Yi-You  
Lin, Feng-Huei  
Coll. of Medicine, National Taiwan Univ. Hospital  
National Taiwan Univ.  
National Taiwan Univ.  
National Taiwan Univ.

**FrD10**

Astor Ballroom

**Image Segmentation and Analysis (Oral Session)**

15:45-16:00

**Segmentation of Brain MR Images Using Genetically Guided Clustering**, pp. 3620-3623

mohan, sasikala  
Natesan, Kumaravel  
Sampath kumar, Ravikumar  
Madras Inst. of Tech. AnnaUniversity, Chennai, India  
Anna Univ.  
Madras Inst. of Tech. Anna Univ.



16:45-17:00

***Towards Tissue Engineering of Meniscus Substitutes: Selection Cell Source and Culture Environment***, pp. 3656-3658

Marsano, Anna  
Vunjak-Novakovic, Gordana  
Martin, Ivan

Columbia Univ.  
Columbia Univ.  
Univ. Hospital Basel

17:00-17:15

***Chondrocyte Nuclear Response to Osmotic Loading***, pp. 3659-3661

Oswald, Elizabeth  
Chao, Pen-hsiu Grace  
Bulinski, Chloe  
Ateshian, Gerard  
Hung, Clark

Columbia Univ.  
Columbia Univ.  
Columbia Univ.  
Columbia Univ.  
Columbia Univ.

**FrD12**

Palace Wintergarten

**Electrophysiological Neuroimaging (Oral Session)**

15:45-16:00

***Cortical Potential Imaging of Movement-Related Potentials Using Parametric Weiner Filter in Realistic-Shaped Head Model***, pp. 3662-3665

Hori, Junichi  
He, Bin

Niigata Univ.  
Univ. of Minnesota

16:00-16:15

***Hypermethylenes for EEG Hyperscanning***, pp. 3666-3669

Babiloni, Fabio  
Astolfi, Laura  
Cincotti, Febo  
Mattia, Donatella  
Mattiocco, Marco  
Marciani, Maria Grazia  
De Vico Fallani, Fabrizio

Univ. of Rome  
Univ. of Rome  
Fondazione Santa Lucia IRCCS  
Fondazione Santa Lucia IRCCS  
Fondazione Santa Lucia IRCCS  
Tor Vergata Univ.  
Univ. La Sapienza

16:15-16:30

***Spatio-Temporal Source Localization and Granger Causality in Ictal Source Analysis***, pp. 3670-3671

Ding, Lei  
Worrell, Gregory A.  
Lagerlund, Terrence D.  
He, Bin

Univ. of Minnesota  
Mayo Clinic  
Mayo Clinic  
Univ. of Minnesota

16:30-16:45

***A Feature-Based Approach to Combine Functional MRI, Structural MRI and EEG Brain Imaging Data***, pp. 3672-3675

Calhoun, Vince  
Adali, Tulay  
Liu, Jingyu

Olin Neuropsychiatry Res. Center, Yale Univ.  
Univ. of Maryland Baltimore County  
Olin Neuropsychiatry Res. Center, Inst. of Living

16:45-17:00

***Neural Basis for the Brain Responses to the Marketing Messages: An High Resolution EEG Study***, pp. 3676-3679

Babiloni, Fabio  
De Vico Fallani, Fabrizio  
Astolfi, Laura  
Cincotti, Febo  
Mattia, Donatella  
Mattiocco, Marco  
Marciani, Maria Grazia  
Bufalari, Simona

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Univ. La Sapienza  
Univ. of Rome  
Fondazione Santa Lucia IRCCS  
Fondazione Santa Lucia IRCCS  
Fondazione Santa Lucia IRCCS  
Tor Vergata Univ.  
Fondazione Santa Lucia IRCCS

17:00-17:15

***A Generalized Spatiotemporal Covariance Model for Stationary Background in Analysis of MEG Data***, pp. 3680-3683

Plis, Sergey	Los Alamos National Lab.
Jun, Sung Chan	Los Alamos National Lab.
Schmidt, David	Los Alamos National Lab.
Ranken, Doug	Los Alamos National Lab.

**FrD14**

Chelsea-Gotham

**Neuromuscular Control: Central Mechanisms** (Oral Session)

15:45-16:00

***Towards a Method to Study Neurorobotic Control in a Rat Model of Spinal Cord Injury\****

Flint, Robert	Drexel Univ.
Moxon, Karen	Drexel Univ.

16:00-16:15

***Robot Application of Elastic Fields to the Pelvis of the Spinal Transected Rat: A Tool for Detailed Assessment and Rehabilitation.***, pp. 3684-3687

Udoekwere, Ubong Ime	Drexel Univ.
Ramakrishnan, Arun	Drexel Univ.
Mbi, Lollise	Drexel Univ. Coll. of Medicine
Giszter, Simon	Drexel Univ. Coll. Medicine

16:15-16:30

***Mechanical Abnormalities of the Spastic Ankle in Chronic Stroke Subjects***, pp. 3688-3691

Thajchayapong, M	RIC/NU
Alibiglou, Laila	RIC/UIC
Lilaonitkul, Thanan	RIC/NU
Mirbagheri, Mehdi	Northwestern Univ.

16:30-16:45

***Fmri Analysis of Neural Mechanisms Underlying Rehabilitation in Virtual Reality: Activating Secondary Motor Areas***, pp. 3692-3695

August, Katherine	NJIT
Lewis, Jeffrey	UMDNJ
Chandar, Gayathri	NJIT
Merians, Alma	UMDNJ
Biswal, Bharat	UMDNJ
Adamovich, Sergei	NJIT

16:45-17:00

***Vestibular-Evoked Reflexive Head Movements and Their Dependence on the Body's Orientation in Space***, pp. 3696-3699

Gdowski, Greg	Univ. of Rochester
Duarte, Sally P.	Univ. of Rochester
Green, Abbey	Univ. of Rochester

**FrD15**

O'Neill

**Linear and Nonlinear Adaptive Filters** (Oral Session)

15:45-16:00

***A Software Module for the Adaptive Estimation of Steady State Auditory Evoked Potentials***, pp. 3700-3703

Middleton, Seth	Clarkson Univ.
Goli, Asghar	Clarkson Univ.
Ziarani, Alireza	Clarkson Univ.

16:00-16:15

**Statistical Signal Processing for an Implantable Ethanol Biosensor**, pp. 3704-3707

Han, Jae-Joon  
Doerschuk, Peter C.  
Gelfand, Saul  
O'Connor, Sean  
Purdue Univ.  
Purdue Univ.  
Purdue Univ.  
Indiana Univ. School of Medicine and Purdue Univ.

16:15-16:30

**Cardiovascular Signal Decomposition and Estimation with the Extended Kalman Smoother**, pp. 3708-3711

McNames, James  
Aboy, Mateo  
Portland State Univ.  
Oregon Inst. of Tech.

16:30-16:45

**A Bootstrap Term Selection Method for the Identification of Time-Varying Nonlinear Systems**, pp. 3712-3715

Ikharia, Bashiru I.  
Westwick, David T.  
Univ. of Calgary  
Univ. of Calgary

16:45-17:00

**Automated Tracking of Multiple C. Elegans**, pp. 3716-3719

Fontaine, Ebraheem  
Burdick, Joel W.  
Barr, Alan  
California Inst. of Tech.  
California Inst. of Tech.  
California Inst. of Tech.

17:00-17:15

**A Spectrum of Colors: Investigating the Temporal Frequency Characteristics of the Human Visual System Using a System Identification Approach**, pp. 3720-3723

Lalor, Edmund  
Reilly, Richard  
Pearlmutter, Barak  
Foxe, John  
Univ. Coll. Dublin  
Univ. Coll. Dublin  
National Univ. of Ireland, Maynooth  
City Coll. of the City Univ. of New York

**FrEP1**

Westside Ballroom South

**Biomedical Signal Processing II (Poster Session)**

16:30-18:30

**Automatic Detection of QRS Complexes in ECG Signals Collected from Patients after Cardiac Surgery**, pp. 3724-3727

Visinescu, Mirela  
Bashour, Allen  
Bakri, Mohamed  
Nair, Bala  
The Cleveland Clinic  
Cleveland Clinic  
Cleveland Clinic  
Cleveland Clinic

16:30-18:30

**Evaluation of Fetal Heart Rate Baseline Estimation Method Using Testing Signals Based on a Statistical Model**, pp. 3728-3731

Kupka, Tomasz  
Wrobel, Janusz  
Jezewski, Janusz  
Gacek, Adam  
Jezewski, Michal  
Inst. of Medical Tech. and Equipment  
Inst. of Medical Tech. and Equipment  
Inst. of Medical Tech. and Equipment  
Inst. of Medical Tech. and Equipment  
The Silesian Univ. of Tech.

16:30-18:30

**Unsupervised and Uncued Segmentation of the Fundamental Heart Sounds in Phonocardiograms Using a Time-Scale Representation**, pp. 3732-3735

Rajan, Sreeraman  
Budd, Erin  
Stevenson, Maryhelen  
Doraiswami, Rajamani  
DRDC - Ottawa  
Univ. of New Brunswick  
Univ. of New Brunswick  
Univ. of New Brunswick



16:30-18:30

***Autoregressive Spectral Analysis in Brain Computer Interface Context***, pp. 3736-3739

Bufalari, Simona  
Mattia, Donatella  
Babiloni, Fabio  
Mattiocco, Marco  
Marciani, Maria Grazia  
Cincotti, Febo

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Fondazione Santa Lucia IRCCS  
Univ. of Rome  
Fondazione Santa Lucia IRCCS  
Tor Vergata Univ.  
Fondazione Santa Lucia IRCCS

16:30-18:30

***Frequency Domain Analysis of Sleep EEG for Visualization and Automated State Detection***, pp. 3740-3743

Vivaldi, Ennio A.  
Bassi, Alejandro

Facultad de Medicina, Univ. de Chile  
FCFM, Univ. de Chile

16:30-18:30

***Time Series Trend of the Water Content on the Different Human Anatomical Sites Using Single Frequency-Susceptance Measuring Method***, pp. 3744-3746

JANG, WOO YOUNG  
Park, Jeong Je  
Jeong, Hye Jin  
Kim, Hong Sig  
Park, Jae Chan

Samsung Advanced Inst. of Tech.  
Samsung Advanced Inst. of Tech.  
Samsung Advanced Inst. of Tech.  
Samsung Advanced Insititute of Tech.  
Samsung Advanced Inst. of Tech.

16:30-18:30

***Patient Un-Specific Detection of Epileptic Seizures through Changes in Variance***, pp. 3747-3750

Varsavsky, Andrea  
Mareels, Iven

Melbourne Univ.  
Melbourne Univ.

16:30-18:30

***Short-Term Effects of GSM Mobiles Phones on Spectral Components of the Human Electroencephalogram***, pp. 3751-3754

MABY, Emmanuel  
Le Bouquin Jeannes, Regine  
Faucon, Gerard

INSERM, U280, Lyon  
INSERM U642 - Univ. de Rennes 1  
INSERM U642 - Univ. de Rennes 1

16:30-18:30

***Using Windowed Relative Deviation to Detect Possible Voice Pathology***, pp. 3755-3758

Lafren, John Brandon  
Lazarus, Cathy L.  
Amin, Milan R.

New York Univ.  
New York Univ.  
New York Univ.

16:30-18:30

***Assessment of Dysarthric Speech and an Analysis on Velopharyngeal Incompetence***, pp. 3759-3762

P, Vijayalakshmi  
M, Ramasubba Reddy

Indian Inst. of Tech. Madras  
Indian Inst. of Tech. Madras

16:30-18:30

***Speech Processing for Cochlear Implants with the Discrete Wavelet Transform: Feasibility Study and Performance Evaluation***, pp. 3763-3766

Paglialonga, Alessia  
Tognola, Gabriella  
Baselli, Giuseppe  
Parazzini, Marta  
Ravazzani, Paolo  
Grandori, Ferdinando

Inst. of Biomedical Engineering CNR  
Istituto di Ingegneria Biomedica CNR  
Pol. di Milano  
CNR  
CNR  
Consiglio Nazionale delle Ricerche

16:30-18:30

***A 'Nyquist' Plot Approach for Functional Analysis of Human Voice Production\****

Yan, Yuling

Stanford Univ. School of Medicine

**Image Reconstruction I (Poster Session)**

16:30-18:30

***An Efficient MR Image Reconstruction Method for Arbitrary K-Space Trajectories without Density Compensation***, pp. 3767-3770Song, Jiayu  
Liu, Qing HuoDuke Univ.  
Duke Univ.

16:30-18:30

***Morphological Exponential Entropy Driven-HUM***, pp. 3771-3774gambino, orazio  
ardizzone, edoardo  
pirrone, robertoUniv. degli Studi di Palermo  
Univ. degli Studi di Palermo  
Univ. degli Studi di Palermo

16:30-18:30

***Magnetic Field Mapping by Selective Equipotential Excitation***, pp. 3775-3778Felfoul, Ouajdi  
Michelle, Raimbert  
Martel, SylvainÉcole Pol. de Montréal  
Univ. de Montreal  
École Pol. de Montréal

16:30-18:30

***Joint Optimization of Spatial Registration and Histogram Compensation for Microscopic Images***, pp. 3779-3782Kim, Dong Sik  
Lee, Kiryung  
Lee, Kyung Eun  
Han, Sung SikHankuk Univ. of Foreign Studies  
LG Electronics Inst. of Tech.  
Korea Univ.  
Korea Univ.

16:30-18:30

***A New Scheme and Reconstruction Algorithm for Dual Source Circular CT***, pp. 3783-3786Yan, Ming  
Zhang, Cishen  
Liang, HongzhuNanyang Tech. Univ.  
Nanyang Tech. Univ.  
Nanyang Tech. Univ.

16:30-18:30

***Direct Fourier Method in 3D PET Using Accurately Determined Frequency Sample Distribution***, pp. 3787-3790Li, Yingbo  
Kummert, Anton  
Herzog, HansUniv. of Wuppertal  
Univ. of Wuppertal  
Res. Center Juelich**Image-Guided Surgery and Treatment III (Poster Session)**

16:30-18:30

***Modified Grey-Level Models for Active Shape Model Training***, pp. 3791-3794Luo, Shuqian  
Dong, ShuoCapital Univ. of Medical Sciences  
Capital Univ. of Medical Sciences

16:30-18:30

***Ultrasound Image Registration for Patient Setup in Conformal Radiotherapy of Prostate Cancer***, pp. 3795-3798Betrouni, Nacim  
Pasquier, David  
DEWALLE, ANNE-SOPHIE  
Jounwaz, Reza  
DUBOIS, Patrick  
Lartigau, Eric  
Lopes, RenaudInst. de Tech. Médicale  
Centre O. Lambret, Univ. Lille 2  
Univ. des Sciences et Tech. de Lille  
Inserm, Univ. of Lille 2, Lille Univ. Hospital  
Inserm  
CRLCC Centre Oscar Lambret  
LMPA, ULCO, Calais, France.

16:30-18:30

***Effect of Ultrasound Probe on Dose Delivery During Real-Time Ultrasound-Guided***

***Tumor Tracking***, pp. 3799-3802

Wu, Jianzhou  
Dandekar, Omkar  
Nazareth, Daryl  
Lei, Peng  
D'Souza, Warren  
Shekhar, Raj

Univ. of Maryland School of Medicine  
Univ. of Maryland  
Univ. of Maryland School of Medicine  
Univ. of Maryland School of Medicine  
Univ. of Maryland School of Medicine  
Univ. of Maryland

16:30-18:30

***Intra-Observer Variation in Gross Tumor Volume Delineation in 18FDG-PET Guided IMRT***

***Treatment Planning for Lung Cancer***, pp. 3803-3806

Song, Yulin  
Chan, Maria  
Burman, Chandra  
Cann, Donald

Memorial Sloan-Kettering Cancer Center  
Memorial Sloan-Kettering Cancer Center  
Memorial Sloan-Kettering Cancer Center  
Memorial Sloan-Kettering Cancer Center

16:30-18:30

***Heating Efficiency Improvement by Using a Spherically-Concaved Sectored Array in Focused***

***Ultrasound Thermal Therapy***, pp. 3807-3810

Liu, Hao-Li  
Chen, Heng-Wun  
Ju, Kuen-Cheng  
Shih, Tzu-Ching  
Chen, Wen-Shiang

Chang Gung Univ.  
Chang-Gung Univ.  
Univ. of Washington  
China Medical Univ.  
National Taiwan Univ. Hospital

16:30-18:30

***Semi-Automated Intra-Operative Fluoroscopy Guidance for Osteotomy and External-Fixator***, pp. 3811-3814

Lin, Hong  
Birch, John

TSRHC  
Texas Scottish Right Hospital for Children

16:30-18:30

***Antomically Based Computational Models of the Male and Female Pelvic Floor and***

***Anal Canal***, pp. 3815-3818

Noakes, Kim  
Bissett, Ian  
Pullan, Andrew  
Cheng, Leo

Bioengineering Inst. The Univ. of Auckland  
The Univ. of Auckland  
The Univ. of Auckland  
The Univ. of Auckland

16:30-18:30

***Quantification of Progression and Regression of Carotid Artery Atherosclerosis Using 3D***

***Ultrasound Images***, pp. 3819-3822

Chiu, Bernard  
Egger, Micaela  
Spence, J. David  
Parraga, Grace  
Fenster, Aaron

Robarts Res. Inst.  
Robarts Res. Inst.  
Robarts Res. Inst.  
Robarts Res. Inst.  
Robarts Res. Inst.

16:30-18:30

***A Clinical Procedure for Case-Specific Analytical Validation of Mono-Modality Image Fusion in Image***

***Guided Radiotherapy***, pp. 3823-3826

Hanley, Joseph  
Barbiere, Joseph  
Song, Yulin

Hackensack Univ. Medical Center  
Hackensack Univ. Medical Center  
Memorial Sloan-Kettering Cancer Center

16:30-18:30

***Normal Vector Information Registration and Comparisons with Mutual Information***, pp. 3827-3830

Zhuang, Xiahai  
Gu, Lixu

Shanghai Jiao Tong Univ.  
Shanghai Jiaotong Univ.

16:30-18:30

**Evaluation of the Influence of Probe Pressure on the B-Mode Ultrasound Measurement of Arterial Diameter**, pp. 3831-3835

TRIBOULET, Jean  
NASR, Elias  
DOMBRE, Etienne  
POIGNET, Philippe  
DAUZAT, Michel

LIRMM, UMR CNRS 5506, Univ. of Montpellier II  
LIRMM, UMR CNRS 5506, Univ. of Montpellier II  
LIRMM, UMR CNRS 5506, Univ. of Montpellier II  
LIRMM, UMR CNRS 5506, Univ. of Montpellier II  
Lab. of Cardio-Vascular Physiologic, EA 2992, Faculty of Medecine

16:30-18:30

**A Visual Validation Method Based on Point Mappings for Medical Image Segmentation**, pp. 3836-3839

Qian, Feng  
Gu, Lixu  
Zhang, Shaoting

Shanghai Jiaotong Univ.  
Shanghai Jiaotong Univ.  
Shanghai Jiao Tong Univ.

16:30-18:30

**Statistical Evaluation of the Cleft Lip Nose Deformity Image**, pp. 3840-3842

Kim, Deok Won  
Kim, Jin Tae  
Park, JoongHoon  
Hong, Hyun Ki  
Nam, Ki Chang

Yonsei Univ. Coll. of Medicine  
Yonsei Univ.  
Yonsei Univ.  
Yonsei Univ.  
SIEMENS

16:30-18:30

**Spinal 3D Alignment Measurement in Standing Position\***

Nakajima, Yoshikazu

The Univ. of Tokyo

16:30-18:30

**Ultrasound-Guided Noninvasive Measurement of a Patient's Central Venous Pressure**, pp. 3843-3849

Aggarwal, Vikram  
Chatterjee, Aniruddha  
Cho, Yoonju  
Cheung, Dickson

Johns Hopkins Univ.  
Johns Hopkins Univ.  
Johns Hopkins Univ.  
Bayview Medical Center, Johns Hopkins Univ.

**FrEP4**

Westside Ballroom South

**Surgical and Bio-Robotics (Poster Session)**

16:30-18:30

**Master Slave Robotic System for Therapeutic Gastrointestinal Endoscopic Procedures**, pp. 3850-3853

Low, Soon Chiang

Nanyang Tech. Univ.

16:30-18:30

**Tool/tissue Interaction Feedback Modalities in Robot-Assisted Lump Localization**, pp. 3854-3857

Tavakoli, Mahdi  
Aziminejad, Arash  
Patel, Rajni  
Moallem, Mehrdad

CSTAR, London Health Sciences Centre  
CSTAR, London Health Sciences Centre  
CSTAR, London Health Sciences Centre  
CSTAR, London Health Sciences Centre

16:30-18:30

**Deflection of a Flexible Needle During Insertion into Soft Tissue**, pp. 3858-3861

Abolhassani, Niki  
Patel, Rajni

Univ. of Western Ontario, Canadian Surgical Tech. & Advan  
Univ. of Western Ontario, Canadian Surgical Tech. & Advan

16:30-18:30

**Acousto-Optic Compensation of Tremor for Use in a Handheld Laser**

**Microsurgical Instrument**, pp. 3862-3864

Cernat, Ramona  
Matei, Consuela  
Olteanu, Luiza  
Riviere, Cameron  
Dumitra\_, Dan

National Inst. for Laser, Plasma, and Radiation Physics  
National Inst. for Laser, Plasma, and Radiation Physics  
National Inst. for Laser, Plasma, and Radiation Physics  
Carnegie Mellon Univ.  
National Inst. for Laser, Plasma, and Radiation Physics

**Sleep Disorders** (Poster Session)

16:30-18:30

***Communication Platform for Biosensor-Based Sleep Management Applications***, pp. 3865-3868

Cabrera-Umpierrez, Maria Fernanda  
 Fico, Giuseppe  
 ARREDONDO, MARIA TERESA  
 Blasco, Jose Manuel  
 Monton, Eduardo  
 GUILLEN, SERGIO  
 Hernandez, Jose F  
 Vasao, Teresa  
 Valadas, Jorge

Univ. Pol. de Madrid  
 Tech. Univ. of Madrid  
 Tech. Univ. of Madrid  
 ITACA Inst.  
 ITACA Inst. - Pol. Univ. of Valencia  
 Inst. Itaca  
 Itaca Inst.  
 INESC INOVAÇÃO  
 INESC INOVAÇÃO

16:30-18:30

***SENSATION Remote Monitoring System for Enabling the "anytime, Anywhere" Monitoring of Patients with Selected Sleep Disorders***, pp. 3869-3872

MAGLAVERA, STAVROULA  
 MAGLAVERAS, NIKOLAOS  
 Lekka, Irini  
 Bekiaris, Evangelos  
 Penzel, Thomas  
 Canisius, Sebastian  
 JAcob, Nathalie  
 Leondaridis, Elefterios

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 Aristotle Univ. of Thessaloniki  
 Medical School, Aristotle Univ. of Thessaloniki  
 Centre for Res. & Tech. Hellas  
 Hospital of Philipps-Univ.  
 Philipps-Univ. Marburg - Faculty Human Medicine  
 FORENAP FRP  
 NETSMART S.A.

16:30-18:30

***Nonlinear Dynamics Analysis of Heart Rate Variability Signals to Detect Sleep Disordered Breathing in Children***, pp. 3873-3878

Nazeran, Homayoun  
 Krishnam, Rohit  
 Chatlapalli, Surya Mala  
 Pamula, Yvonne  
 Haltiwanger, Emily  
 Cabrera, Sergio

The Univ. of Texas  
 Univ. of Texas at El Paso  
 Univ. of Texas at El Paso  
 Adelaide Women's and Children's Hospital  
 Coll. of Health Sciences  
 Univ. of Texas at El Paso

16:30-18:30

***Detection of Apnoeic and Breathing Activity through Pole-Zero Analysis of the SpO2 Signal***, pp. 3879-3882

Lazareck, Lisa Joanna  
 Tarassenko, Lionel

Univ. of Oxford  
 Univ. of Oxford

16:30-18:30

***Automatic Sleep Spindle Detection in Patients with Sleep Disorders***, pp. 3883-3886

Devuyst, Stéphanie  
 Dutoit, Thierry  
 Didier, Jean-François  
 Meers, François  
 Stanus, Etienne  
 Stenuit, Patricia  
 Kerkhofs, Myriam

Faculté Pol. de Mons  
 Faculté Pol. de Mons  
 Faculté Pol. de Mons  
 Multitel ASBL  
 Tivoli Hospital  
 CHU Vésale  
 CHU Vésale

16:30-18:30

***A New Method to Detect Obstructive Sleep Apnea Using Fuzzy Classification of Time-Frequency Plots of the Heart Rate Variability\****

Al-Abed, Mohammad  
 Behbehani, Khosrow  
 Burk, John R.  
 Lucas, Edgar A  
 Manry, Michael

Univ. of Texas -- Arlington  
 Univ. of Texas at Arlington  
 Sleep Consultants Inc.  
 Sleep Consultants Inc.  
 The Univ. of Texas at Arlington

16:30-18:30

***Study of the Relationship between Pulse Photoplethysmography Amplitude Decrease Events and Sleep Apneas in Children***, pp. 3887-3890

Gil, Eduardo  
Vergara, Jose Maria  
Laguna, Pablo

Zaragoza Univ.  
Miguel Servet Children Hospital  
Zaragoza Univ.

**FrEP6**

Westside Ballroom South

**Cardiac Electrophysiological Modeling and Instrumentation (Poster Session)**

16:30-18:30

***Temporal Resolution of Stimulation Threshold: A Tool for Electrophysiologic Analysis***, pp. 3891-3894

Whittington, R. Hollis  
Chen, Michael Q.  
Giovangrandi, Laurent  
Kovacs, Gregory T.A.

Stanford Univ.  
Stanford Univ.  
Stanford Univ.  
Stanford Univ.

16:30-18:30

***A Comparison of Monodomain and Bidomain Propagation Models for the Human Heart***, pp. 3895-3898

Potse, Mark  
Dubé, Bruno  
Vinet, Alain  
Cardinal, René

Univ. de Montréal  
Univ. de Montréal  
Univ. de Montréal  
Univ. de Montréal

16:30-18:30

***ST Elevation or Depression in Subendocardial Ischemia?***, pp. 3899-3902

Potse, Mark  
LeBlanc, A.-Robert  
Cardinal, René  
Vinet, Alain

Univ. de Montréal  
Univ. de Montréal  
Univ. de Montréal  
Univ. de Montréal

16:30-18:30

***A Comparison of Different Choices for the Regularization Parameter in Inverse Electrocardiography Models***, pp. 3903-3906

Shou, guofa  
Jiang, Mingfeng  
Xia, Ling  
Wei, Qing  
Liu, Feng  
Crozier, Stuart

Zhejiang Univ.  
Zhejiang Univ.  
Zhejiang Univ.  
University of Queensland  
The Univ. of Queensland  
The Univ. of Queensland

16:30-18:30

***The Use of Genetic Algorithms for Solving the Inverse Problem of Electrocardiography***, pp. 3907-3910

Jiang, Mingfeng  
Xia, Ling  
Shou, guofa

Zhejiang Univ.  
Zhejiang Univ.  
Zhejiang Univ.

16:30-18:30

***The Effects of Phase Resetting Technique in Cardiac Models***, pp. 3911-3914

Tsalikakis, Dimitrios  
Zhang,, Henggui  
Kremmydas, George  
Fotiadis, Dimitrios I.

Univ. of Ioannina  
The Univ. of Manchester  
Univ. of Ioannina  
Univ. of Ioannina

16:30-18:30

***Guidelines for Plunge Needle Recordings for Effective Detection of Purkinje Activation***, pp. 3915-3918

Dosdall, Derek	Univ. of Alabama at Birmingham
Huang, Jian	Univ. of Alabama at Birmingham
Smith, William	Univ. of Alabama at Birmingham
Allison, J. Scott	Univ. of Alabama at Birmingham
Allred, James	Univ. of Alabama at Birmingham
Ideker, Raymond	Univ. of Alabama at Birmingham

16:30-18:30

***The Role of Resitution in Pacing Induced Spiral Wave Acceleration***, pp. 3919-3922

Tranquillo, Joseph	Bucknell Univ.
Bursac, Nenad	Duke Univ.

16:30-18:30

***Accelerating Large Cardiac Bidomain Simulations by Arnoldi Preconditioning***, pp. 3923-3926

Deo, Makarand	Univ. of Calgary
Bauer, Steffen	National organization of metrology
Plank, Gernot	Medical Univ. of Graz
Vigmond, Edward	Univ. of Calgary

16:30-18:30

***Printed Circuit Board Electrodes for Transmural Cardiac Mapping***, pp. 3927-3930

Dosdall, Derek	Univ. of Alabama at Birmingham
Huang, Jian	Univ. of Alabama at Birmingham
Smith, William	Univ. of Alabama at Birmingham
Allred, James	Univ. of Alabama at Birmingham
Allison, J. Scott	Univ. of Alabama at Birmingham
Ideker, Raymond	Univ. of Alabama at Birmingham

16:30-18:30

***A Cycle-Linear Approach to Modeling Action Potentials***, pp. 3931-3934

Ye, Pei	Stony Brook Univ.
Entcheva, Emilia	Stony Brook Univ.
Smolka, Scott	Stony Brook Univ.
True, Mike	SUNY at Stony Brook
Grosu, Radu	Stony Brook Univ.

16:30-18:30

***Inherent Dispersion in Restitution Properties Over Space***, pp. 3935-3938

Singh, Rupinder	Stony Brook Univ.
Entcheva, Emilia	Stony Brook Univ.
Bien, Harold	Stony Brook Univ.
Fenton, Flavio	Cornell Univ.

16:30-18:30

***Delayed Termination Following Pacing Induced Shifts from Monomorphic to Polymorphic Ventricular Tachycardia: Implications for Antitachycardia Pacing***, pp. 3939-3942

Byrd, Israel	Univ. of Alabama at Birmingham
Pollard, Andrew E	Univ. of Alabama at Birmingham
Kay, Matthew	The George Washington Univ.

16:30-18:30

***Simulating Pulmonary Vein Activity Leading to Atrial Fibrillation Using a Rule-based Approach on Realistic Anatomical Data***, pp. 3943-3946

Reumann, Matthias	Univ. Karlsruhe (TH)
Bohnert, Julia	Univ. Karlsruhe (TH)
Doessel, Olaf	Univ. of Karlsruhe (TH)

16:30-18:30

***Unraveling the Mechanisms of Catecholaminergic Polymorphic Ventricular Tachycardia\****

Iyer, Vivek

Massachusetts General Hospital

Armoundas, Antonis

Massachusetts General Hospital

16:30-18:30

***Methods for Accurate Measures of Total Ventricular Activation Time***, pp. 3947-3949

Sutherland, David R.

Univ. of Utah

Adams, Jacob

Utah Valley State Coll.

Punske, Bonnie

Univ. of Utah

16:30-18:30

***Maintenance of Ventricular Fibrillation in Heterogeneous Ventricle***, pp. 3950-3953

Arevalo, Hermenegild

Tulane Univ.

Trayanova, Natalia

Tulane Univ.

**FrEP7**

Westside Ballroom South

**Sensory-Motor Assessment (Poster Session)**

16:30-18:30

***Quantitative Assessment of Divergence Eye Movements to Ramp Stimuli***, pp. 3954-3957

Gayed, Bassem

New Jersey Inst. of Tech.

Alvarez, Tara

New Jersey Inst. of Tech.

16:30-18:30

***Assessing Impaired Arm Use and Learned Bias after Stroke Using Unimanual and Bimanual***

***Steering Tasks***, pp. 3958-3961

Paranjape, Ruta P.

Marquette Univ.

Johnson, Michelle J.

Medical Coll. of Wisconsin/Marquette Univ.

Ramachandran, Brinda

Marquette Univ.

16:30-18:30

***Investigation of a Portable Performance Measurement System for Neurologic***

***Screening in Clinics***, pp. 3962-3965

Kondraske, George

Univ. of Texas at Arlington

Mulukutla, Rahul

Univ. of Texas at Arlington

Stewart, R. Malcolm

Presbyterian Hospital of Dallas

16:30-18:30

***Quantitative Characterization of Disease Severity in Diseases with Complex***

***Symptom Profiles***, pp. 3966-3969

Kondraske, George

Univ. of Texas at Arlington

Stewart, R. Malcolm

Presbyterian Hospital of Dallas

16:30-18:30

***Improvements on a Fast Algorithm for Real Time Eye Movement Quantification***, pp. 3970-3973

Azevedo, Dario F.G. de

Pontifícia Univ. Católica

Figueira, Márcio Vieira

Pontifical Catholic Univ. of Rio Grande do Sul

Zaffari, Carlos Alberto

PUCRS - Pontifícia Univ. Católica do Rio GrandedoSul

da Rocha, Murilo Fraga

Pontifical Catholic Univ. of Rio Grande do Sul

Russomano, Thais

PUCRS

16:30-18:30

***Measurement of Elbow Spasticity in Stroke Patients Using a Manual Spasticity Evaluator***, pp. 3974-3977

Wu, Yi-Ning

National Cheng Kung Univ.

Park, Hyung-Soon

Rehabilitation Inst. of Chicago

Yupeng, Ren

Rehabilitation Inst. of Chicago

Gaebler-Spira, Deborah

Northwestern Univ.

Chen, Jia-Jin

National Cheng Kung Univ.

Zhang, Liquan

Northwestern Univ.



16:30-18:30

*Twitch Response of Intact Human Tibialis Anterior Muscle to Doublet Stimulation at Graded Strengths\**

Freeman, Stefan  
Durfee, William

Univ. of Minnesota  
Univ. of Minnesota

**FrEP8**

Westside Ballroom South

**Electrocardiology and Arrhythmias (Poster Session)**

16:30-18:30

**Action Potential Duration Gradient Protects the Right Atrium from Fibrillation**, pp. 3978-3981

Ridler, Marc  
McQueen, David  
Peskin, Charles  
Vigmond, Edward

Univ. of Calgary  
New York Univ.  
New York Univ.  
Univ. of Calgary

16:30-18:30

**Instance Selection for Estimation of Epicardial Activation Sequence from Venous Catheter Measurements**, pp. 3982-3985

Yilmaz, Bulent  
MacLeod, Robert

Baskent Univ.  
Univ. of Utah

16:30-18:30

**Accuracy of QT Measurement in the EASI-Derived 12-Lead ECG**, pp. 3986-3989

Martínez, Juan Pablo  
Laguna, Pablo  
Olmos, Salvador  
Pahlm, Olle  
Pettersson, Jonas  
Sornmo, Leif

Univ. of Zaragoza  
Univ. of Zaragoza  
Univ. of Zaragoza  
Lund Univ. Hospital  
AstraZeneca R&D.  
Lund Univ.

16:30-18:30

**An Improved QT Interval Measurement Based on Singular Value Decomposition**, pp. 3990-3993

Yana, Kazuo  
Shichiku, Hiroyuki  
Sato, Toshihisa  
Mizuta, Hirohisa  
Ono, Takuya

Hosei Univ.  
Hosei Univ.  
Hosei Univ.  
Josai Univ.  
Nippon Medical School

16:30-18:30

**Comparison of Laplacian and Bipolar ECGs for R-Wave Detection During Noise**, pp. 3994-3997

Ghanem, Raja N.  
Gillberg, Jeffrey M.  
Wanasek, Kevin  
Wood, Nicole  
Abeyratne, Athula  
Mitrani, Raul

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Medtronic, Inc  
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Memorial Regional Hospital, and Cardiovascular Consultants of So

16:30-18:30

**Sensibility Analysis of the Arruda Localization Method**, pp. 3998-4001

Szilagyi, Sandor Miklos  
Szilagyi, Laszlo  
Benyo, Zoltan

Sapientia - Hungarian Science Univ. of Transylvania  
Budapest Univ.  
Budapest Univ. of Tech. and Ec.

