

SS59 Bioimpedance I. (Standard Session - oral contributions)

Chair: Tadeusz Palko (Poland)

Co-Chair: Nikolay Yabluchansky (Ukraine)

Day and time: Monday 21st November, 11.00-12.30 (format 10+3 minutes)

Hall: Meeting Hall V

Id	Title	Paper Authors	Authors' Institutions
2274 11.00	EXCITATION AND REFERENCE GENERATOR FOR DUAL FREQUENCY EIT	<u>Adam Bujnowski</u> ¹ , Jerzy Wtorek ¹	¹ Gdańsk University of Technology Biomedical Engineering Department (Poland)
1448 11.13	IMAGE AND SHAPE RECONSTRUCTION IN ELECTRICAL RESISTANCE TOMOGRAPHY	Manouchehr <u>Soleimani</u> ¹ , <u>Amir Movafeghi</u> ^{2,3}	¹ William Lee Innovation Centre, school of materials, the University of Manchester (U.K.); ² NDT Dept., Radiation Protection Tech. Centre, AEOI (Iran); ³ Sharif University of Technology (Iran)
2340 11.26	DUAL FREQUENCY DIFFERENTIAL IMPEDANCE TOMOGRAPHY - PHANTOM STUDIES	<u>Adam Bujnowski</u> ¹ , Jerzy Wtorek ¹	¹ Gdańsk University of Technology Biomedical Engineering Department (Poland)
1994 11.39	MAGNETIC INDUCTION TOMOGRAPHY SPECTROSCOPY OF LIVING TISSUES: PRINCIPLES AND THEORY	<u>Hermann Scharfetter</u> ¹ , Patricia Brunner ¹ , Karl Hollaus ² , Robert Merwa ¹	¹ Institute for Medical Engineering (Austria); ² Institute for Fundamentals and Theory in Electrical Engineering (Austria)
2015 11.52	MAGNETIC INDUCTION TOMOGRAPHY SPECTROSCOPY (MITS) OF LIVING TISSUES: EXPERIMENTAL EVALUATION	<u>Andreas Missner</u> ¹ , Robert Merwa ¹ , Patricia Brunner ¹ , Hermann Scharfetter ¹	¹ Institute of Medical Engineering, TU-Graz (Austria)
2216 12.05	IMAGING ELECTRICAL IMPEDANCE IN A SIMULATED LIMB BY MAGNETIC INDUCTION TOMOGRAPHY	<u>Stuart Watson</u> ¹ , Huw Griffiths ² , Robert Williams ¹	¹ University of Glamorgan (U.K.); ² Dept. of Medical Physics & Clinical Engineering, Singleton Hospital, Swansea (U.K.)
2341 12.18	EMIT - COMPARISON OF SENSITIVITY FOR 2D AND 3D MODELS	<u>Agnieszka Janczulewicz</u> ¹ , Jerzy Wtorek ¹	¹ Gdansk University of Technology/Department of Biomedical Engineering (Poland)

SS32 Measurement and Analysis of Biosignals (Special Session - oral contributions)

Chair: Radim Kolář (Czech Republic)

Co-Chair: Jana Bardoňová (Czech Republic)

Day and time: Monday 21st November, 11.00-12.30 (format 14+4 minutes)

Hall: Meeting Hall I

Id	Title	Paper Authors	Authors' Institutions
1608 11.00	DEVELOPMENT OF A SYSTEM FOR NON STATIONARY MEASUREMENTS OF OTOACOUSTIC EMISSIONS	<u>Raghida Traboulsi</u> ^{1,2}	¹ Laboratory of Biophysics (France); ² The National Council for Scientific Research (Lebanon)
1864 11.18	CLASSIFICATION OF ECG SIGNALS USING WAVELET TRANSFORM AND HIDDEN MARKOV MODELS	<u>Dina Kičmerová</u> ¹ , Ivo Provazník ¹ , Jana Bardoňová ¹	¹ VUT Brno (Czech Republic)
2051 11.36	ADAPTIVE WAVELET FILTERING METHODS FOR ECG DENOISING	<u>Lukáš Chmelka</u> ¹ , Jiří Kozumplík ¹	¹ Department of Biomedical Engineering, Faculty of Electrical Engineering and Communication, Brno University of Technology (Czech Republic)
2211 11.54	ELECTROGASTROGRAPHIC SIGNALS ANALYZED BY INDEPENDENT COMPONENT ANALYSIS	Peter Hubka ¹ , Vladimír Rosík ² , Jaroslav Ždiňák ² , <u>Milan Tyšler</u> ² , Ivan Hulín ¹	¹ Institute of Pathophysiology, Faculty of Medicine, Comenius University (Slovak Republic); ² Institute of Measurement Science, Slovak Academy of Sciences (Slovak Republic)
1626 12.12	METHOD FOR ALLOCATION OF A FIDUCIAL POINT IN EACH HEART-BEAT	Anatoly Miheev ¹ , <u>Olga Melnik</u> ¹	¹ Ryazan State Radiotechnical Academy (Russia)

SS23 Intelligent Medical Data Analysis (Special Session - oral contributions)

Chair: Lenka Lhotská (Czech Republic)

Co-Chair: Peter Kokol (Slovenia)

Day and time: Monday 21st November, 11.00-12.30 (format 10+5 minutes)

Hall: Club A

Id	Title	Paper Authors	Authors' Institutions
1913 11.00	EDUCATIONAL AND INFORMATIONAL E-HEALTH PORTAL	<u>Mateja Verlic</u> ¹ , Mitja Lenic ¹ , Peter Kokol ¹	¹ University of Maribor (Slovenia)
2103 11.15	INTELLIGENT RISK ANALYSIS BY SELF-ORGANISING MAPS – THE PROBABILITY OF PATIENT SURVIVAL FOLLOWING LIVER TRANSPLANTATION	<u>Yrjö Hiltunen</u> ¹ , Geoffrey Haydon ² , Nick Murphy ² , Bridget Gunson ² , David Collett ³ , James Neuberger ²	¹ University of Kuopio (Finland); ² The Queen Elizabeth Hospital (U.K.); ³ UK Transplant (U.K.)
2116 11.30	FEATURE EXTRACTION IN BODY SURFACE POTENTIAL MAPPING	<u>Václav Chudáček</u> ¹ , Michal Huptych ¹ , Lenka Lhotská ¹ , Otomar Kittnar ² , Mikuláš Miček ²	¹ Czech Technical University in Prague - Gerstner Laboratory (Czech Republic); ² Charles University - Physiological Institute First School of Medicine (Czech Republic)
2214 11.45	MINING THE STRONGEST PATTERNS IN MEDICAL SEQUENTIAL DATA	Jiří Kléma ¹ , Tomáš Holas ¹ , <u>Filip Karel</u> ¹ , Filip Železný ¹	¹ CTU Prague (Czech Republic)
2544 12.00	A MEDICAL DECISION SUPPORT SYSTEM WITH UNCERTAINTY: A CASE STUDY FOR EPILEPSY CLASSIFICATION	Emmanuil Marakakis ¹ , <u>Kostas Vassilakis</u> ¹ , Emmanuil Kalivianakis ¹ , Sifis Micheloyiannis ²	¹ Technological Educational Institute (Greece); ² University of Crete (Greece)
2071 12.15	DYNAMIC DATAMINING WITH COMPLEXITY THEORY – THE CASE OF PROGNOSED SEPSIS	<u>Matej Mertik</u> ¹ , Miljenko Križmarič ² , Zoran Zabavnik ³ , Milan Zorman ¹ , Gregor Štiglic ¹ , Dušanka Mičetič Turk ² , Kokol Peter ¹	¹ University of Maribor, FERl (Slovenia); ² University of Maribor, College of Nursing Studies (Slovenia); ³ General Hospital Maribor (Slovenia)

SS9 Magnetic Resonance Imaging of Cardio/Cerebrovascular Flow and Cerebral Transport (Special Session - oral contributions)

Chair: John Georgiadis (United States)

Co-Chair: Guy Raguin (United States)

Day and time: Monday 21st November, 11.00-12.30 (format, please see below)

Hall: Club B

Id	Title	Paper Authors	Authors' Institutions
2484 11:00	ACCELERATING CINE FLOW MEASUREMENT WITH K-T BLAST & K-T SENSE	Peter Boesiger ¹ , Christof Baltes ¹ , Jeff Tsao ² , Klaas P. Pruessmann ¹ , Sebastian Kozerke ¹	¹ Swiss Federal Institute of Technology (ETH), Zurich (Switzerland); ² Novartis Institutes for BioMedical Research, Cambridge, Massachusetts (USA)
2363 11:30	SURGICAL PLANNING OF THE TOTAL CAVOPULMONARY CONNECTION USING MRI, COMPUTATIONAL, AND EXPERIMENTAL FLUID MECHANICS	Ajit Yoganathan ¹ , Diane de Zelicourt, Kerem Pekkan, Kartik Sundareswaran, Hiroumi Kitajima, David Frakes, Mark Fogel, James Parks, Shiva Sharma	¹ Georgia Institute of Technology & Emory University (United States)
2588 11:50	QUANTITATIVE ANALYSIS OF Q-SPACE MRI DATA	Guy Raguin ¹ , Diego Hernando ² , Dimitrios Karampinos ¹ , Luisa Ciobanu ³ , Brad Sutton ³ , Zhi-Pei Liang ³ , John Georgiadis ¹	¹ University of Illinois at Urbana–Champaign, Department of Mechanical & Industrial Engineering, Laboratory of Quantitative Visualization in Energetics, Urbana (USA); ² University of Illinois at Urbana–Champaign, Department of Electrical & Computer Engineering, Urbana (USA); ³ University of Illinois at Urbana–Champaign, Biomedical Imaging Center, Beckman Institute, Urbana (USA)
2232 12:10	HIGH RESOLUTION VENOGRAPHY AT 3 TESLA	Domenico Zaca ¹ , Roberto Bianco ¹ , Sergio Casciaro ^{1,2} , Graziano Palma ¹ , Ernesto Casciaro ^{1,2} , Alessandro Distante ^{1,2}	¹ ISBEM Euro Mediterranean Biomedical Scientific Institute, Brindisi (Italy); ² National Council of Research, Institute of Clinical Physiology, Lecce (Italy)

SS1 Mass Transport in Arterial Disease (Special Session - oral contributions)

Chair: P.G. Walker (United Kingdom)

Co-Chair: Peter Weinberg (United Kingdom)

Day and time: Monday 21st November, 11.00-12.30 (format 10+5 minutes)

Hall: Club C

Id	Title	Paper Authors	Authors' Institutions
1572 11.00	MATHEMATICAL MODELLING OF MASS TRANSFER IN THE VASCULAR SYSTEM	Paolo Zunino ¹ , Martin Prosi, Alfio Quarteroni	¹ Institute of Analysis and Scientific Computing (IACS), Ecole Polytechnique Fédérale de Lausanne (EPFL), (Switzerland)
1962 11.15	LDL TRANSPORT FROM BLOOD FLOW TO THE ARTERIAL WALL IN A THREE DIMENSIONAL HUMAN CAROTID BIFURCATION	Omid Amili ¹ , Nasser Fatouraee ¹	¹ Amirkabir University of Technology (Tehran Polytechnic) (Iran)
2066 11.30	CHANGES WITH AGE IN PATTERNS OF ARTERIAL WALL PERMEABILITY AND DISEASE - ROLES OF NITRIC OXIDE AND BLOOD FLOW	Peter Weinberg ¹	¹ Department of Bioengineering, Imperial College (United Kingdom)
2249 11.45	MASS TRANSPORT AND ATHEROSCLEROSIS IN MOVING CORONARY ARTERIES. A CFD STUDY	Maheshwaran Kolandavel ¹ , Ernst- Torben Fruend ² , Steffen Ringgaard ² , Peter G Walker ¹	¹ University of Leeds (U.K.); ² Aarhus University (Denmark)
2337 12.00	THE ROLE OF BLOOD FLOW IN THE LOCALIZATION OF VASCULAR DISEASES: SPECULATION-BASED COMPUTER SIMULATION	Shigeo Wada ¹ , Yixiang Feng ¹ , Takami Yamaguchi ¹ , Takeshi Karino ²	¹ Department of Bioengineering and Robotics, Tohoku University (Japan); ² Research Institute for Electronic Science, Hokkaido University (Japan)
2420 12.15	EFFECTS OF A SHEAR FLOW AND WATER FILTRATION ON THE TRANSPORT OF LDL AND PROLIFERATION OF CELLS IN A MODEL OF AN ARTERY	Takeshi Karino ¹ , Jiro Sakai, Xiaomin He, Koichi Niwa	² Research Institute for Electronic Science, Hokkaido University (Japan)

SS55 Artificial Organs and Tissue Engineering (Standard Session - oral contributions)

Chair: Pascal Verdonck (Belgium)

Co-Chair: Jan Wojcicki (Poland)

Day and time: Monday 21st November, 11.00-12.30 (format 10+3 minutes)

Hall: Club D

Id	Title	Paper Authors	Authors' Institutions
1810 11.00	NUMERICAL ASSESSMENT OF FLUID FLOW AND OXYGEN AVAILABILITY IN THE AMC BIOARTIFICIAL LIVER	Guy Mareels ¹ , Sunny Eloit ¹ , Paul Poyck ² , Rob Chamuleau ² , <u>Pascal Verdonck</u> ¹	¹ Cardiovascular Mechanics and Biofluid Dynamics Research Group, Institute of Biomedical Technology, Ghent University, Gent (Belgium); ² Departments of Experimental Surgery and Hepatology, Academic Medical Center, University of Amsterdam, Amsterdam (The Netherlands)
1952 11.13	COMPUTER MODELING OF THE VOCAL FOLDS FUNCTION BASED ON THE "BUBBLES" PRINCIPLE	<u>Vojtěch MIŠUN</u> ¹ , Karel PŘIKRYL ¹	¹ Department of Mechanics of Bodies, Mechatronics and Biomechanics (Czech Republic)
2042 11.26	TOTAL REMOVED URIC ACID DURING DIALYSIS ESTIMATED BY ON -LINE ULTRA VIOLET ABSORBANCE IN THE SPENT DIALYSATE	Fredrik Uhlin ¹ , Lars-Göran Lindberg ² , <u>Ivo Fridolin</u> ³	¹ Department of Nephrology, University Hospital, Linköping (Sweden); ² Department of Biomedical Engineering, Linköping University, University Hospital (Sweden); ³ Biomedical Engineering Centre, Tallinn University of Technology (Estonia)
2453 11.39	SONOLUMINESCENCE ON MECHANICAL HEART VALVES AND ITS APPLICATION TO THE EVALUATION OF CAVITATION SEVERITY	<u>Koki Takiura</u> ¹ , Shuichi Mochizuki ² , Tsuneo Chinzei ² , Kou Imachi ¹	¹ Tohoku University Biomedical Engineering Research Organization (Japan); ² The University of Tokyo (Japan)
2452 11.53	NOVEL CELL CULTURING SYSTEM WITH MICROMACHINED TEMPLATE FOR THE REALIZATION OF A COMPLEX ORGAN	<u>Koki Takiura</u> ¹ , Yamato Fukuta ² , Hirofumi Funamizu ² , Shuichi Mochizuki ² , Hidemoto Nakagawa ² , Itsuro Saito ² , Takafumi Suzuki ² , Hiroyuki Fujita ² , Tsuneo Chinzei ²	¹ Tohoku University Biomedical Engineering Research Organization (Japan); ² The University of Tokyo (Japan)
2623 12.05	MICRO HOLE BASED SINGLE CHIP	<u>Sungbo Cho</u> ¹ , Hagen Thielecke ¹	¹ Fraunhofer Institute for Biomedical Engineering (Germany)

1410	ENHANCED MYOBLAST	<u>Lei Cheng</u> ¹ , Maode	¹ Department of Pathology and
12.18	MEDIATED GENE TRANSFER	Lai ¹ , Ming Li ²	Pathophysiology, Center for
	INTO MYOCYTES FOR THE		Environmental Genomics, College of
	PRODUCTION OF THERAPEUTIC		Medicine, Zhejiang University (China);
	PROTEINS		² Department of Medicine and
			Therapeutics, 9/F, Clinical Science
			Building, Prince of Wales Hospital, The
			Chinese University of Hong Kong (Hong
			Kong)

SS24 Embedded Systems in Biomedicine (Special Session - oral contributions)

Chair: Marek Penhaker (Czech Republic)

Co-Chair: Vilém Srovnal (Czech Republic)

Day and time: Monday 21st November, 11.00-12.30 (format 10+3 minutes)

Hall: Club E

Id	Title	Paper Authors	Authors' Institutions
1683 11.00	THE MEASURING OF GLYCEMIA BY SIGHTLESS PEOPLE	Lukáš Martinák ¹ , Marek Penhaker ¹	¹ VSB - Technical University of Ostrava (Czech Republic)
2215 11.13	AN EMBEDDED SYSTEM FOR THE ELECTROCARDIOGRAM RECOGNITION	Christos Pavlatos ¹ , Alexandros Dimopoulos ¹ , George Papakonstantinou ¹	¹ National Technical University of Athens (Greece)
2384 11.26	EMBEDEED PORTABLE BIOTELEMETRY SYSTEM OF HUMANS	Marek Penhaker ¹ , Jan Spišák ¹ , Martin Černý ¹ , Lukáš Martinák ¹	¹ VŠB - TU Ostrava (Czech Republic)
2470 11.39	USING OF EMBEDDED SYSTEMS IN BIOMEDICAL APPLICATIONS	Vilem Srovnal ¹	¹ VSB-Technical University of Ostrava (Czech Republic)
2583 11.52	MEDICAL THERMOGRAPHY AND ITS APPLICATION IN REHABILITATION OF SPINAL CORD INJURED INDIVIDUALS	Radovan Hudák ¹ , Jaroslav Majerník ¹ , Jozef Živčák ¹ , Teodor Tóth ¹	¹ Technical University of Košice, Department of Instrumental and Biomedical Engineering (Slovak Republic)
2596 12.05	REAL-TIME REGISTRATION OF RAW MEDICAL ULTRASOUND MULTI-MODALITY DATA USING SPECIALIZED USB DEVICE	Martin Imramovský ¹	¹ VSB-Technical University of Ostrava (Czech Republic)
2597 12.18	MECHANICAL TESTS OF BIOLOGICAL TISSUES	Radovan Hudák ¹ , Teodor Tóth ¹ , Jozef Živčák ¹ , Sylvia Gromošová ² , Ján Michel ³ , Peter Gál ⁴	¹ Technical University of Košice, Department of Instrumental and Biomedical Engineering (Slovak Republic); ² Pavol Jozef Šafárik University in Košice, Associated Tissue Bank (Slovak Republic); ³ Technical University of Košice, Department of Materials Science (Slovak Republic); ⁴ Pavol Jozef Šafárik University in Košice, Institute of Medical Biophysics (Slovak Republic)

SS8 Medical Image Processing and Interpretation (Special Session - oral contributions)

Chair: P.C. Chung (Taiwan)

Co-Chair: Mikuláš Popper (Slovakia)

Day and time: Monday 21st November, 11.00-12.30 (format 10+3 minutes)

Hall: Club H

Id	Title	Paper Authors	Authors' Institutions
1474 11.00	THE DETECTION OF TEETH ROOD TUBE USING ACTIVE CONTOUR MODEL	<u>Kuo-Sheng Cheng</u> ¹ , Neng-Yuh Zhou ¹ , Wen-Horng Ting ¹	¹ Institute of Biomedical Engineering, National Cheng Kung University (Taiwan)
2063 11.13	POINT SPREAD FUNCTION MODELLING FOR THE RESTORATION OF 3D IMAGES FROM THE EPICOPIC FLUORESCENCE IMAGE CAPTURING SYSTEM	<u>Daan Zhu</u> ¹ , Timothy Mohun ¹ , Stamatis Pagakis ²	¹ National Institute for Medical Research (U.K.); ² Foundation for Biomedical Research (Greece)
1964 11.26	REGULARIZED CELL COMPETITION ALGORITHM FOR BOUNDARY DELINEATION IN A SERIES OF 2D SONOGRAMS	<u>Jie-Zhi Cheng</u> ¹ , Chia-Yen Lee ¹ , Chung-Ming Chen ¹	¹ Institute of Biomedical Engineering, National Taiwan University, Taipei, Taiwan (Taiwan)
2447 11.39	USING FEATURE SELECTION WITH SUPPORT VECTOR MACHINE IN GASTRIC HISTOLOGY CLASSIFICATION	Chun-Rong Huang ¹ , Hsiu-Jui Kuo ¹ , <u>Pau-Choo Chung</u> ¹ , Mikulas Popper ¹	¹ Department of Electrical Engineering, National Cheng Kung University (Taiwan)
2310 11.52	AUTOMATIC KNEE OSTEOARTHRITIS PARAMETERS MEASUREMENT BASED ON X-RAY IMAGE	<u>Jiann-Shu Lee</u> ¹ , Chwin-Min Weng ² , Chii-Jeng Lin ³ , Shih-Hao Yeh ⁴	¹ Department of Information and Learning Technology, National University of Tainan (Taiwan); ² Department of Information Management, Tainan Woman's College of Arts and Technology (Taiwan); ³ Department of Orthopaedics, National Cheng Kung University Hospital (Taiwan); ⁴ Department of Emergency Medicine, National Cheng Kung University Hospital (Taiwan)
1472 12.05	IMPROVING THE TELE-CONSULTATION SERVICES-CAPABILITIES OF RETRO	Hewijin Christine Jiau ¹ , Chien-Cheng Lee ² , <u>Pau-Choo Chung</u> ¹ , Tsung-Lung Yang ³ , Kuo-Feng Ssu ¹ , Yu-Shian Kuo ¹	¹ Department of Electrical Engineering, National Cheng Kung University (Taiwan); ² Department of Communications Engineering, Yuan-Ze University (Taiwan); ³ Department of Radiology, Kaohsiung Veterans General Hospital (Taiwan)
1515 12.18	CELL TRACKING IN MICROSCOPIC IMAGE SEQUENCE	<u>Yung-Nien Sun</u> ¹	¹ National Cheng Kung University (Taiwan)

SS89 Biomedical Signal Processing (Standard Session - oral contributions)

Chair: Herbert Witte (Germany)

Co-Chair: Ivan Dotsinsky (Bulgaria)

Day and time: Monday 21st November, 14.00-16.00 (10+2 minutes)

Hall: Meeting Hall V

Id	Title	Paper Authors	Authors' Institutions
1546 14.00	BIAS ON THE APPROXIMATE ENTROPY OF RR TIME SERIES CAUSED BY THE ECG SAMPLING FREQUENCY	<u>Miguel Ángel García-González</u> ¹ , Mireya Fernández-Chimeno ¹ , Juan Ramos-Castro ¹	¹ Technical University of Catalonia (UPC) (Spain)
1942 14.12	IMPROVING QRS DETECTION IN MULTI-CHANNEL ELECTROCARDIOGRAPHY BY PRINCIPAL COMPONENTS ANALYSIS	<u>SUZANNA MARTENS</u> ¹ , <u>ROB SLUIJTER</u> ² , JAN BERGMANS ¹	¹ University of Technology Eindhoven (The Netherlands); ² Philips Research Laboratories (The Netherlands)
2028 14.24	SURFACE ELECTROCARDIOGRAMS RECONSTRUCTION FROM CARDIAC PROTHESIS ELECTROGRAMS	Marie-line Gentil ¹ , Fabienne Porée ¹ , Alfredo Hernandez ¹ , <u>Guy Carrault</u> ¹	¹ Laboratoire Traitement du Signal et de l'Image, Inserm 642, Université de Rennes 1, Rennes (France)
2065 14.36	PILOTING REAL-TIME QRS DETECTION ALGORITHMS IN VARIABLE CONTEXTS	François PORTET ^{1,2} , <u>GUY CARRAULT</u> ²	¹ IRISA, Université de Rennes 1 (France); ² LTSI, Unité INSERM 642 (France)
2503 12.48	COMPARISON OF HEARTBEAT SCALING EXPONENT DERIVED FROM LONG- AND SHORT-SEGMENTS AT DIFFERENTWAKE PERIODS	<u>Sandra Aguilar</u> ¹ , Juan Carlos Echeverría ¹ , Rocío Ortiz ¹ , Jesús Alvarez-Ramírez ² , Ramón González ³	¹ Electrical Engineering Department, Universidad Autónoma Metropolitana (Mexico); ² Process and Hydraulic Engineering Department, Universidad Autónoma Metropolitana (Mexico); ³ Health Science Department, Universidad Autónoma Metropolitana (Mexico)
2324 13.00	MOBILE INTERROGATION UNIT FOR SAW DELAY LINE SENSORS IN LONG-TERM ECG MONITORING	<u>Thomas Finnberg</u> ¹ , Anna Karilainen ¹ , Jörg Müller ¹	¹ Hamburg University of Technology (Germany)
2026 13.12	NONLINEAR ADDITIVE AUTOREGRESSIVE MODEL FOR SHORT-TERM HEART RATE VARIABILITY	Niels Wessel, Hagen Malberg, Robert Bauernschmitt, Alexander Schirdewan, Jürgen Kurths	
2280 13.24	FEATURE EXTRACTION AND SELECTION, BASED ON HYBRID, MIXED DOMAIN FEATURES IN HRV SIGNALS NEURAL CLASSIFIER	<u>Pawel Kostka</u> ^{1,2} , Ewaryst Tkacz ^{1,2}	¹ Silesian University of Technology, Institute of Electronics, Division of Microelectronics and Biotechnology, Gliwice. (Poland); ² Medical University of Silesia, Faculty of Pharmacy and Laboratory Medicine. (Poland)

1944 13.36	FRACTAL AND SYMBOLIC ANALYSIS OF HEART RATE VARIABILITY AND SLEEP STAGING	<u>Włodzimierz</u> <u>Klonowski</u> ^{1,2} , Elzbieta Olejarczyk ^{1,2} , Robert Stepien ^{1,2} , Giedrius Varoneckas ³ , Audrius Alonderis ³ , Danguole Zemaityte ³	¹ GBAF-SENSATION, Medical Research Center, Polish Academy of Sciences, Warsaw (Poland); ² Institute of Biocybernetics and Biomedical Engineering, Polish Academy of Sciences, Warsaw (Poland); ³ Institute of Psychophysiology and Rehabilitation c/o Kaunas University of Medicine, Palanga (Lithuania)
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SS75 Biomedical Image Processing (Standard Session - oral contributions)

Chair: Mariusz Kaczmarek (Poland)

Co-Chair: Zoltán Szabó (Czech Republic)

Day and time: Monday 21st November, 14.00-16.00 (format 10+2 minutes)

Hall: Meeting Hall I

Id	Title	Paper Authors	Authors' Institutions
1705 14.00	IMPROVING COMPUTER AIDED BREAST CANCER DETECTION USING JOINT ANALYSIS OF MULTIPLE MAMMOGRAPHIC VIEWS	<u>Marta Altrichter</u> ¹ , Zoltan Ludanyi ¹ , Gabor Horvath ¹	¹ Budapest University of Technology and Economics, Department of Measurement and Information Systems (Hungary)
1746 14.12	TEXTURE IN THYROID ULTRASONOGRAPHY AND ITS RELATION TO BCL-2 PROTEINS IN PATIENTS WITH BREAST CANCER AND AUTOIMMUNE THYROID DISEASES	<u>Daniel Smutek</u> ¹ , Jan Jiskra ¹	¹ 1st Medical Faculty, Charles University, Prague (Czech Republic)
2007 14.24	MASS DETECTION IN MAMMOGRAMS COMBINING TWO METHODS	<u>Norbert Tóth</u> ¹ , Gábor Takács ¹ , Béla Pataki ¹	¹ Budapest University of Technology and Economics, Department of Measurement and Information Systems (Hungary)
2238 14.36	DETECTION OF MICROCALCIFICATION CLUSTERS IN SCREENING MAMMOGRAPHY	Gabor Horvath ¹ , <u>Bela Pataki</u> ¹ , Akos Horvath ¹ , Gabor Takacs ¹ , Gergely Balogh ¹	¹ Budapest University of Technology and Economics, Dept, of Measurement and Information Systems (Hungary)
2251 14.48	DETECTION OF MICROCALCIFICATIONS IN MAMMOGRAMS USING 2D PREDICTION FILTERING AND A NEW STATISTICAL MEASURE OF THE RIGHT TAIL WEIGHT	<u>Begona Acha</u> ¹ , Carmen Serrano ¹ , Rangaraj Rangayyan ²	¹ University of Seville (Spain); ² University of Calgary (Canada)
2496 15.00	FAST ENHANCEMENT OF MAMMOGRAPHIC IMAGES USING WAVELETS AND CLAHE ON A DISTRIBUTED PROCESSING SYSTEM	<u>Panos Bougioukos</u> ¹ , Antonis Daskalakis ¹ , Dimitris Glotsos ¹ , Nikos Dimitropoulos ² , Dionisis Cavouras ³ , George Nikiforidis ¹	¹ University of Patras, Department of Medical Physics, Patras (Greece); ² EUROMEDICA Medical Center, Department of Medical Imaging, Athens (Greece); ³ Technological Institute of Athens, Department of Medical Instrumentation Technology (Greece)
2346 15.12	THERMOGRAM CLASSIFICATION IN BREAST CANCER DETECTION	<u>Michal Závisek</u> ¹ , Aleš Drastich ¹	¹ Brno University of Technology (Czech Republic)
1945 15.24	CLASSIFICATION OF GASTRIC TUMORS BASED ON SHAPE FEATURES OF THE GLAND	<u>Toshiyuki Tanaka</u> ¹ , Yoshitaka Uchino ¹ , Teruaki Oka ²	¹ Keio University (Japan); ² Kanto Central Hospital (Japan)

2166 15.36	WAVELET-BASED ANALYSIS AND CLASSIFICATION OF LIVER CT	Tryphon Lambrou ¹ , Alf Linney ¹ , Andrew Todd-Pokropek ¹	¹ University College London (U.K.)
2504 16.48	GENETIC ALGORITHMS FOR FINITE MIXTURE MODEL BASED TISSUE CLASSIFICATION IN BRAIN MRI	Jussi Tohka ^{1,2} , Evgeny Krestyannikov ² , Ivo Dinov ^{1,3} , David Shattuck ¹ , Ulla Ruotsalainen ² , Arthur W. Toga ¹	¹ Laboratory of Neuro Imaging, Department of Neurology, UCLA (USA); ² Institute of Signal Processing, Tampere University of Technology (Finland); ³ Department of Statistics, UCLA (USA)

SS120 Medical Imaging (Standard Session - oral contributions)

Chair: Peter Boesiger (Switzerland)

Co-Chair: Arcangelo Merla (Italy)

Day and time: Monday 21st November, 14.00-16.00 (format 10+2 minutes)

Hall: Club A

Id	Title	Paper Authors	Authors' Institutions
2338 14.00	SELF ORGANIZED MAPS FOR INTESTINAL CONTRACTIONS CATEGORIZATION WITH WIRELESS CAPSULE VIDEO ENDOSCOPY	Fernando Luis Vilarino ¹ , <u>Panagiota Spyridonos</u> ¹ , Jordi Vitria ¹ , Petia Radeva	¹ Computer Vision Center (Spain)
1931 14.12	CONTENT-BASED IMAGE RETRIEVAL FOR CAROTID PLAQUE ULTRASOUND IMAGES	Christodoulos Christodoulou ^{1,2} , <u>Constantinos Pattichis</u> ² , Efthymoulos Kyriacou ^{1,2} , Andrew Nicolaides ¹	¹ Cyprus Institute of Neurology and Genetics (Cyprus); ² Dep. of Computer Science, University of Cyprus (Cyprus)
1842 14.24	POLARIZATION MEASUREMENT OF BACKSCATTERING FROM TURBID MEDIA FOR TISSUE CHARACTERIZATION	<u>Mamiko Fujii</u> ¹ , Kiyoshi Nakayama ¹	¹ Sophia University (Japan)
2156 14.36	MOSAICKING OF HIGH-RESOLUTION BIOMEDICAL IMAGES ACQUIRED FROM WIDE-FIELD OPTICAL MICROSCOPE	<u>Vladimír Ulman</u> ¹	¹ Faculty of Informatics, Masaryk University (Czech Republic)
2235 14.48	COMPUTER SIMULATOR OF MAMMOGRAPHY CONTEMPLATING THE CLASSIFICATION OF ACR BI-RADS™	<u>Francisco Carlos da Silva</u> ¹ , Henrique J. Quintino Oliveira ¹ , Ricardo Rodrigues Falconi ¹ , Rejane de Almeida Borges ¹ , Anabel Medeiros Scaranello ²	¹ University of Mogi das Cruzes (Brazil); ² University Federal of São Paulo (Brazil)
1520 15.00	DIFFERENCE OF THE CORPUS CALLOSUM ON MIDSAGITTAL PLANE BETWEEN NORMAL MALE, FEMALE AND TRANSSEXUALS	<u>Yasunari Yokota</u> ¹ , Yoko Kawamura ¹ , Yuzuru Kameya ²	¹ Gifu University (Japan); ² Kameya Mental Clinic (Japan)

2269 15.12	SURGICAL PLANNING FOR PROSTHESIS IMPLANTATION IN THE SHOULDER JOINT BASED ON FREEHAND ULTRASOUND VOLUMES	<u>Ute von Jan</u> ¹ , Dennis Sandkühler ² , Ludger Kirsch ³ , Oliver Rühmann ³ , Heinrich Martin Overhoff ²	¹ Institute of Medical Informatics, Hannover Medical School (Germany); ² Medical Engineering Laboratory, University of Applied Sciences Gelsenkirchen (Germany); ³ Orthopedic Department, Hannover Medical School (Germany)
2263 15.24	DIAGNOSTIC VALUE OF THERMAL IMAGING DUE TO WHOLE BODY CRYOTHERAPY	<u>Armand Cholewka</u> ¹ , Zofia Drzazga ¹	¹ Institute of Physics Silesian University (Poland)
1537 15.36	FUNCTIONAL INFRARED IMAGING IN THE MYOFASCIAL PAIN	<u>Arcangelo Merla</u> ^{1,2} , Fabio Ciuffolo ³ , Gaetano De Michele ² , Andrea Tangherlini ² , Gian Luca Romani ^{1,2} , Michele D'Attilio ³ , Silvia Rezza ³ , Felice Festa ³	¹ ITAB – Institute of Advanced Biomedical Technologies – Foundation “Universita’ d’Annunzio”, Chieti (Italy); ² Clinical Sciences and Bioimaging Dept., University “G. d’Annunzio” of Chieti (Italy); ³ Section of Orthodontic and Gnathology, Department of Oral Science, University “G. d’Annunzio” of Chieti (Italy)
2110 15.48	DIGITAL HOLOGRAPHIC MICROSCOPY , A NEW IMAGING TECHNOLOGY APPLIED TO LIFE SCIENCES	<u>Christian Depeursinge</u> ¹ , Anca Marian ¹ , Frederic Montfort ² , Tristan Colomb ¹ , Florian Charriere ¹ , Jonas Kühn ¹ , Nicolas Aspert ² , Etienne Cuche ² , Yves Emery ² , Pierre Marquet ³ , Etienne Cuche ² , Yves Emery ² , Pierre Marquet ³ , Pierre J. Magistretti ³	¹ Imaging and Applied Optics Institute, Ecole Polytechnique Fédérale de Lausanne, CH-1005 Lausanne, Suisse (Switzerland); ² Lyncée Tec SA, PSE A, CH-1015 Lausanne, Suisse (Switzerland); ³ Centre de Neurosciences Psychiatriques, Département de psychiatrie DP-CHUV, Site de Cery, 1008 Prilly-Lausanne (Switzerland)

SS3 ESEM Tissue Engineering for Orthopaedics Applications Symposium (Special Session - oral contributions)

Chair: Clive Lee (Ireland)

Co-Chair: Fergal O'Brien (Ireland)

Day and time: Monday 21st November, 14.00-16.00 (format 10+7 minutes)

Hall: Club B

Id	Title	Paper Authors	Authors' Institutions
1496 14.00	THE EFFECT OF PORE SIZE ON PERMEABILITY AND CELL ATTACHMENT IN COLLAGEN-GAG SCAFFOLDS	<u>Fergal O'Brien</u> ¹ , Mary Waller, Brendan Harley, Petrick Prendergast, Ioannis Yannas, Lorna Gibson	¹ Department of Anatomy, Royal College of Surgeons (Ireland)
1455 14.17	A COLLAGEN GLYCOSAMINOGLYCAN SCAFFOLD SUPPORTS ADULT RAT MESENCHYMAL STEM CELL DIFFERENTIATION ALONG THE OSTEOGENIC AND CHONDROGENIC ROUTES	<u>Eric Farrell</u> ¹ , Fergal O'Brien, Patrick Prendergast, Paul Doyle, Veronica Campbell	¹ Trinity Centre for Bioengineering, School of Engineering, Trinity College, University of Dublin (Ireland)
2264 14.34	INVESTIGATING CELL-SUBSTRATE MECHANICAL INTERACTION: A TISSUE ENGINEERING APPROACH	<u>Debbie Chachra</u> ¹ , Erin McCusker ¹	¹ Franklin W. Olin College of Engineering (USA)
2648 14.51	BIOACTIVE COMPOSITES FOR BONE TISSUE ENGINEERING	<u>Elizabeth Tanner</u> ¹	¹ Department of Materials, Queen Mary, University of London (United Kingdom)
2082 15.08	EFFECT OF ELECTROMAGNETIC STIMULATION ON BONE MATRIX PRODUCTION BY SAOS-2 OSTEOBLASTS SEEDED ONTO A POLYURETHANE POROUS SCAFFOLD	<u>Lorenzo Fassina</u> ¹ , Livia Visai ² , Aurora Farina ³ , Valentina Maliardi ³ , Franco Benazzo ⁴ , Giovanni Magenes ¹	¹ Dipartimento di Informatica e Sistemistica, University of Pavia, Pavia (Italy); ² Dipartimento di Biochimica, University of Pavia, Pavia (Italy); ³ Dipartimento di Medicina Sperimentale, University of Pavia, Pavia (Italy); ⁴ Dipartimento SMEC, Ortopedia, University of Pavia, Pavia (Italy)
1657 15.25	OSTEOCHONDRAL DEFECT REPAIR USING A NOVEL TISSUE ENGINEERING APPROACH - SHEP MODEL STUDY	<u>Robert Pilliar</u> ¹ , Rita Kandel ^{2,1} , Marc Grynblas ^{2,1} , Paul Zalzal ² , Mark Hurtig ³ , Jennifer Lee ²	¹ IBBME, University of Toronto (Canada); ² Mt Sinai Hospital & IBBME, University of Toronto (Canada); ³ Ontario Vet College, Guelph University (Canada)
2388 15.42	ORTHOPAEDIC TISSUE ENGINEERING: NOVEL APPROACHES AND CLINICAL APPLICATION	<u>Glenn Dickson</u> ¹ , Fraser Buchanan, David Marsh, Mervyn McCaigue, Eileen Harkin-Jones	¹ Department of Trauma & Orthopaedic Surgery, Musgrave Park Hospital, Belfast (Northern Ireland)

SS53 Medical Informatics (Standard Session - oral contributions)

Chair: Lenka Lhotská (Czech Republic)

Co-Chair: Petr Pošík (Czech Republic)

Day and time: Monday 21st November, 14.00-16.00 (format 10+3 minutes)

Hall: Club C

Id	Title	Paper Authors	Authors' Institutions
1450 14.00	CLASSIFICATION OF CAPSULE ENDOSCOPIC IMAGES BASED ON TEXTURE AND NEURO-FUZZY SYSTEMS	Vassilis Kodogiannis ¹ , Edmund Wadge ¹	¹ University of Westminster (U.K.)
1481 14.13	AUBADE - A WEARABLE EMG AUGMENTATION SYSTEM FOR ROBUST EMOTIONAL UNDERSTANDING	Christos Katsis ^{1,2} , Nikolaos Katertsidis ² , George Ganiatsas ² , Dimitrios Fotiadis ²	¹ Department of Medical Physics, Medical School, University of Ioannina, Ioannina (Greece); ² Unit of Medical Technology and Intelligent Information Systems, Department of Computer Science, University of Ioannina, Ioannina (Greece)
1485 14.26	CLASSIFICATION OF TRANSIENT EVENTS IN EEG RECORDINGS USING SUPPORT VECTOR MACHINES	Alexandros Tzallas ¹ , Christos Katsis ¹ , Petros Karvelis ² , Dimitrios Fotiadis ² , Sotirios Giannopoulos ³ , Spiridon Konitsiotis ³	¹ Dept. of Medical Physics, Medical School, University of Ioannina, Ioannina (Greece); ² Unit of Medical Technology and Intelligent Information Systems, Dept. of Computer Science, University of Ioannina, Ioannina (Greece); ³ Dept. of Neurology, Medical School, University of Ioannina, Ioannina (Greece)
2478 14.39	VESTIBULO-OCULAR REFLEX SIGNAL PROCESSING USING EVOLUTIONARY ALGORITHM	Petr Pošík ¹	¹ Czech Technical University in Prague, Faculty of Electrical Engineering, Dept. of Cybernetics (Czech Republic)
2553 14.52	A DECISION SUPPORT SYSTEM FOR THE MONITORING OF PATIENTS TREATED BY HEMODIALYSIS BASED ON A BAYESIAN NETWORK	Smali Cherif ^{1,2} , Rose Cederic ^{1,2} , Charpillet François ^{1,2}	¹ INRIA-LORIA, Vandoeuvre (France)
1723 15.05	MODELLING AND SIMULATION OF CLINICAL PROCESSES ILLUSTRATED BY THE EXAMPLE OF THE "ACUTE CORONARY SYNDROME"	Katja Eisentraut ¹ , Frank Richter ²	¹ Department of Medical Informatics, Technical University, Ilmenau (Germany); ² Medical Solutions, Siemens AG, Erlangen (Germany)
2255 15.18	A PREDICTIVE APPROACH TO GENERIC ECG DATA COMPRESSION	Mário Brito ¹ , Jorge Henriques ¹ , Paulo Gil ¹ , Manuel Antunes ²	¹ Centre for Informatics and Systems, University of Coimbra (Portugal); ² Centre of Cardio-thoracic Surgery, University Hospital of Coimbra (Portugal)

2540 15.31	COLLECTION AND CHARACTERIZATION OF A DATABASE FORMED BY MYOCARDIAL SCINTIGRAPHIC IMAGES	<u>Manoel Alves</u> ¹ , Luis Carvalho ^{2,3} , Elmar Melcher ¹	¹ Federal University of Campina Grande (Brazil); ² Federal University of Paraiba (Brazil); ³ UNIPE (Brazil)
2551 15.44	HIERARCHICAL CLASIFICACION OF ELECTRONOGRAPHICAL IMAGES	<u>Elena Mircea</u> ¹	¹ University Politehnica of Bucharest (Romania)

SS17 Processing of Magnetic Resonance Images (Special Session - oral contributions)

Chair: Hannu Eskola (Finland)

Co-Chair: Antonio Bosnjak (Venezuela)

Day and time: Monday 21st November, 14.00-16.00 (format 15+5 minutes)

Hall: Club D

Id	Title	Paper Authors	Authors' Institutions
1568 14.00	A 3-D IMAGE REGISTRATION METHOD FOR DYNAMIC SUBTRACTION OF MAGNETIC RESONANCE LIVER VOLUMES	<u>Luca Mainardi</u> ^{1,4} , Katia Marina Passera ^{1,4} , Paolo Potepan ^{3,4} , Agnese Lucesoli ² , Ernesto Setti ^{3,4} , Daniele Vergnaghi ^{3,4}	¹ Department of Biomedical Engineering, Polytechnic University of Milan, Italy (Italy); ² Department of Electromagnetism and Bioengineering, Marche Polytechnic University, Italy (Italy); ³ Department of Imaging Diagnosis and Radiotherapy, National Cancer Institute of Milan, Italy (Italy); ⁴ Laboratory of Advanced Radiological Image Analysis (LARA), Milano, Italy (Italy)
1955 14.20	AUTOMATIC DETECTION AND SEGMENTATION OF BREAST LESIONS ON MR IMAGES USING 3D LEVEL SET TECHNIQUE	<u>Federico Veronesi</u> ^{1,2} , Cristiana Corsi ¹ , Alessandro Sarti ¹ , Leonardo Bocchi ³ , Claudio Lamberti ¹	¹ DEIS, University of Bologna (Italy); ² Polytechnic of Milan (Italy); ³ University of Florence (Italy)
2595 14.40	COMPUTER ASSISTED PLANNING USING DEPENDENT TEXTURE MAPPING AND MULTIPLE RENDERING PROJECTIONS IN MEDICAL APPLICATIONS	<u>Guillermo Montilla</u> ¹ , <u>Antonio Bosnjak</u> ¹ , Iván Jara ² , Hyxia Villegas ¹	¹ Centro de Procesamiento de Imágenes, Universidad de Carabobo, Valencia (Venezuela); ² Hospital Metropolitano del Norte, Valencia (Venezuela)
2533 15.00	NOVEL ALGORITHM FOR ACTIVE SURFACE RECONSTRUCTION BY BAYESIAN CONSTRAINED SPECTRAL METHOD	<u>Tomasz Soltysinski</u> ¹	¹ Warsaw University of Technology (Poland)
2070 15.20	STATISTICAL ANALYSIS FOR BRAIN TUMOR MEASUREMENT APPROACHES	<u>Yasser Salman</u> ¹ , A.M Badawi, M.A Assal, S.M Alian, M.M Bayomi	

SS35 e-Learning in Biomedical Engineering (Special Session - oral contributions)

Chair: Jaakko Malmivuo (Finland)

Co-Chair: Helmut Hutten (Austria)

Day and time: Monday 21st November, 14.00-16.00 (format 15+5 minutes)

Hall: Club E

Id	Title	Paper Authors	Authors' Institutions
2009 14.00	BIOMEDICAL ENGINEERING EDUCATION ON THE INTERNET AT THE RAGNAR GRANIT INSTITUTE: A MODEL FOR AN EUROPEAN E-LEARNING NETWORK	<u>Juha Nousiainen</u> ¹ , Jaakko Malmivuo ¹	¹ Tampere University of Technology (Finland)
2669 14.20	APPLICATION OF INTERNET FOR COURSE EXAMINATIONS	<u>Jaakko Malmivuo</u> ¹ , Juha Nousiainen ¹ , Tomi Hasu ¹	¹ Tampere University of Technology (Finland)
2111 14.40	USE OF CONCEPT MAPS IN BIOMEDICAL ENGINEERING EDUCATION	Tomi Hasu ¹ , Juha Nousiainen ¹ , <u>Jaakko Malmivuo</u> ¹	¹ Tampere University of Technology (Finland)
1958 15.00	INTERNET-BASED E-LEARNING PLATFORM FOR AN INDIVIDUALLY CONTROLLED PROGRAMME WITH SEQUENTIAL STRUCTURE AND OBLIGATORY TESTS FOR PERFORMANCE EVALUATION	<u>Helmut Hutten</u> ^{1,2} , Wolfgang Stiegmaier ²	¹ University of Technology, Graz (Austria); ² CORTRONIK, Graz (Austria)
1836 15.20	EVALUATION OF STUDENTS PSYCHOPHYSICAL INVOLVEMENT DURING E-LEARNING PROCESS, THROUGH PHYSIOLOGICAL AND PSYCHOLOGICAL DATA ACQUISITION	<u>Stefano Scotti</u> ¹ , Maurizio Mauri ² , Luca Mainardi ¹ , Sergio Cerutti ¹ , Marco Villamira ²	¹ Polytechnic of Milan (Italy); ² IULM UNiversity Milan (Italy)
1978 15.40	VIRTUAL BIO-INSTRUMENTATION FRAMEWORK FOR THE STUDY AND SIMULATION OF BIOSIGNAL CORRUPTION BY ELECTROMAGNETIC PERTURBATIONS AND ARTEFACTS	Joaquin Roca Dorda ¹ , Jose A. Noguera Arnaldos ¹ , <u>Joaquín Roca González</u> ¹	¹ Polytechnic University of Cartagena (Spain)

SS68 Biomechanics I. (Standard Session - oral contributions)

Chair: Pascal Verdonck (Belgium)

Co-Chair: Jan Čulík (Czech Republic)

Day and time: Monday 21st November, 14.00-16.00 (format 10+2 minutes)

Hall: Club H

Id	Title	Paper Authors	Authors' Institutions
1505 14.00	CFD MODELING OF BLOOD FLOW INSIDE HUMAN LEFT CORONARY ARTERY BIFURCATION WITH ANEURYSMS	Nurullah Arslan ¹ , Volkan Tuzcu ² , Selman Nas ² , Ayse Durukan ¹	¹ FATIH UNIVERSITY (Turkey); ² UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCE (USA)
1642 14.12	ASSESSMENT OF GLOBAL AND LOCAL PRESSURE WAVE REFLECTION IN THE AORTA OF PATIENTS WITH MARFAN DISEASE	Patrick Segers ¹ , Julie De Backer ² , Dan Devos ² , Stein Inge Rabben ³ , Thierry Gillebert ² , Luc Van Bortel ² , Johan De Sutter ² , Anne De Paepe ² , Pascal Verdonck ¹	¹ Cardiovascular Mechanics and Biofluid Dynamics, Ghent University (Belgium); ² Ghent University Hospital (Belgium); ³ Institute for Surgical Research, Rikshospitalet University Hospital, Oslo (Norway)
2624 14.24	CHARACTERIZATION OF HEALTHY AND DISEASED HUMAN ASCENDING AORTA TISSUE	Nusrat Choudhury ¹	¹ McGill University (Canada)
2655 14.36	INTERACTIONS BETWEEN PLATELETS AND ENDOTHELIAL CELLS IN AN ASYMMETRIC STENOSIS MODEL	Leonie Rouleau ¹ , Farcas Monica ¹ , Théoret Jean-Francois ³ , Mongrain Rosaire ^{2,3} , Tardif Jean-Claude ³ , Thorin Eric ³ , Merhi Yahye ³ , L. Leask Richard ^{1,3}	¹ *Department of Chemical Engineering, McGill University (Canada); ² *Department of Mechanical Engineering, McGill University (Canada); ³ Montreal Heart Institute (Canada)
2405 14.48	OUTER BOUNDARY AMBIGUITY EFFECTS ON INTRA-PLAQUE STRESS DISTRIBUTION IN ATHEROSCLEROTIC PLAQUES	Mohammad Reza Ahmadian ¹	¹ LEMA- Laboratoire d'Etude Mécanique des Assemblages, Université de Versailles et Saint Quentin-en-Yvelines (France)

2618 15.00	MECHANICAL MODULI OF AORTA AND ITS ARTIFICIAL SUBSTITUTES	Jiří Polanský ² , Olivier Boiron ³ , Aude Lescaille ⁴ , Vít Nováček ¹	¹ University of West Bohemia/Department of Mechanics, Plzen (Czech Republic); ² University of West Bohemia/Department of Power System Engineering, Plzen (Czech Republic); ³ EGIM – IRPHE, IMT, Technopole de Chateau-Gombert, Marseille (France); ⁴ Institut Supérieur des Bio Sciences, Paris (France)
2563 15.12	HEAT TRANSFER FROM ATHEROSCLEROTIC PLAQUES IN MULTIFOCAL CORONARY ARTERY DISEASE – A CFD MODEL	Lior Rosen ¹ , <u>Ze'ev Aronis</u> ¹ , Moshe Rosenfeld ¹ , Shmuel Einav ¹	¹ Tel-Aviv University (Israel)
1713 15.24	NON-LINEAR ISOCHRONES IN PRESSURE-VOLUME LOOPS OF MOUSE VENTRICLES	Tom Claessens ¹ , Dimitrios Georgakopoulos ² , Marina Afanasyeva ³ , Huntley Millar ⁴ , Nikolaos Stergiopoulos ⁵ , Nico Westerhof ⁶ , Pascal Verdonck ¹ , <u>Patrick Segers</u> ¹	¹ Institute of Biomedical Technology, Ghent University (Belgium); ² Department of Medicine, Johns Hopkins University School of Medicine, Baltimore, Maryland (USA); ³ Department of Pathology, Johns Hopkins University School of Medicine, Baltimore, Maryland (USA); ⁴ Millar Instruments, Houston, Texas (USA); ⁵ Laboratory of Hemodynamics and Cardiovascular Technology, Lausanne (Switzerland); ⁶ Laboratory for Physiology, ICar-VU, VU University Medical Center (The Netherlands)
2240 15.36	UNSTEADY FLOW INVESTIGATION BEHIND THE END-TO-SIDE ANASTOMOSIS	<u>Jan Matěcha</u> ¹ , Hana Netřebská ¹ , Jan Tůma ¹ , Michal Schmirler ¹ , Josef Adamec ¹	¹ Division of Fluid Dynamics and Thermodynamics, Czech Technical University in Prague, Faculty of Mechanical Engineering, Prague, Czech Republic (Czech Republic)
2241 15.48	EXPERIMENTAL STUDY OF FLOW THROW STENOSIS	<u>Hana Netřebská</u> ¹ , Michal Schmirler ¹ , Jan Tůma ¹ , Jan Matěcha ¹ , Josef adamec ¹	¹ Department of Fluid Dynamics and Power Engineering, Czech Technical University (Czech Republic)

SS90 (SS89 II.) Biomedical Signal Processing (Standard Session - oral contributions)

Chair: Herbert Witte (Germany)

Co-Chair: Tarmo Lipping (Finland)

Day and time: Monday 21st November, 16.30-18.30 (format 10+2 minutes)

Hall: Meeting Hall V

Id	Title	Paper Authors	Authors' Institutions
1986 16.30	AUTOMATIC DETECTION OF SLEEP STAGES IN PRETERM NEONATES BY EXPLORING THE TIME STRUCTURE OF THE EEG	<u>Vladimir Krajca</u> ¹ , Jitka Mohylova ² , Karel Paul ³ , Svojmil Petranek ¹	¹ Faculty Hospital Bulovka (Czech Republic); ² Technical University Ostrava (Czech Republic); ³ Institute for Care of Mother and Child (Czech Republic)
2171 16.42	THE INVESTIGATION OF COMPLEX NEURAL NETWORK ON EPILEPTIFORM PATTERN CLASSIFICATION	<u>Fernando de Azevedo</u> ¹ , Sheila Travessa ¹ , Fernanda Argoud ¹	¹ Federal University of Santa Catarina - UFSC (Brazil)
2200 16.54	AUTOMATIC LATERALIZATION OF TLE BASED ON NON-LINEAR CORRELATION ON SCALP EEG: STUDY ON 43 PATIENTS	Matthieu Caparos ¹ , <u>Valerie Louis-Dorr</u> ¹ , Fabrice Wendling ² , Jean-Pierre Vignal ³ , Didier Wolf ¹	¹ Institut National Polytechnique de Lorraine, UMR 7039 CRAN CNRS-UHP-INPL, Vandoeuvre-les-Nancy (France); ² Laboratoire Traitement du Signal et de l'Image, UMR INSERM 642, Rennes (France); ³ Centre Hospitalier Univeritaire, Service de Neurologie, Nancy (France)
2258 17.06	ENTRAINMENT OF THE ALPHA RHYTHM DURING FLICKER STIMULATION IN HUMAN EEG AND MEG RECORDINGS	<u>Karin Schwab</u> ¹ , Carolin Ligges ² , Bernd Hilgenfeld ³ , Jens Haueisen ³ , Herbert Witte ¹	¹ Institute of Medical Statistics, Computer Sciences and Documentation, Medical Faculty of the Friedrich Schiller University Jena (Germany); ² Department of Child and Adolescents Psychiatry, Medical Faculty of the Friedrich Schiller University Jena (Germany); ³ Department of Neurology, Biomagnetic Centre, Medical Faculty of the Friedrich Schiller University Jena (Germany)
2534 17.18	TOWARDS FEATURE SPACE REPRESENTATION OF EEG SIGNALS AFFECTED BY MEDICAL TREATMENT	<u>Tomasz Soltysinski</u> ¹ , Pawel Niedbalski ¹	¹ Warsaw University of Technology (Poland)

2148 17.30	POWER SPECTRUM ESTIMATION IN THE CALCULATION OF SPECTRAL ENTROPY TO ASSESS THE DEPTH OF SEDATION	<u>Tarmo Lipping</u> ¹ , Andres Anier ² , Ville Jäntti ¹ , Sari Melto ³ , Seppo Hovilehto ³	¹ Tampere University of Technology (Finland); ² Tallinn University of Technology (Estonia); ³ South Karelia Central Hospital (Finland)
1745 17.42	DISCRIMINATING OCD PATIENTS FROM HEALTHY CONTROLS USING PATTERN RECOGNITION METHODS ON THE P600 COMPONENT OF ERP SIGNALS	<u>Ioannis Kalatzis</u> ¹ , Errikos Ventouras ¹ , Nikolaos Piliouras ¹ , Dimitrios Glotsos ² , Charalampos Papageorgiou ^{3,4} , Andreas Rabavilas ⁴ , Constantin Soldatos ³ , Donisios Cavouras ¹	¹ Department of Medical Instrumentation Technology, Technological Educational Institution of Athens (Greece); ² Department of Medical Physics, University of Patras (Greece); ³ Department of Psychiatry, Eginition Hospital, Medical School, University of Athens (Greece); ⁴ University Mental Health Research Institute, Athens (Greece)
1799 17.54	THE ANISOTROPIC VERSUS THE ISOTROPIC SPHERICAL HEAD MODEL IN THE PRESENCE OF NOISE	<u>Hans Hallez</u> ^{1,3} , Peter Van Hese ^{1,3} , Bart Vanrumste ² , Paul Boon ³ , Yves D'Asseler ¹ , Ignace Lemahieu ¹ , Rik Van de Walle ¹	¹ Medical Image and Signal Processing (MEDISIP), Department of Electronics and Information Systems (ELIS-MEDISIP), Ghent University, Ghent, Belgium (Belgium); ² Department of Electrical Engineering (ESAT-SCD), KU Leuven, Leuven, Belgium (Belgium); ³ Laboratory for clinical and experimental neurophysiology, Department of Neurology, Ghent University Hospital, Ghent, Belgium (Belgium)
2208 18.06	INVERSE SOLUTION FOR SINGLE SLEEP SPINDLES PARAMETRIZED BY MULTICHANNEL MATCHING PURSUIT	<u>Marek Artur Matysiak</u> ¹ , Eduardo Martinez Montes ²	¹ Department of Biomedical Physics, Warsaw University (Poland); ² Department of Brain Dynamics, Cuban Neuroscience Centre (Cuba)
2479 18.18	SLEEP APNEA DETECTION BY POLYSOMNOGRAPHIC ANALYSIS	<u>Mihaela Ungureanu</u> ¹ , Werner Wolf ¹ , Rodica Strungaru ² , St. Cososchi ²	¹ Politehnica University of Bucharest (Romania); ² University A.F. Munich (Germany)

SS76 (SS75 II.) Biomedical Image Processing (Standard Session - oral contributions)

Chair: Mariusz Kaczmarek (Poland)

Co-Chair: Zoltán Szabó (Czech Republic)

Day and time: Monday 21st November, 16.30-18.30 (format 10+2 minutes)

Hall: Meeting Hall I

Id	Title	Paper Authors	Authors' Institutions
1767 16.30	A NEW METHOD FOR AUTOMATIC SEGMENTATION OF ENDOCARDIAL BOUNDARIES IN ECHOCARDIOGRAPHIC SEQUENCES	<u>Cristiana Corsi</u> ¹ , Federico Veronesi ¹ , Alessandro Sarti ¹ , Claudio Lamberti ¹	¹ DEIS, University of Bologna (Italy)
1827 16.42	PATTERN RECOGNITION BASED SEGMENTATION VERSUS WAVELET MAXIMA CHAIN EDGE REPRESENTATION FOR NUCLEI DETECTION IN MICROSCOPY IMAGES OF THYROID NODULES	<u>DIMITRIS</u> <u>GKLOTSOS</u> ¹ , STAVROS TSANTIS ¹ , JAN KYBIC ² , IOANNIS KALATZIS ⁴ , PANAGIOTA RAVAZOULA ³ , NIKOS DIMITROPOULOS ⁵ , GEORGE NIKIFORIDIS ¹ , DIONISIS CAVOURAS ⁴	¹ University of Patras, Department of Medical Physics (Greece); ² Czech Technical University, Department of Cybernetics, Prague (Czech Republic); ³ University Hospital of Patras, Department of Pathology, Patras (Greece); ⁴ Technological Institute of Athens, Department of Medical Instrumentation Technology, Athens (Greece); ⁵ EUROMEDICA Medical Center, Department of Medical Imaging, Athens (Greece)
1935 16.54	PRE-PROCESSING COMPUTER TOMOGRAPHY IMAGES FOR SEGMENTATION BASED ON REGION GROWING METHODS	<u>Tomáš Červinka</u> ¹ , Ivo Provazník ¹ , Jari Hytinen ² , Tomi Heinonen ^{2,3} , Prasun Dastidar ^{4,5}	¹ Brno University of Technology (Czech Republic); ² Tampere University of Technology (Finland); ³ Nokia Corporation (Finland); ⁴ Tampere University Hospital (Finland); ⁵ Tampere Medical School (Finland)
2095 17.06	FINDING CLOSE PROXIMITY OF HEART IN PET IMAGES AS PREPROCESSING FOR CONTOURING AND SEGMENTATION OF LEFT HEART VENTRICLE MUSCLE	<u>Rafał Bilko</u> ¹ , Tadeusz Palko ¹	¹ Institute of Precision and Biomedical Engineering, Warsaw University of Technology (Poland)
2242 17.18	FUZZY COLOUR C-MEANS CLUSTERING FOR PATTERN SEGMENTATION IN HISTOLOGICAL IMAGES	Gloria Bueno ¹ , <u>Roberto</u> <u>González</u> ¹ , Jesús González ² , Marcial García-Rojo ²	¹ Universidad de Castilla-La Mancha (Spain); ² Hospital General de Ciudad Real (Spain)

1988 17.30	A VISUALIZATION TOOL FOR GLOBAL ASSESSMENT OF BRONCHIECTASIS AND LOCAL EVALUATION OF THE AIRWAYS	<u>BENJAMIN ODRY</u> ^{1,2} , ATILLA KIRALY ² , CAROL NOVAK ² , JEAN-FRANCOIS LERALLUT ¹ , D. P. NAIDICH ³	¹ Universite de Technologie de Compiegne (France); ² Siemens Corporate Research (USA); ³ New York University Medical Center (USA)
1459 17.42	WATER-BORNE MICRO-ORGANISM CRYPTOSPORIDIUM DETECTION USING IMAGE PROCESSING	<u>HERNANDO FERNANDEZ-CANQUE</u> ¹ , BARRY BEGGS ¹ , ELAINE SMITH ¹ , HUW SMTH ² , SORIN HINTEA ³ , ALLAN PELLOW ¹	¹ GLASGOW CALEDONIAN UNIVERSITY (U.K.); ² SCOTTISH PARASITE DIAGNOSTIC LABORATORY (U.K.); ³ TECHNICAL UNIVERSITY OF CLUJ NAPOCA (Romania)
1637 17.54	COMPUTER-AIDED ANALYSIS OF DERMATOGLYPHIC DATA	<u>Ludmila Faynberg</u> ¹ , Nikolay Matveev ² , Leonid Strongin ¹	¹ Nizhny Novgorod State Medical Academy (Russia); ² Moscow Research Institute for Paediatrics and Children Surgery (Russia)
2247 15.06	HEALTH DATA MANAGEMENT THROUGH MULTIPLE WATERMARKING OF MEDICAL IMAGES	<u>Aggeliki Giakoumaki</u> ¹ , Sotiris Pavlopoulos ² , Dimitris Koutsouris ¹	¹ Biomedical Engineering Laboratory, National Technical University of Athens (Greece); ² Institute of Communication and Computer Systems, National Technical University of Athens (Greece)
2487 15.18	INFORMATION MINING IN MEDICAL IMAGE DATABASES	Rodica Strungaru ¹ , <u>Mihaela Ungureanu</u> ¹ , R. Murri ² , C. Pasquali ³ , Klaus Seidel, Mihai Datcu	¹ Politehnica University of Bucharest (Romania); ² Swiss Federal Institute of Technology (Switzerland); ³ German Aerospace Center (DLR) (Germany)

SS121 (SS120 II.) Medical Imaging (Standard Session - oral contributions)

Chair: Gabor Horvath (Hungary)

Co-Chair: Arcangelo Merla (Italy)

Day and time: Monday 21st November, 16.30-18.30 (format 10+2 minutes)

Hall: Club A

Id	Title	Paper Authors	Authors' Institutions
1778 16.30	DUAL ENERGY SUBTRACTION TOMOSYNTHESIS – SIMULATION STUDIES USING A 3D BREAST SOFTWARE PHANTOM	<u>Kristina Bliznakova</u> ¹ , Zoi Kolitsi ¹ , Nicolas Pallikarakis ¹	¹ University of Patras (Greece)
2292 16.42	BAYESIAN INFERENCE OF OPTIMAL LYMPHOSCINTIGRAPHIC SAMPLING TIMES	<u>Senan James Doyle</u> ¹ , Anthony Quinn ¹ , Petr Gebousky ²	¹ University of Dublin, Trinity College (Ireland); ² Akademie Ved Ceske Republiky (Czech Republic)
2330 16.54	WAVELENGTH SELECTION BY GENETIC ALGORITHMS IN NEAR INFRARED SPECTRA FOR MELANOMA DIAGNOSIS	<u>Torbjörn Nordling</u> ^{1,2} , Janne Koljonen ¹ , Josefina Nyström ^{3,4} , I. Bodén ^{4,5} , Britta Sethson ^{3,4} , P. Geladi ⁶ , Jarmo Alander ¹	¹ University of Vaasa/Dept. of Elec. Eng. and Automation (Finland); ² TKK/Control Engineering Laboratory, Helsinki (Finland); ³ UmU/Dept. of Chemistry, Umeå (Sweden); ⁴ UmU/Centre for Medical Engineering and Physics, Umeå (Sweden); ⁵ UmU/ Dept. of Surgical and Perioperative Sciences, Surgery, Umeå (Sweden); ⁶ SLU/The unit of Biomass Technology and Chem., Umeå (Sweden)
2662 17.06	A NOVEL ACOUSTICAL METHOD FOR BREAST IMAGING	<u>Azra Alizad</u> ¹ , Dana Whaley ¹ , James Greenleaf ¹ , Mostafa Fatemi ¹	¹ Mayo Clinic College of Medicine (USA)
2085 17.18	AUTOMATED 3D COMPOUND ULTRASOUND SCANNING FOR BREAST CANCER EXAMINATION	Carsten Riis, Hans Nygaard	
2564 17.30	AN ENHANCED ELECTRICAL IMPEDANCE IMAGING TECHNIQUE IN TWO AND THREE DIMENSIONS	<u>Hani AMASHA</u> ¹	¹ The Hashemite University (Jordan)
1707 17.42	SIMULATION OF SUBENDOCARDIAL MYOCARDIAL INFARCTION USING A HEART PHANTOM FOR Tc-99m SPECT	<u>Marta Radwanska</u> ¹ , Artur Stepień ² , Jolanta Pawlus ² , Katarzyna Natkaniec ¹	¹ AGH University of Science and Technology, Krakow (Poland); ² 5th Military Clinical Hospital, Krakow (Poland)
2586 17.54	NOVEL METHODS FOR LABELING MICROORGANISMS	<u>Daniel Bahcheli</u> ¹ , Zhijun Zhang ¹ , Annette Hollmann ¹ , Jay Nadeau ¹	¹ McGill University (Canada)

1401 18.06	MULTIPHOTON-EXCITED FLUORESCENCE IMAGING AND CORRELATION OF SINGLE QUANTUM DOTS USING A COMBINED APPROACH OF LASER SCANNING MICROSCOPY AND FCS	<u>NORBERT OPITZ</u> ¹ , MARTIN KAHMS ¹ , TATIANA MITROSHINA ¹ , BRIGITTE OEKE ¹ , JUERGEN KUHLMANN ¹	¹ Max-Planck-Inst. for Molecular Physiology (Germany)
2254 18.18	RENAL FISTULA ASSESSMENT USING AUTOMATED THERMAL IMAGING	J Allen ¹ , C P Oates ¹ , A Chishti ¹ , G Schaefer ² , <u>S Y Zhu</u> ³ , I Ahmed ¹ , D Talbot ¹ , A Murray ¹	¹ Freeman Hospital (U.K.); ² Nottingham Trent University (U.K.); ³ University of Derby (U.K.)

SS22 Rehabilitation Engineering (Special Session - oral contributions)

Chair: Jaroslav Majerník (Slovakia)

Co-Chair: Peter Lee (Singapore)

Day and time: Monday 21st November, 16.30-18.30 (format 10+2 minutes)

Hall: Club B

Id	Title	Paper Authors	Authors' Institutions
1673 16.30	DEVELOPMENT OF BIOMIMETIC HAND PROSTHESIS WITH MORE POWERFUL MOTOR	<u>Ryuhei Okuno</u> ¹ , Masaki Yoshida ² , Kenzo Akazawa ¹	¹ Osaka University (Japan); ² Osaka Electro-Communication University (Japan)
1763 16.42	APPLICATIONS OF CONCURRENT SYSTEMATIC DESIGN ON ASSISTIVE TECHNOLOGY-- A NEW WHEELCHAIR DESIGN FOR STROKE PATIENT	KUEN-HORNG TSAI ¹ , CHUN-YU YEH ² , <u>HSIN-CHANG LO</u> ³ , TSUNG-YI LIN ⁴ , TSUNG-YUAN KUO ⁴	¹ Institute of System Engineering, National University of Tainan (Taiwan); ² School of Physical Therapy, Chung Shan Medical University (Taiwan); ³ Institute of Biomedical Engineering, National Cheng Kung University (Taiwan); ⁴ Department of Mechanical Engineering Southern Taiwan University of Technology (Taiwan)
1950 16.54	TRIAL USAGE OF REHABILITATION SYSTEM; SIMPLE DRIVING SIMULATOR FOR THE DRIVING SKILL EVALUATION OF ELDERLY PERSONS AND HANDICAPPED PEOPLE	<u>Kaoru Inoue</u> ¹ , Yuko Ito ¹ , Yumi Ikeda ¹ , Keisuke Suzuki ¹ , Yoshiyuki Takahashi ² , Hokyoo Lee ³ , Takafumi Terada ⁴ , Tadashi Suzuki ⁵ , Takashi Komeda ³	¹ Tokyo Metropolitan University (Japan); ² The University of Tokyo Center for Collaborative Research (Japan); ³ Shibaura Institute of Technology (Japan); ⁴ Mitsubishi Precision Co. Ltd. (Japan); ⁵ Tokyo Teishin Hospital (Japan)
2294 17.06	DEVELOPMENT OF A HUMAN INTERFACE DEVICE USING ELECTROOCULOGRAM FOR THE AMYOTROPHIC LATERAL SCLEROSIS PATIENTS	<u>Sunmee Park</u> ¹ , DongWoo Kim ¹ , Hee Chan Kim ^{2,3}	¹ Interdisciplinary Program of Biomedical Engineering Major, Graduate School, Seoul National University (South Korea); ² Department of Biomedical Engineering, College of Medicine, Seoul National University (South Korea); ³ Institute of Medical & Biological Engineering, Medical Research Center, Seoul National University (South Korea)
2462 17.18	HAPTIC VIRTUAL ENVIRONMENT SIMULATOR FOR BILATERAL TASKS	<u>Ales Bardorfer</u> ¹ , Tadej Bajd ¹	¹ University of Ljubljana, Faculty of Electrical Engineering (Slovenia)

2520 17.30	DEVELOPMENT OF GAIT ASSIST SYSTEM FOR UNDERWATER TRAINING	<u>Shin-ichiroh Yamamoto</u> ¹ , Hideaki Hiramatsu ¹ , Tasuku Miyoshi ¹ , Kazuaki Hiramatsu ³ , Takashi Komeda ¹ , Kimitaka Nakazawa ² , Masami Akai ²	¹ Shibaura Institute of Technology (Japan); ² National Rehabilitation Center for Disabled (Japan); ³ Hitachi Medical Corporation (Japan)
2107 17.42	WIRELESS SYSTEM FOR ROWER MONITORING	Vaidotas Marozas ^{1,2} , Arunas Lukosevicius ^{1,2} , Saulius Daukantas ² , <u>Martynas Patasius</u> ² , Stasys Korsakas ³	¹ Kaunas University of Technology, Signal Processing Department, Kaunas, Lithuania (Lithuania); ² Kaunas University of Technology, Institute of Biomedical Engineering, Kaunas, Lithuania (Lithuania); ³ Institute of Cardiology, Kaunas Medicine University, Lithuania (Lithuania)
1671 17.54	ALTERATION OF AUTONOMIC NERVOUS SYSTEM ACTIVITY IN THE DAYTIME THROUGH TONE-ENTROPY ANALYSIS	<u>Hideo Nakamura</u> ¹ , Reiko Ohdan ² , Masaki Yoshida ¹	¹ Osaka Electro-Communication University (Japan); ² University of Hyogo (Japan)
2450 18.06	ACCELEROMETER-BASED LONG-TERM MONITORING OF PHYSICAL EXERCISE	<u>Timo Jämsä</u> ¹ , Aki Vainionpää ^{1,3} , Erkki Vihriälä ^{2,4} , Raija Korpelainen ³ , Anneli Rinta-Paavola ⁴ , Juhani Leppäluoto ⁵	¹ Department of Medical Technology, University of Oulu (Finland); ² Optoelectronics and Measurement Laboratory, University of Oulu (Finland); ³ Department of Sports Medicine, Oulu Deaconess Institute (Finland); ⁴ Newtest Ltd. (Finland); ⁵ Department of Physiology, University of Oulu (Finland)
1977 18.18	DETERMINING THE TIME LAG AND THE FRACTAL DIMENSION IN TEMPORAL SERIES AND ITS APPLICATION TO PHYSIOLOGICAL FATIGUE INDICATORS IN EMG SIGNALS	Joaquin Roca Dorda ^{1,2} , Luis Pena Morán ^{1,2} , Francisco J. Martínez González ¹ , <u>Joaquín Roca González</u> ¹	¹ Air Force Academy/Department of Applied Sciences, San Javier (Spain); ² Polytechnic University of Cartagena (Spain)

2136 18.30	ASYMMETRIES IN VERTICAL JUMP: A SUPPORT FOR FUNCTIONAL MOTOR EVALUATION?	Ezio Preatoni ¹ , <u>Irene Di Giulio</u> ¹ , Renato Rodano ¹	¹ Department of Bioengineering, Politecnico di Milano (Italy)
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SS106 Cardiovascular and Pulmonary Systems (Standard Session - oral contributions)

Chair: Karel Roubík (Czech Republic)

Co-Chair: Martin Rožánek (Czech Republic)

Day and time: Monday 21st November, 16.30-18.30 (format 10+2 minutes)

Hall: Club C

Id	Title	Paper Authors	Authors' Institutions
1656 16.30	EFFECTS OF THE EJECTING VELOCITY OF A FIBRIOLYTIC AGENT ON THROMBOLYSIS	<u>Kyehan Rhee</u> ¹ , Woo Won Jeong ¹ , Gon Khang ²	¹ Myongji University (South Korea); ² Kyung Hee University (South Korea)
1544 16.42	FLOW DEPENDENT CHANGES IN AORTIC VALVE EFFECTIVE ORIFICE AREA: THE ROLE OF UNSTEADY FLOW EFFECTS	<u>Lyes KADEM</u> ^{1,2} , Régis RIEU ¹ , Jean-Gaston DUMESNIL ³ , Louis-Gilles DURAND ² , Philippe PIBAROT ³	¹ Cardiovascular Biomechanics Laboratory, IRPHE, Marseille (France); ² Biomedical Engineering Laboratory, IRCM (Canada); ³ Research Center of Laval Hospital (Canada)
1510 16.54	THE OXYGEN CONSUMPTION RATE OF ARTERIOLAR WALLS UNDER PHYSIOLOGICAL CONDITIONS	<u>Masahiro Shibata</u> ¹ , Shigeru Ichioka ¹ , Norihiko Ohura ¹ , Akira Kamiya ¹	¹ Department of Biomedical Engineering, Graduate School of Medicine, University of Tokyo (Japan)
1828 17.06	COUPLED ANALYSIS OF THE CARDIOVASCULAR FLOW FIELD AND DEFORMATION OF THE BLOOD VESSEL	<u>Lee Ming Lung</u> ¹ , Lee Lung Cheng ¹ , Chen Shou I ¹ , Shen Cherng Yeu ¹ , Shih Ren Jieh ¹ , Chou Chau Yi ¹ , Lin Jeng Yann ¹	¹ National Center for High Performance Computin (Taiwan)

2284 17.18	EFFECTS OF VOLTAGE SENSITIVE DYE di-4-ANEPPS ON GUINEA PIG MYOCARDIUM	Marie Nováková ¹ , Ivo Provazník ² , Jana Bardoňová ² , Milan Blaha ² , Eva Táborská ¹ , Hana Bochořáková ¹ , Hana Paulová ¹ , Drahomír Horký ¹ , Lenka Krejčířová ¹	¹ Faculty of Medicine, Masaryk University Brno (Czech Republic); ² Faculty of Electrical Engineering and Communication, Brno University of Technology, Brno (Czech Republic)
1823 17.30	STUDY ON FLOW FIELD IN A BIFURCATION LUNG AIRWAY MODEL	Lin Jeng Yann ¹ , Lee Lung Cheng ² , Lee Ming Lung ³ , Shen Cherng Yeu ⁴ , Shih Ren Jieh ⁵	¹ Jeng Yann Lin (Taiwan); ² Lung Cheng Lee (Taiwan); ³ Ming Lung Lee (Taiwan); ⁴ Cherng Yeu Shen (Taiwan); ⁵ Ren Jieh Shih (Taiwan)
1699 17.42	VENTILATOR SETTING DEPENDENCE OF PARAMETERS FOR DETECTING EXPIRATORY FLOW LIMITATION IN MECHANICAL VENTILATION: A SIMULATION STUDY	Chiara Brighenti ¹ , Paolo Barbini ² , Gabriele Cevenini ² , Gianni Gnudi ¹	¹ Department of Electronics, Computer Science and Systems, University of Bologna (Italy); ² Department of Surgery and Bioengineering, University of Siena (Italy)
2599 17.54	OPTIMIZATION OF ARTIFICIAL VENTILATION THERAPY FOR ARDS BASED ON AUTOMATIC IDENTIFICATION OF LUNG PROPERTIES	Henning Luepschen ¹ , Torsten Meier ² , Thorsten Leibecke ³ , Martin Grossherr ² , Steffen Leonhardt ¹	¹ Medical Information Technology, Helmholtz-Institute, RWTH Aachen University (Germany); ² Department of Anaesthesiology, University of Luebeck (Germany); ³ Department of Radiology, University of Luebeck (Germany)
2637 18.06	ADVANCED LUNG VENTILATION SYSTEM FOR CONTROLLED BREATHING OPTIMIZATION	Maria Guerrisi ¹ , Antonio Canichella ¹ , Francesco Montecchia ^{2,1}	¹ Sezione di Fisica Medica, Dip. Biopatologia, Università Tor Vergata, Roma (Italy); ² Istituto Nazionale di Fisica Nucleare, Sezione di Roma2, Roma (Italy)
2683 18.18	IMPOSED WORK OF BREATHING DURING HIGH-FREQUENCY OSCILLATORY VENTILATION: A BENCH STUDY	Karel Roubik ³ , M van Heerde ¹ , H. R. Genderingen ¹ , T Leenhoven ² , D. G. Markhorst ¹	¹ Dept. of Pediatric Intensive Care, VU university medical center, Amsterdam (Netherlands Antilles); ² Dept. of Pediatric Intensive Care, Wilhelmina Children's Hospital, Utrecht (Netherlands Antilles); ³ Faculty of Biomedical Engineering, Czech Technical University, Prague (Czech Republic)

SS63 Biomathematics (Standard Session - oral contributions)

Chair: Metin Akay (USA)

Co-Chair: Vít Kopelent (Czech Republic)

Day and time: Monday 21st November, 16.30-18.30 (format 10+5 minutes)

Hall: Club D

	Title	Paper Authors	Authors' Institutions
1490 16.30	SUPPORT VECTOR MACHINES ON HEMOGLOBIN SECONDARY STRUCTURES	Turgay Ibrikci ¹ , Ayca Cakmak ¹ , Irem Ersoz ² , Okan Ersoy ³	¹ Cukurova University (Turkey); ² Mersin University (Turkey); ³ Purdue University (USA)
2080 16.45	ADAPTIVE FUZZY-LOGIC FOR PROCESSING VISUAL EVOKED POTENTIALS IN OBJECTIVE PERIMETRICAL EXAMINATIONS	<u>Michael Thorwarth</u> ¹	¹ Institute of Biomedical Engineering and Informatics, Ilmenau (Germany)
2178 17.00	DISTRIBUTED ARCHITECTURE FOR REAL TIME JPEG2000 MEDICAL IMAGES DECOMPRESSION AND VISUALIZATION	Gloria Bueno ¹ , <u>Juan García-Arbolea</u> ¹ , Roberto Morales ¹	¹ Universidad de Castilla-La Mancha (Spain)
2485 17.15	HIGH PERFORMANCE COMPUTING AND FINITE ELEMENT STENT DESIGN – A PROMISING COMBINATION	<u>Matthieu De Beule</u> ¹ , Benedict Verheghe ¹ , Rudy Van Impe ¹	¹ Ghent University (Belgium)
2619 17.30	WHY ANOTHER MICROARRAY LIMS?	Joel Arrais ¹ , Luis Silva ¹ , Maria Rodrigues ¹ , Laura Carreto ² , José Luis Oliveira ¹ , Manuel A.S. Santos ³	¹ Institute of Electronics and Telematics Engineering of Aveiro (IEETA), Aveiro (Portugal); ² Faculty of Science and Technology, University of Algarve, Campus de Gambelas, Faro (Portugal); ³ Department of Biology, University of Aveiro (Portugal)
2112 17.45	THE STUDY OF RISK FACTORS DEPENDENCE OF CONTEXT USING COMPATIBILITY FUNCTIONS	<u>Cristina Gena</u> <u>Dascalu</u> ¹ , Georgeta Zegan ¹ , Smarandita Georgeta Pacuraru	¹ University of Medicine and Pharmacy "Gr.T.Popa", Iasi (Romania)
2184 18.00	GENOMIC SIGNAL ANALYSIS OF HIV – 1 CLADE F VARIABILITY	Paul Dan Cristea	
1559 18.15	DIFFERENTIAL PCR DIAGNOSTIC OF ORTHOPOXVIRUSES	Sergei Shchelkunov	

SS85 Biomedical Measurement I. (Standard Session - oral contributions)

Chair: Per Ask (Sweden)

Co-Chair: Karel Hána (Czech Republic)

Day and time: Monday 21st November, 16.30-18.30 (format 10+3 minutes)

Hall: Club E

Id	Title	Paper Authors	Authors' Institutions
2086 16.30	PASSIVE FOUR-FREQUENCY MICROWAVE TOMOGRAPHY: AN EXPERIMENTAL FEASIBILITY STUDY	<u>Irene Karanasiou</u> ^{1,2} , Melina Giamalaki ¹ , Athina Oikonomou ¹ , Nikolaos Uzunoglu ^{1,2}	¹ National Technical University of Athens (Greece); ² Institute of Communications and Computer Systems (Greece)
2193 16.43	DEVELOPMENT OF A MICROCELL-BASED HYPER-SENSITIVE ASSAY SYSTEM FOR THE REVERSE IONTOPHORETICALLY EXTRACTED GLUCOSE	<u>D.W. Kim</u> ¹ , D.H. Lee ² , H.S. Kim ² , H.C. Kim ³	¹ Interdisciplinary Program, Biomedical Engineering Major, Graduate School, Seoul National University (South Korea); ² Tech4M Co., Ltd. (South Korea); ³ Department of Biomedical Engineering, College of Medicine and Institute of Medical & Biological Engineering, Medical Research Center, Seoul National University (South Korea)
2203 16.56	MEASUREMENT SYSTEM FOR THE ACQUISITION, VISUALIZATION, AND ANALYSIS OF THE CARDIAC ELECTRIC NEAR-FIELD	<u>Thomas Wiener</u> ¹ , Thomas Thurner ¹ , Ernst Hofer ² , Gernot Plank ²	¹ Graz University of Technology/Institute of Electrical Measurement and Measurement Signal Processing (Austria); ² Medical University of Graz/Institute of Biophysics (Austria)
1726 17.09	BLUETOOTH ENABLED SYSTEM FOR IN VIVO MONITORING AND LOGGING OF BIOMECHANICAL LOADS IN EXTERNAL FIXATORS	<u>Robert Wendlandt</u> ¹ , Klaus Seide ² , Nils Weinrich ^{1,2} , Ulf-Joachim Gerlach ² , Christian Juergens ² , Joerg Mueller ¹	¹ Hamburg University of Technology (Germany); ² Berufsgenossenschaftliches Unfallkrankenhaus (Trauma Hospital) Hamburg (Germany)
2189 17.22	AN AUTOMATED PRESSURE CONTROL FOR PATCH-CLAMP MEASUREMENTS	Alessandro De Simone, Eleonora Grandi, Silvio Cavalcanti, Marco Tartagni	
2427 17.35	A NOVEL AUTOMATED READING ASSISTANCE SYSTEM	Jeffrey Kang ¹ , <u>Moshe Eizenman</u> ¹	¹ University of Toronto (Canada)
1624 17.48	STRENGTH TESTS OF FROZEN COMPACTED BONE GRAFTS IN THE MODEL OF HIP JOINT ACETABULUM	<u>Janusz Płomiński</u> ¹ , Zbigniew Watral ² , Krzysztof Kwiatkowski ¹	¹ Military Medical Institute (Poland); ² Military University of Technology (Poland)

2014 16.01	A NEW PROPOSAL OF DRIVER'S ACTIVATION STATE INDEX BASED ON PHYSIOLOGICAL MONITORING UNDER SIMULATED MONOTONOUS DRIVING	<u>Takehiro</u> <u>Yamakoshi</u> ¹ , Ken-ichi Yamakoshi ² , Shinobu Tanaka ² , Masamichi Nogawa ² , Yukinori Sawada ³ , Peter Rolfe ⁴ , Masahiro Kusakabe ¹	¹ Graduate School of Eng., Fukui University, Fukui (Japan); ² Dept. of Human & Mechanical Systems Eng., Kanazawa University, Kanazawa (Japan); ³ Faculty of Medicine, Sapporo Medical University, Sapporo (Japan); ⁴ Dept. of Communication, Computer & System Sciences, Genova University, Genova (Italy)
2371 16.14	PHYSIOLOGICAL RESPONSES DURING EXAMINATION IN RAPID LBNP EXPOSURE	<u>Jan Hanousek</u> ¹ , Petr Dosek ¹ , Jan Petricek ¹ , Ludvik Cettl ¹	¹ Institute of Aviation Medicine (Czech Republic)

SS69 (SS68 II.) Biomechanics II. (Standard Session - oral contributions)

Chair: Jenie Fouke (United States)

Co-Chair: Josef Pražák (Czech Republic)

Day and time: Monday 21st November, 16.30-18.30 (format 10+2 minutes)

Hall: Club H

Id	Title	Paper Authors	Authors' Institutions
1762 16.30	SUBACOUSTICAL TRANSFER IN SPINAL SEGMENTS AND ITS POSSIBLE USE IN DIAGNOSTICS	Josef Zeman ¹ , <u>Petra Zemanová</u> ¹ , Stanislav Otáhal ¹	¹ Charles University in Prague, Faculty of Physical Education and Sport (Czech Republic)
1629 16.42	SIMULATION OF SHOCK WAVE PROPAGATION AND ATTENUATION IN THE LUNG: CRITERIA FOR EDEMA FORMATION	<u>Oksana Manyuhina</u> ¹ , Alexander D'yachenko ²	¹ Institute for Molecules and Materials, Radboud University Nijmegen, Toernooiveld 1, 6525 ED Nijmegen (The Netherlands); ² General Physics Institute of the Russian Academy of Sciences, Vavilova 38, 117942 Moscow (Russia)
2128 16.54	A 3D QUASI-STATIC MODEL TO INVESTIGATE BIOMECHANIC FUNCTION OF THE KNEE CRUCIATE LIGAMENTS USING SUBJECT SPECIFIC GEOMETRY AND KINEMATICS DATA	<u>Luigi Bertozzi</u> ¹ , Rita Stagni ¹ , Silvia Fantozzi ¹ , Maurizio Lannocca ¹ , Angelo Cappello ¹	¹ Department of Electronics, Informatics, and Computer Science; University of Bologna (Italy)
2322 17.06	THE EFFECTS OF INCLINED SURFACES ON SPINAL STABILITY: THE THRUSTLINE APPROACH	<u>Senay Mihcin</u> ¹ , Serpil Acar ¹	¹ Loughborough University (U.K.)
1499 17.18	DISRUPTION OF THE OSTEOCYTE CELLULAR NETWORK BY MICROCRACKS: A POSSIBLE STIMULUS FOR BONE ADAPTATION	<u>Jan Geert Hazenberg</u> ^{1,2} , David Taylor ² , Clive Lee Lee ^{1,2}	¹ Royal College of Surgeons in Ireland (Ireland); ² Trinity Centre for Bioengineering (Ireland)

2535 17.30	A FRAMEWORK FOR MULTI-SCALE MODELLING OF THE MYOCARDIUM	Holger Schmid ¹ , Martyn P Nash ¹ , Cameron Walker ² , Greg B Sands ¹ , Adele Pope ³ , Ian J LeGrice ¹ , Alistair A Young ¹ , <u>Poul Nielsen</u> ¹ , Peter J Hunter ¹	¹ Bioengineering Institute, University of Auckland, Auckland (New Zealand); ² Department of Engineering Science, University of Auckland, Auckland (New Zealand); ³ School of Medicine, University of South Carolina, Columbia, South Carolina (USA)
2605 17.42	MODEL-BASED IDENTIFICATION OF THE NONLINEAR ANISOTROPIC MECHANICAL PROPERTIES OF IN-VIVO HUMAN SKIN	Yme Kvistedal ¹ , <u>Poul Nielsen</u> ¹	¹ University of Auckland (New Zealand)
2129 17.54	FINITE ELEMENT MODEL OF THE CRANIOCERVICAL JUNCTION (AND CERVICAL SPINAL CANAL)	<u>Agnieszka Kaczmarška</u> ¹ , Ondřej Jiroušek ² , Petr Vaněk ³ , Monika Šorfová ¹ , Stanislav Otáhal ¹ , Jakub Otáhal ¹	¹ Faculty of Physical Education and Sports, Department of Biomechanics, Charles University in Prague (Czech Republic); ² Faculty of Transportation Sciences, Czech Technical University, Prague (Czech Republic); ³ Masarykova Nemocnice, Neurosurgical Department, Usti nad Labem (Czech Republic)
2442 18.06	A BIOMECHANICAL MODEL OF THE BREAST TO TRACK TUMOURS	<u>Jae-Hoon Chung</u> ¹ , Vijay Rajagopal ¹ , Poul M.F. Nielsen ¹ , Martyn P. Nash ¹	¹ Bioengineering Institute, The University of Auckland (New Zealand)
2555 18.18	MODELING AND STRESS ANALYSIS OF HUMAN HEAD IN FRONTAL IMPACT WITH A DEFORMABLE BODY, USING FEM METHOD	<u>Seyed Mohammad Rajaai</u> ¹ , Nezam Ali Bakhtiary ¹ , Shahab Mansur Baghaei ¹	¹ Iran University of Science and Technology (Iran)

SS52 (SS22 II.) Rehabilitation Engineering (Special Session - posters)

Day and time: Monday 21st November, 9.00-18.00, 12.30-14.00 mandatory presence of authors

Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
2642 1	BIOMECHANICAL, METALLURGICAL AND BIOCOMPATIBLE STUDY OF FAILED IMPLANTS	<u>Ritu Rathi</u>	
2191 2	A MOBILITY DATA ACQUISITION SENSOR	<u>Karen Culhane</u> ¹ , <u>Sean Corkery</u> ¹ , <u>Derek O' Keeffe</u> ¹ , <u>Richard Conway</u> ¹ , <u>Gerard Lyons</u> ¹	¹ Biomedical Electronics Laboratory, Department of Electronic and Computer Engineering, University of Limerick, Limerick (Ireland)
1397 3	CONTROL PERFORMANCE OF A SPONGE-CORE-SOFT-RUBBER ACTUATOR FOR WELFARE MACHINES	<u>Yasuhiro</u> <u>Hayakawa</u> ^{1,2} , <u>Kensuke Morishita</u> ² , <u>Masahide Oonuki</u> ²	¹ IEEE (USA); ² JSME (Japan)
1501 4	A LOW-COST ROBOTIC ARM WITH FINGER MOVEMENT INPUT: CONCEPT AND PRELIMINARY DESIGN	<u>Vassilios Kyriazis</u> ¹	¹ University of Ioannina (Greece)
1787 5	METHOD FOR GAIT AIDING AND ANALYSIS	<u>Błażej Kabzinski</u> ¹ , <u>Danuta Jasińska- Choromańska</u> ¹	¹ Warsaw University of Technology, Institute of Micromechanics and Photonics (Poland)
1963 6	ENHANCED USER INTERFACE FOR POWER WHEELCHAIRS DEVELOPED IN THE MOVEMENT PROJECT	<u>Georg Edelmayer</u> ¹ , <u>Peter Mayer</u> ¹ , <u>Christian Beck</u> ¹ , <u>Wolfgang Zagler</u> ¹	¹ Institute 'integrated study', Vienna University of Technology (Austria)
2233 7	A VERSATILE SYSTEM FOR HOME REHABILITATION OF POST-SURGERY PATIENTS	<u>Daniel Moga</u> ¹ , <u>Florin</u> <u>Neaga</u> ² , <u>Petru</u> <u>Dobra</u> ³ , <u>Radu A.</u> <u>Munteanu</u> ⁴	¹ Technical University of Cluj-Napoca (Romania); ² Salaj County Hospital (Romania); ³ Technical University of Cluj- Napoca (Romania); ⁴ Technical University of Cluj-Napoca (Romania)
2441 8	INTEGRATION OF COMPUTER AIDED DESIGN AND FINITE ELEMENT ANALYSIS FOR LOWER-LIMB PROSTHETIC SOCKETS	<u>Khye Soon Andy</u> <u>Yew</u> ¹ , <u>Cho Hong</u> <u>James Goh</u> ^{1,2} , <u>Siew</u> <u>Lok Toh</u> ^{1,4} , <u>Peter</u> <u>Vee Sin Lee</u> ^{1,3}	¹ Division of Bioengineering, National University of Singapore (Singapore); ² Department of Orthopaedic Surgery, National University of Singapore (Singapore); ³ Defense Medical and Environmental Research Institute, DSO (Singapore); ⁴ Department of Mechanical Engineering, National University of Singapore, Singapore (Singapore)
2589 9	EEG AS COMMAND SIGNAL IN REHABILITATION DEVICES	<u>Kim Dremstrup</u> <u>Nielsen</u> ¹ , <u>Omar</u> <u>Nascimento</u> ¹ , <u>Alvaro</u> <u>Cabrera</u> ¹	¹ Aalborg University (Denmark)

1670 10	COMPARING THREE MODALITIES OF PROLONGED MUSCLE STRETCHING TREATMENTS IN SUPPRESSION OF ANKLE HYPERTONIA	Chun-Yu Yeh, Jia-Jin J Chen, Kuen-Horng Tsai	
1788 11	THE MOST IMPORTANT FACTORS INFLUENCING QUALITY OF CONVEX PRINTOUTS FOR THE BLIND	<u>Roman Barczyk</u> ¹ , Danuta Jasinska - Choromanska ¹	¹ Warsaw University of Technology (Poland)
1720 12	FUNCTIONAL INFRARED IMAGING APPLIED TO THE STUDY OF THE SKIN THERMOREGULATION IN TRAINED AND UNTRAINED SUBJECTS	<u>Arcangelo Merla</u> ^{1,2} , Pierpaolo Iodice ³ , Raoul Saggini ³ , Andrea Tangherlini ² , Gaetano De Michele ² , Gian Luca Romani ^{1,2}	¹ ITAB – Institute of Advanced Biomedical Technologies, Foundation “G. D’Annunzio University”, Chieti (Italy); ² Department of Clinical Sciences and Bioimaging, School of Medicine, University of Chieti-Pescara, Chieti (Italy); ³ Department of Aging Sciences, School of Motor Sciences, University of Chieti-Pescara, Chieti (Italy)
2318 13	POST-STROKE HAND OPENING REHABILITATION: AN APPROACH UTILIZING VIRTUAL REALITY, BODY OTHOSIS AND PNEUMATIC DEVICE	<u>Xun Luo</u> , Derek Kamper	
2311 14	QT INTERVAL ANALYSIS IN PHYSICALLY ACTIVE DIABETIC PATIENTS	<u>Claudia M G Marques</u> ¹ , Juliane G Rocha ¹ , Patrícia R P Moutinho ¹ , Rita C B Sandoval ² , Ana V Souza ¹ , Euler V Garcia ³ , Jefferson L B Marques ³	¹ State University of Santa Catarina, Department of Biological Sciences, Florianópolis (Brazil); ² Federal University of Santa Catarina, University Hospital, Florianópolis (Brazil); ³ Federal University of Santa Catarina, Department of Electrical Engineering, Institute of Biomedical Engineering, Florianópolis (Brazil)
1794 15	SPECIAL KINDS OF THE DIAGNOSIS IN THE EXTERNAL OSTEOSYNTHESIS	<u>Dariusz Kołodziej</u> ¹ , Danuta Jasińska-Choromańska ¹	¹ Warsaw University of Technology, Faculty of Mechatronics, Institute of Micromechanics and Photonics (Poland)

SS56 (SS55 II.) Artificial Organs and Tissue Engineering II. (Standard Session - posters)

Day and time: Monday 21st November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1640 16	DIALYZER DIFFUSIVE CLEARANCE OPTIMIZATION BY A NON-REGENERATED RECIRCULATING DIALYSATE SYSTEM	<u>Manuel Prado</u> ¹ , Laura M. Roa ¹	¹ Biomedical Engineering Group, University of Seville (Spain)
1797 17	TRI-LEAFLET VALVE WITH A PURGE FLOW FOR CARDIAC ASSIST DEVICES	<u>Tobias Timmel</u> ¹ , Leonid Goubergrits ¹ , Klaus Affeld ¹	¹ Biofluidmechanics Lab, Charité - Universitätsmedizin Berlin (Germany)
1804 18	AN ORIGINAL METHOD TO EVALUATE VASCULAR ACCESS FLOW IN DIALYSIS PATIENT	<u>Andrea Ciandrini</u> ¹ , Carlo Alberto Lodi ² , Raffaele Galato ³ , Maria Concetta Miscia ³ , Silvio Cavalcanti ¹	¹ Dept. of Electronics, Computer Science and Systems, University of Bologna (Italy); ² R&D Monitor Division, Gambro Dasco S.p.A. (Italy); ³ Nephrology Division, San Carlo Clinic (Italy)
1644 19	COMBINED CELL SURVIVAL AND INJECTION SUCCESS RATE IN MICROINJECTION OF LIVING ADHERENT CELLS	<u>Katrin Kovanen</u> ¹ , Sami Purmonen ² , Timo Ylikomi ² , Pasi Kallio ¹	¹ Institute of Automation and Control, Tampere University of Technology (Finland); ² Department of Cell Biology, Medical School, University of Tampere (Finland)
1725 19	BIOLOGICAL EFFECT OF SHOCK WAVES: BRAIN DAMAGES BY SHOCK WAVES IN RATS – PRESSURE DEPENDENCE	<u>Kaoruko Kato</u> ¹ , Miki Fujimura ¹ , Junichi Sato ¹ , Atsuhiro Nakagawa ¹ , Tomohiro Ohki ² , Kazuyoshi Takayama ² , Teiji Tominaga ¹	¹ Department of Neurosurgery, Tohoku University Graduate School of Medicine (Japan); ² Transdisciplinary Fluid Integration Research Center, Institute of Fluid Science, Tohoku University (Japan)
2639 10	INVESTIGATION OF DIFFERENT UNLOADING CONDITIONS OF THE HEART DURING PULSATILE LEFT VENTRICULAR ASSISTANCE	<u>Heinrich Schima</u> , Michael Vollkron, Leopold Huber, Georg Wieselthaler	
2530 21	TEST CONSOLE FOR CHEMICAL SENSORS USED IN VITAL MICROSCOPY	<u>Matthias Thümmler</u> ¹ , Thomas Baumgart ¹	¹ University of Technology Dresden, Medical Faculty, Department of Medical Physics and Biomedical Engineering (Germany)
2524 22	INVESTIGATION OF INFLAMMATORY REACTION ON COATED OYGENATOR FIBERS BY SCANNING TUNNELING MICROSCOPE	<u>Mustafa Kocakulak</u> , Cengiz Kocum, Hakan Ayhan	

1685 23	LASER BIO-PRINTING OF CONIDIA AND LIVING CELLS USING ABSORBING FILM ASSISTED LASER INDUCED FORWARD TRANSFER	Béla Hopp, Tomi Smausz, Norbert Kresz, Antal Nógrádi, Zsuzsanna Antal, Lajos Kolozsvári, Douglas Chrisey, Zsolt Bor	
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SS97 (SS89 IX. Mo) Biomedical Signal Processing IX. (Standard Session - posters)

Day and time: Monday 21st November, 9.00-18.00, 12.30-14.00 mandatory presence of authors

Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1451 24	INVESTIGATION OF CARDIOVASCULAR SYSTEM WITH HELP OF ENERGY APPROACH	<u>Ramzi Qawasma</u> ¹ , Ludmila Sushkova ² , Artyomy Kuznetsov ³	¹ Qawasama Ramzi (Russia); ² Sushkova Ludmila (Russia); ³ Kuznetsov Artyomy (Russia)
1821 25	CARDIAC ARRHYTHMIA CLASSIFICATION USING SUPPORT VECTOR MACHINES	<u>Markos</u> <u>Tsipouras</u> ^{1,2} , Costas Voglis ¹ , Lagaris Isaak ¹ , Dimitrios Fotiadis ^{1,2}	¹ Department of Computer Science, University of Ioannina (Greece); ² Unit of Medical Technology and Intelligent Information Systems (Greece)
1538 26	NEW METHODS OF AN ST SEGMENT OF ELECTROCARDIOSIGNAL PARAMETERS ESTIMATION	<u>Olga Melnik</u> ¹	¹ Ryazan State Radiotechnical Academy (Russia)
1611 27	IMPLEMENTATION OF AN EFFICIENT R-PEAK DETECTION ALGO-RITHM ON A 16 BIT MICROPROCESSOR FOR A SUBCUTANEOUSLY IMPLANTABLE HEART-RISK-MONITOR	<u>Wolfgang</u> <u>Stiegmaier</u> ^{1,2} , Helmut Hutten ^{3,1} , Günter Rauchegger ¹	¹ CORTRONIK GmbH (Austria); ² Division of MedIT, Carinthia Tech Institute, University of Applied Sciences, Klagenfurt (Austria); ³ Institute of Medical Engineering, University of Technology Graz (Austria)
2260 28	ITERATIVE ECG SIGNAL FILTERING FOR BETTER QRS RECOGNITION	<u>Zsolt Mathe</u> ² , Levente-Karoly Gorog ¹ , O Cret ² , Sandor Elek Laszlo ¹ , Sandor Miklos Szilagyi ¹	¹ Sapientia - Hungarian University of Transylvania (Romania); ² Technical University of Cluj (Romania)
2455 29	SPATIAL SHAPE VARIABILITY OF ECG WAVES	Balkine Khaddoumi ¹ , <u>Hervé</u> <u>Rix</u> ¹ , olivier Meste ¹ , Małgorzata Fereniec ² , Roman Maniewski ²	¹ I3S, University of Nice-Sophia Antipolis and CNRS (France); ² Institute of Biocybernetics and Biomedical Engineering, PAS, Warsaw (Poland)
1617 30	SENSITIVITY OF T WAVE ALTERNANS DETECTORS TO THE SHAPE OF ALTERNANS TREND	<u>Milan Tannenberg</u> ¹ , Jiří Kozumplík ¹	¹ Brno University of Technology (Czech Republic)
2113 31	CLUSTERING OF HEARTBEATS FOR AUTOMATED ECG HOLTER ANALYSIS	<u>Václav Chudáček</u> ¹ , Martin Hanuliak ² , Lenka Lhotská ¹	¹ Czech Technical University in Prague - Gerstner Laboratory (Czech Republic); ² Medical Technologies (Czech Republic)

1771 32	NON-LINEAR ANALYSIS OF HEART RATE AND BLOOD PRESSURE VARIABILITY AFTER AUTONOMIC BLOCKADE IN RATS	<u>Frank Beckers</u> ¹ , <u>Bart Verheyden</u> ¹ , <u>André E Aubert</u> ¹	¹ Lab. of Exp Cardiology (Belgium)
1436 33	SPECTRAL INDEPENDENT COMPONENT ANALYSIS OF HEART RATE VARIABILITY	Alexander Martynenko, Ann Antonova, Marina Martynenko	
2694 34	ECG ANALYSIS IN TIME DOMAIN	<u>Václav Chudáček</u> ¹ , <u>Michal Huptych</u> ¹ , <u>Lenka Lhotská</u> ¹	¹ Czech Technical University in Prague - Gerstner Laboratory (Czech Republic)
2507 35	SOFTWARE FOR HEART RATE VARIABILITY AND QT INTERVAL VARIABILITY ANALYSIS	<u>Daiana Petry</u> ¹ , Jefferson L. B. Marques ¹	¹ Federal University of Santa Catarina (Brazil)
2600 36	NONINVASIVE STUDY OF SPATIO-TEMPORAL VARIABILITY OF BEAT-TO-BEAT VENTRICULAR DEPOLARIZATION AND REPOLARIZATION	<u>Kristóf Haraszti</u> ¹ , György Kozmann ²	¹ MTA MFA Dept. of Bioengineering (Hungary); ² University of Veszprém Dept. of Information Systems (Hungary)
1631 37	SYSTEM FOR CONTACTLESS REGISTRATION OF PHYSIOLOGICAL SIGNALS DURING A SLEEP	Roman Baevsky ¹ , Irina Funtova ¹ , Andrew Pashenko ¹ , <u>Anna Chernikova</u> ¹ , A.M. Sudarev ² , Y.I. Levin ³	¹ Institute of Biomedical Problems (Russia); ² Institute of Radio-engineering and Electronics of RAS (Russia); ³ Moscow Center of Sleep Researches (Russia)
2602 38	COMPARISON OF PHASE COUPLING PARAMETERS FOR THE ANALYSIS OF NEURONAL SYNCHRONIZATION	<u>Andreas Spiegler</u> ¹ , Guenter Henning ¹ , Galina Ivanova ¹	¹ Institute of Biomedical Engineering and Informatics, Technische Universität Ilmenau (Germany)
1437 39	HEART RATE VARIABILITY TRANSITION PROCESSES MEASUREMENT	Alexander Martynenko, Nikolay Yabluchansky	
2317 40	A COMPARATIVE STUDY BETWEEN WAVELET THEORY AND ADAPTIVE SEGMENTATION FOR NEURAL ENGINEERING PURPOSES	Joao-Batista Destro-Filho ¹ , <u>Vinicius Guimaraes</u> <u>Reis</u> ¹ , Ronaldo Januario-Viana ¹ , Rodrigo Ribeiro- Cardoso ¹	¹ Federal University of Uberlandia (UFU) (Brazil)

SS73 (SS68 VI. Mo) Biomechanics VI. (Standard Session - posters)

Day and time: Monday 21st November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1402 41	COMPUTER AID CHILDREN SCOLIOSIS TREATMENT	<u>Jan Čulík</u> ¹	¹ Czech Technical University of Prague (Czech Republic)
1407 42	MAGNETOBIOMECHANICS OF SMART SUSPENSIONS IN BLOOD	<u>Evgeny Taran</u> ¹ , <u>Olga Melnyk</u> ²	¹ Taran Evgeny (Ukraine); ² Melnyk Olga (Ukraine)
1408 43	THE EFFECT OF ADDITIONS ON APPARENT VISCOSITY OF BLOOD	<u>Evgeny Taran</u> ¹ , <u>Olga Melnyk</u> ¹	¹ Faculty of Mechanics and Mathematics, Kyiv Taras Shevchenko National University (Ukraine)
1417 44	BIOTRIBOLOGY: CAPILLARY BLOOD FLOW MODELLING	Kalion Vitaliy	
1467 45	KINEMATIC MODEL OF HIERARCHY STRUCTURE WITH FASCICLES AND LIGAMENT	<u>Shunji Hirokawa</u> ¹ , Takamitsu Hamasaki ¹ , Seitarou Doi ¹	¹ Kyushu University (Japan)
1552 46	TANNIC ACID MIMICKING DENDRIMERS AS A STABILIZING NANOMORDANT IN VASCULAR TISSUE ENGINEERING	<u>Vladimir Kasyanov</u> ^{1,2} , Jason Isenburg ³ , Jason Hodde ⁴ , Iveta Ozolanta ² , Janis Vetra ² , S. Bart Halkes ⁵ , Ioannis Vrasidas ⁵ , Rob Liskamp ⁵ , Roland Pieters ⁵ , Dan Simionescu ³	¹ Medical University of South Carolina (USA); ² Riga Stradins University (Latvia); ³ Clemson University (USA); ⁴ Cook Biotech Inc., (USA); ⁵ Utrecht University (The Netherlands)
1675 47	NEW APPROACH TO IDENTIFICATION OF INTERVERTEBRAL DISC MECHANICAL PROPERTIES	<u>Petra Zemanová</u> ¹ , Josef Zeman ¹ , Stanislav Otáhal ¹	¹ Charles University in Prague, Faculty of Physical Education and Sport (Czech Republic)
1811 48	COMPREHENSIVE APPROACH TO COMPUTATIONAL MODELLING OF BEHAVIOUR OF HIP JOINTS AND THEIR ENDOPROSTHESES	Michal Vaverka, Martin Vrbka, Tomáš Návrát, Přemysl Janíček, Zdeněk Florian, Vladimír Fuis	
1887 49	A NON-NEWTONIAN FINITE ELEMENT ANALYSIS OF BLOOD FLOW IN THE ARTERIAL NETWORKS	<u>Yaaghoob Dabiri</u> ¹ , Nasser Fatouraei ¹ , Hamid Reza Katoozian ¹	¹ Amirkabir University of Technology (Tehran Polytechnic) (Iran)

2118 50	BIOMECHANICAL MODEL OF THE ARTERIAL WALL ACCOUNTING FOR ELASTIC AND STRUCTURAL PROPERTIES	Nikos Stergiopoulos, Sylvain Roy, Gilles Prod'hom	
1818 51	COMPUTATIONAL MODELLING OF BEHAVIOUR OF SOFT BIOLOGICAL TISSUES	Jiří Burša ¹ , Radek Lebiš ¹ , Pavel Ryšavý ¹	¹ BUT,FME, Institute of Solid Mechanics, Biomechanics and Mechatronics (Czech Republic)
2124 52	MODELING OF THE CERVICAL SPINE RELATIONSHIP BETWEEN MUSCLE TONE AND SHAPE OF THE CERVICAL SPINE	Jitka Čemusová ¹ , Agnieszka Kaczmarská ¹ , Stanislav Otáhal ¹	¹ Charles University, FTVS UK (Czech Republic)
2625 53	MODELING, IMPLEMENTATION AND SIMULATION OF BRAIN TISSUE	FENG SHEN, TONG EARN TAY, JIAN ZHONG LI, VEE SIN PETER LEE, HAU KONG CHAN	
1968 54	EXPERIMENTAL STUDY OF THE HEMODYNAMICS IN AN ABDOMINAL AORTIC ANEURYSM UNDER PHYSIOLOGICAL RESTING AND EXERCISE FLOW CONDITIONS	Emmanuel Gaillard, Valerie Deplano	
1887 55	A NON-NEWTONIAN FINITE ELEMENT ANALYSIS OF BLOOD FLOW IN THE ARTERIAL NETWORKS	Yaaghoob Dabiri ¹ , Nasser Fatourae ¹ , Hamid Reza Katoozian ¹	¹ Amirkabir University of Technology (Tehran Polytechnic) (Iran)
2529 56	REOPERATION EVALUATION AND DEFECTS MECHANISM OF HIP PROSTHESIS	Monika Michalíková ¹ , Jozef Živčák ¹ , Teodor Tóth ¹	¹ Technical University of Košice, Department of Instrumental and Biomedical Engineering (Slovak Republic)
2359 57	VOLUMETRIC CHANGES BASED ON COMPUTER TOMOGRAPHY AFTER THE FIRST TREATMENT OF LYMPHOMA PATIENTS	Reea Peltola ¹ , Ritva Järvenpää ² , Tuomas Saarinen ¹ , Prasun Dastidar ² , Hannu Pertovaara ³ , T. Arola ⁴ , Tomi Heinonen ⁴ , Jari Hyttinen ⁴ , Pirkko Kellokumpu-Lehtinen ^{1,3} , Seppo Soimakallio ^{1,2}	¹ Medical School of Tampere University (Finland); ² Department of Diagnostic Radiology, Tampere University Hospital (Finland); ³ Department of Oncology, Tampere University Hospital (Finland); ⁴ Ragnar Granit Institute, Tampere University of Technology (Finland)

SS80 (SS75 VI. Mo) Biomedical Image Processing VI. (Standard Session - posters)

Day and time: Monday 21st November, 9.00-18.00, 12.30-14.00 mandatory presence of authors

Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
2144 58	CORONARY ARTERY FLOW CALCULATION BASED ON THE CORONAROGRAPHIC IMAGES: VALIDATION ON THE CLINICAL DATA	Hanna Goszczynska ¹ , Marek Rewicki ² , Leszek Kowalczyk ¹ , Paweł Hoser ¹	¹ Institute of Biocybernetic and Biomedical Engineering PAS (Poland); ² Institute of Cardiology (Poland)
1780 59	THE SYSTEM STRUCTURE FOR MEDICAL IMAGES COMPRESSION ANALYSIS	Anna Villevalde, Zafar Yuldashev	
1541 60	MOTION CORRECTION FOR FUNCTIONAL INFRARED IMAGING	Andrea Tangherlini ¹ , Arcangelo Merla ^{1,2} , Gian Luca Romani ^{1,2}	¹ Department of Clinical Sciences and Bioimaging, School of Medicine, University of Chieti-Pescara, Chieti (Italy); ² ITAB – Institute of Advanced Biomedical Technologies, Foundation “G. D’Annunzio University”, Chieti (Italy)
1901 61	CANONICAL DECOMPOSITION OF SLIDING MASKS OF DIMENSION 5x5 FOR IMAGES PROCESSING	Stanislav Semenov, Ludmila Sushkova, Konstantin Tshirkov	
2141 62	EVALUATION OF TEXTURE FEATURES FOR BREAST MASSES CHARACTERIZATION	Patricia Bellin Ribeiro, Homero Shiabel, Ana Cláudia Patrocínio, Maurício Cunha Escarpinati	
2278 63	B-SPLINES FILTERING FOR AUTOMATIC DETECTION OF CALCIFICATION LESIONS IN MAMMOGRAMS	Gloria Bueno, Monica Ruiz, Jesús Serrano	
1995 64	AN EFFICIENT SEARCH STRATEGY FOR 2D/3D MEDICAL IMAGE REGISTRATION BASED ON DEPENDENCIES OF TRANSFORMATION PARAMETERS	Xinhui Yang, Wolfgang Birkfellner, Peter Niederer	