16:30-18:30

**Optical Mapping System for Visualizing Arrhythmias in Isolated Mouse Atria**, pp. 4002-4005

Schmidt, Robyn  
Nygren, Anders

Univ. of Calgary  
Univ. of Calgary

16:30-18:30

**Prediction of Atrial Fibrillation Following Cardiac Surgery Using Rough Set Derived Rules**, pp. 4006-4009

Wiggins, Matthew  
Firpi, Hiram  
Blanco, Raul  
Amer, Muhammad  
Dudley, Samuel

Georgia Inst. of Tech.  
Georgia Inst. of Tech.  
Emory Univ.  
Emory Univ.  
Atlanta Veteran's Affairs Medical Center

16:30-18:30

**Electrocardiographic Method for Identifying Drug-Induced Repolarization Abnormalities Associated with a Reduction of the Rapidly Activating Delayed Rectifier Potassium Current**, pp. 4010-4015

Couderc, Jean-Philippe  
Vaglio, Martino  
Xia, Xiaojuan  
McNitt, Scott  
Hyrien, Ollivier

Univ. of Rochester  
Univ. of Rochester  
Univ. of Rochester  
Univ. of Rochester Medical Center  
Univ. of Rochester

16:30-18:30

**Automatic Classification of Heartbeats Using Neural Network Classifier Based on a Bayesian Framework**, pp. 4016-4019

Magenes, Giovanni  
Karraz, George

Univ. of Pavia  
Univ. of Pavia

16:30-18:30

**Morphological Analysis of P-Wave in Patients Prone to Atrial Fibrillation**, pp. 4020-4023

Censi, Federica  
Calcagnini, Giovanni  
Mattei, Eugenio  
Ricci, Renato  
Ricci, Chiara  
Santini, Massimo  
Grammatico, Andrea  
Bartolini, Pietro

Italian National Inst. of Health  
Italian National Inst. of Health  
Italian National Inst. of Health  
San Filippo Neri Hospital  
Univ. of Rome "LA Sapienza"  
San Filippo Neri Hospital  
Medtronic Italia SpA  
Italian National Inst. of Health

16:30-18:30

**Validation of a Novel Atrial Fibrillation Model through Simulated Atrial Pacing Protocols**, pp. 4024-4027

Lian, Jie  
Muessig, Dirk  
Lang, Volker

Micro Systems Engineering, Inc.  
Micro Systems Engineering, Inc.  
Micro Systems Engineering, Inc.

16:30-18:30

**Successful Defibrillation in Water: A Preliminary Study**, pp. 4028-4030

KLOCK-frezot, Julia Cathy  
Ohley, William  
Schock, Robert B.  
Marc Cote, Marc  
Schofield, Lorraine

Univ. of Rhode Island  
Univ. of Rhode Island  
Life Recovery Systems  
Life Recovery Systems  
Rhode Island Hospital

16:30-18:30

**The Time Constants for Cathodic Make Stimulation of Electrical Syncytia: An Application to Cardiac Pacing**, pp. 4031-4034

Suarez-Antola, Roberto

Catholic Univ. of Uruguay

16:30-18:30

**Automated Masking of Voltage-Sensitive Dye Imaging Data**, pp. 4035-4038

Phillips, Trevor Paul  
Schmidt, Robyn  
Nygren, Anders

Univ. of Calgary  
Univ. of Calgary  
Univ. of Calgary

16:30-18:30

***Structural Barrier Increases QT-Peak Dispersion in Swine Left Ventricle in Vivo***, pp. 4039-4042

Lu, Sheng

Gong, Yunfan

Iwai, Sei

Stein, Kenneth

Lerman, Bruce

Christini, David

State Univ. of New York at Stony Brook

Weill Medical Coll. of Cornell Univ.

Weill Medical Coll. of Cornell Univ.

Weill Medical Coll. of Cornell Univ.

Weill Medical Coll. of Cornell Univ.

Weill Medical Coll. of Cornell Univ.

16:30-18:30

***Transmural Electrophysiological Heterogeneities in Action Potential Duration Increase the Upper Limit of Vulnerability***, pp. 4043-4046

Maharaj, Thushka

Rodriguez, Blanca

Blake, Robert

Trayanova, Natalia

Gavaghan, David

Oxford Univ.

Oxford Univ.

Tulane Univ.

Tulane Univ.

Univ. of Oxford

**FrEP9**

Westside Ballroom South

**Postural Control** (Poster Session)

16:30-18:30

***Identification of a Degradation in Postural Equilibrium Invoked by Different Vibration Frequencies on the Tibialis Anterior Tendon***, pp. 4047-4050

Michel-Pellegrino, Valérie

Amoud, Hassan

Hewson, David J

Duchêne, Jacques

Univ. de Tech. de Troyes

Univ. de Tech. de Troyes

Univ. de Tech. de Troyes

Univ. de Tech. de Troyes

16:30-18:30

***Postural Control in Subjects with Down's Syndrome\****

Rigoldi, Chiara

Galli, Manuela

Mainardi, Luca

Tenore, Nunzio

Crivellini, Marcello

Albertini, Giorgio

Passera, Katia

Pol. of Milan

Pol. di Milano

Pol. di Milano

IRCCS San Raffaele Tosinvest Sanitf

Pol. di Milano

IRCCS San Raffaele Tosinvest Sanitf

Pol. of Milan

16:30-18:30

***Normative Based Clinical Tool for Objective Evaluation of Postural Responses***, pp. 4051-4054

Cikajlo, Imre

Klemen, Ana

Rudolf, Marko

Goljar, Nika

Matja

Šušteršič, Zlatko

Inst. for rehabilitation Republic of Slovenia

Inst. for rehabilitation Republic of Slovenia

Inst. for rehabilitation Republic of Slovenia

Inst. for rehabilitation Republic of Slovenia

Inst. for rehabilitation Republic of Slovenia

16:30-18:30

***Effects of Stance Width on Control Gain in Standing Balance***, pp. 4055-4057

Scrivens, Jevin E.

Ting, Lena H.

DeWeerth, Stephen P.

Georgia Inst. of Tech.

Emory Univ. and Georgia Inst. of Tech.

Georgia Inst. of Tech.

16:30-18:30

**Experimental Heating Properties of Re-Entrant Type Resonant Cavity Applicator for Deep Tumor Hyperthermia**, pp. 4058-4061Nakano, Akinobu  
Kato, KazuoMeiji Univ.  
Meiji Univ.

16:30-18:30

**Modeling the Healthcare Assistance Process for Comorbidity Patients Compliant with Pren12967**, pp. 4062-4065Roman, Isabel  
Millan, Antonio  
Roa, Laura M.  
Madinabeitia, Germán  
Reina-Tosina, Javier  
Aguayo, MarianoUniv. of Seville  
Univ. Hospital Virgen Macarena  
Univ. of Seville  
Univ. of Seville  
Univ. of Seville  
Univ. Hospital Virgen Macarena

16:30-18:30

**Statistical Shape Analysis of Metopic Craniosynostosis: A Preliminary Study**, pp. 4066-4069Srivilasa, Charlie  
Zhao, Linping  
Patel, Pravin  
Liu, Shu Q.  
Tomita, TadanoriNorthwestern Univ.  
Shriners Hospital for Children-Chicago  
Shriners Hospital for Children-Chicago  
Northwestern Univ.  
Shriners Hospital for Children-Chicago

16:30-18:30

**Knowledge Creation Using Artificial Intelligence: A Twin Approach to Improve Breast Screening Attendance**, pp. 4070-4073Baskaran, Vikram  
Bali, Rajeev Kumar  
Arochena, Hisbel  
Naguib, Raouf  
Wallis, Matthew  
Wheaton, MargotCoventry Univ.  
Coventry Univ.  
Coventry Univ.  
Coventry Univ.  
Coventry & Warwickshire Teaching Hospitals NHS Trust  
Coventry & Warwickshire Teaching Hospitals NHS Trust

16:30-18:30

**Design and Construction of Resonant Cavity Applicator for Brain Tumor Hyperthermia Treatment without Contact**, pp. 4074-4077Takahashi, Yoshihiko  
Kato, KazuoMeiji Univ.  
Meiji Univ.

16:30-18:30

**Whospital: A Web-Based Application with Digital Signature for Drugs Dispensing Management\***Rossi, Lorenzo  
Margola, Lorenzo  
Manzelli, Vania  
Bandera, AlessandraPol. di Milano  
it2b srl  
it2b srl  
Hospital of Busto Arsizio

16:30-18:30

**Evidence-Based Analysis of Field Testing of Medical Electrical Equipment**, pp. 4078-4080Taktak, Azzam Fouad George  
Brown, MalcolmRoyal Liverpool Univ. Hospital  
Royal Liverpool Univ. Hospital

16:30-18:30

***Developing Safety Standards for Electromagnetic Energy: The IEEE International Committee on Electromagnetic Safety ICES***, pp. 4081-4084

Murphy, Michael R.  
Petersen, Ronald

Human Effectiveness Directorate, Air Force Res.  
R C Petersen Associates LLC

16:30-18:30

***Informed Consent in Biomedical Research***, pp. 4085-4087

Townsend, Daphné

SITE, Univ. of Ottawa

**FrEP12**

Westside Ballroom South

**Micro Instrumentation and Imaging II (Poster Session)**

16:30-18:30

***Skin Penetration of Silicon Dioxide Microneedle Arrays***, pp. 4088-4091

Kim, Sangchae  
Shetty, Smitha  
Price\*, Dorielle  
Bhansali, Shekhar

Univ. of South Florida  
Univ. of South Florida  
Univ. of South Florida  
Univ. of South Florida

16:30-18:30

***Biocompatible MEMS Electrode Array for Determination of Three-Dimensional Strain***, pp. 4092-4095

Evans, Boyd  
Mohamed, Mahfouz  
Pritchard, Emily

Univ. of Tennessee  
Univ. of Tennessee  
Univ. of Tennessee

16:30-18:30

***Electro-Disruption of Escherichia Coli Bacterial Cells on a Microfabricated Chip***, pp. 4096-4099

de la Rosa, Carlos  
Kaler, Karan V.I.S.

Univ. of Calgary  
Univ. of Calgary

16:30-18:30

***Detecting Artifacts on SNP Chips***, pp. 4100-4102

Pellegrino, Maurizio  
Suarez-Farinas, Mayte  
Magnasco, Marcelo O.  
Wittkowski, Knut M.

The Rockefeller Univ.  
The Rockefeller Univ.  
The Rockefeller Univ.  
The Rockefeller Univ.

**FrEP13**

Westside Ballroom South

**Advances in Sensor Technology 4 (Poster Session)**

16:30-18:30

***Competitive Technology Approaches for Electronic Hybridisation Detection in a Microsystem with Microfluidics for Diagnosis Genetic Tests***, pp. 4103-4106

Bellis, Stephen  
Blionas, Spyridon  
Carrera, Jordi  
Chatzandroulis, Stavros  
Getin, Stephane  
Misiakos, Kostas  
Planat-Chretien, Anne  
Tsoukalas, Dimitris

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INTRACOM S.A.  
NTE S.A.  
NCSR Demokritos  
Commissariat A L'energie Atomique (LETI)  
Ncsrd Demokritos  
Commissariat A L'energie Atomique (Leti)  
National Tech. Univ. of Athens

16:30-18:30

***Design of the Laser Acupuncture Therapeutic Instrument***, pp. 4107-4110

li, chengwei  
Huang, Zhen

Electric Engineering Coll. Univ.  
Biomedical engineering

16:30-18:30

***FPMOD: A Modeling Tool for Sampling the Conformational Space of Fusion Proteins***, pp. 4111-4114

Chiang, Jui-Hsuan(Jason)	Univ. of Toronto
Pham, Elizabeth	Univ. of Toronto
Li, Isaac	Univ. of Toronto
Truong, Kevin	Univ. of Toronto

16:30-18:30

***Serotonin (5-HT) Released by Activated White Blood Cells in a Biological Fuel Cell Provide a Potential Energy Source for Electricity Generation***, pp. 4115-4118

Justin, Gusphyl	Univ. of Pittsburgh
Sun, Mingui	Univ. of Pittsburgh
Zhang, Yingze	Univ. of Pittsburgh
Cui, Xinyan Tracy	Univ. of Pittsburgh
Sclabassi, Robert	Univ. of Pittsburgh

16:30-18:30

***Construction and Characterization of Soft-Supported Lipid Bilayer Membranes for Biosensors Application***, pp. 4119-4122

Jimenez, Jeffy	Univ. of South Florida
Heim II, August J.	Univ. of South Florida
Matthews, Garrett	Univ. of South Florida
Alcantar, Norma	Univ. of South Florida

16:30-18:30

***Skin Surface Shock Wave***, pp. 4123-4126

Tanaka, Nobuyuki	Hiroshima Univ.
Kaneko, Makoto	Hiroshima Univ.

16:30-18:30

***An Electrodeless System for Measurement of Liquid Sample Dielectric Properties in Radio Frequency Band***, pp. 4127-4130

Hartwig, Valentina	Univ. of Pisa
Giovannetti, Giulio	CNR
Vanello, Nicola	Univ. of Pisa
Costantino, Maria	CNR
Landini, Luigi	Univ. of Pisa
Benassi, Antonio	CNR-Pisa

16:30-18:30

***Thermal Imaging Aid for the Blind***, pp. 4131-4134

Hedin, Daniel	Advanced Medical Electronics
Seifert, Gregory John	Advanced Medical Electronics
Dagnelie, Gislin	Johns Hopkins Univ.
Havey, Gary	Advanced Medical Electronics Corp.
Knuesel, Robert	Advanced Medical Electronics
Gibson, Paul	Advanced Medical Electronics

16:30-18:30

***The "parotec" Pressure Measurement System and Its Evaluation Procedures***, pp. 4135-4139

Zequera Diaz, Martha Lucia	Pontificia Univ. Javeriana
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16:30-18:30

***The Effect of Laser Wavelength in the Simulation of Laser Generated Surface Waves in a Human Skin Model***, pp. 4140-4143

L'Etang, Adele J	Univ. of Dundee
Huang, Zhihong	Univ. of Dundee

16:30-18:30

***Development and Calibration of a Pedal with Force and Moment Sensors***, pp. 4144-4146

Azevedo, Dario F.G. de	Pontificia Univ. Católica
Helegda, Sergio	Pontificia Univ. Católica do Rio Grande do Sul
Russomano, Thais	PUCRS
Gurgel, Jonas	PUCRS
Porto, Flavia	PUCRS
Cambraia, Rodrigo	PUCRS
Beck, João Carlos Pinheiro Beck	ipct
S. Glock, Flavio	Pontificia Univ. Católica do Rio Grande do Sul

**FrEP14**

Westside Ballroom South

**Mathematical Modeling and Simulation of Molecules and Cells II (Poster Session)**

16:30-18:30

***Inference of Genetic Network of Xenopus Frog Egg : Improved Genetic Algorithm***, pp. 4147-4150

Wu, Shinq-Jen	Da-Yeh Univ.
Chou, Chia-Hsien	National Chiao-Tung Univ.
Wu, Cheng-Tao	Da-Yeh Univ.
Lee, Tsu-Tian	National Chiao-Tung Univ.

16:30-18:30

***Hybrid Automata As a Unifying Framework for Modeling Excitable Cells***, pp. 4151-4154

Ye, Pei	Stony Brook Univ.
Entcheva, Emilia	Stony Brook Univ.
Smolka, Scott	Stony Brook Univ.
True, Mike	SUNY at Stony Brook
Grosu, Radu	Stony Brook Univ.

16:30-18:30

***EONS: An Online Synaptic Modeling Platform***, pp. 4155-4158

Bouteiller, Jean-Marie Charles	Univ. of Southern California
Qiu, Yumei	Tandberg Television
Ziane, Mohammed	Univ. of Southern California
Baudry, Michel	Univ. of Southern California
Berger, Theodore	Univ. of Southern California

16:30-18:30

***Synchronization Index of Neural Spike Trains in Response to Simulated Vowel Signal Stimuli in the Presence of a Pseudo-Spontaneous Activity***, pp. 4159-4162

Wada, Yoshimasa	Kanto Gakuin Univ.
Mino, Hiroyuki	Kanto Gakuin Univ.

16:30-18:30

***Development of a Support Tool for Multi-Agent Based Biological Modeling***, pp. 4163-4166

Kawazu, Toshihiro	Osaka Univ.
Odai, Shinsuke	Osaka Univ.
Shibuya, Noriko	Osaka Univ.
Nomura, Taishin	Osaka Univ.

16:30-18:30

***A Reduced Differential Model of the Electrical Activity of Cardiac Purkinje Fibres***, pp. 4167-4170

Djabella, Karima	INRIA
Sorine, Michel	INRIA

16:30-18:30

**Computer Support for Physiological Cell Modelling Using an Ontology on Cell Physiology**, pp. 4171-4174  
Shimayoshi, Takao  
Komurasaki, Kazuhiro  
Amano, Akira  
Iwashita, Takeshi  
Kanazawa, Masanori  
Matsuda, Tetsuya

ASTEM Res. Inst. of Kyoto  
Kyoto Univ.  
Kyoto Univ.  
Kyoto Univ.  
Kyoto Univ.  
Kyoto Univ.

16:30-18:30

**Analysis of Spatial Dependencies of Endocytic Proteins Based on Temporal Random Sets**, pp. 4175-4178  
Sebastian, Rafael  
Diaz, Elena  
Ayala, Guillermo  
Zoncu, Roberto  
Toomre, Derek

Univ. of Valencia  
Univ. of Valencia  
Univ. de Valencia  
Yale Univ.  
Yale Univ.

16:30-18:30

**Dynamical Analysis of Uterine Cell Electrical Activity Model**, pp. 4179-4182  
Rihana, Sandy  
Ferreira, Jorge  
Mondie, Sabine  
Marque, Catherine

Univ. of Tech. of Compiègne  
Université de Tech. de Compiègne  
CINVESTAV  
Univ. of Tech. of Compiègne

16:30-18:30

**Effects of Exogenous Noise in a Silent Neuron Model: Firing Induction and EM Signal Detection**, pp. 4183-4186  
Paffi, Alessandra  
Liberti, Micaela  
Apollonio, Francesca  
Gianni, Matteo  
D'Inzeo, Guglielmo

ICEmB@La Sapienza Univ. Rome  
ICEmB@La Sapienza Univ. Rome  
ICEmB@La Sapienza Univ. Rome  
ICEmB @ Univ. of Rome "La Sapienza"  
ICEmB@La Sapienza Univ. Rome

16:30-18:30

**Modelling of Acetylcholinesterase Immobilized into Artificial Membrane**, pp. 4187-4191  
Ferreira, Jorge  
Friboulet, Alain  
Lozano, Rogelio

Univ. de Tech. de Compiègne  
Univ. de Tech. de Compiègne  
Univ. de Tech. de Compiègne

16:30-18:30

**A Method to Model Neuron Activity**, pp. 4192-4195  
Masanotti, Delia  
Langlois, Peter  
Taylor, John

Univ. of Bath  
Univ. Coll.  
Univ. of Bath

16:30-18:30

**Information Transmission in Hippocampal CA1 Neuron Models in the Presence of Poisson Shot Noise: The Case of Periodic Sub-Threshold Spike Trains**, pp. 4196-4199  
Kawaguchi, Minato  
Mino, Hiroyuki  
Durand, Dominique

Kanto Gakuin Univ.  
Kanto Gakuin Univ.  
Case Western Res. Univ.

16:30-18:30

**Estimation of Action Potential of the Cellular Membrane Using Support Vectors Machines**, pp. 4200-4204  
Seijas, Cesar  
Caralli, Antonino  
Villazana, Sergio

Univ. of Carabobo  
Univ. of Carabobo  
Univ. of Carabobo



16:30-18:30

***A Study on Some Optical Illusions Based Upon the Theory of Inducing Field***, pp. 4205-4208

Ge, Sheng

Saito, Takashi

Wu, Jing-Long

Iramina, Keiji

Kyushu Univ.

Yamaguchi Univ. Japan

Kagawa Univ.

Kyushu Univ. Japan

16:30-18:30

***Electrostatics of Photosynthetic Reaction Centers in Membranes***, pp. 4209-4212

Pennisi, Cristian Pablo

Greenbaum, Elias

Yoshida, Ken

Aalborg Univ. SMI

ORNL

Aalborg Univ. SMI

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**FrEP15**

Westside Ballroom South

**Novel Technologies for Computational Biology and Bioinformatics, 2 (Poster Session)**

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16:30-18:30

***A Smart Video Magnifier Controlled by the Visibility Signal of a Low Vision User***, pp. 4213-4216

Miyakawa, Michio

Maeda, Yoshinobu

Miyazawa, Yoichi

Hori, Junichi

Niigata Univ.

Niigata Univ.

Niigata Univ.

Niigata Univ.

16:30-18:30

***Application of XML Database Technology to Biological Pathway Datasets***, pp. 4217-4220

Jiang, Keyuan

Nash, Christopher

Purdue Univ. Calumet

Purdue Univ. Calumet

16:30-18:30

***PDB Data Curation***, pp. 4221-4224

Wang, Yanchao

Sunderraman, Rajshekhar

Georgia State Univ.

Georgia State Univ.

16:30-18:30

***Free Energy Analysis on the Coding Region of the Individual Genes of Saccharomyces Cerevisiae***, pp. 4225-4228

Xing, Chuanhua

Bitzer, Donald

Alexander, Winser

Stomp, Anne-Marie

Vouk, Mladen

NC State Univ.

NC State Univ.

NC State Univ.

NC State Univ.

NC State Univ.

16:30-18:30

***A Bootstrap-Based Linear Classifier Fusion System for Protein Subcellular Location Prediction***, pp. 4229-4232

Wu, Yunfeng

Ma, Yuezhu

Liu, Xiaona

Wang, Cong

Beijing Univ. of Posts and Telecommunications

Beijing Univ. of Posts and Telecommunications

Beijing Univ. of Posts and Telecommunications

Beijing Univ. of Posts and Telecommunications

16:30-18:30

***Using Existing Digital Tools for Efficient Metabolic Pathway Simulations***, pp. 4233-4236

Macchiarulo, Luca

Univ. of Hawaii at Manoa

16:30-18:30

***Toward a Curated CellML Model Repository***, pp. 4237-4240

Nickerson, David Phillip

Stevens, Carey

Halstead, Matt

Hunter, Peter

Nielsen, Poul

National Univ. of Singapore

The Univ. of Auckland

The Univ. of Auckland

The Univ. of Auckland

The Univ. of Auckland

16:30-18:30

***Inferring Network Interactions Using Recurrent Neural Networks and Swarm Intelligence***, pp. 4241-4244  
Ressom, Habtom Georgetown Univ.  
Zhang, Yuji Georgetown Univ.  
Xuan, Jianhua The Catholic Univ. of America  
Wang, Yue Virginia Pol. Inst. and State Univ.  
Clarke, Robert Lombardi Comprehensive Cancer Center, Georgetown Univ.

**SaA01**

Marquis AB

**EEG Signal Processing and Modeling (Oral Session)**

09:00-09:15

***Combing Nonlinear Dimensionality Reduction with Wavelet Network to Solve EEG Inverse Problem***, pp. 4245-4248

Wu, Qing Hebei Univ. of Tech.  
Shi, Lukui Hebei Univ. of Tech.  
Wu, Youxi Hebei Univ. of Tech.  
Xu, Guizhi Hebei Univ. of Tech.  
Li, Ying Hebei Univ. of Tech.  
Yan, Weili Hebei Univ. of Tech.

09:15-09:30

***Smooth Bilinear Classification of EEG***, pp. 4249-4252

Dyrholm, Mads City Coll. New York  
Parra, Lucas City Coll. of New York

09:30-09:45

***A Realistic Spatiotemporal Source Model for EEG Activity: Application to the Reconstruction of Epileptic Depth-EEG Signals***, pp. 4253-4256

COSANDIER-RIMELE, Delphine INSERM - Univ. de Rennes 1  
BADIER, Jean-Michel INSERM - Univ. de la Méditerranée  
WENDLING, Fabrice INSERM - Univ. de Rennes 1

09:45-10:00

***Visualization of the Short Term Maximum Lyapunov Exponent Topography in the Epileptic Brain***, pp. 4257-4260

Mammone, Nadia Univ. of Reggio Calabria  
Morabito, Francesco Carlo Univ. of Reggio Calabria  
Principe, Jose Univ. of Florida

10:00-10:15

***Gravity Transform for Input Conditioning in Brain Machine Interfaces***, pp. 4261-4264

Paiva, António R. C. Univ. of Florida  
Principe, Jose Univ. of Florida  
Sanchez, Justin Univ. of Florida

10:15-10:30

***Time-Significant Wavelet Coherence for the Evaluation of Schizophrenic Brain Activity Using a Graph Theory Approach***, pp. 4265-4268

Sakkalis, Vangelis Tech. Univ. of Crete - Foundation for Res. and  
Oikonomou, Theofanis Univ. of Crete - Foundation for Res. and  
Pachou, Ellie Univ. of Crete  
Tollis, Ioannis Univ. of Crete - Foundation for Research and Tech. - Hellas  
Micheloyannis, Sifis Univ. of Crete  
Zervakis, Michalis Tech. Univ. of Crete, Greece

**Electrical Impedance Imaging I (Oral Session)**

09:00-09:15

***Sub-Second Functional Imaging by Electrical Impedance Tomography***, pp. 4269-4272

McCann, Hugh	Univ. of Manchester
Polydorides, Nick	Univ. of Manchester
Murrieta-Lee, Carlos	Univ. of Manchester
Kou, Ge	Univ. of Manchester
Beatty, Paul	Univ. of Manchester
Pomfrett, Chris	Univ. of Manchester

09:15-09:30

***Hybrid Microwave Tomography Technique for Breast Cancer Imaging***, pp. 4273-4276

Sabouni, Abas	Univ. of Manitoba
Flores-Tapia, Daniel	Univ. of Manitoba
Noghanian, Sima	Univ. of Manitoba
Thomas, Gabriel	Univ. of Manitoba
Pistorius, Stephen	CancerCare Manitoba / Univ. of Manitoba

09:30-09:45

***A Fast Linear Reconstruction Method for Scanning Impedance Imaging***, pp. 4277-4280

Liu, Hongze	Brigham Young Univ.
Hawkins, Aaron	Brigham Young Univ.
Schultz, Stephen	Brigham Young Univ.
Oliphant, Travis	Brigham Young Univ.

09:45-10:00

***Electrical Impedance Tomography Method for Reconstruction of Biological Tissues with Continuous Plane-Stratification***, pp. 4281-4284

Dolgin, Madlena	Tech. - Israel Inst. of Tech.
Einziger, Pinchas	Tech. - Israel Inst. of Tech.

10:00-10:15

***Multi-Frequency EIT Hardware System Based on DSP\****

Zhang, Shuai	Hebei Univ. of Tech.
Xu, Guizhi	Hebei Univ. of Tech.
Wu, Huanli	Hebei Univ. of Tech.
Geng, Duyan	Hebei Univ. of Tech.
Yan, Weili	Hebei Univ. of Tech.

10:15-10:30

***Correlation between Live and Post Mortem Skull Conductivity Measurements***, pp. 4285-4288

Wendel, Katrina	Tampere Univ. of Tech.
Malmivuo, Jaakko	Tampere Univ. of Tech.

**Non Linear Dynamics in Cardio-Respiratory Systems II (Oral Session)**

09:00-09:15

***Comparison of Heart Rate Variability Signal Features Derived from Electrocardiography and Photoplethysmography in Healthy Individuals***, pp. 4289-4294

Bolanos, Marcos	Univ. of Texas at El Paso
Nazeran, Homayoun	The Univ. of Texas
Haltiwanger, Emily	Coll. of Health Sciences

09:15-09:30

***SpO2 Sensor Embedded in a Finger Ring: Design and Implementation***, pp. 4295-4298

Sola, Josep	Swiss Center for Electronics and Microtechnology - CSEM
Castoldi, Serge	HEIG-VD
Olivier, Chételat	CSEM
Correvon, Marc	Haute Ec. d'Ingénierie et de Gestion du Canton de Vaud
Dasen, Stephan	CSEM
Droz, Serge	CSEM
jacob, nathalie	FORENAP
Kormann, Roger	Heig-VD
Neuman, Victor	Company
Perrenoud, André	Haute Ec. d'Ingénierie et de Gestion du Canton de Vaud
Pascal, Pilloud	CSEM
Verjus, Christophe	CSEM

09:30-09:45

***Modelling and Control for Heart Rate Regulation During Treadmill Exercise***, pp. 4299-4302

Su, Steven Weidong	Univ. of Tech. Sydney
Wang, Lu	Univ. of New South Wales
Celler, Branko George	Univ. of New South Wales
Savkin, Andrey	Univ. of New South Wales
Guo, Ying	CSIRO

09:45-10:00

***Pain / Analgesia Evaluation Using Heart Rate Variability Analysis***, pp. 4303-4306

Logier, Regis	CHRU de Lille
Jeanne, Mathieu	CHRU de Lille
Tavernier, Benoit	CHRU de Lille
De jonckheere, Julien	USTL

**SaA04**

Ziegfeld

**Micro Instrumentation and Imaging (Oral Session)**

09:00-09:15

***Imaging Cross-Section of DNA Electrophoresis in a Microfabricated Glass Device with CLSM***, pp. 4307-4309

Chen, Zheng	Univ. of Michigan
Burns, Mark	Univ. of Michigan
Burke, David	Univ. of Michigan

09:15-09:30

***Nerve Cell Segmentation Via Multi-Scale Gradient Watershed Hierarchies***, pp. 4310-4313

Wang, Yi-Ying	National Cheng Kung Univ.
Sun, Yung-Nien	National Cheng Kung Univ.
Lin, Chou-Ching	National Cheng Kung Univ.
Ju, Ming-Shung	National Cheng Kung University

09:30-09:45

***NMR Planar Micro Coils for Micro Spectroscopy: Design and Characterisation***, pp. 4314-4317

Baxan, Nicoleta	Univ. Claude Bernard Lyon1
Rengle, Adrian	Univ. Claude Bernard Lyon1
Chateaux, Jean-François	Univ. Claude Bernard Lyon1
Briguet, Andre	Univ. Claude Bernard LYON1, CPE
Pasquet, Guillaume	Univ. Claude Bernard Lyon1
Morin, Pierre	Univ. Claude Bernard Lyon1
Fakri-Bouchet, Latifa	Univ. Claude Bernard Lyon1

09:45-10:00

***New Opto-Plasmonic Tweezers for Manipulation and Rotation of Biological Cells - Design and Fabrication***, pp. 4318-4321

Miao, Xiaoyu  
Lin, Lih Y.

Univ. of Washington  
Univ. of Washington

10:00-10:15

***Parylene Neurocages for Electrical Stimulation on Silicon and Glass Substrates***, pp. 4322-4325

Tooker, Angela  
Erickson, Jon  
Chow, Gary  
Tai, Yu-Chong  
Pine, Jerry

California Inst. of Tech.  
California Inst. of Tech.  
California Inst. of Tech.  
California Inst. of Tech.  
California Inst. of Tech.

10:15-10:30

***Microneedle Array for Measuring Wound Generated Electric Fields***, pp. 4326-4328

Mukerjee, Erik V.  
Isseroff, Roslyn R.  
Nuccitelli, Richard  
Collins, Scott D.  
Smith, Rosemary L.

Lawrence Livermore National Lab.  
School of Medicine, Univ. of California, Davis  
Old Dominion Univ.  
Lab. for Surface Science & Tech. Univ. of Maine  
Lab. for Surface Science & Tech. Univ. of Maine

**SaA05**

Duffy-Columbia

**Advances in Sensor Technology II (Oral Session)**

09:00-09:15

***Making Medical Devices Accessible: A Drug-Resistant Malaria Detection System***, pp. 4329-4332

Smilkstein, Tina

UC Berkeley

09:15-09:30

***Multi-Site Analysis of Dopamine Uptake in the Somatosensory Cortex.\****

Khair, Andrew  
Moxon, Karen

Drexel Univ.  
Drexel Univ.

09:30-09:45

***A 1000+ Channel Bionic Communication System***, pp. 4333-4335

Schulman, Joseph  
Mobley, J. Phil  
Wolfe, James  
Stover, Howard  
Krag, Adrian

Alfred Mann Foundation  
Alfred Mann Foundation  
Alfred Mann Foundation  
Alfred Mann Foundation  
Alfred Mann Foundation

09:45-10:00

***Real Time Pressure-Volume Loops in Mice Using Complex Admittance: Measurement and Implications***, pp. 4336-4339

Kottam, Anil T.G.  
Porterfield, John  
Raghavan, Karthik  
Fernandez, Daniel Jose  
Feldman, Marc D.  
Valvano, Jonathan  
Pearce, John Anthony

Univ. of Texas at Austin  
Univ. of Texas at Austin  
The Univ. of Texas at Austin  
Univ. of Texas at Austin  
Univ. of Texas Health Science Center at San Antonio  
Univ. of Texas at Austin  
Univ. of Texas at Austin

10:00-10:15

***A Method to Investigate Non-Thermal Effects of Radio Frequency Radiation on Pharmaceuticals with Relevance to RFID Technology***, pp. 4340-4343

Cox, Felicia	MIT
Sharma, Vikas	MIT
Wu, Bae-lan	MIT
Kong, Jin	MIT
Klibanov, Alexander	MIT
Engels, Daniel	MIT

10:15-10:30

***Producing Smart Sensing Films by Means of Organic Field Effect Transistors***, pp. 4344-4346

Manunza, Ileana	Univ. of Cagliari
Orgiu, Emanuele	Univ. of Cagliari
Caboni, Alessandra	Univ. of Cagliari
Barbaro, Massimo	Univ. of Cagliari
Bonfiglio, Annalisa	Univ. of Cagliari

**SaA06**

Empire Hudson

**Novel Carriers for Drug and Gene Delivery (Oral Session)**

09:00-09:15

***Non-Viral Charge Reversal Vectors for DNA Delivery***, pp. 4347-4349

Grinstaff, Mark	Boston Univ.
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09:15-09:30

***Efficient Nuclear Delivery and Nuclear Bodies Localization of Antisense Oligo-Nucleotides Using Degradable Polymersomes***, pp. 4350-4353

Kim, Younghoon	Univ. of Pennsylvania
Tewari, Manu	Univ. of Pennsylvania
Pajeroski, David J.	Univ. of Pennsylvania
Sen, Shamik	Univ. of Pennsylvania
Jason, Williams	Drexel Univ.
Sirsi, Shashank	Drexel Univ.
Lutz, Gordon	Drexel Univ.
Discher, Dennis	Univ. of Pennsylvania

09:30-09:45

***Enhanced Efficacy of Anti-Tumor Liposomal Doxorubicin by Hyperthermia***, pp. 4354-4357

Liu, Ping	Shanghai Jiao Tong Univ.
Xu, Lisa Xuemin	Shanghai Jiao Tong Univ.
Zhang, Aili	Shanghai Jiaotong Univ.