1543 65	SEGMENTATION OF CHROMOSOME IMAGES BASED ON A RECURSIVE WATERSHED TRANSFORM	<u>Petros Karvelis</u> ¹ , Dimitrios Fotiadis ^{1,2} , Marika Syrrou ³ , Ioannis Georgiou ⁴	¹ Unit of Medical Technology and Intelligent Information Systems / Dept. of Computer Science, University of Ioannina, Ioannina (Greece); ² Biomedical Research Institute-FORTH, Ioannina (Greece); ³ Department of General Biology / Medical School, University of Ioannina, Ioannina (Greece); ⁴ Lab of Human Reproductive Genetics / Medical School, University of Ioannina, Ioannina (Greece)
2464 66	NOVEL MULTI-STEP REGION GROWING ALGORITHM FOR THE SEGMENTATION OF BURN IMAGES	<u>Carmen Serrano</u> ¹ , Begona Acha ¹ , Irene Fondón ¹	¹ University of Seville (Spain)
1419 67	3D LOCALISATION OF EEG ELECTRODE POSITIONS AND REGISTRATION WITH HEAD SURFACE MRI DATA	<u>Günther Grabner</u> ¹ , Andrew Janke ² , Graham Galloway ² , Christian Kargel ¹	¹ Carinthia Tech Institute, University of Applied Sciences, Klagenfurt, Austria, Division of Medical Information Technologie (Austria); ² Centre for Magnetic Resonance, University of Queensland, Brisbane, Australia (Australia)

SS124 (SS120 V. Mo) Medical Imaging V. (Standard Session - posters)

Day and time: Monday 21st November, 9.00-18.00, 12.30-14.00 mandatory presence of authors

Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1990 68	EXAMINATION OF LEFT HEART VENTRICLE'S CONTRACTILITY BY ANALYSIS OF ITS SHAPE COEFFICIENTS	<u>Malgorzata Przytulska</u> ¹ , Juliusz Kulikowski ¹	¹ Institute of Biocybernetics and Biomedical Engineering PAS, Warsaw (Poland)
2227 69	ASSESSING FORE PARAMETERS FOR THE REBINNING OF 3D PET SCAN	<u>Elisabetta De Bernardi</u> ¹ , Marco Mazzoli ¹ , Felicia Zito ² , Giuseppe Baselli ¹	¹ Biomedical engineering Department, Polytechnic University of Milan (Italy); ² Nuclear Medicine Department, Ospedale Maggiore Policlinico, Mangiagalli e Regina Elena, Milan (Italy)
2359 70	VOLUMETRIC CHANGES BASED ON COMPUTER TOMOGRAPHY AFTER THE FIRST TREATMENT OF LYMPHOMA PATIENTS	Reea Peltola ¹ , Tuomas Saarinen ¹ , Ritva Järvenpää ² , Hannu Pertovaara ³ , Tomi Heinonen ⁴ , Prasun Dastidar ² , Pirkko Kellokumpu-Lehtinen ^{1,3} , <u>Jari Hyttinen</u> ⁴ , Seppo Soimakallio ^{1,2}	¹ Medical School of Tampere University (Finland); ² Department of Diagnostic Radiology, Tampere University Hospital (Finland); ³ Department of Oncology, Tampere University Hospital (Finland); ⁴ Ragnar Granit Institute, Tampere University of Technology (Finland)
2360 71	EVALUATION OF THE TREATMENT OUTCOME OF LYMPHOMA PATIENTS AFTER THE FIRST TREATMENT USING MAGNETIC RESONANCE IMAGING BASED VOLUMETRY	Tuomas Saarinen ¹ , Prasun Dastidar ² , Reea Peltola ¹ , Ritva Järvenpää ² , Hannu Pertovaara ³ , Tuuka Arola ⁴ , Tomi Heinonen ⁴ , <u>Jari Hyttinen</u> ⁴ , Pirkko Kellokumpu-Lehtinen ^{1,3} , Seppo Soimakallio ^{1,2}	¹ Medical School of Tampere University (Finland); ² Department of Diagnostic Radiology, Tampere University Hospital (Finland); ³ Department of Oncology, Tampere University Hospital (Finland); ⁴ Ragnar Granit Institute, Tampere University of Technology (Finland)
2630 72	SEGMENTATION OF BRAIN IMAGES	Andris Lubans, Alexander Glaz, Ardis Platkajis	

2224 73	PERFORMANCE EVALUATION OF RESOLUTION RECOVERY IN 2D AND 3D PET DURING ITERATIVE IMAGE RECONSTRUCTION	<u>Elisabetta De Bernardi</u> ¹ , Felicia Zito ² , Marco Mazzoli ¹ , Luca Mainardi ¹ , Giuseppe Baselli ¹ , Paolo Gerundini ²	¹ Biomedical Engineering Department, Polytechnic University of Milan (Italy); ² Nuclear Medicine Department, Ospedale Maggiore Policlinico, Mangiagalli e Regina Elena, Milan (Italy)
2514 YIC 74	EXPERIMENTAL STUDY ON REDUCTION OF POST-COMPRESSION ERROR IN CODED EXCITATION IMAGING USING ORTHOGONAL GOLAY CODES	<u>Bae-Hyung Kim</u> ¹ , Tai-Kyong Song ¹	¹ Center for Medical Solutions Research/Department of Electronic Engineering, Sogang University (South Korea)
2180 75	EXPERIMENTAL IDENTIFICATION OF THE ELECTROMECHANICAL TRANSFER FUNCTION OF ULTRASOUND TRANSDUCERS	<u>Tobias Gehrke</u> ¹ , Fahmi Cheikhrouhou ¹ , Heinrich Martin Overhoff ¹	¹ Medical Engineering Laboratory, University of Applied Sciences Gelsenkirchen (Germany)
1996 76	A JAVA-BASED MULTIPLATFORM HIGH PERFORMANCE 2D AND 3D VISUALIZATION ENGINE FOR MEDICAL IMAGE DATA SETS: ABDOMINAL AORTIC ANEURYSM AS AN EXAMPLE	<u>Tuukka Arola</u> ¹ , Markus Hannula ¹ , Jari Hyttinen ¹ , Prasun Dastidar ² , Seppo Soimakallio ² , Jaakko Malmivuo ¹	¹ Ragnar Granit Institute, Tampere University of Technology (Finland); ² Department of Diagnostic Radiology, Tampere University Hospital (Finland)
2145 77	SEGMENTATION OF THE PIG HEAD	Markus Hannula ¹ , <u>Tuukka Arola</u> ¹ , Jari Hyttinen ¹ , Ville Jäntti ² , Minna Silfverhuth ³ , Jaakko Malmivuo ¹	¹ Ragnar Granit Institute, Tampere University of Technology (Finland); ² Diagnostic Radiology / Clinical Neurophysiology, Oulu University Hospital (Finland); ³ Clinical Neurophysiology, Tampere University Hospital (Finland)
2361 78	USE OF SEGMENTATION AND VOLUMETRIC ESTIMATION IN THE TREATMENT OF ABDOMINAL AORTIC ANEURYSMS USING STENTS	Markus Hannula ¹ , <u>Tuukka Arola</u> ¹ , Jari Hyttinen ¹ , Nathaniel Narra ¹ , Prasun Dastidar ^{2,3} , Georg Pimenoff ² , Seppo Soimakallio ^{2,3} , Jaakko Malmivuo ¹	¹ Ragnar Granit Institute, Tampere University of Technology (Finland); ² Department of Diagnostic Radiology, Tampere University Hospital (Finland); ³ Medical School of Tampere University (Finland)
2572 79	AN EFFICIENT ANALYSIS METHOD TO DESIGN OPTIMUM SPARSE ARRAY SCHEMES FOR PHASED ARRAY TRANSDUCERS	<u>Gi-Duck Kim</u> ¹ , Tai-Kyong Song ¹	¹ Sogang University (South Korea)

2515 80	3-D IMAGING METHODS USING 2-DIMENSIONAL PHASED ARRAYS BASED ON SYNTHETIC FOCUSING TECHNIQUE	Jung-Jun Kim ¹ , Tai-Kyong Song ¹	¹ SOGANG University (South Korea)
2548 81	EFFICIENT ULTRASOUND ECHO PROCESSING ALGORITHMS FOR IMPLEMENTATION WITH TMS320C64x DSPs	Dong-Hoon Han ¹ , Hak-Yeol Sohn ¹ , Hyun-Chul Kim ¹ , Tai-Kyong Song ¹	¹ Sogang University (South Korea)

YIC - Young Investigator Competition Finalist

SS64 (SS63 II.) Biomathematics II. (Standard Session - posters)

Day and time: Monday 21st November, 9.00-18.00, 12.30-14.00 mandatory presence of authors

Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1912 82	MODELS OF NATURAL CUBIC SPLINES FOR HEAVY METALS EXPOSURE ASSESSMENT	<u>Irena Patasiene</u> ^{1,5} , Rima Kregzdyte ² , Martynas Patasius ^{4,3} , Agne Kazakeviciute ¹	¹ Kaunas University of Technology, Faculty of Social Sciences (Lithuania); ² Institute for Biomedical Research, Kaunas University of Medicine (Lithuania); ³ Kaunas University of Technology, Faculty of Informatics (Lithuania); ⁴ Kaunas University of Technology Institute of Biomedical Engineering (Lithuania); ⁵ Kaunas University of Medicine, Department of Social Medicine (Lithuania)
1504 83	HEAVY METALS KINETICS IN MAN	Filimonova Galina, Saprunova Galina, Tokin Ivan	
1479 84	PREDICTION OF PROTEIN STRUCTURE USING A HIDDEN MARKOV MODEL WITH LIMITED NUMBER OF STATES	<u>Christos Lampros</u> ¹ , Costas Papaloukas ^{1,2} , Yorgos Goletsis ^{1,3} , Dimitrios Fotiadis ¹	¹ Unit of Medical Technology and Intelligent Information Systems, Dept. of Computer Science, University of Ioannina (Greece); ² Department of Biological Applications and Technology, University of Ioannina (Greece); ³ Department of Economics, University of Ioannina (Greece)
1863 85	A SOFTWARE FOR LATERAL AND FRONTAL CEPHALOGRAM COMPUTERIZED ANALYSIS	<u>Georgeta Zegan</u> ¹ , Cristina Gena Dascalu ¹ , Dragos Teodor Gavrilut ²	¹ University of Medicine and Pharmacy "Gr.T.Popa", Iasi (Romania); ² University "Al.I.Cuza", Iasi (Romania)
2299 86	EXPERTSHELL - A SHELL FOR DEVELOPING AND SHARING OF EXPERT SYSTEMS ON INTERNET	Marco Aurelio Benedetti Rodrigues ¹ , Luiz Duarte Dalmolin ¹ , <u>Vander Vigolo</u> ¹ , Ciro Egoavil ¹	¹ Faculdades Integradas da Rede de Ensino UNIVEST (Brazil)
1503 87	MITOTIC DELAY UNDER IRRADIATION	Ivan Tokin, Maria Tolstaja	
2554 88	PARAMETER ESTIMATION METHOD IN DISCRETE POPULATION DYNAMICS MODELS	George-Virgil Focsanianu, Ioan Grosu, Aurelia Patrulescu	

SS54 (SS53 II.) Medical Informatics II. (Standard Session - posters)

Day and time: Monday 21st November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1679 89	A NEUROCOMPUTATIONAL MODEL FOR TOWER OF HANOI TEST	Gülay Büyükaksoy Kaplan, Neslihan Şengör, Hakan Gürvit	
1857 90	AUTOMATIC SLEEP APNEA DIAGNOSIS SYSTEM USING NONINVASIVE VITAL SIGNALS RECORDS	Tarik Al-ani ² , Daniel Novák ¹ , Lenka Lhotska ¹ , <u>Tamara Pozzo Mendoza Paula</u> ¹ , Laëtitia Rigaux ³	¹ Czech Technical University in Prague/Gerstner Laboratory (Czech Republic); ² ESIEE - PARIS/A ² SI (France); ³ Polytech'Grenoble (France)
1888 91	PREDICTION OF INDIVIDUAL PSYCHOPHYSIOLOGICAL STRESS LEVEL WITH ARTIFICIAL NEURAL NETWORK	<u>Manne Hannula</u> ¹ , Pekka Määttä ¹ , Maija-Leena Lehtelä ¹	¹ Oulu Polytechnic (Finland)
2108 92	COMPUTATION OF PARAMETERS FOR FEED FORWARD NEURAL NETWORKS IN THE INTERPRETATION OF IMPEDANCE CARDIOVASOGRAMS	<u>Sunil Karamchandani</u> ¹ , M.Y. Dixit ² , Mita Bhowmick ³ , Harish Kaprani ³	¹ Bombay Institute of Technology Bandra, Mumbai (India); ² Bhabha Atomic Research Center Trombay, Mumbai (India); ³ Thadomal Shahani Engineering College Bandra, Mumbai (India)
2237 93	USING MOBILE AGENT TECHNIQUES FOR DISTRIBUTED HEALTH-CARE TELEEXPERTISE SYSTEMS	<u>HACHICHA HÉLA</u> ² , LOUKIL Adlén ³ , GHEDIRA Khaled ¹	¹ ISG (Tunisia); ² FSEGS (Tunisia); ³ INSAT (Tunisia)
2326 94	TOWARDS OWL MAMMOGRAPHIC ONTOLOGY	Teresa Podsiadły-Marczykowska ¹ , Anna Guzik ² , <u>Hanna Goszczynska</u> ³	¹ Institute of Biocybernetics and Biomedical Engineering (Poland); ² Radiology Department Grochowski Hospital (Poland); ³ Institute of Biocybernetics and Biomedical Engineering (Poland)
2351 95	A COMPARISON OF MLBP, PNN, RBF, AND MMF NEURAL NETWORKS FOR VEP FEATURE EXTRACTION	A. Mohammadian, A. R. Sharafat, S. Mohammad P. Firoozabadi, E. Jafarzadehpur	
1548 96	THE INTERACTIVE WEB APPLICATION FOR TREATMENT OF THE ARTICULATION/PHONOLOGICAL DISORDER CHILDREN	<u>Shih-Tsang Tang</u> ¹ , Yueh-Fang Huang ² , Shuenn-Tsong Young ³	¹ Department of Biomedical Engineering, Yuanpei Institute of Science and Technology (Taiwan); ² Department of Nursing, Chang Gung Institute of Technology (Taiwan); ³ Institute of Biomedical Engineering, National Yang-Ming University (Taiwan)

1812 97	AUTOMATIC ANNOTATION OF MEDICAL RECORDS	Ján Antolík, Petr Kolesa	
1872 98	COMPUTER-AIDED DIAGNOSIS OF BREAST CANCER VIA AN INDEXED ATLAS AND CONTENT- BASED RETRIEVAL OF MAMMOGRAMS	Heather Bosnak ¹ , Ramanpreet Grewal ¹ , James Howland ¹ , Ben Liu ¹ , <u>Rangaraj M</u> <u>Rangayyan</u> ¹	¹ University of Calgary (Canada)
2000 99	INDEXING OF MEDICAL IMAGES BASED UPON THE JPEG-2000 WAVELET COMPRESSION SCHEME	<u>Guy CAZUGUEL</u> ^{1,2} , Mathieu LAMARD ² , Wissam DACCACHE ³ , Christian ROUX ^{2,1} , Béatrice COCHENER ^{3,2}	¹ LATIM - Département I.T.I., GET- ENST Bretagne (France); ² Laboratoire de Traitement de l'Information Médicale U650 - INSERM (France); ³ Service d'Ophtalmologie CHU de BREST (France)

SS62 (SS59 IV. Mo) Bioimpedance IV. (Standard Session - posters)

Day and time: Monday 21st November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1446 100	Electrical time constant of erythrocytes	<u>Hiroshi Kanai</u> ¹ , Norio Furuya ³ , Katsuyuki Sakamoto ² , Naoaki Kanai ⁴	¹ Tokyo Denki University (Japan); ² Kitasato University (Japan); ³ Tokyo Metropolitan college (Japan); ⁴ Tokai University (Japan)
2415 101	Nonlinear software phantom for conductivity perturbations in Electrical Impedance Endotomography	<u>Jacques JOSSINET</u> ¹ , Adrien Matias ¹	¹ INSERM (France)
1447 102	INSTRUMENTATION DESIGN FOR A LOW COST ELECTRICAL IMPEDANCE (EIT) SYSTEM	Manouchehr Soleimani ¹ , <u>Amir Movafeghi</u> ^{2,3} , Mohammad Kargarnovin ³	¹ William Lee Innovation Centre, school of materials, the University of Manchester (U.K.); ² NDT Dept., Radiation Protection Tech. Centre, AEOI, Tehran (Iran); ³ School of Mechanical Engineeribg, Sharif university of Technology, Tehran (Iran)

SS108 (SS106 III. Mo) Cardiovascular and Pulmonary Systems III. (Standard Session - posters)

Day and time: Monday 21st November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1494 103	WHEEZING AS AN ACOUSTICAL SIGN OF BRONCHIAL OBSTRUCTION	Volker Groß, Christian Reinke, Ulrich Koehler, Roland Koch, Thomas Penzel, Claus Vogelmeier	
2078 104	DIAGNOSIS OF CHILDHOOD ASTHMA BY NEURAL NETWORK MODEL	Umut Adas, Cenk Sahin, Muhammed Ali Ulku, Kerem Tuncay Ozgunen, Cigdem Zeren, Banu Aslangiray, Derya Ufuk Altintas, Gulbin Karakoc, Ayfer Inal, Sanli Sadi Kurdak	
2661 105	ANALYSIS OF NON-INVASIVE VENTILATION EFFECTS ON GASTRIC INFLATION USING A NON-LINEAR MULTIPLE-CYCLE MODEL	<u>Oded Luria</u> ¹ , Lior Reshef ² , Ofer Barnea ¹	¹ Tel-Aviv University, Department of Biomedical Engineering (Israel); ² Tel-Aviv University, School of Electrical Engineering (Israel)
1628 106	SYSTEM 'RESERVE' FOR PRE- AND POST FLIGHT CARDIORESPIRATORY SYSTEM EXAMINATIONS OF COSMONAUTS	<u>Andrew Pashenko</u> ¹ , Viktor Baranov ¹ , Roman Baevsky ¹ , A. B. Shubin ²	¹ Institute of Biomedical Problems (Russia); ² Neurosoft (Russia)
1411 107	FREQUENCY OF THE BLOOD-PRESSURE SPECTRAL PEAK AROUND 0.1 HZ AND BAROREFLEX SENSITIVITY IN MAN	<u>Antonin Krlicka</u> ¹ , Bohumil Fiser ² , Natasa Honzikova ³ , Zuzana Novakova ⁴	¹ University of Defence, Faculty of Military Technology, Department of Electrical and Electronic Engineering (Czech Republic); ² Masaryk University, Faculty of Medicine, Department of Physiology (Czech Republic); ³ Masaryk University, Faculty of Medicine, Department of Physiology (Czech Republic); ⁴ Masaryk University, Faculty of Medicine, Department of Physiology (Czech Republic)
1796 108	ANALYSIS OF CARDIOVASCULAR VARIABILITIES FOR ENHANCED RISK STRATIFICATION IN PATIENTS WITH DCM	<u>Andreas Voss</u> ¹ , Sandra Truebner ¹ , Alexander Schirdewan ² , Matthias Goernig ³ , Hans-Reiner Figulla ³	¹ Department of Medical Engineering, University of Applied Sciences Jena (Germany); ² Franz-Volhard-Clinic, Charité, Humboldt University Berlin (Germany); ³ Clinic of Internal Medicine I, Friedrich Schiller University Jena (Germany)

1984 109	TIME-FREQUENCY ANALYSIS OF THE HEART RATE VARIABILITY IN AROUSAL FROM SLEEP	<u>Martin Mendez</u> ¹ , Anna M. Bianchi ¹ , Sergio Cerutti ¹	¹ Politecnico di Milano (Italy)
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SS88 (SS85 IV. Mo) Biomedical Measurement IV. (Standard Session - posters)

Day and time: Monday 21st November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1435 110	ECG SIGNAL FILTERING USING THE VIRTUAL INSTRUMENTATION	Mihai Munteanu ¹ , Dan Rafiroiu ² , Gabriel Chindris ³ , Radu Jr. Munteanu ⁴ , Radu Ciupa ⁵ , Marius Roman ⁶ , Anca Flueras ⁷	¹ Cluj-Napoca Technical University (Romania); ² Cluj-Napoca Technical University (Romania); ³ Cluj-Napoca Technical University (Romania); ⁴ Cluj-Napoca Technical University (Romania); ⁵ Cluj-Napoca Technical University (Romania); ⁶ Cluj-Napoca Technical University (Romania); ⁷ Cluj-Napoca Technical University (Romania)
1630 111	THE INFLUENCE OF AGE AND DENTAL STATUS ON THE DURATION OF CHEWING CYCLES DURING MASTICATION	Iva Z. Alajbeg ¹ , Melita Valentic-Peruzovic ¹ , Mario Cifrek ² , Ivan Alajbeg ¹	¹ School of Dental Medicine, University of Zagreb (Croatia); ² Faculty of Electrical Engineering and Computing, University of Zagreb (Croatia)
1877 112	THIN FILM MICROELECTRODES USED IN ELECTRICAL MONITORING OF BLOOD SEDIMENTATION	Radovan Viglaský ¹ , Vladimír Tvarozek ¹ , Michal Weis ²	¹ Slovak University of Technology, Department of Microelectronics (Slovak Republic); ² Institute of Medical Physics and Biophysics, Comenius University, Slovakia (Slovak Republic)
2319 113	THERMISTOR MEASUREMENT OF THE TEMPERATURE INCREASE DUE TO ABSORPTION OF DIAGNOSTIC ULTRASOUND	Roman Žák ¹ , J. Rozman ¹	¹ Faculty of Electrical Engineering and Communication, Department of Biomedical Engineering, VUT Brno (Czech Republic)
2392 114	EVALUATION AND ASSOCIATION OF Hb-AGE WITH DYSLIPIDEMIA AND BLOOD VISCOSITY IN TYPE 2 DIABETIC ASIAN INDIANS	Nivedita Karmakar Gohil ³ , Biju Kumar Gopalakrishna Pillai ¹ , Anoop Misra ² , Sneha Anand ³	¹ Biomedical Engineering Unit, All India Institute of Medical Sciences, Delhi (India); ² Department of Medicine, All India Institute of Medical Sciences, Delhi (India); ³ Centre for Biomedical Engineering, Indian Institute of Technology, Delhi (India)
2011 115	MONITORING OF THE HEART STATE DURING CARDIOSURGICAL INTERVENTIONS	Antoni Nowakowski ¹ , Jerzy Wtorek ¹ , M. Kaczmarek ¹ , K. Grzęda ¹ , K. Kudlak ¹ , J. Siebert ² , B. Trzeciak ² , W. Stojek ³	¹ Gdansk University of Technology/Department of Biomedical Engineering, Gdansk (Poland); ² Medical University of Gdansk/University Centre for Cardiology, Gdansk (Poland); ³ University of Gdansk/Department of Animal Physiology, Gdansk (Poland)

1621 116	A USB INTERFACED MOTION CAPTURE SENSOR, USING TRI-AXIS MAGNETIC/INERTIAL SENSORS FOR USE IN KINEMATIC STUDIES.	<u>John Foody</u> ¹ , Fiachra Mathews ¹ , Damini Kumar ² , Charles Markham ¹ , Tomas Ward ¹ , Brian Caulfield ²	¹ National University of Ireland Maynooth (Ireland); ² University College Dublin (Ireland)
2139 117	HEART RATE DETECTION USING EMFI SENSORS ON A NORMAL LOOKING CHAIR	<u>Laurentiu C. Barna</u> ¹ , Mikko Koivuluoma ¹ , Alpo Värri ¹	¹ Institute of Signal Processing, Tampere University of Technology (Finland)
1854 118	CONTINUAL BIOIMPEDANCE MEASUREMENT BY DUAL CHANNEL SYSTEM WITH HIGH DYNAMIC RANGE	<u>Petr Verner</u> ¹ , Vlastimil Vondra ¹	¹ Academy of Sciences of the Czech Republic (Czech Republic)
2680 119	GAIT DIAGNOSTICS DEVICES FOR PEOPLE WITH IMPLANTS	<u>Dariusz Korzeniowski</u> ¹ , Danuta Jasińska-Choromańska ¹	¹ WARSAW UNIVERSITY OF TECHNOLOGY (Poland)

SS91 (SS89 III.) Biomedical Signal Processing III. (Standard Session - oral contributions)

Chair: Hasan Al-Nashash (United Arab Emirates)

Co-Chair: Herbert Witte (Germany)

Day and time: Tuesday 22nd November, 11.00-12.30 (format 10+5 minutes)

Hall: Meeting Hall V

Id	Title	Paper Authors	Authors' Institutions
2202 11.00	A COMPLETE TOOLBOX FOR ABDOMINAL SOUNDS SIGNAL PROCESSING AND ANALYSIS	Radu Ranta ¹ , <u>Valerie Louis-Dorr</u> ¹ , Christian Heinrich ² , Didier Wolf ¹ , Francois Guillemin ³	¹ INPL Nancy (France); ² LSIIT Strasbourg (France); ³ CAV Nancy (France)
2518 11.15	OPTIMISED COMB FILTER AND SVD FOR DYSPHONIC VOICE ENHANCEMENT	<u>Claudia Manfredi</u> ¹ , Cloe Marino ¹	¹ Department of Electronics and Telecommunications, Univ. of Firenze, Firenze (Italy)
2557 11.30	BOWEL SLOW WAVE FREQUENCY VARIATION IN FAST STATE	Jose J. Moreno-Vazquez ¹ , Javier Garcia-Casado ² , <u>Jose L. Martinez-de-Juan</u> ² , S. Perez-Paredes ³ , Jose L Ponce ⁴	¹ Departamento de Ingeniería Electrónica, Instituto Tecnológico de Minatitlán, Veracruz (Mexico); ² Grupo de Bioelectrónica. Centro de investigación e innovación en Bioingeniería, Valencia (Spain); ³ Departamento de Ingeniería Mecatrónica, Instituto Tecnológico de Querétaro, Qro. (Mexico); ⁴ Área de Cirugía. Hospital Universitario "La Fe" de Valencia (Spain)
2591 11.45	THE VIBRATO AND PHONEME RATING TOOL: A REAL-TIME SPEECH THERAPY FEEDBACK TOOL	<u>Ruairi de Frein</u> ¹ , Scott Rickard ¹	¹ University College Dublin (Ireland)
2414 12.00	HEARTH SOUND REDUCTION IN LUNG SOUNDS BY SPECTROGRAM	ESRA SAATCI ¹ , AYDIN AKAN ²	¹ Istanbul Kultur University (Turkey); ² University of Istanbul (Turkey)
1542 12.15	A NOVEL STATISTICAL TEST TO DETECT AUDITORY EVOKED POTENTIALS	<u>Jing Lv</u> ¹ , David Simpson ¹ , Steven Bell ¹	¹ University of Southampton (U.K.)

SS116 Gait and Motion Analysis (Standard Session - oral contributions)

Chair: Vlasta Zanchi (Croatia)

Co-Chair: Timo Jämsä (Finland)

Day and time: Tuesday 22nd November, 11.00-12.45 (format 10+3 minutes)

Hall: Meeting Hall I

Id	Title	Paper Authors	Authors' Institutions
1672 11.00	EFFECTS OF SHOE LIFTS ON GAIT PARAMETERS	<u>Li-Tung Chang</u> ¹ , Fon-Chin Su ² , Kou-An Lai ²	¹ Chia Nan University of Pharmacy and Science (Taiwan); ² National Chung Kung University (Taiwan)
2186 11.13	AN INVESTIGATION OF THE GAIT OF ELDERLY FALLERS WITH ORTHOSTATIC HYPOTENSION USING FOOTSWITCHES	<u>Karen Culhane</u> ¹ , Ann-Marie Finucane ² , Margaret O' Connor ² , Declan Lyons ² , Gerard Lyons ¹	¹ Biomedical Electronics Laboratory, Department of Electronic and Computer Engineering, University of Limerick, Limerick (Ireland); ² Rehabilitation Centre, St. Camillus' Hospital, Limerick (Ireland)
1602 11.26	BEARING ANGLE STRATEGY USE FOR LOCOMOTION TO AND INTERCEPTING A MOVING OBJECT	<u>Ambreen Chohan</u> ¹ , Geert Savelsbergh ^{1,2} , Paulien van Kampen ² , Marline Wind ² , Martine Verheul ¹	¹ Institute for Biophysical and Clinical research into Human Movement, Manchester Metropolitan University (U.K.); ² Institute for Fundamental and Clinical Human Movement Science, Vrije Universiteit (The Netherlands)
2061 11.39	QUANTITATIVE ANALYSIS OF CARE-GIVING MOTION USING A 3-D MOTION ANALYSIS	<u>Yaemi Koshino</u> ¹ , Masaki Yoshida ² , Yuko Ohno ¹	¹ Osaka University (Japan); ² Osaka Electro-Communication University (Japan)
2174 11.52	INFLUENCE ON INVERSE DYNAMICS CALCULATION OF DETAILING THE HEAD-ARMS-TRUNK SEGMENT	<u>Silvia Fantozzi</u> ¹ , Rita Stagni ¹ , Roberto Spinozzi ¹ , Angelo Cappello ¹	¹ Department of Electronics, Computer Science and Systems; University of Bologna (Italy)
2612 12.05	CONSISTENCY INDEX OF KINEMATIC AND KINETIC GAIT PATTERNS	Ricardo Bravo, Antonio Salazar, Marcel Rupcich, Christian De Castro, Cecilia Murrugarra	
2123 12.18	PROPAGATION OF EPICONDILES MISLOCATION TO KNEE KINEMATICS DURING STEP-UP/DOWN MOTOR TASK: EFFECTIVENESS OF SINGLE AND DOUBLE CALIBRATION	<u>Rita Stagni</u> ¹ , Silvia Fantozzi ¹ , Angelo Cappello ¹	¹ DEIS, Università degli Studi di Bologna (Italy)
2209 12.31	THE KNEE KINEMATICAL COORDINATION INVESTIGATION OF AN IMC CHILD DURING GAIT	Yannick Delpierre ¹ , Paul Filipetti ¹ , Elisabeth Kolanowski ¹ , <u>Kevin Guelton</u> ²	¹ Centre de l'ARCHE, Saint-Saturnin-Le mans - (France); ² CRestIC – University of Reims Champagne-Ardennes (France)

SS10 Image Processing and Analysis of Retinal Images I. (Special Session - oral contributions)

Chair: Alfredo Ruggeri (Italy)

Co-Chair: Meindert Niemeijer (The Netherlands)

Day and time: Tuesday 22nd November, 11.00-12.30 (format 10+5 minutes)

Hall: Club A

Id	Title	Paper Authors	Authors' Institutions
1618 11.00	AUTOMATED QUANTIFICATION OF FUNDUS IMAGE QUALITY	James Lowell ¹ , Andrew Hunter ¹ , Maged Habib ² , David Steel ²	¹ University of Lincoln (U.K.); ² Sunderland Eye Infirmary (U.K.)
1561 11.15	DISPARITY ESTIMATION IN UNCALIBRATED STEREO RETINAL IMAGES	Radim Kolar ¹ , L. Kubecka ¹ , J. Jan ¹ , R. Chrastek ²	¹ Department of Biomedical Engineering, FEEC, Brno University of Technology (Czech Republic); ² Department of Computer Science, Friedrich-Alexander University (Germany)
1736 11.30	TRAM-LINE FILTERING FOR RETINAL VESSEL SEGMENTATION	Andrew Hunter ¹ , James Lowell ¹ , David Steel ²	¹ University of Lincoln (U.K.); ² Sunderland Royal Infirmary (U.K.)
1889 11.45	A RIBBON OF TWINS FOR EXTRACTING RETINAL VESSEL BOUNDARIES	Bashir Al-Diri ¹ , Andrew Hunter ¹	¹ The University of Lincoln (U.K.)
1953 12.00	ENHANCED CLASSIFICATION-BASED VESSEL TRACKING USING VESSEL MODELS AND HOUGH TRANSFORM	Alfredo Giani ¹ , Enrico Grisan ¹ , Alfredo Ruggeri ¹	¹ Department of Information Engineering, University of Padova (Italy)
2132 12.15	MULTI-SCALE SEGMENTATION OF THE VASCULAR TREES IN RETINAL IMAGES	Kai Rothaus ¹ , Xiaoyi Jiang ¹	¹ Department of Computer Science - University of Muenster (Germany)

SS6 Nanomechanics and Nanomanipulation of Biological Materials (Special Session - oral contributions)

Chair: Isaac Liu (United Kingdom)

Co-Chair: Chuan Li (Singapore)

Day and time: Tuesday 22nd November, 11.00-12.30 (format 10+3 minutes)

Hall: Club B

Id	Title	Paper Authors	Authors' Institutions
1466 11.00	OSTEOBLASTS TUNE THEIR MECHANICAL BEHAVIOR TO THE MAGNITUDE OF HABITUAL MECHANICAL LOADING	<u>Michael Jaasma</u> ^{1,2} , Wesley Jackson ¹ , Tony Keaveny ¹	¹ University of California, Berkeley (USA); ² Royal College of Surgeons in Ireland (Ireland)
1495 11.13	INFLUENCE OF CHAIN LENGTH OF SELF-ASSEMBLED MONOLAYERS ON ADHESION FORCE	<u>Ya-Pu Zhao</u> ¹ , L.Y. Guo	¹ Chinese Academy of Sciences (China)
1674 11.26	STRESS AND DEFORMATION OF A CELL BY OPTICAL STRETCH	<u>Chuan Li</u> ¹	¹ Nanyang Technological University (Singapore)
1833 11.39	MICRO-MECHANICAL TESTING OF MECHANO-ACTIVE SCAFFOLDS FOR SKELETAL TISSUE REGENERATION	<u>Elbert Baas</u> ¹ , Jan Herman Kuiper ¹ , Ying Yang ¹ , Alicia El Haj ¹	¹ Institute of Science and Technology in Medicine (U.K.)
1885 11.52	A NOVEL INDENTATION TECHNIQUE FOR THE MECHANICAL CHARACTERISATION OF HUMAN CORNEA	<u>Mark Ahearne</u> ¹ , Ying Yang ¹ , Alicia El Haj ¹ , Kong Then ² , Kuo-Kang Liu ¹	¹ Institute of Science and Technology in Medicine, Keele University (U.K.); ² Birmingham and Midland Eye Centre, City Hospital, Birmingham (U.K.)
2374 12.05	"ADVANCED METHODS AND TOOLS FOR HANDLING AND ASSEMBLY IN MICROTECHNOLOGY" – A EUROPEAN APPROACH IN THE FRAME OF THE FP6 MARIE CURIE RTN ASSEMIC	<u>Werner Brenner</u> ¹ , Franz Suemecz ¹ , Ana Almansa ²	¹ Institute of Sensor and Actuator Systems, Vienna University of Technology (Austria); ² Mechatronic Automation Systems, ARC Seibersdorf research GmbH (Austria)
1427 12.18	NANOMECHANICS AND NANOMANIPULATION OF SOFT BIOLOGICAL MATERIALS FOR TISSUE ENGINEERING APPLICATIONS	<u>Isaac Liu</u> ¹	¹ Keele University (U.K.)

SS25 Gene Expression Data Mining (Special Session - oral contributions)

Chair: Filip Železný (Czech Republic)

Co-Chair: Jakub Tolar (Czech Republic)

Day and time: Tuesday 22nd November, 11.00-12.30 (format 10+5 minutes)

Hall: Club C

Id	Title	Paper Authors	Authors' Institutions
1599 11.00	GENE NETWORK RECONSTRUCTION WITH LATENT FACTORS BASED ON INDEPENDENT COMPONENT ANALYSIS	Woei-Fuh Wang ¹ , Chung-Ming Chen ¹ , Yueh-Yuan Fang ² , Cheng-Chi Huang ¹	¹ Institute of Biomedical Engineering, National Taiwan University (Taiwan); ² Department of Electrical Engineering, National Central University (Taiwan)
1604 11.15	PROBABILISTIC ARTIFICIAL NEURAL NETWORKS FOR TISSUE CLASSIFICATION USING GENE EXPRESSION PROFILES	<u>Costas Papaloukas</u> ^{1,2} , Theodora Nikolaidi ¹ , Yorgos Goletsis ^{1,3} , Dimitrios I. Fotiadis ¹	¹ Unit of Medical Technology and Intelligent Information Systems, Department of Computer Science, University of Ioannina (Greece); ² Department of Biological Applications and Technology, University of Ioannina (Greece); ³ Department of Economics, University of Ioannina (Greece)
2204 11.30	RELATIONAL SUBGROUP DISCOVERY FOR GENE EXPRESSION DATA MINING	<u>Filip Železný</u> ¹ , Jakub Tolar ² , Nada Lavrač ³ , Olga Štěpánková ¹	¹ Czech Technical University (Czech Republic); ² University of Minnesota (USA); ³ Jozef Stefan Institute (Slovenia)
2593 11.45	SEQUENCE ANALYSIS VIA FEED-FORWARD NEURAL NETWORK AND BAYESIAN THEORY	<u>Flavio Nobre</u> ¹ , Marcelo Ribeiro-Alves ¹	¹ Biomedical Engineering Department, Alberto Luiz Coimbra Institute, Federal University of Rio de Janeiro (Brazil)
2486 12.00	USE OF MAANOVA FOR DETECTING DIFFERENTIALLY EXPRESSED GENES IN GENOME-WIDE EXPRESSION OF HUMAN PBMC STIMULATED WITH MYCOBACTERIUM LEPRAE	Marcelo Ribeiro-Alves ¹ , Alessandra Saliba ² , Tatiana Fulco ² , Jorge Ramirez-Salcedo ³ , Euzenir Sarno ² , Elizabeth Sampaio ² , Ulisses Lopes ⁴ , <u>Flávio Nobre</u> ¹	¹ Biomedical Engineering Department, Alberto Luiz Coimbra Institute, Federal University of Rio de Janeiro (Brazil); ² Leprosy Laboratory, Oswaldo Cruz Institute, FIOCRUZ (Brazil); ³ Institute of Cellular Physiology, Universidad Nacional Autonoma de Mexico (Mexico); ⁴ Institute of Biophysics Carlos Chagas Filho, Federal University of Rio de Janeiro (Brazil)

SS30 Advanced Medical Imaging Modalities (Special Session - oral contributions)

Chair: Jan Kybic (Czech Republic)

Co-Chair: Peter Boesiger (Switzerland)

Day and time: Tuesday 22nd November, 11.00-12.30 (format 15+7 minutes)

Hall: Club D

Id	Title	Paper Authors	Authors' Institutions
1452 11.00	NON-INVASIVE IMAGING OF SYNCHRONIZED NEURONAL ACTIVITY USING LOW FREQUENCY ELECTRICAL IMPEDANCE TOMOGRAPHY (LFEIT) – SIMULATION STUDY	<u>Ori Gilad</u> ¹ , Lior Horesh ¹ , David S Holder ¹	¹ University College London, Department of Medical Physics & Bioengineering (U.K.)
2287 11.22	MRI USING CONTINUOUS TABLE MOTION	<u>Stephen Riederer</u>	
1717 11.44	SPECKLE STUDY TO BIOMEDICAL APPLICATIONS	<u>Odile Carvalho</u> ^{1,2} , Marie-Cécile Péron ² , Steve Guyot ² , Eric Deléchelle ² , Laurence Roy ¹	¹ IRSN/DRPH/SRBE/LDB (France); ² LISSI, Université Paris 12 Val-de-Marne (France)
2368 12.06	ESTIMATION OF MOUSE CONTRAST ECHOCARDIOGRAPHY SET UP WITH SECI	<u>Bruno Durning</u> ¹ , Christian Cachard ¹ , Hélène Thibault ² , Genevieve Derumeaux ² , Michel Ovize ²	¹ CREATIS CNRS UMR 5515, U 630 INSERM, Université Claude Bernard Lyon 1, Lyon (France); ² Laboratoire d'Echocardiographie, INSERM E0226 Laboratoire de Physiologie Lyon Nord, Hôpital Cardiologique Louis Pradel, Lyon (France)

SS7 Telemedicine: Intelligent Integrated Mobile Care Support Systems (Special Session - oral contributions)

Chair: Polun Chang (Taiwan)

Co-Chair: Mikuláš Popper (Slovakia)

Day and time: Tuesday 22nd November, 11.00-12.30 (format 10+2 minutes)

Hall: Club E

Id	Title	Paper Authors	Authors' Institutions
2344 11.00	BUILDING AN INTEGRATED OMR-AND-PAPER-BASED DATA AUTOMATIC COLLECTION SUPPORT SYSTEM	Wen-Hsien Tseng ¹ , Polun Chang ¹ , Tze-Heng Ma ²	¹ Institution of Health Informatics and Decision Making, National Yang-Ming University (Taiwan); ² Institute of Information Science, Academia Sinica (Taiwan)
2347 11.12	DEVELOPING AND PILOT EVALUATING A SMARTPHONE-AND-PALM-BASED EVALUATION SUPPORT SYSTEM IN HOME CARE	Mu-Jung Chen ¹ , James C Chen ¹ , Chung-Fu Lan ² , Polun Chang ³	¹ Department of Industrial Engineering, Chung Yuan Christian University (Taiwan); ² Institute of Health Economics and Policy, National Yang-Ming University (Taiwan); ³ Institute of Health Informatics and Decision Making, National Yang-Ming University (Taiwan)
2353 11.24	A WIRELESS SPEECH-AND-TOUCH-BASED INTELLIGENT COMPREHENSIVE TRIAGE SUPPORT SYSTEM	Polun Chang ¹ , Yu-Hsiang Sheng ² , Da-Wei Wang ³ , Yueh-Shuang Hsu ⁴ , I-Ching Hou ⁵	¹ Institute of Health Informatics and Decision Making (Taiwan); ² Industrial Research Technology Institute (Taiwan); ³ Institute of Information Science, Academia Sinica (Taiwan); ⁴ Taipei Veterans General Hospital (Taiwan); ⁵ National Taiwan University Hospital (Taiwan)
2354 11.36	A PATIENT-IDENTIFICATION-ORIENTED NURSING SHIFT EXCHANGE SUPPORT SYSTEM USING WIRELESS RFID PDA TECHNIQUES	Chien-Cheng She ² , Pin-Jen Huang ¹ , Polun Chang ¹	¹ National Yang-Ming University (Taiwan); ² Everlite Technology Co, Ltd. (Taiwan)
2357 11.48	INTELLEAGENT MOBILE VOICE INFORMATION CENTER SYSTEM: TAKING THE EMERGENCY TRIAGE SUPPORT SYSTEM AS AN EXAMPLE	Fang-Ying Hsiao ¹ , Li-Wei Lin ² , Guo-Hang Chang ¹ , Polun Chang ¹	¹ Institution of Health Informatics and Decision Making, National Yang-Ming University (Taiwan); ² Institute of Information Management, Chiao Tung University Hsinchu (Taiwan)
2629 12.00	TELEMEDICINE TO ASSIST PATIENT UNDERSTANDING OF ATMOSPHERIC INFLUENCE ON LUNG FUNCTION AND IMPROVE REALTIME CONTROL OF MILD-TO-MODERATE ASTHMATICS	William Cobern ¹ , Patrick McSharry ¹ , Lionel Tarassenko ¹	¹ Department of Engineering Science, University of Oxford (U.K.)
2638 12.12	PDA BASED BODY FAT MEASUREMENT SYSTEM	Mi-Hee Lee ¹ , Hyoung-Ki Lee ¹ , Seokwon Bang ¹ , Yongbeom Lee ¹ , Sangryong Kim ¹	¹ Samsung Advanced Institute of Technology (South Korea)
1655 12.24	EMERGENCY TELEMEDICINE SYSTEM USING MOBILE NETWORKS	Chien-Cheng Lee ¹	¹ YuanZe University (Taiwan)

SS28 Modeling in Electrophysiology (Special Session - oral contributions)

Chair: Milan Tyšler (Slovakia)

Co-Chair: Leonid Titomir (Russia)

Day and time: Tuesday 22nd November, 11.00-12.30 (format 10+5 minutes)

Hall: Club H

Id	Title	Paper Authors	Authors' Institutions
1743 11.00	EPICARDIAL STIMULATION OF A VIRTUAL LEFT VENTRICULAR WALL COMPRISING HETEROGENEITY AND ANISOTROPY	<u>Daniel L. Weiss</u> ¹ , Gunnar Seemann ¹ , Olaf Doessel ¹	¹ Institute of Biomedical Engineering, Universität Karlsruhe (TH), Karlsruhe (Germany)
2207 11.15	NONINVASIVE DETECTION OF ISCHEMIC REGIONS IN THE HEART	<u>Milan Tyšler</u> ¹ , Marie Turzová ¹ , Jana Švehlíková ¹ , Eva Hebláková ¹ , Slavomíra Filipová ²	¹ Institute of Measurement Science, Slovak Academy of Sciences (Slovak Republic); ² Department of Cardiology, Slovak Healthcare University (Slovak Republic)
2265 11.30 YIC	LEAD FIELD FORMULATION FOR EPICARDIAL POTENTIAL IN ELECTROCARDIOGRAPHIC LOCALIZATION OF ACUTE MYOCARDIAL ISCHEMIA	<u>Matti Stenroos</u> ¹ , Helena Hänninen ² , Mats Lindholm ¹ , Ilkka Tierala ² , Toivo Katila ¹	¹ Helsinki University of Technology (Finland); ² Helsinki University Central Hospital (Finland)
2109 11.45	VALIDATION OF A RABBIT VENTRICULAR BIDOMAIN MODEL FOR REENTRY INDUCTION	<u>Gernot Plank</u> ¹ , Anton Prassl ¹ , Ernst Hofer ¹	¹ Medical University Graz, Institute of Biophysics (Austria)
2125 12.00 YIC	MODEL-BASED ANALYSIS AND INTERPRETATION OF HUMAN EPICARDIAL ELECTROGRAMS USING A BIDOMAIN SLAB MODEL	<u>Lukas Fritz</u> ¹ , Anton Prassl ² , Helmut Hutten ¹ , Gernot Plank ²	¹ Institute of Medical Engineering (Austria); ² Institute of Biophysics (Austria)
2329 12.15	DEVELOPMENT OF A 3D COMPUTERMODEL FOR DEFIBRILLATION STUDIES BASED ON HISTOLOGICAL RABBIT DATA	<u>Anton J. Prassl</u> ¹ , Gernot Plank ¹	¹ Medical University Graz (Austria)

YIC - Young Investigator Competition Finalist

SS92 (SS89 IV.) Biomedical Signal Processing IV. (Standard Session - oral contributions)

Chair: Ivo Provazník (Czech Republic)

Co-Chair: Marek Penhaker (Czech Republic)

Day and time: Tuesday 22nd November, 14.00-16.00 (format 10+5 minutes)

Hall: Meeting Hall V

Id	Title	Paper Authors	Authors' Institutions
1646 14.00	LOWER POWER ULTRASOUND APPROACH FEASIBILITY VARYING MICROBUBBLE CONCENTRATION	<u>Rosa Palmizio Errico</u> ¹ , Sergio Casciaro ^{1,2} , Francesco Conversano ¹ , Graziano Palma ¹ , Alessandro Distante ^{1,2}	¹ ISBEM Euro Mediterranean Biomedical Scientific Institute, Brindisi (Italy); ² National Council of Research, Institute of Clinical Physiology, Lecce (Italy)
1403 14.15	AN EXPERT SYSTEM TO DIAGNOSE THE ATHEROSCLEROSIS FROM DOPPLER SIGNALS OF CAROTID ARTERY	<u>SADIK KARA</u> ¹ , FATMA DIRGENALI ²	¹ Erciyes University (Turkey); ² Erciyes University (Turkey)
1405 14.30	ANALYSIS OF LOWER EXTREMITY VENOUS DOPPLER SIGNALS USING SPECTRAL BROADENING INDEX	<u>SEMRA İÇER</u> ¹ , SADIK KARA ²	¹ Erciyes University (Turkey); ² Erciyes University (Turkey)
1414 14.45	DETECTION OF ATHEROSCLEROSIS IN EARLY PHASE USING POWER SPECTRAL DENSITIES OF CAROTID ARTERY DOPPLER SIGNALS	<u>Fatma Dirgenali</u> ¹ , Sadik Kara ²	¹ Erciyes University (Turkey); ² Erciyes University (Turkey)
1735 15.00	1H MR DATA QUANTITATION: REPRODUCIBILITY EVALUATION BY SIMULATION	<u>Maria Filomena Santarelli</u> ¹ , Luigi Landini ² , Vincenzo Positano ¹ , Domenico Montanaro ¹ , Nicola Vanello ³ , Antonio Benassi ¹	¹ CNR Institute of Clinical Physiology (Italy); ² Dept. of Information Engineering - University of Pisa (Italy); ³ Dept. of Electrical Systems and Automation - University of Pisa (Italy)

1929 15.15	METHODOLOGICAL STUDY OF READING PROCESSES WITH ERPs AND ER-fMRI	<u>S. Casarotto</u> ¹ , A. M. Bianchi ¹ , S. Cerutti ¹ , N. Vanello ^{2,3} , E. Ricciardi ⁴ , C. Gentili ⁴ , L. Sani ⁴ , D. Bonino ⁴ , M. Guazzelli ⁵ , P. Pietrini ⁴ , L. Landini ⁶ and G. A. Chiarenza ⁷	¹ Dept. Biomedical Engineering, Polytechnic University of Milan, Milan (Italy) ² Dept. Electrical Systems and Automation, Faculty of Engineering, University of Pisa, Pisa (Italy) ³ MRI Laboratory, Institute of Clinical Physiology, Council of National Research, Pisa (Italy) ⁶ Dept. Information Engineering, University of Pisa, Pisa (Italy) ⁴ Lab. Clinical Biochemistry, Dept. Experimental Pathology, University of Pisa Medical School, Pisa (Italy) ⁵ Dept. Psychiatry, Neurobiology, Pharmacology and Biotechnology, University of Pisa Medical School, Pisa (Italy) ⁷ Dept. Child and Adolescent Neuropsychiatry, Az. Osp. "G. Salvini", Rho Hospital, Rho (Italy)
1776 15.30	REAL-TIME WAVELET-BASED ALGORITHM FOR CARDIAC AND RESPIRATORY MRI GATING	<u>Dima Abi Abdallah</u> ¹ , Eric Chauvet ¹ , Agnes Drochon ¹ , Vincent Robin ¹ , Odette Fokapu ¹	¹ University of Technology of Compiègne (France)
2425 15.45	BLIND SEPARATION OF ELECTROCARDIOGRAM INTERFERENCE FROM BOWEL MYOELECTRICAL SURFACE RECORDING	<u>Yiyao Ye</u> ¹ , J.L. Martínez de Juan ¹ , Javier Garcia Casado ¹ , J.L. Ponce ²	¹ Grupo de Bioelectrónica. Centro de Investigación e Innovación en Bioingeniería. (Spain); ² Departamento de Cirugía. Hospital Universitario "La Fe" de Valencia. (Spain)

SS77 (SS75 III.) Biomedical Image Processing III. (Standard Session - oral contributions)

Chair: Zoltán Szabó (Czech Republic)

Co-Chair: Martin Kohut (Czech Republic)

Day and time: Tuesday 22nd November, 14.00-16.00 (format 10+5 minutes)

Hall: Meeting Hall I

Id	Title	Paper Authors	Authors' Institutions
1850 14.00	MRI TO PET-CT CO-REGISTRATION AND DIFFERENTIAL ANALYSIS	<u>Jacek Ruminski</u> ¹ , Tomasz Stachowiak ¹ , Barbara Bobek-Billewicz ²	¹ Gdansk University of Technology (Poland); ² Comprehensive Cancer Centre (Poland)
2670 14.15	EVALUATION OF FEATURE EXTRACTION ALGORITHMS FOR THE FEATURE-LIST CROSS-CORRELATION IN RETINAL IMAGES	<u>Ralph Maschotta</u> ¹ , J. Rehs ¹ , Simon Boymann ² , Ulrich Hoppe	¹ Institute of Biomedical Engineering and Informatics, Technical University Ilmenau (Germany); ² Department of Audiology, University Hospital of Erlangen-Nuremberg (Germany)
1594 14.30	IMAGE ENHANCEMENT OF DATA SETS IN FLUORESCENT CONFOCAL MICROSCOPY	<u>Martin Čapek</u> ^{1,2} , Lucie Kubínová ² , Karel Hána ¹ , Pavel Smrčka ¹	¹ Czech Technical University, Faculty of Biomedical Engineering (Czech Republic); ² Academy of Sciences of the Czech Republic, Institute of Physiology (Czech Republic)
1798 14.45	MICROSCOPIC IMAGE ANALYSIS OF ELASTIN AND MORPHOMETRY OF WALL OF THORACIC AND ABDOMINAL PORCINE AORTA	<u>Zbynek Tonar</u> ^{1,2} , Stanislav Nemecek ³ , Radek Holota ⁴	¹ Charles University in Prague, Faculty of Medicine in Pilsen (Czech Republic); ² University of West Bohemia in Pilsen, Faculty of Applied Sciences (Czech Republic); ³ Comtes FHT, Pilsen (Czech Republic); ⁴ University of West Bohemia in Pilsen, Faculty of Electrical Engineering (Czech Republic)
1525 15.00	PROBABILISTIC ESTIMATION OF ARTICULATED BODY MODEL FROM MULTIVIEW SEQUENCES	<u>Karel Zimmermann</u> ¹ , Tomas Svoboda ²	¹ Center for Machine Perception (Czech Republic); ² Center for Applied Cybernetics (Czech Republic)
2502 15.15	CONSTRUCTING PANORAMIC VIEWS OF INTERNAL WALLS OF A BLADDER FROM CYSTOSCOPIC IMAGE SEQUENCES	<u>Yahir Hernandez-Mier</u> ¹ , Walter C. P. M. Blondel ¹ , Christian Daul ¹ , Didier Wolf ¹	¹ CNRS UMR 7039 – CRAN (Centre de Recherche en Automatique de Nancy) (France)
1972 15.30	CAMERA BASED EYE-TRACKING SYSTEM FOR MEDICAL PURPOSES	<u>M. Yasser Al Nahlaoui</u> ¹ , Klaus Jostschulte ¹ , Ruediger Kays ¹ , Johannes Schmitz ²	¹ University of Dortmund (Germany); ² Teltra GmbH (Germany)

2550 15.45	DIGITAL PHOTOSCREENER VlrA (Video Infrared Ambliodetector)	<u>Jaroslav Dušek</u> ¹ , Vlastimil Mrnavek ² , Miroslav Dostalek ³	¹ Dept. of Biophysics and Informatics, First Faculty of Medicine, Charles University in Prague, Prague (Czech Republic); ² Dept. of Radioelectronics, Faculty of Electrical Engineering, Czech Technical University in Prague, Prague, (Czech Republic); ³ Centre for Functional Disorders of Vision, Hospital Litomysl, Litomysl (Czech Republic)
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SS26 Image Processing and Analysis of Retinal Images II. (Special Session - SS10 II. - oral contributions)

Chair: Alfredo Ruggeri (Italy)

Co-Chair: Meindert Niemeijer (The Netherlands)

Day and time: Tuesday 22nd November, 14.00-16.00 (format 15+5 minutes)

Hall: Club A

Id	Title	Paper Authors	Authors' Institutions
1609 14.00	A HIERARCHICAL BAYESIAN CLASSIFICATION FOR NON-VASCULAR LESIONS DETECTION IN FUNDUS IMAGES	<u>Enrico Grisan</u> ¹ , Ruggeri Alfredo ¹	¹ University of Padova (Italy)
1832 14.20	AUTOMATIC DETECTION OF THE PRESENCE OF BRIGHT LESIONS IN COLOUR FUNDUS PHOTOGRAPHS	<u>Meindert Niemeijer</u> ¹ , Michael D. Abramoff ² , Bram van Ginneken ¹	¹ Image Sciences Institute, University Medical Center Utrecht (The Netherlands); ² Department of Ophthalmology and Visual Sciences, The University of Iowa (USA)
1924 14.40	EARMARKING RETINAL CHANGES IN A SEQUENCE OF DIGITAL COLOR FUNDUS PHOTOGRAPHS	<u>Joao Ferreira</u> ^{1,2} , Rui Bernardes ¹ , Pedro Baptista ¹ , José Cunha-Vaz ^{1,3}	¹ Center of New Technologies for Medicine, Association for Innovation and Biomedical Research on Light and Image, Coimbra (Portugal); ² Institute of Systems and Robotics, University of Coimbra (Portugal); ³ Institute of Biomedical Research on Light and Image, Faculty of Medicine of the University of Coimbra (Portugal)
1868 15.00	DISTORTION FREE REGISTRATION BETWEEN MULTIFOCAL ERG AND RETINAL LEAKAGE ANALYZER	Rui Bernardes ¹ , <u>Joao Ferreira</u> ^{1,2} , Pedro Baptista ¹ , Ana Sebastiao ^{1,3} , Jorge Dias ² , José Cunha-Vaz ^{1,3}	¹ Center of New Technologies for Medicine, Association for Innovation and Biomedical Research on Light and Image, Coimbra (Portugal); ² Institute of Systems and Robotics, University of Coimbra (Portugal); ³ Institute of Biomedical Research on Light and Image, Faculty of Medicine of the University of Coimbra (Portugal)