09:45-10:00

***Controlled Release of PRP-Derived Growth Factors Promotes Osteogenic Differentiation of Human Mesenchymal Stem Cells***, pp. 4358-4361

Lin, Sylvia S	Columbia Univ. Coll. of Dental Medicine
Landesberg, Regina	Columbia Univ. Coll. of Dental Medicine
Chin, Hsin S	Columbia Univ.
Lin, Jeffrey	Columbia Univ. Coll. of Dental Medicine
Eisig, Sidney B	Columbia Univ. Coll. of Dental Medicine
Lu, Helen	Columbia Univ.

10:00-10:15

***Targeted Therapy with Monoclonal Antibodies: The New Generation of Pharmaceuticals\****

Goldenberg, David
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**SaA07**

Cantor-Jolson

**Pacing, Defibrillation and Catheter Ablation (Oral Session)**

09:00-09:15

***Method of Post-Shock Synchronized Pacing in the Excitable Gaps***, pp. 4362-4365

Tang, Liang

Cedars-Sinai Medical Center

Hwang, Gyo-Seung

Cedars-Sinai Medical Center

Yang, Lin

Xian Jiaotong Univ.

Lin, Shien-Fong

Cedars-Sinai Medical Center

09:15-09:30

***Development of Arrhythmia Diagnosis Algorithm for Effective Control of Antitachycardia Pacing and High Energy Shock of ICD***, pp. 4366-4369

Shin, Hang Sik

Yonsei Univ.

Lee, Chungkeun

Yonsei Univ.

Kim, Jinkwon

Yonsei Univ.

Lee, Myounggho

Yonsei Univ.

09:30-09:45

***Development of an Algorithm for Detection of Fatal Cardiac Arrhythmia for Implantable Cardioverter-Defibrillator Using a Self-Organizing Map***, pp. 4370-4373

Kinoshita, Hiroyuki

Graduate School of Engineering, Tohoku Univ.

Yoshizawa, Makoto

Tohoku Univ.

Inagaki, Masashi

National Cardiovascular Res. Inst.

UEMURA, KAZUNORI

National Cardio. Center Res. Inst.

Sugimachi, Masaru

Natl Cardio Center Res. Inst.

Sunagawa, Kenji

Kyushu Univ.

09:45-10:00

***Transthoracic Atrial Defibrillation Energy Thresholds Are Correlated to Uniformity of Current Density Distributions***, pp. 4374-4377

Hunt, Leslie

Univ. of Memphis

de Jongh Curry, Amy

The Univ. of Memphis

10:00-10:15

***Esophageal Electric Fields Are Correlated to Atrial Defibrillation Thresholds: Towards Patient-Specific Optimization of External Atrial Defibrillation***, pp. 4378-4381

Fitch, David

The Univ. of Memphis

Soberman, Judith

Univ. of Tennessee Health Science Center

de Jongh Curry, Amy

The Univ. of Memphis

**SaA08**

Juilliard

**Neural Stimulation and Prosthesis 3 (Oral Session)**

09:00-09:15

***Effects of Acute Hippocampal Stimulation on EEG Dynamics***, pp. 4382-4386

Nair, Sandeep

Univ. of Florida

Sackellares, J. Chris

Univ. of Florida

Shiau, Deng-Shan

Univ. of Florida

Norman, Wendy

Univ. of Florida

Dance, Linda

Univ. of Florida

Pardalos, Panos

Univ. of Florida

Principe, Jose

Univ. of Florida

Carney, Paul

Univ. of Florida

09:15-09:30

***Neural Recording Stability of Chronic Electrode Arrays in Freely Behaving Primates***, pp. 4387-4391

Linderman, Michael	Stanford Univ.
Gilja, Vikash	Stanford Univ.
Santhanam, Gopal	Stanford Univ.
Afshar, Afsheen	Stanford Univ.
Ryu, Stephen	Stanford Univ.
Meng, Teresa	Stanford Univ.
Shenoy, Krishna	Stanford Univ.

09:30-09:45

***A Dual Band Wireless Power and Data Telemetry for Retinal Prosthesis***, pp. 4392-4395

Wang, Guoxing	Univ. of California, Santa Cruz
Liu, Wentai	Univ. of California, Santa Cruz
Sivaprakasam, Mohanasankar	Univ. of California at Santa Cruz
Zhou, Mingcui	Univ. of California, Santa Cruz
Weiland, James	Univ. of Southern California
Humayun, Mark	Univ. of Southern California

09:45-10:00

***VLSI Implementation of a Nonlinear Neuronal Model: A "Neural Prosthesis" to Restore Hippocampal Trisynaptic Dynamics***, pp. 4396-4399

Hsiao, Min-Chi	Univ. of Southern California
Chan, Chiu-Hsien	Univ. of Southern California
Zanos, Theodoros	Univ. of Southern California
Ahuja, Ashish	Univ. of Southern California
Gholmieh, Ghassan	Univ. of Southern California
Wills, Jack	Univ. of Southern California
LaCoss, Jeff	Univ. of Southern California
Courellis, Spiros	Univ. of Southern California
Song, Dong	Univ. of Southern California
Granacki, John	Univ. of Southern California
Marmarelis, Vasilis	Univ. of Southern California
Berger, Theodore	Univ. of Southern California

10:00-10:15

***Psychophysics of Prosthetic Vision: I. Visual Scanning and Visual Acuity***, pp. 4400-4403

Chen, Spencer Chin-Yu	Univ. of New South Wales
Hallum, Luke E.	Univ. of New South Wales
Suaning, Gregg	The Univ. of Newcastle
Lovell, Nigel H	Univ. of New South Wales

10:15-10:30

***A Wideband Wireless Neural Stimulation Platform for High-Density Microelectrode Arrays***, pp. 4404-4407

Myers, Frank	North Carolina State Univ.
Simpson, Jim	North Carolina State Univ.
Ghovanloo, Maysam	North Carolina State Univ.



**Automation and Computer-Aided Surgery I (Oral Session)**

09:00-09:15

- ElePhant - an Anatomical Electronic Phantom As Simulation-System for Otologic Surgery***, pp. 4408-4411
- |                  |  |
|------------------|--|
| Grunert, Ronny   | Univ. of Leipzig                       |
| Strauss, Gero    | Univ. of Leipzig                       |
| Moeckel, Hendrik | Univ. of Leipzig                       |
| Hofer, Mathias   | Univ.                                  |
| Poessneck, Antje | Univ. of Leipzig                       |
| Thalheim, Mario  | Univ. of Leipzig                       |
| Schmiedel, Ronny | Heart Center Leipzig                   |
| Schulz, Thomas   | Univ. of Leipzig                       |
| Oeken, Jens      | Hospital of Chemnitz                   |
| Jannin, Pierre   | INRIA, INSERM, CNRS, Univ. de Rennes 1 |
| Dietz, Andreas   | Univ. of Leipzig                       |
| Korb, Werner     | Univ. of Leipzig                       |

09:15-09:30

***Modeling Interactions with a Computer Representation of the Upper Gastrointestinal System***, pp. 4412-4415

- |                           |  |
|---------------------------|--|
| Gastélum Strozzi, Alfonso | CCADET-UNAM (National Autonomus Univ. of Mexico) |
| Mosso, Jose               | ISSSTE   |
| Marquez, Jorge            | UNAM-CCADET                                      |

09:30-09:45

***A New Kind of Training for Obstetric Residents: Simulator Training***, pp. 4416-4419

- |                   |   |
|-------------------|---|
| Moreau, Richard   | Inst. National des Sciences Appliquées (INSA de Lyon) |
| Jardin, Audrey    | Inst. National des Sciences Appliquées (INSA de Lyon) |
| Pham, Minh Tu     | Inst. National des Sciences Appliquées (INSA de Lyon) |
| Redarce, Tanneguy | Inst. National des Sciences Appliquées (INSA de Lyon) |
| Olaby, Osama      | Inst. National des Sciences Appliquées (INSA de Lyon) |
| Dupuis, Olivier   | Hospices Civils de Lyon                               |

09:45-10:00

***A Cascade Control Approach for a Class of Biomedical Systems***, pp. 4420-4423

- |                      |   |
|----------------------|---|
| Ortiz-Vargas, Moises | Univ. Panamericana                          |
| Puebla, Hector       | Univ. Autonoma Metropolitana - Azcapotzalco |

10:00-10:15

***Bidimensional MRI-Based Navigation System Using a PID Controller***, pp. 4424-4427

- |                   |                        |
|-------------------|------------------------|
| Tamaz, Samer      | École Pol. de Montréal |
| Gourdeau, Richard | École Pol. de Montréal |
| Martel, Sylvain   | Ec. Pol. de Montreal   |

10:15-10:30

***Towards Ubiquitous Access of Computer-Assisted Surgery Systems***, pp. 4428-4431

- |                  |                   |
|------------------|-------------------|
| Liu, Hui         | Xidian Univ.      |
| Lufei, Hanping   | Wayne State Univ. |
| Shi, Weisong     | Wayne State Univ. |
| Chaudhary, Vipin | Wayne State Univ. |

**Retinal Image Analysis I (Oral Session)**

09:00-09:15

***The Automatic Detection of the Optic Disc Location in Retinal Images Using Optic Disc Location Regression***, pp. 4432-4435

- |                         |                  |
|-------------------------|------------------|
| Abramoff, Michael David | Univ. of Iowa    |
| Niemeijer, Meindert     | Univ. of Utrecht |

09:15-09:30

***Locating the Optic Nerve in Retinal Images: Comparing Model-Based and Bayesian***

***Decision Methods***, pp. 4436-4439

Karnowski, Thomas  
Govindasamy, V. Priya  
Tobin, Kenneth  
Chaum, Edward

Oak Ridge National Lab.  
Oak Ridge National Lab.  
Oak Ridge National Lab.  
Univ. of Tennessee Hamilton Eye Inst.

09:30-09:45

***Fundus Foveal Localization Based on Vessel Model***, pp. 4440-4444

Chutatape, Opas

Rangsit Univ.

09:45-10:00

***A Reliability Study of Fractal Analysis of the Skeletonised Vascular Network Using the "box-Counting" Technique.***, pp. 4445-4448

MacGillivray, Tom  
Patton, Niall

University of Edinburgh  
NHS Lothian Univ. Hospitals Div.

10:00-10:15

***Detecting False Vessel Recognitions in Retinal Fundus Analysis***, pp. 4449-4452

Giani, Alfredo  
Grisan, Enrico  
De Luca, Massimo  
Ruggeri, Alfredo

Univ. of Padova  
Univ. of Padova  
Univ. of Padova  
Univ. of Padova

10:15-10:30

***Automatic Image Processing Algorithm to Detect Hard Exudates Based on Mixture Models***, pp. 4453-4456

Sánchez, Clara I.  
Mayo, Agustín  
García, María  
López, María I.  
Hornero, Roberto

Univ. of Valladolid  
Univ. of Valladolid  
Univ. of Valladolid  
Univ. of Valladolid  
Univ. of Valladolid

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**SaA14**

Chelsea-Gotham

**Intelligent Monitoring and Analysis Systems I (Oral Session)**

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09:00-09:15

***An Interactive Software Module for DPOAE Signal Estimation***, pp. 4457-4460

Powers, Michael  
Goli, Asghar  
Ziarani, Alireza

Clarkson Univ.  
Clarkson Univ.  
Clarkson Univ.

09:15-09:30

***Automated Doppler Gate Placement and Velocity Calculation Based on a Vessel Angle Estimate***, pp. 4461-4464

Hirsch, Annika  
Petersch, Bernhard  
Hoenigmann, Dieter C.

Advanced Computer Vision GmbH - ACV  
Advanced Computer Vision GmbH - ACV  
Advanced Computer Vision GmbH - ACV

09:30-09:45

***Plantar Pressure Parameters for Dynamic Gait Stability Analysis***, pp. 4465-4468

Lemaire, Edward  
Biswas, Ajoy  
Kofman, Jonathan

The Ottawa Hospital Rehabilitation Centre  
Univ. of Ottawa  
Univ. of Waterloo

09:45-10:00

***Vision Analysis in Detecting Abnormal Breathing Activity in Application to Diagnosis of Obstructive Sleep Apnoea***, pp. 4469-4473

Wang, Ching Wei  
Ahmed, Amr  
Hunter, Andrew

Univ. of Lincoln  
Univ. of Lincoln  
Univ. of Lincoln

10:00-10:15

*Automated Detection of Videotaped Neonatal Seizures by Motion Segmentation Methods Based on Optical Flow Computation\**

Tao, Guozhi

Karayiannis, Nicolaos

Univ. of Houston

Univ. of Houston

**SaA15**

O'Neill

**Sensorimotor and Neuromuscular Systems (Oral Session)**

09:00-09:15

***Sensory Perception of Unexpected Sudden Changes in Floor Level During Human Gait***, pp. 4474-4477

Ishikawa, Tatsuya

Kaji, Yuji

Nomura, Taishin

Osaka Univ.

Osaka Univ.

Osaka Univ.

09:15-09:30

***Central Physiological Tremor Oscillators within a Hemifield Repetitive Visual Stimulation Paradigm***, pp. 4478-4481

Dobrea, Monica Claudia

Dobrea, Dan Marius

"Gh. Asachi" Tech. Univ. Iasi

"Gh. Asachi" Tech. Univ. Iasi

09:30-09:45

***A Musculotendon Contribution for Multijoint Hand Control***, pp. 4482-4485

Galias, Nick

Matsuoka, Yoky

Carnegie Mellon Univ.

Carnegie Mellon Univ.

09:45-10:00

***Passive Dynamics of a Hybrid Neuromechanical Joint Incorporating Living Muscle***, pp. 4486-4489

Sundar, Kartik

Ting, Lena H.

DeWeerth, Stephen P.

Georgia Inst. of Tech.

Emory Univ. and Georgia Inst. of Tech.

Georgia Inst. of Tech.

10:00-10:15

***Effect of Fatigue on Muscle Elasticity in the Human Forearm Using Ultrasound Strain Imaging***, pp. 4490-4493

Witte, Russell

Kim, Kang

Martin, Bernard

O'Donnell, Matthew

Univ. of Michigan

Univ. of Michigan

Univ. of Michigan

Univ. of Michigan

10:15-10:30

***Can Human Isochrony Be Explained by a Computational Theory?***, pp. 4494-4497

Saito, Hisashi

Tsubone, Tadashi

Wada, Yasuhiro

Nagaoka Univ. of Tech.

Nagaoka Univ. of Tech.

Nagaoka Univ. of Tech.

**SaB01**

Marquis AB

**High-Order Spectral Analysis and Other Advanced Methods of Biomedical Signal Processing (Oral Session)**

10:45-11:00

***Fourth Order Approaches for Localization of Brain Current Sources***, pp. 4498-4501

Albera, Laurent

Ferreol, Anne

Cosandier-Rimele, Delphine

Merlet, Isabelle

Wendling, Fabrice

INSERM - Univ. de Rennes1

THALES COMMUNICATIONS

INSERM - Univ. de Rennes 1

INSERM - Univ. de Rennes 1

INSERM - Univ. de Rennes 1

11:00-11:15

***Nonlinear Analysis of Heart Murmurs Using Wavelet-Based Higher-Order Spectral Parameters***, pp. 4502-4505

Taplidou, Styliani  
Hadjileontiadis, Leontios

Aristotle Univ. of Thessaloniki  
Aristotle Univ. of Thessaloniki

11:15-11:30

***Non-Skin Contact Wireless Application of Ultra Wideband (UWB) for Estimation of Multiple Person Vital-Signs\****

Rivera, Natalia V.  
Venkatesh, Swaroop  
Buehrer, R. Michael

School of Biomedical Engineering and Sciences, Virginia Tech. -  
Bradley Dept. of Electrical Engineering and Computer Engineering  
Bradley Dept. of Electrical Engineering and Computer Engineering

11:30-11:45

***Nonlinear Characteristics of Wheezes As Seen in the Wavelet Higher-Order Spectra Domain***, pp. 4506-4509

Taplidou, Styliani  
Hadjileontiadis, Leontios

Aristotle Univ. of Thessaloniki  
Aristotle Univ. of Thessaloniki

11:45-12:00

***Dynamic Data Analysis in Obstructive Sleep Apnea***, pp. 4510-4513

Karunajeewa, Samantha  
Abeyratne, Udantha R  
Rathnayake, Suren Indrajith  
Swarnkar, Vinayak

UQ  
Univ. of Queensland  
Univ. of Queensland, Australia  
Univ. of Queensland, Australia

12:00-12:15

***A Detection Scheme for Frontalis and Temporalis Muscle EMG Contamination of EEG Data***, pp. 4514-4518

Fu, Michael J.  
Cavusoglu, M. Cenk  
Daly, Janis J.

Case Western Res. Univ.  
Case Western Res. Univ.  
Case Western Res. Univ.

**SaB02**

Marquis C

**Electrical Source Imaging (Oral Session)**

10:45-11:00

***Imaging 3-Dimensional Cardiac Electrical Activity from Intra-Cavity Potentials***, pp. 4519-4519

He, Bin

Univ. of Minnesota

11:00-11:15

***Things Arising from Electrocardiographic Imaging: Toward a Theory of Partial Inverse Problems***, pp. 4520-4523

Greensite, Fred

Univ. of California, Irvine

11:15-11:30

***Three-Dimensional Ventricular Activation Imaging by Means of Equivalent Current Source Modeling and Estimation***, pp. 4524-4527

Liu, Zhongming  
Liu, Chenguang  
He, Bin

Univ. of Minnesota  
Univ. of Minnesota  
Univ. of Minnesota

11:30-11:45

***Non-Invasive Laplacian Electrocardiography and Moment of Activation Mapping***, pp. 4528-4531

Besio, W. G.  
Chen, Ting

Louisiana Tech. Univ.  
Louisiana Tech. Univ.

11:45-12:00

***Large Scale Kalman Filtering Solutions to the Electrophysiological Source Localization Problem a Meg Case Study***, pp. 4532-4535

Long, Christopher John	Massachusetts General Hospital/ Massachusetts Inst. of Tech.
Purdon, Patrick L.	Massachusetts General Hospital/ Massachusetts Inst. of Tech.
Temereanca, Simona	Massachusetts General Hospital/ Massachusetts Inst. of Tech.
Desai, Neil U	Massachusetts Inst. of Tech.
Hamalainen, Matti	Massachusetts General Hospital
Brown, Emery N	MGH-Harvard Medical School-MIT

12:00-12:15

***A High-Resolution Anisotropic Finite-Volume Head Model for EEG Source Analysis***, pp. 4536-4539

Cook, Michael	Univ. of Alberta
Koles, Zoltan	Univ. of Alberta

**SaB03**

SoHo-Herald

**Computational Genomics, Epigenomics, and Proteomics I (Oral Session)**

10:45-11:00

***A Computational Model for Reading Frame Maintenance***, pp. 4540-4543

Ponnala, Lalit	NC State Univ.
Bitzer, Donald	NC State Univ.
Stomp, Anne-Marie	NC State Univ.
Vouk, Mladen	NC State Univ.

11:00-11:15

***The Genomic Structure: Proof of the Role of Non-Coding DNA***, pp. 4544-4547

Bouaynaya, Nidhal	Univ. of Illinois at Chicago
Schonfeld, Dan	Univ. of Illinois at Chicago

11:15-11:30

***Syndrome-Based Discrimination of Single Nucleotide Polymorphism***, pp. 4548-4551

May, Elebeoba	Sandia National Lab.
Dolan, Patricia	Sandia National Lab.
Crozier, Paul	Sandia National Lab.
Brozik, Susan	Sandia National Lab.

11:30-11:45

***Automated Method for Predicting Enzyme Functional Surface and Locating Key Residues with Accuracy and Specificity***, pp. 4552-4555

Tseng, Yan Yuan	Univ. of Illinois at Chicago
Liang, Jie	Univ. of Illinois at Chicago

11:45-12:00

***Design and Implementation of Probability-Based Scoring Function for Peptide Mass Fingerprinting Protein Identification***, pp. 4556-4559

Song, Zhao	Univ. of Missouri-Columbia
Xu, Dong	Univ. of Missouri-Columbia
Chen, Luonan	Osaka Sangyo Univ.
Zhang, Chao	Univ. of Missouri-Columbia

12:00-12:15

***Ant Colony Optimization for Biomarker Identification from MALDI-TOF Mass Spectra***, pp. 4560-4563

Ressom, Habtom	Georgetown Univ.
Varghese, Rency	Georgetown Univ. Medical Center
Orvisky, Eduard	Georgetown Univ.
Drake, Steven	NIH
Hortin, Glen	NIH
Abdel-Hamid, Mohamed	NHTMRI
Loffredo, Christopher	Georgetown Univ.
Goldman, Radoslav	Georgetown Univ.

**SaB04**

Ziegfeld

**Signal Processing and Modeling in Central and Peripheral Nervous System (Oral Session)**

10:45-11:00

- Estimation of the Center of Body Mass During Forward Stepping Using Body Acceleration***, pp. 4564-4567  
Han, Jungmok Univ. of Manitoba  
Betker, Aimee L. Univ. of Manitoba  
Szturm, Tony Univ. of Manitoba  
Moussavi, Zahra Univ. of Texas at El Paso

11:00-11:15

- Nonlinear Characteristics of Visual Evoked Potential in Glaucoma Patients and Their Correlation with the Visual Responses on Magnocellular and Parvocellular Pathways***, pp. 4568-4571  
Momose, Keiko Waseda Univ.  
Kiyosawa, Motohiro Tokyo Medical and Dental Univ.

11:15-11:30

- Using Component Synchrony Measure for Somatosensory Evoked Potential Detection***, pp. 4572-4575  
Melges, Danilo Barbosa Federal Univ. of Rio de Janeiro  
Miranda de Sá, Antonio Mauricio Ferreira Leite Federal Univ. of Rio de Janeiro  
Infantosi, Antonio Fernando Catelli Federal Univ. of Rio de Janeiro

11:30-11:45

- Combined Sagittal and Coronal Plane Postural Stability Model***, pp. 4576-4579  
Bustamante Valles, Karla Dolores Marquette Univ.  
Schneider, Jennifer Melissa Marquette Univ.  
Long, Jason Medical Coll. of Wisconsin  
Riedel, Susan Marquette Univ.  
Johnson, Michelle Medical Coll. of Wisconsin/Marquette Univ.  
Harris, Gerald Marquette Univ.

11:45-12:00

- Optimal Window Length in the Windowed Adaptive Chirplet Analysis of Visual Evoked Potentials***, pp. 4580-4583  
Cui, Richard, J. Univ. of Toronto  
Wong, Willy Univ. of Toronto

12:00-12:15

- Reconstructed Phase Spaces of Intrinsic Mode Functions. Application to Postural Stability Analysis***, pp. 4584-4589  
Snoussi, Hichem Univ. de Tech. de Troyes  
Amoud, Hassan Univ. de Tech. de Troyes  
Doussot, Michel Univ. de Tech. de Troyes  
Hewson, David J Univ. de Tech. de Troyes  
Duchêne, Jacques Univ. de Tech. de Troyes

**SaB05**

Duffy-Columbia

**Biological and Chemical Sensors (Oral Session)**

10:45-11:00

- Lateral Field Excitation (LFE) of Thickness Shear Mode (TSM) Acoustic Waves in Thin Film Bulk Acoustic Resonators (FBAR) As a Potential Biosensor***, pp. 4590-4593  
Dickherber, Anthony Georgia Inst. of Tech.  
Corso, Christopher David Georgia Inst. of Tech.  
Hunt, Bill Georgia Inst. of Tech.

11:00-11:15

***Characterization of Gold Electrodes in Phosphate Buffered Saline Solution by Impedance and Noise Measurements for Biological Applications***, pp. 4594-4597

McAdams, Eric  
Jossinet, Jacques  
Raman, Subramanian  
McCauley, Ruth

Univ. of Ulster  
INSERM  
Univ. of Ulster at Jordanstown  
Univ. of Ulster at Jordanstown

11:15-11:30

***Novel Measurement Method for Magnetic Particles***, pp. 4598-4601

Mäkiranta, Jarkko  
Verho, Jarmo  
Lekkala, Jukka  
Matintupa, Nuutti

Tampere Univ. of Tech.  
Tampere Univ. of Tech.  
Tampere Univ. of Tech.  
Univ. of Jyväskylä

11:30-11:45

***Cavity-Enhanced Biosensing Utilizing Plasmon Resonance Modes***, pp. 4602-4605

Razansky, Daniel  
Einziger, Pinchas  
Adam, Dan

Tech. - Israel Inst. of Tech.  
Tech. - Israel Inst. of Tech.  
Tech. - Israel Inst. of Tech.

11:45-12:00

***Fabrication of Polymer Neural Probes with Sub-Cellular Features for Reduced Tissue Encapsulation***, pp. 4606-4609

Seymour, John P.  
Kipke, Daryl

Univ. of Michigan  
Univ. of Michigan

12:00-12:15

***Fabrication of Impedimetric Sensors for Label-Free Point-Of-Care Immunoassay Cardiac Marker Systems, with Passive Microfluidic Delivery.***, pp. 4610-4614

Tweedie, Mark  
Raman, Subramanian  
Lemoine, Patrick  
Craig, Ian  
McAdams, Eric  
McLaughlin, James  
MacCraith, Brian  
Kent, Nigel

Univ. of Ulster at Jordanstown  
Univ. of Ulster at Jordanstown  
Univ. of Ulster at Jordanstown  
Univ. of Ulster at Jordanstown  
Univ. of Ulster at Jordanstown  
Univ. of Ulster at Jordanstown  
Dublin City Univ.  
Dublin City Univ.

**SaB07**

Cantor-Jolson

**Respiratory System Modeling and Signal Processing (Oral Session)**

10:45-11:00

***Differences in Phi Recovery in CO<sub>2</sub>-Chemosensitive and Non-Chemosensitive Cells: Predictions from a Mathematical Model\****

Cordovez, Juan  
Clausen, Chris  
Moore, Leon C.  
Solomon, Irene

SUNY Stony Brook  
SUNY Stony Brook  
SUNY at Stony Brook  
State Univ. of New York at Stony Brook

11:00-11:15

***Fractal Fluctuations in Breath Number, Period, and Amplitude Are Independently Controlled in Awake, Healthy Human***, pp. 4615-4618

GEBBER, GERARD  
Barman, Susan  
Fadel, Paul

Michigan State Univ.  
Michigan State Univ.  
Univ. of Missouri

11:15-11:30

***Fast Oscillatory Rhythms in Inspiratory Motor Discharge: A Mathematical Model***, pp. 4619-4622

Chen, Xinnian  
Solomon, Irene  
Zhao, He  
Chon, Ki

State Univ. of NY at Stony Brook  
State Univ. of New York at Stony Brook  
State Univ. of New York at Stony Brook  
State Univ. of New York at Stony Brook

11:30-11:45

***Apnea Detection Using Acoustical Means***, pp. 4623-4626

Yadollahi, Azadeh  
Moussavi, Zahra

Univ. of Manitoba  
Univ. of Manitoba

11:45-12:00

***Sensitized Central Controller of Ventilation in Rats with Chronic Heart Failure Contributes to Hyperpnea Little at Rest but More During Exercise***, pp. 4627-4630

Miyamoto, Tadayoshi  
Inagaki, Masashi  
Takaki, Hiroshi  
Kamiya, Atsunori  
Kawada, Toru  
Shishido, Toshiaki  
Sugimachi, Masaru  
Sunagawa, Kenji

National Cardiovascular Center Res. Inst.  
National Cardiovascular Res. Inst.  
National Cardiovascular Center Res. Inst.  
National Cardiovascular Center Res. Inst.  
Nat. Cardiovascular Center Res. Inst.  
National Cardiovascular Center Res. Inst.  
Natl Cardio Center Res. Inst.  
Kyushu Univ.

12:00-12:15

***Power-Based Segmentation of Respiratory Signals Using Forward-Backward Bank Filtering***, pp. 4631-4634

Aoude, Ahmed  
Motto, Alexis L.  
Galiana, Henrietta L.  
Brown, Karen  
Kearney, Robert Edward

McGill Univ.  
McGill Univ.  
McGill Univ.  
McGill Univ.  
McGill Univ.

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## SaB08

Juilliard

### Neural Stimulation and Prostheses 5 (Oral Session)

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10:45-11:00

***Mathematically Modeling the Effects of Electrically Stimulating Skeletal Muscle***, pp. 4635-4638

Davidson, John Bilkey  
Kim, Juliana  
Cheng, Leo K  
Rohrle, Oliver  
Shorten, Paul  
Soboleva, Tanya  
Clarke, Ross  
Pullan, Andrew

Univ. of Auckland  
Univ. of Auckland  
The Univ. of Auckland  
Univ. of Auckland  
AgResearch Limited  
AgResearch Limited  
AgResearch Limited  
Univ. of Auckland

11:00-11:15

***Models of Selective Stimulation with a Flat Interface Nerve Electrode for Standing Neuroprosthetic Systems***, pp. 4639-4642

Schiefer, Matthew Anthony  
Triolo, Ronald J.  
Tyler, Dustin

Case Western Res. Univ.  
Cleveland FES Center  
Case Western Res. Univ.

11:15-11:30

***Microassembly Techniques for a Three-Dimensional Neural Stimulating Microelectrode Array***, pp. 4643-4646

Yao, Ying  
Gulari, Ning  
Wise, Kensall

Univ. of Michigan, Ann Arbor  
Univ. of Michigan, Ann Arbor  
Univ. of Michigan, Ann Arbor



11:30-11:45

***Microelectronic Retinal Prosthesis: I. a Neurostimulator for the Concurrent Activation of Multiple Electrodes***, pp. 4647-4650

Wong, Yan Tat  
Dommel, Norbert Brian  
Byrnes-Preston, Phil J.  
Lehmann, Torsten  
Lovell, Nigel H  
Suaning, Gregg

Univ. of New South Wales  
Univ. of New South Wales  
The Univ. of New South Wales  
Univ. of New South Wales  
Univ. of New South Wales  
The Univ. of Newcastle

11:45-12:00

***Microelectronic Retinal Prosthesis: II. Use of High-Voltage CMOS in Retinal Neurostimulators***, pp. 4651-4654

Dommel, Norbert Brian  
Wong, Yan Tat  
Byrnes-Preston, Phil J.  
Lehmann, Torsten  
Lovell, Nigel H  
Suaning, Gregg

Univ. of New South Wales  
Univ. of New South Wales  
The Univ. of New South Wales  
Univ. of New South Wales  
Univ. of New South Wales  
The Univ. of Newcastle

12:00-12:15

***Generalized Series Solution for the Induced E-Field Distribution of Slinky-Type Magnetic Stimulators***, pp. 4655-4658

Feitosa, Marcilio  
Fontana, Eduardo

Departamento de Eletrônica e Sistemas, Univ. Pernambuco  
Departamento de Eletrônica e Sistemas, Univ. Federal de Pernambu

**SaB09**

Gramercy-Olmstead

**Intelligent Monitoring and Analysis Systems II (Oral Session)**

10:45-11:00

***An Integrated Cattle Health Monitoring System***, pp. 4659-4662

Smith, Kevin D.  
Martinez, Angel  
Craddolph, Roland  
Andresen, Daniel  
Warren, Steve

Kansas State Univ.  
Kansas State Univ.  
Kansas State Univ.  
Kansas State Univ.  
Kansas State Univ.

11:00-11:15

***Modeling of ECG Interpretation Methods Sharing Based on Human Experts Relations***, pp. 4663-4666

Augustyniak, Piotr  
Tadeusiewicz, Ryszard

AGH Univ. of Science and Tech.  
AGH Univ. of Science and Tech.

11:15-11:30

***A New Method to Estimate Arterial Blood Pressure Using Photoplethysmographic Signal***, pp. 4667-4670

Jeong, In Cheol  
Ko, Jae Il  
Hwang, Sung Oh  
Yoon, Hyung Ro

Yonsei Univ.  
Yonsei Univ.  
Yonsei Univ.  
Yonsei Univ.

11:30-11:45

***A Recursive Fuzzy Expert Systems for Sequential Pattern Recognition for Patient Status Monitoring in Operating Room***, pp. 4671-4674

Xue, Joel  
Krajnak, Michael

GE Healthcare  
GE Healthcare Information Tech.

11:45-12:00

***Thickness Dependent Tortuosity Estimation for Retinal Blood Vessels***, pp. 4675-4678

azegrouz, hind  
Trucco, Emanuele  
Dhillon, Baljean  
MacGillivray, Thomas  
MacCormick, Ian J

Heriot Watt Univ.  
Heriot Watt Univ.  
Princess Alexandra Eye Pavilion  
Univ. of Edinburgh  
The Univ. of Edinburgh

12:00-12:15

***Multi-Channel EEG Based Neonatal Seizure Detection***, pp. 4679-4684

Greene, Barry  
Reilly, Richard  
Boylan, Geraldine  
de Chazal, Philip  
Connolly, Sean

Univ. Coll. Dublin  
Univ. Coll. Dublin  
Univ. Coll. Cork  
BiancaMed Ltd  
St. Vincent's Univ. Hospital

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**SaB11**

Belasco

**Critical (Medical) Information Protection: A Privacy/Security and Information Assurance Debate**

(Minisymposium)

Organizer: Coatrieux, Gouenou  
Organizer: Kun, Luis

ENST Bretagne - Inserm  
IRMC-NDU

10:45-11:00

***Homecare and Disease Prevention: Reviewing a Decade of Evolution - Privacy Still the Biggest Hurdle (I)***, pp. 4685-4685

Kun, Luis

IRMC-NDU

11:00-11:15

***The Need for Technical Solutions for Maintaining the Privacy of EHR (I)***, pp. 4686-4689

Ray, Pradeep  
Wimalasiri, Jaminda

Univ. of New South Wales  
Univ. of New South Wales

11:15-11:30

***Maintaining Security and Privacy of Patient Information (I)***, pp. 4690-4690

Ferrante, Frank

11:30-11:45

***A Review of Image Watermarking Applications in Healthcare (I)***, pp. 4691-4694

Coatrieux, Gouenou  
Lecornu, Laurent  
Roux, Christian  
Sankur, Bulent

ENST Bretagne - Inserm  
GET ENST Bretagne  
ENST Bretagne - INSERM  
Bogazici Univ.

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**SaB12**

Palace Wintergarden

**Retinal Image Analysis II (Oral Session)**

10:45-11:00

***Design of an Ultrasonic Micro-Array for Near Field Sensing During Retinal Microsurgery***, pp. 4695-4699

Clarke, Clyde  
Etienne-Cummings, Ralph

Morgan State Univ.  
Johns Hopkins Univ.

11:00-11:15

***The Design and Testing of an Epi-Retinal Vision Prosthesis Neurostimulator Capable of Concurrent Parallel Stimulation***, pp. 4700-4709

Dommel, Norbert Brian  
Wong, Yan Tat  
Byrnes-Preston, Phil J.  
Lehmann, Torsten  
Lovell, Nigel H  
Suanning, Gregg

Univ. of New South Wales  
Univ. of New South Wales  
The Univ. of New South Wales  
Univ. of New South Wales  
Univ. of New South Wales  
The Univ. of Newcastle

11:15-11:30

***Increased Resolution Macular Thickness Mapping by OCT***, pp. 4710-4713

Bernardes, Rui Association for Innovation and Biomedical Res. on Light and Imag  
Santos, Torcato Association for Innovation and Biomedical Res. on Light and Imag  
Cunha-Vaz, José Association for Innovation and Biomedical Res. on Light and Imag

11:30-11:45

***Automated Change Analysis from Fluorescein Angiograms for Monitoring Wet Macular Degeneration***, pp. 4714-4717

Narasimha-Iyer, Harihar Lickenbrock Engineering Inc  
Can, Ali GE Global Res.  
Roysam, Badrinath Rensselaer Pol. Inst.  
Stern, Jeffrey Northeastern Retina Specialists

11:45-12:00

***Autofocusing for Automated Microscopic Evaluation of Blood Smear and Pap Smear***, pp. 4718-4721

Liu, Xinyu Univ. of Toronto  
Wang, Wenhui Univ. of Toronto  
Sun, Yu Univ. of Toronto

12:00-12:15

***Registration of Retinal Angiograms Using Self Organizing Maps***, pp. 4722-4725

Asvestas, Pantelis Inst. Of Communication & Computer Systems  
Matsopoulos, George K. Inst. Of Communication & Computer Systems  
Mouravliansky, Nikolaos Inst. Of Communication & Computer Systems  
Delibasis, Konstantinos Inst. Of Communication & Computer Systems

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**SaB14**

Chelsea-Gotham

**Clinical Engineering and Healthcare Information Systems Best Practices I (Oral Session)**

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10:45-11:00

***Electrical Safety Priority Index for Medical Equipment\****

Ortiz-Posadas, Martha Univ. Autónoma Metropolitana Iztapalapa

11:00-11:15

***Using Web Technique in the Managing Regulatory Requirements of Medical Equipment for the Nursing Department\****

Chien, Chia-Hung National Taiwan Univ.  
Hwang, Bao-Hwa National Taiwan Univ. Hospital  
Lin, Thuey-Ru National Taiwan Univ. Hospital  
WANG, Cheng-Yi Coll. of Medicine, National Taiwan Univ. Hospital  
Chong, Fok-Ching National Taiwan Univ.

11:15-11:30

***A Communication Tool to Improve the Patient Journey Modeling Process***, pp. 4726-4730

Curry, Joanne Marie Univ. of Western Sydney  
McGregor, Carolyn Univ. of Western Sydney  
Tracy, Sally Univ. of New South Wales

11:30-11:45

***An Integrated Healthcare Enterprise Information Portal and Healthcare Information System Framework***, pp. 4731-4734

Hsieh, Sheau-Ling	National Chiao Tung Univ.
Lai, Feipei	National Taiwan Univ.
Cheng, Po-Hsun	National Taiwan Univ. Hospital
Chen, Chuen-Liang	National Taiwan Univ.
Lee, Hsiu-Hui	National Taiwan Univ.
Tsai, Wen-Nung	National Chiao Tung Univ.
Weng, Yung-Ching	National Taiwan Univ.
Hsieh, Sung-Huai	National Taiwan Univ.
Hsu, Kai-Ping	National Taiwan Univ.
Ko, Li-Fan	National Taiwan Univ.
Chen, Chi-Huang	National Taiwan Univ.
Yang, Tzu-Hsiang	National Taiwan Univ. Hospital

11:45-12:00

***FUJI-Scheduler : Outpatient-Test-Order-Management Function for Order Entry System***, pp. 4735-4738

Toyoda, Shuichi	Jobu Univ.
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12:00-12:15

***EHTP: Improving Health Quality through Health Technology\****

Judd, Tom	Kaiser Permanente consultant; WHO consultant
Heimann, Peter	World Health Organization
Issakov, Andrei	World Health Organization

**SaBP1**

Westside Ballroom South

**Image Analysis: Applications II (Poster Session)**

10:45-11:00

***Analysis of Corneal Images for the Recognition of Nerve Structures***, pp. 4739-4742

Ruggeri, Alfredo	Univ. of Padova
Scarpa, Fabio	Univ. of Padova
Grisan, Enrico	Univ. of Padova

11:00-11:15

***A Novel Image Capture System for Use in Telehealth Applications***, pp. 4743-4746

Lim, Ed W	Univ. of NSW
Celler, Branko George	Univ. of New South Wales
Basilakis, Jim	Univ. of NSW
Taubman, David S.	Univ. of New South Wales

11:15-11:30

***SVM Based System for Classification of Microcalcifications in Digital Mammograms***, pp. 4747-4750

Singh, Sukhvinder	Sant Longowal Inst. of Engineering and Tech.
Kumar, Vinod	IIT Roorkee
Verma, H. K.	IIT Roorkee
Singh, Dilbag	Dr. B. R. Ambedkar National Inst. of Tech. Jalandhar

11:30-11:45

***Diffusion Equations with Negentropy Applied to Denoise Mammographic Images***, pp. 4751-4754

Mayo, Patricia	Univ. Pol. de Valencia
Rodenas, Francisco	Univ. Pol. de Valencia
Ginestar, Damian	Univ. Pol. de Valencia
Verdú, Gumersindo	Pol. Univ. of Valencia
Miró, Rafael	Pol. Univ. of Valencia

11:45-12:00

***Using Gabor Filter Banks and Temporal-Spatial Constraints to Compute 3D Myocardium Strain***, pp. 4755-4758

chen, ting  
Axel, Leon

NYU  
NYU Medical Center

12:00-12:15

***Detecting Prostatic Adenocarcinoma from Digitized Histology Using a Multi-Scale Hierarchical Classification Approach***, pp. 4759-4762

Doyle, Scott  
Rodriguez, Carlos  
Madabhushi, Anant  
Feldman, Michael  
Tomaszewski, John

Rutgers Univ.  
Rutgers Univ.  
Rutgers Univ.  
Univ. of Pennsylvania  
Univ. of Pennsylvania

**SaBP2**

Westside Ballroom South

**Image Processing and Analysis (Poster Session)**

10:45-11:00

***The Theory of Cross Point Regions with Ideal Cross Point Regions for Medical Image Compression\****

Dang, Tin T.  
Higuchi, Seihaku  
Vu, Dinh Thanh  
Nguyen, Kim Sach

Hochiminh City Univ. of Tech.  
Osaka Sangyo Univ.  
Hochiminh city Univ. of Tech.  
Hochiminh city Univ. of Tech.

11:00-11:15

***Threshold Optimization of Adaptive Template Filtering for MRI Based on Intelligent Optimization Algorithm***, pp. 4763-4766

Guo, Lei  
Wu, Youxi  
Liu, Xuena  
Li, Ying  
Xu, Guizhi  
Yan, Weili

Hebei Univ. of Tech.  
Hebei Univ. of Tech.  
Hebei Univ. of Tech.  
Hebei Univ. of Tech.  
Hebei Univ. of Tech.  
Hebei Univ. of Tech.

11:15-11:30

***Statistical Analysis of Difference Image for Absolutely Lossless Compression of Medical Images***, pp. 4767-4770

Ashraf, Robina  
Akbar, Muhammad  
Jafri, Noman

National Univ. of Sciences & Tech.  
National Univ. of sciences & Tech. Pakistan  
National Univ. of Sciences & Tech. Pakistan

11:30-11:45

***A System for Automatic Quantification of Cigarette Smoking Behavior.***, pp. 4771-4774

Stitt, Joseph  
Kozlowski, Lynn

Pennsylvania State Univ.  
Pennsylvania State Univ.

11:45-12:00

***SVM-Based Texture Classification and Application to Early Melanoma Detection***, pp. 4775-4778

Yuan, Xiaojing  
Yang, Zhenyu  
Zouridakis, George  
Mullani, Nizar

Univ. of Houston  
Univ. of Houston  
Univ. of Houston  
Translite, LLC

12:00-12:15

***Significance of MPEG-7 Textural Features for Improved Mass Detection in Mammography***, pp. 4779-4782

Eltonsy, Nevine  
Tourassi, Georgia  
Fadeev, Aleksey  
Elmaghraby, Adel

Univ. of Louisville  
Duke Univ. Medical Center  
Univ. of Louisville  
Univ. of Louisville

- 12:00-12:15  
***A Fast Eye-Movement Tracking Using Cross-Division Algorithm\****  
 Cho, Jongman Inje Univ.
- 12:00-12:15  
***Fuzzy Wavelet and Contourlet Based Contrast Enhancement\****  
 Nezhadarya, Ehsan Sharif Univ. of Tech.  
 Shamsollahi, Mohammad Bagher Sharif Univ. of Tech.  
 Sayadi, Omid Sharif Univ. of Tech.
- 12:00-12:15  
***Three-Dimensional Digital Image Analysis of Immunostained Neurons in Thick Tissue Sections***, pp. 4783-4786  
 Selinummi, Jyrki Tampere Univ. of Tech.  
 Ruusuvoori, Pekka Tampere Univ. of Tech.  
 Lehmussola, Antti Tampere Univ. of Tech.  
 Huttunen, Heikki Tampere Univ. of Tech.  
 Yli-Harja, Olli Tampere Univ. of Tech.  
 Miettinen, Riitta Univ. of Kuopio
- 12:00-12:15  
***Platelet-Based MPLE Method for Denoising of Brain and Cardiac SPECT Images***, pp. 4787-4790  
 Riyahi-Alam, Nader Tehran Univ. of Medical Sciences (TUMS)  
 Takavar, abbas tehran Univ. of medical sciences(TUMS)  
 Alibabaei, Naghmeh Tehran Univ. of Medical Sciences(TUMS), School of  
 Sohrabi, M Tehran Univ. of Medical Sciences(TUMS), School of Medicine  
 Fard-Esfahani, A Tehran Univ. of Medical Sciences(TUMS), School of Medicine  
 Oghabian, Mohammad Ali Tehran Univ. of Medical Sciences  
 Bakhtiary, Morteza Res. Center for Science and Tech. in Medicine
- 12:00-12:15  
***Performance Evaluation of Feature Extraction Methods for Classifying Abnormalities in Ultrasound Liver Images Using Neural Network***, pp. 4791-4794  
 maheshkumar, poonguzhali Coll. of Engineering ,Guidy, Anna Univ. .  
 gurubatham, ravindran Coll. of Engineering ,Guidy, Anna Univ.
- 12:00-12:15  
***Progressive Image Transmission for Medical Applications Based on Wavelet Transform with a Non-Uniform Scalar Quantization Scheme***, pp. 4795-4798  
 Lu, Yi Insightful Corp.  
 Zheng, Jun Queens Coll. - City Univ. of New York  
 Jiang, Yingtao Univ. of Nevada  
 Yang, Mei Univ. of Nevada, Las Vegas  
 Fu, Bingmei The City Coll. of New York  
 Hou, Wensheng Bioengineering Inst. of Chongqing Univ.
- 12:00-12:15  
***A Dental Vision System for Accurate 3D Tooth Modeling***, pp. 4799-4802  
 Zhang, Li Univ. of Bristol, UK  
 Alemzadeh, Kazem Univ. of Bristol, UK
- 12:00-12:15  
***Image Registration Based on Neural Network and Fourier Transform***, pp. 4803-4806  
 Abche, Antoine Univ. of Balamand  
 Yaacoub, Fadi Univ. of Balamand  
 Maalouf, Aldo Univ. of Balamand  
 Karam, Elie Univ. of balamand
- 12:00-12:15  
***Parametric 3D Hip Joint Segmentation for the Diagnosis of Developmental Dysplasia***, pp. 4807-4810  
 de Luis-García, Rodrigo Univ. of Valladolid  
 Alberola-López, Carlos Univ. de Valladolid

12:00-12:15

***The Effects of Sampling Rate on the Texture Separability of Ultrasound Images***, pp. 4811-4814

Lai, Chao-Wei

National Taiwan Univ.

Tsao, Jenho

National Taiwan Univ.

Lo, Men-Tzung

National Taiwan Univ.

12:00-12:15

***Image Quality Assessment Based on Local Variance***, pp. 4815-4818

Aja-Fernandez, Santiago

Lab. of Mathematics in Imaging, Brigham and Women's Hospital, Ha

San Jose Estepar, Raul

Lab. of Mathematics in Imaging, Brigham and Women's Hospital, Ha

Alberola-López, Carlos

Univ. de Valladolid

Westin, Carl-Fredrik

Brigham and Women's Hospital, Harvard Medical School

12:00-12:15

***Acceleration of Fiber Tracking in DTI Tractography by Reconfigurable Computer Hardware***, pp. 4819-4822

Singh, Manbir

Univ. of Southern California

Kwatra, Aditya

Univ. of Southern California

Wong, Chi Wah

Univ. of Southern California

Prasanna, Viktor

Univ. of Southern California

12:00-12:15

***Nonrigid Registration of Images with Different Topologies Using Embedded Maps***, pp. 4823-4827

Wyatt, Christopher Lee

Virginia Tech.

Laurienti, Paul

Wake Forest Univ. Health Sciences

12:00-12:15

***A Method for the Dynamic Analysis of the Heart Using a Lyapounov Based***

***Denosing Algorithm***, pp. 4828-4831

Sanches, João

Inst. Superior Técnico / Inst. de Sistemas e Robótica

Nascimento, Jacinto

Inst. Superior Técnico / Inst. de Sistemas e Robótica

Marques, Jorge

Inst. Superior Técnico and Inst. for Systems and Robotics

12:00-12:15

***Source Localization of Subtopographic Brain Maps for Event Related Potentials (ERP)***, pp. 4832-4834

Duru, Adil Deniz

Univ. of Bogazici

Bayram, Ali

Univ. of Bogazici

Demiralp, Tamer

Univ. of Istanbul, Medical School

Ademoglu, Ahmet

Univ. of Bogazici

12:00-12:15

***Framework for Creating New Discriminants for Detecting DTI Properties: DTI Mapper***, pp. 4835-4839

Sakai, Koji

Kyoto Univ.

12:00-12:15

***Qualitative Visual Image Analysis of Bruise Age Determination: A Survey***, pp. 4840-4843

Dimitrova, Tatyana Velikova

Rousse Univ.

Georgieva, Lidia Hristova

Rousse Univ.

Pattichis, Constantinos

Univ. of Cyprus

Neofytou, Marios

Univ. of Cyprus

12:00-12:15

***Image Analysis for Neuroblastoma Classification: Segmentation of Cell Nuclei***, pp. 4844-4847

Gurcan, Metin

The Ohio State Univ.

12:00-12:15

***An Automated Tool for Face Recognition Using Visual Attention and Active Shape***

***Models Analysis***, pp. 4848-4852

Faro, Alberto

Univ. di Catania

Giordano, Daniela

Univ. di Catania

Spampinato, Concetto

Univ. di Catania

12:00-12:15

***Three Comparative Approaches for Breast Density Estimation in Digital and Screen***

***Film Mammograms***, pp. 4853-4856

Chang, Ruey-Feng  
Chang-Chien, Kuang-Che  
Takada, Etsuo  
Suri, Jasjit  
Moon, Woo Kyung  
Wu, Jeffery H.K.  
Cho, Nariya  
Wang, Yi-Fa  
Chen, Dar-Ren

National Chung Cheng Univ.  
National Chung Cheng Univ.  
Dokkyo Univ. School of Medicine  
Biomedical Tech.  
Seoul National Univ. Hospital  
Changhua Christian Hospital  
Seoul National Univ. Hospital  
National Chung Cheng Univ.  
Changhua Christian Hospital

12:00-12:15

***Tissue Image Interpolation Based on Fractional Brownian Motion***, pp. 4857-4860

Li, Ching Lin  
Ting, Wen-Hung  
Cheng, Kuo-Sheng

National Cheng Kung Univ.  
National Cheng Kung Univ.  
National Cheng Kung Univ.

12:00-12:15

***Wireless Capsule Endoscopy Images Enhancement by Tensor Based Diffusion***, pp. 4861-4864

Li, Baopu  
Meng, Max Qinghu

The Chinese Univ. of Hong Kong  
The Chinese Univ. of Hong Kong

**SaBP3**

Westside Ballroom South

**Image Retrieval, Visualization, and Volume Rendering II (Poster Session)**

10:45-11:00

***Automated Classification of Cerebral Arteries in MRA Images and Its Application to Maximum Intensity Projection***, pp. 4865-4868

Uchiyama, Yoshikazu  
Yamauchi, Masashi  
Ando, Hiromichi  
Yokoyama, Ryujiro  
Hara, Takeshi  
Fujita, Hiroshi  
Iwama, Toru  
Hoshi, Hiroaki

Gifu Univ.  
Gifu Univ.  
Graduate School of Medicine, Gifu Univ.  
Gifu Univ.  
Gifu Univ. Graduate Sch of Medicine  
Gifu Univ.  
Graduate School of Medicine, Gifu Univ.  
Gifu Univ.

11:00-11:15

***Segmentation of Lung Lobes in Volumetric CT Images for Surgical Planning of Treating Lung Cancer***, pp. 4869-4872

Wei, Qiao  
Hu, Yaoping  
MacGregor, J. H.  
Gelfand, Gary

Univ. of Calgary  
The Univ. of Calgary  
Foothills Medical Center  
Foothills Medical Center

11:15-11:30

***Investigation on Virtual Palpation System Using Ultrasonic Elasticity Imaging***, pp. 4873-4876

HAMAMOTO, Kazuhiko

Tokai Univ.

11:30-11:45

***Progress in Visualizing Turbulent Flow Using Single-Echo Acquisition Imaging***, pp. 4877-4880

Wright, Steven M.  
McDougall, Mary P.  
Bosshard, John

Texas A&M Univ.  
Texas A&M Univ.  
Texas A&M Univ.



11:45-12:00

***Circumferential Resection Margin Assessment on MRI of Rectal Cancer***, pp. 4881-4884

Petroudi, Styliani  
Brown, Gina  
Bond, Sarah  
Brady, Michael

Univ. of Oxford  
Royal Marsden Hospital NHS Foundation Trust  
Oxford Univ.  
Univ. of Oxford

12:00-12:15

***Sampling DTI Fibers in the Human Brain Based on DWI Forward Modeling***, pp. 4885-4888

Zhang, Song  
Laidlaw, David

Brown Univ.  
Brown Univ.

12:00-12:15

***Classification and Retrieval of Medical Images in an Integrated Healthcare Environment***, pp. 4889-4892

José, Alexandre Bellezi  
Reis, Maria do Carmo dos  
Camapum, Juliana Fernandes  
Carvalho, Hervaldo Sampaio  
França Vasconcelos, Daniel  
da Rocha, Adson F.  
Barbosa, Talles M. G. de A.

Univ. of Brasília  
Univ. of Brasília  
Univ. de Brasília  
Univ. of Brasília  
UnB - HUB  
Univ. of Brasilia  
Catholic Univ. of Goiás

**SaBP4**

Westside Ballroom South

**New Techniques in Rehabilitation III (Poster Session)**

10:45-11:00

***Development of the Navigation System for the Visually Impaired by Using White Can***, pp. 4893-4896

Hirahara, Yoshiaki  
Sakurai, Yusuke  
Siizu, Yuriko  
Yanashima, Kenji  
Magatani, Kazushige

Tokai Univ.  
Tokai Univ.  
Tokai Univ.  
National Rehabilitation Center for the Disabled  
TOKAI Univ.

11:00-11:15

***Neural Observer Based Spasticity Quantification During Therapeutic Muscle Stimulation***, pp. 4897-4900

Bernhardt, Michael  
Angerer, Bernhard  
Buss, Martin  
Struppler, Albrecht

Tech. Univ. Muenchen  
Tech. Univ. Muenchen  
Tech. Univ. Muenchen  
Tech. Univ. Muenchen

11:15-11:30

***Analysis of Prosody in Finger Braille Using Electromyography***, pp. 4901-4904

Miyagi, Manabi  
Nishida, Masafumi  
Horiuchi, Yasuo  
Ichikawa, Akira

Chiba Univ.  
Chiba Univ.  
Chiba Univ.  
Chiba Univ.

11:30-11:45

***Design and Development of a Low-Cost Eye Tracking System for the Rehabilitation of the Completely Locked-In Patient***, pp. 4905-4908

Abu-Faraj, Ziad  
Mashaalany, Maya  
Bou Sleiman, Habib  
Heneine, Jean-Louis  
Al Katergi, Waleed

American Univ. of Science & Tech.  
American Univ. of Science & Tech.  
American Univ. of Science & Tech.  
American Univ. of Science & Tech.  
American Univ. of Science & Tech.

11:45-12:00

***Transfer Information Enhancement with a 2-D Tactile Stimulator Array for Acoustic Vision Substitute System***, pp. 4909-4912

Taki, Hirofumi  
Sato, Toru

Kyoto Univ.  
Kyoto Univ.

12:00-12:15

***Space Cognitive Map As a Tool for Navigation for Visually Impaired.***, pp. 4913-4916

Pissaloux, Edwige  
Maingreaud, Flavien  
Hafez, Moustapha  
Velazquez, Ramiro

Univ. Paris 6  
Univ. Paris 6 et CEA/LIST  
CEA  
Univ. Paris 6

12:00-12:15

***M3S-Based Electrical Wheelchair with Head-Controlled Device***, pp. 4917-4920

Chen, Show-Hong  
Chen, Yu-luen  
Kuo, Te-son  
Chu, Chiung-Yu  
Chao-Nan, Hung

National Taiwan Univ.  
Hwa-Hsia Inst. of Tech.  
Nation Taiwan Univ.  
NCTU  
Tung Nan Inst. of Tech.

12:00-12:15

***Stopping Behavior in a VR Driving Simulator: A New Clinical Measure for the Assessment of Driving***, pp. 4921-4924

Schultheis, Maria  
Simone, Lisa  
Roseman, Emily  
Nead, Richard  
Rebimbas, Jose  
Mourant, Ronald

Drexel Univ.  
New Jersey Inst. of Tech.  
Drexel Univ.  
Kessler Inst. for Rehabilitation  
KMRREC  
Northeastern Univ.

12:00-12:15

***Novel Design of Interactive Multimodal Biofeedback System for Neurorehabilitation***, pp. 4925-4928

Huang, He  
CHEN, YINPENG  
WeiWei, Xu  
Sundaram, Hari  
Olson, Loren  
ingalls, todd  
Rikakis, Thanassis  
He, Jiping

Arizona State Univ.  
Arizona State Univ.  
Arizona State Univ.  
Arizona State Univ.  
Arizona State Univ.  
Arizona State Univ.  
Arizona State Univ.  
Arizona State Univ.

12:00-12:15

***Auditory Cortical Plasticity Induced by Intracortical Microstimulation under Pharmacological Blockage of Inhibitory Synapses***, pp. 4929-4932

Yokota, Ryou  
Suzurikawa, Jun  
Takahashi, Hirokazu  
funamizu, akihiro  
uchihara, masanobu  
kanzaki, ryohei

the Univ. of Tokyo  
The Univ. of Tokyo  
Univ. of Tokyo  
the Univ. of Tokyo  
the Univ. of Tokyo  
the Univ. of Tokyo

12:00-12:15

***Coactivations of Elbow and Shoulder Muscles in Hemiplegic Persons with Chronic Stroke During Robot-Assisted Training***, pp. 4933-4935

Hu, Xiaoling  
Song, Rong  
Tong, Kai Yu, Raymond  
Tsang, Sin Fai  
Leung, Penny  
Li, Le

The Hong Kong Pol. Univ.  
The Hong Kong Pol. Univ.  
The Hong Kong Pol. Univ.  
The Hong Kong Pol. Univ.  
The Hong Kong Pol. Univ.  
The Hong Kong Pol. Univ.

12:00-12:15

*Conscious Control of Electrodermal Activity: The Potential of Mental Exercises\**

Blain, Stefanie  
Mihailidis, Alex  
Chau, Tom

Univ. of Toronto  
Univ. of Toronto  
Univ. of Toronto

12:00-12:15

***Development of a Measuring System of Contact Pressure During Braille Reading Using an Optical 6-Axis Force Sensor***, pp. 4936-4940

Watanabe, Tetsuya  
Oouchi, Susumu  
Yamaguchi, Toshimitsu  
Shimojo, Makoto  
Shimada, Shigenobu

National Inst. of Special Education  
National Inst. of Special Education  
National Inst. of Special Education  
The Univ. of Electro-Communications  
Tokyo Metropolitan Industrial Tech. Res. Inst.

12:00-12:15

***The Transcutaneous Charger for Implanted Nerve Stimulation Device***, pp. 4941-4944

Niu, Chuansen  
Hao, Hongwei  
Li, Luming  
Ma, Bozhi  
Wu, Minsheng

Tsinghua Univ.  
Tsinghua Univ.  
Tsinghua Univ.  
Tsinghua Univ.  
Tsinghua Univ.

12:00-12:15

***The Therapeutic Effects of Myoelectrically Controlled Robotic System for Persons after Stroke-A Pilot Study***, pp. 4945-4948

Song, Rong  
Tong, Kai Yu, Raymond  
Hu, Xiaoling  
Tsang, Vincent  
Li, Le

The Hong Kong Pol. Univ.  
The Hong Kong Pol. Univ.  
The Hong Kong Pol. Univ.  
The Hong Kong Pol. Univ.  
The Hong Kong Pol. Univ.

**SaBP5**

Westside Ballroom South

**Computational Neurophysiology (Poster Session)**

10:45-11:00

***Amplification of Small Electric Fields by Neurons; Implications for Spike Timing***, pp. 4949-4952

Radman, Thomas  
Parra, Lucas  
Bikson, Marom

The City Coll. of New York  
The City Coll. of New York  
The City Coll. of New York

11:00-11:15

***Object Segmentation and Reconstruction Via an Oscillatory Neural Network: Interaction among Learning, Memory, Topological Organization and Gamma-Band Synchronization***, pp. 4953-4956

Magosso, Elisa  
Cuppini, Cristiano  
Ursino, Mauro

Univ. of Bologna  
Univ. of Bologna  
Univ. of Bologna

11:15-11:30

***Enhancement of Information Transmission with Stochastic Resonance in Hippocampal CA1 Neuron Models***, pp. 4957-4960

Mino, Hiroyuki  
Durand, Dominique  
Kawaguchi, Minato

Kanto Gakuin Univ.  
Case Western Res. Univ.  
Kanto Gakuin Univ.

11:30-11:45

***An Internal Model of Self-Motion Based on Inertial Signals.***, pp. 4961-4964

Ramat, Stefano  
Pre, Deborah  
Magenes, Giovanni

Univ. di Pavia  
Univ. deglistudi di Pavia  
Univ. of Pavia

11:45-12:00

***Long-Term Potentiation Alters the Hippocampal Paired-Pulse Index in the Freely Behaving Neonatal Rat***, pp. 4965-4966

Blaise, J. Harry  
Arnett, Adrian

Trinity Coll.  
Trinity Coll.

12:00-12:15

***A Multi-Input Modeling Approach to Quantify Hippocampal Nonlinear Dynamic Transformations***, pp. 4967-4970

Zanos, Theodoros  
Courellis, Spiros  
Hampson, Robert  
Deadwyler, Sam  
Marmarelis, Vasilis  
Berger, Theodore

Univ. of Southern California  
Univ. of Southern California  
Wake Forest Univ.  
Wake Forest Univ.  
Univ. of Southern California  
Univ. of Southern California

12:00-12:15

***High Frequency Mammalian Nerve Conduction Block: Simulations and Experiments***, pp. 4971-4974

Kilgore, Kevin  
Bhadra, Niloy

MetroHealth Medical Center  
Case Western Res. Univ.

12:00-12:15

***Computational Modeling of  $A_{\beta}$ ; Fiber Wind-Up***, pp. 4975-4978

farajidavar, aydin  
Towhidkhah, Farzad  
mirhashemi, arash  
gharibzadeh, shahriar  
Behbehani, Khosrow

Amirkabir Univ. of Tech.  
Amirkabir Univ. of Tech.  
Amirkabir Univ. of Tech.  
Amirkabir Univ. of Tech.  
Univ. of Texas at Arlington

12:00-12:15

***A Feedforward Hippocampal Circuit Associated with the Mossy Fiber Pathway Acts As an Adaptive Highpass Filter***, pp. 4979-4982

Zalay, Osbert  
Bardakjian, Berj Luther

Univ. of Toronto  
Univ. of Toronto

12:00-12:15

***Audiometric Threshold Screening Method Using Envelope Detection Filters of Intensity Ramping Click Auditory Steady-State Responses***, pp. 4983-4986

Acikgoz, Nuri  
Ozdamar, Ozcan  
Delgado, Rafael E.  
Bohorquez, Jorge

Univ. of Miami  
Univ. of Miami  
Univ. of Miami  
Univ. of Miami

12:00-12:15

***Acquisition and Analysis of High Rate Deconvolved Auditory Evoked Potentials During Sleep***, pp. 4987-4990

Millan, Jorge  
Ozdamar, Ozcan  
Bohorquez, Jorge

Univ. of Miami  
Univ. of Miami  
Univ. of Miami

12:00-12:15

***Analysis of a Gain Control Model of V1: Is the Goal Redundancy Reduction?***, pp. 4991-4994

Shi, Jianing  
Wielaard, Jim  
Sajda, Paul

Columbia Univ.  
Columbia Univ.  
Columbia Univ.

**SaBP6**

Westside Ballroom South

**Therapeutic Devices 3 (Poster Session)**

10:45-11:00

***Comparative Phantom Study on Epidural Anesthesia Needle***, pp. 4995-4998

Naemura, Kiyoshi

Tokyo Univ. of Tech.

11:00-11:15

***A New Infusion Pathway Intactness Monitoring System***, pp. 4999-5000

Ogawa, Hidekuni  
Yonezawa, Yoshiharu  
Maki, Hiromichi  
Ninomiya, Ishio  
Sata, Koji  
Hamada, Shingo  
Caldwell, Morton

Hiroshima Inst. of Tech.  
Hiroshima Inst. of Tech.  
International Trinity Coll.  
Hiroshima International Univ.  
Shakaihoken Shimonoseki Kousei Hospital  
Shakaihoken Shimonoseki Kousei Hospital  
Caldwell Biomedical Electronics

11:15-11:30

***A Portable Needle-Free Jet Injector Based on a Custom High Power-Density Voice-Coil Actuator***, pp. 5001-5004

Taberner, Andrew  
Ball, Nathan  
Hogan, N. Catherine  
Hunter, Ian

Massachusetts Inst. of Tech.  
Massachusetts Inst. of Tech.  
Massachusetts Inst. of Tech.  
Massachusetts Inst. of Tech.

11:30-11:45

***The Effect of Jet Parameters on Jet Injection***, pp. 5005-5008

Wendell, Dawn  
Hemond, Brian  
Hogan, N. Catherine  
Taberner, Andrew  
Hunter, Ian

Massachusetts Inst. of Tech.  
Massachusetts Inst. of Tech.  
Massachusetts Inst. of Tech.  
Massachusetts Inst. of Tech.  
Massachusetts Inst. of Tech.

11:45-12:00

***A Software Upgrade Method for Micro-Electronics Medical Implants***, pp. 5009-5012

Cao, Yang  
Hao, Hongwei  
Xue, Lin  
Li, Luming  
Ma, Bozhi

Tsinghua Univ.  
Tsinghua Univ.  
Tsinghua Univ.  
Tsinghua Univ.  
Tsinghua Univ.

12:00-12:15

***Contribution of Direct Heating, Thermal Conduction and Perfusion During Radiofrequency and Microwave Ablation***, pp. 5013-5016

Schramm, Wolfgang  
Yang, Deshan  
Haemmerich, Dieter

Medical Univ. of South Carolina  
Univ. of Wisconsin-Madison  
Medical Univ. of South Carolina

12:00-12:15

***Study of a Brain Hyperthermia System Providing Also Passive Brain Temperature Monitoring***, pp. 5017-5020

Karanasiou, Irene  
Uzunoglu, Nikolaos

National Tech. Univ. of Athens, Inst. of Communications and Comp  
National Tech. Univ. of Athens

12:00-12:15

***Electrical Isolation During Radiofrequency Ablation: 5% Dextrose in Water Provides Better Protection Than Saline***, pp. 5021-5024

Brace, Christopher  
Laeseke, Paul  
Prasad, Vijay  
Lee, Jr., Fred

Univ. of Wisconsin  
Univ. of Wisconsin  
Univ. of Wisconsin  
Univ. of Wisconsin

12:00-12:15

***Measurement of Safe Thermal Therapy Levels: The Case of Ultrasonic Waveguide Interstitial Applicator Array***, pp. 5025-5028

Jarosz, Boguslaw J

Carleton Univ.

**SaBP7**

Westside Ballroom South

**Pharmacokinetics and Dynamics (Poster Session)**

10:45-11:00

***Pharmacodynamic Modelling of Drug-Induced Ventilatory Depression and Automatic Drug Dosing in Conscious Sedation***, pp. 5029-5032Zanderigo, Eleonora  
Caruso, Antonello  
Bouillon, Thomas  
Luginbuehl, Martin  
Morari, ManfredSwiss Federal Inst. of Tech.  
Swiss Federal Inst. of Tech.  
Univ. Hospital Bern  
Univ. Hospital Bern  
Swiss Federal Inst. of Tech.

11:00-11:15

***Ordinary Differential Equation Models for Ethanol Pharmacokinetics Based on Anatomy and Physiology***, pp. 5033-5036Han, Jae-Joon  
Plawecki, Martin  
Doerschuk, Peter C.  
O'Connor, Sean  
Ramchandani, VijayPurdue Univ.  
Purdue Univ.  
Purdue Univ.  
Indiana Univ. School of Medicine and Purdue Univ.  
National Inst. of Alcohol Abuse and Alcoholism (NIAAA)

11:15-11:30

***A Fuzzy Physiologically Based Pharmacokinetic Modeling Framework to Predict Drug Disposition in Humans***, pp. 5037-5040Seng, Kok-Yong  
Vicini, Paolo  
Nestorov, IvanUniv. of Washington  
Univ. of Washington  
Zymogenetics Inc.