2607 15.20	QUANTIFICATION OF PROGRESSION OF RETINAL NERVE FIBER LAYER ATROPHY IN FUNDUS PHOTOGRAPHY	<u>Hyoun-Joong Kong</u> ¹ , Jong-MO Seo ² , Hum Chung ² , Dong Myoung Kim ² , Kwang Suk Park ³ , Hee Chan Kim ³	¹ Interdisciplinary Program, Biomedical Engineering Major, Graduate School, Advanced Biometric Research Center, Seoul National University (South Korea); ² Department of Ophthalmology, School of Medicine, Seoul National University (South Korea); ³ Department of Biomedical Engineering, School of Medicine, Institute of Medical & Biological Engineering, Seoul National University (South Korea)
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SS31 Signals and Systems in Human Motion I. (Special Session - oral contributions)

Chair: Silvia Conforto (Italy)

Co-Chair: Vlasta Zanchi (Croatia)

Day and time: Tuesday 22nd November, 14.00-16.00 (format 10+4 minutes)

Hall: Club B

Id	Title	Paper Authors	Authors' Institutions
1434 14.00	ANALYSIS OF HAND-OBJECT ALIGNMENT DURING REACHING-TO-GRASP MOVEMENT	Tamara Supuk ¹ , Tadej Bajd ² , Vlasta Zanchi ¹	¹ Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, University of Split (Croatia); ² Faculty of Electrical Engineering, University of Ljubljana (Slovenia)
1454 14.14	HUMAN MOTION CLASSIFICATION USING 3D ACCELEROMETERS: COMPARISON BETWEEN NEURAL NETWORK AND HIDDEN MARKOV MODEL APPROACHES	Bakir Bukvic ^{1,2} , Paul Schaller ^{1,2} , Patrick Celka ² , Thomas Klinger ¹	¹ Carinthia Tech Institute/Electronics and Signal Processing Group (Austria); ² Griffith University/School of Engineering/Electronics and Signal Processing Group (Australia)
1456 14.28	COMPARISON OF THE AUTOMATIC MARKER-LESS BODY SEGMENTS TRACKING AND THE TRADITIONAL MARKER BASED APPROACH	Vladan Papić ¹ , Vlasta Zanchi ¹	¹ University of Split (Croatia)
1822 14.42	MUSCULAR FATIGUE FROM ELECTROMYOGRAPHIC RECORDINGS: REAL-TIME MONITORING DURING EXERCISE TRAINING	Silvia Conforto ¹ , Daniele Bibbo ¹ , Maurizio Schmid ¹ , Tommaso D'Alessio ¹	¹ DEA - University of Roma TRE (Italy)
1826 14.56	A SYSTEM FOR REAL WORLD MONITORING OF PROSTHESES AND FOOTWEAR	John Barton ¹ , Andrew Lynch ¹ , Kevin Aherne ¹ , Brendan O'Flynn ¹ , Christopher Nester ² , Yannis Goulermas ² , David Howard ² , Freygardur Thorsteinsson ³ , Matthew Pepper ⁴ , Robert Fulford ⁵	¹ Tyndall National Institute (Ireland); ² Centre for Rehabilitation and Human Performance Research, University of Salford (U.K.); ³ Ossur hf (Iceland); ⁴ University of Kent at Canterbury (U.K.); ⁵ Remploy Healthcare (U.K.); ⁶ Tadiran Spectralink (Israel); ⁷ Vicon Motion Systems (U.K.); ⁸ Roessingh Research and Development bv (The Netherlands); ⁹ Erasmus University (The Netherlands); ¹⁰ Xsens Technologies (The Netherlands)
1838 15.10	THE EFFECT OF A CONCURRENT COGNITIVE TASK ON POSTURAL CONTROL IN CHILDREN	Maurizio Schmid ¹ , Silvia Conforto ¹ , Luisa Lopez ² , Tommaso D'Alessio ¹	¹ Applied Electronics Department - Università degli Studi Roma TRE (Italy); ² Child Neurology Unit - Università degli Studi di Roma "Tor Vergata" (Italy)

1840 15.24	DYNAMOMETRY AS A MEAN TO NON-INVASIVELY ESTIMATE CARDIAC OUTPUT	<u>Maurizio Schmid</u> ¹ , Silvia Conforto ¹ , Giovanni Calcagnini ² , Daniele Bibbo ¹ , Tommaso D'Alessio ¹	¹ Department of Applied Electronics, Università degli Studi Roma TRE, Roma (Italy); ² Department of Technologies and Health, Istituto Superiore di Sanità, Roma (Italy)
1610 15.38	GAIT PHASE DETECTION AND STEP LENGTH ESTIMATION OF GAIT BY MEANS OF INERTIAL SENSORS	<u>Nils-Otto Negard</u> ^{1,4} , Stephan Andres ³ , Ralf Kauert ² , Thomas Schauer ¹ , Joerg Raisch ^{4,1}	¹ Max Planck Institute for Dynamics of Complex Systems (Germany); ² HASOMED GmbH (Germany); ³ Fraunhofer Institute for Factory Operation and Automation IFF (Germany); ⁴ Universität Magdeburg, Lehrstuhl fuer Systemtheorie (Germany)
1908 16.52	A SOFTWARE SYSTEM FOR THE ESTIMATION OF THE QUADRICEPTS VARIATIONS USING A GAIT ANALYSIS SYSTEM	Stefania Zourlidou ¹ , <u>George Stylios</u> ²	¹ Computer Science Dept., University of Ioannina (Greece); ² Technological Educational Institute of Epirus, (Greece)

SS127 Telemedicine and Healthcare I. (Standard Session - oral contributions) - dedicated to the late Professor Swamy Laxminarayan

Chair: Laura M. Roa (Spain)

Co-Chair: Helmut Hutten (Austria)

Day and time: Tuesday 22nd November, 14.00-16.00 (format 10+2 minutes)

Hall: Club C

Id	Title	Paper Authors	Authors' Institutions
<i>At the beginning of the session will be provided commemoration of Professor Swamy Laxminarayan by Professor Laura M. Roa</i>			
1853 14.12	A NEW HOME TELECARE MODEL FOR CHRONIC HIV/AIDS PATIENTS	Cesar Caceres ^{1,2} , <u>Enrique J. Gomez</u> ¹ , Felipe Garcia ³ , Paloma Chausa ¹ , Jorge Guzman ¹ , Francisco Del Pozo ¹ , Jose M. Gatell ³	¹ Bioengineering and Telemedicine Unit, Technical University of Madrid (Spain); ² Artificial Intelligence Unit, Rey Juan Carlos University, Madrid (Spain); ³ Infectious Diseases Unit, Clinic Hospital, Barcelona (Spain)
2157 14.24	A CDMA-BASED EMERGENCY TELEMEDICINE SYSTEM WHICH INCLUDE FIVE VITAL BIOSIGNALS	<u>il hyung Shin</u> ¹ , Jaemin Kang ¹ , Seung Yup Lee ¹ , Yong Won Jang ¹ , Hee Chan Kim ^{1,2}	¹ Interdisciplinary Program, Biomedical Engineering Major, Graduate School, Seoul National University (South Korea); ² Department of Biomedical Engineering, College of Medicine and Institute of Medical & Biological Engineering, Medical Research Center, Seoul National University (South Korea)
2170 14.36	POWER SAVING ORIENTED MEDIUM ACCESS CONTROL PROTOCOL FOR PATIENT PERSONAL AREA NETWORKS	<u>Ilias Lamprinos</u> ¹ , Andriana Prentza ¹ , Dimitris Koutsouris ¹	¹ Biomedical Engineering Laboratory - National Technical University of Athens (Greece)
2183 14.48	A TELEMEDICINE APPLICATION OF AN EMBEDDED SYSTEM FOR REMOTE MONITORING OF BALANCE	Michel Dousot ¹ , <u>David Hewson</u> ¹ , Jacques Duchene ¹	¹ Université de technologie de Troyes (France)
2248 15.00	VEMH - VIRTUAL EURO-MEDITERRANEAN HOSPITAL AND MEDICAL GRID	<u>Georgi Grasczew</u> ¹ , Theo A. Roelofs ¹ , Stefan Rakowsky ¹ , Peter M. Schlag ¹	¹ Surgical Research Unit OP 2000, Max-Delbrueck-Centrum and Robert-Roessle-Klinik, Charite - University Medicine Berlin (Germany)
2250 15.12	EMERGENCY TELEMEDICINE VIA WIRELESS HANDHELD DEVICES	<u>Konstantinos Perakis</u> ¹ , Konstantinos Kardaras ¹ , Georgios Konnis ¹ , Dimitris Koutsouris ¹	¹ Biomedical Engineering Laboratory, National Technical University of Athens (Greece)

2336 15.24	HOME MONITORING SYSTEM PROTOTYPE FOR MANAGEMENT OF CARDIOVASCULAR DISEASES	<u>Francesca Braga</u> ¹ , Christian Forlani ¹ , Cesare Colombo ² , Maria G. Signorini ¹	¹ Politecnico di Milano (Italy); ² CEFRIEL (Italy)
2296 15.36	THE FEASIBILITY OF MEASURING SpO2 FROM THE HEAD USING A REFLECTANCE PULSE OXIMETER: EFFECT OF MOTION ARTIFACTS	<u>Yitzhak Mendelson</u> ¹	¹ Worcester Polytechnic Institute (USA)
2312 15.48	FOREHEAD MEASUREMENTS OF HEART RATE AND HEART RATE VARIABILITY FROM A PHOTOPLETHYSMOGRAPHIC REFLECTANCE SENSOR: EFFECT OF MOTION ARTIFACTS	<u>Yitzhak Mendelson</u> ¹ , William Johnston ¹ , R.P. Dresher ¹	¹ Worcester Polytechnic Institute (USA)

SS60 (SS59 II.) Bioimpedance II. (Standard Session - oral contributions)

Chair: George Sajin (Romania)

Co-Chair: John G. Webster (USA)

Day and time: Tuesday 22nd November, 14.00-16.00 (format 10+3 minutes)

Hall: Club D

Id	Title	Paper Authors	Authors' Institutions
1614 14.00	MYOCARDIAL ELECTRICAL IMPEDANCE SPECTROSCOPY IN TRANSPLANTED HUMAN HEART WITH AND WITHOUT GRAFT REJECTION	Javier Rosell-Ferrer ¹ , Ramon Bragós ¹ , Juan Ramos ¹ , Yolocuahutli Salazar ³ , Mireya Fernández ¹ , Miguel Ángel García-González ¹ , Pere Riu ¹ , Xavier Vinales ² , E Rodríguez-Font ² , J García-Picart ²	¹ Electronic Engineering Department, Polytechnic University of Catalonia (Spain); ² Cardiology Service, Hospital de la Santa Creu i de Sant Pau (Spain); ³ Instituto Politécnico de Durango (Mexico)
1649 14.13	EVALUATION OF IMPEDANCE SPECTROSCOPY FOR INTRAVASCULAR TISSUE CHARACTERISATION AND ENDOSCOPY	Hagen Thielecke ¹ , Tim Süselbeck ² , Sungbo Cho ¹ , Julia Koechlin ² , Jürgen Metz ³	¹ Fraunhofer-Institut für Biomedizinische Technik (Germany); ² University Hospital Mannheim (Germany); ³ University of Heidelberg (Germany)
2307 14.26	IN VITRO MONITORING OF L929 CELLS GROWTH USING IMPEDANCE SPECTROSCOPY	Sungbo Cho ¹ , Hagen Thielecke ¹	¹ Fraunhofer Institute for Biomedical Engineering (Germany)
2499 14.39	CELL GROWING AND DIFERENTIATION MONITORING SYSTEM USING ELECTRICAL BIOIMPEDANCE SPECTROSCOPY MEASUREMENT ON INTERDIGITATED MICROELECTRODES	Ramon Bragós ¹ , Enric Sarro ² , H. Estruch ¹ , Jordi Farre ² , Jordi Cairo ² , Antoni Bayes-Genis ³ , Javier Rosell ¹ , Juan Cinca ³ , F. Godia ²	¹ Technical University of Catalonia (Spain); ² Autonomous University of Barcelona (Spain); ³ Hospital de la Santa Creu i Sant Pau (Spain)
2594 14.52	INFORMATION EXTRACTION FROM IMPEDANCE SPECTRA: THEORETICAL PREDICTIONS AND IN VIVO VALIDATION FOR THE ORAL MUCOSA	Igor Lackovic ¹ , Zoran Stare ¹	¹ Faculty of Electrical Engineering and Computing, University of Zagreb (Croatia)
2332 15.05	APPLICATION OF INFINITE ELEMENT METHOD TO MODELLING OF THE SURROUNDING IN LOW CONTRAST CASES	Artur Polinski ¹ , Jerzy Wtorek ¹ , Bart Truyen ²	¹ Gdańsk University of Gdańsk (Poland); ² Vrije Universiteit Brussel (Belgium)

1765 15.18	NON-INVASIVE VENTILATION MONITORING DURING CARDIOPULMONARY RESUSCITATION BY MEANS OF THORACIC IMPEDANCE	<u>Martin Risdal</u> ¹ , Trygve Eftestol ¹ , Sven Ole Aase ¹ , Jon Nysather ³ , Heidrun Losert ² , Fritz Sterz ²	¹ University of Stavanger (Norway); ² Department of Emergency Medicine, Medical University of Vienna (Austria); ³ Laerdal Medical AS (Norway)
1766 YIC 15.31	VENTILATION CLASSIFICATION FOR CARDIOPULMONARY RESUSCITATION QUALITY MONITORING USING THORACIC IMPEDANCE	<u>Martin Risdal</u> ¹ , Trygve Eftestol ¹ , Sven Ole Aase ¹ , Jon Nysather ³ , Heidrun Losert ² , Fritz Sterz ²	¹ University of Stavanger (Norway); ² Department of Emergency Medicine, Medical University of Vienna (Austria); ³ Laerdal Medical AS (Norway)
1769 15.44	IMPEDANCE-BASED VENTILATION DETECTION UTILIZING A NEURAL NETWORK FOR USE DURING CARDIOPULMONARY RESUSCITATION	<u>Martin Risdal</u> ¹ , Trygve Eftestol ¹ , Sven Ole Aase ¹ , Mette Stavland ²	¹ University of Stavanger (Norway); ² Laerdal Medical AS (Norway)

YIC - Young Investigator Competition Finalist

SS98 Biomedical System Modelling and Analysis I. (Standard Session - oral contributions)

Chair: Per Ask (Sweden)

Co-Chair: Herbert Witte (Germany)

Day and time: Tuesday 22nd November, 14.00-16.00 (format 10+3 minutes)

Hall: Club E

Id	Title	Paper Authors	Authors' Institutions
2422 YIC 14.00	PREDICTING THE GROWTH AND RUPTURE POTENTIAL OF ABDOMINAL AORTIC ANEURYSMS USING FINITE ELEMENT ANALYSIS	Jason Collier ¹ , G. Desai ¹ , M. Heng ² , I. Chetter ² , P. T. McCollum ² , M. J. Fagan ¹	¹ Center for Medical Engineering and Technology, University of Hull, Kingston upon Hull (U.K.); ² Academic Vascular Unit, Hull Royal Infirmary, Hull and East Yorkshire Hospitals NHS Trust, Kingston upon Hull (U.K.)
1519 14.13	HEART RATE VARIABILITY TRANSITION PROCESSES IN YOUNG HEALTHY VOLUNTEERS	Myckola Yabluchansky, Alexander Martynenko, Pavel Garkaviy	
2025 14.26	A PHYSIOLOGICAL MODEL DESCRIBING DOBUTAMINE INTERACTION WITH SEPTIC PATIENTS: A SIMULATION STUDY	Mouloud Denai ¹ , Mahdi Mahfouf ¹ , Jonathan Ross ²	¹ Dept of Automatic Control & Systems Eng., Univ of Sheffield, Sheffield (U.K.); ² Dept of Anaesthetics, Univ of Sheffield, Sheffield (U.K.)
2094 14.39	PSYCHO-ACOUSTIC EXPERIMENTS OF THE MISSING FUNDAMENTAL AND CONSIDERATIONS BY USE OF COCHLEAR MODELS – ANTEROVENTRAL COCHLEAR NUCLEUS MODELS	Takahide Matsuoka ¹ , Daisuke Konno ¹	¹ Utsunomiya University (Japan)
2131 14.52	Including titin in a simple muscle contraction model suitable for a myocardial cell model	Natalie Schneider ¹ , Takao Shimayoshi ² , Akira Amano ³ , Tetsuya Matsuda ³ , Akinori Noma ⁴	¹ Cell/Biodynamics Simulation Project Kyoto University, Kyoto (Japan); ² ASTEM Research Institute of Kyoto, Kyoto (Japan); ³ Department of Systems Science, Graduate School of Informatics, Kyoto University, Kyoto (Japan); ⁴ Department of Physiology and Biophysics, Graduate School of Medicine, Kyoto University, Kyoto (Japan)
2636 15.05	MODEL ANALYSIS OF RESPIRATORY MODULATION OF HEART HAEMODYNAMICS	Maria Guerri ¹ , Nicola Toschi ¹ , Italo Vannucci ¹	¹ Sezione di Fisica Medica, Dip. Biopatologia, Universita` Tor Vergata, Roma (Italy)

2252 15.18	FREQUENCY DEPENDENT MODEL BACKGROUND OF METHODS FOR ASSESSMENT OF HUMAN CEREBRAL AUTOREGULATION	Ute Morgenstern, Frank Noack, Melanie Christ, Ralf Steinmeier	
2234 15.31	A Model of the Thermodynamical Processes in the Human Body during a Cardiopulmonary Bypass	<u>Michael Schwarz</u> ¹ , Gunnar Meyrowitz ¹ , Christoph Benk ² , Claudia Heilmann ² , Friedhelm Beyersdorf ² , Uwe Kiencke ¹	¹ Institute of Industrial Information Technology, Universität Karlsruhe (TH) (Germany); ² Department of Cardiovascular Surgery, Universität Freiburg (Germany)
2152 15.44	MODEL OF ¹³¹ I BIOKINETICS IN THYROID GLAND AND ITS IMPLEMENTATION FOR ESTIMATION OF ABSORBED DOSES	<u>Ladislav Jirsa</u> ¹ , Ferdinand Varga ² , Miroslav Kárný ¹ , Jindřiška Heřmanská ^{3,2}	¹ Institute of Information Theory and Automation, Department of Adaptive Systems, Czech Academy of Sciences, Prague (Czech Republic); ² 2nd Medical School, Institute of Biophysics, Charles University, Prague (Czech Republic); ³ Clinic of Nuclear Medicine and Endocrinology, Motol Hospital, Prague (Czech Republic)

YIC - Young Investigator Competition Finalist

SS70 (SS68 III.) Biomechanics III. (Standard Session - oral contributions)

Chair: Timo Jämsä (Finland)

Co-Chair: Jan Čulík (Czech Republic)

Day and time: Tuesday 22nd November, 14.00-16.00 (format 10+2 minutes)

Hall: Club H

Id	Title	Paper Authors	Authors' Institutions
1689 14.00	ASSESSMENT OF HUMAN HAND DEXTERITY	<u>Mitja Veber</u> ¹ , Tadej Bajd ¹	¹ University of Ljubljana, Laboratory of Robotics and Biomedical Engineering (Slovenia)
1488 14.12	GUIDED ULTRASOUND WAVE PROPAGATION IN HEALING LONG BONES	<u>Vasilios Protopappas</u> ^{1,2} , Dimitrios Fotiadis ²	¹ Dept. of Medical Physics, Medical School, University of Ioannina, GR 45 110 Ioannina (Greece); ² Unit of Medical Technology and Intelligent Information Systems, Dept. of Computer Science, University of Ioannina, GR 45 110 Ioannina (Greece)
2438 14.24	MASTICATORY MUSCLE AND JOINT FORCES DURING CLENCHING BASED ON SIMULTANEOUS FORCE AND EMG MEASUREMENT	<u>Stefan Rues</u> ¹ , Hans, J. Schindler ¹ , Jens, C. Türp ² , K. Schweizerhof ³ , Jürgen Lenz ¹	¹ Research Group Biomechanics, University of Karlsruhe (Germany); ² Department of Reconstructive Dentistry, Dental School, University of Basel (Switzerland); ³ Institute of Mechanics, University of Karlsruhe, Karlsruhe (Germany)
2666 14.36	THE EFFECT OF X-RAY IRRADIATION ON HUMAN DENTAL TISSUE MEASURED BY NANOINDENTATION	Wolfgang Fränzel ¹ , Reinhard Gerlach ² , Hans-Günther Schaller ⁴ , <u>Hans-Joachim Hein</u> ³	¹ Dept. of Physics, Martin Luther University Halle, 06099 Halle, Germany (Germany); ² University Clinic and Policlinic for Radiation Therapy, Martin Luther University Halle, 06097 Halle, Germany (Germany); ³ University Clinic and Policlinic for Orthopaedics and Physical Medicine, Martin Luther University Halle, 06097 Halle, Germany (Germany); ⁴ Department of Operative Dentistry and Periodontology, Martin Luther University Halle, 06097 Halle, Germany (Germany)
1774 14.48	ANALYSE OF POSTURAL DYNAMIC EQUILIBRIUM IN ELDERLY SUBJECTS DESCENDING A STEP BACKWARDS	<u>Valérie Michel</u> ¹ , David Hewson ¹ , Jean-Yves Hogrel ² , Jacques Duchene ¹	¹ Université de technologie de Troyes (France); ² Institut de Myologie (France)

2323 15.00	EVALUATING OF AXIAL ROTATION OF SPINE AND ITS IMPORTANCE IN SPINAL DEFORMITY	<u>Iveta Pallova</u> ¹	¹ Charles University, Faculty of Physical Education and Sport (Czech Republic)
1784 15.12	AGE-AND SEX-RELATED COMPRESSIVE STRENGTH AND MORPHOMETRY OF LUMBAR VERTEBRAE IN OSTEOPOROSIS	<u>Marta Kurutz</u> ¹ , <u>Bela Fornet</u> ² , <u>Miklos Galos</u> ¹	¹ Department of Structural Mechanics, Budapest University of Technology and Economics, (Hungary); ² International Medical Center, Budapest, Hungary (Hungary)
2468 15.24	JOINT MOBILITY AND MUSCULAR FUNCTION AT THE FOOT-ANKLE COMPLEX IN PRESENCE OF DIABETES	Velio Macellari, Emanuela D'Ambrogi, Stefano Cesinaro, Luigi Uccioli, Claudia Giacomozzi	
2402 15.36	MEASUREMENT OF PARAMETERS OF A SKIN WITH A SCAR IN VIVO AND THE INFLUENCE OF PHYSIOTHERAPY	<u>Hana Vranova</u> ¹ , <u>Josef Zeman</u> ¹ , <u>Stanislav Otahal</u> ¹	¹ Faculty of Physical Education and Sport, Charles University / Department of Anatomy and Biomechanics (Czech Republic)
2511 15.48	COUPLING SKIN TO INTERNAL BREAST TISSUE FOR FINITE ELEMENT MODELLING OF BREAST BIOMECHANICS	Vijay Rajagopal ¹ , Yme Kvisdetal ¹ , <u>Jae-Hoon Chung</u> ¹ , <u>Martyn Nash</u> ¹ , <u>Poul Nielsen</u> ¹	¹ Bioengineering Institute (New Zealand)

SS93 (SS89 V.) Biomedical Signal Processing V. (Standard Session - oral contributions)

Chair: Tamara Supuk (Croatia)

Co-Chair: Vladan Papic (Croatia)

Day and time: Tuesday 22nd November, 16.30-18.30 (format 10+3 minutes)

Hall: Meeting Hall V

Id	Title	Paper Authors	Authors' Institutions
1688 16.30	CONFIDENCE LIMIT COMPUTATION FOR EEG-EMG COHERENCE ESTIMATED WITH SEGMENT OVERLAPPING	<u>Radoslav Bortel</u> ¹ , Pavel Sovka ¹	¹ Faculty of Electrical Engineering, Czech Technical University, Technická 2, Prague (Czech Republic)
1691 16.43	ON THE USE OF A CONSTANT PHASE TERM IN EEG-EMG TIME DELAY ESTIMATION	<u>Radoslav Bortel</u> ¹ , Pavel Sovka ¹	¹ Faculty of Electrical Engineering, Czech Technical University, Technická 2, Prague (Czech Republic)
1600 16.56	SURFACE ELECTROMYOGRAPHY AS A TOOL TO COMPARE VEHICLE RESPONSES TO LATERAL ACCELERATIONS	<u>Georges Farah</u> ^{1,2} , David Hewson ¹ , Jacques Duchene ¹	¹ Université de technologie de Troyes (France); ² Renault (France)
1819 17.09	THE USE OF WAVELET PACKETS FOR DETECTION AND IDENTIFICATION OF EVENTS IN UTERINE EMG	<u>Marwa Chendeb</u> ¹ , Mohamad Khalil ² , Jacques Duchene ¹	¹ Université de technologie de Troyes (France); ² Lebanese University (Lebanon)
2032 17.22	CYCLIC SPECTRAL ANALYSIS OF SURFACE ELECTROMYOGRAM TO CHARACTERISE OSCILLATIONS IN THE MOTOR SYSTEM: A SIMULATION STUDY	<u>IMAD EL HAJJ DIB</u> ¹ , JULIEN PISCIONE ¹ , JEROME ANTONI ¹ , DIDIER GAMET ¹ , CATHERINE MARQUE ¹	¹ Université de Technologie de Compiègne (France)
2169 17.35	EMG FEATURE EVALUATION USING TRANSPARENT FUZZY SYSTEM FOR HAND AND FINGER MOVEMENTS IDENTIFICATION	<u>Zeghib Abdelhafid</u> ¹ , Palis Frank ¹ , F.B. Ouezdou ²	¹ Otto-von-Guericke-Universität /Electrical Engineering, Magdeburg (Germany); ² Liris, CNRS, Versailles (France)
1641 17.48	MOTOR UNIT FIBER DENSITY ESTIMATION USING ARTIFICIAL NEURAL NETWORKS	<u>Javier Navallas</u> ¹ , Miriam Gonzalez ¹ , Armando Malanda ¹ , Luis Gila ² , Javier Rodriguez ¹ , Ignacio Rodriguez ¹	¹ Universidad Publica de Navarra (Spain); ² Hospital Virgen del Camino (Spain)
2432 18.01	HISTOGRAM BASED QUANTIFICATION OF SUBMENTAL EMG	<u>Corina Popescu</u> ¹ , Laurentiu C. Barna ¹ , Mikko Koivuluoma ¹ , Alpo Väri ¹	¹ Institute of Signal Processing, Tampere University of Technology (Finland)

1718	ESTIMATION OF THE HUMAN ARM	<u>Yunus Ziya Arslan</u> ¹ ,	¹ Istanbul University (Turkey); ² Marmara
18.14	TIP FORCES BY USING EMG SIGNALS	Aydin Akan ¹ , M.Arif Adli ²	University (Turkey)

SS78 (SS75 IV.) Biomedical Image Processing IV. (Standard Session - oral contributions)

Chair: Arcangelo Merla (Italy)

Co-Chair: Zoltán Szabó (Czech Republic)

Day and time: Tuesday 22nd November, 16.30-18.30 (format 10+5 minutes)

Hall: Meeting Hall I

Id	Title	Paper Authors	Authors' Institutions
2073 16.30	EFFECTS OF 3D REBBINING PROCEDURES ON PET RECONSTRUCTED IMAGES	<u>Michele Butti</u> ¹ , Elisabetta De Bernardi ¹ , Felicia Zito ² , Luca Mainardi ¹ , Sergio Cerutti ¹ , Paolo Gerundini ² , Giuseppe Baselli ¹	¹ Department of Biomedical Engineering, Polytechnic University of Milan (Italy); ² Nuclear Medicine Department, Ospedale Maggiore Policlinico, Mangiagalli e Regina Elena, Milan (Italy)
2088 16.45	A NEW METHOD FOR SPECT MYOCARDIAL IMAGE SEGMENTATION BASED ON LV SPATIAL INFORMATION	<u>Manoel Alves</u> ¹ , Elmar Melcher ¹ , Luis Carvalho ^{2,3}	¹ Federal University of Campina Grande (Brazil); ² Federal University of Paraiba (Brazil); ³ UNIFE (Brazil)
2219 17.00	Reducing Partial Volume Artifacts in MRI Segmentation	<u>Jose Vicente Manjon-Herrera</u> ¹ , Juan Jose Lull ¹ , Jose Carbonell ¹ , Gracian Garcia ¹ , Luis Marti-Bonmati ^{1,2} , Monserrat Robles ¹	¹ IBM-BET, Polytechnical University of Valencia (Spain); ² Quirón Clinic of Valencia (Spain)
2138 17.15	ACTIVE DYNAMIC THERMOGRAPHY AS A DIAGNOSTIC TOOL IN BURNS TREATMENT	<u>Mariusz Kaczmarek</u> ¹ , Alicja Renkielska ²	¹ Gdansk University of Technology (Poland); ² Medical University of Gdansk (Poland)
1440 YIC 17.30	BLIND ITERATIVE DECONVOLUTION OF ULTRASONIC IMAGES	<u>Radovan Jirik</u> ¹ , Torfinn Taxt ²	¹ Dept. of Biomedical Engineering, Brno University of Technology (Czech Republic); ² Dept. of Biomedicine, University of Bergen (Norway)
1645 17.45	SUBHARMONIC IMAGING IMPLEMENTATION BY VARYING MICROBUBBLE CONCENTRATION	<u>Sergio Casciaro</u> ^{1,2} , Rosa Palmizio Errico ² , Francesco Conversano ² , Christian Demitri ² , Ernesto Casciaro ^{1,2} , Alessandro Distante ^{1,2}	¹ National Council of Research, Institute of Clinical Physiology, Lecce (Italy); ² ISBEM Euro Mediterranean Biomedical Scientific Institute, Brindisi (Italy)

2493 18.00	DEVELOPMENT OF A BRAIN BLOOD VESSEL SEGMENTATION METHOD IN CT-ANGIOGRAPHY	Spiros Kostopoulos ¹ , George Kagadis ¹ , Dimitris Glotsos ¹ , Nikos Dimitropoulos ² , Theodore Petsas ³ , Dionisis Cavouras ⁴ , George Nikiforidis ¹	¹ University of Patras (Greece); ² EUROMEDICA Medical Center (Greece); ³ University Hospital of Patras (Greece); ⁴ Technological Institute of Athens (Greece)
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YIC - Young Investigator Competition Finalist

SS107 (SS106 II.) Cardiovascular and Pulmonary Systems II. (Standard Session - oral contributions)

Chair: Guy Raguin (United States)

Co-Chair: will be completed

Day and time: Tuesday 22nd November, 16.30-18.30 (format 10+2 minutes)

Hall: Club A

Id	Title	Paper Authors	Authors' Institutions
1465 16.30	GAS MICROBUBBLES IN FRESH NATIVE BLOOD AND THEIR SIGNIFICANCE FOR ESR MEASUREMENTS	<u>Vladimir Voeikov</u> ^{1,2} , Alexander Goncharenko ¹ , Svetlana Goncharenko ¹ , Isaak Kaganovsky ¹	¹ Lomonosov Moscow State University, Faculty of Biology, Department of Bioorganic Chemistry, Moscow (Russia); ² International Institute of Biophysics, Neuss, Hombroich (Germany)
1511 16.42	IN VITRO EVALUATION OF ANEURISMAL HEMODYNAMICS AFTER ITS ENDOVASCULAR BYPASS BY FLOW DIVERTOR	<u>B. Barry Lieber</u> ^{1,2} , Jaehoon Seong ¹ , Ajay Wakhloo ³	¹ University of Miami Department of Biomedical Engineering (USA); ² University of Miami Department of Radiology (USA); ³ University of Massachusetts Medical School (USA)
1517 16.54	THE EFFECT OF BLOOD'S PSEUDOPLASTIC RHEOLOGY ON MEASURED TURBULENT STRESS	<u>Brandon Travis</u> ¹	¹ Department of Cardiothoracic and Vascular Surgery, Århus University Hospital (Denmark)
1612 17.06	COMPARISON OF THREE DIFFERENT METHODS TO ESTIMATE VASCULAR IMPEDANCE FROM MEASURED IN VITRO PRESSURES AND FLOW	<u>Uldis Rubins</u> ¹ , Magnus Cinthio ² , Tomas Jansson ²	¹ University of Latvia, Atomic and spectroscopic institute (Latvia); ² Lund University, Department of Electric measurements (Sweden)
1677 17.18	A SIMPLE FEEDBACK CONTROL MODEL TO CHARACTERIZE CEREBRAL AUTOREGULATION	<u>B. Barry Lieber</u> ² , Amir Raz ¹ , Chander Sadasivan ² , Alexander Gersten ³	¹ Department of Psychiatry, Columbia University College of Physicians & Surgeons, and the New York State Psychiatric Institute (USA); ² Department of Biomedical Engineering, University of Miami (USA); ³ Department of Physics, Ben-Gurion University of the Negev (Israel)
1949 17.30	COMPUTER SIMULATION OF THE FLOW IN THE ABDOMINAL ANEURYSMATIC AORTA	<u>Zbynek Tonar</u> ¹ , Jiri Jenik ¹ , Vladislav Treska ² , Milan Novak ²	¹ University of West Bohemia in Pilsen, Faculty of Applied Sciences (Czech Republic); ² University Hospital Pilsen (Czech Republic)
1463 17.42	IMPACT OF AORTIC STENOSIS ON CORONARY BLOOD FLOW	<u>Damien Garcia</u> ¹ , Lyes Kadem ¹ , Philippe Pibarot ² , Louis-Gilles Durand ¹	¹ Biomedical engineering laboratory, IRCM (Canada); ² Quebec Heart Institute (Canada)

1816 17.54	AN EXPERIMENTAL MODEL TO ASSESS MECHANISMS OF HEART RATE TURBULENCE	<u>federica censi</u> ¹ , giovanni calcagnini ¹ , samantha poli ¹ , pietro bartolini ¹	¹ Istituto Superiore di Sanità (Italy)
2610 18.06	THE DEVELOPMENT OF 3-D, IN VITRO, ENDOTHELIAL CELL CULTURE MODELS FOR THE STUDY OF CORONARY ARTERY DISEASE	<u>Monica Farcas</u> ¹ , Leonie Rouleau ¹ , Richard Fraser ² , Richard L. Leask ¹	¹ McGill University (Canada); ² McGill University Health Centre (Canada)
2640 18.18	EXPERIMENTAL VALIDATION OF NUMERICAL FLOW SIMULATIONS FOR CARDIOVASCULAR DEVICES	Heinrich Schima, Martin Stoiber, Christian Reindl, Stefan Pirker	

SS42 Signals and Systems in Human Motion II. (Special Session - SS31 II. - oral contributions)

Chair: Vlasta Zanchi (Croatia)

Co-Chair: Jiri Hozman (Czech Republic)

Day and time: Tuesday 22nd November, 16.30-18.30 (format 10+4 minutes)

Hall: Club B

Id	Title	Paper Authors	Authors' Institutions
1979 16.30	ON MODELING BOW ARM MOVEMENT IN CELLO PLAYING	<u>Koichi Furukawa</u> ¹ , Kinjo Keita ¹ , Sawai Keigo ² , Shimizu Satoshi ² , Yoshinaga Sayori ²	¹ Graduate School of Media and Governance, Keio University (Japan); ² Faculty of Environmental Information, Keio University (Japan)
2050 16.44	MEASUREMENT AND ANALYSES OF POSTURAL STABILITY	<u>Stjepan Podrug</u> ¹ , Vlasta Zanchi ¹	¹ Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, University in Split (Croatia)
1754 16.58	APPARATUS FOR CLINICAL ASSESSMENT OF POSTURAL BALANCING ABILITIES	<u>Imre Cikajlo</u> ¹ , Zlatko Matjačić ¹	¹ Institute for rehabilitation, Republic of Slovenia (Slovenia)
2627 17.12	MARKER-FREE ANALYSIS OF HUMAN GAIT	<u>Jaroslav MAJERNIK</u> ¹ , Dušan ŠIMŠÍK ¹	¹ Technical University of Košice (Slovak Republic)
2064 17.26	MARKERLESS HUMAN MOTION CAPTURE FOR GAIT ANALYSIS	<u>Jamal SABOUNE</u> ¹ , Francois CHARPILLET ¹	¹ INRIA-LORIA (France)
2500 17.40	HARDWARE IMPLEMENTATION OF PAN & TOMPKINS QRS DETECTION ALGORITHM	<u>C Pavlatos</u> ¹ , A. Dimopoulos ¹ , George Manis ² , G. Papakonstantinou ¹	¹ National Technical University of Athens, Dept. of Electrical and Computer Engineering (Greece); ² University of Ioannina, Dept. of Computer Science (Greece)
2545 17.54	MEASUREMENT OF POSTURAL HEAD ALIGNMENT IN NEUROLOGICAL PRACTICE	<u>Jiri Hozman</u> ¹ , David Sturm ² , Jan Stoklasa ² , Rudolf Cerny ³	¹ Czech Technical University in Prague, Faculty of Biomedical Engineering, Kladno (Czech Republic); ² Czech Technical University in Prague, Faculty of Electrical Engineering, Prague (Czech Republic); ³ Charles University in Prague, 2nd Faculty of Medicine, Clinic of Neurology, Prague (Czech Republic)

2546 18.08	SPEM - BASED ASSESSMENT OF SUPRASEGMENTAL EFFECTS OF SELECTIVE POSTERIOR RHIZOTOMY	Jiri Hozman ¹ , David Sturm ² , Jan Stoklasa ² , Rudolf Cerny ⁴ , Daniel Horinek ³	¹ Czech Technical University in Prague, Faculty of Biomedical Engineering, Kladno (Czech Republic); ² Czech Technical University in Prague, Faculty of Electrical Engineering, Prague (Czech Republic); ³ University Hospital Motol, Department of Pediatric Neurosurgery, Prague (Czech Republic); ⁴ Charles University in Prague, 2nd Faculty of Medicine, Clinic of Neurology, Prague (Czech Republic)
1862 18.22	IDENTIFICATION OF THEORETICAL WALKING PHASES USING SEMG ANALYSIS	Antonio De Stefano, Robert Allen	

SS128 (SS127 II.) Telemedicine and Healthcare II. (Standard Session - oral contributions)

Chair: Lenka Lhotská (Czech Republic)

Co-Chair: Karel Hána (Czech Republic)

Day and time: Tuesday 22nd November, 16.30-18.30 (format 10+2 minutes)

Hall: Club C

Id	Title	Paper Authors	Authors' Institutions
1619 16.30	WEARABLE WIRELESS MONITORING SYSTEM BASED ON BLUETOOTH TECHNOLOGY: A TUTORIAL	<u>Santiago Led</u> ¹ , Luis Serrano ¹ , Miguel Galarraga ¹	¹ Public University of Navarra (Spain)
1623 16.42	GATEWAY BLUETOOTH-GPRS FOR ECG SIGNAL TRANSMISSION: IMPLEMENTATION IN MOBILE PHONE	<u>Miguel Galarraga</u> ¹ , Beatriz Ucar ¹ , Santiago Led ¹ , Luis Serrano ¹	¹ Universidad Publica de Navarra (UPNA) (Spain)
2350 16.54	THE INTELLIGENT STETHOSCOPE	Peter Hult ¹ , Christer Ahlstrom ¹ , L Rattfält ¹ , Cecilia Hagstrom ² , Nils-Erik Pettersson ² , Per Ask ¹	¹ Department of Biomedical Engineering, Linköping University, Linköping (Sweden); ² Biomedical Engineering, Örebro University Hospital, Örebro (Sweden)
2476 17.06	INTELLIGENT HOLTER: A NEW WEARABLE DEVICE FOR ECG MONITORING USING BLUETOOTH TECHNOLOGY	<u>Santiago Led</u> ¹ , Miguel Galarraga ¹ , Luis Serrano ¹	¹ Public University of Navarra (Spain)
1773 17.18	EXPERIMENTAL EVALUATION OF HOME-BASED UBIQUITOUS HEALTH MONITORING USING BLUETOOTH AND INTERNET	JONG MIN CHOI ¹ , JIN WOO SEO ¹ , BYUNG HUN CHOI ¹ , JUNG SOO KIM ¹ , YONG KYU LIM ¹ , RYANG HEE SOHN ² , MYUNG SUK RYU ² , KWANG SUK PARK ^{1,2}	¹ Interdisciplinary Program in Biomedical Engineering, Seoul National University (South Korea); ² Advanced Biometric Research Center, Seoul National University (South Korea)
1999 17.30	TELEMEDICAL SYSTEM FOR MONITORING OF BLOOD PRESSURE	<u>Vratislav Fabian</u> ¹ , Marcela Fejtova ¹	¹ CTU in Prague, FEE, Department of Cybernetics (Czech Republic)
2286 17.42	A LOW BANDWIDTH SOLUTION FOR TELEMEDICINE APPLICATION EVENT SYNCHRONIZATION USING JMF	<u>Nuno Seixas</u> ¹ , Hugo Pereira ¹ , Paulo Carvalho ¹ , Jorge Henriques ¹ , Manuel Antunes ²	¹ Centre for Informatics and Systems, University of Coimbra (Portugal); ² Centre of Cardio-thoracic Surgery of the University Hospital of Coimbra (Portugal)

2106 17.54	WELLNESS DIARY FOR MOBILE PHONES	Elina Lamminmäki ¹ , Juha Pärkkä ¹ , Marion Hermersdorf ² , Jussi Kaasinen ² , Kai Samposalo ² , Janne Vainio ² , Juha Kolari ¹ , Minna Kulju ¹ , Raimo Lappalainen ³ , Ilkka Korhonen ¹	¹ VTT Information Technology (Finland); ² Nokia Research Center (Finland); ³ University of Tampere (Finland)
1906 18.06	EVALUATION OF WIRELESS COMMUNICATION FOR PERIOPERATIVE REALTIME MONITORING	Marco Gönne ¹ , Holger Pals ¹ , Holger Matz ² , Hartmut Gehring ³	¹ Institute for Computer Engineering, University of Lübeck (Germany); ² Institute of Biomedical Engineering, University of Lübeck (Germany); ³ Department of Anaesthesiology, University Clinic Schleswig-Holstein (Germany)
1971 18.18	LASER PATTERN BASED 3D OBJECT MEASUREMENT SYSTEM FOR MEDICAL APPLICATIONS	Dominik Lubeley ¹ , Klaus Jostschulte ¹ , Rüdiger Kays ¹ , Karsten Biskup ² , Bernhard Clasbrummel ²	¹ University of Dortmund (Germany); ² BG-Hospital Bergmannsheil Bochum (Germany)

SS61 (SS59 III.) Bioimpedance III. (Standard Session - oral contributions)

Chair: John G. Webster (USA)

Co-Chair: Marek Penhaker (Czech Republic)

Day and time: Tuesday 22nd November, 16.30-18.30 (format 10+5 minutes)

Hall: Club D

Id	Title	Paper Authors	Authors' Institutions
1429 16.30	ON THE RELIABILITY AND REPEATABILITY OF BIOIMPEDANCE MEASUREMENT	<u>Stanko Tonković</u> ¹ , Ivana Tonković ² , Igor Blazek ¹	¹ Faculty of Electrical Engineering and Computing, Zagreb (Croatia); ² School of Medicine (Croatia)
1841 16.45	IN VIVO ASSESSMENT OF HAEMATOCRIT CHANGES BY ELECTRICAL IMPEDANCE MEASUREMENTS	<u>Pere J Riu</u> ¹ , Omar Surkhy ¹ , Francisco Bogonez ¹	¹ Technical University of Catalonia (UPC) (Spain)
2334 17.00	ELECTRODE - TISSUE INTERFACE: THE METHOD OF ACHIEVING STABLE AND REPEATABLE ELECTRODE IMPEDANCE	<u>Andrzej Maczynski</u> ¹ , Jerzy Wtorek ¹	¹ Gdansk University of Technology/Department of Biomedical Engineering, Gdansk, Poland (Poland)
2335 17.15	PHANTOM OF THE BIOLOGICAL LAYERED STRUCTURE FOR THE EXPERIMENTAL EVALUATION OF THE MEASUREMENT METHOD	<u>Andrzej Maczynski</u> ¹ , Jerzy Wtorek ¹	¹ Gdansk University of Technology/Department of Biomedical Engineering, Gdansk, Poland (Poland)
2474 17.30	SIMULATION OF BIOIMPEDANCE MEASUREMENT METHOD ON A CROSS SECTION OF A HUMAN UPPER ARM	<u>Tomaz Zagar</u> ¹ , Dejan Krizaj ¹	¹ Faculty of electrical engineering, University of Ljubljana (Slovenia)
1985 17.45	COMPARING ENDOGENOUS AND EXOGENOUS ELECTRODERMAL RESPONSE	<u>Orjan G. Martinsen</u> ¹ , Sverre Grimnes ^{1,2} , Eirik Sundve ¹	¹ Department of Physics, University of Oslo (Norway); ² Department of Clinical and Biomedical Engineering, Rikshospitalet (Norway)
2036 18.00	MODELING AND ESTIMATION OF ELECTRICAL PARAMETERS OF EQUIVALENT CIRCUIT IN ISOLATED RAT HEART	<u>Alicja Cicha-</u> <u>Mikolajczyk</u> ¹	¹ Medical Centre of Postgraduate Education (Poland)
2313 18.15	NEGATIVE CAPACITANCE CIRCUIT WITH TUNABLE GAIN MARGIN	<u>In-Duk Hwang</u> ¹	¹ Daejeon University (South Korea)

SS99 (SS98 II.) Biomedical System Modelling and Analysis II. (Standard Session - oral contributions)

Chair: Maria da Graça Ruano (Portugal)

Co-Chair: will be completed

Day and time: Tuesday 22nd November, 16.30-18.30 (format 10+2 minutes)

Hall: Club E

Id	Title	Paper Authors	Authors' Institutions
1739 16.30	CFD SIMULATION OF AN UNSTEADY NON-NEWTONIAN BLOOD FLOW AND ITS EFFECTS ON INTEGRITY OF STENT-GRAFTS FOR ABDOMINAL AORTIC ANEURYSM REPAIR	<u>Michal Kolar</u> ¹ , Octavian Buiu ²	¹ Univ. of Liverpool, Department of Engineering (U.K.); ² Univ. of Liverpool, Department of Electrical Engineering and Electronics (U.K.)
1813 16.42	THE DETRIMENTAL EFFECT OF LOW VELOCITY STREAMLINES ON OXYGEN DIFFUSION TO TISSUE CONSTRUCTS IN A PERFUSION BIOREACTOR	<u>Thomas O Brien</u> ¹ , Paul Devereux ¹ , Eoin Bambury ¹ , Michael Walsh ¹ , Tim McGloughlin ¹	¹ Centre for Applied Biomedical Engineering Research and Materials and Surface Science Institute, University of Limerick (Ireland)
1837 16.54	A FINITE ELEMENT MODEL OF THE HUMAN VENTRICLES DURING THE RAPID FILLING PHASE	<u>Diane-Elise Bettendorff</u> ¹ , Peter Schmid ¹ , Paul Lunkenheimer ² , Peter Niederer ¹	¹ Institute for Biomedical Engineering, University of Zürich and Swiss Federal Institute of Technology, Zürich (Switzerland); ² Experimental Thoraco-vascular and Cardiac Surgery, University of Münster, Münster (Germany)
2457 17.06	A SIMULATION STUDY OF THE SAFETY FACTOR OF PROPAGATION IN METABOLIC INHIBITION	<u>Lucía Romero</u> ¹ , José María Ferrero ¹	¹ Center for Reseach and Innovation in Bioengineering, Universidad Politécnica de Valencia (Spain)
2458 17.18	A SIMPLIFIED METHOD OF EVALUATION OF THE SAFETY FACTOR OF CONDUCTION IN CARDIAC TISSUE	<u>Lucía Romero</u> ¹ , Beatriz Trénor ¹	¹ Center for Reseach and Innovation in Bioengineering, Universidad Politécnica de Valencia (Spain)
2579 17.30	TEMPERATURE DEPENDENCY OF THE MAXIMUM CALCIUM CONDUCTANCE IN APLYSIA NEURONS	<u>Nam Gyu Hyun</u> ¹ , Kwang Ho Hyun ²	¹ Cheju National University (South Korea); ² Korea Science Academy (South Korea)
2634 17.42	COMPUTATIONAL MODELS OF THE MICRO ARCHITECTURE OF THE CARDIAC ENDOMYSIAL COLLAGEN	Benedetto Intrigila ³ , Guido Macchiarelli ² , Igor Melatti ¹ , <u>Alberto Tofani</u> ¹	¹ Dip. di Informatica, Universitadi L'Aquila, L'Aquila (Italy); ² Dip. di Medicina Sperimentale, Universitadi L'Aquila, L'Aquila (Italy); ³ Dip. di Matematica, Universita "Tor Vergata", Roma (Italy)
1661 17.54	PERCEPTUAL PROCESS OF FILLING-IN FOR DYNAMIC TEXTURES	<u>Masae YOKOTA</u> ¹ , Yasunari YOKOTA ²	¹ Nagoya Bunri University (Japan); ² Gifu University (Japan)

2433 18.06	A SYSTEM FOR MODELING THE COOPERATIVITY OF RYANODINE RECEPTORS IN CARDIAC MYOCYTES	Michal Kania ¹ , <u>Malgorzata</u> <u>Kotulska</u> ¹	¹ Wroclaw University of Technology (Poland)
2159 18.18	SIMULATION OF AIRFLOW AND PARTICLE DEPOSITION IN THE CENTRAL HUMAN AIRWAYS	Daniela Fontana ¹ , Marco Vanni ¹ , Giancarlo Baldi ¹	¹ Politecnico di Torino (Italy)

SS71 (SS68 IV.) Biomechanics IV. (Standard Session - oral contributions)

Chair: Bart Verkerke (The Netherlands)

Co-Chair: Zlatko Matjačič (Slovenia)

Day and time: Tuesday 22nd November, 16.30-18.30 (format 10+2 minutes)

Hall: Club H

Id	Title	Paper Authors	Authors' Institutions
1786 16.30	NUMERICAL SIMULATION AND PARAMETER IDENTIFICATION OF HUMAN LUMBAR FSUS IN HYDROTRACTION	<u>Marta Kurutz</u> ¹ , Tibor Szabadszallasi ¹	¹ Department of Structural Mechanics, Budapest University of Technology and Economics, (Chatham Island (New Zealand))
1937 16.42	EXPERIMENTAL MEASUREMENTS OF THE LUMBAR SPINE STIFFNESS	<u>Lenka Jirková</u> ¹ , Zdeněk Horák ¹ , Petr Tichý ¹ , Radek Sedláček ¹	¹ CTU in Prag - Laboratory of Biomechanics (Czech Republic)
2573 16.54	MOTION BEHAVIOR OF THE VERTEBRAE AFTER INSERTION OF AN INTERSPINOUS SPACER IMPLANT UNDER VARIOUS LOADING CONDITIONS	<u>Hui-Sung Lee</u> ¹ , Soo-Jung Moon ¹ , Kyu-Chul Shin ² , Kwon-Yong Lee ³ , Sung-Jae Lee ^{1,4}	¹ Biomedical Engineering, Inje University (South Korea); ² Cheil Orthopaedic Hospital (South Korea); ³ Mechanical Engineering, Sejong University (South Korea); ⁴ Paik Institute for Clinical Research, Inje University (South Korea)
2574 17.06	EVALUATION OF UNILATERAL FIXATOR WITH SERRATED JOINTS BASED ON BIOMECHANICAL TESTS AND FINITE ELEMENT ANALYSIS	<u>Yoon-Ho Ahn</u> ¹ , Wen-Ming Chen ¹ , Soo-Jung Moon ¹ , Tae-Gon Jung ² , Sung-Jae Lee ^{1,3}	¹ Biomedical engineering, Inje University (South Korea); ² Biomedical Institute of Solco Biomedical Co., Ltd (South Korea); ³ Paik Institute for Clinical Research, Inje University (South Korea)
2343 17.18	THE EFFECT OF STIMULATION AMPLITUDE AND FREQUENCY ON PERI-IMPLANT BONE ADAPTATION IN THE GUINEA PIG MODEL	<u>Siegfried VN Jacques</u> ¹ , Els De Smet ² , John Jansen ³ , Martine Wevers ⁴ , Jos Vander Sloten ¹ , Ignace E Naert ²	¹ K.U.Leuven, Division of Biomechanics and Engineering Design (Belgium); ² K.U.Leuven, Department of Prosthetic Dentistry, BIOMAT Research Group (Belgium); ³ University of Nijmegen, University Medical Center, Department of Biomaterials / Dentistry, (The Netherlands); ⁴ K.U.Leuven, Department of Metallurgy and Materials Engineering (Belgium)
1438 17.30	DEVELOPMENT OF A 3D FINITE ELEMENT MODEL OF THE MAXILLA FOR NUMERICAL ANALYSIS OF ORTHODONTIC LOAD CASES	<u>Susanne Reimann</u> ¹ , Christoph Bourauel ¹ , Ludger Keilig ¹ , Andreas Jäger ¹ , Alexander Vardimon ² , Tamar Brosh ²	¹ Department of Orthodontics, University of Bonn (Germany); ² Department of Orthodontics, University of Tel Aviv (Israel)

2053 17.42	NUMERICAL ANALYSIS OF REMODELLING ON A PROSTHETIZED FEMUR	Andrea Corvi ¹ , <u>Bernardo Innocenti</u> ¹	¹ Dipartimento di Meccanica e Tecnologie Industriali, Università degli Studi di Firenze (Italy)
2631 17.54	BIOMECHANICS OF A SINGLE LAP IN VITRO MODEL FOR INTEGRATED ARTICULAR CARTILAGE REPAIR	<u>Johann Fierlbeck</u> ¹ , Joachim Hammer ¹ , Carsten Englert ² , Robert Reuben ³	¹ Labor für Werkstofftechnik und Metallographie, University of Applied Sciences Regensburg (Germany); ² Hospital of University of Regensburg, Department of Trauma Surgery, Regensburg (Germany); ³ Heriot-Watt University, School of Engineering and Physical Sciences, Edinburgh (U.K.)
2270 18.06	DETERMINING PARAMETERS FOR ANATOMICAL LANDMARKS OF THE HUMERUS FROM POINT CLOUDS ACQUIRED FROM THE BONE'S SURFACE	<u>Ute von Jan</u> ¹ , Dennis Sandkühler ² , Ludger Kirsch ³ , Oliver Rühmann ³ , Heinrich Martin Overhoff ²	¹ Institute of Medical Informatics, Hannover Medical School (Germany); ² Medical Engineering Laboratory, University of Applied Sciences Gelsenkirchen (Germany); ³ Orthopedic Department, Hannover Medical School (Germany)
2342 18.18	BIOMECHANICAL PARAMETERS RELEVANT TO THE SUCCESS OF HIP PROSTHESES: CLINICAL FOLLOW-UP AND FE MODEL STUDY	Maria Elvira Zeman ¹ , <u>Siegfried VN Jaecques</u> ¹ , Michiel Mulier ² , Georges Van der Perre ¹	¹ K.U.Leuven, Division of Biomechanics and Engineering Design (Belgium); ² K.U.Leuven, UZ Pellenberg, Department of Orthopaedic Surgery (Belgium)

SS40 Image Processing and Analysis of Retinal Images III. (Special Session - posters - SS10 III.)