11:30-11:45

***An Improved PID Switching Control Strategy for Type 1 Diabetes***, pp. 5041-5044Marchetti, Gianni  
Barolo, Massimiliano  
Jovanovic, Lois  
Zisser, Howard  
Seborg, DaleUniv. of Padova  
Univ. of Padova  
Sansum Diabetes Res. Inst.  
Sansum Diabetes Res. Inst.  
Univ. of California, Santa Barbara

11:45-12:00

***Glucose Production by Deconvolution in Intravenous and Oral Glucose Tolerance Tests: Role of Output Variable***, pp. 5045-5048Chierici, Marco  
Pillonetto, Gianluigi  
Toffolo, Gianna  
Cobelli, ClaudioUniv. of Padova  
Univ. of Padova  
Univ. of Padova  
Univ. of Padova

12:00-12:15

***Identification of IVGTT Minimal Glucose Model by Nonlinear Mixed-Effects Approaches***, pp. 5049-5052Denti, Paolo  
Bertoldo, Alessandra  
Vicini, Paolo  
Cobelli, ClaudioUniv. of Padova  
Univ. of Padova  
Univ. of Washington  
Univ. of Padova**SaBP8**

Westside Ballroom South

**Diagnostic Instrumentation and Physiological Measurements 3 (Poster Session)**

10:45-11:00

***Hypacusis Detector for Evaluation of Scholars in Field***, pp. 5053-5055Moreno, José Antonio  
Hernández, Pablo\_Rogelio  
Cardiel, Eladio  
Pérez, Santiago\_Jesus  
Martínez, Mario AlbertoCINVESTAV-IPN  
CINVESTAV-IPN  
CINVESTAV-IPN  
CECADET-UNAM  
CINVESTAV-IPN

11:00-11:15

***Impedance Analyzer for in Vivo Electroporation Studies***, pp. 5056-5059

Ivorra, Antoni  
Rubinsky, Boris

Univ. of California at Berkeley  
Univ. of California at Berkeley

11:15-11:30

***RTD Fluxgate Performance for Application in Magnetic Label-Based Bioassay: Preliminary Results***, pp. 5060-5063

Baglio, Salvatore  
Andñ, Bruno  
Ascia, Alberto  
Bulsara, Adi  
In, Visarath  
Trigona, Carlo

Univ. of Catania  
DIEES - Univ. of Catania  
DIEES - Univ. of Catania  
SPAWAR  
SPAWAR  
DIEES - Univ. of Catania

11:30-11:45

***Fully-Integrated Heart Rate Variability Monitoring System with an Efficient Memory***, pp. 5064-5067

Wang, Xiaoyue  
Chen, Mingqi  
Macchiarulo, Luca  
Boric-Lubecke, Olga

Univ. of Hawaii at Manoa  
Univ. of Hawaii Manoa  
Univ. of Hawaii at Manoa  
Univ. of Hawaii at Manoa

11:45-12:00

***Tendon Reflexes Elicited Using a Computer Controlled Linear Motor Tendon Hammer***, pp. 5068-5071

Archambeault, Mark  
de Bruin, Hubert  
McComas, Alan  
Fu, Winnie

McMaster Univ.  
McMaster Univ.  
McMaster Univ.  
Univ. of British Columbia

12:00-12:15

***Simulation of Laser Ultrasonic Surface Wave Dispersion in a Multilayered Skin Model***, pp. 5072-5075

L'Etang, Adele J  
Huang, Zhihong  
Yang, Di

Univ. of Dundee  
Univ. of Dundee  
Univ. of Dundee

12:00-12:15

***Measurements of Ocular Properties in Response to Intraocular Pressure Changes Using an Ultrasonic System***, pp. 5076-5079

He, Xiaoyin  
Liu, Jun

The Ohio State Univ.  
The Ohio State Univ.

12:00-12:15

***Preliminary Study of Skeletal Muscles with Multi-Signals During Isometric Contraction***, pp. 5080-5083

Shi, Jun  
Zheng, Yongping  
Yan, Zhuangzhi  
Huang, Qinghua

Shanghai Univ.  
The Hong Kong Pol. Univ.  
Shanghai Univ.  
The Hong Kong Pol. Univ.

12:00-12:15

***A Simple Model to Measure Breath by Breath the VO<sub>2</sub> and VCO<sub>2</sub> in the Indirect Calorimetry Technique***, pp. 5084-5087

Cadena, Miguel  
Infante, Oscar

Univ. Autonoma Metropolitana  
Inst. Nacional de Cardiologia Dr. Ignacio Chavez

12:00-12:15

***Cuffless Estimation of Systolic Blood Pressure for Short Effort Bicycle Tests: The Prominent Role of the Pre-Ejection Period***, pp. 5088-5092

Muehlsteff, Jens  
Aubert, Xavier  
Schuett, Marion

Philips  
Philips Res. Lab. Aachen  
Res.

12:00-12:15

***Non-Restrictive Heart Rate Monitoring Using an Acceleration Sensor***, pp. 5093-5096

Okada, Shima

Osaka Univ. Graduate School of Medicine, Div. Sciences

Fujiwara, Yoshihisa

SANYO Electric Co., Ltd.

Yasuda, Masashi

SANYO Electric Co., Ltd.

OHNO, Yuko

Osaka Univ. Graduate School of Medicine

Makikawa, Masaaki

Ritsumeikan Univ.

**SaBP9**

Westside Ballroom South

**Diagnostic Instrumentation and Physiological Measurements 4 (Poster Session)**

10:45-11:00

***Enhancing the Focusing Properties of an Ellipsoidal Beamformer Based Imaging System:***

***A Simulation Study***, pp. 5097-5100

Trichopoulos, Georgios

National Tech. Univ. of Athens

Karanasiou, Irene

National Tech. Univ. of Athens, Inst. of Communications and Comp

Uzunoglu, Nikolaos

National Tech. Univ. of Athens

11:00-11:15

***Simulation of Exercise-Dependent Difference in Metabolism with a Mathematical Model for Analyses of Measurements Using Near-Infrared Spectroscopy***, pp. 5101-5104

Kek, Khai Jun

Hokkaido Univ.

Miyakawa, Takahiro

Hokkaido Univ.

Yoneyama, Satoko

Hokkaido Univ.

Kudo, Nobuki

Hokkaido Univ.

Yamamoto, Katsuyuki

Hokkaido Univ.

11:15-11:30

***A True to Life Simulation of Electrosurgery***, pp. 5105-5108

Shambroom, John R.

Shambroom Associates, LLC

11:30-11:45

***Detecting Exercise Induced Stress Using the Photoplethysmogram***, pp. 5109-5112

Linder, Stephen Paul

Dartmouth Coll.

Wendelken, Suzanne

Dartmouth Coll.

Clayman, Jeffrey

DHMC

11:45-12:00

***Heart Rate Detection from Plantar Bioimpedance Measurements***, pp. 5113-5116

González Landaeta, Rafael

Castelldefels School of Tech. Tech. Univ. of Catalonia

Casas, Oscar

Castelldefels School of Tech. Tech. Univ. of Catalonia

Pallás-Areny, Ramon

Castelldefels School of Tech. Tech. Univ. of Catalonia

12:00-12:15

***Continuous Blood Pressure Monitoring Using ECG and Finger Photoplethysmogram***, pp. 5117-5120

Chua, Chern Pin

Univ. Coll. Dublin

Heneghan, Conor

Univ. Coll. Dublin

12:00-12:15

***Current Source for Multifrequency Broadband Electrical Bioimpedance Spectroscopy Systems.***

***a Novel Approach***, pp. 5121-5125

Seoane, Fernando

Univ. Coll. of Borís

Bragos, Ramon

Tech. Univ. of Catalonia (UPC)

Lindecrantz, Kaj

Univ. Coll. of Borís

12:00-12:15

***Continuous Measurement of Calf Resistivity in Hemodialysis Patients Using Bioimpedance Analysis***, pp. 5126-5128

Zhu, Fansan

Renal Res. Inst.

Leonard, Edward F.

Columbia Univ.

Carter, Mary

Renal Res. Inst.

levin, Nathan W.

Renal Res. Inst.



12:00-12:15

***Hemodynamic Responses During Simulated Automobile Driving in a Monotonous Situation***, pp. 5129-5132

Yamakoshi, Takehiro Kanazawa Univ.  
Yamakoshi, Ken-ichi Kanazawa Univ.  
Tanaka, Shinobu Kanazawa Univ.  
Nogawa, Masamichi Kanazawa Univ.  
Sawada, Yukihiro Sapporo Medical Univ.  
Rolfe, Peter Oxford BioHorizons Ltd

12:00-12:15

***Effects of Physiological Parameters on the Electrical Properties of Blood Bank Stored***

***Erythrocyte Suspensions***, pp. 5133-5136

SEZDI, MANA Bogaziçi Univ. Istanbul, Turkey  
Ulgen, Yekta Bogazici Univ.

12:00-12:15

***Complete Scanpaths Analysis Toolbox***, pp. 5137-5140

Augustyniak, Piotr AGH Univ. of Science and Tech.  
Mikrut, Zbigniew AGH Univ. of Science and Tech.

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**SaBP10**

Westside Ballroom South

**Healthcare Information Management (Poster Session)**

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10:45-11:00

***Archetype-Based Semantic Integration and Standardization of Clinical Data***, pp. 5141-5144

Moner, David Tech. Univ. of Valencia  
Maldonado, José Alberto Tech. Univ. of Valencia  
Bosca, Diego Tech. Univ. of Valencia  
Fernández-Breis, Jesualdo Tomás Univ. de Murcia  
Angulo, Carlos Tech. Univ. of Valencia  
Crespo, Pere Tech. Univ. of Valencia  
Vivancos Vicente, Pedro Jose Univ. OF MURCIA  
Robles, Montserrat Tech. Univ. of Valencia

11:00-11:15

***The Effect of Age on Web-Safe Color Visibility for a White Background***, pp. 5145-5148

Saito, Daisuke Tokyo Denki Univ.  
Saito, Keiichi Tokyo Denki Univ.  
Notomi, Kazuhiro Kanagawa Inst. of Tech.  
Saito, Masao Tokyo Denki Univ.

11:15-11:30

***Application of Knowledge Management and the Intelligence Continuum for Medical Emergencies and***

***Disaster Scenarios***, pp. 5149-5152

Wickramasinghe, Nilmini Stuart School of Business, Illinois Inst. of Tech.  
Bali, Rajeev Kumar Coventry Univ.  
Naguib, Raouf Coventry Univ.

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**SaBP11**

Westside Ballroom South

**Models in Healthcare Informatics (Poster Session)**

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10:45-11:00

***Classification of Cancer Stage from Free-Text Histology Reports***, pp. 5153-5156

McCowan, Iain CSIRO, ICT Centre  
Moore, Darren CSIRO, ICT Centre  
Fry, Mary-Jane Queensland Health

11:00-11:15

***Synthesizing Multi-View Video Frames for Coding Patient Monitoring Video***, pp. 5157-5160

Peng, Renbin

Sclabassi, Robert

Liu, Qiang

Justin, Gusphyl

Sun, Mingui

Univ. of Pittsburgh

Univ. of Pittsburgh

Univ. of Pittsburgh

Univ. of Pittsburgh

Univ. of Pittsburgh

11:15-11:30

***Development of the Re-Entrant Type Resonant Cavity Applicator for Brain Tumor Hyperthermia: Experimental Heating Results***, pp. 5161-5164

Yabuhara, Tadao

Kato, Kazuo

Meiji Univ.

Meiji Univ.

11:30-11:45

***The Application of Computerized WCST and Long-Term Evoked Potentials for Schizophrenia Analysis***, pp. 5165-5168

Huang, Min-Wei

Lo, Pei-Yu

Chen, Chien Hung

Chen, Cheng-Yu

Cheng, Kuo-Sheng

Inst. of Biomedical Engineering, National Cheng Kung University, Ta  
Veterans General Hospital-Kaohsiung, National Cheng Kung University

National Cheng Kung Univ.

National Cheng Kung Univ.

National Cheng Kung Univ.

11:45-12:00

***Equilibrium-Based Bipolar Neurological Modeling***, pp. 5169-5172

Zhang, Wen-Ran

Pandurangi, Anand

Peace, Karl

Georgia Southern Univ.

Virginia Commonwealth Univ.

Georgia Southern Univ.

12:00-12:15

***Optimizing Fuzzy Clinical Decision Support Rules Using Genetic Algorithms***, pp. 5173-5176

Krajnak, Michael

Xue, Joel

GE Healthcare Information Tech.

GE Healthcare

12:00-12:15

***Model Predictive Control with Reinforcement Learning for Drug Delivery in Renal Anemia Management***, pp. 5177-5180

Gaweda, Adam

Muezzinoglu, Mehmet

Aronoff, George

Jacobs, Alfred

Brier, Michael

Univ. of Louisville

Univ. of Louisville

Univ. of Louisville

Univ. of Louisville

Univ. of Louisville

12:00-12:15

***Development of Voice Navigation System for the Visually Impaired by Using IC Tags***, pp. 5181-5184

NORHIKO, TAKATORI

KENGO, NOJIMA

MASASHI, MATSUMOTO

Magatani, Kazushige

Yanashima, Kenji

Tokai Univ.

Tokai Univ.

Tokai Univ.

Tokai Univ.

National Rehabilitation Center for the Disabled

**SaBP12**

Westside Ballroom South

**Emerging Technologies for Healthcare Delivery (Poster Session)**

10:45-11:00

***Use of Hand Held Devices in a Western Australian Health Sector***, pp. 5185-5187

Patel, Keyurkumar

Gururajan, Raj

Box Hill Inst.

Univ. of Southern Queensland

11:00-11:15

***A Hybrid Mobile-Based Patient Location Tracking System for Personal Healthcare Applications***, pp. 5188-5191

Chew, Shih Han  
Chong, Peiyi Adele  
Gunawan, Erry  
Goh, Keng Wee  
Kim, Yongmin  
Soh, Cheong Boon

Nanyang Tech. Univ.  
Nanyang Tech. Univ.  
Nanyang Tech. Univ.  
Nanyang Tech. Univ.  
Univ. of Washington  
Nanyang Tech. Univ.

11:15-11:30

***A Wearable Context Aware System for Ubiquitous Healthcare***, pp. 5192-5195

Kang, Dong-Oh  
Lee, Hyung-Jik  
Ko, Eun-Jung  
Kang, Kyuchang  
Lee, Jeunwoo

Electronics and Telecommunications Res. Inst.  
Electronics and Telecommunications Res. Inst.  
Electronics and Telecommunications Res. Inst.  
Electronics and Telecommunications Res. Inst.  
Electronics and Telecommunications Res. Inst.

11:30-11:45

***Use of Infrared Sensors for Estimation of Energy Expenditure by Elderly People Living Alone at Home***, pp. 5196-5199

Kaushik, Alka  
Celler, Branko George

Univ. of New South Wales  
Univ. of New South Wales

11:45-12:00

***Continuous Home Care Monitoring Services through INTERLIFE***, pp. 5200-5203

MAGLAVERA, STAVROULA  
PRENTZA, ANDRIANA  
MAGLAVERAS, NIKOLAOS  
Lekka, Irini  
Sakka, Eleni  
Leondaridis, Elefterios

Netsmart S.A.  
Inst. of Communication and Computer Systems  
Aristotle Univ. of Thessaloniki  
Medical School, Aristotle Univ. of Thessaloniki  
Inst. of Communication and Computer Systems, NTUA  
NETSMART S.A.

12:00-12:15

***Ultrasonometric Profiling of Incidence and Risk of Osteoporosis in Rural Women***, pp. 5204-5205

Gueldner, Sarah  
Britton, Geraldine R.  
Pierce, Carolyn  
Madhavan, Guruprasad  
Stucke, Sheri  
Grabo, Theresa  
Lombardi, Bernadette  
Srnska-Debnar, Frances

SUNY  
Binghamton Univ. SUNY  
State Univ. of New York  
State Univ. of New York  
UNLV  
SUNY  
SUNY  
SUNY

12:00-12:15

***Improving the Detection of Stage I Pressure Ulcers by Enhancing Digital Color Images***, pp. 5206-5209

Rajendran, Prabhu Jude  
Leachtenauer, Jon  
Kell, Steve  
Turner, Beverly  
Newcomer, Chris  
Lyder, Courtney  
Alwan, Majd

Univ. of Virginia  
Univ. of Virginia Volunteer Services  
Univ. of Virginia  
Univ. of Virginia  
Univ. of Virginia  
Univ. of Virginia  
Univ. of Virginia

**Telemedicine, E-Medicine, and Home-Based Healthcare (Poster Session)**

10:45-11:00

***Extending the Use of DRGs to Estimate Mean Home-Care Cost by Employing an Adapted ASTM******E2369-05 Continuity of Care Record***, pp. 5210-5213

Spyropoulos, Vasileios

Tech. Education Inst. of Athens

Botsivaly, Maria

Tech. Educational Inst. of Athens

Tzavaras, Aris

Tech. Educational Inst. of Athens

Koutsourakis, Konstantinos

Tech. Educational Inst. of Athens

11:00-11:15

***Interoperability of a Mobile Health Care Solution with Electronic Healthcare******Record Systems***, pp. 5214-5217

De Toledo, Paula

Univ. Pol. de Madrid

Lalinde, William

Motorola

Del Pozo, Francisco

Univ. Pol. de Madrid

Thurber, Douglas

Motorola

Jiménez-Fernández, Silvia

Tech. Univ. of Madrid

11:15-11:30

***Initial Experiences with a Telemedicine Framework for Remote Pacemaker Follow-Up***, pp. 5218-5221

Kollmann, Alexander

ARC Seibersdorf Res. GmbH

Hayn, Dieter

ARC Seibersdorf Res. GmbH

García Moros, José

Aragon Inst. for Engineering Res. (I3A), Univ. Zaragoza.

Kastner, Peter

ARC Seibersdorf Res. GmbH

Rotman, Brigitte

Medical Univ. Graz

Tscheliessnigg, Karlheinz

Medical Univ. Graz

Schreier, Guenter

ARC Seibersdorf Res. GmbH

11:30-11:45

***Application Parameters Optimization to Guarantee QoS in E-Health Services***, pp. 5222-5225

Martínez Ruiz, Ignacio

Aragon Inst. for Engineering Res. (I3A), Univ. Zaragoza.

García Moros, José

Aragon Inst. for Engineering Res. (I3A), Univ. of Zaragoza.

Viruete Navarro, Eduardo Antonio

Aragon Inst. of Engineering Res. (I3A), Univ. Zaragoza.

Fernández Navajas, Julián

Aragon Inst. for Engineering Res. (I3A), Univ. of Zaragoza.

11:45-12:00

***Fetal Breathing Transmission in Phonocardiographic Monitoring Telemedicine Systems***, pp. 5226-5229

Horvath, Csaba

Budapest Univ. of Tech. and Ec.

Kovacs, Ferenc

Pazmany Peter Catholic Univ.

Torok, Miklos

OGYIK State Medical Centre

Hosszu, Gabor

Budapest Univ. of Tech. and Ec.

12:00-12:15

***A System for Prevention, Care and Rehabilitation of Subject with Cardiovascular Risk: The Signal******Processing Algorithm Library***, pp. 5230-5233

Braga, Francesca

Pol. di Milano

Bonacina, Stefano

Pol. di Milano

Signorini, Maria G.

Pol. di Milano

12:00-12:15

***SIMILITUDE: Symbolic Indexing of Medical Images for Learning by Internet and Teamwork in Upper******Digestive Endoscopy\****

Le Guillou, Clara

Univ. Bretagne Occidentale

Cholet, Franck

Univ. Hospital (CHU)

Solaiman, Basel

GET-ENST Bretagne

Logan, Judith

Oregon Health &amp; Science Univ. (OHSU)

Cauvin, Jean-Michel

Univ. Hospital (CHU)

12:00-12:15

***Adaptive Transmit Diversity with Orthogonal Space-Time Block Coding for Telemedicine Application\****

Mahmoud, Seedahmed	RMIT Univ.
Fang, Qiang	RMIT Univ.
Hussain, Zahir	RMIT Univ.
Cosic, Irena	RMIT Univ.

12:00-12:15

***Performance Evaluation of Rural E-Health Scenarios: Users and QoS Management***, pp. 5234-5237

Martínez Ruiz, Ignacio	Aragon Inst. for Engineering Res. (I3A), Univ. Zaragoza.
García Moros, José	Aragon Inst. for Engineering Res. (I3A), Univ. of Zaragoza.
Viruete Navarro, Eduardo Antonio	Aragon Inst. of Engineering Res. (I3A), Univ. Zaragoza.
Fernández Navajas, Julián	Aragon Inst. for Engineering Res. (I3A), Univ. of Zaragoza.

12:00-12:15

***Wavelet Compression of Multichannel ECG Data by Enhanced Set Partitioning in Hierarchical***

***Trees Algorithm***, pp. 5238-5243

Sharifahmadian, Ershad	Shahed Univ.
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12:00-12:15

***A Portable ECG Monitoring Device with Bluetooth and Holter Capabilities for***

***Telemedicine Applications***, pp. 5244-5247

Lucani, Daniel Enrique	Univ. Simon Bolivar
Cataldo, Giancarlo	Univ. Simon Bolivar
Cruz, Julio	Univ. Simon Bolivar
Sara Wong, Castañeda	Univ. Simon Bolivar
Villegas, Guillermo	Univ. Simon Bolivar

12:00-12:15

***Mobile Consultant: Combining Total Mobility with Constant Access***, pp. 5248-5251

Banitsas, Konstantinos	Brunel Univ.
Georgiadis, Pantelis	Tech. Educational Inst. of Athens
Tachakra, Sapal	Central Middlesex Hospital
Cavouras, Dionysios	Tech. Educational Inst. of Athens

12:00-12:15

***Development of a Telemedicine Model for Emerging Countries: A Case Study on Pediatric***

***Oncology in Brazil***, pp. 5252-5256

Hira, Adilson Yuuji	Escola Pol. da Univ. de São Paulo
Nebel de Mello, André	Faculdade de Medicina da Univ. de São Paulo
Faria, Regis Rossi Alves	Escola Pol. da Universidade de São Paulo
Odone Filho, Vicente	Faculdade de Medicina da Univ. de São Paulo
Lopes, Roseli de Deus	Escola Pol. da Univ. de São Paulo
Zuffo, Marcelo Knörich	Escola Pol. da Univ. de São Paulo

12:00-12:15

***Characterization of Passive Infrared Sensors for Monitoring Occupancy Pattern***, pp. 5257-5260

Kaushik, Alka	Univ. of New South Wales
Celler, Branko George	Univ. of New South Wales

12:00-12:15

***Image Processing for a Tactile/Vision Substitution System Using Digital CNN***, pp. 5261-5264

Lin, Chien-Nan	National Chung Cheng Univ.
Yu, Sung-Nien	National Chung Cheng Univ.
Hu, Jin-Cheng	National Chung Cheng Univ.

12:00-12:15

***Effective Method for Quantifying Respiratory Instability During Ambulatory Recordings As a Subsequent Marker of Anxiety\****

Myers, Lance Jonathan	VivoMetrics, Inc.
Derchak, Phillip Alexander	VivoMetrics Inc

**SaC01**

Marquis AB

**Principal Component Analysis, Independent Components Analysis I (Oral Session)**

14:00-14:15

***A Fully Automatic Method for Ocular Artifact Suppression from EEG Data Using Wavelet Transform and Independent Component Analysis***, pp. 5265-5268Ghandeharioun, Hosna  
Erfanian, AbbasIran Univ. of Science and Tech.  
Iran Univ. of science and Tech.

14:15-14:30

***Real-Time Ocular Artifacts Suppression from EEG Signals Using an Unsupervised Adaptive Blind Source Separation***, pp. 5269-5272Shayegh Boroujeny, Farzaneh  
Erfanian, AbbasIran Univ. of Science and Tech. (IUST)  
Iran Univ. of science and Tech.

14:30-14:45

***Blinking Artifact Removal in Cognitive EEG Data Using ICA***, pp. 5273-5276Li, Ruijiang  
Principe, JoseUniv. of Florida  
Univ. of Florida

14:45-15:00

***Single Trial Method for Brain-Computer Interface***, pp. 5277-5281Funase, Arao  
Yagi, Tohru  
Barros, Allan  
Cichocki, Andrzej  
TAKUMI, IchiNaogya Inst. of Tech.  
RIKEN  
Federal Univ. of the Maranhao  
BSI RIKEN  
Naogya Inst. of Tech.

15:00-15:15

***Rejection of Artifact Sources in Magnetoencephalogram Background Activity Using Independent Component Analysis***, pp. 5282-5285Escudero, Javier  
Hornero, Roberto  
Abásolo, Daniel  
Poza, Jesús  
Fernandez, Alberto  
López, MiguelUniv. of Valladolid  
Univ. of Valladolid  
Univ. of Valladolid  
Univ. of Valladolid  
Univ. Complutense de Madrid  
Univ. of Valladolid

15:15-15:30

***Extracting the Spike Process from the EEG by Spatially Constrained ICA***, pp. 5286-5289Phlypo, Ronald  
Van Hese, Peter  
Hallez, Hans J.  
Van de Walle, Rik  
Lemahieu, Ignace  
Boon, Paul  
D'Asseler, YvesGhent Univ.  
Ghent Univ.  
Ghent Univ.  
Ghent Univ.  
Ghent Univ.  
Univ. Hospital Ghent, Lab. for Clinical and Experimental Neurolo  
Ghent Univ.**SaC02**

Marquis C

**3D Image Modeling and Registration (Oral Session)**

14:00-14:15

***A Finite Element Model of the Human Thorax: Prediction of Respiratory Motion\****Kyriakou, Elizabeth  
McKenzie, David  
Suchowerska, Natalka  
Fulton, RogerUniv. of Sydney, Australia  
Univ. of Sydney  
Univ. of Sydney  
Univ. of Sydney

14:15-14:30

**3D Modeling of Patient-Specific Geometries of Portal Veins Using MR Images**, pp. 5290-5293

Yang, Yan Georgia Inst. of Tech.  
George, Stephanie Georgia Inst. of Tech.  
Martin, Diego Emory Univ.  
Tannenbaum, Allen Georgia Institute of Tech.  
Giddens, Don Georgia Inst. of Tech.

14:30-14:45

**Knowledge-Driven 3-D Extraction of the Masseter from MR Data**, pp. 5294-5297

Ng, Hsiao Piau National Univ. of Singapore / Agency for Science, Tech. and Res.  
Ong, Sim Heng National Univ. of Singapore  
Foong, Kelvin Weng Chiong National Univ. of Singapore  
Goh, Poh Sun National Univ. of Singapore  
Nowinski, L. Wieslaw Agency for Science, Tech. & Res.

14:45-15:00

**Compensating for Camera Translation in Video Eye Movement Recordings by Tracking a Landmark Selected Automatically by a Genetic Algorithm**, pp. 5298-5301

Karmali, Faisal Johns Hopkins Univ.  
Shelhamer, Mark Johns Hopkins Univ.

15:00-15:15

**Robust High-Speed Binocular 3D Eye Movement Tracking System Using a Two-Radii Eye Model**, pp. 5302-5306

Zhu, Danjie Brooklyn Coll. of the City Univ. of New York  
Kunin, Mikhail Brooklyn Coll. CUNY  
Raphan, Theodore Brooklyn Coll. of the City Univ. of New York

**SaC03**

SoHo-Herald

**Novel Technologies for Computational Biology and Bioinformatics, 1 (Oral Session)**

14:00-14:15

**Computer Modeling Provides a New Tool for Clinically Diagnosing Melanoma Spread through the Lymphatics**, pp. 5307-5310

Reynolds, Hayley Maria Univ. of Auckland  
Dunbar, Rod Univ. of Auckland  
Uren, Roger Univ. of Sydney  
Smith, Nicolas Univ. of Auckland

14:15-14:30

**A Computational Model of Cardiac Electromechanics**, pp. 5311-5314

Nickerson, David Phillip National Univ. of Singapore  
Niederer, Steven Alexander The Univ. of Auckland  
Stevens, Carey The Univ. of Auckland  
Nash, Martyn The Univ. of Auckland  
Hunter, Peter The Univ. of Auckland

14:30-14:45

**Finding Intervention Points in the Pathogenesis of Dengue Viral Infection**, pp. 5315-5321

Tay, Joc Cing Nanyang Tech. Univ.  
Tan, Philip Nanyang Tech. Univ.

14:45-15:00

**A Meta-Predictor for MHC Class II Binding Peptides Based on Naïve Bayesian Approach**, pp. 5322-5325

Huang, Lei Univ. of Illinois at Chicago  
Karpenko, Oleksiy Univ. of Illinois at Chicago  
Murugan, Naveen Univ. of Illinois at Chicago  
Dai, Yang Univ. of Illinois at Chicago

15:00-15:15

***A Knowledge Driven Regression Model for Gene Expression and Microarray Analysis***, pp. 5326-5329

Jin, Rong  
Si, Luo  
Srivastava, Shireesh  
Li, Zheng  
Chan, Christina

Michigan State Univ.  
Purdue Univ.  
Michigan State Univ.  
Michigan State Univ.  
Michigan State Univ.

15:15-15:30

***Protein-Protein Docking with Reduced Potentials by Exploiting Multi-Dimensional Energy Funnels***, pp. 5330-5333

Paschalidis, Ioannis  
Shen, Yang  
Vakili, Pirooz  
Vajda, Sandor

Boston Univ.  
Boston Univ.  
Boston Univ.  
Boston Univ.

**SaC04**

Ziegfeld

**Applications of Neural Networks to Biosignal Analysis III (Oral Session)**

14:00-14:15

***Classifier Fusion Approaches for Diagnostic Cancer Models***, pp. 5334-5337

Dimou, Ioannis  
Manikis, Georgios  
Zervakis, Michalis

Tech. Univ. of Crete  
Tech. Univ. of Crete  
Tech. Univ. of Crete, Greece

14:15-14:30

***Classification of Cervical Cancer Cells Using FTIR Data***, pp. 5338-5341

Njoroge, Erick  
Alty, Stephen  
Gani, Mahbub  
Alkatib, Maha

King's Coll. London  
King's Coll. London  
King's Coll. London  
St George's Hospital

14:30-14:45

***Classifying Ovarian Tumors Using Bayesian Multi-Layer Perceptrons and Automatic Relevance***

***Determination: A Multi-Center Study***, pp. 5342-5345

Van Calster, Ben  
Timmerman, Dirk  
Nabney, Ian T.  
Valentin, Lil  
Van Holsbeke, Caroline  
Van Huffel, Sabine

Katholieke Univ. Leuven  
K.U.Leuven  
Aston Univ.  
Univ. Hospital Malmo  
Univ. Hospitals Leuven  
Katholieke Univ. Leuven

14:45-15:00

***Fuzzy Similarity Index for Discrimination of EEG Signals***, pp. 5346-5349

Ubeyli, Elif Derya

TOBB Ec. and Tech. Univ.

15:00-15:15

***Stacked Generalization for Early Diagnosis of Alzheimer's Disease***, pp. 5350-5353

Gandhi, Hardik  
Green, Deborah  
Kounios, John  
Clark, Christopher  
Polikar, Robi

Rowan Univ.  
Drexel Univ.  
Drexel Univ.  
Univ. of Pennsylvania  
Rowan Univ.

15:15-15:30

***Training Probabilistic VLSI Models On-Chip to Recognise Biomedical Signals under Hardware Nonidealities***, pp. 5354-5357

Jiang, Pei-Chi  
Chen, Hsin

National Tsing-Hua Univ.  
National Tsing-Hua Univ.



**Sensors and Systems for E-Health, M-Health, and P-Health 1 (Oral Session)**

14:00-14:15

***Wearable Health Systems: From Smart Technologies to Real Applications\****Lymberis, Andreas  
Gatzoulis, LoukianosEuropean Commission  
European Commission

14:15-14:30

***Textile Piezoresistive Sensors for Biomechanical Variables Monitoring***, pp. 5358-5361Pacelli, Maria  
Caldani, Laura  
Paradiso, RitaSmartex s.r.l.  
Univ. of Pisa  
Milior SpA

14:30-14:45

***Sensors to Detect the Activities of Daily Living***, pp. 5362-5365Logan, Beth  
Healey, JenniferIntel Digital Health  
Intel Digital Health

14:45-15:00

***A Prototype Sourceless Kinematic-Feedback Based Video Game for Movement Based Exercise.***, pp. 5366-5369Foody, John  
Kelly, Daniel  
Kumar, Damini  
Fitzgerald, Diarmaid  
Caulfield, Brian  
Ward, Tomas  
Markham, CharlesNational Univ. of Ireland Maynooth  
National Univ. Maynooth.  
Univ. Coll. Dublin  
UCD  
UCD  
NUIM  
NUIM

15:00-15:15

***Marker-Based Monitoring of Seated Spinal Posture Using a Calibrated Single-Variable Threshold Model***, pp. 5370-5373Walsh, Pauline  
Dunne, Lucy  
caulfield, brian  
smyth, barryUniv. Coll. Dublin  
Univ. Coll. Dublin  
UCD  
Univ. Coll. dublin

15:15-15:30

***Smart Garment to Help Children Improve Posture***, pp. 5374-5377Lou, Edmond H.  
Raso, James  
Hill, Doug  
Moreau, Marc  
Mahood, JamesGlenrose Rehabilitation Hospital  
Glenrose Rehabilitation Hospital  
Glenrose Rehabilitation Hospital  
Univ. of Alberta  
Univ. of Alberta**Ventricular Assist Devices (Oral Session)**

14:00-14:15

***Evaluation of Cardiac Function Based on Ventricular Pressure-Volume Relationships During Assistance with a Rotary Blood Pump.***, pp. 5378-5381Ogawa, Daisuke  
Yoshizawa, Makoto  
Tanaka, Akira  
Olegario, Paul S.  
Yambe, Tomoyuki  
Shiraishi, Yasuyuki  
Sekine, KazumitsuTohoku Univ.  
Tohoku Univ.  
Fukushima Univ.  
Tohoku Univ.  
Tohoku Univ.  
Inst. of Development, Aging & Cancer  
Tohoku Univ.

14:15-14:30

***A Discriminant-Analysis-Based Suction Detection System for Rotary Blood Pumps***, pp. 5382-5385

Ferreira, Antonio Univ. of Pittsburgh  
Chen, Shaohui Univ. of Pittsburgh  
Simaan, Marwan Univ. of Pittsburgh  
Boston, J Robert Univ. of Pittsburgh  
Antaki, James Carnegie-Mellon Univ.

14:30-14:45

***Automated Non-Invasive Detection of Pumping States in an Implantable Rotary Blood Pump***, pp. 5386-5389

Karantonis, Dean M Univ. of New South Wales  
Cloherty, Shaun L Univ. of New South Wales  
Mason, David G Ventracor Ltd  
Salamonsen, Robert F Alfred Hospital  
Ayre, Peter J Ventracor Ltd  
Lovell, Nigel H Univ. of New South Wales

14:45-15:00

***OxyRVAD for Total Right Heart and Respiratory Support***, pp. 5390-5391

Wang, Dongfang The Univ. of Texas Medical Branch

15:00-15:15

***Analysis of Current Density and Specific Absorption Rate in Biological Tissue Surrounding an Air-Core Type of Transcutaneous Transformer for an Artificial Heart***, pp. 5392-5395

Shiba, Kenji Hiroshima Univ.  
Nukaya, Masayuki Hiroshima Univ.  
Tsuji, Toshio Hiroshima Univ.  
Koshiji, Kohji Tokyo Univ. of Science

15:15-15:30

***Structural Performance and Hydrodynamic Resistance of a New Silicone Auricular Cannula Tip***, pp. 5396-5399

Tovar, Francisco Innovamedica S.A. de C.V.  
Escobedo, Carlos Innovamedica S.A. de C.V.  
Rodriguez, Georgina Innovamedica S.A. de C.V.  
Garcia, Julio Innovamedica S.A. de C.V.  
Vilá, Alexandra Innovamedica S.A. de C.V.  
Corona, Farah Univ. Metropolitana  
Sacristan, Emilio Univ. Autónoma Metropolitana

**SaC08**

Juilliard

**Neural Stimulation and Protheses 6 (Oral Session)**

14:00-14:15

***Mechanisms of High-Frequency Electrical Stimulation of the Stomach in Gastroparetic Patients***, pp. 5400-5403

McCallum, Richard W. Univ. of Kansas Medical Center  
Dusing, Reginald Univ. of Kansas Medical Center  
Sarosiek, Irene Univ. of Kansas Medical Center  
Cocjin, Jose Univ. of Kansas Medical Center  
Forster, Jameson Univ. of Kansas Medical Center  
Lin, Zhiyue Univ. of Kansas Medical Center,

14:15-14:30

***Functional Electrical Stimulation: A MatLab Based Tool for Designing Stimulation Patterns***, pp. 5404-5407

Došen, Strahinja Aalborg Univ.  
Popovi\_., Dejan Aalborg Univ.

14:30-14:45

***Ambulation after Incomplete Spinal Cord Injury with Electromyogram-Triggered Functional Electrical Stimulation***, pp. 5408-5411

Dutta, Anirban  
Kobetic, Rudi  
Triolo, Ronald J.