Day and time: Tuesday 22nd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1760 1	RETINAL IMAGE FUSION AND REGISTRATION	<u>Libor Kubecka</u> ¹ , Jiri Jan ¹	¹ Brno University of Technology/Department of Biomedical Engineering, Kolejní 4, Brno (Czech Republic)
1867 2	MULTIMODAL MACULA MAPPING: STUDY FOR RIGID, PERSPECTIVE AND NON-RIGID IMAGE REGISTRATION.	<u>Pedro Baptista</u> ¹ , Rui Bernardes ¹ , Joao Ferreira ^{1,2} , Jorge Dias ² , José Cunha-Vaz ^{1,3}	¹ Center of New Technologies for Medicine, Association for Innovation and Biomedical Research on Light and Image, Coimbra (Portugal); ² Institute of Systems and Robotics, University of Coimbra (Portugal); ³ Institute of Biomedical Research on Light and Image, Faculty of Medicine of the University of Coimbra (Portugal)
2062 3	AUTOFLUORESCENCE AREAS DETECTION IN HRA IMAGES	<u>Radim Kolar</u> ¹ , Jiri Jan ¹ , R. Chrastek ² , R. Laemmer ³ , Ch. Y. Mardin ³	¹ Department of Biomedical Engineering, FEEC, Brno University of Technology (Czech Republic); ² Department of Computer Science, Friedrich-Alexander University (Germany); ³ Department of Ophthalmology, Friedrich-Alexander University (Germany)
2177 4	DEVELOPMENT AND EVALUATION OF ADVANCED RETINAL IMAGING PLATFORM FOR BIOMEDICAL ENGINEERING EDUCATION	<u>NIKOLAOS APOSTOLOU</u> ¹ , ARGURO MAGANIOTI ¹ , SOFIA NIKITOPOULOU ¹ , AIKATERINI LAZARIDOU ¹ , DIMITRIS KOUTSOURIS ¹	¹ NATIONAL TECHNICAL UNIVERSITY (Greece)
2578 5	COMPUTER-ASSISTED ANALYSIS OF THE DIABETIC RETINOPATHY USING DIGITAL IMAGE PROCESSING	<u>JONG MO SEO</u> ^{1,3} , KWANG GI KIM ² , JONG HYO KIM ² , KWANG SUK PARK ³ , HUM CHUNG ¹	¹ Department of Ophthalmology, Seoul National University School of Medicine (South Korea); ² Department of Radiology, Seoul National University School of Medicine (South Korea); ³ Department of Biomedical Engineering, Seoul National University School of Medicine (South Korea)

2581 6	QUANTITATIVE ANALYSIS OF THE RETINAL BLOOD FLOW USING DIGITAL FLUORESCEIN ANGIOGRAPHY	<u>JONG MO SEO</u> ^{1,3} , NAM KUG KIM ⁴ , JONG HYO KIM ² , KWANG SUK PARK ³ , JEONG MIN HWANG ^{1,5} , HUM CHUNG ¹	¹ Department of Ophthalmology, Seoul National University School of Medicine (South Korea); ² Department of Radiology, Seoul National University School of Medicine (South Korea); ³ Department of Biomedical Engineering, Seoul National University School of Medicine (South Korea); ⁴ Department of Radiology, Asan Medical Center (South Korea); ⁵ Bundang Seoul National University Hospital (South Korea)
2609 7	3D RECONSTRUCTION FROM STEREO DISC PHOTOGRAPH BASED ON BLOCK MATCHING METHOD WITH VARIABLE SEARCH RANGE	<u>Sun Kwon Kim</u> ¹ , Hyoun-Joong Kong ¹ , Jong-Mo Seo ² , Ki Ho Park ² , Jung Min Hwang ² , Hum Chung ² , Kwang Suk Park ³ , Hee Chan Kim ³	¹ Interdisciplinary Program, Biomedical Engineering Major, Graduate School, Advanced Biometric Research Center, Seoul National University (South Korea); ² Department of Ophthalmology, School of Medicine, Institute of Medical & Biological Engineering, Seoul National University (South Korea); ³ Department of Biomedical Engineering, School of Medicine, Institute of Medical & Biological Engineering, Seoul National University (South Korea)

SS129 (SS127 III.) Telemedicine and Healthcare III. (Standard Session - posters)

Day and time: Tuesday 22nd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1469 8	EVALUATION OF PRACTICAL FEASIBILITY AND ACCEPTABILITY OF HOME MONITORING IN A RESIDENTIAL HOME SETTING	<u>Malcolm Clarke</u> ¹ , Tanja Bratan ¹ , Russell Jones ² , Andrew Larkworthy ³	¹ Brunel University (U.K.); ² Chorleywood Health Centre (U.K.); ³ New Road Surgery (U.K.)
1555 9	TELEMONITORING DEVICES TO SUPPORT CHRONIC DISEASE MANAGEMENT AND ACUTE EPISODE MONITORING	<u>Malcolm Clarke</u> ¹	¹ Brunel University (U.K.)
1639 10	FEASIBILITY OF A COST-EFFECTIVE TELECONSULT PLATFORM FOR MINOR AMBULATORY SURGERY	<u>Javier Reina-Tosina</u> ¹ , Laura M. Roa ¹ , Manuel Prado ¹ , Tomás Gómez-Cía ^{1,2}	¹ University of Seville (Spain); ² University Hospital Virgen del Rocío (Spain)
1650 11	MEDICAL APPLICATIONS AND HIGH SPEED NETWORKING	<u>Milan Sarek</u> ¹	¹ CESNET Association (Czech Republic)
1728 12	DESIGN OF A PDA SURFACE WITH CONSIDERATION OF ERGONOMIC ASPECTS	<u>Karsten Biskup</u> ¹ , Joerg Orłowski ¹ , Birger Jettkant ¹ , Asude Derebasi ¹ , Bernhard Clasbrummel ¹	¹ Research Group Telemedicine, BG-Hospital Bergmannsheil Bochum (Germany)
1729 13	CABLELESS COMMUNICATION BETWEEN MOBILE PHONE, DATABASE AND A SCALE USING THE MSD FORMAT	<u>Joerg Orłowski</u> ¹ , Karsten Biskup ¹ , Birger Jettkant ¹ , Bernhard Clasbrummel ¹	¹ Research Group Telemedicine, BG-Hospital Bergmannsheil Bochum (Germany)
1928 14	A WEB-BASED WAVELET APPLICATION TO REDUCE ONE DIMENSIONAL LONG TERM PHYSIOLOGICAL DATA WITH INFREQUENT SHORT DURATION EVENTS FOR REMOTE DISPLAY	Yoot Khuan Lee, Michel Bister, Peter Blanchfield, Yusof Md Salleh	
2021 15	MOBILE ACTIVITY SCANNING FOR MEDICAL PREVENTION AND CARE	<u>Alexander Scholz</u> ¹ , Johannes Clauss ¹ , Hans-Georg Gruber ¹ , Bernhard Christ ¹ , Bernhard Wolf ¹	¹ Heinz-Nixdorf Lehrstuhl für medizinische Elektronik, Technische Universität München (Germany)
2165 16	IMPLEMENTING SECURITY IN A WIRELESS NETWORK FOR THE PROVISION OF MEDICAL CARE IN EMERGENCY SITUATIONS	<u>SPIROs</u> , <u>DEMBEYIOTIS</u> ¹ , GEORGIOS KONNIS ¹ , DIMITRIOS KOUTSOURIS ¹	¹ Biomedical Engineering Laboratory, National Technical University of Athens (Greece)

2460 17	POINT OF CARE MEDICAL DEVICE COMMUNICATION STANDARDS (ISO11073/IEEE1073) IN PATIENT TELEMONITORING	<u>Miguel Galarraga</u> ¹ , Ignacio Martinez ² , Paula de Toledo ³ , Luis Serrano ¹ , J. Garcia ² , Silvia Jiménez ³	¹ Universidad Publica de Navarra (Spain); ² Centro Politecnico Superior Universidad de Zaragoza (Spain); ³ Universidad Politecnica de Madrid, GBT (Spain)
2469 18	THE ITACA PROJECT: MODELS, ARCHITECTURES AND PROTOTYPES FOR CONTINUITY IN HEALTH-CARE DELIVERY PROCESS.	Salvatore Silvestri ¹ , Marco Rogante ¹ , Michele Bufano ² , A. D'Aquila ³ , M. Frusciane ³ , F. Paone ² , R. Giampieretti ⁴ , <u>Velio Macellari</u> ¹	¹ Istituto Superiore di Sanità, Technology and Health Department, Rome (Italy); ² Tecnobiomedica S.P.A. - No Profit Research Company, Rome (Italy); ³ Ebit Sanità S.P.A., Genova (Italy); ⁴ Tesan S.P.A., Vicenza (Italy)
2654 19	MOBILE PHONE TELEMEDICINE FOR THE SELF-MANAGEMENT OF TYPE 1 DIABETES: CLINICAL EVALUATION AND MEASURES OF CONTROL USING BLOOD GLUCOSE FORECASTING	<u>Oliver Gibson</u> ¹ , Patrick McSharry ¹ , Lionel Tarassenko ¹	¹ Department of Engineering Science, University of Oxford (U.K.)
2659 20	INTEGRATION OF INSTANT MESSAGING PROTOCOL INTO TELECONSULTATION PLATFORM	Ilias SACHPAZIDIS	
2385 21	CONTINUOUS MONITORING OF PATIENT PARAMETERS USING WIRELESS TELEMETRY	Rajasekaran Jagan	

SS117 (SS116 II.) Gait and Motion Analysis II. (Standard Session - posters)

Day and time: Tuesday 22nd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors

Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1535 22	RECURSIVE CLUSTERING ALGORITHM FOR THUMB MOTION CLASSIFICATION	Jan Havlík ¹ , Jiří Stöhr ¹ , Antonín Hlaváček ¹	¹ Department of Circuit Theory, Faculty of Electrical Engineering, Czech Technical University in Prague (Czech Republic)
1916 23	CHANGES OF ANKLE IMPEDANCE DURING STANDING DEPENDING ON DIFFICULTIES OF CONDITIONS	Akimasa Ishida, Shoji Imai, Hidenori Inaoka, Yutaka Fukuoka, Tadashi Masuda	
2295 24	SOFTWARE FOR ANALYSIS OF PRESSURE DISTRIBUTION DATA	Petr Vlach ¹ , Stanislav Otáhal ¹ , Jakub Otáhal ¹	¹ Univerzita Karlova (Czech Republic)
2626 25	GAIT AND POSTURE ANALYSIS AT REHABILITATION CLINIC	Dušan ŠIMŠÍK, Alena GALAJDOVÁ, Jaroslav MAJERNÍK, Ludovít ŽELINSKÝ	
2656 26	A DYNAMIC CONTACT-FREE OPTICAL ACQUISITION TECHNIQUE FOR ANATOMICAL STRUCTURES OF THE TRUNK AND THE LOWER BODY	Nico Bogaert ¹ , Tom De Wilde ¹ , Cristian Forausberger ¹ , Bart Haex ¹ , Jos Vander Sloten ¹ , Remi Van Audekercke ¹ , Marcin Witkowski ² , Robert Sitnik ² , Walter Rapp ³ , Sven Moonshake ⁴	¹ Division of Biomechanics and Engineering Design, Katholieke Universiteit Leuven (Belgium); ² Institute of Micromechanics and Photonics, Warsaw University of Technology (Poland); ³ Department of Sport Medicine, University Tübingen (Germany); ⁴ Diers Intl. GmbH (Germany); ⁵ Custom8 NV, Ridderstraat 26, 3000 Leuven (Belgium)

SS97 (SS89 IX. Tu) Biomedical Signal Processing IX. (Standard Session - posters)

Day and time: Tuesday 22nd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
2643 27	NONSTATIONARY BLOOD FLOW / WALL MOVEMENT ESTIMATOR USING DOPPLER ULTRASOUND	Hugo Freitas ¹ , <u>Jose Cardoso</u> ² , Carlos A.C. Bastos ³ , Yuanyuan Wang ⁴	¹ Instituto Politecnico de Castelo Branco (Portugal); ² Universidade de Trás-os-Montes e Alto Douro (Portugal); ³ Universidade de Aveiro (Portugal); ⁴ University of Fudan (China)
2276 28	WHITE NOISE BASED MODELING OF SURFACE MYOELECTRIC SIGNALS DURING CYCLIC DYNAMIC CONTRACTIONS	Sasa Ostojic ¹ , <u>Mario Cifrek</u> ¹	¹ University of Zagreb, Faculty of Electrical Engineering and Computing (Croatia)
2603 29	EVALUATION OF TAPING AND ELECTRO THERAPY MUSCLE RECRUITMENT TECHNIQUES USING EMG IN LATERAL PATELLAR HYPER-PRESSURE SYNDROM	Ricardo Bravo, Maxlloys Perez, Octavio Granadillo	
2315 30	AUTOMATED IDENTIFICATION AND INTERPRETATION OF AUDITORY BRAIN STEM EVOKED POTENTIALS	yousef salimpour ^{1,2} , <u>m.djavad abolhassani</u> ^{1,2}	¹ Research Center for Science and Technology (Iran); ² Tehran university of medical science (Iran)
1865 31	FLASH VISUAL EVOKED POTENTIALS IN ZEN-BUDDHIST MEDITATION	<u>Chuan-Yi Liu</u> ¹ , Pei-Chen Lo ¹	¹ National Chiao-Tung University (Taiwan)
2328 32	AUDITORY WAVELET TRANSFORM	<u>Yousef Salimpour</u> ^{1,3} , M.Djavad Abolhassani ^{1,2} , Hamid Soltanianzad ^{3,4}	¹ Research Centre for Science and Technology in Medicine (Iran); ² Tehran University of Medical Sciences (Iran); ³ Institute for Studies in Theoretical Physics and Mathematics (Iran); ⁴ Tehran University (Iran)
1825 33	IMPROVING fMRI DATA ANALYSIS BY STRUCTURED NEURAL NETWORKS	<u>Bernd Brückner</u> ¹	¹ Leibniz Institute for Neurobiology (Germany)
1567 34	TRACKING AND QUANTIFYING POST-SURGICAL VOCAL FOLDS FUNCTIONAL RECOVERING	<u>Claudia Manfredi</u> ¹ , Giovanna Cantarella ² , Barbara Maraschi ²	¹ Department of Electronics and Telecommunications, Univ. of Firenze, Firenze (Italy); ² Department of Otholaryngology, Univ. of Milano, Milano (Italy)

1761 35	INTRODUCTION SUPPORT VECTOR MACHINES TO CLASSIFY SPEECH AND IDENTIFY ARTICULATION DISORDERS	<u>Chrysostomos Stylios</u> ¹ , George Georgoulas ² , Voula Georgoupoulos ³ , Peter Groumpos ²	¹ Dept. of Communications, Informatics and Management, TEI of Epirus, (Greece); ² Laboratory for Automation and Robotics, University of Patras (Greece); ³ Dept. of Speech and Language Therapy, TEI of Patras, (Greece)
2576 36	MULTICHANNEL PHONOCARDIOGRAM SOURCE SEPARATION AND LOCALIZATION	<u>Conor Fearon</u> ¹ , Scott Rickard ¹ , Raymond L. Watrous ²	¹ Sparse Signal Processing Group, University College Dublin (Ireland); ² Zargis Medical Corp., Princeton (USA)
1647 37	OPTIMIZING EXPERIMENTAL SETUP IN SIMULATED ORGANS FOR ULTRASOUND SYSTEMS	<u>Francesco Conversano</u> ¹ , Sergio Casciari ^{1,2} , Rosa Palmizio Errico ¹ , Ernesto Casciari ^{1,2} , Alessandro Distante ^{1,2}	¹ ISBEM Euro Mediterranean Biomedical Scientific Institute, Brindisi (Italy); ² National Council of Research, Institute of Clinical Physiology, Lecce (Italy)
1643 38	THE MODERN METHODS OF RESEARCHES OF BIOELECTRICAL SIGNAL THIN STRUCTURE	Kirill Zaychenko	
2282 39	APPLICATION OF THE MATCHING PURSUIT METHOD TO THE IDENTIFICATION OF SPLIT SOUNDS IN FETAL PHONOCARDIOGRAMS	Csaba Horvath, Ferenc Kovacs, Gabor Hosszu	
2074 40	SLOW EYE MOVEMENT OSCILLATION IN CONGENITAL NYSTAGMUS	<u>Mario Cesarelli</u> ¹ , Paolo Coppola ¹ , Paolo Bifulco ¹ , Maria Romano ¹ , Mario Sansone ¹	¹ Dept. of Electronics and Telecommunications Engineering, University "Federico II" of Naples (Italy)
1556 41	DYNAMICAL NONSTATIONARITY OF THE EEG IN PATIENTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER (AD/HD) DURING COGNITIVE TASKS	<u>Jaeseung Jeong</u> ¹ , Charles-Francois Latchoumane ¹ , Doheon Lee ¹	¹ Department of Biosystems (South Korea)
1803 42	LONG-TERM ANALYSIS AND DESCRIPTION OF INTERICTAL EPILEPTIFORM ACTIVITY IN INTRACRANIAL EEG RECORDINGS	<u>Peter Van Hese</u> ^{1,2} , Jean-Pierre Martens ¹ , Hans Hallez ^{1,2} , Pieter Claeys ² , Yves D'Asseler ¹ , Paul Boon ² , Rik Van de Walle ¹ , Ignace Lemahieu ¹	¹ Medical Image and Signal Processing (MEDISIP), Department of Electronics and Information Systems (ELIS), Ghent University, Ghent, Belgium (Belgium); ² Laboratory for Clinical and Experimental Neurophysiology, Department of Neurology, Ghent University Hospital, Ghent, Belgium (Belgium)

1956 43	LONG-TERM EEG DATA ANALYSIS	<u>Josef Rieger</u> ¹	¹ Czech Technical University (Czech Republic)
2366 44	UTILIZATION OF TIME-DEPENDENCE DURING EEG SIGNAL CLASSIFICATION	<u>Vaclav Gerla</u> ¹ , Lenka Lhotska ¹ , Vladimir Krajca ²	¹ Czech Technical University in Prague - Gerstner Laboratory (Czech Republic); ² University Hospital Na Bulovce, Budínova 2, Prague (Czech Republic)
1506 45	THE INFLUENCE OF THE EEG RECORDING MACHINE TIME MULTIPLEX ON THE LAPLACIAN FILTER: THE SIMULATION WITH THE REAL SHAPED HEAD MODEL	<u>Josef Mlynar</u> ¹ , Jakub Stastny ¹ , Pavel Sovka ¹	¹ Czech Technical University, Department of Circuit Theory, Biosignal Laboratory (Czech Republic)
2604 46	HYSTERETIC ARTIFICIAL NEURAL NETWORK FOR EEG DATA REPRESENTATION	<u>Carmen Grigoras</u> ^{1,2} , Anca Lazar ¹	¹ University of Medicine and Pharmacy Iasi (Romania); ² Romanian Academy - Iasi branch -Institute of Theoretical Informatics (Romania)
1540 47	RELATION BETWEEN EFFECTIVE FEATURES EXTRACTED FROM EEG SIGNALS OF THREE DIFFERENT SUBJECTS FOR A MENTAL TASK IN BCI	Ehsan Arbabi, Mohammad Bagher Shamsollahi	
1580 47	POINCARÉ PLOT ANALYSIS OF HEART RATE VARIABILITY IN STROKE PATIENTS	Gianni D'Addio ¹ , Grazia Maria Corbi ¹ , Giuseppe Rengo ¹ , Giovanna Russo ¹ , <u>Giandomenico Pinna</u> ¹ , Roberto Maestri ¹ , Nicola Ferrara ¹ , Franco Rengo ¹	¹ S. Maugeri Foundation (Italy)
1715 49	WAVELET ANALYSIS OF THE A-WAVE OF THE HUMAN ELECTRORETINOGRAPHIC SIGNAL	Rosita Barraco ¹ , <u>Leonardo Bellomonte</u> ¹ , Maria Brai ¹	¹ Università di Palermo (Italy)
1779 50	GATED MAGNETIC RESONANCE IMAGING OF CARDIAC MORPHOLOGY IN OBESE ZUCKER RATS	<u>Sabbah Maher</u> ¹ , Latifa Fakri-Bouchet ² , Rachida Fissoune ² , Odette Fokapu ¹	¹ Univeristé de Technologie de Compiègne (France); ² Université de Lyon1 (France)
2076 51	STUDY OF SHORT TERM VARIABILITY INDEXES IN CORRESPONDENCE OF FETAL HEART RATE DECELERATIONS	Maria Romano ¹ , <u>Mario Cesarelli</u> ¹ , Paolo Bifulco ¹ , Mario Sansone ¹ , Paolo Coppola ¹	¹ University "Federico II" of Naples, Dept. Electronics and Telecommunications Engineering (Italy)

2105 52	QRS COMPLEX SEPARATION FROM CONVOLUTIVE MIXTURES OF BIOELECTRICAL SIGNALS ACQUIRED BY WEARABLE SYSTEMS	Matteo Milanesi ¹ , Nicola Vanello ¹ , Vincenzo Positano ² , Maria Filomena Santarelli ² , Valentina Hartwig ³ , Nicola Taccini ⁴ , Rita Paradiso ⁵ , Danilo De Rossi ³ , Luigi Landini ³	¹ Department of Electrical Systems and Automation, Faculty of Engineering, University of Pisa (Italy); ² CNR Institute of Clinical Physiology, Pisa (Italy); ³ Interdepartmental Research Center "E. Piaggio", University of Pisa, (Italy); ⁴ Smartex s.r.l, Prato (Italy); ⁵ Milior s.p.a., Prato (Italy)
2399 53	PREICTAL STATE DETECTION OF ABSENCE SEIZURES USING MUTUAL INTERDEPENDENCE MEASURE	Ardalan Aarabi ¹ , Fabrice Wallois ^{1,3} , Reinhard Grebe ²	¹ , EFSN Péd., C.H.U. Nord, Place V. Pauchet, 80054, Amiens, France (France); ² 2GRAMFC, Lab. Bioph., Génie Bioméd., Fac. Médecine, 3 rue des Louvels, 80036, Amiens, France (France); ³ 3GRAMFC, Lab. Neurophysio., Fac. Médecine, 3 rue des Louvels, 80036, Amiens, France (France)
2528 54	HIERARCHICAL CLUSTERING OF INDEPENDENT COMPONENTS EXTRACTED FROM FMRI DATA	Nicola Vanello ¹ , Vincenzo Positano ² , Matteo Milanesi ¹ , Maria Filomena Santarelli ² , Valentina Hartwig ² , Emiliano Ricciardi ³ , P. Pietrini ³ , Luigi Landini ⁴	¹ of Electrical Systems and Automation, Fac. of Engineering, Univ. of Pisa (Italy); ² MRI Laboratory, CNR Institute of Clinical Physiology, Pisa (Italy); ³ Lab. Clinical Biochemistry, Dept. Experimental Pathology, Univ. of Pisa Med. School (Italy); ⁴ Dept. of Information Engineering, University of Pisa (Italy)
2115 55	MEASURING AND PROCESSING OF EEG SIGNAL IN THE HIGH NOISE ENVIRONMENT, IN PARTICULAR IN THE COURSE OF FMRI DIAGNOSIS	Jan Kaspar, Pavel Smrcka, Karel Hana, Jiri Brada, Radek Fiala	

SS73 (SS68 VI. Tu) Biomechanics VI. (Standard Session - posters)

Day and time: Tuesday 22nd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
2133 56	EVALUATION OF PHOTOELASTIC MATERIALS FOR BIOLOGICAL SOFT TISSUES	<u>Kouji Yamamoto</u> ¹ , shunji Hirokawa ² , Takashi Kawada ³	¹ Kurume Institute of Technology (Japan); ² Kyusyu University (Japan); ³ Kurume University (Japan)
2345 57	TEKSCAN PRESSURE SENSOR EQUILLIBRATION AND CONDITIONING	George Papaioannou ¹ , <u>Vasilios Protopappas</u> ^{2,3} , Constantine Glaros ³ , Ioannis Morres ¹ , Panagiotis Tsopeles ⁴	¹ The Wisconsin Institute for Biomedical and Health Technologies and College of Health Sciences, University of Wisconsin Milwaukee/Madison (USA); ² Dept. of Medical Physics, Medical School, University of Ioannina (Greece); ³ Unit of Medical Technology and Intelligent Information Systems, Dept. of Computer Science, University of Ioannina (Greece); ⁴ Dept. of Civil Engineering, The Catholic University of America, Washington (USA)
2364 58	A PARAMETRIC ANTHROPOMETRIC MODEL OF THE PREGNANT WOMAN	<u>David Van Lopik</u> ¹ , Alix Weekes ¹ , Serpil Acar ¹	¹ Loughborough University (United Kingdom)
2483 59	FINITE ELEMENT STENT DESIGN OPTIMIZATION – TOWARDS A UNIFORM EXPANDING FIRST GENERATION PALMAZ SCHATZ STENT	<u>Matthieu De Beule</u> ¹ , Rudy Van Impe ¹ , Benedict Verhegghe ¹ , Patrick Segers ¹ , Pascal Verdonck ¹	¹ Ghent University (Belgium)
1939 60	ON THE APPLICABILITY OF SEVERAL METHODS FOR CAMERA CALIBRATION	Tomislav Pribanic ¹ , Peter Sturm ² , <u>Mario Cifrek</u> ¹	¹ University of Zagreb (Croatia); ² INRIA (France)
2526 61	DEVELOPMENT OF A HEAD MOTION TRACKING SYSTEM	<u>Ronald Josef Zvonimir Dangel</u> ¹ , A. F. Frère ¹	¹ Universidade de Mogi das Cruzes, NPT, Mogi das Cruzes (Brazil)
2179 62	POLYETHYLENE MOBILITY AND DEFORMATION IN A MOBILE BEARING PROSTHESIS DESIGN: A ROENTGEN STEREOPHOTOGRAMMETRIC ANALYSIS AT 4 YEARS	Luisa Montagna, Alessandro Russo, Laura Bragonzoni, Maurilio Marcacci	

1573 63	STRESS DISTRIBUTION IN BONE BED INFLUENCED BY IMPLANT LENGTH AND DIAMETER	<u>Lucie Himmlová</u> ¹ , Tomáš Goldmann ² , Alois Kácovský ²	¹ Institute of Dental Research 1st MF and GMH (Czech Republic); ² Czech Technical University in Prague, Faculty of Mechanical Engineering (Czech Republic)
1814 64	INFLUENCE OF MECHANICAL LOADING OF HIP JOINT DURING NORMAL GAIT	<u>Zdeněk Horák</u> ¹ , Martin Stupka ² , Jan Martiník ² , Jan Vrana ¹	¹ Laboratory of Biomechanics, Fac. of Mechanical Eng., CTU in Prague (Czech Republic); ² Department of Anatomy and Biomechanics, Fac. of Physical Education and Sport, (Czech Republic)
1876 65	EXPERIMENTAL EVALUATION OF COMBINATIONS OF MATERIALS USED FOR ORTHOPAEDIC IMPLANTS	<u>Radek Sedlacek</u> ¹ , Jana Vondrova ¹	¹ CTU in Prague, Faculty of Mechanical Engineering, Department of Mechanics (Czech Republic)
1859 66	THE EFFECT OF NICOTINE ADMINISTRATION ON THE FEMORAL NECK RIGIDITY AND WORK TO FAILURE OF RAT OSTEOPOROTIC BONES	<u>Jana Vondrova</u> ¹ , Pavel Ruzicka ¹ , Radek Sedlacek ¹	¹ CTU in Prague, FME, Laboratory of Human Biomechanics (Czech Republic)
1946 67	QUANTITATIVE ULTRASOUND TO PREDICT THE MECHANICAL PROPERTIES OF BONE	<u>Manijhe Mokhtari-Dizaji</u> ¹ , maryam- rahelle Dadras ^{1,2} , bager Iarjani ² , gity torkaman ¹	¹ Tarbiat Modarres University (Iran); ² Metabolism and Endocrine Research Center, Tehran Medical Sciences University (Iran)
1399 68	HEART PULSE PROPAGATION IN BLOOD VESSELS WITH STENOSIS	Igor Selezov, Yuri Hupalo, Helen Shved, Andrey Pavluchik	
2632 69	A STUDY OF HYALINE CARTILAGE CHONDROCYTE CELLS REACTION TO CYCLIC LOADING	Garima Sharma, Rajendra Kumar Saxena, Prashant Mishra	
1575 70	CORELLATION BETWEEN ANKLE JOINT REACTION FORCES AND THE POSTURAL BALANCE CONTROL OF HUMAN BODY	Hyeonki Choi, Min- Jwa Seo	
2668 71	METHODOLOGY OF VIRTUAL COMPUTATIONAL MODELS SETUP - EXPERIMENTAL IDENTIFICATION OF BASIC MATERIAL PROPERTIES OF MUSCLE OF URETRINE WALL - INTERACTION BETWEEN SKI – SKIER MATHEMATIC MODEL OF LOADING ACL - CREATION OF A HEAD MODEL USING THE FINITE ELEMENT METHOD	<u>Frantisek Lopot</u> ¹ , Petr Kubový ¹ , Karel Jelen ¹ , V. Nováček ² , Š. Budka ³ , A. Doležal ⁴ , Jan Martiník ¹ , Petr Vorlíček ¹	¹ Charles University/Dep. of Anatomy and Biomechanics, Prague (Czech Republic); ² University of West Bohemia/Department of Mechanics, Plzen (Czech Republic); ³ Gynecologic and obsterics clinic of 3rd FMCU and GTH, Prague (Czech Republic); ⁴ Gynecologic and obsterics clinic of 1st FMCU and GTH, Prague (Czech Republic)

1914 72	THE EFFECT OF AXIAL ACCELERATION ON THE REPONSES OF CERVICAL SPINE DURING WHIPLASH	Qinghang Zhang, Ee Chon Teo, Vee Sin Lee, Kian Wee Tan	
1678 73	THE TENDON SLACK LENGTH CALCULATION FROM THE MAXIMAL AND MINIMAL EXCURSION OF MUSCULOTENDON	<u>Miloslav Vilimek</u> ¹	¹ Czech Technical University in Prague (Czech Republic)
1533 74	BOLUS PROCESSING - 3D MOTION ANALYSIS OF MASTICATION	<u>Tomas Goldmann</u> ¹ , Lucie Himmlova ²	¹ Department of Mechanics, Biomechanics and Mechatronics, CTU in Prague (Czech Republic); ² Institute of Dental Research, 1st MF and GMH (Czech Republic)
1814 75	INFLUENCE OF MECHANICAL LOADING OF HIP JOINT DURING NORMAL GAIT	<u>Zdeněk Horák</u> ¹ , Martin Stupka ² , Jan Martinik ² , Jan Vrana ¹	¹ Laboratory of Biomechanics, Fac. of Mechanical Eng., CTU in Prague (Czech Republic); ² Department of Anatomy and Biomechanics, Fac. of Physical Education and Sport, (Czech Republic)
2673 76	ARTIFICIAL DISC REPLACEMENT - DEVELOPMENT	<u>Jana Koukalová</u> ¹ , Petr Tichý ¹ , Zdeněk Horák ¹	¹ Laboratory of Biomechanics, CTU in Prague (Czech Republic)

SS80 (SS75 VI. Tu) Biomedical Image Processing VI. (Standard Session - posters)

Day and time: Tuesday 22nd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1551 77	SEGMENTATION OF TOMOGRAPHIC IMAGES FOR MEDICAL MODELS CONSTRUCTION	Neusa Grando, Diogo Kuiaski, Tania Centeno, Humberto Gamba	
1893 78	A COMPARATIVE STUDY OF SEGMENTATION TECHNIQUES IN THE DEVELOPMENT OF A MEDICAL IMAGE ANALYSIS SYSTEM	<u>Alfonso Castro</u> ¹ , Sabela Fernandez ¹ , Bernardino Arcay ¹	¹ Universidade da Coruña (Spain)
1558 79	NONDESTRUCTIVE MEASUREMENT OF THE THICKNESS OF A PATHOLOGIC SPECIMEN USING AN OPTICAL MICROSCOPE	<u>Masanobu Takahashi</u> ¹ , Yasuhiro Yoneyama ¹ , Masayuki Nakano ²	¹ Shibaura Institute of Technology (Japan); ² Chiba Medical Center (Japan)
1587 80	ESTIMATION OF 3-D NUCLEAR DENSITY FROM A 2-D IMAGE OF HEPATIC HISTOPATHOLOGICAL SPECIMEN	<u>Takashi Yoshimi</u> ¹ , Masanobu Takahashi ¹ , Masayuki Nakano ²	¹ Shibaura Institute of Technology (Japan); ² Chiba Medical Center (Japan)
1588 81	CONSTRUCTION OF THREE DIMENSIONAL MODELS OF NUCLEI IN A HEPATIC HISTOPATHOLOGICAL SPECIMEN	<u>Tomoaki Kojima</u> ¹ , Masanobu Takahashi ¹ , Masayuki Nakano ²	¹ Shibaura Institute of Technology (Japan); ² Chiba Medical Center (Japan)
1989 82	NEW METHOD FOR THE CALCULATION OF A DYNAMIC A/V-RATIO	Christine Kassner, Axel Fink, Thomas Riemer, Walthard Vilser	
2436 83	SYSTEM FOR POSTURAL ANALYSIS BASED ON DIGITAL IMAGE PROCESSING AND 3D RECONSTRUCTION	<u>Eduardo H. Estigoni</u> ¹ , Jefferson L. B. Marques ¹	¹ Federal University of Santa Catarina (Brazil)
2559 84	ABEL TRANSFORM OF THE POLYNOMIAL WINDOW WITH ODD AND EVEN COEFFICIENT	<u>Marek Jaskula</u> ¹	¹ Szczecin University of Technology (Poland)
2560 85	THE LOW ORDER POLYNOMIAL WINDOW OPTIMIZED WITH VARIOUS CRITERIA AND ITS ABEL TRANSFORM	<u>Marek Jaskula</u> ¹	¹ Szczecin University of Technology (Poland)

2562 86	IMAGE REPRESENTATION IN ITERATIVE IMAGE RECONSTRUCTION BASED ON HIGH ORDER, EVEN POLYNOMIAL WINDOWS	Marek Jaskula ¹ , Wojciech Chlewicki ²	¹ Szczecin University of Technology (Poland); ² Szczecin University of Technology (Poland)
2501 87	DESCRIPTION OF LEUKOCYTS MOVEMENT ON A GLASS	Anna Korzynska	
2173 88	REPRODUCIBILITY AND COMPARISON OF AUTOMATIC AND MANUAL MEASUREMENTS OF RETINAL VESSEL DIAMETERS – PRELIMINARY RESULTS OF A STUDY	Katrin Berthold, Walthard Vilser	
2143 89	DIGITAL ODONTOLOGIC RADIOGRAPHY ALIGNMENT FOR DIGITAL SUBTRACTION RADIOGRAPHY	Eveline Batista Rodrigues, Homero Schiabel, Maurício Cunha Escarpinati, Izabel Regina Fisher Rubira_Bullen	
2291 90	EVALUATING ARTERIOVENOUS MALFORMATIONS (AVMs) USING CEREBRAL ANGIOGRAMS	Laszlo Nagy	
2674 91	BIOMECHANICAL ASPECTS OF SKELETAL MUSCLE TEXTURE ANALYSIS	Martin Stupka	

SS62 (SS59 IV. Tu) Bioimpedance IV. (Standard Session - posters)

Day and time: Tuesday 22nd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
2081 92	THE EFFECT OF THE SCALP AND THE SKULL BONE IN THE TOTAL IMPEDIVITY OF THE NEONATAL HEAD AND ITS IMPLICATIONS IN THE DETECTION OF BRAIN CELLULAR EDEMA	<u>Fernando Seoane</u> <u>Martinez</u> ^{1,2} , Kaj Lindecrantz ¹	¹ School of Engineering, University College of Borås (Sweden); ² Department of Signal and Systems, Chalmers University of Technology (Sweden)
1719 93	MEASURING IMPEDANCE WITH A THIGH-TO-THIGH PATHWAY: ISN'T IT A POSSIBLE METHOD TO MONITOR ONE'S BODY IMPEDANCE?	Ki Hwan Hong ¹ , Yong Kyu Lim ¹ , Kwang Suk Park ²	¹ Medical & Biological Engineering Major, Interdisciplinary program, Medical and Biological Engineering Major, Seoul National University (South Korea); ² Department of Biomedical Engineering, College of Medicine, Seoul National University (South Korea)
2490 94	A HAND-HELD ELECTRICAL IMPEDANCE PROBE FOR THE DETECTION OF MALIGNANT TISSUE	<u>Anna Massey</u> ¹ , Peter Milnes ¹ , Brian Brown ¹ , Dawn Walker ² , Summi Abdul ³ , John Tidy ³	¹ Department of Medical Physics, University of Sheffield (U.K.); ² Department of Computer Science, University of Sheffield (U.K.); ³ Sheffield Gynaecological Cancer Centre, Royal Hallamshire Hospital (U.K.)
2549 95	EXPERIMENTAL RELATIONSHIPS BETWEEN THE BLOOD CONDUCTIVITY AND THE BLOOD RHEOLOGICAL PROPERTIES	<u>Nadia Antonova</u> ¹ , P. Riha ² , R. Zlatev ³ , Ivan Ivanov ¹	¹ Institute of Mechanics and Biomechanics, Bulgarian Academy of Sciences, Sofia (Bulgaria); ² Institute of Hydrodynamics, Academy of Sciences of the Czech Republic, Prague (Czech Republic); ³ Institute of Physical Chemistry, Bulgarian Academy of Sciences, Sofia (Bulgaria)
2302 96	Spread Spectrum Bioimpedance Measurements for Rejecting Jamming signal	<u>In-Duk Hwang</u> ¹	¹ Daejeon University (South Korea)
2459 97	GENERATING SURFACES FOR REGISTRATION AND WARPING FE MESHES FOR THE FORWARD MODEL IN EIT OF BRAIN FUNCTION	<u>Andrew Tizzard</u> ¹ , David Holder ² , Richard Bayford ³	¹ Middlesex University, Product Design and Engineering (U.K.); ² University College, Department of Medical Physics and Bioengineering (U.K.); ³ Middlesex University, School of Health and Social Sciences (U.K.)

SS102 (SS98 V. Tu) Biomedical System Modelling and Analysis V. (Standard Session - posters)

Day and time: Tuesday 22nd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1480 98	EQUIENERGY VS EQUIDOSE INPUTS IN PHARMACOKINETIC STUDIES	<u>Renata Kalicka</u> ¹ , Anna Pietrenko-Dabrowska ¹	¹ Gdansk University of Technology (Poland)
1791 99	SIMULATED EFFECTS OF SYMPATHETIC STIMULATION ON THE ACTION POTENTIAL OF VENTRICULAR CARDIOMYOCYTES	<u>Eleonora Grandi</u> ¹ , Stefania Vecchietti ¹ , Stefano Severi ¹ , Emanuele Giordano ¹ , Silvio Cavalcanti ¹	¹ Cellular and Molecular Engineering Laboratory (Italy)
1846 100	A NUMERICAL SOLVER FOR POISSON AND NERNST-PLANCK EQUATIONS, APPLICATION TO ION CHANNEL CONDUCTION	<u>Simone Furini</u> ¹ , Silvio Cavalcanti ¹ , Francesco Zerbetto ²	¹ Department of electronics, computer science and systems (Italy); ² Department of chemistry "G.Ciamician" (Italy)
1915 101	MODELING OF BLOOD FLOW IN MICROVESSELS	<u>Arezou Jafari</u> ¹ , Piroz Zamankhan ¹ , S.Mohammad Mousavi ¹ , Pertti Kolari ¹	¹ Lappeenranta University of Technology (Finland)
2404 102	COMPUTER SIMULATION OF THE SLIT ARTERIOTOMY TECHNIQUE FOR ARTERIAL END-TO-SIDE MICROANASTOMOSIS	<u>Alvin Chua</u> ¹ , Hai Gu ² , Bien Keem Tan ¹	¹ Singapore General Hospital (Singapore); ² Institute of High Performance Computing, Agency for Science, Technology and Research (Singapore)
1416 103	DETECTION OF OBJECT SALIENT FEATURES BASED ON THE OBSERVER SCANPATH ANALYSIS	<u>Piotr Augustyniak</u> ¹ , Zbigniew Mikrut ¹	¹ AGH University of Science and Technology (Poland)
1855 104	MODELLING OF BIOFEEDBACK USING REGULATING PROCESS	<u>Michael Mráz</u> ^{1,2} , Miroslav Šnorek ¹ , Karel Hána ²	¹ Department of Computer Science and Engineering, Faculty of Electrical Engineering, CTU in Prague (Czech Republic); ² Faculty of Biomedical Engineering, CTU in Prague (Czech Republic)
1917 105	MODELING THE ELECTRICAL ACTIVITY OF A UTERINE CELL A MATHEMATICAL MODEL APPROACH	<u>Sandy Rihana</u> ¹ , Catherine Marque ¹	¹ Université de Technologie de Compiègne (France)

2072 106	IN SILICO SIMULATION ENVIRONMENT AND GLUCOSE CONTROL IN CRITICALLY ILL SUBJECTS: STRATEGIC CONSIDERATIONS	<u>Roman Hovorka</u> ¹ , Malgorzata Wilinska ¹ , Ludovic Chassin ¹	¹ University of Cambridge (U.K.)
2531 107	DIFFERENTIAL MODEL OF EXCITATION-CONTRACTION COUPLING IN A CARDIAC CELL FOR MULTICYCLE SIMULATIONS	<u>DJABELLA</u> <u>KARIMA</u> ¹ , SORINE MICHEL ¹	¹ INRIA (France)
1896 108	ESTIMATION OF BLOOD BRAIN BARRIER PERMEABILITY BY MONTE CARLO SIMULATION AND ANALYTICAL METHOD	<u>Effat Yahaghi</u> ^{1,2} , Hamid Soltanian-Zadeh ^{3,4} , Majid Shahriarei ⁵ , N. Fatourae ⁶	¹ Department of Physics, Amir-Kabir University of Technology, Tehran (Iran); ² Department of Physics, Imam International University, Ghazvin (Iran); ³ Department of Electrical and Computer Engineering, University of Tehran (Iran); ⁴ Department of Radiology, Henry Ford Health System, Detroit, Michigan (USA); ⁵ Faculty of Nuclear Engineering, Shahid Beheshti University, Tehran (Iran); ⁶ Department of Biomedical Engineering, Amir-Kabir University of Technology, Tehran (Iran)
2356 109	EFFECTS OF AFRICAN BLACK TEA EXTRACT ON RATS	<u>Tsutomu Yajima</u> ¹ , Mitsuo Terasawa ²	¹ SUNFIELD CO. LTD (Japan); ² Tamagawa University (Japan)
2279 110	SIMPLIFIED NUMERICAL MODELS FOR MICROWAVE DOSIMETRY IN HUMAN TISSUE	Mihaela Morega ¹ , <u>Alexandru</u> <u>Morega</u> ¹ , Alina Machedon ¹	¹ POLITEHNICA University of Bucharest (Romania)
1527 111	IMPROVEMENT IN THE DISCRIMINATION BETWEEN DAHL HYPERTENSIVE AND NORMOTENSIVE RATS: BASED ON MODIFIED DYNAMIC MODELING OF RENAL BLOOD FLOW	Ehsan Arbabi, Mehran Jahed	
2449 112	EVALUATION OF A GLUCOSE – INSULIN METABOLISM MODEL BASED ON DATA FROM CHILDREN WITH TYPE 1 DIABETES	Stavroula Mouggiakakou, Dimitra Iliopoulou, Konstantina Nikita, Andriani Vazaiou, Evaggelos Mpozias, Christos Bartsokas	

2162 113	A COMPARATIVE STUDY ON DYNAMIC BAYESIAN NETWORKS BASED ON STATE SPACE MODELS FOR GENE NETWORK RECONSTRUCTIONS	<u>Yu-Cheng Liu</u> ¹ , Chung-Ming Chen ¹	¹ Institution of Biomedical Engineering, NTU (Taiwan)
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SS108 (SS106 III. Tu) Cardiovascular and Pulmonary Systems III. (Standard Session - posters)

Day and time: Tuesday 22nd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1920 116	EXAMINATIONS OF COATED CORONARY STENTS' EXPANSION FEATURES AND STABILITY OF THE COATINGS	<u>Eszter Bognár</u> ¹ , György Ring ¹ , János Dobránszky ¹	¹ Budapest University of Technology and Economics, Department of Materials Science and Engineering (Hungary)
1921 117	FATIGUE TESTING OF CORONARY STENTS	György Ring ¹ , Eszter Bognár ¹ , János Dobránszky ¹	¹ Budapest University of Technology and Economics, Department of Materials Science and Engineering (Hungary)
2084 118	A PHYSIOLOGICALLY-BASED CARDIOVASCULAR MODEL FOR DESCRIBING THE CAPILLARY LEAK ASSOCIATED WITH CARDIO-PULMONARY BYPASS	<u>Olufemi King</u> ¹ , Mahdi Mahfouf ¹ , Jonathan Ross ¹ , M. Denai ¹	¹ The University of Sheffield (U.K.)
1428 119	A SYSTEM FOR DETERMINATION OF BLOOD PRESSURES AND HEMODYNAMICS FROM OSCILLOMETRIC WAVEFORMS	<u>Milan Stork</u> ¹ , Jiri Jilek ¹	¹ UWB (Czech Republic)
2395 120	A 1D CIRCULATION MODEL AS BOUNDARY CONDITION FOR A 3D SIMULATION OF A PUMPING HUMAN VENTRICLE	<u>Michael Reik</u> ¹ , Gunnar Meyrowitz ² , Michael Schwarz ² , Sven Donisi ¹ , Torsten Schenkel ¹ , Uwe Kiencke ²	¹ Institute for Fluid Mechanics (Germany); ² institute of Industrial Information Technology (Germany)
2522 121	BODY MASS INDEX AND CORONARY HEART DISEASE RISK FACTORS IN ACTIVE AND NON-ACTIVE SENIOR PATIENTS	<u>Hamid Marefat</u> ¹ , Khosro Ebrahim ² , Manochehr Gharooni ³	¹ Unité de Biologie de l'Effort et Médecin du Sport (France); ^{2**} Department of Cardiology Taleghani, University of Shahid Beheshti (Iran); ³ Amir-Aalam Hospital, University of Tehran (Iran)
1549 122	ASSESSMENT OF MECHANICAL HEART VALVE INTEGRITY IN PATIENTS USING ACOUSTIC TECHNIQUES REQUIRES ULTRAHIGH FREQUENCY BANDWIDTH	<u>Peter Johansen</u> ¹ , Henrik Sogaard ¹ , Ole R. Morgenstjerne ¹ , Hans Nygaard ¹	¹ Aarhus University Hospital, Engineering College in Aarhus (Denmark)

2692 123	NOVEL METHOD OF TOTAL LIQUID LUNG VENTILATION BASED ON OXYGEN BUFFERING IN METHYLBENSENE SUBSTRATE	Gattinoni Pietro ¹ , Pelosi Leonard ¹ , Psoic Sysloj ²	¹ University Hospital of Verona, Dept. of Anaesthesiology and CCM (Italy), ² National Biomedical Institute of Zagreb, Dept. of Fluidics and Mechanics (Croatia)
1482 124	MEASURABILITY AND CLINICAL CORRELATES OF THE TRANSFER FUNCTION METHOD IN THE ASSESSMENT OF BAROREFLEX SENSITIVITY IN HEART FAILURE PATIENTS: COMPARISON WITH THE PHARMACOLOGICAL APPROACH	<u>Gian Domenico Pinna</u> ¹ , Roberto Maestri ¹ , Soccorso Capomolla ² , Oreste Febo ² , Elena Robbi ² , Franco Cobelli ² , Maria Teresa La Rovere ²	¹ Department of Biomedical Engineering, S. Maugeri Foundation, IRCCS (Italy); ² Department of Cardiology, S. Maugeri Foundation, IRCCS (Italy)
2424 125	CFD MODEL OF FLOW HEMODYNAMICS IN ABDOMINAL AORTIC ANEURYSM	Marek Podyma ¹ , Ireneusz Zbicinski ¹ , L. Stefanczyk ² , Jerzy Walecki ³ , Miroslaw Nowicki ³ , Piotr Makowski ⁴	¹ Faculty of Process and Environmental Engineering, Technical University of Lodz, Lodz (Poland); ² Department of Radiology and Diagnostic Imaging, Medical University of Lodz, Lodz (Poland); ³ Department of Radiology and Diagnostic Imaging, Postgraduate Medical Center, Warsaw (Poland); ⁴ Faculty of Electrical and Electronic Engineering, Technical University of Lodz, Lodz (Poland)
2681 126	FLOW OPTIMIZATION OF A MICRO-AXIAL BLOOD PUMP	Christoph Brücker ¹ , Michael Triep ¹ , Thorsten Sieß ²	¹ Lehrstuhl für Strömungsmechanik und Strömungsmaschinen, TU Freiberg, Freiberg (Germany); ² Impella CardioSystems AG, Aachen (Germany)

SS4 Medical Applications of Electromagnetic Field I. (Special Session - oral contributions)

Chair: Jan Vrba (Czech Republic)

Co-Chair: Gerard Van Rhoon (The Netherlands)

Day and time: Wednesday 23rd November, 11.00-12.30 (format 10+5 minutes)

Hall: Meeting Hall V

Id	Title	Paper Authors	Authors' Institutions
11.00	SURVEY LECTURE	<u>Gerard Van Rhoon</u> ¹	¹ Erasmus MC - Daniel den Hoed Cancer Center (The Netherlands)
2195 11.15	WAVEGUIDE APPLICATORS FOR MICROWAVE THERMOTHERAPY: APERTURE AND WATER BOLUS RESONANCES	<u>Jan Vrba</u> ¹ , <u>Jakub Cvek</u> ¹ , <u>Jan Herza</u> ¹ , <u>Roman Chovanec</u> ¹ , <u>Ladislav Oppl</u> ¹	¹ Faculty of Electrical Engineering, Czech Technical University in Prague (Czech Republic)
2197 11.30	WAVEGUIDE APPLICATOR FOR MICROWAVE THERMOTHERAPY: POSSIBILITY TO INCREASE TREATMENT AREA	<u>Tomas Drizdal</u> ¹ , <u>Jan Vrba</u> ¹	¹ Faculty of Electrical Engineering, Czech Technical University in Prague (Czech Republic)
2114 11.45	A PATCH ANTENNA DESIGN FOR A PHASED-ARRAY APPLICATOR FOR HYPERTHERMIA TREATMENT OF HEAD AND NECK TUMOURS	<u>Margarethus Paulides</u> ¹ , <u>Jurriaan Bakker</u> ¹ , <u>Gerard Van Rhoon</u> ¹	¹ Erasmus MC - Daniel den Hoed Cancer Center (The Netherlands)
2150 12.00	APPLICATOR FOR TREATMENT OF DEEP SEATED TUMOURS	<u>Hana Trefna</u> ¹ , <u>Jan Vrba</u> ¹	¹ Faculty of Electrical Engineering, Czech Technical University in Prague (Czech Republic)
2206 12.15	SIMULATION AND MEASUREMENT OF MICROWAVE THERMOTHERAPY APPLICATORS	<u>Jan Herza</u> ¹ , <u>Jakub Cvek</u> , <u>Roman Chovanec</u>	¹ Faculty of Electrical Engineering, Czech Technical University in Prague (Czech Republic)

SS109 Medical Robotics I. (Standard Session - oral contributions)

Chair: Olga Štěpánková (Czech Republic)

Co-Chair: Jan Mužík (Czech Republic)

Day and time: Wednesday 23rd November, 11.00-12.30 (format 10+3 minutes)

Hall: Meeting Hall I

Id	Title	Paper Authors	Authors' Institutions
1433 11.00	FAST SIMULATION OF ULTRASOUND IMAGES FROM A CT VOLUME.	Soizic Laguitton ¹ , <u>Jean-Louis Dillenseger</u> ¹ , Jean-Jacques Patard ²	¹ LTSI, INSERM, Univ. Rennes, 35042 Rennes (France); ² Service d'Urologie, Hôpital de Pontchaillou, CHR Rennes, Rennes (France)
1598 11.13	APPLICATION OF SURFACE LASER SCANNING TECHNIQUES IN IMAGE-GUIDED NEUROSURGERY: A FEASIBILITY STUDY	<u>Marco Riboldi</u> ¹ , Maria Francesca Spadea ¹ , Giovanni Broggi ² , Ivano Dones ² , Guido Baroni ¹	¹ TBMLab - Department of Bioengineering, Politecnico di Milano University (Italy); ² Department of Surgical Neuroscience, Istituto Nazionale Neurologico Carlo Besta (Italy)
1714 11.26	INTEGRATION OF PRE- AND INTRAOPERATIVE MULTIMODAL DATA SOURCES IN NEUROSURGICAL OPERATIONS	<u>Urs Eisenmann</u> ¹ , Roland Metzner ¹ , Rainer Wirtz ² , Hartmut Dickhaus ¹	¹ Institute for Biometry and Informatics, Department of Medical Informatics, University Hospital Heidelberg (Germany); ² Department of Neurosurgery, University Hospital Heidelberg (Germany)
2567 11.39	METHOD TO REDUCE FORCE AND TARGET MOVEMENT DURING SURGICAL NEEDLE INTERVENTIONS	Tarun Podder ¹ , Jason Sherman ¹ , Douglas Clark ^{1,5} , D. Fuller ¹ , Deborah Rubens ^{2,4} , Edward Messing ^{3,4} , John Strang ² , Lydia Liao ^{1,2} , Wan-Sing Ng ⁶ , <u>Yan Yu</u> ^{1,5}	¹ Department of Radiation Oncology, University of Rochester Medical Center, Rochester (USA); ² Department of Radiation Radiology, University of Rochester Medical Center, Rochester (USA); ³ Department of Urology, University of Rochester Medical Center, Rochester (USA); ⁴ Department of Surgery, University of Rochester Medical Center, Rochester (USA); ⁵ Department of Biomedical Engineering, University of Rochester, Rochester (USA); ⁶ Department of Mechanical and Aerospace Engineering, Nanyang Technological University (Singapore)
1843 11.52	EFFECTS OF TIP GEOMETRY OF SURGICAL NEEDLES: AN ASSESSMENT OF FORCE-TORQUE AND DEFLECTION	Tarun Podder ¹ , Douglas Clark ¹ , Dave Fuller ¹ , Edward Messing ¹ , Deborah Rubens ¹ , John Strang ¹ , Wan-Sing Ng ² , <u>Yan Yu</u> ¹	¹ University of Rochester (USA); ² Nanyang Technological University (Singapore)
2218 12.05	FUZZY LOGIC BASED HYBRID IMPEDANCE/FORCE CONTROL FOR UPPER LIMBS ROBOTIZED REHABILITATION	<u>Alexandre Deneve</u> ¹ , Said Moughamir ¹ , Lissan Afilal ¹	¹ Centre de Recherche en Sciences et Technologies de l'Information (CRéSTIC) (France)

1847	DEVELOPMENT OF A TWIST	<u>Kohji Masuda</u> ¹ ,	¹ Tokyo University of Agriculture &
12.18	PANTOGRAPH MECHANISM FOR	Hiroaki Kato ¹	Technology (Japan)
	ROBOTIC TELE-ECHOGRAPHY		

SS18 Biomechanics of Joint Replacement (Special Session - oral contributions)

Chair: Svatava Konvičková (Czech Republic)

Co-Chair: Miroslav Sochor (Czech Republic)

Day and time: Wednesday 23rd November, 11.00-12.30 (format 10+5 minutes)

Hall: Club A

Id	Title	Paper Authors	Authors' Institutions
1445 11.00	MODELING OF A NEW DESIGN OF THE ACETABULAR COMPONENT FOR TOTAL REPLACEMENT OF A HIP JOINT	<u>Jan Sykora</u> ¹ , Svatava Konvickova ¹ , Matej Daniel ¹	¹ Czech Technical University, Faculty of Mechanical Engineering, Department of Mechanics, Laboratory of Biomechanics (Czech Republic)
1449 11.15	MATHEMATICAL MODEL OF CARDIOMYOCYTE ION CHANNELS SYSTEM	<u>Martin Fischer</u> ¹ , Svatava Konvickova ¹	¹ Czech Technical University in Prague (Czech Republic)
1801 11.30	FEM ANALYSIS OF TEMPOROMANDIBULAR JOINT	<u>Martina Fricova</u> ¹ , Zdenek Horak ¹ , Radek Jirman ² , Svatava Konvickova ¹	¹ Czech Technical University in Prague, Fac. of Mech. E., Dept. of Mech., Lab. of Biomechanics (Czech Republic); ² Charles Univ., The 1st Medical Fac., Stomatology (Czech Republic)
2406 11.45	FINITE ELEMENT ANALYSES AND OTHER TESTS OF CERAMIC KNEE JOINT REPLACEMENT (WDM SYSTEM)	<u>Lukáš Zach</u> ¹ , Svatava Konvičková ¹ , Pavel Růžička ¹	¹ Czech Technical University in Prague – Faculty of Mechanical Engineering/Department of Strength of Materials, Laboratory of Human Biomechanics (Czech Republic)
2068 12.00	INFLUENCE OF STENT IMPLANTATION ON MECHANICS OF ELASTIC TUBE	<u>Lukas Horny</u> ¹ , Hynek Chlup, Svatava Konvickova	¹ Czech Technical University in Prague – Faculty of Mechanical Engineering/Department of Strength of Materials, Laboratory of Human Biomechanics (Czech Republic)
2077 12.15	MECHANICAL PROPERTIES OF LATEX TUBES WITH RESPECT ON ITS USING IN CARDIOVASCULAR BIOMECHANICS	<u>Lukas Horny</u> ¹ , Hynek Chlup, Radek Sedlacek, Svatava Konvickova	¹ Czech Technical University in Prague – Faculty of Mechanical Engineering/Department of Strength of Materials, Laboratory of Human Biomechanics (Czech Republic)

SS33 Blind Source Separation / Independent Component Analysis in Biomedicine (Special Session - oral contributions)

Chair: Christopher James (United Kingdom)

Co-Chair: Christian Hesse (United Kingdom)

Day and time: Wednesday 23rd November, 11.00-12.30 (format 10+5 minutes)

Hall: Club B

Id	Title	Paper Authors	Authors' Institutions
1500 11.00	ICA AND BSS APPLIED TO BIOMEDICAL SIGNALS: AN OVERVIEW OF THEIR USE IN BIOMEDICINE	<u>Christopher James</u> ¹ , Christian Hesse ¹	¹ University of Southampton (U.K.)
1584 11.30	SEIZURE TRACKING AND DETECTION IN ICTAL EEG USING TIME-STRUCTURE BASED BLIND SOURCE SEPARATION METHODS AND PRIOR SPATIAL TOPOGRAPHICAL INFORMATION	<u>Christian Hesse</u> ¹ , Christopher James ¹	¹ University of Southampton (U.K.)
1471 11.45	MOVEMENT-RELATED EEG SEPARATION USING INDEPENDENT COMPONENT ANALYSIS	<u>Ondřej Konopka</u> ¹ , Jakub Št'astný ¹ , Pavel Sovka ¹	¹ Czech Technical University in Prague (Czech Republic)
1633 12.00	INDEPENDENT COMPONENT ANALYSIS: COMPARISON OF ALGORITHMS ON SIMULATED FMCG DATA	<u>Silvia Comani</u> ¹ , Dante Mantini ² , Kenneth Hild ³ , Giovanna Alleva ¹	¹ ITAB-Institute of Advanced Biomedical Technologies, University Foundation "G. D'Annunzio", Chieti University, Chieti (Italy); ² Department of Informatics and Automation Engineering, Marche Polytechnic University, Ancona (Italy); ³ CNEL-Computational Neuroengineering Laboratory, University of Florida, Gainesville, Florida (USA)
1820 12.15	A BLIND SOURCE SEPARATION TECHNIQUE TO REMOVE MUSCLE ARTIFACTS IN THE ELECTROENCEPHALOGRAM WITHOUT AFFECTING BETA ACTIVITY	<u>Anneleen Vergult</u> ¹ , Wim De Clercq ¹ , Bart Vanrumste ¹ , Wim Van Paesschen ² , Sabine Van Huffel ¹	¹ SISTA-SCD/Department of Electrical Engineering (ESAT), Katholieke Universiteit Leuven (Belgium); ² Clinical and Experimental Neurology/Department of Neurology, University Hospital Leuven (Belgium)

SS13 Fetal Magnetoencephalography, Fetal Magnetocardiography and Uterine Magnetomyographic Signals (Special Session - oral contributions)

Chair: Hubert Preissl (Germany)

Co-Chair: will be completed

Day and time: Wednesday 23rd November, 11.00-12.30 (format, please see below + 6 min. general discussion)

Hall: Club C

Id	Title	Paper Authors	Authors' Institutions
1706 18+2 min.	FETAL MAGNETOENCEPHALOGRAPHY: DEVELOPMENTAL CHANGES IN THE AUDITORY SYSTEM	Hubert Preissl ^{1,2} , Draganova Rossitza ¹ , Holst Manuela ^{1,2} , Murphy Pamela ¹ , Lowery Curtis ¹ , Eswaran Hari ¹	¹ SARA Research Center, Department of Ob/Gyn, University of Arkansas for Medical sciences, Little Rock (USA); ² MEG Center, University of Tübingen, Tübingen (Germany)
1992 18+2 min.	REALISTIC VOLUME CONDUCTOR MODELING FOR SOURCE LOCALIZATION IN FETAL MAGNETOENCEPHALOGRAPHY BASED ON 3D ULTRASOUND IMAGING	Jens Haueisen ¹ , Roland Eichardt, Uwe Schneider, Ekkehard Schleussner	¹ Neurological university hospital, Jena (Germany)
1681 18+2 min.	GENDER RELATED CHANGES IN FETAL CONDUCTION TIMES BASED ON MAGNETOCARDIOGRAPHY IN INTRAUTERINE GROWTH RETARDATION	Peter Van Leeuwen ¹ , Anita Klein, Sven Schiermeier, Silke Lange, Daniel Geue, Wolfgang Hatzmann, Dietrich Grönemeyer	¹ Department of Biomagnetism, Research and Development Center for Microtherapy (EFMT), Bochum (Germany)
1634 10+2 min.	BEAT-TO-BEAT COMPUTATION OF FETAL CARDIAC TIME INTERVALS FROM FMCG: COMPARISON WITH ESTIMATES ON AVERAGED CARDIAC CYCLES	Giovanna Alleva ¹ , Silvia Comani ¹ , Dante Mantini ² , Silvano Di Luzio ¹ , Gian Luca Romani ¹	¹ ITAB-Institute of Advanced Biomedical Technologies, University Foundation "G. D'Annunzio", Chieti University, Chieti (Italy); ² Department of Informatics and Automation Engineering, Marche Polytechnic University, Ancona (Italy)
2372 10+2 min.	SPATIAL TEMPORAL ANALYSIS OF UTERINE SMOOTH MUSCLE ACTIVITY	Hari Eswaran ¹ , Curtis Lowery ¹ , James Wilson ¹ , Pamela Murphy ¹ , Ceon Ramon ³ , Hubert Preissl ^{1,2}	¹ University of Arkansas for Medical Sciences (USA); ² University of Tuebingen (Germany); ³ University of Washington, Seattle (USA)

SS14 Diagnostic Assessment of Autonomic Nervous Control of the Heart (Special Session - oral contributions)

Chair: Mark van Gils (Finland)

Co-Chair: Luca Mainardi (Italy)

Day and time: Wednesday 23rd November, 11.00-12.30 (format 10+5 minutes)

Hall: Club D

Id	Title	Paper Authors	Authors' Institutions
1464 11.00	ATRIAL FIBRILLATION INTELLIGENT DIAGNOSIS BASED ON ROUGH SET APPROACH	<u>XIAOMIN XU</u> ¹ , YING LIU ¹	¹ Department of Electronic & Computer Engineering, University of Portsmouth (U.K.)
1529 11.15	DEVELOPMENT OF AN INDEX FOR ASSESSMENT OF NOCICEPTION AT INCISION DURING SURGERY	<u>Mark van Gils</u> ¹ , Ilkka Korhonen ¹ , Markku Rantala ² , Arvi Yli-Hankala ² , Heidi Yppärilä-Wolters ¹ , Matti Huiku ³ , Minna Kymäläinen ³ , Panu Takala ³ , Kimmo Uutela ³ , Hanna Viertiö-Oja ³	¹ VTT Information Technology (Finland); ² Tampere University Hospital (Finland); ³ GE Healthcare (Finland)
2431 11.30	ASSESSMENT OF SURGICAL STRESS USING HEART RATE AND PLETHYSMOGRAPHIC PULSE WAVE AMPLITUDE VARIABILITY	Matti Huiku ² , <u>Mark van Gils</u> ¹ , Ilkka Korhonen ¹ , Minna Kymäläinen ¹ , Petri Kärkäs ² , Panu Takala ³ , Kimmo Uutela, Arvi Yli-Hankala	¹ GE Healthcare Finland, Helsinki (Finland); ² VTT Information Technology, Tampere (Finland); ³ Department of Anaesthesia, Tampere University Hospital, Tampere (Finland)
2461 11.45	ASSOCIATIONS OF PSYCHOLOGICAL SELF-ASSESSMENTS AND HRV IN LONG-TERM MEASUREMENTS AT HOME	<u>Kari Antila</u> ¹ , Mark van Gils ¹ , Juho Merilahti ¹ , Ilkka Korhonen ¹	¹ VTT Information Technology (Finland)
2390 12.00	UNCERTAINTY OF HEART RATE VARIABILITY DIAGNOSTIC INDICES IN PATIENT MONITORING SYSTEMS	Lev Kalakutskiy ¹ , Vasily Kalakutskiy ¹ , <u>Fedor Belyanin</u> ¹	¹ Samara State Aerospace University (Russia)
1489 12.15	LONG-TERM HEART RATE TURBULENCE ANALYSIS VERSUS VARIABILITY IN PATIENTS WITH DILATED CARDIOMYOPATHY	<u>Hagen Malberg</u> ¹ , Robert Bauernschmitt, Alexander Schirdewan, Niels Wessel	¹ Institute of Applied Computer Sciences, Forschungszentrum Karlsruhe (Karlsruhe Research Center), Karlsruhe (Germany)

SS34 BIOMEDEA: BME Education and Accreditation in Europe (Special Session - oral contributions) organised by D.W. Slaaf and J. Nagel and endorsed by EAMBES and IFMBE

Chair: Dick Slaaf (The Netherlands)

Co-Chair: Joachim Nagel (Germany)

Day and time: Wednesday 23rd November, 11.00-12.30 (format 10+5 minutes)

Hall: Club E

Id	Title	Paper Authors	Authors' Institutions
2672 11.00	HARMONIZATION OF BME EDUCATION IN EUROPE	<u>Dick W. Slaaf</u> ¹ , <u>Joachim Nagel</u> ²	¹ Department of Biomedical Engineering, Eindhoven University of Technology, Eindhoven (The Netherlands); ² Department of Biomedical Engineering, University of Stuttgart, Stuttgart, (Germany)
11.30	ACCREDITATION OF BIOMEDICAL ENGINEERING PROGRAMMES IN EUROPE	<u>Joe C. Barbanel</u>	Department of Electronic and Electrical Engineering, University of Strathclyde, Glasgow, Scotland (United Kingdom)
11.45	BIOMEDICAL ENGINEERING AND MEDICAL PHYSICS	<u>Slavik Tabakov</u>	King's College London, University of London (United Kingdom)
12.00	CLINICAL ENGINEERING EDUCATION, TRAINING AND CERTIFICATION	<u>Joachim Nagel</u>	Department of Biomedical Engineering, University of Stuttgart, Stuttgart, (Germany)
2663 12.15	USE OF PROBLEM BASED LEARNING IN BIOMATERIALS EDUCATION	<u>Farah Safir</u> ¹ , <u>Elizabeth Tanner</u> ¹	¹ Queen Mary University of London (U.K.)

SS81 Biomedical Instrumentation and Biosensors I. (Standard Session - oral contributions)

Chair: Hasan Al-Nashash (United Arab Emirates)

Co-Chair: Peter Lee (Singapore)

Day and time: Wednesday 23rd November, 11.00-12.30 (format 10+5 minutes)

Hall: Club H

Id	Title	Paper Authors	Authors' Institutions
1487 11.00	MEASUREMENT OF BLOOD UREA BASED IN OPTICAL SENSING EMPLOYMENT IN THE HEMODIALYSIS TREATMENT	Gustavo Adolfo Martinez Chavez ^{1,2} , Ramon Bragos Bardia ²	¹ S.E.D.E.N.A. (Mexico); ² Technical University of Catalonia (Spain)
1834 11.15	ASSESSMENT OF RECOVERY AT STROKE PATIENTS BY WHOLE-BODY ISOMETRIC FORCE-TORQUE MEASUREMENTS OF FUNCTIONAL TASKS I: MECHANICAL DESIGN OF THE DEVICE	Jozef Van Vaerenbergh ¹ , Stefano Mazzoleni ² , Andras Toth ³ , Eugenio Guglielmelli ⁴ , Marko Munih ⁵ , Emma Stokes ⁶ , Gabor Fazekas ⁷ , Sigried de Ruijter ⁸	¹ Katholieke Universiteit Leuven (Belgium); ² Scuola Superiore Sant'Anna (Italy); ³ Budapest University of Technology and Economics (Hungary); ⁴ Università Campus Bio-Medico (Italy); ⁵ University of Ljubljana (Slovenia); ⁶ Trinity College Dublin (Ireland); ⁷ National Institute for Medical Rehabilitation (Hungary); ⁸ Arteveldehogeschool (Belgium)
2075 11.30	QUANTITATIVE BONE HEALING MONITORING ULTRASOUND SYSTEM	Hasan Al-Nashash ¹ , Nasser Qaddoumi ¹	¹ American University of Sharjah (United Arab Emirates)
2083 11.45	BLOOD-AQUEOUS BARRIER PERMEABILITY ASSESSMENT BY OCULAR FLUORESCENCE MEASUREMENTS AFTER ORAL AND IV FLUORESCEIN ADMINISTRATION.	José Domingues ¹ , Joao Figueira ¹ , Carlos Correia ¹ , José Cunha-Vaz ¹	¹ University of Coimbra (Portugal)
2090 12.00	EVALUATION OF A NON-INVASIVE DEVICE FOR MONITORING INSTANTANEOUS BLOOD PRESSURE IN RADIAL ARTERY USING THE VOLUME-COMPENSATION METHOD	Shinobu Tanaka ¹ , Shumei Gao ² , Masamichi Nogawa ² , Ken-ichi Yamakoshi ²	¹ Institute of Nature and Environmental Technology, Kanazawa University (Japan); ² Graduate School of Natural Science and Technology, Kanazawa University (Japan)

2428 12.15	REMOTE POINT-OF-GAZE ESTIMATION WITH FREE HEAD MOVEMENTS	Elias Guestrin ^{1,3} , <u>Moshe</u> <u>Eizenman</u> ^{2,3}	¹ Department of Electrical and Computer Engineering, University of Toronto (Canada); ² Departments of Electrical and Computer Engineering and Ophthalmology, University of Toronto (Canada); ³ Institute of Biomaterials and Biomedical Engineering, University of Toronto (Canada)
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SS94 (SS89 VI.) Biomedical Signal Processing VI. (Standard Session - oral contributions)

Chair: Maria da Graça Ruano (Portugal)

Co-Chair: Pavel Smrčka (Czech Republic)

Day and time: Wednesday 23rd November, 14.00-16.00 (format 10+3 minutes)

Hall: Meeting Hall V

Id	Title	Paper Authors	Authors' Institutions
2410 14.00	A METHOD OF DIGITAL DEPARAFFINING BASED ON RAMAN SPECTROSCOPY AND INDEPENDENT COMPONENT ANALYSIS - APPLICATION TO MELANOMA EARLY DIAGNOSIS	Cyril GOBINET ¹ , Ali TFAYLI ² , Olivier PIOT ² , Valeriu VRABIE ¹ , Régis HUEZ ¹	¹ CReSTIC, Université de Reims Champagne-Ardenne (France); ² Unite MeDIAN, CNRS UMR 6142, Université de Reims Champagne-Ardenne (France)
2293 14.13	A TREMOR MODEL SELECTION BASED ON ARTIFICIAL NEURAL NETWORKS CORRECT CLASSIFICATION RATE	Monica Claudia Serban ¹ , Dan Marius Dobrea ¹	¹ "Gh. Asachi" Technical University, Faculty of Electronics and Telecommunications, Iasi (Romania)
2611 14.26	WAVELET COEFFICIENTS PREDICTORS FOR MAINTENANCE OF SINUS RHYTHM AFTER ELECTRICAL CARDIOVERSION IN PATIENTS WITH PERSISTENT ATRIAL FIBRILLATION	Raquel Cervigón ^{1,2} , César Sánchez ^{1,2} , Francisco Castells ^{2,1} , José Millet ^{2,1}	¹ Universidad de Castilla-La Mancha, Cuenca (Spain); ² Universidad Politécnica Valencia (Spain)
2268 14.39	NONINVASIVE BLOOD PRESSURE MEASUREMENTS: SEPARATION OF THE ARTERIAL PRESSURE OSCILLOMETRIC WAVEFORM FROM THE DEFLATION USING DIGITAL FILTERING	Vojko Jazbinsek ¹ , Janko Luznik ¹ , Zvonko Trontelj ¹	¹ IMFM, University of Ljubljana (Slovenia)
1593 14.52	SPECTRAL PROPERTIES OF A BCG SIGNAL IN SITTING AND LYING POSITION IN NORMAL BLOOD PRESSURE AND HYPERTENSION	Jarmo Alametsä ¹ , Antti Saastamoinen ¹ , Eero Huupponen ¹ , Alpo Värrilä ¹	¹ TTY Signal Processing (Finland)
2140 15.05	OSCILLOMETRIC MEASUREMENT OF ARTERIAL BLOOD PRESSURE: ESTIMATION AND ANALYSIS OF THE ENVELOPE OF OSCILLOMETRIC OSCILLATIONS	Barbara Wilk ¹	¹ Rzeszow University of Technology (Poland)
2331 15.18	ESTIMATION OF BAROREFLEX SENSITIVITY DURING MENTAL STRESS TESTING – A COMPARISON OF DIFFERENT METHODS	Alessandro Beda ¹ , Alex Jones ² , David Simpson ¹ , David Phillips ²	¹ Institute of Sound and Vibration Research, University of Southampton (U.K.); ² MRC Epidemiological Resource Centre, Southampton General Hospital (U.K.)
1957 15.31	ELECTROMAGNETIC COUPLINGS IN MICROSYSTEMS FOR MEDICAL APPLICATIONS	Jan Novak ¹ , Julius Foit ¹ , Vladimír Janíček ¹	¹ CTU FEE in Prague (Czech Republic)

2568 15.44	ECG NOISE SUPPRESSION USING MORPHOLOGICAL OPERATORS AND ADAPTIVE ALPHA-TRIMMED MEAN FILTERING	<u>Viviane Palodeto</u> ¹ , Jefferson Luiz Brum Marques ¹	¹ Federal University of Santa Catarina (Brazil)
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SS110 (SS109 II.) Medical Robotics II. (Standard Session - oral contributions)

Chair: will be completed

Co-Chair: Marek Penhaker (Czech Republic)

Day and time: Wednesday 23rd November, 14.00-16.00 (format 10+3 minutes)

Hall: Meeting Hall I

Id	Title	Paper Authors	Authors' Institutions
2023 14.00	COMPUTER SUPPORTED PRE-OPERATIVE PLANNING OF CRANIOFACIAL SURGERY: FROM PATIENT TO TEMPLATE	Tim Clijmans ¹ , Frederik Gelaude ¹ , Paul Suetens ² , Maurice Mommaerts ³ , Jos Vander Sloten ¹	¹ Division of Biomechanics and Engineering Design, BMGO K.U. Leuven, Leuven (Belgium); ² Center for Processing Speech and Images, PSI K.U. Leuven, Leuven (Belgium); ³ Division of Maxillo-Facial Surgery, General Hospital St. Jan, Bruges (Belgium)
2130 14.13	SIMULATION AND BIOMECHANICAL EVALUATION OF RECONSTRUCTIVE SURGERY OF THE HIP IN CHILDREN	Peter Verschueren ¹ , Frederik Gelaude ¹ , P. Moens ² , G. Fabry ² , Jos Vander Sloten ¹	¹ Division of Biomechanics and Engineering Design, K.U.Leuven, Leuven (Belgium); ² Orthopaedics Section, K.U.Leuven, Leuven (Belgium)
2181 14.26	LARGE BONE TUMOUR DEFECTS: PERSONALISED SHAPE RECONSTRUCTION AND PLATE DESIGN	Frederik Gelaude ¹ , Jos Vander Sloten ¹ , Bert Lauwers ²	¹ Division of Biomechanics and Engineering Design, K.U.Leuven (Belgium); ² Division Production, Machine Design and Automation, K.U.Leuven (Belgium)
2400 14.39	EVALUATION OF HAPTIC FEEDBACK IN AN EXPERIMENTAL TELEMANIPULATOR SYSTEM	Robert Bauernschmitt ¹ , Eva Schirmbeck ¹ , Constanze Hasselbeck ¹ , Hermann Mayer ² , Franziska Freyberger ³ , Alois Knoll ² , Ruediger Lange ¹	¹ German Heart Center Munich, Dept. of Cardiovascular Surgery (Germany); ² Robotics and Embedded Systems, Technische Universität München (Germany); ³ Human Factors Institute, University of theBundeswehr Munich (Germany)
1943 14.52	CALIBRATION AND NAVIGATION OF A TRANSRECTAL ULTRASOUND PROBE FOR PROSTATIA CANCER THERAPY	Detlef Richter ¹ , Karsten Berthold ¹ , Hinnerk Voss ¹ , Gerd Strassmann ²	¹ University of Applied Sciences, Department of Computer Science (Germany); ² University of Marburg, Department of Radio-Oncology (Germany)
1805 15.05	A GRID PLATFORM TO SEARCH A SPECIFIC ENVIRONMENT FOR A VIRTUAL SURGICAL SIMULATOR	Lucio T. De Paolis ^{1,2} , Giovanni Aloisio ^{1,2} , Alfonso Zuccala ¹ , Alessandro De Mauro ¹	¹ Dept. of Innovation Engineering - University of Lecce (Italy); ² SPACI Consortium (Italy)

2175 15.18	DEVELOPMENT OF A VR BASED CONVERSATION TRAINING PROGRAM FOR PATIENTS WITH SCHIZOPHRENIA	Sun I. Kim ¹ , Jeonghun Ku ¹ , Kwanguk Kim ¹ , Jaehun Kim ¹ , In Y. Kim ¹ , Heejeong Jang ² , Soyoung Kim ² , Jae Jin Kim ²	¹ Department of Biomedical Engineering, Hanyang University, Seoul, Korea (South Korea); ² Department of Psychiatry, College of Medicine, Yonsei University, Severance Mental Health Hospital, Gyunggi-do, Gwang-ju, Korea (South Korea)
2205 15.31	AUTOMATED 3D LASER SCANNING FOR BIOMEDICAL APPLICATIONS	Maria Francesca Spadea ¹ , Guido Baroni ¹ , Marco Riboldi ¹ , Antonio Pedotti ¹	¹ TBMLab, Bioengineering Department, Politecnico di Milano University (Italy)
2172 15.44	AN ASSESSMENT SYSTEM OF SOCIAL PERCEPTION FOR SCHIZOPHRENIA USING VIRTUAL REALITY	Sun I. Kim, Daeun Park, Jeonghun Ku, Kwanguk Kim, Jaehun Kim, In Y. Kim, Heejeong Jang, Soyoung Kim, Jaejin Kim	

SS65 Biomaterials I. (Standard Session - oral contributions)

Chair: Josef Pražák (Czech Republic)

Co-Chair: Rudolf Fryček (Czech Republic)

Day and time: Wednesday 23rd November, 14.00-16.00 (format 10+5 minutes)

Hall: Club A

Id	Title	Paper Authors	Authors' Institutions
1458 14.00	GLASS FIBERS AND POLYSILOXANES BASED COMPOSITE MATERIALS FOR BIOMEDICAL APPLICATIONS	Tomáš Suchý ^{1,2} , Karel Balík ² , Miroslav Sochor ¹ , Martin Černý ² , Radek Sedláček ¹ , Vlasta Pešáková ³ , Hana Hulejová ³	¹ Faculty of Mechanical Engineering, Department of Mechanics, Czech Technical University in Prague (Czech Republic); ² Institute of Rock Structure and Mechanics, Department of Carbon and Composites, Czech Academy of Sciences, Prague (Czech Republic); ³ Institute of Rheumatism, Prague (Czech Republic)
1508 14.15	BACTERIAL ADHESION MECHANISM BY THERMODYNAMIC APPROACH	Chun Wang ¹ , Qi Zhao ¹ , Yunli Liu ¹	¹ University of Dundee (U.K.)
1925 14.30	SURFACE CHARACTERIZATION OF CHITOSAN FILMS PHOTOCHEMICALLY MODIFIED BY RGDS AND EGF	Ayse Karakecili ¹ , Cristina Satriano ² , Menemse Gumusderelioglu ¹ , Giovanni Marletta ²	¹ Hacettepe University (Turkey); ² University of Catania (Italy)
2437 14.45	IN VITRO EVALUATION OF A BIOMIMETIC GELATIN-CALCIUM PHOSPHATE BONE CEMENT	Silvia Panzavolta ¹ , Paola Torricelli ² , Barbara Bracci ¹ , Luigina Sturba ¹ , Roberto Giardino ² , Adriana Bigi ¹	¹ Department of Chemistry "G. Ciamician" University of Bologna, 40126 Bologna (Italy); ² Department of Experimental Surgery, Research Institute "Codivilla Putti", Rizzoli Orthopedic Institute, Bologna (Italy)
2628 15.00	STRAIN EVOLUTION DURING COMPRESSIVE FATIGUE OF BOVINE CANCELLOUS BONE	Sebastian Dendorfer ¹ , Hans Jürgen Maier ² , Joachim Hammer ¹	¹ University of Applied Sciences Regensburg (Germany); ² University Paderborn (Germany)

SS16 Quantification in Medical Imaging (Special Session - round table discussion)

Chair: Hannu Eskola (Finland)

Co-Chair: Jiří Jan (Czech Republic)

Day and time: Wednesday 23rd November, 14.00-16.00 (format - please, see instructions below the table)

Hall: Club B

Id	Title	Paper Authors	Authors' Institutions
1589	EVALUATION OF TORTUOSITY OF EYE BLOOD VESSELS USING THE INTEGRAL OF SQUARE OF DERIVATIVE OF CURVATURE	<u>Martynas Patasius</u> ^{1,3} , Vaidotas Marozas ^{2,1} , Darius Jegelevicius ^{1,2} , Arunas Lukosevicius ^{1,2}	¹ Kaunas University of Technology, Institute of Biomedical Engineering (Lithuania); ² Kaunas University of Technology, Signal Processing Department (Lithuania); ³ Kaunas University of Technology, Faculty of Informatics (Lithuania)
1835	MEASURES OF COMPLEXITY TO ASSESS BONE STRUCTURE AND ESTIMATE BONE STRENGTH FROM PQCT- AND CT-IMAGES OF LUMBAR VERTEBRAE AND PROXIMAL TIBIAE	<u>Peter Saporin</u> ¹ , Jesper Skovhus Thomsen, Gisela Beller, Dieter Felsenberg, Peter Fratzl, Wolfgang Gowin	¹ Department of Biomaterials, Max Planck Institute of Colloids and Interfaces (Germany)
1894	A SEMI-AUTOMATIC TOOL FOR THE DETECTION AND QUANTIFICATION OF STENOSIS	Sabela Fernandez ¹ , <u>Alfonso Castro</u> ¹ , Bernardino Arcay ¹	¹ Universidade da Coruña (Spain)
2158	DETECTION AND CHARACTERIZATION OF LESIONS IN BREAST MR IMAGING	<u>Leonardo Bocchi</u> ¹ , Paola De Giacomo ⁴ , Bernardo Innocenti ¹ , Simone Lombardo ¹ , Francesca Toccafondi ² , Federico Veronesi ³	¹ Universita' di Firenze (Italy); ² AOU Careggi (Italy); ³ Universita' di Roma (Italy); ⁴ CNR (Italy)
2498	COMPUTER-AIDED DIAGNOSIS OF THYROID NODULES MALIGNANCY	<u>Antonis Daskalakis</u> ¹ , Dimitris Glotsos ¹ , Panos Bougioukos ¹ , Spiros Kostopoulos ¹ , Panagiota Ravazoula ² , Dionisis Cavouras ³ , George Nikiforidis ¹	¹ University of Patras, Department of Medical Physics (Greece); ² University Hospital of Patras, Department of Pathology (Greece); ³ Technological Educational Institute of Athens, Department of Medical Instrumentation Technology (Greece)
2547	GUI BASED APPLICATION FOR PARENCHYMAL BREAST DENSITY ANALYSIS	<u>Jiri Hozman</u> ¹ , David Sturm ² , Jan Stoklasa ² , Jan Danes ³	¹ Czech Technical University (CTU), Faculty of Biomedical Engineering (Czech Republic); ² CTU, Faculty of Electrical Engineering (Czech Republic); ³ Charles University, Department of Radiodiagnostics (Czech Republic)
2552	COMPARISON OF WAVELET TRANSFORM, FRACTAL DIMENSION AND SECOND ORDER STATISTICS FOR TEXTURE ANALYSIS OF CAROTID ATHEROSCLEROTIC PLAQUES	<u>John Stoitsis</u> ¹ , Spyretta Golemati ¹ , Nikos Tsiaparas ¹ , Konstantina Nikita ¹	¹ National Technical University (Greece)
1918	EVALUATION OF RADIOGRAPHIC TEXTURE ANALYSIS FOR THE CHARACTERIZATION OF 3D BONE MICRO-ARCHITECTURE: INFLUENCE OF SPATIAL RESOLUTION	<u>Mirza Pasovic</u> ¹ , Olivier Basset ¹ , Christophe Odet ¹ , Jean Marc Dinten ² , Vincent Boudousq ³ , Pierre Olivier Kotzki ³ , Françoise Peyrin ^{1,4}	¹ CREATIS (France); ² LETI (France); ³ Laboratoire de Biophysique Médicale (France); ⁴ ESRF (France)

Round-table session SS16 will be organised as follows:

1. All papers will be shortly introduced (about 2 minutes/paper)
2. One question/paper will be asked by the audience or the other authors
3. One general question will be asked by SS16 chairman and answered by all authors
4. Rest of the time will be for general discussion

SS104 Brain, Neural and Neuromuscular Systems (Standard Session - oral contributions)

Chair: Hasan Al-Nashash (United Arab Emirates)

Co-Chair: Jan Mužík (Czech Republic)

Day and time: Wednesday 23rd November, 14.00-16.00 (format 10+2 minutes)

Hall: Club C

Id	Title	Paper Authors	Authors' Institutions
1492 14.00	RECOGNITION OF DIRECTION OF FINGER MOVEMENT FROM EEG SIGNAL USING MARKOV MODELS	Jaromír Doležal ¹ , Jakub Štastný ¹ , Pavel Sovka ¹	¹ Biological Signal Lab., Faculty of Electrical Engineering/Czech Technical University in Prague (Czech Republic)
1547 14.12	PERCEPTUAL CENTRE CORRELATES IN EVOKED POTENTIALS	Christopher Soraghan ¹ , Tomas Ward ¹ , Rudi Villing ¹ , Joseph Timoney ¹	¹ NUI Maynooth (Ireland)
1878 14.24	UNI- AND MULTI-VARIATE COHERENCE-BASED DETECTION APPLIED TO EEG DURING SOMATOSENSORY ESTIMULATION	Antonio Fernando Infantsi ¹ , Danilo Melges ¹ , Antonio Mauricio Miranda de Sá ¹ , Mauricio Cagy ¹	¹ Federal University of Rio de Janeiro (Brazil)
2445 14.36	TIME-FREQUENCY CHARACTERIZATION OF DEEP EEG SIGNALS IN MICRORECORDING-GUIDED NEUROSURGERY	Jose L. Martinez-de-Juan ¹ , Enrique Guijarro ¹ , Gema Prats ¹ , Pedro Ortiz ² , Helberth Otero ¹ , Juan A. Barcia ²	¹ Centro de Investigación e Innovación en Bioingeniería (Ci2B). Universidad Politécnica de Valencia (Spain); ² Hospital General Universitario de Valencia (Spain)
2492 14.48	EVALUATION OF COGNITIVE EP, ERD/ERS FROM INTRACEREBRAL ELECTRODES DURING THE TESTING OF EXECUTIVE FUNCTIONS, THE TIME – FREQUENCY ANALYSIS	Jan Chládek ¹ , Martina Bočková ² , Igor Nestrašil ² , Josef Halánek ¹ , Pavel Jurák ¹ , Ivan Rektor ²	¹ Institute of Scientific Instruments, Academy of Sciences of CR (Czech Republic); ² St. Anne Hospital, Department of Neurology (Czech Republic)
1648 15.00	MAGNITUDE-SQUARED COHERENCE APPLIED TO MLAEP DURING STIMULATION AT DIFFERENT SOUND PRESSURE LEVELS	Antonio Fernando Infantsi ¹ , Mauricio Cagy ¹ , Antonio Mauricio Miranda de Sá ¹ , Eduardo Zaeyen ¹	¹ Federal University of Rio de Janeiro (Brazil)

1758 15.12	BISPECTRAL ANALYSIS OF GLOBUS PALLIDUS LOCAL FIELD POTENTIALS IN DYSTONIA AND PARKINSON'S DISEASE	<u>Sara Marceglia</u> ¹ , AnnaMaria Bianchi ² , Giuseppe Baselli ² , Simona Mrakic Sposta ¹ , Barbara Bossi ¹ , Alberto Priori ¹	¹ Dipartimento di Scienze Neurologiche e Organi di senso, Fondazione IRCCS Ospedale Maggiore Policlinico, Mangiagalli e Regina Elena, Milan (Italy); ² Dipartimento di Bioingegneria, Politecnico di Milano (Italy)
2446 15.24	MULTI-ELECTRODE NERVE CUFF RECORDING – MODEL ANALYSIS OF THE EFFECTS OF FINITE CUFF LENGTH	<u>Peter Veltink</u> ¹ , T. Tönis ¹ , H.P.J. Buschman ² , E. Marani ¹ , W.A. Wesselink ³	¹ University of Twente/Institute for Biomedical Technology, Enschede (The Netherlands); ² Twente Institute for Neuromodulation (TWIN), Enschede (The Netherlands); ³ Vitatron / Research and Technology Department, Arnhem (The Netherlands)
2142 15.36	FINAL TETANUS FORCE OF FROG SEMITENDINOSUS MUSCLE AFTER RAMP SHORTENING AT VARIOUS LENGTHS	<u>Nobuyuki Baba</u> ¹ , Ryuhei Okuno ¹ , Gwan Kim ¹ , Kenzo Akazawa ¹	¹ Graduate School of Information Science and Technology, Osaka University (Japan)
1757 15.48	FUZZY COGNITIVE MAP-BASED METHODOLOGY FOR GRADING BRAIN TUMORS	<u>P. Spyridonos</u> ³ , D. Glotsos ² , Elpiniki Papageorgiou ² , Chrysostomos Stylios ¹ , P. Ravazoula, Peter Groumpos, G. N. Nikiforidis	^{1*} Computer Laboratory, School of Medicine, University of Patras (Greece); ^{2**} Department of Electrical and Computer Engineering, University of Patras (Greece); ^{3**} Department of Communications, Informatics and Management, TEI of Epirus, (Greece)

SS86 (SS85 II.) Biomedical Measurement II. (Standard Session - oral contributions)

Chair: Vladan Papic (Croatia)

Co-Chair: Hiie Hinrikus (Estonia)

Day and time: Wednesday 23rd November, 14.00-16.00 (format 10+3 minutes)

Hall: Club D

Id	Title	Paper Authors	Authors' Institutions
1694 14.00	PULSE PRESSURE VARIATION CAN AFFECT READINGS OF BEAT-TO-BEAT ARTERIAL COMPLIANCE MEASUREMENT	<u>Rein Raamat</u> ¹ , Jaak Talts ¹ , Kersti Jagomägi ¹	¹ Department of Physiology, University of Tartu (Estonia)
1700 14.13	USE OF DIGITAL ARTERIAL PRESSURE AND VOLUME WAVEFORMS FOR ASSESSMENT OF ARTERIAL COMPLIANCE DURING HAND ELEVATION	<u>Kersti Jagomägi</u> ¹ , Rein Raamat ¹ , Jaak Talts ¹	¹ Department of Physiology, University of Tartu (Estonia)
2043 14.26	ARTERIAL BLOOD FLOW AND BLOOD PRESSURE MEASUREMENTS ON A PHYSICAL MODEL OF HUMAN ARTERIAL SYSTEM	<u>Ferenc Molnár</u> ¹ , Sára Till ¹ , Gábor Halász ¹	¹ Department of Hydrodynamic Systems, Budapest University of Technology and Economics (Hungary)
2098 14.39	ULTRASOUND CONTRAST MICROBUBBLES: SIMUALTIONS AND IN VITRO EXPERIMENTS	Marcus Ressner ¹ , Adriana Kvikliene Kvikliene ² , Lars Hoff Hoff ³ , Rytis Jurkonis Jurkonis ² , Tomas Jansson ⁴ , Birgitta Janerot-Sjöberg ⁵ , Arunas Lukosevicius ² , <u>Per Ask</u> ¹	¹ Departments of Biomedical Engineering, University, Linköping (Sweden); ² Institute of Biomedical Engineering, Kaunas University of Technology, Kaunas (Lithuania); ³ Faculty of Science and Engineering, Vestfold University College, Horten (Norway); ⁴ Department of Electrical Measurements, Lund University (Sweden); ⁵ Department of Clinical Physiology Linköping, University, Linköping (Sweden)
2558 14.52	DIAGNOSIS OF PARALYTIC ILEUS BY MEANS OF SMALL BOWEL MYOELECTRICAL SIGNAL RECORD	<u>Jose L. Guardiola</u> ¹ , Javier Garcia-Casado ¹ , Julia Bertelli ² , Jose L. Martinez-de-Juan ¹ , Jose L. Ponce ²	¹ Centro de Investigación e Innovación en Bioingeniería (Ci2B), Universidad Politécnica de Valencia (Spain); ² Servicio de Cirugía General y Digestiva I, Hospital Universitario "La Fe", Valencia (Spain)
2566 15.05	VERIFICATION OF PHONOCARDIOGRAPHIC METHOD USING STETHOSCOPES TO DETERMINE PULSE WAVE VELOCITY	<u>Martin Jelínek</u> ¹ , Josef Dobeš ² , Lubomír Poušek ¹	¹ CTU in Prague, FBMI, nam. Sitna 3705, Kladno (Czech Republic); ² CTU in Prague, FEE, Technicka 2, Prague (Czech Republic)
1603 15.18	DEVELOPMENT OF A NEW MEASUREMENT METHOD FOR ERYTHEMA QUANTIFICATION	<u>Barbara Piuze</u> ¹ , Antonio Boscolo ¹ , Daniele Biasutti ¹	¹ University of Trieste (Italy)

1790 15.31	Assessment of stroke patients by whole-body isometric force-torque measurements II: software design of the ALLADIN Diagnostic Device	Justin Cinkelj ¹ , Matjaz Mihelj ¹ , Davide Bacciu ² , Mihaly Jurak ³ , Eugenio Guglielmelli ⁴ , Andras Toth ³ , Jo De Lafonteyne ⁵ , Jean-Luc Verschelde ⁶ , Stefano Mazzoleni ² , Marko Munih ¹	¹ University of Ljubljana, Faculty of Electrical Engineering (Slovenia); ² Scuola Superiore Sant'Anna (Italy); ³ Budapest University of Technology and Economics, Faculty of Mechanical Engineering (Hungary); ⁴ University Campus BioMedico (Italy); ⁵ Multitel ASBL (Belgium); ⁶ Language and Computing NV (Belgium)
1737 15.44	Differentiation to the stimulation of nerves ending 1st and 5th by registration of core olfactory responses.	Teodor Świdziński ¹ , Andrzej Obrębowski ² , Piotr Świdziński ²	¹ Chair & Dept. of Biophysics, University of Medical Sciences, Poznań (Poland); ² Chair & Dept. of Phoniatics and Audiology, University of Medical Sciences, Poznań (Poland)

SS100 (SS98 III.) Biomedical System Modelling and Analysis III. (Standard Session - oral contributions)

Chair: Karel Roubík (Czech Republic)

Co-Chair: Martin Rožánek (Czech Republic)

Day and time: Wednesday 23rd November, 14.00-16.00 (format 10+5)

Hall: Club E

Id	Title	Paper Authors	Authors' Institutions
1742 14.00	STROKE TYPE DIFFERENTIATION BY MULTI- FREQUENCY ELECTRICAL IMPEDANCE TOMOGRAPHY (MFEIT) - A FEASIBILITY STUDY	Lior Horesh ¹ , Ori Gilad ¹ , Andrea Romsauerova ¹ , A. McEwan ¹ , S.R. Arridge ² , David S. Holder ¹	¹ University College London, Department of Medical Physics, EIT group (U.K.); ² University College London, Department of Computer Science, DOT group (U.K.)
2309 14.15	SENSIBILITY ANALYSIS OF THE ARRUDA LOCALIZATION METHOD	Levente-Karoly Gorog ¹ , Zsolt Mathe ² , O Cret ² , Sandor Miklos Szilagyi ¹	¹ Sapientia - Hungarian University of Transylvania (Romania); ² Technical University of Cluj (Romania)
2644 14.30	APPLICATION OF WAVE-DIGITAL TECHNIQUES TO THE SIMULATION OF HUMAN CARDIOVASCULAR SYSTEM	Maria Guerrisi, Ferdinando Iellamo, Gabriele Bunkeila	
1997 14.45	THE HEMODYNAMICS OF DIFFERENT TRIMMED VASCULAR ACCESS GRAFTS – A CFD STUDY	Ulf Krueger, Juergen Zanol, Hans Scholz	
2153 15.00	A HAEMODYNAMIC MODEL OF THE CARDIOVASCULAR SYSTEM CONSIDERING THE DISPLACEMENT OF THE ATRIOVENTRICULAR VALVES AND THEIR INFLUENCE ON THE ATRIAL VOLUME	Johannes Port, Jan Hansmann, Simon Weißenmayer, Joachim Nagel	
2362 15.15	THE PRESENCE OF RED BLOOD CELLS IN THE PLASMA LAYER INFLUENCES NITRIC OXIDE AND O ₂ TRANSPORT	Dov Jaron ¹ , Xuewen Chen ¹ , Kenneth Barbee ¹ , Donald G. Buerk ²	¹ Drexel University (USA); ² University of Pennsylvania (USA)
2614 15.30	THE NUMERICAL MODEL OF THE COCHLEA	Michal NAVARA, Martin KUKAČKA	

SS82 (SS81 II.) Biomedical Instrumentation and Biosensors II. (Standard Session - oral contributions)

Chair: Stanko Tonkovic (Croatia)

Co-Chair: Karel Hána (Czech Republic)

Day and time: Wednesday 23rd November, 14.00-16.00 (format 15+5 minutes)

Hall: Club H

Id	Title	Paper Authors	Authors' Institutions
2389 14.00	MODULAR, WIRELESS BIOELECTRONIC CELL CHIP SYSTEM	<u>Joachim Wiest</u> ¹ , Michael Schmidhuber ¹ , Eléonore Cabala ¹ , Martin Brischwein ¹ , Helmut Grothe ¹ , Bernhard Wolf ¹	¹ Technical University of Munich / Heinz Nixdorf chair for Medical Electronics (Germany)
1484 14.20	ON-CHIP FABRICATION OF MICROTIPS FOR NONE-DEAD-VOLUME ELECTROSPRAY IONIZATION IN THE MS APPLICATIONS	<u>Che-Hsin Lin</u> ¹ , Jen-Taie Shiea ¹ , Yen-Lieng Lin ¹	¹ National Sun Yat-sen University (Taiwan)
1969 14.40	CARDIAC NEAR FIELD SENSORS TECHNICAL REQUIREMENTS AND VALIDATION PROCEDURES	<u>Ernst Hofer</u> ¹ , Thomas Wiener ¹ , Thomas Thurner ² , Franz Keplinger ³ , Peter Svasek ³ , D. Sanchez-Quintana ⁴ , V. Climent ⁴ , Andreas Lueger ¹ , Gernot Plank ¹	¹ Medical University Graz (Austria); ² University of Technology Graz (Austria); ³ University of Technology Vienna (Austria); ⁴ Universidad Extremadura (Spain)
2225 15.00	A PATTERN RECOGNITION SYSTEM FOR A NEW LASER SENSOR	<u>Dan Marius Dobrea</u> ¹ , Arcadie Cracan ¹ , Teodoru Catalin ¹ , Teodor Haret ¹	¹ "Gh. Asachi" Technical University (Romania)
1687 15.20	INVESTIGATION INTO REMOTE ARTIFICIAL PALPATION IN MINIMALLY INVASIVE SURGERY	<u>Han Teik Yeoh</u> ¹ , Gareth Thomson ¹	¹ University of Dundee (U.K.)

2440 15.40	A MODERN WEARABLE SYSTEM FOR THE DYNAMIC MONITORING OF THE SKIN THERMOGRAPHY: DESIGNING A SUITABLE SKIN- SENSOR INTERFACE	<u>DANIELE</u> <u>GIANSANTI</u> ¹ , giovanni Maccioni ¹ , paola Bernhardt ³ , giovanni etto Gigante ² , franco mele ³ , giovanni cei ³	¹ Istituto Superiore di Sanità (Italy); ² Università La Sapienza (Italy); ³ INAIL (Italy)
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SS95 (SS89 VI.) Biomedical Signal Processing VI. (Standard Session - oral contributions)

Chair: Maria da Graça Ruano (Portugal)

Co-Chair: Pavel Smrčka (Czech Republic)

Day and time: Wednesday 23rd November, 16.30-18.30 (format 10+2 minutes)

Hall: Meeting Hall V

Id	Title	Paper Authors	Authors' Institutions
1409 16.30	A DIFFERENT METHOD TO THE DIAGNOSIS OF GASTRIC DYSRHYTHMIA FROM THE ELECTROGASTROGRAM	<u>SÜKRÜ OKKESİM</u> ¹ , SADIK KARA ²	¹ Erciyes University (Turkey); ² Erciyes University (Turkey)
2523 16.42	CHARACTERISTIC OF MOTION ARTEFACTS IN ELECTROGASTROGRAM THE CUTANEOUS RECORDING OF GASTRIC MYOELECTRICAL ACTIVITY OF STOMACH	Barbara Mika ¹ , <u>Ewaryst Tkacz</u> ^{1,2}	¹ Institute of Electronics, Silesian University of Technology, Gliwice (Poland); ² Medical University of Silesia, Faculty of Pharmacy and Laboratory Medicine, Department of Bionics, Sosnowiec (Poland)
1795 16.54	A BAYESIAN PCA APPROACH TO FETAL ECG EXTRACTION	<u>Vangelis Oikonomou</u> ¹ , Dimitrios Fotiadis ¹	¹ Unit of Medical Technology and Intelligent Information Systems, Dept. of Computer Science, University of Ioannina, Ioannina (Greece)
2467 17.06	THE CARDIOTOCOGRAPHY: FREQUENCY ANALYSIS OF THE FETAL HEART RATE VARIABILITY	<u>Angela Marfella</u> ¹ , Maria Romano ¹ , Mario Cesarelli ¹ , Marcello Bracale ¹	¹ University of Naples "Federico II" (Italy)
1638 17.18	TO WHAT EXTENT THE QUALITY OF FETAL MAGNETOCARDIOGRAMS DEPEND ON DATA FILTERING?	<u>Silvia Comani</u> ¹ , Dante Mantini ² , Giovanna Alleva ¹	¹ ITAB-Institute of Advanced Biomedical Technologies, University Foundation "G. D'Annunzio", Chieti University, Chieti (Italy); ² Department of Informatics and Automation Engineering, Marche Polytechnic University, Ancona (Italy)
1709 17.30	EVALUATION OF THE QRS DETECTION ALGORITHMS IN RELATION TO FETAL HEART RATE ESTIMATION	Adam Matonia ¹ , Tomasz Kupka ¹ , <u>Janusz Jezewski</u> ¹ , Krzysztof Horoba ¹	¹ Institute of Medical Technology and Equipment (Poland)
2505 17.42	USE OF PCO2 SIGNALS FOR THE ASSESSMENT OF CO2 REACTIVITY IN NEWBORNS	FRN Bravo ¹ , J Nadal ¹ , <u>DM Simpson</u> ² , MNV Marinatto ⁴ , JMA Lopes ⁴ , RB Panerai ³ , DH Evans ¹	¹ Federal University of Rio de Janeiro (Brazil); ² University of Southampton (U.K.); ³ University of Leicester (U.K.); ⁴ Instituto Fernandes Figueira - Rio de Janeiro (Brazil)

2057 17.54	AUTOMATIC DETECTION OF SLOW EYE MOVEMENTS BY DISCRETE WAVELET TRANSFORM	<u>Elisa Magosso</u> ¹ , Federica Provini ² , Pasquale Montagna ² , Mauro Ursino ¹	¹ Department of Electronics, Computer Science and Systems, University of Bologna, Bologna (Italy); ² Department of Neurological Sciences, Polysomnographic Laboratory, University of Bologna (Italy)
1566 18.06	SACCADIC EYE MOVEMENTS IN A TYPE 3 GAUCHER'S DISEASE CHILD DURING ENZYME REPLACEMENT THERAPY	Agostino Accardo ¹ , Stefano Pensiero ² , Maria Gabriela Pittis ³ , Bruno Bembi ³ , Giovanni Ciana ³ , <u>Paolo Perissutti</u> ²	¹ Department of Electronics (DEEI), University of Trieste (Italy); ² Department of Ophthalmology, IRCCS Burlo Garofolo of Trieste (Italy); ³ Metabolic Diseases Unit, IRCCS Burlo Garofolo of Trieste (Italy)
1406 18.18	CLASSIFYING OPTIC NERVE DISEASE FROM THE PATTERN ELECTRORETINOGRAPHY SIGNALS	AYŞEGÜL GÜVEN ¹ , <u>SADIK KARA</u> ²	¹ Erciyes University (Turkey); ² Erciyes University (Turkey)

SS122 (SS120 III.) Medical Imaging III. (Standard Session - oral contributions)

Chair: Jiří Jan (Czech Republic)

Co-Chair: Jan Mužík (Czech Republic)

Day and time: Wednesday 23rd November, 16.30-18.30 (format 10+3 minutes)

Hall: Meeting Hall I

Id	Title	Paper Authors	Authors' Institutions
2040 16.30	DETERMINING CANDIDATE POLYP MORPHOLOGY FROM CT COLONOGRAPHY USING A LEVEL-SET METHOD	<u>Michael Lynch</u> ¹ , Tarik Chowdhury ¹ , Ovidiu Ghita ¹ , Paul F. Whelan ¹	¹ Vision Systems Group, Dublin City University (Ireland)
2373 16.43	CATHETER LOCALISATION FOR MR-GUIDED INTERVENTIONS USING A MICRO OPTICALLY DETUNABLE RESONANT CIRCUIT	<u>Thorsten Uelzen</u> ¹ , Jörg Mueller ¹ , Steffen Weiss ² , Guido Pantel ³	¹ Hamburg University of Technology, Hamburg (Germany); ² Philips Technical Systems, Hamburg (Germany); ³ Invivo Germany GmbH, Schwerin (Germany)
2587 16.56	PHASE DISTRIBUTION DEPENDENT ON PHASE-ENCODE DIRECTION IN PHASE CONTRAST METHOD	<u>Yoko Kato</u> ^{1,2} , Ryutaro Himeno ²	¹ Faculty of Engineering, Tohoku Gakuin University (Japan); ² Computational Biomechanics Unit, RIKEN (Japan)
1590 17.09	AUTOMATIC DETECTION OF BOLUS ARRIVAL TIME IN DYNAMIC MRI STUDIES	<u>Jacek Ruminski</u> ¹ , B Karczewski ¹	¹ Gdansk University of Technology (Poland)
1873 17.22	DETECTION OF ARCHITECTURAL DISTORTION IN MAMMOGRAMS VIA ANALYSIS OF PHASE PORTRAITS AND CURVILINEAR STRUCTURES	<u>Fabio Ayres</u> ¹ , <u>Rangaraj Rangayyan</u> ¹	¹ University of Calgary (Canada)
2488 17.35	A GEOMETRIC METHOD FOR NEAR-FIELD ARTIFACT REDUCTION IN PLANAR CODED APERTURE NUCLEAR MEDICINE IMAGING	<u>David Starfield</u> ¹ , David Rubin ¹ , Tshilidzi Marwala ¹	¹ School of Electrical and Information Engineering, University of the Witwatersrand, Johannesburg (South Africa)
1892 17.48	DETECTION OF LESIONS IN MAMMOGRAMS USING LEARNED DICTIONARIES AND SPARSE REPRESENTATIONS	<u>Jostein Herredsvela</u> ¹ , Kjersti Engan ¹ , Thor Ole Gulsrud ¹ , Karl Skretting ¹	¹ University of Stavanger (Norway)
2327 18.01	WAVELET TRANSFORM IN CLASSIFICATION OF BIOMEDICAL IMAGES	<u>Aleš Procházka</u> ¹ , <u>Andrea Gavlasová</u> ¹	¹ Institute of Chemical Technology (Czech Republic)
1752 18.14	CLASSIFYING AFFECTED BRAIN TISSUE IN UNCOMPENSATED ULTRASOUND IMAGES OF NEONATES	<u>Ewout Vansteenkiste</u> ¹ , Bruno Huysmans ¹ , Wilfried Philips ¹	¹ Ghent University (Belgium)

SS87 (SS85 III.) Biomedical Measurement III. (Standard Session - oral contributions)

Chair: Roman Maniewski (Poland)

Co-Chair: Karel Hána (Czech Republic)

Day and time: Wednesday 23rd November, 16.30-18.30 (format 15+5 minutes)

Hall: Club A

Id	Title	Paper Authors	Authors' Institutions
1768 16.30	ORAL STIMULATION OF PATIENTS WITH BURNING MOUTH SYNDROME USING SINUSOIDAL CONSTANT CURRENT	<u>Ivan Alajbeg</u> ¹ , Stanko Tonkovic ² , Iva Z Alajbeg ¹ , Ana Cekic-Arambasin ¹ , Marijan Kuri ²	¹ University of Zagreb, School of Dental Medicine (Croatia); ² University of Zagreb, Faculty of Electrical Engineering and Computing (Croatia)
1870 16.50	MONITORING OF PSYCHOPHYSIOLOGICAL PROCESSES BY SKIN CONDUCTIVITY MEASUREMENTS USING MICROELECTRODE ARRAYS	<u>Erik Vavrinsky</u> ¹ , Vladimir Tvarozek ¹ , Peter Marman ² , Michal Weis ³	¹ Department of Microelectronics, Slovak University of Technology (Slovak Republic); ² Faculty of Philosophy, Comenius University (Slovak Republic); ³ Institute of Medical Physics and Biophysics, Comenius University (Slovak Republic)
1970 17.10	ARTERIAL PULSE WAVE ANALYSIS DURING COLD PRESSOR TEST IN PATIENTS WITH BORDERLINE HYPERTENSION	<u>Irina Hlimonenko</u> ¹	¹ Tallinn Technical University (Estonia)
2089 17.30	A PDA-BASED, MEASUREMENT SYSTEM OF TONGUE FORCE FOR CLINICAL APPLICATION	<u>Ryunosuke Tsuji</u> ¹ , Masafumi Matsumura ² , Kanji Nohara ³ , Takashi Tachimura ⁴ , Kunihiro Chihara ¹	¹ Nara Institute of Science and Technology, Graduate School of Information Science, Nara (Japan); ² Osaka Electro-Communication University, Graduate School of Biomedical Engineering, Osaka (Japan); ³ Osaka University, Osaka University Dental Hospital, Osaka (Japan); ⁴ Osaka University, Graduate School of Dentistry, Osaka (Japan)
1522 17.50	INFLUENCE OF ELECTRODE DESIGN ON ELECTRIC FIELD DISTRIBUTION DURING ELECTROPORATION	<u>Nicolle Wilke</u> ¹ , Anthony Morrissey ¹	¹ Tyndall National Institute (Ireland)
2001 18.10	FEASIBILITY STUDY ON NON-INVASIVE MEASUREMENT OF BLOOD GLUCOSE CONCENTRATION USING INSTANTANEOUS DIFFERENTIAL NEAR INFRARED SPECTROPHOTOMETRY	<u>Ken-ichi Yamakoshi</u> ¹ , Yasuhiro Yamakoshi ² , Masamichi Nogawa ¹ , Takehiro Yamakoshi ³ , Shinobu Tanaka ¹	¹ Kanazawa University (Japan); ² TYT Institute of Technology Corp. (Japan); ³ Fukui University (Japan)

SS114 Decision Support Systems in Medicine (Standard Session - oral contributions)

Chair: Lenka Lhotská (Czech Republic)

Co-Chair: Miroslav Palfy (Slovenia)

Day and time: Wednesday 23rd November, 16.30-18.30 (10+2 minutes)

Hall: Club B

Id	Title	Paper Authors	Authors' Institutions
2217 16.30	AUTOMATIC IDENTIFICATION OF HISTOLOGICAL FEATURES IN HISTOLOGICAL IMAGES USING ARTIFICIAL NEURAL NETWORKS	Miroslav Palfy ¹ , <u>Milan Zorman</u> ¹ , Jose Luis Sanchez ²	¹ University of Maribor, Faculty of Electrical Engineering and Computer Science (Slovenia); ² University of La Laguna (Spain)
2444 16.42	DESIGN OF A DECISION SUPPORT SYSTEM IN CARDIOLOGY	<u>Lenka Lhotska</u> ¹	¹ Czech Technical University in Prague (Czech Republic)
2645 16.54	DECISION SUPPORT SYSTEM FOR DIAGNOSING DYSFUNCTIONS IN THE LOWER URINARY TRACT	<u>David Gil Méndez</u> ¹ , Antonio Soriano Paya ¹ , Daniel Ruiz Fernández ¹ , José García Rodríguez ¹ , Francisco Flórez Revuelta ¹	¹ University of Alicante (Spain)
1553 17.06	IMPROVED MICROCALCIFICATION DETECTION UTILIZING ENHANCEMENT TECHNIQUES	<u>Athanassios</u> <u>Papadopoulos</u> ^{1,2} , Dimitrios Fotiadis ²	¹ Dept. of Medical Physics, Medical School, University of Ioannina, 45110 Ioannina (Greece); ² Dept. of Computer Science, Unit of Medical Technology and Intelligent Information Systems, University of Ioannina, 45110 Ioannina (Greece)
1744 17.18	AUTOMATIC CLASSIFICATION OF GLAUCOMATOUS PATIENTS BASED ON VESSEL SHAPE ANALYSIS	GEORGE MATSOPOULOS ¹ , PANTELIS ASVESTAS ¹ , <u>KONSTANTINOS</u> <u>DELIBASIS</u> ¹ , NIKOLAOS MOURAVLIANSKY 1	¹ Institute of Communication and Computer Systems (Greece)
2308 17.30	AN INTELLIGENT DECISION SUPPORT SYSTEM FOR SCREENING MAMMOGRAPHY	<u>Gabor Horvath</u> ¹ , Bela Pataki ¹ , Jozsef Valyon ¹ , Zsuzsa Domotori ² , Nora Szekely ¹ , Norbert Toth ¹ , Gabor Takacs ¹	¹ Budapest University of Technology and Economics/Dept. of Measurement and (Hungary); ² Semmelweis University/Dept. of Radiology, Budapest (Hungary)

1545 17.42	A NOVEL METHODOLOGY FOR MYOCARDIAL ISCHAEMIA DIAGNOSIS USING ASSOCIATION RULES	<u>Themis Exarchos</u> ¹ , Costas Papaloukas ² , Dimitrios Fotiadis ^{1,3}	¹ Unit of Medical Technology and Intelligent Information System, Department of Computer Science, University of Ioannina, Ioannina (Greece); ² Department of Biological Applications and Technology, University of Ioannina, Ioannina (Greece); ³ Biomedical Research Institute, Ioannina (Greece)
2306 17.54	FEATURE AND CLASSIFIER SELECTION FOR COMPUTER ASSISTED EEG INTERPRETATION	<u>Michel Van Putten</u> ¹ , Jos Vliegen ¹ , Cor Veenman ²	¹ Department of Neurology and Clinical Neurophysiology, Medisch Spectrum Twente, Enschede, Netherlands (The Netherlands); ² University of Amsterdam - ISLA Group and Netherlands Forensic Institute - Digital Technology (The Netherlands)
2127 18.06	FEATURE EXTRACTION IN AUDITORY BRAINSTEM RESPONSES: USE OF THE DAUBECHIES WAVELET	Gaye Lightbody ¹ , <u>McCullagh Paul</u> ¹ , McAllister Gerry ¹	¹ School of Computing and Mathematic, Ulster of University, Newtownabbey, Northern Ireland (U.K.)
1851 18.18	APPLICATION OF THE CLOSE-WORLD ASSUMPTION TO A BAYESIAN NETWORK FOR OPTIMAL TREATMENT SELECTION	<u>Stefan Visscher</u> ¹ , Karin Schurink ¹ , Marc Bonten ¹ , Peter Lucas ²	¹ University Medical Center Utrecht (The Netherlands); ² Radboud University Nijmegen (The Netherlands)
1844 YIC 18.30	DIAGNOSTICS OF PERIPHERAL ARTERIAL OCCLUSIVE DISEASE USING DIFFERENT CLASSIFICATION STRATEGIES IN ASSOCIATION WITH IMPEDANCE PLETHYSMOGRAPHICAL FEATURES	<u>Andreas Berting</u> ¹ , Hans-Ullrich Guenther ² , Thomas Stegmann ² , Guenter Henning ¹	¹ Institute of Biomedical Engineering and Informatics, Ilmenau Technical University (Germany); ² Dept. of Thoracic, Heart and Vascular Surgery, Fulda Hospital (Germany)