Case Western Res. Univ.  
Louis Stokes Veterans Affairs Medical Center  
Cleveland FES Center

14:45-15:00

***Instability Prediction by Monitoring Center of Pressure During Standing***, pp. 5412-5415

Tortolero Baena, Xavier  
Masani, Kei  
Thrasher, Timothy Adam  
Popovic, Milos R.

Univ. Iberoamericana  
Univ. of Toronto  
Univ. of Toronto  
Univ. of Toronto

15:00-15:15

***Frequency Sensitive Motion Control for a Single Joint Arm Model***, pp. 5416-5419

Park, Hyunjoo  
Durand, Dominique

Case Western Res. Univ.  
Case Western Res. Univ.

15:15-15:30

***Spectral Analysis in Walking Balance by Elderly Subjects***, pp. 5420-5423

TSURUOKA, Yuriko  
Shibasaki, Ryosuke

The Inst. of Statistical Mathematics  
Center for Spatial Information Science, Univ. of Tokyo

**SaC09**

Gramercy-Olmstead

**Healthcare Decision Support Systems II (Oral Session)**

14:00-14:15

***Prototyping Virtual Cancer Therapist(VCT): A Software Engineering Approach***, pp. 5424-5427

Liu, Shaoshan  
Gaudiot, Jean-Luc  
Cristini, Vittorio

Univ. of California Irvine  
Univ. of California Irvine  
Univ. of California Irvine

14:15-14:30

***Understanding Eye Deformation in Non-Contact Tonometry***, pp. 5428-5431

Kempf, Roland  
Kurita, Yuichi  
Iida, Yoshichika  
Kaneko, Makoto  
Mishima, Hiromu  
Tsukamoto, Hidetoshi  
Sugimoto, Eiichiro

Hiroshima Univ.  
Hiroshima Univ.  
Hiroshima Univ.  
Hiroshima Univ.  
Hiroshima Univ.  
Hiroshima Univ.  
Hiroshima Univ.

14:30-14:45

***A Minimal Model for Glycemia Control in Critically Ill Patients***, pp. 5432-5435

Van Herpe, Tom  
Pluymers, Bert  
Espinoza, Marcelo  
Van den Berghe, Greet  
De Moor, Bart

Katholieke Univ. Leuven  
Katholieke Univ. Leuven  
Katholieke Univ. Leuven  
Katholieke Univ. Leuven  
Katholieke Univ. Leuven

14:45-15:00

***Observer Design in Switching Control of Neuromuscular Blockade: Clinical Cases***, pp. 5436-5439

Magalhães, Hugo  
Mendonça, Teresa  
Lemos, João  
Rocha, Paula  
Esteves, Simão  
Gaivão, José

Faculdade de Ciências  
Faculdade de Ciências  
INESC  
Univ. de Aveiro  
Hospital Geral de Santo António  
Faculdade de Ciências

15:00-15:15

***JEDI – an Executive Dashboard and Decision Support System for Lean Global Military Medical Resource and Logistics Management***, pp. 5440-5443

Sloane, Elliot B.  
Rosow, Eric  
Adam, Joe  
Shine, Dave

Villanova Univ.  
Premise Development Corp.  
Premise Development Corp.  
Premise Development Corp.

15:15-15:30

***Integrated Healthcare Resource Planning and Management***, pp. 5444-5446

Poluta, Mladen  
Nunziata, Enrico

Univ. of Cape Town  
Health Tech. Consulting

**SaC14**

Chelsea-Gotham

**Law, Ethics, Policy, Risk and Safety Issues I (Oral Session)**

14:00-14:15

***Legal and Ethical Issues in the Regulation and Development of Engineering Achievements in Medical Technology: A 2006 Perspective\****

Malloy, Allison

Carleton Univ.

14:15-14:30

***Modeling Risk in Distributed Healthcare Information Systems***, pp. 5447-5450

Maglogiannis, Ilias  
ZAFIROPOULOS, ELIAS

Univ. of the Aegean  
Univ. Of The Aegean, Department Of Information And Communication

14:30-14:45

***Virtual Firm As a Role-Playing Tool for Biomedical Education***, pp. 5451-5452

Blagosklonov, Oleg  
Soto-Romero, Georges  
Guyon, Florent  
Butterlin, Nadia

CHU Jean Minjot  
Univ. of Franche-Comte  
Univ. of Franche-Comte  
Univ. of Franche-Comte

14:45-15:00

***Security and Privacy Issues with Health Care Information Technology***, pp. 5453-5458

Meingast, Marci  
Roosta, Tanya  
Sastry, Shankar

Univ. of California, Berkeley  
Univ. of California, Berkeley  
Univ. of California, Berkeley

15:00-15:15

***Clinical Evaluation of Watermarked Medical Images***, pp. 5459-5462

Zain, Jasni M.  
Fauzi, Mohammed  
Aziz, Azian

Univ. Coll. of Engineering & Tech. Malaysia  
International Islamic Univ. of Malaysia  
International Islamic Univ. of Malaysia

15:15-15:30

***An Anatomically Realistic Voxel Model of the Pregnant Woman and Numerical Dosimetry for a Whole-Body Exposure to RF Electromagnetic Fields***, pp. 5463-5467

Nagaoka, Tomoaki  
Togashi, Toshihiro  
Saito, Kazuyuki  
Takahashi, Masaharu  
Ito, Koichi  
Ueda, Takuya  
Osada, Hisao  
Ito, Hisao  
Watanabe, Soichi

National Inst. of Information and Communications Technology  
Chiba Univ.  
Chiba Univ.  
Chiba Univ.  
Chiba Univ.  
Univ. of Tukuba  
Juntendo Univ. Shizuoka Hospital  
Graduate School of Medicine, Chiba Univ.  
National Inst. of Information and Communications Tech.

**Neural Interfacing and Neurorobotics (Oral Session)**

14:00-14:15

***Analysis of Amplitude Modulated Control Features for ECoG Neuroprosthetics***, pp. 5468-5471Sanchez, Justin C.  
Carney, Paul R.  
Principe, Jose C.Univ. of Florida  
Univ. of Florida  
Univ. of Florida

14:15-14:30

***Motor Cortical Encoding of Hand Orientation in a 3-D Reach-To-Grasp Task***, pp. 5472-5475Fan, Jing  
He, Jipingarizona state Univ.  
Arizona State Univ.

14:30-14:45

***Towards Real-Time In-Implant Epileptic Seizure Prediction***, pp. 5476-5479Aziz, Joseph  
Karakiewicz, Rafal  
Genov, Roman  
Bardakjian, Berj Luther  
Derchansky, Miron  
Carlen, Peter L.Univ. of Toronto  
Univ. of Toronto  
Univ. of Toronto  
Univ. of Toronto  
Univ. of Toronto  
Univ. of Toronto

14:45-15:00

***Detecting Controlled Signals in the Human Brain by Near Infrared Spectroscopy***, pp. 5480-5482Kohlenberg, Jennifer  
Chau, TomUniv. of Toronto  
Univ. of Toronto

15:00-15:15

***The Effects of Training Set on Prediction of Elbow Trajectory from Shoulder Trajectory During Reaching to Targets***, pp. 5483-5486

Kaliki, Rahul

Univ. of Southern California

15:15-15:30

***Preparatory Activity in PMd Neurons to Bypass a Virtual Obstacle in the Reaching Path***, pp. 5487-5490Kang, Tao  
He, JipingArizona State Univ.  
Arizona State Univ.**Principal Component Analysis, Independent Component Analysis IV (Oral Session)**

15:45-16:00

***Limitations of Surface EMG Signals of Extrinsic Muscles in Predicting Postures of Human Hand***, pp. 5491-5494Vinjamuri, Ramana  
Mao, Zhi-Hong  
Sclabassi, Robert  
Sun, MinguiUniv. of Pittsburgh  
Univ. of Pittsburgh  
Univ. of Pittsburgh  
Univ. of Pittsburgh

16:00-16:15

***Quantitative Evaluation of Automatic Ocular Removal from Simulated EEG Signals: Regression vs. Second Order Statistics Methods***, pp. 5495-5498Romero, Sergio  
Mañanas, Miquel Angel  
Barbanoj, ManuelTech. Univ. of Catalonia (UPC)  
Tech. Univ. of Catalonia (UPC)  
Farmacología Clínica. Hospital de la Santa Creu i Sant Pau

16:15-16:30

***On Correlation between Single-Trial ERP and GSR Responses: A Principal Component Regression Approach***, pp. 5499-5502

Ranta-aho, Perttu	Univ. of Kuopio
Tarvainen, Mika	Univ. of Kuopio
Georgiadis, Stefanos	Univ. of Kuopio
Niskanen, Juha-Pekka	Univ. of Kuopio
Valkonen-Korhonen, Minna	Univ. of Kuopio
Lehtonen, Johannes	Univ. of Kuopio
Karjalainen, Pasi	Univ. of Kuopio

16:30-16:45

***Feature Selection in Pathology Detection Using Hybrid Multidimensional Analysis***, pp. 5503-5506

Castellanos, Germán	Univ. Nacional de Colombia, sede Manizales (National Univ.)
Delgado Trejos, Edilson	Univ. Nacional de Colombia, sede Manizales (National Univ.)
Daza, Genaro	Univ. Nacional de Colombia, sede Manizales (National Univ.)
Sanchez, Luis	Univ. Nacional de Colombia, sede Manizales (National Univ.)
Suarez, Julio	Univ. Nacional de Colombia, sede Manizales (National Univ.)

16:45-17:00

***Acoustic Speech Analysis for Hypernasality Detection in Children***, pp. 5507-5510

Castellanos, Germán	Univ. Nacional de Colombia, sede Manizales (National Univ.)
Daza, Genaro	Univ. Nacional de Colombia, sede Manizales (National Univ.)
Sanchez, Luis	Univ. Nacional de Colombia, sede Manizales (National Univ.)
Castrillon, Omar	Univ. Nacional de Colombia, sede Manizales (National Univ.)
Suarez, Julio	Univ. Nacional de Colombia, sede Manizales (National Univ.)

17:00-17:15

***Kernel Principal Component Analysis through Time for Voice Disorder Classification***, pp. 5511-5514

Alvarez, Mauricio	Univ. Tecnológica de Pereira
Henao, Ricardo	Univ. Tecnológica de Pereira
Castellanos, Germán	Univ. Nacional de Colombia, sede Manizales
Godino-Llorente, Juan Ignacio	Univ. Pol. de Madrid
Orozco, Alvaro	Univ. Tecnológica de Pereira

**SaD03**

SoHo-Herald

**Regulatory Elements, Gene Expression, and Gene Networks. 1 (Oral Session)**

15:45-16:00

***Biologically Supervised Hierarchical Clustering Algorithms for Gene Expression Data***, pp. 5515-5518

Boratyn, Grzegorz M	Univ. of Louisville
Datta, Susmita	Univ. of Louisville
Datta, Somnath	Univ. of Louisville

16:00-16:15

***Predictive Modeling of Therapy Response in Multiple Sclerosis Using Gene Expression Data***, pp. 5519-5522

Mostafavi, Sara	Queen's Univ.
Baranzini, Sergio	Univ. of California, San Francisco
Oksenberg, Jorge	Univ. of California, San Francisco
Mousavi, Parvin	Queen's Univ.

16:15-16:30

***Sample Scale-Free Gene Regulatory Network Using Gene Ontology***, pp. 5523-5526

Chen, Guanrao	Univ. of Illinois at Chicago
Larsen, Peter	Univ. of Illinois at Chicago
Almasri, Eyad	Univ. of Illinois at Chicago
Dai, Yang	Univ. of Illinois at Chicago

16:30-16:45

***Alignment of Protein Interaction Networks by Integer Quadratic Programming***, pp. 5527-5530

Li, Zhenping

Beijing Wuzi Univ.

Wang, Yong

Osaka Sangyo Univ.

Zhang, Shihua

CAS

Zhang, Xiang-Sun

CAS

Chen, Luonan

Osaka Sangyo Univ.

16:45-17:00

***Overlapping Probabilities of Top Ranking Gene Lists, Hypergeometric Distribution, and Stringency of Gene Selection Criterion***, pp. 5531-5534

Fury, Wen

Regeneron Pharmaceuticals, Inc.

Batliwalla, Franak

Feinstein Inst. for Medical Res. North Shore LIJ Health System

Gregersen, Peter K.

Feinstein Inst. for Medical Res. North Shore LIJ Health System

Li, Wentian

Feinstein Inst. for Medical Res.

17:00-17:15

***Assessing the Information Content of Short Time Series Expression Data***, pp. 5535-5538

Yang, Eric

Rutgers Univ.

Androulakis, Ioannis

Rutgers Univ.

**SaD04**

Ziegfeld

**Nonlinear Brain Signal Processing and Modeling (Oral Session)**

15:45-16:00

***Modeling the Nonlinear Dynamic Interactions of the Lateral and the Medial Perforant Path of the Hippocampal Dentate Gyrus***, pp. 5539-5542

Dimoka, Angelika

Univ. of Southern California

Courellis, Spiros

Univ. of Southern California

Marmarelis, Vasilis

Univ. of Southern California

Berger, Theodore

Univ. of Southern California

16:00-16:15

***Interaction of Short-Term Neuronal Plasticity and Synaptic Plasticity Revealed by Nonlinear Systems Analysis in Dentate Granule Cells***, pp. 5543-5546

Xie, Xiaping

Univ. of Southern California

Song, Dong

Univ. of Southern California

Wang, Zhuo

Univ. of Southern California

Marmarelis, Vasilis

Univ. of Southern California

Berger, Theodore

Univ. of Southern California

16:15-16:30

***Oscillation and Its Inhibition in a Neural Oscillator Model for Tinnitus***, pp. 5547-5550

Fujimoto, Kenichi

The Univ. of Tokushima

Nagashino, Hirofumi

The Univ. of Tokushima

Kinouchi, Yohsuke

The Univ. of Tokushima

Danesh, Ali A.

Florida Atlantic Univ.

Pandya, Abhijit S.

Florida Atlantic Univ.

16:30-16:45

***A Model Selection Approach for Robust Spatio-Temporal Analysis of Dynamics in 4D Fluorescence Videomicroscopy***, pp. 5551-5554

BECHAR, Ikhlef

Univ. of Paris 5 & INRA of Jouy-en-Josas

Trubuil, Alain

INRA of Jouy-en-Josas

16:45-17:00

***Identification of Spike Sources Using Proximity Analysis through Hidden Markov Models***, pp. 5555-5558

Orozco, Alvaro

Univ. Tecnológica de Pereira

Alvarez, Mauricio

Univ. Tecnológica de Pereira

Guijarro, Enrique

Pol. Univ. of Valencia

Castellanos, Germán

Univ. Nacional de Colombia, sede Manizales

17:00-17:15

***Neural Mass Model of Human Multisensory Integration***, pp. 5559-5562

Moran, Rosalyn  
Reilly, Richard

Univ. Coll. Dublin  
Univ. Coll. Dublin

**SaD05**

Duffy-Columbia

**Monitoring Sensors and Systems II (Oral Session)**

15:45-16:00

***New Methodology for Preventing Pressure Ulcers Using Actimetry and Autonomous Nervous System Recording***, pp. 5563-5566

Meffre, Richard  
GEHIN, Claudine  
SCHMITT, Michael  
De Oliveira, Fabrice  
DITTMAR, Andre

INSA Lyon  
INSA Lyon  
INSA Lyon  
INSA Lyon  
INSA Lyon

16:00-16:15

***Head Fixed Field Coil System for Measuring Eye Movements in Freely Moving Monkeys***, pp. 5567-5570

Ogorodnikov, Dmitri  
Tarasenko, Sergey  
Yakushin, Sergei  
Cohen, Bernard  
Raphan, Theodore

Mount Sinai School of Medicine  
The Mount Sinai Hospital Center  
Mount Sinai School of Medicine  
Mount Sinai School of Medicine  
Brooklyn Coll. of the City Univ. of New York

16:15-16:30

***Midpoint Perturbation Response in Haptically-Guided Movements***, pp. 5571-5574

Fortunov, Daniel  
Hwang, Faustina  
Harwin, William Seymour

Univ. of Reading  
Univ. of Reading  
Univ. of Reading

16:30-16:45

***Can Visual Evoked Potentials Be Used in Biometric Identification?***, pp. 5575-5578

Power, Alan  
Lalor, Edmund  
Reilly, Richard

Univ. Coll. Dublin  
Univ. Coll. Dublin  
Univ. Coll. Dublin

16:45-17:00

***Rapid Prototyping of Pulse Oximeter***, pp. 5579-5582

Jalan, Payal  
Bracio, Boris Romanus  
Rider, Patrick Jason  
Toniolo, Horacio

Univ. of Alaska Fairbanks  
Univ. of Alaska Fairbanks  
Univ. of Alaska Fairbanks  
Univ. of Alaska Fairbanks

17:00-17:15

***A Noncontact Measurement of Saccadic Eye Movement with Two High-Speed Cameras***, pp. 5583-5586

UENO, Akinori  
OTANI, Yuji  
UCHIKAWA, Yoshinori

Tokyo Denki Univ.  
Tokyo Denki Univ.  
Tokyo Denki Univ.



**Pulmonary Mechanics and Dynamics IA (Oral Session)**

15:45-16:00

***Support Vector Machine Classification Applied on Weaning Trials Patients***, pp. 5587-5590

Giraldo, Beatriz  
 Garde, Ainara  
 Arizmendi, Carlos  
 Jané, Raimon  
 Benito, Salvador  
 Diaz, Ivan  
 Ballesteros, D

Tech. Univ. of Catalonia (UPC)  
 Tech. Univ. of Catalonia (UPC)  
 Tech. Univ. of Catalonia (UPC)  
 Univ. Pol. de Catalunya  
 Hospital de la Santa Creu i Sant Pau  
 Hospital de la Santa Creu i Sant Pau  
 Hospital Univ. de Getafe

16:00-16:15

***Analysis of Temporal Pattern of Swallowing Mechanism***, pp. 5591-5594

Aboofazeli, Mohammad  
 Moussavi, Zahra

Univ. of Manitoba  
 Univ. of Manitoba

16:15-16:30

***Can Asthma in Children Be Detected by the Estimated Parameter Values of the Augmented RIC Model ?***, pp. 5595-5598

Rajagiri, Avinash  
 Diong, Bill  
 Goldman, Michael David  
 Nazeran, Homayoun

Texas Christian Univ.  
 Texas Christian Univ.  
 Univ. of California Los Angeles  
 The Univ. of Texas at El Paso

16:30-16:45

***Airflow Velocities in the Airways During Expiration on Different End-Expiratory Lung Volumes: Computational Study***, pp. 5599-5602

Sohn, Kiwon

State Univ. of New York at Stony Brook

16:45-17:00

***Circuit Compliance Compensation in Lung Protective Ventilation***, pp. 5603-5606

Masselli, Grazia Maria Pia  
 Silvestri, Sergio  
 Sciuto, Salvatore Andrea  
 Cappa, Paolo

Univ. Campus Bio-Medico  
 Univ. Campus Bio-medico  
 Univ. "Roma Tre"  
 Univ. La Sapienza

17:00-17:15

***Automated Extraction of Swallowing Sounds Using a Wavelet-Based Filter***, pp. 5607-5610

Aboofazeli, Mohammad  
 Moussavi, Zahra

Univ. of Manitoba  
 Univ. of Manitoba

**Drug Delivery and Imaging (Oral Session)**

15:45-16:00

***Delivery of Active Collagenase to Skin Using a Lorentz-Force Actuated Needle-Free Injector***, pp. 5611-5616

Hogan, N. Catherine  
 Hemond, Brian  
 Wendell, Dawn  
 Taberner, Andrew  
 Hunter, Ian

Massachusetts Inst. of Tech.  
 Massachusetts Inst. of Tech.  
 Massachusetts Inst. of Tech.  
 Massachusetts Inst. of Tech.  
 Massachusetts Inst. of Tech.

16:00-16:15

***Feasibility Study for Focusing Electric Fields to Mediate in Vitro Drug and Gene Delivery***, pp. 5617-5620

Rey, Jose I.  
 Gilbert, Richard  
 Jaroszeski, Mark

Univ. of South Florida  
 Univ. of South Florida  
 Univ. of South Florida

16:15-16:30

***MEMS Fabricated Chip for an Implantable Drug Delivery Device***, pp. 5621-5624

Sbiaa, Zouhair

MicroCHIPS

16:30-16:45

***Detection Sensitivity of MRI Using Ultra-Small Super Paramagnetic Iron Oxide Nano-Particles (USPIO) in Biological Tissues***, pp. 5625-5626

Oghabian, Mohammad Ali	Tehran Univ. of Medical Sciences
Guiti, Massomeh	Tehran Univ. of Medical Sciences
Haddad, Payman	Tehran Univ. of Medical Sciences
Gharehaghaji, Nahid	Tehran Univ. of Medical Sciences
Riyahi-Alam, Nader	Tehran Univ. of Medical Sciences (TUMS)
Malekpour, M	Tehran Univ. of Medical Sciences
Rafie, Behrouz	Tehran Univ. of Medical Sciences
Saber, Reza	Tehran Univ. of Medical Sciences

16:45-17:00

***Reconstruction of Spatially Resolved Pharmacokinetic Rate Images of Fluorescence Agents in FDOT***, pp. 5627-5630

Alacam, Burak	Rensselaer Pol. Inst.
Yazici, Birsen	RPI
Serdaroglu, Ahmed	RPI
Intes, Xavier	ART
Nioka, Shoko	UPENN
Chance, Britton	UPENN

17:00-17:15

***Magneto-Optical Labeling of Fetal Neural Stem Cells for in Vivo MRI Tracking***, pp. 5631-5634

Flexman, Jennifer A.	Univ. of Washington
Minoshima, Satoshi	Univ. of Washington
Kim, Yongmin	Univ. of Washington
Cross, Donna J.	Univ. of Washington

**SaD08**

Juilliard

**Neural Stimulation and Prosthesis VII (Oral Session)**

15:45-16:00

***Cobotic Architecture for Prosthetics***, pp. 5635-5637

Faulring, Eric L.	Chicago PT, LLC
Colgate, J. Edward	Northwestern Univ.
Peshkin, Michael	Northwestern Univ.

16:00-16:15

***Liquid-Fueled Actuation for an Anthropomorphic Upper Extremity Prosthesis***, pp. 5638-5642

Fite, Kevin	Vanderbilt Univ.
Withrow, Thomas	Vanderbilt Univ.
Wait, Keith	Vanderbilt Univ.
Goldfarb, Michael	Vanderbilt Univ.

16:15-16:30

***Multiday Electrophysiological Recordings from Freely Behaving Primates***, pp. 5643-5646

Gilja, Vikash	Stanford Univ.
Linderman, Michael	Stanford Univ.
Santhanam, Gopal	Stanford Univ.
Afshar, Afsheen	Stanford Univ.
Ryu, Stephen	Stanford Univ.
Meng, Teresa	Stanford Univ.
Shenoy, Krishna	Stanford Univ.

16:30-16:45

***A Model of Glucose Production During a Meal***, pp. 5647-5650

Dalla Man, Chiara  
Toffolo, Gianna  
Basu, Rita  
Rizza, Robert  
Cobelli, Claudio

Univ. of Padova  
Univ. of Padova  
Mayo Clinic  
Mayo Clinic  
Univ. of Padova

**SaD10**

Astor Ballroom

**Students: The Movers and Shakers of EMBS** (Minisymposium)

Organizer: Tran, Winston  
Organizer: Lazareck, Lisa Joanna

Univ. of Southern California  
Univ. of Oxford

15:45-16:00

***Experiences and Lessons Learned from the Formation of a New IEEE EMBS***

***Student Chapter***, pp. 5651-5654

Celebi, Leyla  
Pickel, Lara Michelle  
Sprouse, Mary  
Dyer, Stephen  
Warren, Steve

Kansas State Univ. EMB  
Kansas State Univ.  
Kansas State Univ. EMB  
Kansas State Univ.  
Kansas State Univ.

**SaD14**

Chelsea-Gotham

**Clinical Engineering and Healthcare Information Systems Best Practices II** (Oral Session)

15:45-16:00

***Managing Medical Technology in Australia's Health Care Systems – Planning, Prioritisation and Procurement***, pp. 5655-5658

Brown, Ian  
Smale, Andrew  
Wong, Matthew

Monash Univ. Centre for Biomedical Engineering  
Monash Univ. Centre for Biomedical Engineering  
Monash Univ. Centre for Biomedical Engineering

16:00-16:15

***Evaluation of DR and CR Digital Mammography Systems Based on Phantom and Breast Dosimetry***, pp. 5659-5662

Verdú, Gumersindo  
Ramos, Miguel  
Ferrer, Silvia

Pol. Univ. of Valencia  
Pol. Univ. of Valencia  
Pol. Univ. of Valencia

16:15-16:30

***A Completely Decentralized Workflow Management System for the Support of Emergency Telemedicine and Patient Monitoring***, pp. 5663-5666

Kyriacou, Efthymoulos  
Fakas, Georgios  
Pavlaki, Vaso

Univ. of Cyprus  
Manchester Metropolitan Univ.  
Univ. of Cyprus

16:30-16:45

***Activities for Endoscopy Information Systems Standardization in Japan***, pp. 5667-5670

Yokoi, Hideto  
Fujino, Masayuki A.

Kagawa Univ. Hospital  
Univ. of Yamanashi

16:45-17:00

***Engineers in the Field: Accreditation of BME Programs in Argentina***, pp. 5671-5674

Monzon, Jorge E.

Univ. Nacional del Nordeste

17:00-17:15

***A Medical Device Regulatory Framework – Case Study: South Africa***, pp. 5675-5678

Poluta, Mladen

Univ. of Cape Town

**New Techniques in Sensory Rehabilitation (Oral Session)**

15:45-16:00

***Improved Head Direction Command Classification Using an Optimised Bayesian******Neural Network***, pp. 5679-5682

Nguyen, Son

Univ. of Tech. Sydney

Nguyen, Hung

Univ. of Tech. Sydney

Taylor, Philip

Univ. of Tech. Sydney

Middleton, James

The Univ. of Sydney

16:00-16:15

***Divergence Dynamic Modification As a Function of Initial Position***, pp. 5683-5686

Alvarez, Tara

New Jersey Inst. of Tech.

Gayed, Bassem

New Jersey Inst. of Tech.

16:15-16:30

***The Transient Component of Disparity Vergence Maybe an Indication of Progressive******Lens Acceptability***, pp. 5687-5690

Castillo, Carlos

New Jersey Inst. of Tech.

Gayed, Bassem

New Jersey Inst. of Tech.

Pedrono, Claude

Essilor International

Ciuffreda, Kenneth

SUNY- School of Optometry

Semmlow, John

Rutgers Univ.

Alvarez, Tara

New Jersey Inst. of Tech.

16:30-16:45

***Effect of Learning on Listening to Ultra-Fast Synthesized Speech***, pp. 5691-5694

Nishimoto, Takuya

The Univ. of Tokyo

Sako, Shinji

The Univ. of Tokyo

Sagayama, Shigeki

The Univ. of Tokyo

Ohshima, Kazue

Tokyo Woman's Christian Univ.

Oda, Koichi

Tokyo Woman's Christian Univ.

Watanabe, Takayuki

Tokyo Woman's Christian Univ.

16:45-17:00

***Should Object Function Matter During Modeling of Reach-To-Grasp Selfcare Tasks in******Robot-Assisted Therapy?***, pp. 5695-5698

Nathan, Dominic

Marquette Univ.

Johnson, Michelle

Medical Coll. of Wisconsin/Marquette Univ.

17:00-17:15

***Hybrid Feature Subset Selection for the Quantitative Assessment of Skills of Stroke Patients in******Activity of Daily Living Tasks***, pp. 5699-5703

Van Dijck, Gert

Katholieke Univ. Leuven

Van Hulle, Marc

K.U. Leuven

Van Vaerenbergh, Jo

Center for Multidisciplinary Approach and Tech.

**Principal Component and Independent Component Analysis (Poster Session)**

16:30-18:00

***Independent Component Analysis of Parameterized ECG Signals***, pp. 5704-5707

Tanskanen, Jarno Mika Antero

Tampere Univ. of Tech.

Viik, Jari

Tampere Univ. of Tech.

Hyttinen, Jari

Tampere Univ. of Tech.

16:30-18:00

***A Study of Heart Sound and Lung Sound Separation by Independent Component Analysis Technique***, pp. 5708-5711

Jen-Chien, Chien  
Huang, Ming-Chuan  
Lin, Yue-Der  
Chong, Fok-Ching

Univ. of National Taiwan  
Univ. of National Taiwan  
Univ. of Feng Chia  
Univ. of National Taiwan

16:30-18:00

***Assessment Myocardial Perfusion and Contraction by Karhunen-Loeve Transform on Scintigraphic Images***, pp. 5712-5714

Blagosklonov, Oleg  
Comas, Laurent  
Berthout, Pascal  
Sabbah, Remy  
Verdenet, Josette  
Cardot, Jean-Claude  
Baud, Michel

CHU Jean Minjoz  
CHU Jean Minjoz  
St-Vincent Clinic  
CHU Jean Minjoz  
CHU Jean Minjoz  
CHU Jean Minjoz  
CHU Jean Minjoz

16:30-18:00

***A Procedure to Extract the Aortic and the Pulmonary Sounds from the Phonocardiogram***, pp. 5715-5718

Nigam, Vivek  
Priemer, Roland

Univ. of Illinois at Chicago  
Univ. of Illinois at Chicago

16:30-18:00

***A Global Approach for Automatic Artifact Removal for Standard EEG Record***, pp. 5719-5722

Boudet, Samuel  
Peyrodie, Laurent  
Gallois, Philippe  
Vasseur, Christian

HEI  
HEI  
Univ. Catholique de Lille  
USTL

16:30-18:00

***Detecting Behavioral Microsleeps from EEG Power Spectra***, pp. 5723-5726

Peiris, Malik T. R.  
Jones, Richard D.  
Davidson, Paul R.  
Bones, Philip. J.

Univ. of Canterbury  
Van der Veer Inst.  
Van der Veer Inst.  
Univ. of Canterbury

16:30-18:00

***Analysis of the Automatic Detection of Critical Epochs from Coma-EEG by Dominant Components and Features Extraction***, pp. 5727-5730

Inuso, Giuseppina  
La Foresta, Fabio  
Mammone, Nadia  
Morabito, Francesco Carlo

Univ. of Reggio Calabria  
Univ. of Reggio Calabria  
Univ. of Reggio Calabria  
Univ. of Reggio Calabria

16:30-18:00

***Analysis of Large-Scale Brain Data for Brain-Computer Interfaces***, pp. 5731-5734

Das, Koel  
Meyer, Joerg  
Nenadic, Zoran

Univ. of California, Irvine  
Univ. of California, Irvine  
Univ. of California, Irvine

16:30-18:00

***Blind Source Separation in Single-Channel EEG Analysis: An Application to BCI\****

James, Christopher  
Wang, Suogang

Univ. of Southampton  
Univ. of Southampton

16:30-18:00

***Inspiratory Pressure Evaluation by Means of the Entropy of Respiratory Mechanomyographic Signals***, pp. 5735-5738

Torres, Abel  
Fiz, José A.  
Galdiz, Juan B.  
Gea, Joaquim  
Morera, Josep  
Jané, Raimon

Univ. Pol. de Catalunya  
Hospital Univ. Germans Trias i Pujol  
Hospital Cruces  
Hospital del Mar  
Hospital Germans Trias I Pujol  
Univ. Pol. de Catalunya

16:30-18:00

***Limitations and Applications of ICA for Surface Electromyogram***, pp. 5739-5742

Naik, Ganesh R  
Kumar, Dinesh Kant  
Poosapadi Arjunan, Sridhar  
Palaniswami, Marimuthu  
Begg, Rezaul

Royal Melbourne Univ. of Tech.  
Rmit Univ.  
RMIT Univ.  
The Univ. of Melbourne  
Victoria Univ.

16:30-18:00

***Beamspace Magnetoencephalographic Signal Decomposition in Spherical Harmonics Domain***, pp. 5743-5746

Ozkurt, Tolga Esat  
Sun, Mingui  
Sclabassi, Robert

Univ. of Pittsburgh  
Univ. of Pittsburgh  
Univ. of Pittsburgh

16:30-18:00

***Feature Extraction & Lips Posture Detection Oriented to the Treatment of CLP Children***, pp. 5747-5750

Salazar, Augusto  
Daza, Genaro  
Sanchez, Luis  
Prieto, Flavio  
Castellanos, Germán  
Quintero, Colombia

Univ. Nacional de Colombia, sede Manizales (National Univ.)  
Univ. Nacional de Colombia, sede Manizales (National Univ.)  
Univ. Nacional de Colombia, sede Manizales (National Univ.)  
Univ. Nacional de Colombia, sede Manizales (National Univ.)  
Univ. Nacional de Colombia, sede Manizales (National Univ.)  
Univ. de Caldas (Caldas Univ.)

**SaEP2**

Westside Ballroom South

**Algorithm and Software System for Bioinformatics, 2 (Poster Session)**

16:30-18:00

***A Domain Specific Data Management Architecture for Protein Structure Data***, pp. 5751-5754

Wang, Yanchao  
Sunderraman, Rajshekhar  
Tian, Hao

Georgia State Univ.  
Georgia State Univ.  
Georgia State Univ.

16:30-18:00

***Building a Structured PDB: The RS-PDB Database***, pp. 5755-5758

Szabadka, Zoltan  
Grolmusz, Vince

Eotvos Univ.  
Eotvos Univ.

16:30-18:00

***Multiple Linear Regression for Index SNP Selection on Unphased Genotypes***, pp. 5759-5762

He, Jingwu  
Zelikovsky, Alex

Georgia State Univ.  
Georgia State Univ.

16:30-18:00

***Tally and Geometry Definition Influence on the Computing Time in Radiotherapy Treatment Planning with MCNP Monte Carlo Code***, pp. 5763-5766

Miró, Rafael  
Juste, Belen  
Gallardo, Sergio  
Santos, Agustín  
Verdú, Gumersindo

Pol. Univ. of Valencia  
Pol. Univ. of Valencia  
Pol. Univ. of Valencia  
Hospital Provincial de Castelló  
Pol. Univ. of Valencia

16:30-18:00

**Phenotypic-Specific Gene Module Discovery Using a Diagnostic Tree and Cabig VISDA**, pp. 5767-5770  
Zhu, Yitan Virginia Pol. Inst. and State Univ.  
Wang, Zuyi Children National Medical Center  
Feng, Yuanjian Virginia Pol. Inst. and State Univ.  
Xuan, Jianhua Virginia Pol. Inst. and State Univ.  
Miller, David J. The Pennsylvania State Univ.  
Hoffman, Eric P. Children National Medical Center  
Wang, Yue Virginia Pol. Inst. and State Univ.

16:30-18:00

**A Fast Boosting-Based Screening Method for Large-Scale Association Study Data in Complex Traits with Genetic Heterogeneity**, pp. 5771-5774  
Wang, Lu-yong Siemens Corp. Res.  
Fasulo, Daniel Siemens Corp. Res.

16:30-18:00

**Automated Adaptive Heart Interbeat Time Extraction from Long Term Noisy and Variable ECG Signals**, pp. 5775-5778  
Torres-Solis, Jorge Univ. of Toronto  
Chan, Christopher Univ. Health Network  
Chau, Tom Univ. of Toronto

16:30-18:00

**BioProber: Software System for Biomedical Relation Discovery from PubMed**, pp. 5779-5782  
Jang, Hyunchul Electronics and Telecommunications Res. Inst.  
Lim, Jaesoo Electronics and Telecommunications Res. Inst.  
Lim, Joon-Ho Electronics and Telecommunications Res. Inst.  
Park, Soo-Jun Electronics and Telecommunications Res. Inst.  
Lee, Kyu-Chul Chungnam National Univ.

16:30-18:00

**DNA Binding Sites Characterization by Means of Rényi Entropy Measures on Nucleotide Transitions**, pp. 5783-5786  
Perera, Alexandre Tech. Univ. of Catalonia  
Vallverdu, Montserrat Tech. Univ. of Catalonia  
Claria, Francesc Lleida Univ.  
Soria, José Manuel Santa Creu i Sant Pau Hospital  
Caminal, Pere Tech. Univ. of Catalonia (UPC)

16:30-18:00

**Hardware Accelerator for Genomic Sequence Alignment**, pp. 5787-5789  
Chiang, Jui-Hsuan(Univ. of Toronto)  
Studniberg, Michael Univ. of Toronto  
shaw, jack Univ. of Toronto  
Seto, Stephen Univ. of Toronto  
Truong, Kevin Univ. of Toronto

16:30-18:00

**A Program for Medical Visualization and Image Processing**, pp. 5790-5793  
Zaffari, Carlos Alberto PUCRS - Pontifícia Univ. Católica do Rio Grande do Sul  
Zaffari, Paulo PUCRS - Pontifícia Univ. Católica do Rio Grande do Sul  
Azevedo, Dario F.G. de Pontifícia Univ. Católica  
Helegda, Sergio Pontifícia Univ. Católica do Rio Grande do Sul  
Figueira, Márcio Vieira Pontifical Catholic Univ. of Rio Grande do Sul  
Russomano, Thais PUCRS

16:30-18:00

***An Interactive Visualization-Based Approach for High Throughput Screening Information Management in Drug Discovery***, pp. 5794-5797

Chan, Pui Shan, Tammy  
Malik, Preeti  
Singh, Rahul

San Francisco State Univ.  
San Francisco State Univ.  
San Francisco State Univ.

16:30-18:00

***Utilization of Human Expert Techniques for Detection of Low-Abundant Peaks in High-Resolution Mass Spectra***, pp. 5798-5801

Boratyn, Grzegorz M  
Merchant, Michael L  
Klein, Jon B

Univ. of Louisville  
Univ. of Louisville  
Univ. of Louisville

**SaEP3**

Westside Ballroom South

**Computational Genomics, Epigenomics, and Proteomics II (Poster Session)**

16:30-18:00

***Combinatorial Search Methods for Multi-SNP Disease Association***, pp. 5802-5805

Brinza, Dumitru  
He, Jingwu  
Zelikovsky, Alex

Georgia State Univ.  
Georgia State Univ.  
Georgia State Univ.

16:30-18:00

***Statistical Framework for Quantitative Analysis of Array CGH***, pp. 5806-5809

Shah, Shishir

Univ. of Houston

16:30-18:00

***A Rule-Based Detection of Functional Modules in Protein-Protein Interaction Networks***, pp. 5810-5813

Park, Jongmin  
Choi, Jaehun  
Yang, Jaedong  
Park, Soo-Jun

Electronics and Telecommunications Res. Inst.  
Electronics and Telecommunications Res. Inst.  
Chonbuk National Univ.  
Electronics and Telecommunications Res. Inst.

16:30-18:00

***Protein Classification Using Sequential Pattern Mining***, pp. 5814-5817

Exarchos, Themis P.  
Papaloukas, Costas  
Lampros, Christos  
Fotiadis, Dimitrios I.

Unit of Medical Tech. and Intelligent Information  
Univ. of Ioannina  
Unit of Medical Tech. and Intelligent Information Systems  
Univ. of Ioannina

16:30-18:00

***Linear Discrimination of Transmembrane from Non-Transmembrane Segments in Proteins Using Higher-Order Crossings***, pp. 5818-5821

Kitsas, Ilias  
Panas, Stavros  
Hadjileontiadis, Leontios

Aristotle Univ. of Thessaloniki  
Aristotle Univ. of Thessaloniki  
Aristotle Univ. of Thessaloniki

16:30-18:00

***A New Seed Selection Algorithm That Maximizes Local Structural Similarity in Proteins***, pp. 5822-5825

Altun, Gulsah  
Zhong, Wei  
Pan, Yi  
Tai, Phang C.  
Harrison, Robert W.

Georgia State Univ. Dept. of Computer Science  
Georgia State Univ. Dept. of Computer Science  
Georgia State Univ. Dept. of Computer Science  
Georgia State Univ. Dept. of Biology  
Georgia State Univ. Dept. of Computer Science and Biology

16:30-18:00

***A Fast Algorithm for Low-Resolution Protein Structure Prediction***, pp. 5826-5829

Bondugula, Rajkumar  
Xu, Dong  
Shang, Yi

Univ. of Missouri-Columbia  
Univ. of Missouri-Columbia  
Univ. of Missouri-Columbia



16:30-18:00

*A Protein Structure Prediction Scoring Function Based on Backbone Dihedral Angles and Pairwise Distance of Residues of the Protein\**

Zhang, Lu

Shanghai Jiaotong Univ.

16:30-18:00

***Prediction of RNA-Binding Residues in Protein Sequences Using Support Vector Machines***, pp. 5830-5833

Wang, Liangjiang

Kansas State Univ.

Brown, Susan

Kansas State Univ.

**SaEP4**

Westside Ballroom South

**Regulatory Elements, Gene Expression, and Gene Networks. 2 (Poster Session)**

16:30-18:00

***An Ensemble Approach for Phenotype Classification Based on Fuzzy Partitioning of Gene***

***Expression Data***, pp. 5834-5837

Dragomir, Andrei

Univ. of Patras

Maraziotis, Ioannis

Univ. of Patras

Bezerianos, Anastasios

PATRAS

16:30-18:00

***A Neural Network Based Approach for Inference and Verification of Transcriptional***

***Regulatory Interactions***, pp. 5838-5841

Knott, Simon Robert Vincent

Queen's Univ.

Mostafavi, Sara

Queen's Univ.

Mousavi, parvin

Queen's Univ.

16:30-18:00

***Correlated Discretized Expression Score: A Method for Identifying Gene Interaction Networks from***

***Time Course Microarray Expression Data***, pp. 5842-5845

Larsen, Peter

Univ. of Illinois at Chicago

Almasri, Eyad

Univ. of Illinois at Chicago

Chen, Guanrao

Univ. of Illinois at Chicago

Dai, Yang

Univ. of Illinois at Chicago

16:30-18:00

***Does Logarithm Transformation of Microarray Data Affect Ranking Order of Differentially Expressed Genes?\****

Li, Wentian

Feinstein Inst. For Medical Res.

Suh, Young Ju

Sookmyung Women's Univ.

Zhang, Jing-Shan

Forest Res. Inst.

16:30-18:00

***Gene Selection for Brain Cancer Classification***, pp. 5846-5849

Leung, Y. Y.

The Univ. of Hong Kong

Chang, C. Q.

The Univ. of Hong Kong

Hung, Y.S.

The Univ. of Hong Kong

Fung, P.C.W.

The Univ. of Hong Kong

16:30-18:00

***Improved Microarray Spot Segmentation by Combining Two Information Channels***, pp. 5850-5853

Margaritis, Thanasis

IMBB - FORTH, UoC

Marias, Kostas

Foundation for Res. & Tech. Hellas

Kafetzopoulos, Dimitris

IMBB - FORTH

16:30-18:00

***A Statistical and Biological Approach for Identifying Misdiagnosis of Incipient Alzheimer Patients***

***Using Gene Expression Data***, pp. 5854-5857

Joseph, Sandeep

Univ. of Georgia

Robbins, Kelly

Univ. of Georgia

Rekaya, Romdhane

Univ. of Georgia

16:30-18:00

***Exploiting Binary Abstractions in Deciphering Gene Interactions***, pp. 5858-5863

Yoon, Sungroh  
Garg, Abhishek  
Chung, Eui-Young  
Park, Hyun Seok  
Park, Woong Yang  
De Micheli, Giovanni

Stanford Univ.  
EPFL  
Yonsei Univ.  
Ewha Womans Univ.  
Seoul National Univ.  
EPFL

16:30-18:00

***Cancer Classification Using Loss of Heterozygosity Data Derived from Single-Nucleotide Polymorphism Genotyping Arrays***, pp. 5864-5867

Wang, Yuhang

Southern Methodist Univ.

16:30-18:00

***Lung Tumor Diagnosis and Subtype Discovery by Gene Expression Profiling***, pp. 5868-5871

Wang, Lu-yong  
Tu, Zhuowen

Siemens Corp. Res.  
Univ. of California, Los Angeles

16:30-18:00

***Latent Variable and Nica Modeling of Pathway Gene Module Composite***, pp. 5872-5875

Gong, Ting  
Zhu, Yitan  
Xuan, Jianhua  
Li, Huai  
Clarke, Robert  
Hoffman, Eric P.  
Wang, Yue

Virginia Pol. Inst. and State Univ.  
Virginia Pol. Inst. and State Univ.  
The Catholic Univ. of America  
National Inst. on Aging, NIH  
Lombardi Comprehensive Cancer Center, Georgetown Univ.  
Children National Medical Center  
Virginia Pol. Inst. and State Univ.

16:30-18:00

***An Automated Method for Gridding in Microarray Images***, pp. 5876-5879

Giannakeas, Nikolaos  
Fotiadis, Dimitrios I.  
Politou, Anastasia

Univ. of Ioannina  
Univ. of Ioannina  
Univ. of Ioannina

**SaEP5**

Westside Ballroom South

**Wireless Sensors and Telemetry Systems 3 (Poster Session)**

16:30-18:00

***Analytical Calculation of the Self-Resonant Frequency of Biomedical Telemetry Coils***, pp. 5880-5883

Yang, Zhi  
Wang, Guoxing  
Liu, Wentai

Univ. of California, Santa Cruz  
Univ. of California, Santa Cruz  
Univ. of California, Santa Cruz

16:30-18:00

***A Transcutaneous Data Telemetry System Tolerant to Power Telemetry Interference***, pp. 5884-5887

Zhou, Mingcui  
Liu, Wentai  
Wang, Guoxing  
Sivaprakasam, Mohanasankar  
Yuce, Mehmet  
Weiland, James  
Humayun, Mark

Univ. of California, Santa Cruz  
Univ. of California, Santa Cruz  
Univ. of California, Santa Cruz  
Univ. of California at Santa Cruz  
The Univ. of Newcastle  
Univ. of Southern California  
Univ. of Southern California

16:30-18:00

***Investigation of Signal Processing Algorithms for an Embedded Microcontroller-Based Wearable***

***Pulse Oximeter***, pp. 5888-5891

Mendelson, Yitzhak  
Johnston, William

Worcester Pol. Inst.  
WPI

16:30-18:00

***ASIC Design for Wireless Surgical MEMS Device and Instrumentation***, pp. 5892-5895

To, Gary

Univ. of Tennessee

Qu, Wenchao

Univ. of Tennessee

Mohamed, Mahfouz

Univ. of Tennessee

16:30-18:00

***A Portable, Low-Cost, Battery-Powered Wireless Monitoring System for Obtaining Varying Physiologic Parameters from Multiple Subjects***, pp. 5896-5899

Zhao, He

State Univ. of New York at Stony Brook

Chen, Xinnian

State Univ. of NY at Stony Brook

chou, ki

State Univ. of New York at Stony Brook

16:30-18:00

***A Neural Signal Processor for an Implantable Multi-Channel Cortical Recording Microsystem***, pp. 5900-5903

Sodagar, Amir M.

Univ. of Michigan

Wise, Kensall

Univ. of Michigan

Najafi, Khalil

Univ. of Michigan

16:30-18:00

***The Development of Virtual Instrument for Detecting Korotkoff Sounds\****

Jiang, Guotai

Tongji Univ.

Li, Juanjuan

Tongji Univ.

Zheng, Fuhui

Tongji Univ.

Wang, Peipei

Tongji Univ.

16:30-18:00

***Neural Signal Sampling Via the Low Power Wireless Pico System***, pp. 5904-5907

Cieslewski, Grzegorz

Univ. of Florida

Cheney, David

Univ. of Florida

Gugel, Karl

Univ. of Florida

Sanchez, Justin C.

Univ. of Florida

Principe, Jose C.

Univ. of Florida

16:30-18:00

***Wireless Platform for Multi-Channel Analog Measurements***, pp. 5908-5911

Heinisuo, Sami Markus

Tampere Univ. of Tech.

Vanhala, Jukka

Tampere Univ. of Tech.

**SaEP6**

Westside Ballroom South

**Wearable Technology 1** (Poster Session)

16:30-18:00

***A Simple Test to Assess the Static and Dynamic Accuracy of an Inertial Sensors System for Human Movement Analysis***, pp. 5912-5915

Cutti, Andrea Giovanni

INAIL Prosthesis Center

Giovanardi, Andrea

INAIL Prosthesis Center

Rocchi, Laura

Univ. of Bologna

Davalli, Angelo

INAIL Prosthesis Center

16:30-18:00

***Quantifying Functional Mobility Progress for Chronic Disease Management***, pp. 5916-5919

Boyle, Justin

CSIRO ICT Centre

Karunanithi, Mohan

CSIRO ICT Centre

Wark, Tim

CSIRO ICT Centre

Chan, Wilbur

The Prince Charles Hospital

Colavitti, Christine

The Prince Charles Hospital

16:30-18:00

**Evaluation of the Preset Travel Routes in a Self-Determination Support System**, pp. 5920-5923

Maeda, Yoshinobu  
Miyaji, Takaaki  
Miyakawa, Michio

Niigata Univ.  
Niigata Univ.  
Niigata Univ.

16:30-18:00

**Gait Evaluation of a New Electromechanical Stance-Control Knee-Ankle-Foot Orthosis**, pp. 5924-5927

Yakimovich, Terris  
Lemaire, Edward  
Kofman, Jonathan

The Ottawa Hospital Rehabilitation Centre  
The Ottawa Hospital Rehabilitation Centre  
Univ. of Waterloo

16:30-18:00

**24 Hour Ambulatory Research System Supporting Multiple Physiologic Sensors**, pp. 5928-5931

Ellingson, Roger M.  
Oken, Barry  
Zajdel, Daniel  
Flegal, Kristin  
Kishiyama, Shirley  
Thong, Tran

RM Ellingson System Design & Development  
Oregon Health & Science Univ.  
Oregon Health & Science Univ.  
Oregon Health & Science Univ.  
Oregon Health & Science Univ.  
Oregon Health & Science Univ.

16:30-18:00

**A Wireless Ballistocardiographic Chair**, pp. 5932-5935

Junnila, Sakari  
Akhbardeh, Alireza  
Barna, Laurentiu C  
Defee, Irek  
Värri, Alpo

Tampere Univ. of Tech.  
Tampere Univ. of Tech.  
Tampere Univ. of Tech.  
Tampere Univ. of Tech.  
Tampere Univ. of Tech.

16:30-18:00

**A Sub-Microwatt Piezo-Floating-Gate Sensor for Long-Term Fatigue Monitoring in Biomechanical Implants**, pp. 5936-5939

Chakrabartty, Shantanu  
Elvin, Niell  
Lajnef, Nizar  
Elvin, Alex

Michigan State Univ.  
Michigan State Univ.  
Michigan State Univ.  
Michigan State Univ.

16:30-18:00

**A Next Generation Electronic Triage System to Aid Mass Casualty Disaster Response\***

Gao, Tia  
White, David

Johns Hopkins Univ.  
Johns Hopkins Univ.

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**SaEP7**

Westside Ballroom South

**Wearable Sensors and Devices 4 (Poster Session)**

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16:30-18:00

**Development of an Ambulatory Device for Monitoring Posture Change and Walking Speed for Use in Rehabilitation**, pp. 5940-5943

Motoi, Kosuke  
Ikeda, Kohei  
Kuwae, Yutaka  
Yuji, Tadahiko  
Higashi, Yuji  
Nogawa, Masamichi  
Tanaka, Shinobu  
Yamakoshi, Ken-ichi

Kanazawa Univ.  
Kanazawa Univ.  
Fujimoto Hayasuzu Hospital  
Fujimoto Hayasuzu Hospital  
Fujimoto Hayasuzu Hospital  
Kanazawa Univ.  
Kanazawa Univ.  
Kanazawa Univ.

16:30-18:00

***Friction-Assisted Magnetic Holding of an Ingestible Capsule for Esophageal Ph and Impedance Monitoring***, pp. 5944-5947

Mintchev, Martin P.  
Sadowski, Dan  
Gonzalez, Jose L.

Univ. of Calgary  
Univ. of Alberta  
Univ. of Calgary

16:30-18:00

***FPGA-Based Sleep Apnea Screening Device for Home Monitoring***, pp. 5948-5951

Al-Ashmouny, Khaled  
Hamed, Hisham  
MORSY, AHMED

Cairo Univ.  
National Telecommunication Inst.  
Cairo Univ.

16:30-18:00

***A Novel Solution to Power Problems in Implanted Biosensor Networks***, pp. 5952-5955

Guo, Tiantian  
Zhang, Luyong  
Zhou, Zheng  
Liu, Wei

Beijing Univ. of Posts and Telecommunication  
Beijing Univ. of Posts and Telecommunication  
Beijing Univ. of Posts and Telecommunication  
Beijing Univ. of Posts and Telecommunication

16:30-18:00

***Review of Current Actuator Suitability for Use in Medical Implants***, pp. 5956-5959

Szczesny, Spencer  
Jetzki, Stefanie  
Leonhardt, Steffen

RWTH Aachen Univ.  
RWTH Aachen Univ.  
RWTH Aachen Univ.

16:30-18:00

***An Indoor Guidance System for the Blind Using Fluorescent Lights -Relationship between Receiving Signal and Walking Speed***, pp. 5960-5963

Liu, Xiaohan  
Makino, Hideo  
Kobayashi, Suguru  
Maeda, Yoshinobu

Niigata Univ.  
Niigata Univ.  
Niigata Univ.  
Niigata Univ.

16:30-18:00

***Comparison of Step Length Estimators from Wearable Accelerometer Devices***, pp. 5964-5967

Alvarez, Diego  
Gonzalez, Rafael C.  
Lopez, Antonio M.  
Alvarez, Juan Carlos

Univ. de Oviedo  
Univ. de Oviedo  
Univ. de Oviedo  
Univ. de Oviedo

16:30-18:00

***A Wearable Device for Continuous Monitoring of Heart Mechanical Function Based on Impedance CardioGraphy***, pp. 5968-5971

Panfilii, Guido  
Piccini, Luca  
Maggi, Luca  
Parini, Sergio  
Andreoni, Giuseppe

Pol. di Milano  
Pol. di Milano  
Pol. di Milano  
Pol. di Milano  
Pol. di Milano

16:30-18:00

***Design of Antennas for a Wearable Sensor for Homecare Movement Monitoring***, pp. 5972-5976

Reina-Tosina, Javier  
Roa, Laura M.  
Prado, Manuel

Univ. of Seville  
Univ. of Seville  
Univ. de Sevilla

16:30-18:00

*Assessment of Stress-Induced Hemodynamic Responses Using Multipurpose Non-Invasive Continuous Cardiovascular Monitoring System\**

Nogawa, Masamichi  
Yamakoshi, Takehiro  
Ikarashi, Akira  
Tanaka, Shinobu  
Yamakoshi, Ken-ichi

Kanazawa Univ.  
Kanazawa Univ.  
Ishikawa Sunrise Industries Creation Organization  
Kanazawa Univ.  
Kanazawa Univ.

16:30-18:00

*Wearable Patient Monitoring Application (ECG) Using Wireless Sensor Networks*, pp. 5977-5980

Taylor, Steven Andrew  
Sharif, Hamid

Univ. of Nebraska-Lincoln  
Univ. of Nebraska-Lincoln

16:30-18:00

*Wearable EDA Sensor Gloves Using Conducting Fabric and Embedded System\**

Lee, youngbum  
Yoon, sung won  
Lee, Chungkeun  
Lee, Myounggho

Yonsei Univ.  
Yonsei Univ.  
Yonsei Univ.  
Yonsei Univ.

**SaEP8**

Westside Ballroom South

**Wearable Technology 2 (Poster Session)**

16:30-18:00

*The Effect of Fiber Orientation on Volume Measurement Using Conductance Catheter Techniques*, pp. 5981-5984

Thaijiam, Chanchai  
Gale, Timothy John

Univ. of Tasmania  
Univ. of Tasmania

16:30-18:00

*Digital Signal Processing of the Wideband External Pulse Recorded During Cuff Deflation: A New Way to Measure Blood Pressure*, pp. 5985-5988

Yeol, Joe W.  
Ryu, Yeong Soon  
Blank, Seymour

Columbia Univ.  
New York City Coll. of Tech.  
New York City Coll. of Tech.

16:30-18:00

*Battery-Operated High-Bandwidth Multi-Channel Wireless Neural Recording System Using 802.11b*, pp. 5989-5992

Parthasarathy, Jayant  
Hogenson, Jim  
Erdman, Arthur  
redish, david  
ziaie, babak

Univ. of Minnesota  
Avalon Engineering LLC  
Univ. of Minnesota  
Univ. of Minnesota  
Purdue Univ.

16:30-18:00

*Evaluation of Chip LED Sensor Module for Fat Thickness Measurement Using Tissue Phantoms*, pp. 5993-5996

Hwang, In Duk  
Shin, Kunsoo  
Ho, Dong-Su  
Kim, Beop-Min

Samsung Advanced Inst. of Tech.  
Samsung Advanced Inst. of Tech.  
Yonsei Univ.  
Yonsei Univ.

16:30-18:00

*Portable Gage for Pressure Ulcer Detection*, pp. 5997-6000

Wang, Qi  
Kong, Linghua  
Sprigle, Stephen  
Hayward, Vincent

McGill Univ.  
Georgia Inst. of Tech.  
Georgia Inst. of Tech.  
McGill Univ.

16:30-18:00

***Feasibility Study of a Urine Glucose Level Monitor for Home Healthcare Using Near Infrared Spectroscopy***, pp. 6001-6003

Tanaka, Shinobu  
Motoi, Kosuke  
Nogawa, Masamichi  
Yamakoshi, Takehiro  
Yamakoshi, Ken-ichi

Kanazawa Univ.  
Kanazawa Univ.  
Kanazawa Univ.  
Kanazawa Univ.  
Kanazawa Univ.

16:30-18:00

***Design and Implementation of a Mobile-Care System Over Wireless Sensor Network for Home Healthcare Applications***, pp. 6004-6007

Lee, Ren-Guey  
Lai, Chien-Chih  
Chiang, Shao-Shan  
Liu, Hsin-Sheng  
Chen, Chun-Chang  
Hsieh, Guan-Yu

National Taipei Univ. of Tech.  
National Taipei Univ. of Tech.  
Lunghwa Univ. of Science and Tech.  
National Taipei Univ. of Tech.  
National Taipei Univ. of Tech.  
National Taipei Univ. of Tech.

**SaEP9**

Westside Ballroom South

**Wearable Sensors and Devices 5 (Poster Session)**

16:30-18:00

***Design and Development of a Cost Effective Plantar Pressure Distribution Analysis System for the Dynamically Moving Feet***, pp. 6008-6011

Karkokli, Riwa  
Valter McConville, Kristiina M.

Ryerson Univ.  
Ryerson Univ.

16:30-18:00

***Measurement of Noise and Impedance of Dry and Wet Textile Electrodes, and Textile Electrodes with Hydrogel***, pp. 6012-6015

Puurtinen, Merja  
Komulainen, Satu  
Kauppinen, Pasi  
Malmivuo, Jaakko  
Hyttinen, Jari

Tampere Univ. of Tech.  
Tampere Univ. of Tech.  
Tampere Univ. of Tech.  
Tampere Univ. of Tech.  
Tampere Univ. of Tech.

16:30-18:00

***An Electrical Stimulator for Sensory Substitution***, pp. 6016-6020

Pereira, Mauro Conti  
Kassab Jr, Fuad

UCDB - Univ. Catolica Dom Bosco  
USP

16:30-18:00

***Electrode-Electrolyte Interface Properties in Implantation Conditions***, pp. 6021-6024

Riistama, Jarno  
Lekkala, Jukka

Tampere Univ. of Tech.  
Tampere Univ. of Tech.

16:30-18:00

***Practical Issues Affecting the Measurement and Analysis of Physiological Data Recorded Remotely from Individuals with Spinal Cord Injury (SCI) During Normal Daily Activities***, pp. 6025-6028

Nunn, Andrew  
Brown, Ian

Monash Univ.  
Monash Univ.

16:30-18:00

***Optimizing the Use of an Artificial Tongue-Placed Tactile Biofeedback for Improving Ankle Joint Position Sense in Humans***, pp. 6029-6032

Vuillerme, Nicolas  
Chenu, Olivier  
Fleury, Anthony  
Demongeot, Jacques  
Payan, Yohan

Lab. TIMC-IMAG, UMR CNRS 5525  
Lab. TIMC-IMAG, UMR CNRS 5525  
Lab. TIMC-IMAG, UMR CNRS 5525  
Lab. TIMC-IMAG, UMR CNRS 5525  
Lab. TIMC-IMAG, UMR CNRS 5525

16:30-18:00

***The Preliminary Study on the Clinical Application of the WHAM (Wearable Heart Activity Monitor)***, pp. 6033-6036

Shin, Kunsoo  
Kim, Youn Ho  
Kim, Jong Pal  
Park, Jae Chan

Samsung Advanced Inst. of Tech.  
Samsung Advanced Inst. of Tech.  
Samsung Advanced Inst. of Tech.  
Samsung Advanced Inst. of Tech.

16:30-18:00

***Application-Oriented Programming Model for Sensor Networks Embedded in the Human Body***, pp. 6037-6040

Barbosa, Talles M. G. de A.  
Sene Jr, Iwens G.  
da Rocha, Adson F.  
Assis de Oliveira Nascimento, Francisco  
Carvalho, Hervaldo Sampaio  
Camapum, Juliana Fernandes

Catholic Univ. of Goiás  
Catholic Univ. of Goiás  
Univ. of Brasilia  
Univ. of Brasilia  
Univ. of Brasília  
Univ. de Brasília

16:30-18:00

***Development of a Quantitative In-Shoe Measurement System for Assessing Balance: Sixteen-Sensor Insoles***, pp. 6041-6044

Bamberg, Stacy J Morris  
Dibble, Lee  
LaStayo, Paul  
Musselman, Josh  
Dasa Raghavendra, Swarna Kiran

Univ. of Utah  
Univ. of Utah  
Univ. of Utah  
Univ. of Utah  
Univ. of Utah

16:30-18:00

***Reduction of Skin Stretch Induced Motion Artifacts in Electrocardiogram Monitoring Using Adaptive Filtering***, pp. 6045-6048

Liu, Yan  
Pecht, Michael

Univ. of Maryland, Coll. Park  
Univ. of Maryland, Coll. Park

16:30-18:00

***An Evaluation of a PTT-Based Method for Noninvasive and Cuffless Estimation of Arterial Blood Pressure***, pp. 6049-6052

Teng, Xiaofei  
Zhang, Yuan-Ting

The Chinese Univ. of Hong Kong  
The Chinese Univ. of Hong Kong

**SaEP10**

Westside Ballroom South

**Diagnostic Instrumentation and Physiological Measurements 2 (Poster Session)**

16:30-18:00

***Neural-Network Detection of Hypoglycemic Episodes in Children with Type 1 Diabetes Using Physiological Parameters***, pp. 6053-6056

Nguyen, Hung  
Ghevondian, Nejhdeh  
Jones, Timothy

Univ. of Tech. Sydney  
AIMedics Pty Ltd  
Princess Margaret Hospital for Children

16:30-18:00

***Which Techniques to Improve the Early Detection and Prevention of Pressure Ulcers?***, pp. 6057-6060

GEHIN, Claudine  
BRUSSEAU, Elisabeth  
Meffre, Richard  
SCHMITT, Michael  
DEPREZ, Jean-François  
DITTMAR, Andre

INSA Lyon  
UMR CNRS5515  
INSA Lyon  
INSA Lyon  
UMR CNRS5515 INSERM U630  
INSA Lyon



16:30-18:00

***Two-Channel Bioimpedance Monitor for Impedance Cardiography***, pp. 6061-6063

Vondra, Vlastimil  
Halamek, Josef  
Viscor, Ivo  
Jurak, Pavel

Inst. of Scientific Inst. Czech Acad. of  
Inst. of Scientific Inst. Acad. of Sciences of the Czech Republic  
Inst. of Scientific Inst. Czech Acad. of Sciences  
Inst. of Scientific Inst. Acad. of Sciences of the Czech Republic

16:30-18:00

***Extraction of the Intracranial Component from the Rheoencephalographic Signal: A New Approach***, pp. 6064-6067

Perez, Juan J  
Guijarro, Enrique  
Sancho, Jeronimo  
Navarre, Arantxa

Pol. Univ. of Valencia  
Pol. Univ. of Valencia  
Hospital General Univ.  
Hospital General Univ.

16:30-18:00

***Design of Rapid Medical Evacuation System for Trauma Patients Resulting from Biological and Chemical Terrorist Attacks***, pp. 6068-6071

Frieder, Russell  
Kumaresan, Srirangam  
Sances, Jr., Anthony  
Renfro, David  
Myers, Will J.  
Harvey, L. William

Cal-Zark, LLC  
Cal-Zark, LLC  
Cal-Zark, LLC  
Cal-Zark, LLC  
Cal-Zark, LLC  
Cal-Zark, LLC

16:30-18:00

***The Simulation of Current Generator Design for Multi-Frequency Electrical Impedance Tomograph***, pp. 6072-6075

Chen, Cheng-Yu  
Lu, Yi-Yu  
Huang, Wen-Lung  
Cheng, Kuo-Sheng

National Cheng Kung Univ.  
National Cheng Kung Univ.  
National Cheng Kung Univ.  
National Cheng Kung Univ.

16:30-18:00

***A New Device for Assessing Subjective Haptic Vertical***, pp. 6076-6079

Cavalleri, Matteo  
Reni, Gianluigi  
Brambilla, Daniele

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IRCCS E.MEDEA  
IRCCS E.MEDEA

16:30-18:00

***Discrete Laplacian Recordings of the Electroenterogram from Abdominal Surface in Humans***, pp. 6080-6083

Prats-Boluda, Gema  
Martinez-de-Juan, Jose Luis  
Garcia-Casado, Javier  
Guardiola, Jose Luis  
Ponce, Jose Luis

Centro de investigación e Innovación en Bioingeniería  
Centro de investigación e Innovación en Bioingeniería  
Univ. Pol. de Valencia  
Univ. Pol. de Valencia  
Hospital Univ. La Fe

16:30-18:00

***Evaluation of Spasticity in the Ankle of a Hemiplegic Subject Using a Step-Like Response***, pp. 6084-6087

Murayama, Daisuke  
Uchiyama, Takanori  
Uchida, Ryusei

Faculty of science and Tech.  
Keio Univ.  
Kanto-Rosai Hospital

16:30-18:00

***Sensitivity of Rheoencephalographic Measurements to Spatial Brain Electrical Conductivity***, pp. 6088-6091

Guijarro, Enrique  
Perez, Juan J  
Berjano, Enrique  
Ortiz, Pedro

Pol. Univ. of Valencia  
Pol. Univ. of Valencia  
Pol. Univ. of Valencia  
Hospital General Univ.

16:30-18:00

**Heart Rate Detection in Low Amplitude Non-Invasive Fetal ECG Recordings**, pp. 6092-6094

Peters, Christiaan Hendrik Leonard  
Vullings, Rik  
Bergmans, Johannes Wilhelmus Maria  
Oei, S. Guid  
Wijn, Pieter

Máxima Medical Center  
Eindhoven Univ. of Tech.  
Eindhoven Univ. of Tech.  
Maxima Medisch Centrum, Veldhoven  
Máxima Medical Center

**SaEP11**

Westside Ballroom South

**Intelligent Monitoring and Analysis Systems (Poster Session)**

16:30-18:00

**A Multi-Facets Analysis of the Driver Status by EEG and Fuzzy Hardware Processing**, pp. 6095-6100

Faro, Alberto  
Giordano, Daniela  
Spampinato, Concetto

Univ. di Catania  
Univ. di Catania  
Univ. di Catania

16:30-18:00

**Enhanced Insulin Transport through Skin by High-Voltage Pulse\***

Zhu, Bing  
Bao, Jiali  
Yang, Yuanyuan  
hou, haifeng

Coll. of medicine science, Zhejiang Univ.  
Zhejiang Univ.  
Coll. of Medicine Science, Zhejiang Univ.  
Coll. of Medicine Science, Zhejiang Univ.

16:30-18:00

**Differentiation of Epileptic Seizures from Voluntary Movements by Quantitative Analysis of Digital Video\***

Karayiannis, Nicolaos  
Modur, Pradeep  
Xiong, Yaohua  
Tao, Guozhi

Univ. of Houston  
Univ. of Louisville  
Univ. of Houston  
Univ. of Houston

16:30-18:00

**Embedded Assessment Algorithms within Home-Based Cognitive Computer Game**

**Exercises for Elders**, pp. 6101-6104

Jimison, Holly  
Pavel, Michael

Oregon Health & Science Univ.  
Oregon Health and Science Univ.

16:30-18:00

**Software Enhanced Learning of Cardiac Auscultation**, pp. 6105-6108

Syed, Zeeshan  
Curtis, Dorothy  
Nesta, Francesca  
Levine, Robert A.  
Guttag, John

Massachusetts Inst. of Tech.  
Massachusetts Inst. of Tech.  
Massachusetts General Hospital  
Massachusetts General Hospital  
Massachusetts Inst. of Tech.

**SaEP12**

Westside Ballroom South

**Healthcare Decision Support Systems (Poster Session)**

16:30-18:00

**Risk Factors for Apgar Score Using Artificial Neural Networks**, pp. 6109-6112

Ibrahim, Doaa  
Frize, Monique  
Walker, Robin

Ottawa Univ.  
Carleton Univ.  
Children Hospital of Eastern Ontario

16:30-18:00

**Probabilistic Framework for Reliability Analysis of Information-Theoretic CAD**

**Systems in Mammography**, pp. 6113-6116

Habas, Piotr A.  
Zurada, Jacek M.  
Elmaghraby, Adel S.  
Tourassi, Georgia D.

Univ. of Louisville  
Univ. of Louisville  
Univ. of Louisville  
Duke Univ. Medical Center

16:30-18:00

***A Combined Fuzzy Cognitive Map and Decision Trees Model for Medical Decision Making***, pp. 6117-6120  
Papageorgiou, Elpiniki Univ. of Patras  
Stylios, Chrysostomos Univ. of Patras  
Groumpos, Peter Univ. of Patras

16:30-18:00

***Computer-Based Classification of Eye Diseases***, pp. 6121-6124  
Acharya, Rajendra NgeeAnn Pol.  
Natarajan, Kannathal National Univ. of Singapore  
NG, Eddie YK Nanyang Tech. Univ.  
Suri, Jasjit Biomedical Tech.