YIC - Young Investigator Competition Finalist

SS118 Healthcare Information Technology (Standard Session - oral contributions)

Chair: Timo Jämsä (Finland)

Co-Chair: Martin Kohut (Czech Republic)

Day and time: Wednesday 23rd November, 16.30-18.30 (format 10+2 minutes)

Hall: Club C

Id	Title	Paper Authors	Authors' Institutions
1591 16.30	DISTRIBUTED ANALYSIS OF MEDICAL IMAGE DATA USING JAVASPACE TECHNOLOGY	<u>Jacek Ruminski</u> ¹	¹ Gdansk University of Technology (Poland)
2403 16.42	ANALYSIS OF ACTIVITIES OF DAILY LIVING FOR ELDERLY PEOPLE IN A NURSING CARE CENTER USING A MONITORING SYSTEM	<u>Ryoji Suzuki</u> ¹ , Mitsuhiro Ogawa ² , Sakuko Otake ³ , Takeshi Izutsu ³ , Shin- ichi Izumi ⁴ , Tsutomu Iwaya ⁵	¹ Osaka Electro-Communication University (Japan); ² Tokyo Medical and Dental University (Japan); ³ Welfare Techno House Co. Ltd. (Japan); ⁴ Tohoku University (Japan); ⁵ National Rehabilitation Center for Persons with Disability (Japan)
2465 16.54	A SEMANTICALLY ENHANCED ENVIRONMENT FOR SCP-ECG RECORDS	Alexandra Kokkinaki ¹ , Ioanna Chouvarda ¹ , <u>Nicos Maglaveras</u> ¹	¹ Lab of Medical Informatics/The Medical School, Aristotle University, Thessaloniki (Greece)
2580 17.06	STRUCTURED REPORTING OF MEDICAL WORKFLOWS BASED ON 3-D IMAGE VOLUMES	<u>Tobias Gehrke</u> ¹ , Stefan Maas ¹ , Bassam Alugili ¹ , Heinrich Martin Overhoff ¹	¹ Medical Engineering Laboratory, University of Applied Sciences Gelsenkirchen (Germany)
2093 17.18	USING SMART SENSORS AND A CAMERA PHONE TO DETECT AND VERIFY THE FALL OF ELDERLY PERSONS	Thomas Riisgaard Hansen ² , <u>J. Mikael Eklund</u> ¹ , Jonathan Sprinkle ¹ , Ruzena Bajcsy ¹ , Shankar Sastry ¹	¹ University of California, Berkeley (USA); ² Aarhus University (Denmark)
2185 17.30	AN ARCHITECTURE FOR BUILDING COST-EFFECTIVE, FLEXIBLE AND INTEROPERABLE XML HEALTHCARD APPLICATIONS	<u>Aggelos Georgoulas</u> ¹ , Dimitrios Koutsouris ¹	¹ National Technical University of Athens (Greece)
1667 17.42	WEARABLE MONITORING DEVICE FOR EMERGING HEALTHCARE APPLICATION USING WIRELESS TECHNOLOGY	<u>Jae Hwan Kang</u> ¹ , Seung Hwan Kim ¹	¹ ETRI (South Korea)

1697 17.54	A SOFTWARE-TOOL ALLOWING FOR DEPARTMENTAL HOSPITAL OPERATIONAL COST ESTIMATION	<u>Maria Botsivaly</u> ¹ , Basile Spyropoulos ¹ , Aris Tzavaras ¹ , Panagiotis Sarantakis ¹ , Emmanouel Mosxidis ¹ , Michael Marinis ¹ , konstantinos Koutsourakis ¹	¹ Technological Education Institute of Athens (Greece)
2067 18.06	ACQUISITION OF COST DATA FOR SURGERY AND INTENSIVE MEDICINE TO BE EMPLOYED FOR DRAFTING A DRGS HOSPITAL REIMBURSEMENT SYSTEM IN GREECE	<u>Basile Spyropoulos</u> ¹ , Maria Botsivaly ¹ , Aris Tzavaras ¹ , Georgios Nikoloudakis ¹ , Ilias Balabanis ¹ , Nicolaos Karagiannis ¹ , Irene Limnou ¹	¹ Technological Education Institute of Athens (Greece)
1539 18.18	ETHICAL ISSUES CONCERNING THE EMPLOYMENT OF THE DIAGNOSIS RELATED GROUPS IN THE HOSPITAL MANAGEMENT	<u>Basile Spyropoulos</u> ¹ , Georgios Papagounos ²	¹ Technological Education Institute of Athens (Greece); ² University of Crete (Greece)

SS125 Medical Physics and Radiotherapy (Standard Session - oral contributions)

Chair: will be completed

Co-Chair: Marco Riboldi (Italy)

Day and time: Wednesday 23rd November, 16.30-18.30 (format 10+2 minutes)

Hall: Club D

Id	Title	Paper Authors	Authors' Institutions
1475 16.30	HIGH-RESOLUTION, REAL-TIME X-RAY IMAGING SYSTEM USING SYNCHROTRON RADIATION FOR ANIMAL STUDIES	Keiji Umetani ¹ , Makito Kobatake ² , Akira Yamamoto ² , Takenori Yamashita ² , Shigeki Imai ² , Yasumasa Kajihara ²	¹ Japan Synchrotron Radiation Research Institute (Japan); ² Kawasaki Medical School (Japan)
1521 16.42	APPROACHING RADIOGRAPHIC PATIENT EXPOSURE AND STERILISATION QUALITY ASSURANCE IN DENTAL MEDICINE PRACTICE IN GREECE	<u>Basile Spyropoulos</u> ¹ , Dimitrios Papavassiliou ¹ , Ioannis Loukos ¹	¹ Technological Education Institute of Athens (Greece)
1526 16.54	SHEET ROLL PHANTOM WITH RADIOCHROMIC FILM OF COMPUTED TOMOGRAPHY	Rumi Gotanda ¹ , Toshizo Katsuta ² , Yoshitada Nakagiri ² , Ayako Ujifuku ¹ , Atsushi Kawabe ¹ , Tatsuhiro Gotanda ¹	¹ Graduate School of Health Sciences, Okayama University, Okayama (Japan); ² Faculty of Health Sciences, Okayama University, Okayama (Japan)
1557 17.06	SKIN EXPOSURE REDUCTION USING AIR GAP IN INTERVENTIONAL RADIOLOGY	<u>Atsushi Kawabe</u> ¹ , Toshizo Katsuda ¹ , Yoshitada Nakagiri ¹ , Rumi Gotanda ¹ , Akitami Matsushita ²	¹ Graduate school of health sciences, Okayama University (Japan); ² Okayama Kyokuto Hospital, Okayama (Japan)
1751 17.18	FAST SIMULATION OF REALISTIC SPECT PROJECTIONS USING FORCED DETECTION IN GEANT4	<u>Andreas Goedicke</u> ¹ , Bernd Schweizer ¹ , Steven Staelens ² , Jan De Bennhouwer ²	¹ Philips Research Laboratories Aachen (Germany); ² Ghent University (Belgium)

2667 17.30	INFLUENCE OF STORAGE MEDIA ON THE ELASTIC PROPERTIES OF DENTIN AND TOOTH ENAMEL – A SCANNING ACOUSTIC MICROSCOPY ANALYSIS	<u>Katrin Kempf</u> ¹ , Hans-Joachim Hein ¹ , Johannes Schubert ² , Kay Raum ¹	¹ Dept. of Orthopedics, Q-BAM Group, Martin-Luther-University of Halle-Wittenberg (Germany); ² Dept. of Oral Plastic Maxillofacial Surgery, Martin Luther University of Halle-Wittenberg (Germany)
1898 17.42	COLD PENETRATION OF THE FOURTH-LAYER TISSUE MODEL IN THE WHOLE BODY CRYOTHERAPY CONDITIONS	<u>Zofia Drzazga</u> ¹ , Armand Cholewka ¹ , Marcin Kurpas ¹ , Władysław Borgiel ¹	¹ Institute of Physics Silesian University (Poland)
1775 17.54	A VOXEL-BASED MONTE CARLO RADIOTHERAPY SIMULATOR	<u>Kristina Bliznakova</u> ¹ , Zoi Kolitsi ¹ , Nicolas Pallikarakis ¹	¹ University of Patras (Greece)
2497 18.06	OPTO-ELECTRONIC GUIDED PATIENT POSITIONING IN THE CONFORMAL RADIOTHERAPY OF PROSTATE CANCER	<u>Marco Riboldi</u> ¹ , Maria Francesca Spadea ¹ , Guido Baroni ¹ , Barbara Tagaste ² , Cristina Garibaldi ² , Simona Castiglioni ³ , Giovanni Ivaldi ³ , Roberto Orecchia ³ , Antonio Pedotti ¹	¹ TBMLab - Department of Bioengineering, Politecnico di Milano University (Italy); ² Medical Physics, European Institute of Oncology (Italy); ³ Radiation Oncology, European Institute of Oncology (Italy)
1423 18.18	HIGH ENERGY SHOCKWAVE AND ITS APPLICATIONS IN ORTHOPAEDICS	<u>Kevin S.C. Kwong</u> ¹ , Xia Guo ¹ , Jack C.Y. Cheng ²	¹ Department of Rehabilitation Sciences, The Hong Kong Polytechnic University (Hong Kong); ² Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong (Hong Kong)

SS101 (SS98 IV.) Biomedical System Modelling and Analysis IV. (Standard Session - oral contributions)

Chair: Tarmo Lipping (Finland)

Co-Chair: Vít Kopelent (Czech Republic)

Day and time: Wednesday 23rd November, 16.30-18.30 (format 10+5 minutes)

Hall: Club E

Id	Title	Paper Authors	Authors' Institutions
2451 16.30	A MATHEMATICAL MODEL OF BIOFEEDBACK AND ITS RELATION TO NEURAL ACTIVITY	<u>Chiaki Nishimura</u> ¹ , Li-Qun Wang ² , Aki Nagase ¹ , Kazuko Terada ¹ , Yoshifumi Miyamoto ³	¹ Toho University School of Medicine (Japan); ² Research Center for Advanced Technologies, Tokyo Denki University (Japan); ³ Department of Mechanical Engineering, Osaka Sangyo University (Japan)
1693 16.45	NONLINEAR DYNAMIC MODELING OF ACTION POTENTIAL ENCODING IN TWO TYPES OF SPIDER MECHANORECEPTORS	Georgios D. Mitsis ¹ , Andrew S. French ² , Ulli Höger ² , Spiros Courellis ¹ , <u>Vasilis Z. Marmarelis</u> ¹	¹ Department of Biomedical Engineering, University of Southern California (USA); ² Department of Physiology and Biophysics, Dalhousie University (Canada)
1845 17.00	MOTOR NEURON FIRING IN A TRANSGENIC MOUSE MODEL OF AMYOTROPHIC LATERAL SCLEROSIS: A SIMULATION STUDY	<u>Nicoletta Marzocchi</u> ^{1,2} , Stefano Severi ¹ , Cristina Zona ^{3,4} , Silvio Cavalcanti ¹	¹ Cellular and Molecular Engineering Laboratory, D.E.I.S., University of Bologna (Italy); ² Department of Human and General Physiology, University of Bologna (Italy); ³ Department of Neuroscience, University of Rome "Tor Vergata" (Italy); ⁴ Fondazione S. Lucia, I.R.C.C.S., Rome (Italy)
1782 17.15	A REALISTIC FORWARD MODEL USING MRI AND SURFACE EMG DATA FUSION: APPLICATION TO BIOELECTRICAL MUSCULAR SOURCES LOCALISATION	Odette Fokapu, Eric Chauvet, Maher Sabbah , Didier Gamet	
1716 17.30	MULTIVARIABLE FUZZY LOGIC VENTILATOR ADVISORY SYSTEM	<u>Aris Tzavaras</u> ¹ , Basile Spyropoulos ¹ , Maria Botsivaly ¹ , Konstantinos Gatsios ¹ , Alexandros Koufakis ¹	¹ TECHNOLOGICAL EDUCATIONAL INSTITUTE OF ATHENS (Greece)
2229 17.45	DYNAMIC KNEE MODELING FOR REHABILITATION SYSTEM	Gasmi Mohamed Amine, Manamanni Nourdinne, Moughamir Said	

2134	A 6 DEGREES OF FREEDOM	Lynda Seddiki ¹ ,	¹ CReSTIC – University of Reims
18.00	KINEMATICAL MODEL OF THE	<u>Kevin Guelton</u> ¹ ,	Champagne-Ardenne (France)
	KNEE FOR THE DESIGN OF A NEW	Lissan Afilal ¹ , Janan	
	REHABILITATION DEVICE	Zaytoon ¹	

SS83 (SS81 III.) Biomedical Instrumentation and Biosensors III. (Standard Session - oral contributions)

Chair: Kalju Meigas (Estonia)

Co-Chair: Marek Penhaker (Czech Republic)

Day and time: Wednesday 23rd November, 16.30-18.30 (format 10+5 minutes)

Hall: Club H

Id	Title	Paper Authors	Authors' Institutions
2367 16.30	ELECTROMUSCULAR INCAPACITATING DEVICE SAFETY	Hongyu Sun ¹ , Jiun-Yan Wu ¹ , Rami Abdallah ² , John G. Webster ³	¹ University of Wisconsin-Madison/Department of Electrical and Computer Engineering (USA); ² American University of Beirut/Department of Electrical Engineering, Beirut (Lebanon); ³ University of Wisconsin-Madison/Department of Biomedical Engineering (USA)
1701 16.45	A NEW DEVICE FOR CRICOTHYROTOMY (AIRFREE ®): MEASUREMENTS OF FLOW AND AIRWAY RESISTANCE	Asghar Schiri pour Tscharlou ¹ , Juergen Klappenberger ¹ , Stefanie Klappenberger ² , Wilhelm Firbas ¹ , Hermann Gilly ³	¹ Center for Anatomy and Cell Biology, Department of Anatomy, Medical University of Vienna (Austria); ² Department of Surgery and Policlinic - Inner City, LMU, Munich (Germany); ³ L. Boltzmann Institut for Anaesthesiology and Intensive Care Medicine and Department of Anaesthesiology & Intensive Care (B), Medical University of Vienna (Austria)
2539 17.00	ARCHITECTURE LAYOUT AND DESIGN OPTIMIZATION OF MEDICAL ASSISTIVE DEVICE FOR NARCOLEPSY PATIENTS	Salam Gabran ¹ , Magdy Salama ¹ , El-Saadany Ehab ¹	¹ University of Waterloo (Canada)
2426 17.15	REGULATION OF HEMODYNAMICS IN LEFT HEART FAILURE USING ADAPTIVE PREDICTIVE CONTROL BASED ON NEURAL NETWORKS	Koji Kashihara ¹	¹ RIKEN BSI (Japan)
2223 17.30	A PROTOTYPE WIRELESS PERSONAL ECG MONITORING DEVICE CONNECTED VIA BLUETOOTH	Antonio Fratini ¹ , Paolo Bifulco ¹ , Marcello Bracale ¹ , Mario Cesarelli ¹	¹ University of Naples "Federico II" (Italy)
1731 17.45	SIMULATING A CLOSED LOOP CONTROLLER FOR LONG-TERM OXYGEN THERAPY	Mario Iobbi ¹ , Robert Dickinson ¹	¹ Department of Bioengineering, Imperial College London (U.K.)
1959 18.00	MICROMECHANICAL STRUCTURES FOR LOW LEVEL POWER MEASUREMENT IN MEDICAL SYSTEMS	Jiri Jakovenko ¹ , Miroslav Husak ¹	¹ CTU-FEE in Prague (Czech Republic)

1595 18.15	METHOD AND DEVICE FOR BEAT- TO-BEAT BLOOD PRESSURE MEASUREMENTS	Kalju Meigas ¹ , Jaanus Lass ¹ , Deniss Karai ¹ , Rain Kattai ¹ , Jüri Kaik ²	¹ Tallinn University of Technology (Estonia); ² Estonian Institute of Cardiology (Estonia)
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SS105 (SS104 II.) Brain, Neural and Neuromuscular Systems II. (Standard Session - posters)

Day and time: Wednesday 23rd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1457 1	OPTIMISATION OF PREPARING AND UTILISING SINTERED Ag/AgCl-ELECTRODES FOR LOW DRIFT DC-EEG MEASUREMENTS	Annegret Hopf ¹ , Sebastian Berkes ² , Falk Schlegelmilch ² , Peter Husar ¹	¹ Institute of Biomedical Engineering and Informatics, Technische Universität Ilmenau (Germany); ² eldith GmbH, Ilmenau (Germany)
1571 2	INDICATORS IN BRAIN REGIONS: THE ENERGY SPATIAL PATTERNS	Manuela La Rosa ^{1,2} , David Shannahoff-Khalsa ³ , Mattia Frasca ¹ , Maide Bucolo ¹ , Luigi Fortuna ¹	¹ DIEES - University of Catania (Italy); ² STMicroelectronics (Italy); ³ INLS-UCSD (USA)
2168 3	QUANTITATIVE COMPARISON OF SIGNAL ANALYSIS METHODS FOR CHARACTERIZATION OF BRAIN FUNCTIONAL CONNECTIVITY	Karim Ansari-Asl ¹ , Lotfi Senhadji ¹ , Fabrice Wendling ¹ , Jean-Jacques Bellanger ¹	¹ LTSI, INSERM U642, Université de Rennes 1 (France)
2297 4	TRACE AND MAJOR ELEMENTAL ANALYSIS IN BRAIN STRUCTURES FROM WISTAR RATS BY TOTAL REFLECTION X-RAY TOTAL REFLECTION WITH SYNCHROTRON RADIATION	RENATA SERPA, EDGAR de JESUS, MARCELINO ANJOS, RICARDO LOPES, SILVANA MOREIRA, MÔNICA ROCHA, MARIA do CARMO, ANA MARTINEZ	
1800 5	NEW DESIGN FOR CLIPS USED IN MICROSURGICALLY TREATMENT OF INTRACRANIAL PREANEURYSMAL LESIONS	Poeat Ion, Chiriac Alexandru	
1491 6	SIMULATION OF SIMILARITY AND PREVIOUS KNOWLEDGE GESTALT RULES WITH COUPLED NEURAL OSCILLATORS	Elisa Magosso ¹ , Emiliano La Cara ¹ , Cristiano Cuppini ¹ , Mauro Ursino ¹	¹ Dept. Electronics, Computer Science, and Systems, University of Bologna (Italy)
1563 7	SIMULATION OF TILT AFTEREFFECT OF VISUAL CELLS IN THE PRIMARY VISUAL CORTEX	Mauro Ursino ¹ , Giuseppe Emiliano La Cara ¹ , Elisa Magosso ¹	¹ Dept. Electronics, Computer Science, and Systems, University of Bologna (Italy)

1570 8	COLLECTIVE NEURON DYNAMICS THROUGH CNN	<u>Manuela La Rosa</u> ^{1,2} , Giovanni Sicurella ¹ , Maide Bucolo ² , Luigi Fortuna ²	¹ STMicroelectronics (Italy); ² DIEES- University of Catania (Italy)
1576 9	SIMULATION OF FUNCTIONAL CONNECTIVITY AMONG BRAIN CORTICAL AREAS USING A NEURAL MASS MODEL	<u>Melissa Zavaglia</u> ¹ , Elisa Magosso ¹ , Laura Astolfi ² , Fabio Babiloni ² , Mauro Ursino ¹	¹ Dept. Electronics, Computer Science, and Systems, University of Bologna (Italy); ² Dept. Human Physiology and Pharmacology, University of Roma (Italy)
1492 10	RECOGNITION OF DIRECTION OF FINGER MOVEMENT FROM EEG SIGNAL USING MARKOV MODELS	<u>Jaromír Doležal</u> ¹ , Jakub Štastrný ¹ , Pavel Sovka ¹	¹ Biological Signal Lab., Faculty of Electrical Engineering/Czech Technical University in Prague (Czech Republic)
1874 11	DESIGN OF A PROTOTYPE FOR THE BRAIN ACTIVATION FUNCTIONAL STUDY USING NEAR INFRARED SPECTROSCOPY	<u>Valentina Hartwig</u> ^{1,2} , Giulio Giovannetti ¹ , Nicola Vanello ¹ , Raffaello Francesconi ¹ , Matteo Milanese ³ , Luigi Landini ³ , Antonio Benassi ¹	¹ CNR Institute of Clinical Physiology, Pisa (Italy); ² Interdepartmental Centre E. Piaggio, University of Pisa (Italy); ³ Department of Information Engineering, University of Pisa (Italy)
2517 12	STUDY FOR CORRELATION BETWEEN PERFORMANCE OF MOBILE PHONE TYPE HUMAN INTERFACE AND CAPACITY OF SHORT TERM MEMORY	<u>Ryosuke HOSAKA</u> ¹	¹ Shonan Institute of Technology (Japan)

SS115 (SS114 II.) Decision Support Systems in Medicine II. (Standard Session - posters)

Day and time: Wednesday 23rd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1926 13	STRUCTURAL CLASSIFICATION OF THYROID DISEASE BY SECOND ORDER OPTIMIZATION ALGORITHMS IN NEURAL NETWORKS	Cenk SAHIN, Seyfi OGULATA, Ayca CAKMAK, Sinan KIRIM	
2097 14	PRESUMPTIONS OF DECISION SUPPORT SYSTEM ON EXAMPLE OF INTRACRANIAL ANEURYSM	Kasper Tomczak ¹ (Krzysztof Szafranski)	¹ Szczecin University of Technology (Poland)
2613 15	BAROCALC: ADVANCED SOFTWARE PACKAGE FOR BAROREFLEX CALCULUS	Sónia Gouveia, José Pedro Fernandes, Ana Paula Rocha, Pedro Lago	
2620 16	AN APPLICATION FOR CONTROL AND NEWBORN SCREENING ANALYSIS	Miguel Pinheiro ¹ , José Luís Oliveira ¹ , Manuel A.S. Santos ¹ , Hugo Rocha ² , M. Luis Cardoso ² , Laura Vilarinho ²	¹ Universidade de Aveiro (IEETA) (Portugal); ² Instituto de Genética Médica (Portugal)
17	Reserve		

SS67 (SS65 III. We) Biomaterials III. (Standard Session - posters)

Day and time: Wednesday 23rd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1498 18	DEVELOPMENT AND EVALUATION OF AG-PTFE COMPOSITE COATINGS WITH ANTI-BACTERIAL PROPERTIES	Yunli Liu, Qi Zhao, Chun Wang, Su Wang	
1512 19	CHANGES IN THE OPTICAL PROPERTIES OF DENTAL RESIN COMPOSITES AFTER ACCERERATED AGING	Yong-Keun Lee, Ji-Hyung Kim, John Powers	
1658 20	NOVEL MACROPOROUS TISSUE ENGINEERING SCAFFOLD USING AMORPHOUS CALCIUM PHOSPHATE GLASS	Yong-Keun Lee ^{1,3} , Young-Sang Park ^{1,3} , Min-Cheol Kim ^{1,3} , Yeon-Ung Kim ^{1,3} , Kyoung-Nam Kim ^{1,3} , Kwang-Mahn Kim ^{1,3} , Seong-Ho Choi ² , Chong-Kwan Kim ² , Racquel LeGeros ⁴	¹ Department and Research Institute of Dental Biomaterials and Bioengineering, Yonsei University College of Dentistry, Seoul (South Korea); ² Department of Periodontics, Yonsei University College of Dentistry, Seoul (South Korea); ³ Research Center for Orofacial Hard Tissue Regeneration, Yonsei University College of Dentistry, Seoul (South Korea); ⁴ Department of Biomaterials and Biomimetics, New York University College of Dentistry, New York, NY 10010 (USA)
1659 21	PREPARATION OF HYPERTHERMIC NANO-MAGNETITE BY CONTROLLED SPRAY METHOD	Dong-Hyun Kim, Se-Ho Lee, Kyoung-Nam Kim, Kwang-Mahn Kim, In-Bo Shim, Myung-Hyun Lee, Yong-Keun Lee	
1660 22	SYNTHESIS OF MAGNETIC ALGINAGTE MICROSPHERES AS DRUG CARRIERS BY REVERSE MICROEMULSION SYSTEM	Se-Ho Lee, Dong-Hyun Kim, Kyoung-Nam Kim, Kwang-Mahn Kim, In-Bo Shim, Myung-Hyun Lee, Yong-Keun Lee	
1684 23	PULSED LASER DEPOSITION OF BIOLOGICAL AND BIOCOMPATIBLE THIN LAYERS	Tomi Smausz, Béla Hopp, Norbert Kresz, Gabriella Kecskeméti, Zsolt Bor	
1770 24	NANOSTRUCTURED CALCIUM PHOSPHATE MATERIALS AND POSSIBILITY TO CONTROL A FUNCTIONAL STATE OF CELLS	Anatoly Karlov, Vladimir Popov, Victor Savenco, Sergey Kirytenko	

1585 25	CAGES BASED ON A CARBON-CARBON COMPOSITE	Miroslav Sochor ¹ , Karel Balík ² , Petr Tichý ¹	¹ Department of Mechanics, Faculty of Mechanical Engineering, Czech Technical University in Prague (Czech Republic); ² Institute of Rock Structure & Mechanics, Academy of Sciences of the Czech Republic, Prague (Czech Republic)
1664 26	DIELECTRIC CHARACTERIZATION OF THE BIOACTIVE COMPOSITES COLLAGEN – GLYCOSAMINOGLYCANS FOR TISSUE ENGINEERING	Krystyna Pietrucha ^{1,2} , Ewa Marzec ²	¹ Institute of Polimer & Dye Technology, Technical University of Łódź, Stefanowskiego 12/16, 90-924 Łódź, Poland (Poland); ² Department of Biophysics, Poznań University of Medical Sciences, Fredry 10, 61-701 Poznań, Poland (Poland)
1686 27	ACCELERATED HEALING OF INCISIONAL WOUND INDUCED BY INORGANIC POLYPHOSPHATE	Yumi Kawazoe ¹ , Ooi Kazuhiro ¹ , Onodera Yuichiro ¹ , Shindoh Masanobu ¹ , Kohgo Takao ¹ , Shiba Toshikazu ²	¹ Graduate School of Dental Medicine, Hokkaido University (Japan); ² Regenetiss Co., Ltd. (Japan)

SS84 (SS81 IV.) Biomedical Instrumentation and Biosensors IV. (Standard Session - posters)

Day and time: Wednesday 23rd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors

Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1470 28	A NEW MACHINE INTERFACE TECHNOLOGY TO BE USED IN WELFARE EQUIPMENTS FOR RECOGNIZING HAND FINGER	Fumio Nogata ¹ , A.T.M. Rofiquil Islam ² , Yua-xiang Xiao ³ , Takayuki Kato ⁴	¹ Gifu University (Japan); ² Gifu University (Japan); ³ Gifu University (Japan); ⁴ Gifu University (Japan)
1653 29	HOOD TEMPERATURE CONTROL IMPROVEMENT FOR NON-CONTACT MEASUREMENT OF THERMAL INERTIA	Kimio OTSUKA ¹ , Mitsuhiro OGAWA ^{1,2} , Hiroyuki MURAMOTO ³ , Katsunori OTA ⁴ , Tatsuo TOGAWA ⁵	¹ Inst. Biomat. Bioeng. Tokyo Med. Dent. Univ. (Japan); ² Microvitae Technologies (France); ³ Marine Micro Technology Corp. (Japan); ⁴ Inter-tec Techonology Corp (Japan); ⁵ School Human Sci., Waseda Univ. (Japan)
1965 30	HIGH RESOLUTION WAVE GENERATOR PERMITS TEST AND CALIBRATION OF MEDICAL INSTRUMENTATION DEVICES	Antoine Nonclercq ¹ , Pierre Mathys ¹	¹ Université Libre de Bruxelles (Belgium)
1993 31	ADAPTABLE SYSTEM FOR RETINAL INVESTIGATIONS - CLASSIFICATION AND POTENTIAL FOR APPLICATIONS IN THE HUMAN EYE	Dietmar Link, Bernd-Ullrich Seifert, Axel Fink, Walthard Vilser	
2052 32	WIRELESS PASSIVE SENSOR FOR MEASURING ECG AND OTHER BIOPOTENTIALS IN IMPEDANCE LOADED SAW TECHNOLOGY	Anna Karilainen ¹ , Thomas Finnberg ¹ , Jörg Müller ¹	¹ Hamburg University of Technology, Micro System Technology (Germany)
2257 33	ANALYSIS OF THE ELEMENTAL CONCENTRATIONS IN FEMURS' HEAD ON RATS USING ENERGY DISPERSIVE X-RAY FLUORESCENCE SPECTROMETRY	INAYA LIMA, MARCELINO ANJOS, RENATA SERPA, MONICA S., RICARDO LOPES	

2509 34	PROPOSAL FOR A REAL-TIME MULTI-FREQUENCY IMPEDANCE TOMOGRAPHY SYSTEM	<u>Antonio Salazar</u> ¹ , Ricardo Bravo ¹ , Cecilia Murrugara ¹ , Osberth De Castro ¹ , Liliana Gavidia ¹ , Eduardo Farkas ¹	¹ Simón Bolívar University (Venezuela)
35	Reserve		
2281 36	COMPUTERIZED ELECTRONYSTAGMOGRAPHY SYSTEM	Marco Aurelio Benedetti Rodrigues ¹ , <u>Geovani Rodrigo</u> <u>Scolaro</u> ¹ , Vander Vigolo ¹ , Ciro José Montero Egoavil ¹ , Dayane Luiza Fioreze ¹	¹ Faculdades Integradas da Rede de Ensino Uninvest (Brazil)
1420 37	BIOSENSORS AND GLOBAL EXPRESS SCREENING OF FOODS AND WATER QUALITIES	Nickolaj Starodub	
1975 38	COVALENT BONDING OF OLIGONUCLEOTIDES WITH SELF ASSEMBLED MONOLAYERS ON AU(111)	Yi Te Wu, Che Ying Lin, Jiunn Der Liao, Cheng Chan Lu	
2239 39	DEVELOPMENT OF A EXTENSOMETRIC FORCE PLATE FOR THE EVALUATION OF HUMAN BALANCE	<u>Marcelle</u> <u>Urquiza</u> ¹ , Alcimar Soares ¹ , Adriano Alves ¹ , Fabio Parreira ¹ , Karina Persona ¹ , Angela Sa ¹ , Eduardo Naves ¹	¹ Universidade Federal de Uberlândia (Brazil)
2513 40	DEVELOPMENT OF 3-D POSITION SENSOR BY USING PERMANENT MAGNETS IN THE DIGESTIVE TRACT	<u>Takashi</u> <u>Nagaoka</u> ¹	¹ Waseda University (Japan)
1831 41	WELL ENGINEERED ION- IMPLANTED MEMBRANE FOR SODIUM MICROSENSORS	ERRACHID ABDELHAMID	

2660 42	CHARACTERISTIC ANALYSIS OF ELECTRIC TEXTILE SENSOR USING HEART RATE VARIABILITY	<u>Hangsik Shin</u> ¹ , Chungkeun Lee ¹ , Myoungho Lee ¹	¹ Department of Electrical and Electronic Engineering, Yonsei University (South Korea)
2421 43	MICROWAVE APPLICATION IN BALISTOCARDIOGRAPHY AND NON-INVASIVE MONITORING OF CARDIORESPIRATORY ACTIVITY	<u>Roxana Silvia Tîpa</u> , Octavian Ioan Baltag, Dragos Arotaritei	¹ University of Medicine and Pharmacy "Gr. T. Popa", Faculty of Medical Bioengineering, Iasi (Romania)
1777 44	DESIGN OF A RADIOFREQUENCY RECEIVER FOR LOW FIELD MAGNETIC RESONANCE APPLICATIONS	Giulio Giovannetti ¹ , Valentina Hartwig ¹ , Vittorio Viti ² , Giuseppe Gaeta ¹ , Raffaello Francesconi ³ , <u>Luigi Landini</u> ¹ , Antonio Benassi ¹	¹ Institute of Clinical Physiology, National Council of Research, Pisa (Italy); ² Esaote Biomedica s.p.a., Genova (Italy); ³ Department of Information Engineering, University of Pisa, Pisa (Italy)
2016 45	DIELECTROPHORETIC MICROSYSTEM FOR SEPARATION OF DOUBLE MUTANT BACTERIA	<u>Marc Castellarnau</u> ¹ , Nadia Zine ² , Joan Bausells ² , Cristina Madrid ¹ , Antonio Juárez ¹ , Josep Samitier ¹ , Abdelhamid Errachid ¹	¹ Nanobioengineering Research Laboratory (CREBEC), Barcelona Science Park (Spain); ² Centro Nacional de Microelectronica (IMB-CSIC) (Spain)
1882 46	MEASUREMENT OF TISSUE OXYGENATION IN ISOLATED RAT HEARTS USING NEAR INFRARED SPECTROSCOPY	<u>Valentina Hartwig</u> ¹ , Giulio Giovannetti ¹ , Raffaello Francesconi ¹ , Claudia Kusmic ¹ , Luigi Landini ² , Antonio L'Abbate ¹ , Antonio Benassi ¹	¹ CNR Institute of Clinical Physiology, Pisa (Italy); ² Department of Information Engineering, University of Pisa (Italy)

SS111 (SS109 III.) Medical Robotics III. (Standard Session - posters)

Day and time: Wednesday 23rd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors

Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1998 47	A SOFTWARE-TOOL FOR GENERATING AN INDIVIDUAL BRAIN ATLAS BASED ON SEGMENTED MRI SCANS	Ulrich Hofmann	

SS119 (SS118 II.) Healthcare Information Technology II. (Standard Session - posters)

Day and time: Wednesday 23rd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
2096 48	A DECENTRALISED INFORMATION AND COMMUNICATION TECHNOLOGY ARCHITECTURE	J. Mikael Eklund ¹ , Thomas Riisgaard Hansen ² , Jonathan Sprinkle ¹ , Ruzena Bajcsy ¹ , Shankar Sastry ¹	¹ University of California, Berkeley (USA); ² Aarhus University (Denmark)
2463 49	EXTENDING MONITORING TIME OF BLUETOOTH PATIENT ADHOC NETWORKS	Javier G Castano ¹ , David E Alfaro ¹ , Mikael Ekström ^{1,2}	¹ Dept Comp Science & Electronics, Mälardalen University (Sweden); ² School of Comp. Science & Information Systems, Edith Cowan University (Australia)
2598 50	LEVELS OF DESIGN CRITERIA FOR EUROPEAN ALL CITIZEN PERSONAL HEALTH RECORDS	Thomas Grechenig ¹ , Barbara Tappeiner ¹ , Anna Wujciow ¹ , Philipp Tomsich ¹	¹ University of Veterinary Medicine - Research Group for Health Infrastructure Information Technologies (Austria)
2622 51	A CONCEPT TO PRESERVE DATA PRIVACY IN INTEGRATED NATIONAL HEALTH CARE INFORMATION SYSTEMS AND INFRASTRUCTURES	Thomas Grechenig ¹ , Philipp Tomsich ¹ , Barbara Tappeiner ¹ , Anna Wujciow ¹	¹ Vienna University of Technology (Austria)
2303 52	SYSTEM FOR ACQUISITION, STORAGE, MONITORING AND DIFFUSION OF CARDIAC SIGNALS ON THE WEB	Marco Aurelio Benedetti Rodrigues ¹ , Ricardo Godoi Vieira ¹ , Ciro José Egoavil Montero ¹	¹ FACVEST - Faculdades Integradas da Rede de Ensino UNIVEST (Brazil)
2167 53	R&D CHALLENGES IN DEVELOPING AN AMBIENT INTELLIGENCE EHEALTH PLATFORM	Franco Chiarugi ¹ , Manolis Spanakis ¹ , Panagiotis Lelis ¹ , Catherine Chronaki ¹ , Manolis Tsiknakis ¹	¹ Foundation for Research and Technology - Hellas, Institute of Computer Science, eHealth Laboratory (Greece)
2176 54	PERFORMANCE EVALUATION OF ADVANCED IMAGE FUSION ALGORITHMS FOR GAMMA KNIFE TREATMENT PLANNING	NIKOLAOS APOSTOLOU ¹ , ATHANASIOS PAPAZOGLOU ² , DIMITRIS KOUTSOURIS ¹	¹ NATIONAL TECHNICAL UNIVERSITY (Greece); ² HYGEIA HOSPITAL (Greece)

2022 55	LOCATION AND EXCHANGE INFORMATION PLATFORM FOR THE DEVELOPMENT OF MANAGEMENT APPLICATIONS IN HEALTH CENTRES	José Francisco Hernández ¹ , Eduardo Montón ¹ , David Aparisi ¹ , José L. Plaza ¹ , <u>Vicente Traver</u> ¹ , Sergio Guillén ¹	¹ ITACA Institute, Polytechnic University of Valencia, TSB Area (Spain)
2285 56	SECURE TELEMATIC ARCHITECTURE TO SUPPORT A HOSPITAL INFORMATION NETWORK DEPLOYMENT	<u>Miguel A. Valero</u> ¹ , Vicente Hernandez ¹ , Lourdes Lopez ¹ , Jose F. Martinez ¹ , Francisco J. Ortega ²	¹ Polytechnic University of Madrid/D. of Telematics Engineering and Architectures, Madrid (Spain); ² Fuenlabrada Hospital/Traumatology Unit, Madrid (Spain)

SS126 (SS125 II.) Medical Physics and Radiotherapy II. (Standard Session - posters)

Day and time: Wednesday 23rd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1911 57	Calculating Additional Shielding Requirements in Diagnostics X-Ray Departments by Computer	<u>Ali Rahimi</u> ¹	¹ faculty of health,mazandaran univercity of medical science (Iran)
2261 58	Effects of detector and electronic faulty on PET reconstructed image acquired with the full ring HR+	<u>Emanuele Fusilli</u> ² , <u>Felicia Zito</u> ¹ , <u>Elisabetta De Bernardi</u> ² , Mauro Schiavini ¹ , Cristina Canzi ¹ , Franco Voltini ¹ , Stefano Agosteo ³ , Paolo Gerundini ¹	¹ Nuclear Medicine Department , Ospedale Maggiore Policlinico, Mangiagalli e Regina Elena, Milan (Italy); ² Biomedical Engineering Department , Polytechnic University of Milan (Italy); ³ Nuclear Engineering Department, Polytechnic University of Milan (Italy)
1476 59	DOSIMETRY OF SMALL PERIPHERAL LUNG CANCER WITH GROUND-GLASS OPACITY IN RADIOTHERAPY USING A PHANTOM MODEL AND RADIOCHROMIC FILM	<u>Ayako Ujifuku</u> ¹ , Katsuda Toshizo ² , Gotanda Rumi ¹ , Inamura Keiji ³ , Kawabe Atsushi ¹ , Nakagiri Yoshitada ²	¹ Graduate School of Health Science, Okayama University (Japan); ² Faculty of Health Sciences, Okayama University Medical School (Japan); ³ Okayama University Hospital (Japan)
2429 60	AN ARTIFICIAL NEURAL NETWORKS ALGORITHM FOR PATIENT POSITIONING IN BREAST CANCER RADIOTHERAPY	<u>Maria Francesca Spadea</u> ¹ , Iuri Frosio ^{1,2} , Elena De Momi ¹ , Marco Riboldi ¹ , Guido Baroni ¹ , Giancarlo Ferrigno ¹ , Roberto Orecchia ³ , <u>Antonio Pedotti</u> ¹	¹ TBMLab, Bioengineering Department, Politecnico di Milano University (Italy); ² Information Scince Department, University of Milan (Italy); ³ Radiotherapy Division, European Instituteof Oncology, Milan (Italy)
2466 61	A SLACK CAPACITY APPROACH FOR SCHEDULING OF THE PERIODIC TREATMENT UNITS	S. Noyan Ogulata, Rizvan Erol, Cenk Sahin	

1860 62	STUDIES OF FIELD SHAPING WITH "OMOIOTHETA" BEAM MODULATORS IN ROTATIONAL RADIATION THERAPY	<u>Tatjana Ivanova</u> ¹ , Kristina Bliznakova ¹ , Nikolas Pallikarakis ¹	¹ Department of Medical Physics, School of Medicine, University of Patras (Greece)
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SS97 (SS89 IX. We) Biomedical Signal Processing IX. (Standard Session - posters)

Day and time: Wednesday 23rd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
2401 63	DECREASED BAROREFLEX SENSITIVITY: PREDICTOR FOR POSTOPERATIVE ATRIAL FIBRILLATION?	<u>Robert Bauernschmitt</u> ¹ , Niels Wessel ² , Hagen Malberg ³ , Gernot Brockmann ¹ , Claudia Zinser ¹ , Ruediger Lange ¹	¹ German Heart Center Munich, Dept. of Cardiovascular Surgery (Germany); ² Dept. of Physics, University of Potsdam (Germany); ³ Institute for Applied Informatics, Karlsruhe Research Center (Germany)
2100 64	DIGITAL SMOOTHING POLYNOMIALFILTER FOR BIOMEDICAL SIGNAL EVALUATION	<u>Milan Stork</u> ¹	¹ UWB (Czech Republic)
2387 65	METHODS AND TOOLS FOR PROCESSING BIOSIGNALS: A SURVEY PAPER	<u>Chrysostomos Stylios</u> ¹ , George Georgoulas ¹ , V Chudacek ² , J Rieger ² , Lenka Lhotská ²	¹ Dept. of Communications, Informatics and Management, TEI of Epirus (Greece); ^{2**} Czech Technical University/Gerstner Laboratory (Czech Republic)
1808 66	UTERINE CONTRACTIONS EXTRACTION BY SPECTRUM ANALYSIS OF THE EHG	<u>Mihaela Ungureanu</u> ¹ , Jan W. M. Bergmans ² , Guid S. Oei ³ , Rodica Strungaru ¹	¹ Politehnica University of Bucharest (Romania); ² Technical University Eindhoven (The Netherlands); ³ Máxima Medisch Centrum (The Netherlands)
2055 67	Dyslexia Detection from Eye Movements using Artificial Neural Networks	<u>Martin Macaš</u> ¹ , Lenka Lhotská ¹ , Daniel Novák ¹ , Martin Vyhnálek ² , Richard Brzezny ²	¹ Czech Technical University in Prague/Gerstner Laboratory, Technická 2, Prague (Czech Republic); ² 2nd Medical Faculty of the Charles University/Department of Neurology, V úvalu 84, Prague (Czech Republic)
1753 68	CLASSIFICATION OF FETAL HEART RATE DURING THE INTRAPARTUM PERIOD USING WAVELET NEURAL NETWORKS TRAINED BY PSO	<u>Chrysostomos Stylios</u> ² , George Georgoulas ¹ , Peter Groumpos ¹	¹ Laboratory for Automation and Robotics, University of Patras (Greece); ² Dept. of Communications, Informatics and Management, TEI of Epirus (Greece)
1866 69	ANALYSIS OF FETAL HEART RATE VARIABILITY SIGNAL TO SEPARATE DISTRESSED IUGR FETUSES FROM SGA FETUSES	<u>Manuela Ferrario</u> ¹ , Maria Gabriella Signorini ¹ , Giovanni Magenes ²	¹ Politecnico di Milano (Italy); ² Università di Pavia (Italy)

2652 70	REMOVAL OF FREQUENCY FLUCTUATING POWER-LINE INTERFERENCE FROM ECG	<u>Ivan Dotsinsky</u> ¹	¹ Center of Biomedical Engineering - Bulgarian Academy of Sciences (Bulgaria)
2027 71	REMOVING THE MHD ARTIFACTS FROM THE ECG SIGNAL FOR CARDIAC MRI SYNCHRONIZATION	Dima Abi Abdallah ¹ , Agnes Drochon ¹ , Vincent Robin ¹ , Latifa Bouchet-Fakri ² , Odette Fokapu ¹	¹ University of Technology of Compiègne (France); ² University Claude Bernard (France)
2271 72	AVERAGING OSCILLOMETRIC NONINVASIVE BLOOD PRESSURE RECORDINGS: TRANSFORMATION INTO THE NORMALISED VIEW	<u>Vojko Jazbinsek</u> ¹ , Janko Luznik ¹ , Zvonko Trontelj ¹	¹ IMFM, University of Ljubljana (Slovenia)
2408 73	EFFECT OF SAUNA BATH TO BCG, CAROTID AND ANKLE PULSE SIGNAL DURING NORMAL BLOOD PRESSURE AND HYPERTENSION	<u>Jarmo Alametsä</u> ¹ , Antti Saastamoinen ¹ , Eero Huupponen ¹ , Alpo Värrä ¹	¹ TTY Signal Processing (Finland)
2119 74	A WAVELET-BASED MULTI-CHANNEL ECG DELINEATOR	<u>Antoun Khawaja</u> ¹ , Sebanti Sanyal ¹ , Olaf Dössel ¹	¹ Institute of Biomedical Engineering, Universität Karlsruhe (Germany)
2489 75	HEART RHYTHM – DIFFERENTIATION OF ATRIAL FIBRILLATION AND FLUTTER FROM OTHER ARRHYTHMIA USING WAVELET TRANSFORM AND ARTIFICIAL NEURAL NETWORK	<u>Radoslaw Dzik</u> ¹ , Ewaryst Tkacz ^{1,2}	¹ The Silesian University of Technology, Institute of Electronics, Gliwice (Poland); ² Medical University of Silesia, Faculty of Pharmacy and Laboratory Medicine, Department of Bionics, Sosnowiec (Poland)
2454 76	FEATURE EXTRACTION EVIDENCING LONG TERM DEPENDENCIES FOR A BRAIN-COMPUTER INTERFACE	<u>Lazar Anca</u> <u>Mihaela</u> ¹ , Ursulean Radu ²	¹ University of Medicine and Pharmacy (Romania); ² Technical University (Romania)
1764 77	CHANGE DETECTION IN CONTINUOUS TAPPING DATA	<u>Heiko Hofer</u> ¹ , Gerhard Staude ¹ , Werner Wolf ¹	¹ Institute of Mathematics and Computer Science, University of A. F. Munich, Germany (Germany)
2155 78	RELIABILITY OF NON-LINEAR POSTURAL PARAMETERS DURING STABILOMETRIC ANALYSIS	Mohamed Abadi ¹ , <u>Hassan Amoud</u> ¹ , David Hewson ¹ , Michel Doussot ¹ , Jacques Duchene ¹	¹ Université de technologie de Troyes (France)

SS124 (SS120 V. We) Medical Imaging V. (Standard Session - posters)

Day and time: Wednesday 23rd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
2008 79	PLATELETS FOR DENOISING OF SPECT IMAGES: PHANTOM AND PATIENT STUDY	<u>Abbas Takavar</u> ^{1,2} , Nader Riyahi- Alam ¹ , Naghmeh Alibabaei ¹ , Mehdi Sohrabi ² , Armaghan Fard- esfahani ²	¹ Tehran University of Medical Sciences(TUMS), School of Medicine, Department of Medical Physics and Biomedical Engineering (Iran); ² Research Institute for Nuclear Medicine, Shariati Hospital (Iran)
2069 80	FEASIBILITY OF 3D MODEL CONSTRUCTION IN MRI COLONOSCOPY USING A MICRO-COIL ANTENNA AND THE PULL-BACK METHOD	<u>Christopher Foley</u> ¹ , Robert Dickinson ¹ , Richard Kitney ¹	¹ Imperial College London (U.K.)
2253 81	LOSSY COMPRESSION OF MEDICAL INFRARED IMAGES	Gerald Schaefer ¹ , <u>Shao Ying Zhu</u> ²	¹ Nottingham Trent University (U.K.); ² University of Derby (U.K.)
1534 82	VALIDATION OF IMPORTANCE SAMPLING IN GATE	<u>Jan De Beenhouwer</u> ¹ , Steven Staelens ¹ , Andreas Goedicke ² , Bernd Schweizer ² , Yves D'Asseler ¹ , Ignace Lemahieu ¹	¹ Ghent University (Belgium); ² Philips Research Laboratories (Germany)
2164 83	HEAD-MOTIONCOMPENSATION DURING RECONSTRUCTION FROM LIST MODE PET DATA	Wies Deckers ¹ , Jeroen Verhaeghe ¹ , <u>Jan De Beenhouwer</u> ¹ , Yves D'Asseler ¹ , Ignace Lemahieu ¹	¹ Gent University (Belgium)
1432 84	PERFORMANCE EVALUATION OF ACTIVE CONTOUR MODELS FOR CAROTID PLAQUE SEGMENTATION	Christos Loizou ¹ , <u>Constandinos Pattichis</u> ² , Robert Istepanian ³ , Marios Pantziaris ⁴	¹ Intercollege (Cyprus); ² University of Cyprus (Cyprus); ³ Institute of Neurology and Genetics (Cyprus); ⁴ Imperial College (U.K.)