16:30-18:00

***Spectral Analysis of Walking with Shoes and without Shoes***, pp. 6125-6128  
Tsuruoka, Masako Center for Spatial Information Science, Univ. of Tokyo  
Tsuruoka, Yuriko The Inst. of Statistical Mathematics  
Shibasaki, Ryosuke Center for Spatial Information Science, Univ. of Tokyo  
Yasuoka, Yoshifumi Univ. of Tokyo

**SaEP13**

Westside Ballroom South

**Nonlinear Dynamic Analysis of Biological Signals II (Poster Session)**

16:30-18:00

***Physiologically Plausible Stochastic Nonlinear Kernel Models of Spike Train to Spike Train Transformation***, pp. 6129-6132  
Song, Dong Univ. of Southern California  
Chan, Rosa Univ. of Southern California  
Marmarelis, Vasilis Univ. of Southern California  
Hampson, Robert Wake Forest Univ.  
Deadwyler, Sam Wake Forest Univ.  
Berger, Theodore Univ. of Southern California

16:30-18:00

***Detection of Rhythmic Discharges in Newborn EEG Signals\****  
Mohseni, Hamid Reza Sharif Univ. of Tech.  
Mirghasemi, Hamed Sharif Univ. of Tech.  
Shamsollahi, Mohammad Bagher Sharif Univ. of Tech.

16:30-18:00

***Left-Right Information Flow in the Brain During EEG Arousals***, pp. 6133-6136  
Swarnkar, Vinayak Univ. of Queensland  
Abeyratne, Udantha R Univ. of Queensland  
Karunajeewa, Samantha Univ. of Queensland

16:30-18:00

***Spike Separation from EEG/MEG Data Using Morphological Filter and Wavelet Transform***, pp. 6137-6140  
Jia, Wenyan Univ. of Pittsburgh  
Sclabassi, Robert Univ. of Pittsburgh  
Pon, Lin-Sen Univ. of Pittsburgh  
Scheuer, Mark Univ. of Pittsburgh  
Sun, Mingui Univ. of Pittsburgh

16:30-18:00

***Seizure Detection by a Novel Wavelet Packet Method***, pp. 6141-6144  
Tafreshi, Reza Univ. of British Columbia  
Dumont, Guy Univ. of British Columbia  
Gross, Donald Univ. of Alberta  
Ries, Craig Univ. of British Columbia  
Puil, Ernie Univ. of British Columbia  
MacLeod, Bernard Univ. of British Columbia

16:30-18:00

**Elman Neural Networks for Dynamic Modeling of Epileptic EEG**, pp. 6145-6148

Natarajan, Kannathal

National Univ. of Singapore

16:30-18:00

**Cross Approximate Entropy Analysis of Nocturnal Oximetry Signals in the Diagnosis of the Obstructive Sleep Apnea Syndrome**, pp. 6149-6152

Alvarez, Daniel

Univ. of Valladolid

Hornero, Roberto

Univ. of Valladolid

García, María

Univ. of Valladolid

del Campo, Félix

Hospital del Río Hortega

Zamarrón, Carlos

Hospital Clínico Univ.

López, Miguel

Univ. of Valladolid

16:30-18:00

**Analysis of Chaos Attractors of MCG-Recordings**, pp. 6153-6156

Jiang, Shiqin

Tongji Univ.

Yang, Fan

Tongji Univ.

Yi, Panke

Tongji Univ.

16:30-18:00

**Self Similarity Behavior Characterization of Fetal Heart Rate Signal in Healthy and IUGR Fetuses**, pp. 6157-6160

Esposti, Federico

Pol. di Milano

Signorini, Maria G.

Pol. di Milano

Ferrario, Manuela

Pol. di Milano

Magenes, Giovanni

Univ. of Pavia

16:30-18:00

**Detrended Fluctuation Analysis of Ion Single Channel Signal\***

Lan, Tong-han

Huazhong Univ. of Science and Tech.

XU, BAO\_SHAN

Huazhong Univ. of Science and Tech.

xu, bang quan

Department of Control science and Engineering, Huazhong

Univ. of Science and Tech. ,Wuhan 430074, PR China.

Lin, Jiarui

Huazhong Univ. of Sci & Tech.

wu, hong xiu

Department of electric information and Engineering, Huazhong

Univ. of Science and Tech. Wuhan 430074,PR China.

16:30-18:00

**Changes in SEMG During the Long Duration Cycling Exercise**, pp. 6161-6164

Singh, Vijay Pal

RMIT Univ.

Kant Kumar, Dinesh

RMIT Univ.

Polus, Barbara

RMIT Univ.

Lo Guidice, Sonia

RMIT Univ.

Fraser, Steve

RMIT Univ.

16:30-18:00

**Identification of the Slow Wave of Bowel Myoelectrical Surface Recording by Empirical Mode Decomposition**, pp. 6165-6168

Ye, Yiyao

Centro de investigación e Innovación en Bioingeniería, CI2B

Garcia-Casado, Javier

Centro de investigación e Innovación en Bioingeniería, CI2B

Martinez-de-Juan, Jose Luis

Centro de investigación e Innovación en Bioingeniería, CI2B

Guardiola, Jose L

Univ. Pol. de Valencia

Ponce, Jose Luis

Hospital Univ. La Fe

16:30-18:00

**Time Delay and Causality in Biological Systems Using Whitened Cross-Correlation Analysis**, pp. 6169-6172

El-Gohary, Mahmoud

Portland State Univ.

McNames, James

Portland State Univ.

Ellis, Tim

Portland State Univ.

Goldstein, Brahm

Oregon Health & Science Univ.

16:30-18:00

***Application of Empirical Mode Decomposition to Remove the Wall Components in Doppler Ultrasound Signals: A Simulation Study***, pp. 6173-6176

Zhang, Yufeng	Yunnan Univ.
Gao, Yali	Yunnan Univ.
Wang, Le	Yunnan Univ.
Chen, Jianhua	Yunnan Univ.
Shi, Xinling	Yunnan Univ.

16:30-18:00

***Biosignal Processing and Analysis Using Mathcad - Pedagogical and Research Issues -***, pp. 6177-6180

Sandham, William	Scotsig
Hamilton, David	Univ. of Strathclyde

16:30-18:00

***Magnetoencephalogram Background Activity Analysis in Alzheimer's Disease Patients Using Auto Mutual Information***, pp. 6181-6184

Gómez, Carlos	Univ. of Valladolid
Hornero, Roberto	Univ. of Valladolid
Fernandez, Alberto	Univ. Complutense de Madrid
Abásolo, Daniel	Univ. of Valladolid
Escudero, Javier	Univ. of Valladolid
López, Miguel	Univ. of Valladolid

**SuA01**

Marquis AB

**Signal Processing and Modeling in Brain-Computer Interface (Oral Session)**

09:00-09:15

***Analysis of the Correlation between Local Field Potentials and Neuronal Firing Rate in the Motor Cortex***, pp. 6185-6188

Wang, Yiwen	Univ. of Florida
Sanchez, Justin	Univ. of Florida
Principe, Jose	Univ. of Florida
Mitzelfelt, Jeremiah	Univ. of Florida
Gunduz, Aysegul	Univ. of Florida

09:15-09:30

***Detection of the Anaerobic Threshold by Surface Electromyography***, pp. 6189-6192

Nadal, Jurandir	Federal Univ. of Rio de Janeiro
Mello, Roger Gomes Tavares de	Federal Univ. of Rio de Janeiro
Oliveira, Liliam Fernandes de	Federal Univ. of Rio de Janeiro

09:30-09:45

***Development of the Human Interface Equipment Based on Surface EMG Employing Channel Selection Method***, pp. 6193-6196

Nagata, Kentaro	TOKAI Univ.
Ando, Keiichi	TOKAI Univ.
Nakano, Shinji	TOKAI Univ.
Nakajima, Hideaki	TOKAI Univ.
Yamada, Masafumi	Kanagawa Rehabilitation Center
Magatani, Kazushige	TOKAI Univ.

09:45-10:00

***Evaluation of Surface EMG Features for the Recognition of American Sign Language Gestures***, pp. 6197-6200

Kosmidou, Vasiliki	Aristotle Univ. of Thessaloniki
Hadjileontiadis, Leontios	Aristotle Univ. of Thessaloniki
Panas, Stavros	Aristotle Univ. of Thessaloniki

10:00-10:15

***Indicators of Sleepiness in an Ambulatory EEG Study of Night Driving***, pp. 6201-6204

Papadelis, Christos	Aristotle Univ.
Kourtidou-Papadeli, Chrysoula	Greek Aerospace Medical Association
Bamidis, Panagiotis	Aristotle Univ.
Chouvarda, Ioanna	Aristotle Univ.
Koufogiannis, Dimitris	Aristotle Univ.
Bekiaris, Evangelos	Centre for Res. & Tech. Hellas
MAGLAVERAS, NIKOLAOS	Aristotle Univ. of Thessaloniki

10:15-10:30

***Analysis of P300 Classifiers in Brain Computer Interface Speller***, pp. 6205-6208

Mirghasemi, Hamed	Sharif Univ. of Tech.
Fazel-Rezai, Reza	Univ. of Manitoba
Shamsollahi, Mohammad Bagher	Sharif Univ. of Tech.

**SuA02**

Marquis C

**Non Linear Dynamics in Brain Signal Analysis (Oral Session)**

09:00-09:15

***Detecting Determinism in EEG Signals Using Principal Component Analysis and Surrogate***

***Data Testing***, pp. 6209-6212

Meghdadi, Amir H.	Univ. of Manitoba
Fazel-Rezai, Reza	Univ. of Manitoba
Aghakhani, Yahya	Univ. of Manitoba

09:15-09:30

***Application of Velocity Filters to Somatosensory Evoked Potential Measurements for Removal of***

***Stimulus Artifact***, pp. 6213-6216

Yazdani, Nabil	Carleton Univ.
Chan, Adrian	Carleton Univ.

09:30-09:45

***Mechanism of Frequency Selectivity in VOR Motor Learning: Frequency Channel or***

***Waveform Learning?***, pp. 6217-6220

Yoshikawa, Akimasa	Chubu Univ. Coll. of Engineering
Hirata, Yutaka	Chubu Univ. Coll. of Engineering

09:45-10:00

***Designing a Planar Vector Field to Investigate the Role of a Slow Variable in an Enhanced Mean-Field***

***Model During General Anesthesia***, pp. 6221-6224

Molae-Ardekani, Behnam	Univ. of Rennes 1, Sharif Univ. of Tech.
Shamsollahi, Mohammad Bagher	Sharif Univ. of Tech.
Senhadji, Lotfi	Univ. of Rennes 1; INSERM
Vosoughi Vahdat, Bijan	Sharif Univ. of Tech.
Wodey, Eric	Univ. of Rennes 1

10:00-10:15

***Nonlinear Analysis of Anesthesia Dynamics by Fractal Scaling Exponent***, pp. 6225-6228

Gifani, Payman	Amir Kabir Univ. of Tech.
Rabiee, Hamid Reza	Sharif University of Tech.
Hashemi, Mohammad Reza	Amir Kabir Univ. of Tech.
Taslimi, Pejman	Sharif Univ. of Tech.
Ghanbari, Mohammad	Univ. of ESSEX

10:15-10:30

**Quantitative EEG Assessment of Brain Injury and Hypothermic Neuroprotection after**

**Cardiac Arrest**, pp. 6229-6232

Shin, Hyunchool  
Tong, Shanbao  
Jia, Xiaofeng  
Geocardin, Romergryko  
Thakor, Nitish

Johns Hopkins Univ.  
Shanghai Jiao Tong Univ.  
Johns Hopkins Univ.  
Johns Hopkins School of Medicine  
Johns Hopkins Univ.

**SuA03**

SoHo-Herald

**Wireless Sensors and Telemetry Systems II (Oral Session)**

09:00-09:15

**Instrumentation System Upgrade Supports Mobile Personalized Healthcare Delivery**, pp. 6233-6236

Ellingson, Roger M.  
Helt, Wendy J.  
Helt, Patrick V.  
Fausti, Stephen A.

Department of Veterans Affairs  
Department of Veterans Affairs  
Department of Veterans Affairs  
Department of Veterans Affairs

09:15-09:30

**Sensing and Feedback Stimulation Via the Wireless ZigBee Protocol**, pp. 6237-6240

Chati, Harding  
Salem, Fathi

Michigan State Univ.  
Michigan State Univ.

09:30-09:45

**A 1-MHz, 5-Kb/s Wireless Command Receiver for Electronic Site Selection in Multichannel Neural Biopotential Recording**, pp. 6241-6244

Mohseni, Pedram  
Najafi, Khalil

Case Western Res. Univ.  
Univ. of Michigan

09:45-10:00

**Wearable Wireless Telemetry System for Implantable Bio-MEMS Sensors**, pp. 6245-6248

Simons, Rainee  
Miranda, Felix  
Wilson, Jeffrey  
Simons, Renita E.

NASA Glenn Res. Center  
NASA Glenn Res. Center  
NASA Glenn Res. Center  
John Carroll Univ.

10:00-10:15

**Low Power Digital Communication in Implantable Devices Using Volume Conduction of Biological Tissues**, pp. 6249-6252

Yao, Ning  
Lee, Heung-no  
Sclabassi, Robert  
Sun, Mingui

Univ. of Pittsburgh  
Univ. of Pittsburgh  
Univ. of Pittsburgh  
Univ. of Pittsburgh

10:15-10:30

**A Wireless Power Interface for Rechargeable Battery Operated Neural Recording Implants**, pp. 6253-6256

Li, Pengfei  
Principe, Jose  
Bashirullah, Rizwan

Univ. of Florida  
Univ. of Florida  
Univ. of Florida

**SuA04**

Ziegfeld

**Healthcare Information Management II (Oral Session)**

09:00-09:15

**A Cross-Functional Service Oriented Architecture to Support Real-Time Information Exchange During Mass Casualty Events\***

Gao, Tia  
Hauenstein, Logan  
White, David

Johns Hopkins Univ.  
Johns Hopkins Univ.  
Johns Hopkins Univ.

09:15-09:30

***Semantic Tagging for Medical Knowledge Tracking***, pp. 6257-6260

Jang, Hyeju

Song, Sa Kwang

Myaeng, Sung Hyon

Information Communications Univ.  
Electronics and Telecommunications Res. Inst.  
Information Communications Univ.

09:30-09:45

***Proposal of Wireless Behavioral Monitoring System with Electric Field Sensor***, pp. 6261-6264

Kameda, Noriyuki

Akabane, Yoshinori

Naganokawa, Haruhisa

Tsukamoto, Sosuke

Tamura, Toshiyo

Hoshino, Hiroshi

Tokyo Denki Univ.  
Tokyo Denki Univ.  
Tokyo Denki Univ.  
Tokyo Denki Univ.  
Chiba Univ. School of Engineering  
Tokyo Denki Univ.

09:45-10:00

***Issues in Implementing a Knowledge-Based ECG Analyzer for Personal Mobile***

***Health Monitoring***, pp. 6265-6268

Goh, Keng Wee

Kim, Eung-Hun

Janardhanan, Lavanya

Kim, Yongmin

Soh, Cheong Boon

Nanyang Tech. Univ.  
Univ. of Washington  
Nanyang Tech. Univ.  
Univ. of Washington  
Nanyang Tech. Univ.

10:00-10:15

***The Development of an Interoperable Roadmap for Medical Devices\****

Judd, Tom

Rausch, Tracy L.

International consultant; WHO consultant

10:15-10:30

***Reinforcement Learning Interfaces for Biomedical Database Systems***, pp. 6269-6272

Rudowsky, Ira

Kulyba, Olga

Kunin, Mikhail

Parsons, Simon

Raphan, Theodore

Brooklyn Coll. / CUNY  
Brooklyn Coll. / CUNY  
Brooklyn Coll. / CUNY  
Brooklyn Coll. / CUNY  
Brooklyn Coll. / CUNY

**SuA05**

Duffy-Columbia

**Wearable Sensors and Devices 3 (Oral Session)**

09:00-09:15

***Posture Classification Via Wearable Strain Sensors for Neurological Rehabilitation***, pp. 6273-6276

Giorgino, Toni

Lorussi, Federico

De Rossi, Danilo

Quaglioni, Silvana

Univ. of Pavia  
Univ. of Pisa  
Univ. of Pisa  
Univ. of Pavia

09:15-09:30

***Unobtrusive Assessment of Mobility***, pp. 6277-6280

Pavel, Michael

Hayes, Tamara

Adami, Andre

Jimison, Holly

Kaye, Jeffrey A.

Oregon Health and Science Univ.  
Oregon Health and Science Univ.  
Oregon Health & Science Univ.  
Oregon Health & Science Univ.  
Oregon Health and Science Univ.



09:30-09:45

***Measuring Finger Flexion and Activity Trends Over a 25 Hour Period Using a Low Cost***

***Wireless Device***, pp. 6281-6284

Simone, Lisa

Sundarrajan, Nappinnai

Elovic, Elie

Luo, Xun

Jia, Yicheng

Kamper, Derek

New Jersey Inst. of Tech.

Kessler Medical Rehabilitation Res. and Education Corp.

Kessler Medical Rehabilitation Res. and Education

Rehabilitation Inst. of Chicago

Rehabilitation Inst. of Chicago

Rehabilitation Inst. of Chicago

09:45-10:00

***Finger Taps Movement Acceleration Measurement System for Quantitative Diagnosis of Parkinson's Disease\****

Okuno, Ryuhei

Osaka Univ.

Akazawa, Kenzo

Osaka Inst. of Tech.

10:00-10:15

***Development of Walking Pattern Evaluation System for Hypogravity Simulation***, pp. 6285-6288

Leaes, Roberta

PUC-RS

Cambráia, Rodrigo

PUCRS

Bacim, Felipe

PUC-RS

Dalmarco, Gustavo

PUCRS

Dario, Azevedo

PUCRS

Russomano, Thais

PUCRS

Pinho, Marcio

PUC-RS

Calder, Alyson

Univ. of Glasgow

10:15-10:30

***A Navigation Aid for the Blind Using Tactile-Visual Sensory Substitution***, pp. 6289-6292

Johnson, Lise A.

The Univ. of Arizona

Higgins, Charles M.

The Univ. of Arizona

**SuA07**

Cantor-Jolson

**Pacing, Defibrillation and Catheter Ablation II (Oral Session)**

09:00-09:15

***Quantification of Local Convective Cooling During Cardiac Radiofrequency***

***Catheter Ablation***, pp. 6293-6296

Haemmerich, Dieter

Medical Univ. of South Carolina

Saul, J. Philip

Medical Univ. of South Carolina

09:15-09:30

***High-Precision Guidance of Ablation Catheters to Arrhythmic Sites: A Physiologically Realistic***

***Simulation Study***, pp. 6297-6300

Barley, Maya

Massachusetts Inst. of Tech.

Cohen, Richard

Massachusetts Inst. of Tech.

09:30-09:45

***Comparison of Current Densities Measured in a Pig Heart During States of Ventricular Fibrillation and***

***Post-Mortem for Different Defibrillation Electrode Positions***, pp. 6301-6304

DeMonte, Tim P.

Field Metrica Inc.

Jorgenson, Dawn B.

Philips Medical Systems

Wang, Dinghui

Univ. of Toronto

Ma, Angela W.

Univ. of Toronto

Nachman, Adrian I.

Univ. of Toronto

Joy, Michael L.

Univ. of Toronto

09:45-10:00

***Cardiac Current Density Distribution by Electrical Pulses from TASER Devices***, pp. 6305-6307

Panescu, Dorin  
Stratbucker, Robert  
Kroll, Mark  
McDaniel, Wayne

St. Jude Medical  
Stratbucker & Assoc.  
Cal Pol. Univ. San Luis Obispo  
Univ. of Missouri

10:00-10:15

***Intracardiac Electrical Bioimpedance As a Basis for Controlling of Pacing Rate Limits***, pp. 6308-6311

Kink, Andres  
Salo, Rodney W  
Min, Mart  
Parve, Toomas  
Ratsep, Indrek

SmartImplant, Ltd.  
Guidant Corp.  
Tallinn Univ. of Tech.  
Tallinn Univ. of Tech.  
Tallinn Univ. of Tech.

10:15-10:30

***Myocardial Contrast Echocardiography of Radiofrequency Ablation Lesions\****

Panescu, Dorin  
Rao, Liyun  
Nagueh, Sherif F.  
Ding, Chuxiong  
Sun, Huabin  
Youker, Keith  
Khoury, Dirar

St. Jude Medical  
The Methodist Hospital Res. Inst.  
The Methodist Hospital Res. Inst.  
The Methodist Hospital Res. Inst.  
The Methodist Hospital Res. Inst.  
The Methodist Hospital Res. Inst.  
The Methodist Hospital Res. Inst.

**SuA09**

Gramercy-Olmstead

**Telemedicine, E-Medicine, and Home-Based Healthcare I (Oral Session)**

09:00-09:15

***Distributed Personal Health Information Management System for Dermatology at the Homes for Senior Citizens***, pp. 6312-6315

Janardhanan, Lavanya  
Goh, Keng Wee  
Leow, Yung Hian  
Chio, Martin  
Kandasamy, Prabakaran  
Kim, Eung-Hun  
Kim, Yongmin  
Soh, Cheong Boon

Nanyang Tech. Univ.  
Nanyang Tech. Univ.  
National Health Group  
National Health Group  
Nanyang Tech. Univ.  
Univ. of Washington  
Univ. of Washington  
Nanyang Tech. Univ.

09:15-09:30

***Fragility Issues of Medical Video Streaming Over 802.11e-WLAN M-Health Environments***, pp. 6316-6319

Tan, Edwin  
Philip, Nada  
Istepanian, Robert

Kingston Univ.  
Kingston Univ.  
Kingston Univ.

09:30-09:45

***A Systematic Review of Technical Evaluation in Telemedicine Systems***, pp. 6320-6323

Clarke, Malcolm  
Thiyagarajan, Chinnayaasari

Brunel Univ.  
Stoke Mandeville Hospital

09:45-10:00

***A Web Application for Managing Data of Cardiovascular Risk Patients***, pp. 6324-6327

Bonacina, Stefano  
Masseroli, Marco

Pol. di Milano  
Pol. di Milano

10:00-10:15

***Digital Watermarking in Telemedicine Applications – towards Enhanced Data***

***Security and Accessibility***, pp. 6328-6331

Giakoumaki, Aggeliki  
Perakis, Konstantinos  
Tagaris, Anastassios  
Koutsouris, Dimitrios

National Tech. Univ. of Athens  
National Tech. Univ. of Athens  
National Tech. Univ. of Athens  
National Tech. Univ. of Athens (NTUA)

10:15-10:30

***Intelligent Agent Model for Remote Support of Rural Healthcare for the Elderly***, pp. 6332-6335

Hudson, Donna L  
Cohen, Maurice

Univ. of California, San Francisco  
Univ. of California San Francisco

**SuB01**

Marquis AB

**Spectral Analysis in Signals of Central Nervous System (Oral Session)**

10:45-11:00

***Spectral Analysis of Category-Specific Knowledge in the Intact Brain***, pp. 6336-6338

LAKANY, Heba

Univ. of Essex

11:00-11:15

***Classifying ECoG/EEG-Based Motor Imagery Tasks***, pp. 6339-6342

An, Bin  
Ning, Yan  
Jiang, Zhaohui  
Feng, Huanqing  
Zhou, Heqin

Univ. of Science and Tech. of China  
Univ. of Science and Tech. of China  
Univ. of Science and Tech. of China  
Univ. of Science and Tech. of China  
Univ. of Science and Tech. of China

11:15-11:30

***Method for the Automatic Detection of Epileptiform Waveforms in Sevoflurane-Induced***

***Anesthesia EEG***, pp. 6343-6346

Ermes, Miikka  
Särkelä, Mika  
van Gils, Mark  
Vakkuri, Anne  
Yli-Hankala, Arvi  
Jäntti, Ville

VTT Tech. Res. Centre of Finland  
GE Healthcare  
VTT Tech. Res. Centre of Finland  
Helsinki Univ. Hospital  
Univ. of Tampere  
Tampere Univ. Hospital

11:30-11:45

***Model-Related Analysis of EEG Burst Patterns in Sedated Patients***, pp. 6347-6350

Leistritz, Lutz  
Putsche, Peter  
Haeisen, Jens  
Witte, Herbert

Friedrich Schiller Univ.  
Friedrich Schiller Univ.  
Tech. Univ. Ilmenau  
Friedrich Schiller Univ.

11:45-12:00

***Frequency-Selective Quantification of Short-Echo Time Magnetic Resonance Spectra***, pp. 6351-6355

Pouillet, Jean-Baptiste  
Van Huffel, Sabine  
Sima, Diana

Katholieke Univ. Leuven  
Katholieke Univ. Leuven  
Katholieke Univ. Leuven

12:00-12:15

***Comparison of the Properties of EEG Spindles in Sleep and Propofol Anesthesia***, pp. 6356-6359

Ferenets, Rain  
Lipping, Tarmo  
Suominen, Pertti  
Turunen, Jari  
Puumala, Pasi  
Jäntti, Ville  
Himanen, Sari-Leena  
Huotari, Ari-Matti

Tampere Univ. of Tech. Pori  
Tampere Univ. of Tech.  
Tampere Univ. of Tech. Pori  
Tampere Univ. of Tech. Pori  
Tampere Univ. Hospital  
Tampere Univ. Hospital  
Tampere Univ. Hospital  
Oulu Univ. Hospital

**SuB03**

SoHo-Herald

**Therapeutic Devices 2 (Oral Session)**

10:45-11:00

***Automated Removal of Stimulus Artifact in Nerve Conduction Studies***, pp. 6360-6363Tracey, Brian  
Krishnamachari, SrivathsanNEUROMetrix  
Neurometrix, Inc

11:00-11:15

***Novel Micromachined Valved Glaucoma Drainage Devices***, pp. 6364-6369Tavakolian, Kouhyar  
Kaminska, Bozena  
Maleki Jafarabadi, TeimourSimon Fraser Univ.  
SIMON FRASER Univ.  
Simon Fraser Univ.

11:15-11:30

***Outlook for the Use of Focused Shock Waves and Pulsed Electric Fields in the Complex Treatment of Malignant Neoplasms***, pp. 6370-6372Zubkov, A. D.  
Andriyanov, Yuri  
Garilevich, Boris  
Olefir, Yu. V.  
Rotov, AntonCentral Air-Force Clinical Hospital  
TRINITI  
Central Clinical Air Forth Hospital  
Central Air Force Clinical Hospital  
Central Clinical Air Forth Hospital

11:30-11:45

***A Possibility of Hyperthermia Treatment Using MRI Equipment***, pp. 6373-6375Kunisaki, Junichi  
Saito, Tasuku  
Yamada, Tsutomu  
Takemura, Yasushi  
Niwa, Tetsu  
Inoue, TomioYokohama National Univ.  
Yokohama National Univ.  
Yokohama National Univ.  
Yokohama National Univ.  
Yokohama City Univ.  
Yokohama City Univ.

11:45-12:00

***Investigation of a Cylindrical Ultrasound Phased-Array with Multiple-Focus Scanning for Breast Tumor Thermal Therapy***, pp. 6376-6379Ho, Cheng-Shiao  
Ju, Kuen-Cheng  
Chen, Yung-Yaw  
Lin, Win-LiNational Taiwan Univ.  
Univ. of Washington  
National Taiwan Univ.  
National Taiwan Univ.**SuB04**

Ziegfeld

**Elder Care Technologies II (Oral Session)**

10:45-11:00

***A Non-Contact Imaging-Based Approach to Detecting Stage I Pressure Ulcers***, pp. 6380-6383Leachtenauer, Jon  
Kell, Steve  
Turner, Beverly  
Newcomer, Chris  
Lyder, Courtney  
Alwan, MajdUniv. of Virginia Volunteer Services  
Univ. of Virginia  
Univ. of Virginia  
Univ. of Virginia  
Univ. of Virginia  
Univ. of Virginia

11:00-11:15

***Monocular 3D Head Tracking to Detect Falls of Elderly People***, pp. 6384-6387Rougier, Caroline  
Meunier, Jean  
St-Arnaud, Alain  
Rousseau, JacquelineUniv. de Montréal  
Univ. de Montreal  
Centre de santé de santé et de services sociaux Lucille-Teasdale  
Univ. de Montréal

11:15-11:30

**Recognizing Falls from Silhouettes**, pp. 6388-6391

Anderson, Derek  
Keller, James M  
Skubic, Marjorie  
Chen, Xi  
He, Zhihai

Univ. of Missouri  
Univ. of Missouri  
Univ. of Missouri  
Univ. of Missouri  
Univ. of Missouri

11:30-11:45

**RFID Application to Control Unauthorized Egress of People with Spatial Disorientation**, pp. 6392-6395

Vargas, Jose

Fundacion Andaluza de Servicios Sociales

11:45-12:00

**Video Surveillance of Medication Intake**, pp. 6396-6399

Valin, Myriam  
Meunier, Jean  
St-Arnaud, Alain  
Rousseau, Jacqueline

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Univ. de Montreal  
Centre de santé de santé et de services sociaux Lucille-Teasdale  
Univ. de Montréal

12:00-12:15

**An Electronic Pillbox for Continuous Monitoring of Medication Adherence**, pp. 6400-6403

Hayes, Tamara  
Hunt, John M.  
Adami, Andre  
Kaye, Jeffrey A.

Oregon Health and Science Univ.  
OGI School of Science and Engineering/Oregon Health & Science Uni  
Oregon Health & Science Univ.  
Oregon Health and Science Univ.

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## SuB05

Duffy-Columbia

### Sensors and Systems (Oral Session)

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10:45-11:00

**The Changes in Pulse Transit Time at Specific Cuff Pressures During Inflation and Deflation**, pp. 6404-6405

Liu, Yinbo  
Poon, Carmen C. Y.  
Zhang, Yuan-Ting

The Chinese Univ. of Hong Kong  
The Chinese Univ. of Hong Kong  
The Chinese Univ. of Hong Kong

11:00-11:15

**Modeling Impermeable Membranes As Acoustic Filters for Biomedical Applications**, pp. 6406-6409

Juan Garcia, Eduardo  
Goenaga Jiménez, Miguel

Univ. of Puerto Rico - Mayagüez  
Univ. of Puerto Rico - Mayagüez

11:15-11:30

**Reliable Respiration Rate Estimation from a Bed Pressure Array**, pp. 6410-6413

Howell-Jones, Megan  
Goubran, Rafik A.  
Knoefel, Frank-Dietrich

Carleton Univ.  
Carleton Univ.  
SCO Health Service

11:30-11:45

**Analysis of Skin-Electrode Impedance Using Concentric Ring Electrode**, pp. 6414-6417

Besio, W. G.  
Prasad, Ashwini

Louisiana Tech. Univ.  
Louisiana Tech. Univ.

11:45-12:00

**Cuffless and Noninvasive Tonometry Mean Blood Pressure Measurement by Physiological Characteristics and Applied Pressure**, pp. 6418-6421

Park, Mikyoung  
Kang, HeeJung  
Huh, Young  
Kim, KyungChul

Korea Elctrotechnology Res. Inst.  
DAEYOMEDI Co., Ltd  
Korea Electrotechnology Res. Inst.  
Dong-Eui Univ.

12:00-12:15

***Development of Smart Toothbrush Monitoring System for Ubiquitous Healthcare***, pp. 6422-6425

Lee, Jeong-Whan	Konkuk Univ.
Kim, Kyeong-Seop	Konkuk Univ.
Kim, Dong-Jun	Cheongju Univ.
Lee, Kang-Hwi	Konkuk Univ.
Kim, Kyungho	Dankook Univ.

**SuB07**

Cantor-Jolson

**Cardiorespiratory Variability II (Oral Session)**

10:45-11:00

***Spontaneous Heart Rate Turbulence in Patients with Dilated Cardiomyopathy***, pp. 6426-6429

Voss, Andreas	Univ. of Applied Sciences Jena
Schroeder, Rico	Univ. of Applied Sciences Jena
Truebner, Sandra	Univ. of Applied Sciences Jena
Goernig, Matthias	Friedrich Schiller Univ. Jena, Klinik fuer Innere Medizin 1
Schirdewan, Alexander	Humboldt Univ. Charite, Franz-Volhard-Klinik
Figulla, Hans R.	Friedrich-Schiller-Univ. Jena, Klinik fuer Innere Medizin 1

11:00-11:15

***Short-Term Heart Rate Variability Response to Head-Up Tilt in Young Syncope Patients and Controls with Respect to Age***, pp. 6430-6433

Dickhaus, Hartmut	Univ. of Heidelberg
Maier, Christoph	Heilbronn Univ.
Khalil, Markus	Univ. of Heidelberg
Ulmer, Herbert	Univ. of Heidelberg

11:15-11:30

***Linear Models of Intrapartum Uterine Pressure-Fetal Heart Rate Interaction for the Normal and Hypoxic Fetus***, pp. 6434-6437

Warrick, Philip A.	McGill Univ.
Kearney, Robert Edward	McGill Univ.
Precup, Doina	McGill Univ.
Hamilton, Emily	McGill Univ.

11:30-11:45

***Frequency Modulation between Low and High-Frequency Components of the Heart Rate Variability Spectrum May Indicate Sympathetic-Parasympathetic Nonlinear Interactions***, pp. 6438-6441

Zhong, Yuru	State Univ. of New York at Stony Brook
Jan, Kung_Ming	Columbia Univ.
Chon, Ki	State Univ. of New York at Stony Brook

11:45-12:00

***Spectral Analysis of Pulse Transit Time Variability and Its Coherence with Other Cardiovascular Variabilities***, pp. 6442-6445

Ma, Ting	Chinese Univ. of Hong Kong
Zhang, Yuan-Ting	The Chinese Univ. of Hong Kong

**SuB09**

Gramercy-Olmstead

**M-Health: Personalised Health Information Systems (Oral Session)**

10:45-11:00

***Home Healthcare in the Home Environment***, pp. 6446-6448

Price, Sheila	Loughborough Univ.
Summers, Ronald	Loughborough Univ.

11:00-11:15

***Design and Implementation of a Framework for Monitoring Patients in Hospitals Using Wireless Sensors in Ad Hoc Configuration***, pp. 6449-6452

O'Donoghue, Nicholas  
Kulkarni, Sarvesh  
Marzella, Douglas

Villanova Univ.  
Villanova Univ.  
Villanova Univ.

11:15-11:30

***Integrated Scheduling Algorithm for Personalized Disease Management Applications***, pp. 6453-6456

Yuan, Xiaojing  
Moges, Mequanint

Univ. of Houston  
Univ. of Houston

11:30-11:45

***The Effects of Wireless Channel Errors on the Quality of Real Time Ultrasound Video Transmission***, pp. 6457-6460

Hernández, Carolina  
Alesanco, Alvaro  
Abadía, Violeta  
García Moros, José

Univ. of Zaragoza  
Univ. of Zaragoza  
Univ. of Zaragoza  
Aragon Inst. for Engineering Res. (I3A), Univ. Zaragoza.

11:45-12:00

***On the Guarantee of Reconstruction Quality in ECG Wavelet Codecs***, pp. 6461-6464

Alesanco, Alvaro  
García, José  
Serrano, Pedro  
Ramos, Luciano  
Istepanian, Robert

Univ. of Zaragoza  
Aragon Inst. for Engineering Res. (I3A), Univ. Zaragoza.  
Clinical Hospital Lozano Blesa  
Uospital of Santa Marina  
Kingston Univ.

12:00-12:15

***Optimum Design of Remote Patient Monitoring Systems***, pp. 6465-6468

Bratan, Tanja Maria  
Clarke, Malcolm

Brunel Univ.  
Brunel Univ.