2236 85	COMPUTER SIMULATOR OF BREAST LESIONS	Ricardo Rodrigues Falconi, Henrique J. Quintino Oliveira, Francisco Carlos da Silva, Rejane de Almeida Borges	
1781 86	A FAST ALGORITHM FOR PHASED ARRAY IMAGE RECONSTRUCTION IN MAGNETIC RESONANCE IMAGING	Giulio Giovannetti ¹ , Vittorio Viti ² , Vincenzo Positano ¹ , <u>Filomena Santarelli</u> ¹ , Luigi Landini ³ , Antonio Benassi ¹	¹ Institute of Clinical Physiology, National Council of Research, Pisa (Italy); ² Esaote Biomedica s.p.a., Genova (Italy); ³ Department of Information Engineering, University of Pisa, Pisa (Italy)
2695 87	COMPLEX-VALUED WAVELET ESTIMATION OF SKULL VOLUME FROM 3D MR IMAGES	S <u>Samia</u> , L Kuppo, L H Arhia	Africa Nazareni University (Kenya)
2590 88	A SIMULATION PROGRAM FOR ULTRASOUND TOMOGRAPHY IMAGING BASED ON FIELD II	<u>Tobias Gehrke</u> ¹ , Fahmi Cheikhrouhou ¹ , Heinrich Martin Overhoff ¹	¹ Medical Engineering Laboratory, University of Applied Sciences Gelsenkirchen (Germany)
2160 90	OPTICAL TRACKING FOR MEDICAL APPLICATIONS	<u>Zoltán Szabó</u> ¹	¹ Faculty of Biomedical Engineering (Czech Republic)

SS102 (SS98 V. We) Biomedical System Modelling and Analysis V. (Standard Session - posters)

Day and time: Wednesday 23rd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1536 91	TOUCH-LESS ESTIMATION OF BLOOD FLOW SPEED AND VESSEL LOCATION FROM FUNCTIONAL INFRARED IMAGING	<u>Arcangelo Merla</u> ^{2,3} , Marc Garbey ¹ , Ioannis Pavlidis ¹	¹ Computer Science Dept., Univ. of Houston, Houston, TX (USA); ² ITAB – Institute of Advanced Biomedical Technologies, Foundation “G. D’Annunzio University”, Chieti (Italy); ³ Department of Clinical Sciences and Bioimaging, School of Medicine, University of Chieti-Pescara, Chieti (Italy)
1579 92	MODELLING OF FIRST-PASS DATA IN MRI MEASUREMENTS	<u>Renata Kalicka</u> ¹	¹ Gdańsk University of Technology (Poland)
1680 93	COMPARISON METHODS FOR IMPROVING GENERALIZATION WHEN PREDICTING OF MUSCLE FORCES USING A BACKPROPAGATION NEURAL NETWORK	<u>Jana Vejpuskova</u> ¹ , Miloslav Vilimek ¹ , Miroslav Sochor ¹	¹ in Prague, Faculty of Mechanical Engineering, Department of Mechanics (Czech Republic)
1721 94	DIRECTLY CALCULATED OPTIMAL SAMPLING TIMES FOR THE SUM OF EXPONENTIAL FUNCTIONS	<u>Renata Kalicka</u> ¹ , Dariusz Bochen ²	¹ Gdansk University of Technology (Poland); ² Białystok Technical University (Poland)
1806 95	LINEAR FINITE ELEMENT ANALYSIS OF TENSION AND DISPLACEMENT FOR VENTRICULO-PERITONEAL SHUNTS	Chiriac Alexandru, Poeata Ion	
1934 96	THE ANALYSIS OF THE BIOLIQUID FLOW THROUGH THE CHANNEL	Natalya Suprunenko	
2024 97	PARAMETRIC ANALYSIS OF MODELS OF INTRACRANIAL SACCCULAR ANEURYSMS	<u>Krzysztof Szafranski</u> ¹	¹ Szczecin University of Technology (Poland)
2146 98	MODELING THE DYNAMIC HEART FOR IMPEDANCE BASED CARDIAC PATHOLOGY DETECTION	<u>Rauno Gordon</u> ¹ , Sergei Malchenko ² , Indrek Rätsep ¹	¹ Tallinn University of Technology (Estonia); ² University of Tartu (Estonia)
2473 99	NEURAL NETWORK MODELS FOR NON-INVASIVE TWO-POINT TEMPERATURE MONITORING IN A HOMOGENEOUS MEDIUM IRRADIATED BY THERAPEUTIC ULTRASOUND	<u>César Teixeira</u> ¹ , Wagner Pereira ² , Antônio Ruano ¹ , Carlos Negreira ³ , Maria da Graça Ruano ¹	¹ Centro de Sistemas Inteligentes (Portugal); ² Programa em Engenharia Biomédica/COPPE (Brazil); ³ Laboratório de Acústica Ultrasonora (Uruguay)

2491 100	MONTE CARLO SIMULATION OF STEADY-STATE DIFFUSE REFLECTANCE SPECTROSCOPY IN ARTERIAL TISSUES	<u>Emilie PERY</u> ¹ , Loic BAUER ¹ , Walter C.P.M. BLONDEL ¹ , Jacques DIDELON ^{1,2} , François GUILLEMIN ^{1,2}	¹ CRAN UMR 7039 CNRS-UHP-INPL (France); ² Centre Alexis Vautrin (France)
1991 101	EXTENSION OF VESSEL MODEL FOR THE VALIDATION OF RETINAL VESSEL ANALYS	<u>Kutaiba Saleh</u> ¹ , Axel Fink ¹ , Bernd-Ullrich Seifert ² , Walthard Vilser ² , Guenter Henning ¹	¹ Technical University of Ilmenau, Institute BMTI (Germany); ² Imedos GmbH, Jena (Germany)
1478 102	THE EFFECT OF THE LEAFLET CONCAVITY ON THE CAVITATIONAL POTENTIAL OF SOME MHVS	Dan Rafiroiu, Corina Giurgea, Calin Popa, Mihai Munteanu, Pompiliu Manea, Radu Ciupa	
1880 103	METHODOLOGY AND FIRST RESULTS OF SELECTIVE CONE STIMULATION OF HUMAN EYE VIA SILENT SUBSTITUTION TECHNIQUE	<u>Patrick Beßler</u> ¹ , Sascha Klee ¹ , Peter Husar ² , Guenter Henning ¹	¹ Technische Universität Ilmenau (Germany); ² Saarland University Hospital (Germany)
1891 104	POLYVARIANT METHODS OF ANALYSIS, MODELLING AND VISUALIZATION OF CARDIOGRAPHIC INFORMATION	<u>Oleg Bodin</u> ¹	¹ Penza State University (Russia)

SS88 (SS85 IV. We) Biomedical Measurement IV. (Standard Session - posters)

Day and time: Wednesday 23rd November, 9.00-18.00, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1606 105	A SOFTWARE SYSTEM FOR THE ESTIMATION OF THE QUADRICEPTS VARIATIONS USING A GAIT ANALYSIS SYSTEM	Milan Stork ¹ , <u>Zdenek Trefny</u> ¹	¹ UWB (Czech Republic)
1702 106	FETAL MONITORING WITH ONLINE PROCESSING OF ELECTROCARDIOGRAPHIC SIGNALS	<u>Janusz Jezewski</u> ¹ , Adam Matonia ¹ , Tomasz Kupka ¹ , Janusz Wrobel ¹	¹ Institute of Medical Technology and Equipment (Poland)
1710 107	OBTAINING AND ANALYSIS OF MULTIFOCAL ELECTRORETINOGRAM	<u>Anna Cysewska-Sobusiak</u> ¹ , Arkadiusz Hulewicz ¹ , Andrzej Grzybowski ² , Michal Boltrukiewicz ¹	¹ Poznan University of Technology, Institute of Electronics and Telecommunications, Division of Metrology (Poland); ² Poznan City Hospital, Vision Electrodiagnostics Lab (Poland)
2231 108	LOW COST ENVIRONMENT FOR MONITORING BIOMEDICAL SIGNALS	Radu Mihai Dumitrean, Mihai Munteanu , Florin Hurgoi, Nicoleta Stroia	
2516 109	NON-INVASIVE MULTI-CHANNELS BOWEL SOUND MEASUREMENT SYSTEM IN DIAGNOSIS OF GUT FUNCTION	<u>Chien Chia-Hung</u> ^{1,2} , Hsieh Dung-Sheng ² , Huang Hung-Chun ^{1,2} , Wang Cheng-Yi ¹ , Chong Fok-Ching ²	¹ Biomedical Engineering Department, (Taiwan); ² Graduate Institute of Electronics Engineering and Department of Electrical Engineering, (Taiwan)
1550 110	GRAPHICAL PRESENTATION OF CERVICAL DILATATION ASSESSMENTS DURING LABOUR	<u>Milorad Letic</u> ¹	¹ School of Medicine (Serbia)
2196 111	A CMOS CAMERA-BASED SYSTEM FOR NON-CONTACT PULSE OXIMETRY IMAGING	<u>Kenneth Humphreys</u> ¹ , Tomas Ward ¹ , Charles Markham ¹	¹ National University of Ireland, Maynooth (Ireland)

1983 112	FIRST RESULTS OF VEP MEASUREMENT WITH A GAZE CONTROLLED PERIMETER	<u>Andreas Götze</u> ¹ , Sebastian Berkes ² , Gunter Henning ¹	¹ Ilmenau Technical University/ Dept. Biomedical Engineering (Germany); ² Eldith, GmbH, Gustav-Kirchhoff-Str. 5, 98693 Ilmenau (Germany)
1749 113	DIELECTRIC STUDIES IN-VITRO OF ISCHAEMIC AND HEALTHY HUMAN TISSUES	<u>Ewa Marzec</u> ^{2,1}	¹ Jacek Brzeziński, Grzegorz Oszkinis, Department of General and Vascular Surgery, Poznań University of Medical Sciences, Długa ½, 61-848 Poznań , Poland, (Poland); ² Ewa Marzec,*Department of Biophysics, Poznań University of Medical Sciences, Fredry 10, 61-701 Poznań, Poland (Poland)
1824 114	APPLICATION OF OPTICAL METHOD IN EVALUATION OF VASOVAGAL SYNCOPE INDUCED BY HEAD-UP TILT TABLE TEST	Angelika Nosek, Roman Maniewski, Ewa Szufładowicz, Anna Zbiec, Franciszek Walczak	
1941 115	RECOVERY OF TARGET IN THE DEEP REGION USING DEPTH- ADAPTIVE-VOXEL-SIZE RECONSTRUCTION IN DIFFUSE REFLECTIVE OPTICAL TOMOGRAPHY (DROT)	<u>reiko endoh</u> ¹ , Mamiko Fujii ¹ , Kiyoshi Nakayama ¹	¹ Nakayama Lab., Dept. of Electrical & Electronics Eng., Sophia University (Japan)

**SS2 Instrumentation and Measurement Applied to Biomedical Engineering I.
(Special Session - oral contributions) - organised by Akos Jobbágy and technically
sponsored by IEEE Hungary Section I & M and EMBS Joint Chapter**

Chair: Akos Jobbágy (Hungary)

Co-Chair: Gabor Horvath (Hungary)

Day and time: Thursday 24th November, 11.00-12.30 (format 10+5 minutes)

Hall: Meeting Hall V

Id	Title	Paper Authors	Authors' Institutions
1426 11.00	NON-INVASIVE ASSESSMENT OF AORTIC STIFFNESS	Ákos Jobbágy ¹ , Péter Csordás ¹ , <u>András Mersich</u> ¹	¹ Budapest University of Technology and Economics (Hungary)
1431 11.15	EVALUATION OF HAND TREMOR	<u>Ákos Jobbágy</u> ¹ , Károly János Bretz ¹ , Zoltán Melicher ¹	¹ Budapest University of Technology and Economics (Hungary)
2030 11.30	24-WELL-MICROPLATE WITH SENSORS FOR METABOLIC, MORPHOLOGIC AND ELECTROPHYSIOLOGIC PARAMETERS OF LIVING CELLS OR TISSUES	<u>Johann Ressler</u> ¹ , Volker Lob ¹ , Martin Brischwein ¹ , Helmut Grothe ¹ , Bernhard Wolf ¹	¹ Technical University of Munich (Germany)
2079 11.45	VIRTUAL BIOINSTRUMENTATION FOR THE IMPLEMENTATION OF AN EEG GUIDED ANAESTHESIA DELIVERY SYSTEM (EGADS)	Joaquin Roca Dorda ¹ , <u>Joaquin Roca González</u> ¹ , Jacinto M. Jiménez Martínez ¹ , José A. Álvarez-Gómez ² , Francisco J. Gil Sánchez ²	¹ Polytechnic University Of Cartagena (Spain); ² Hospital Sta. Maria del Rosell de Cartagena (Spain)
2210 12.00	MODULAR SYSTEM FOR ASSESSMENT OF THE THYROID GLAND FUNCTIONAL STATE - BIOLAB	Vladimír Rosik ¹ , Peter Kneppo ² , <u>Milan Tyšler</u> ¹ , Jaroslav Ždiňák ¹ , Jana Švehlíková ¹	¹ Institute of Measurement Science, Slovak Academy of Sciences (Slovak Republic); ² Faculty of Biomedical Engineering, Czech Technical University (Czech Republic)
2262 12.15	DIGITAL MULTICHANNEL BIOIMPEDANCE ANALYSER: SIGNAL PROCESSING APPROACHES	<u>Ants Ronk</u> ¹ , Paul Annus ² , Alar Kuusik ¹ , Raul Land ¹ , Olev Märtens ¹	¹ Department of Electronics, Tallinn University of Technology (Estonia); ² Competence Centre ELIKO (Estonia)

SS66 (SS65 II.) Biomaterials II. (Standard Session - oral contributions)

Chair: Jan Čulík (Czech Republic)

Co-Chair: Rudolf Fryček (Czech Republic)

Day and time: Thursday 24th November, 11.00-12.30 (format 10+5 minutes)

Hall: Meeting Hall I

Id	Title	Paper Authors	Authors' Institutions
1625 11.00	BIOERODIBLE SCAFFOLDS FOR IMPLANTABLE MICROFLUIDIC PROBES FOR CONVECTION ENHANCED NEURAL DRUG DELIVERY	Conor P. Foley ¹ , W. Mark Saltzman ² , William L. Olbricht ¹	¹ Cornell University (USA); ² Yale University (USA)
2046 11.15	EXPERIMENTAL INVESTIGATION OF NEGATIVE PRESSURE INTRUSION TECHNIQUES OF ACETABULAR COMPONENT CEMENTATION IN TOTAL HIP ARTHROPLASTY	Ruairí Mac Niocaill ^{1,2} , John Britton ² , Paddy Kenny ¹ , Paddy Prendergast ²	¹ Cappagh, National Orthopaedic Hospital, Finglas, Dublin 15 (Ireland); ² Centre for Bioengineering, Dept of Mechanical Engineering, Trinity College, Dublin (Ireland)
2102 11.30	FABRICATION AND CHARACTERIZATION OF SELF-ASSEMBLED MONOLAYERS ON MICROELECTRODE ARRAY FOR CELL CULTURE	Shu Ping Lin ¹ , Hsiao-Yu Lee ² , Jiunn-Der Liao ³ , Shun-Fen Tzeng ⁴ , Jia-Jin Jason Chen ¹	¹ Institute of Biomedical Engineering, National Cheng Kung University (Taiwan); ² Department of Management Information Systems, Far East College (Taiwan); ³ Department of Materials Science & Engineering, National Cheng Kung University (Taiwan); ⁴ Department of Biology, National Cheng Kung University (Taiwan)
1730 11.45	COMPARATIVE ANALYSIS OF COLOUR CHARTS AND SPECTROPHOTOMETRICAL STUDIES IN DENTAL PRACTICE	Kamila Linkowska ¹ , Świdzińska ¹ , Teodor Świdziński ² , Ryszard Koczorowski ¹	¹ Chair & Clinic of Prosthodontics, University of Medical Sciences, Poznań (Poland); ² Chair & Department of Biophysics, University of Medical Sciences, Poznań (Poland)
1523 12.00	DETERMINATION OF MECHANICAL PROPERTIES OF SILICON AND POLYMER MICRONEEDLES	Anthony Morrissey ¹ , Nicolle Wilke ¹	¹ Tyndall National Institute (Ireland)

SS21 Electronic Health Record I. (Satellite Symposium - oral contributions)

Chair: Jana Zvárová (Czech Republic)

Co-Chair: Pirkko Nykänen (Finland)

Day and time: Thursday 24th November, 11.00-12.30 (format 10+5 minutes)

Hall: Club A

Id	Title	Paper Authors	Authors' Institutions
1605 11.00	OPEN LABORATORY INFORMATION SYSTEM BASED ON CEN DATA TYPES AND LOINC CODES	Isabel Román ¹ , <u>Laura Ma Roa</u> ¹ , Germán Madinabeitia ¹ , Ramón García ¹	¹ University of Seville (Spain)
1616 11.15	ONTOLOGY SERVER FOR THE INTEGRATION OF DEMOGRAPHIC SERVERS	Isabel Román ¹ , Germán Madinabeitia ¹ , <u>Laura Ma Roa</u> ¹	¹ University of Seville (Spain)
1698 11.30	MUDRLite – AN ELECTRONIC HEALTH RECORD APPLIED TO DENTISTRY BY THE USAGE OF A DENTAL-CROSS COMPONENT	Josef Špidlen ¹ , Martin Pies ¹ , Zuzana Teuberová ² , Miroslav Nagy ¹ , Petr Hanzlíček ¹ , Jana Zvárová ¹ , <u>Tatjana Dostálová</u> ²	¹ Department of Medical Informatics, Institute of Computer Science, Academy of Sciences of the Czech Republic and EuroMISE Centre, Prague (Czech Republic); ² Department of Prosthodontics, First Faculty of Medicine of Charles University and General University Hospital, EuroMISE Centre, Prague (Czech Republic)
1789 11.45	ELECTRONIC HEALTH RECORD IN CONTINUOUS SHARED HEALTH CARE	<u>Petr Hanzlíček</u> ¹ , Jana Zvárová ¹ , Karel Zvára ² , Vít Bureš ³ , Josef Špidlen ¹	¹ Department of Medical Informatics, Institute of Computer Science AS ČR (Czech Republic); ² EuroMISE, s.r.o. (Czech Republic); ³ Medicalc software, s.r.o. (Czech Republic)
1809 12.00	HOW TO RETRIEVE KNOWLEDGE FROM MEDICAL TEXTS EFFECTIVELY	Petr Kolesa ^{1,2} , Ján Antolík ¹ , <u>Jan</u> <u>Đurovec</u> ¹	¹ EuroMISE Centre, Institute of Computer Science AS CR, Department of the Medical Informatics (Czech Republic); ² EuroMISE s. r. o (Czech Republic)
1815 12.15	METHODS OF MEDICAL GUIDELINES MODELLING IN GLIF	<u>David Buchtela</u> ¹ , Zdeněk Anger ¹ , Jan Peleška ¹ , Marie Tomečková ¹ , Arnošt Veselý ¹ , Jana Zvárová ¹	¹ EuroMISE Center and Dep. of Medical Informatics, AS CR (Czech Republic)

SS12 Microfluidics and Microcirculation I. (Special Session - oral contributions)

Chair: Alexandru Morega (Romania)

Co-Chair: Josef Pražák (Czech Republic)

Day and time: Thursday 24th November, 11.00-12.30 (format 10+5 minutes)

Hall: Club B

Id	Title	Paper Authors	Authors' Institutions
1636 11.00	A MULTICHANNEL MICROFABRICATED DEVICE FOR CONVECTION ENHANCED DRUG DELIVERY	Keith B. Neeves ¹ , Michael S. Isaacson ² , W. Mark Saltzman ³ , William L. Olbricht ¹	¹ Cornell University (USA); ² University of California, Santa Cruz (USA); ³ Yale University (USA)
1792 11.15	A MICROFLUIDIC DEVICE FOR 500-SECOND DNA MICROARRAY HYBRIDIZATION THAT REDUCES TARGET CONCENTRATION BIAS	Ji-Yen Cheng ¹ , Cheng-Wey Wei ¹ , Tai-Horng Young ²	¹ Research Center for Applied Sciences, Academia Sinica (Taiwan); ² Institute of Biomedical Engineering, National Taiwan University (Taiwan)
1518 11.30	LOW-DISPERSION TURNS FOR MICRO CE SYSTEMS	Guan-Liang Chang ¹ , Lung-Ming Fu ² , <u>Che-Hsin Lin</u> ³ , Chien-Hsiung Tsai ²	¹ National Cheng-Kung University (Taiwan); ² National Pingtung University of Science and Technology (Taiwan); ³ National Sun Yat-sen University (Taiwan)

SS51 Biomedical Engineering Education in Europe (Standard Session - oral contributions)

Chair: Dick Slaaf (The Netherlands)

Co-Chair: Jiří Jan (Czech Republic)

Day and time: Thursday 24th November, 11.00-12.30 (format 10+5 minutes)

Hall: Club C

Id	Title	Paper Authors	Authors' Institutions
1724 11.00	INFORMATION TECHNOLOGIES AS A BASE OF BIOMEDICAL ENGINEERING EDUCATIONAL PROCESS	<u>Alexander Kalinichenko</u> ¹ , L	¹ St. Petersburg State Electrotechnical University / Biomedical engineering department (Russia)
1738 11.15	BIOMEDICAL ENGINEERING EDUCATION IN A NEW BRANCH OF BACHELOR STUDY "BIOMEDICAL TECHNOLOGY"	<u>Marek Penhaker</u> ¹ , Jindřich Černohorský ¹ , Petr Tiefenbach ¹ , Hana Sochorová ²	¹ VŠB - TU Ostrava (Czech Republic); ² University of Ostrava (Czech Republic)
2434 11.30	BIOMEDICAL ENGINEERING IN THE CONTEXT OF NEW LEGISLATION IN THE CZECH REPUBLIC	<u>Jaromir Cmiral</u> ¹ , Lenka Lhotska ²	¹ Czech Society for Biomedical Engineering and Medical Informatics (Czech Republic); ² Czech Technical University in Prague, Gerstner Laboratory (Czech Republic)
2435 11.45	BIOMEDICAL ENGINEERING EDUCATION AT THE FACULTY OF ELECTRICAL ENGINEERING OF THE CZECH TECHNICAL UNIVERSITY IN PRAGUE	<u>Lenka Lhotska</u> ¹ , Vladimír Marik ¹ , Olga Stepankova ¹	¹ Czech Technical University in Prague (Czech Republic)
2521 12.00	BME EDUCATION - THE PROJECT ORGANIZED AND PROBLEM BASED LEARNING MODEL IS THE CHOICE	<u>Kim Dremstrup Nielsen</u> ¹ , Johannes Struijk ¹	¹ Aalborg University (Denmark)

SS36 Health Care Technology Assessment I. (Special Session - oral contributions)

Chair: Peter Heimann (WHO, Geneva, Switzerland)

Co-Chair: Nicolas Pallikarakis (Greece)

Day and time: Thursday 24th November, 11.00-12.30 (format - please, see below)

Hall: Club D

Id	Title	Paper Authors	Authors' Institutions
11.00	BRINGING HTA INTO PRACTICE: CHALLENGES AND OPPORTUNITIES	<u>Andrei Issakov</u>	Department of Health System Policies and Operations (SPO), World Health Organization, Geneva (Switzerland)
11.25	TOWARDS ROBUST METHODOLOGIES FOR ASSESSING E-HEALTH	<u>Kwankam Yunkap</u>	Department of Knowledge Management and Sharing (KMS), World Health Organization, Geneva (Switzerland)
2671 11.50	THE IMPACT OF AN EXTERNAL QUALITY MECHANISM IN HOSPITAL STAFF: DOES THE ISO9000 MAKES OUR DREAMS COME TRUE?	<u>Roberto Ichinose</u> ¹ , <u>Rosimary Almeida</u> ¹	¹ Federal University of Rio de Janeiro - COPPE/PEB (Brazil)
2633 12.10	THE SET UP OF A QUALITY CONTROL PROCESS IN TELEMEDICINE	<u>Daniele Giansanti</u> ¹ , Sandra Morelli ¹ , Giovanni Maccioni ¹ , Andrea Belardinelli ² , Lorenzo Guerriero ² , Remo Bedini ² , velio Macellari ¹	¹ Istituto Superiore Di Sanità (Italy); ² IFC-CNR di Pisa (Italy)

SS15 Implantable Devices I. (Special Session - oral contributions)

Chair: Jari Hyttinen (Finland)

Co-Chair: Jukka Leikkala (Finland)

Day and time: Thursday 24th November, 11.00-12.30 (format 10+5 minutes)

Hall: Club E

Id	Title	Paper Authors	Authors' Institutions
1477 11.00	SOLVING THE INTERCONNECTION PROBLEM OF FLEXIBLE MULTIELECTRODE ARRAYS BY USE OF ADDRESSABLE ORGANIC SEMICONDUCTOR STIMULATOR CELLS	<u>Markus Schwarz</u> ¹	¹ Niederrhein University of Applied Sciences (Germany)
1982 11.15	MODELING METHODS IN IMPLANTABLE ECG DEVICE DEVELOPMENT	<u>Juho Väisänen</u> ¹ , Milla Ylinaatu ¹ , Jari Hyttinen ¹ , Jaakko Malmivuo ¹	¹ Ragnar Granit Institute, Tampere University of Technology (Finland)
2137 11.30	INTRODUCING A WIRELESS, PASSIVE AND IMPLANTABLE DEVICE TO MEASURE ECG	<u>Jarno Riistama</u> ^{1,2} , <u>Juho Väisänen</u> ^{1,3} , Jukka Leikkala ^{1,2} , Jari Hyttinen ^{1,3}	¹ Tampere University of Technology (Finland); ² Institute of Measurement and Information Technology (Finland); ³ Ragnar Granit Institute (Finland)
2244 11.45	METHODS OF MULTI-FREQUENCY BIOIMPEDANCE MEASUREMENT IN IMPLANTABLE AND WEARABLE DEVICES	<u>Mart Min</u> ¹ , Toomas Parve ¹ , Gustav Poola ¹	¹ Tallinn University of Technology (Estonia)
1848 12.00	DEVELOPING BIOCOMPATIBLE THIN FILMS FOR COATING AND ENCAPSULATION OF IMPLANTABLE MICROSYSTEMS	<u>Birger Jettkan</u> ¹ , Bernward Horn ² , Bernhard Clasbrummel ¹	¹ BG Kliniken Bergmannsheil Bochum (Germany); ² Ing. Büro Horn (Germany)

SS46 Medical Applications of Electromagnetic Field II. (Special Session - SS4 II. - oral contributions)

Chair: Gerard Van Rhoon (The Netherlands)

Co-Chair: Jan Vrba (Czech Republic)

Day and time: Thursday 24th November, 11.00-12.30 (format 10+3 minutes)

Hall: Club H

Id	Title	Paper Authors	Authors' Institutions
2192 11.00	MICROWAVE MEDICAL IMAGING AND DIAGNOSTICS	<u>Jan Vrba</u> ¹ , Marika Pourova ¹ , Ondrej Zak ¹ , Tomas Drizdal ¹ , Radim Zajicek ¹	¹ Czech Technical University in Prague (Czech Republic)
2198 11.13	METHOD OF MEASURING DIELECTRIC PROPERTIES OF BIOLOGICAL TISSUE AND ITS USE IN MEDICAL IMAGING AND DIAGNOSTICS	<u>Radim Zajicek</u> ¹ , Ladislav Oppl ¹ , Jan Vrba ¹	¹ Czech Technical University in Prague (Czech Republic)
2201 11.26	MICROWAVE APPLICATORS FOR „BPH“ THERMOTHERAPY	<u>Roman Hlavac</u> ¹ , Jan Vrba ¹	¹ Czech Technical University in Prague (Czech Republic)
1852 11.39	MAGNETIC FIELD OF THE LUNGS - NEURAL NETWORK INVERSE MODELS	<u>Jiri Tomek</u> ¹ , Pavel Ripka ¹ , Antonín Platil ¹	¹ Czech Technical University - Faculty of Electrical Engineering (Czech Republic)
2482 11.52	INVESTIGATION OF A NEW COIL DESIGN FOR MAGNETIC STIMULATION	<u>Bareaa Zabach</u> ¹	¹ Politehnica University (Romania)
2525 12.05	OPTIMIZATION OF MR-RELAXOMETRY FOR BMD-MEASUREMENTS AND ITS CORRELATION WITH DEXA	Nader Riyahi-Alam, Morteza Bakhtiyari, mohammad Ali Oghabian, Ali Ghasemzadeh, Hossein Ghanati, Saeed Sarkar, Bagher Iarjani, Zahra Hamidi, Naser Shakeri	
2380 12.18	NOVEL TARGETED TREATMENTS OF TUMORS WITH MICROPARTICLES DRIVEN BY MRI-BASED GRADIENTS	<u>Sylvain Martel</u> ¹ , Gilles Soulez ² , Richard Béliveau ³ , Jean-Baptiste Mathieu ¹ , Ouajdi Felfoul ¹	¹ NanoRobotics Laboratory, Department of Computer Engineering and Institute of Biomedical Engineering, École Polytechnique de Montréal (EPM), Campus of the Université de Montréal, Montréal (Québec) (Canada); ² Radiology Department, Université de Montréal, Montréal (Québec) (Canada); ³ Department of Oncology, Hôpital Ste-Justine, Montréal (Québec) (Canada)

SS20 Medical Ultrasonics I. (Special Session - oral contributions)

Chair: Radovan Jiřík (Czech Republic)

Co-Chair: Jiří Jan (Czech Republic)

Day and time: Thursday 24th November, 14.00-15.30 (format 10+5 minutes)

Hall: Meeting Hall V

Id	Title	Paper Authors	Authors' Institutions
1747 14.00	STATE OF THE ART AND CHALLENGES IN ULTRASOUND COMPUTER TOMOGRAPHY	<u>Nicole Valerie Rüter</u> ¹ , Rainer Stotzka ¹ , Tim Oliver Mueller ¹ , Rong Liu ¹ , Hartmut Gemmeke ¹	¹ Forschungszentrum Karlsruhe (Germany)
1856 14.15	SIGNAL PROCESSING FOR PULSED ULTRASONO-OPTICAL TOMOGRAPHY	<u>Kiyoshi Nakayama</u> ¹ , Yuji Kunihiro ¹ , Mamiko Fujii ¹	¹ Department of Electrical and Electronics Engineering, Sophia University (Japan)
1910 14.30	LOCALIZING METAL ELECTRODE FROM 3D ULTRASOUND DATA USING R-RANSAC AND INTENSITY PRIORS	<u>Martin Barva</u> ^{1,2} , Jan Kybic ¹ , Jean-Martial Mari ² , Christian Cachard ² , Vaclav Hlavac ¹	¹ Center for Machine Perception, Department of Cybernetics, Czech Technical University in Prague (Czech Republic); ² Centre de Recherche et d'Applications en Traitement de l'Image et du Signal, Institut National des Sciences Appliquées de Lyon (France)
1577 14.45	ULTRASOUND TISSUE CHARACTERIZATION USING NAKAGAMI MODEL WITH TEMPORAL AVERAGING	<u>Radim Kolar</u> ¹ , J. Jan ¹ , V. Chaloupka ²	¹ Department of Biomedical Engineering, FEEC, Brno University of Technology (Czech Republic); ² Department of Cardiovascular Testing, Faculty Hospital, Masaryk University Brno (Czech Republic)
2397 15.00	CONCEPTS FOR VELOCITY AND ACCELERATION ESTIMATION EMPLOYING NONUNIFORM SAMPLING	<u>Lars Benner</u> ³ , Wilko Wilkening ² , Helmut Ermert ^{1,2}	¹ Institute of High Frequency Engineering, Faculty of Electrical Engineering, Ruhr-Universitaet Bochum (Germany); ² Ruhr Center of Excellence for Medical Engineering, Bochum (Germany); ³ TomTec Imaging Systems, Unterschleissheim (Germany)
1740 15.15	DEVELOPMENT OF THE SOFTWARE ANALYSIS SYSTEM FOR ULTRASONIC DOPPLER SIGNALS OF FETAL MOTOR ACTIVITY- CURENT STATE	<u>Tomasz Kret</u> ¹ , Krzysztof Kaluzynski ¹ , Jacek Sienko ²	¹ Institute for Precision and Biomedical Engineering, Warsaw University of Technology, Warsaw (Poland); ² 2nd Department of Obstetrics and Gynaecology, Medical University of Warsaw (Poland)

SS19 SYMBIOSIS'05 – Analysis of the Cardiovascular System Activity I. (Satellite Symposium - oral contributions)

Chair: Jiří Holčík (Czech Republic)

Co-Chair: Ewaryst Tkacz (Poland)

Day and time: Thursday 24th November, 14.00-15.30 (format 10+5 minutes)

Hall: Meeting Hall I

Id	Title	Paper Authors	YIC
2035 14.00	SYSTEM APPROACH TO AN ANALYSIS OF CARDIOVASCULAR SYSTEM IN HORSES TO ASSESS RISK OF SUDDEN CARDIOVASCULAR DEATH	Jiri Holcik ¹ , Petr Kozelek ¹ , Martin Kohut ¹ , Karel Hana ¹ , Jaroslav Hanak, Marketa Sedlinska, Radek Kabes	¹ CTU Prague - Faculty of Biomedical Engineering (Czech Republic)
2031 14.15 YIC	MODELS OF CARDIOVASCULAR SYSTEM CONTROL IN HORSES	Petr Kozelek ¹ , Jiri Holcik ¹	¹ CTU Prague - Faculty of Biomedical Engineering (Czech Republic)
2396 14.30	PRINCIPAL COMPONENT ANALYSIS OF CARDIOVASCULAR SYSTEM DYNAMICS IN HORSES	Martin Kohut ¹ , Jiri Holcik ¹ , J. Hanak ² , R. Kabes ²	¹ Faculty of Biomedical Engineering, Czech Technical University in Prague, Kladno (Czech Republic); ² University of Veterinary Sciences and Pharmacy, Equine Clinic, Brno (Czech Republic)
2101 14.45	MODULAR MEASURING SYSTEM „ADVANCED PDA“ DESIGNATED FOR SUPPORT OF THE MEDICAL AND BIOMEDICAL ENGINEERING RESEARCH	Karel Hana ¹ , Radek Fiala ¹ , Jan Kaspar ¹ , Pavel Smrcka ¹ , J. Brada ¹	¹ Czech Technical University in Prague, Faculty of Biomedical Engineering, Prague (Czech Republic)
2121 15.00	NEW ROBUST METHODS FOR DETECTION OF SYSTOLIC COMPLEXES IN THE SIGNAL ACQUIRED FROM BALISTOCARDIOGRAPH	Marcel Jirina ¹ , Pavel Smrcka ¹ , Zdenek Trefny ¹ , Karel Hana ¹	¹ Faculty of Biomedical Engineering, CTU in Prague (Czech Republic)
2592 15.15	QUANTITATIVE SEISMOCARDIOGRAPHY IN STRESS LEVEL EXAMINATION	Zdeněk Trefný ¹ , J. Svačinka ¹ , A. Berseneva ³ , S. Lísková ² , S. Trojan ⁴ , J. Slavíček ⁴ , K. Hána ⁵ , P. Smrčka ⁵	¹ Cardiological Laboratory, Prague (Czech Republic); ² Bath House Manes, Karlovy Vary (Czech Republic); ³ Institute of Biomedical Problems, Moscow (Russia); ⁴ Physiological Institute of I. Medical Faculty, Prague (Czech Republic); ⁵ CTU in Prague, Faculty for Biomedical Engineering, Prague (Czech Republic)

YIC - Young Investigator Competition Finalist

SS27 Electronic Health Record II. (Satellite Symposium - SS21 II. - oral contributions)

Chair: Jana Zvárová (Czech Republic)

Co-Chair: Pirkko Nykänen (Finland)

Day and time: Thursday 24th November, 14.00-15.30 (format 10+5 minutes)

Hall: Club A

Id	Title	Paper Authors	Authors' Institutions
2045 14.00	ANALYSIS OF ELECTRONIC PATIENT RECORD SYSTEM ON DECISION SUPPORT CAPABILITIES	<u>Pirkko Nykänen</u>	Department of Computer Sciences, University of Tampere (Finland)
2577 14.15	DIGITAL IMAGE AND DATA NETWORKING FOR ELECTRONIC MEDICAL RECORD IN OPHTHALMOLOGY CLINICS	<u>JONG MO SEO</u> ^{1,3} , JONG HYO KIM ² , HEE CHAN KIM ³ , KWANG SUK PARK ³ , JEONG MIN HWANG ^{1,4} , HUM CHUNG ¹	¹ Department of Ophthalmology, Seoul National University School of Medicine (South Korea); ² Department of Radiology, Seoul National University School of Medicine (South Korea); ³ Department of Biomedical Engineering, Seoul National University School of Medicine (South Korea); ⁴ Bundang Seoul National University Hospital (South Korea)
2665 14.30	FORMALIZED MEDICAL GUIDELINES AND A STRUCTURED ELECTRONIC HEALTH RECORD	<u>Jan Peleška</u> ¹ , Zdeněk Anger ¹ , David Buchtela ¹ , Marie Tomečková ¹ , Arnošt Veselý ¹ , Jana Zvárová ¹	¹ EuroMISE Center and Dep. of Medical Informatics, AS CR (Czech Republic)
2117 14.45	MEDAT: MEDICAL RESOURCES ANNOTATION TOOL	<u>Monika Žáková</u> ¹ , Olga Štěpánková ¹ , T. Maříková ²	¹ Czech Technical University/Department of Cybernetics, Prague (Czech Republic); ² Charles University, 2nd Medical School, Institute of Biology and Medical Genetics (Czech Republic)
2477 15.00	SCENARIO TESTING FOR QUALITY LABELING OF ELECTRONIC MEDICAL RECORDS FOR GENERAL PRACTITIONERS	<u>Ronald Buyl</u> ¹ , Marc Nyssen ¹ , Anouk De Smedt ¹	¹ Vrije Universiteit Brussel (Belgium)

2220 15.15	ENABLING EXISTING LABORATORY INFORMATION MANAGEMENT SYSTEMS (LIMS) WITH INTEROPERABILITY FEATURES BASED ON THE HL7 STANDARD	Anastasios Tagaris ¹ , <u>Stathis</u> <u>Marinos</u> ¹ , Sotiris Pavlopoulos ¹ , Stavros Kostomanolakis ² , Dimitris Koutsouris ¹	¹ National Technical University of Athens/Department of Electrical and Computer Engineering, Biomedical Engineering Laboratory, Athens (Greece); ² Center for Medical Informatics and Health Telematics Applications (CMI-HTA), Institute of Computer Science (ICS), Foundation for Research and Technology – Hellas (FORTH) (Greece)
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SS11 Brain Pacemakers for Epilepsy (Special Session - oral contributions)

Chair: Leon Iasemidis (United States)

Co-Chair: Deng-Shan Shiau (United States)

Day and time: Thursday 24th November, 14.00-15.30 (format 10+3 minutes)

Hall: Club B

Id	Title	Paper Authors	Authors' Institutions
2012 14.00	A COMPARISON BETWEEN USING ECOG AND EEG FOR DIRECT BRAIN COMMUNICATION	Bernhard Graimann ¹ , George Townsend ² , Jane Huggins ³ , Simon Levine ³ , Gert Pfurtscheller ¹	¹ Institute of Computer Graphics and Vision, BCI-Lab, Graz University of Technology (Austria); ² Mathematics and Computer Science, Algoma University (Canada); ³ Department of Physical Medicine and Rehabilitation and Biomedical Engineering, University of Michigan (USA)
2300 14.13	THEORETICAL CONCEPTS OF CONTROL WITH APPLICATIONS TO EPILEPSY	Konstantinos Tsakalis ¹ , Niranjan Chakravarthy ¹ , Leon Iasemidis ¹	¹ Arizona State University (USA)
2304 14.26	PREDICTION AND CONTROL OF EPILEPTIC SEIZURES: THE BASIS FOR BRAIN PACEMAKERS IN EPILEPSY	Leon Iasemidis ¹ , Shivkumar Sabesan ² , Kostas Tsakalis ² , Levi Good ^{1,3} , David Treiman ^{1,3}	¹ Arizona State University/Harrington Department of Bioengineering, Tempe AZ (USA); ² Arizona State University/Department of Electrical Engineering, Tempe AZ (USA); ³ Epilepsy Research Laboratory, Barrow Neurological Institute, AZ (USA)
2325 14.39	EPILEPTIC BRAIN DYNAMICS AND INFORMATION FLOW	Shivkumar Sabesan ¹ , LEVI GOOD ^{2,3} , LEON IASEMIDIS ² , Kostas Tsakalis ¹ , DAVID TREIMANN ³	¹ Arizona State University/Department of Electrical Engineering, Tempe (USA); ² The Harrington Department of Bioengineering, Tempe (USA); ³ Epilepsy Research Laboratory, Barrow Neurological Institute (USA)
2394 14.52	AMPLITUDE AND PHASE SYNCHRONIZATION IN A MODEL OF TEMPORAL LOBE EPILEPSY	Stiliyan Kalitzin ¹ , Miron Derchansky ^{2,4} , Demetrios Velis ¹ , Jaime Parra ¹ , Peter Carlen ^{2,4} , Fernando Lopes da Silva ³	¹ Dutch Epilepsy Clinics Foundation (The Netherlands); ² Departments of Medicine and Physiology, Toronto Western Research Institute (Canada); ³ Center of Neurosciences, Swammerdam Institute of Life Sciences, University of Amsterdam (The Netherlands); ⁴ University of Toronto (Canada)
2495 15.05	REAL-TIME CONTROL OF EPILEPTIC SEIZURES	Levi Good ^{1,2} , Shivkumar Sabesan ³ , Leon Iasemidis ¹ , David Treiman ^{1,2}	¹ Arizona State University (USA); ² Barrow Neurological Institute (USA); ³ Arizona State University (USA)
2506 15.18	SEIZURE WARNING SYSTEM AND DYNAMIC RESPONSE TO ELECTRICAL STIMULATION IN A RODENT MODEL OF CHRONIC LIMBIC EPILEPSY	Deng-Shan Shiau ^{1,2} , Sandeep Nair ^{1,2} , Leonidas Iasemidis ³ , Paul Carney ¹ , Wendy Norman ¹ , Jose Principe ¹ , Panos Pardalos ¹ , Wichai Suharitdamrong ^{1,2} , Cho Jeongho ¹ , James Sackellares ^{1,2}	¹ University of Florida (USA); ² Malcolm Randal VA Medical Center (USA); ³ Arizona State University (USA)

SS29 Lasers in Medicine and Thin Films in Biomedicine and Pharmacy (Special Session - oral contributions)

Chair: Helena Jelínková (Czech Republic)

Co-Chair: Miroslav Jelínek (Czech Republic)

Day and time: Thursday 24th November, 14.00-15.30 (format 10+3 minutes)

Hall: Club C

Id	Title	Paper Authors	Authors' Institutions
1899 14.00	LASER-INDUCED FLUORESCENCE OF RAT ENAMEL AFTER	Zofia Drzazga ¹ , <u>Grzegorz Liszka</u> ¹ , Michał Kaszuba ¹	¹ Institute of Physics University of Silesia (Poland)
2480 14.13	PHOTODYNAMIC THERAPY OF COLON ADENOCARCINOMA WITH AMINOLEVULINIC ACID: A CLINICAL AND SPECTROSCOPIC STUDY	<u>Jozef Smolka</u> ^{1,3} , Anton Mateášik ¹ , Peter Míkvy ²	¹ International Laser Centre, Bratislava (Slovak Republic); ² Department of Gastroenterology, St. Elisabeth Oncological Institute, Bratislava (Slovak Republic); ³ Faculty of Mathematics, Physics and Informatics, Comenius University, Bratislava (Slovak Republic)
2381 14.26	TEMPERATURE CHANGE AND DEGREE OF CONVERSION DURING ARGON LASER INDUCED POLYMERIZATION OF DENTAL RESIN	<u>Mohammad Khosroshahi</u> ¹ , Mohammad Atai ² , Sadegh Nourbakhsh ¹	¹ Amirkabir University (Iran); ² Iran Polymer and Petrochemical Institute (Iran)
2382 14.39	MEASUREMENT OF WATER SORPTION AND SOLUBILITY OF DENTAL RESIN CURED BY ARGON LASER	<u>Mohammad Khosroshahi</u> ¹ , Mohammad Atai ² , Sadegh Nourbakhsh ¹	¹ Amirkabir University (Iran); ² Iran Polymer and Petrochemical Institute (Iran)
2615 14.52	EXPERIMENTAL APPLICATION OF PULSED HO:YAG LASER-INDUCED CAVITATIONAL SHOCK WAVE GENERATOR AS A NOVEL DRUG DELIVERY SYSTEM	<u>Tomohiro Ohki</u> ¹ , Junichi Sato ² , Atsuhiko Nakagawa ² , Yasuhiko Sato ² , Kaoruko Kato ² , Takayuki Hirano ² , Hiroshi Uenohara ³ , Mingyu Sun ¹ , Teiji Tominaga ² , Kazuyoshi Takayama ⁴	¹ Interdisciplinary Shock Wave Research Laboratory, Institute of Fluid Science, (Japan); ² Department of Neurosurgery, Tohoku University Graduate School of Medicine (Japan); ³ Department of Neurosurgery, National Hospital Organization Sendai Medical Center (Japan); ⁴ Tohoku University Biomedical Engineering Research Organization (Japan)

2684 15.05	MORPHOLOGY OF BIOMEDICAL THIN FILMS PREPARED BY MAPLE	Veronika Vymětalová ¹ , Miroslav Jelinek ^{1,2} , Rodica Cristescu ³ , T. Kocourek ² , Miroslava Vrbova ¹ , I.N. Mihailescu ³	¹ Czech Technical University, Faculty of Biomedical Engineering (Czech Republic); ² Academy of Science Czech Republic, Institute of Physics (Czech Republic); ³ National Institute for Laser, Plasma and Radiation Physics (Romania)
2685 15.18	EYE TISSUE TRANSMISSION FOR NEAR- AND MID-INFRARED LASER RADIATION	Helena Jelinková ¹ , Jiri Pasta ² , Michal Nemeč ¹ , Jan Sulc ¹ , Petr Koranda ¹	¹ Czech Technical University in Prague, Faculty of Nuclear Sciences and Physical Engineering (Czech Republic); ² Central Military Hospital, Clinic of Ophthalmology (Czech Republic)

SS43 Health Care Technology Assessment II. (Special Session - SS36 II. - oral contributions)

Chair: Andrei Issakov (WHO, Geneva, Switzerland)

Co-Chair: Kalju Meigas (Estonia)

Day and time: Thursday 24th November, 14.00-15.30 (format 10+5 minutes)

Hall: Club D

Id	Title	Paper Authors	Authors' Institutions
14.00	DELIVERING HEALTH SERVICES - WHAT RESOURCES ARE NEEDED?: WHO ESSENTIAL HEALTH: TECHNOLOGY PACKAGE	<u>Heimann Peter</u>	Department of Health System Policies and Operations (SPO), World Health Organization, Geneva (Switzerland)
2472 14.30	INTRODUCING MULTIPLE WIRELESS CONNECTIONS TO THE OPERATING Hall, INTERFERENCE OR NOT?	<u>Jan Olav Hogetveit</u> ¹ , Ilanko Balasingham ² , Karl Oyri ² , Oystein Jensen ¹	¹ Department of clinical and biomedical Engineering, Rikshospitalet (Norway); ² The Interventional centre, Rikshospitalet (Norway)
2002 14.45	TECHNOLOGY ASSESSMENT OF NOCTURNAL HOME HEMODIALYSIS AND QUALITY OF LIFE IN END STAGE RENAL DISEASE PATIENTS IN GREECE	<u>Kallirroï Stavrianou</u> ¹ , Nicolas Pallikarakis ¹	¹ University of Patras (Greece)
2658 15.00	IMPLEMENTATION OF QUALITY CONTROL MEASUREMENTS OF CT SCANNERS IN ESTONIAN HOSPITALS	<u>Yury Nosach</u> ¹ , Kalle Kepler ² , Anatoli Vladimirov ²	¹ West-Tallinn Central Hospital (Estonia); ² University of Tartu, Training Department of Medical Physics and Biomedical Engineering (Estonia)
2126 15.15	EVALUATION OF A WEARABLE SYSTEM FOR THE REAL TIME MONITORING OF REHABILITATING ATHLETES	<u>Constantine Glaros</u> ¹ , Dimitrios I. Fotiadis ¹ , Andreas Stafylopatis ²	¹ University of Ioannina (Greece); ² National Technical University of Athens (Greece)

SS37 (SS15 II.) J. Hyttinen - Implantable Devices II. - Applications (Special Session - oral contributions)

Chair: Jari Hyttinen (Finland)

Co-Chair: Jukka Leikkala (Finland)

Day and time: Thursday 24th November, 14.00-15.30 (10+3 minutes)

Hall: Club E

Id	Title	Paper Authors	Authors' Institutions
2058 14.00	DYNAMIC ANALYSIS AND CONTROL OF A SIMPLE NONLINEAR LIMB MODEL	Dávid Cserssik ¹ , Csaba Fazekas ² , Katalin Hangos ¹	¹ Computer and Automation Research Institute (Hungary); ² University of Veszprém (Hungary)
1839 14.13	POWER DRIVEN STAPES PROsthESIS: A NEW IMPLANTABLE HEARING SYSTEM, CONCEPT AND FIRST CLINICAL RESULTS	Christof Stieger ¹ , Hans Bernhard ² , Martin Kompis ¹ , Rudolf Häusler ¹	¹ Inselspital University of Berne (Switzerland); ² Helbling Technik Bern AG (Switzerland)
1627 14.26	AUTOMATIC NEUROPHYSIOLOGICAL IDENTIFICATION OF THE HUMAN SUBTHALAMIC NUCLEUS FOR THE IMPLANTATION OF DEEP BRAIN STIMULATION ELECTRODES BASED ON STATIS	Kerstin Menne ¹ , Ulrich Hofmann ¹ , Shripad Kondra ¹ , Christian Moll ² , Andreas Engel ²	¹ Institute for Signal Processing, University of Lübeck (Germany); ² Institute for Neuro- and Pathophysiology, University-Hospital Hamburg-Eppendorf (Germany)
2471 14.39	WAVELET SPEECH PROCESSING FOR COCHLEAR IMPLANTS: A PRELIMINARY STUDY	Gabiella Tognola ¹ , Giuseppe Baselli ² , Marta Parazzini ¹ , Alessia Paglialonga ^{1,2} , Ferdinando Grandori ¹	¹ Institute of Biomedical Engineering, CNR, c/o Polytechnic of Milan (Italy); ² Department of Biomedical Engineering, Polytechnic of Milan (Italy)
1532 14.52	THE USE OF RAMP_SHAPED STIMULUS WAVEFORM FOR SELECTIVE STIMULATION OF NEURAL FIBERS IN PERIPHERAL NERVES	A. Mahnam ¹ , S.M.P. Firoozabadi ² , R.M. Hashemi ¹ , M. Janahmadi ³	¹ Amirkabir University of Technology (Iran); ² Tarbiat-Modares University (Iran); ³ Shaheed Beheshti University of Medical Sciences (Iran)
2267 15.05	IMPLANTABLE DIAPHRAGMATIC BREATHING PACEMAKER USING TRANSCUTANEOUS ENERGY TRANSMISSION	HoonKi Lee ¹ , Hee Chan Kim ¹ , SungWook Choe ¹	¹ Seoul National University (South Korea)
2582 15.18	IMPLANTATION OF THE POLYIMIDE ELECTRODE ARRAY FOR THE ELECTRICAL STIMULATION OF THE RETINA: EPIRETINAL AND SUBRETINAL APPROACHES	JONG MO SEO ^{1,3} , KYUNG AH KIM ^{1,3} , EUI TAE KIM ^{2,3} , SEUNG JOON PAIK ^{2,3} , KYO IN KOO ^{2,3} , DONG IL CHO ^{2,3} , SUNG JUNE KIM ^{2,3} , HUM CHUNG ^{1,3}	¹ Department of Ophthalmology, Seoul National University School of Medicine (South Korea); ² School of Electronic Engineering and Computer Science, Seoul National University (South Korea); ³ Nano Artificial Vision Research Center (South Korea)

YIC - Young Investigator Competition Finalist

SS5 Biological Effects of Electromagnetic Field I. (Special Session - oral contributions)

Chair: Jan Vrba (Czech Republic)

Co-Chair: Luca Mainardi (Italy)

Day and time: Thursday 24th November, 14.00-15.30 (format 15+5 minutes)

Hall: Club H

Id	Title	Paper Authors	Authors' Institutions
1422 14.00	HUMAN BLOOD MONOCYTES MEMBRANE ANISOTROPY DECREASE FOLLOWING MICROWAVE RADIATION	<u>George SAJIN</u> ¹ , Tudor SAVOPOL ² , Eugenia KOVACS ² , Irina MIRON ²	¹ IMT Bucharest (Romania); ² "Carol Davila" Medical University (Romania)
1528 14.20	COMPARING THE PARAMETERS OF H-REFLEX EVOKED BY ELECTRICAL AND MAGNETIC STIMULATION	<u>M. Kaviani</u> ¹ , S. Mohammad P. Firoozabadi ¹ , A. Sarmadi ¹	¹ Tarbiat-Modares University (Iran)
1596 14.40	EFFECTS OF ELECTROMAGNETIC FIELDS EMITTED BY MOBILE PHONES ON HEART RATE VARIABILITY	<u>Luca Mainardi</u> ¹ , Marta Parazzini ² , Gabriella Tognola ² , Paolo Ravazzani ² , Gyorgy Thuroczy ³ , Alessio Sacchetti ¹ , Gianluca Ardesi ¹	¹ Dipartimento di Bioingegneria, Politecnico di Milano (Italy); ² Istituto di Ingegneria Biomedica ISIB, Consiglio Nazionale delle Ricerche, Milano (Italy); ³ National Research Institute for Radiobiology and Radiohygiene NIRR, Dept of Non-Ionizing Radiation, Budapest (Hungary)
2272 15.00	STUDY OF ABSORPTION IN THE INNER EAR AND THE VESTIBULO-COCHLEAR NERVE FROM MOBILE PHONE EXPOSURE	<u>Rudolf Kopecký</u> ¹ , Henry Nellström ² , Mikael Persson ¹	¹ Chalmers University of Technology (Sweden); ² Medorad AB (Sweden)

SS39 Medical Ultrasonics II. (Special Session - SS20 II. - oral contributions)

Chair: Radovan Jiřík (Czech Republic)

Co-Chair: Jiří Jan (Czech Republic)

Day and time: Thursday 24th November, 16.00-17.30 (format 10+5 minutes)

Hall: Meeting Hall V

Id	Title	Paper Authors	Authors' Institutions
2650 16.00	TRANSDUCER CALIBRATION IN TRANSMISSION ULTRASOUND COMPUTED TOMOGRAPHY	Adam Filipík ¹ , Jiří Jan ¹ , Radovan Jiřík ¹ , Nicole Ruiter ² , Rainer Stotzka ²	¹ Brno University of Technology, Faculty of Electrical Engineering and Communication, Department of Biomedical Engineering, Brno (Czech Republic); ² Forschungszentrum Karlsruhe, Institute of Data Processing and Electronics, Karlsruhe (Germany)
1692 16.15	CROSS-WIRE CALIBRATION FOR FREEHAND 3D ULTRASONOGRAPHY	Asterios Anagnostoudis ¹ , Jiří Jan ¹	¹ Department of Biomedical Engineering, FEEC, BUT, Brno (Czech Republic)
2273 16.30	IMAGE DATA BASED METHOD FOR THREE-DIMENSIONAL ULTRASONIC DATA POSITIONING	Jiří Začal ¹ , Jiří Jan ¹	¹ Faculty of Electrical Engineering and Communication, Department of Biomedical Engineering, Brno University of Technology, Brno (Czech Republic)
1750 16.45	SIMULATED MICROEMBOLI DETECTION USING DOPPLER PROFILER PW2000	Jakub Zmigrodzki ¹ , Krzysztof Kaluzynski ¹ , Giacomo Bambi ² , Stefano Ricci ² , Piero Tortoli ²	¹ The Institute of Precision and Biomedical Engineering, Faculty of Mechatronics Warsaw University of Technology (Poland); ² Dept. of Electronics and Telecommunications, University of Florence (Italy)
2565 17.00	A COMPACT UNDERWATER SHOCK WAVE GENERATOR FOR PRECISE MEDICAL APPLICATION OF SHOCK WAVES	S. H. R. Hosseini ¹ , Kazuyoshi Takayama ¹	¹ Biomedical Engineering Research Organization, Tohoku University (Japan)
1620 17.15	A NEW APPROACH TO AN ULTRASOUND IMAGING SYSTEM EVALUATION USING THE POINT SPREAD FUNCTION	Ladislav Doležal ¹ , Jan Hálek ¹ , Martin Huf ¹ , Hana Kolářová ¹	¹ Faculty of Medicine/Dept. Medical Biophysics, Palacký University, Olomouc (Czech Republic)

SS38 SYMBIOSIS'05 - Analysis of the Cardiovascular System Activity II. (Satellite Symposium - SS19 II. - oral contributions)

Chair: Jiří Holčík (Czech Republic)

Co-Chair: Ewaryst Tkacz (Poland)

Day and time: Thursday 24th November, 16.00-17.30 (format 10+3 minutes)

Hall: Meeting Hall I

Id	Title	Paper Authors	Authors' Institutions
2288 16.00	AN ESTIMATION OF SURVIVAL TIME AFTER BRAIN STROKE USING HEART RATE TURBULENCE AND HEART RATE VARIABILITY PARAMETERS AS PREDICTORS	<u>Ewaryst Tkacz</u> ^{1,2} , Pawel Kostka ^{1,2} , Dariusz Komorowski ^{1,2} , Barbara Mika ¹	¹ Silesian University of Technology (Poland); ² Medical University of Silesia (Poland)
2120 16.13	MULTIFRACTAL ANALYSIS OF HEART RATE VARIABILITY IN SLEEP DEPRIVATION AND ALCOHOL INTOXICATION	<u>Pavel Smrcka</u> ¹ , Karel Hána ¹ , Jan Kašpar ¹ , J. Brada ¹ , R. Fiala ¹	¹ Czech Technical University in Prague, Faculty for Biomedical Engineering (Czech Republic)
1597 16.26	QRS-detection algorithm in fetal ECG during the birth	Roman Shepovalnikov, Anatolij Nemirko, <u>Alexander Kalinichenko</u> ¹	¹ St. Petersburg State Electrotechnical University, Biomedical engineering department, St. Petersburg (Russian Federation)
2377 16.39	An application of the simple adaptive M-filter in processing of ECG signals	<u>Tomasz Pander</u> ¹	¹ Medical University of Silesia (Poland)
2508 16.52	THE INFLUENCE OF TANNIC ACID ON STABILIZATION EFFECT OF THE PERICARDIUM TISSUE	<u>Beata Cwalina</u> ¹ , Artur Turek ¹ , Maria Jastrzebska ¹ , Justyna Zalewska-Rejda ¹ , Roman Wrzalik ² , Bogdan Barwinski ³ , Jerzy Nozynski ⁴	¹ Department of Biophysics, Medical University of Silesia, Ostrogórska 30, 41-200 Sosnowiec (Poland); ² Institute of Physics, Department of Biophysics and Molecular Physics, University of Silesia, Katowice (Poland); ³ Institute of Experimental Physics, University of Wrocław, Wrocław (Poland); ⁴ Foundation for Development of Cardiac Surgery, Zabrze (Poland)
2510 17.05	THE INFLUENCE OF DIMETHYL SUBERIMIDATE AND PENICILLIN ON STRUCTURE OF PORCINE PERICARDIUM	<u>Beata Cwalina</u> ¹ , Artur Turek ¹ , Maria Jastrzebska ¹ , Lucyna Pawlus-Lachecka ² , Jerzy Nozynski ²	¹ Department of Biophysics, Medical University of Silesia, Ostrogórska 30, 41-200 Sosnowiec (Poland); ² Foundation for Development of Cardiac Surgery, Zabrze (Poland)
1785 17.18	THEORETICAL MODEL OF ELECTROLYTE CONDUCTIVITY IN HIGH FREQUENCY ELECTRIC FIELD	Victoria Mukhametshina, Zafar Yuldashev	

SS44 Health Care Technology Assessment III. (Special Session - SS36 III. - oral contributions)

Chair: Rosimary Almeida (Brazil)

Co-Chair: Hermann Gilly (Austria)

Day and time: Thursday 24th November, 16.00-17.30 (format 10+5 minutes)

Hall: Club A

Id	Title	Paper Authors	Authors' Institutions
2584 16.00	EVALUATION OF THE DESIGN AND PERFORMANCE OF LOADING AND UNLOADING SYSTEMS USING AMBULANCE STRETCHER	<u>Glen Cooper</u> ¹ , Elaheh Ghassemieh ¹	¹ University of Sheffield (U.K.)
20381 6.15	EVALUATION OF FALLING RISK BY TOE-GAP FORCE ON AGED	<u>Kazuhiko Yamashita</u> ^{1,4} , Jun Umezawa ² , Yohei Nomoto ³ , Shuichi Ino ⁴ , Toru Ifukube ⁴ , Hironori Koyama ³ , Masashi Kawasumi ³ , Masao Saito ⁵	¹ Tokyo Health Care University (Japan); ² Tokyo Denki University (Japan); ³ Tokyo Denki University (Japan); ⁴ University of Tokyo (Japan); ⁵ Tokyo Denki University (Japan)
2456 16.30	DEVELOPMENT OF A GYRO SENSOR BASED COMPUTER MOUSE WITH AN USB INTERFACE AS A TECHNICAL AID FOR DISABLED PERSONS	<u>Christer Gerdman</u> ¹ , Maria Lindén ¹	¹ Department of Computer Science and Electronics, Mälardalen University, Västerås (Sweden)
2430 16.45	VERY LOW COMPLEXITY ALGORITHM FOR AMBULATORY ACTIVITY CLASSIFICATION	<u>Josep Sola i Caros</u> ¹ , Olivier Chételat ¹ , Patrick Celka ² , Stephan Dasen ¹	¹ Swiss Center for Electronics and Microtechnology (CSEM) (Switzerland); ² School of Engineering, Griffith University (Australia)
1654 17.00	DEVICE MANAGEMENT DOWN UNDER	<u>Purdee Yeo</u> ¹ , John Robson ¹ , Michael Riches ¹ , Tony Carlisle ¹ , Noel Kitto ¹	¹ Flinders Medical Centre (Australia)
2386 17.15	MEDICAL DEVICE FAILURE AND MDD REPORTING FORM – THE NEED FOR TAILORED STANDARD OPERATING PROCEDURES	<u>Hermann Gilly</u> ¹	¹ Department of Anaesthesia, Medical University of Vienna and Ludwig Boltzmann Institute of Anaesthesiology and Intensive Care, A-1090 Vienna (Austria)

SS49 Microfluidics and Microcirculation II. (Special Session - SS12 II. - oral contributions)

Chair: Alexandru Morega (Romania)

Co-Chair: Josef Pražák (Czech Republic)

Day and time: Thursday 24th November, 16.00-17.30 (10+5 minutes)

Hall: Club B

Id	Title	Paper Authors	Authors' Institutions
1412 16.00	A MICROFLUIDIC SYSTEM FOR MICROARRAY FABRICATION AND BIOMOLECULE INTERACTION	<u>Gang JIN</u> ¹ , Zhan-Hui Wang ¹ , Cai Qi ¹ , Zi-Yan Zhao ¹ , Yong-Hong Meng ¹ , Pei-Qing Ying ¹ , She Chen ¹ , Bo Gao ¹ , Lu-Hua Xia ¹	¹ Institute of Mechanics, Chinese Academy of Sciences (China)
1483 16.15	CELL/PARTICLE MANIPULATION AND COUNTING UTILIZING OPTICAL TWEEZER AND DIGITAL IMAGE PROCESSING UNDER MICROFLUIDIC CONFIGURATION	<u>Che-Hsin Lin</u> ¹ , Yu-Sheng Chien ¹ , Fu-Jen Kao ¹ , Cheng-Wen Ko ¹	¹ National Sun Yat-sen University (Taiwan)
1513 16.30	A RAPID 3-D PASSIVE VORTEX MICROMIXER UTILIZING SELF-ROTATION EFFECT	Lung-Ming Fu ¹ , <u>Che-Hsin Lin</u> ³ , Chia-Yen Lee ² , Chien-Hsiung Tsai ¹ , Guan-Liang Chang ⁴	¹ National Pingtung University of Science and Technology (Taiwan); ² Da-Yeh University (Taiwan); ³ National Sun Yat-sen University (Taiwan); ⁴ National Cheng-Kung University (Taiwan)
1514 16.45	A NOVEL MICROFLUIDIC MIXER UTILIZING ELECTROKINETIC DRIVING FORCES UNDER LOW SWITCHING FREQUENCY	Fu Lung-Ming ¹ , Che-Hsin Lin ²	¹ National Pingtung University of Science and Technology (Taiwan); ² National Sun Yat-Sen University (Taiwan)
2277 17.00	MAGNETICALLY INDUCED BIOMAGNETIC FLUID MIXING – FEM MODEL	<u>Alexandru Morega</u> ¹ , Mihaela Morega ¹ , Sebastian Faur ¹	¹ POLITEHNICA University of Bucharest (Romania)
2543 17.15	IONIC MIXER ON A MICROFLUIDIC CHIP USING POLYELECTROLYTIC SALT BRIDGES	<u>Honggu Chun</u> ¹ , Taek Dong Chung ² , Hee Chan Kim ¹	¹ Department of Biomedical Engineering, College of Medicine and Institute of Medical and Biological Engineering, Medical Research Center, Seoul National University, Seoul (South Korea); ² of Chemistry, Sungshin Women's University, Seoul (South Korea)

SS50 Lasers in Medicine and Thin Films in Biomedicine and Pharmacy II. (Special Session - SS29 II. - oral contributions)

Chair: Miroslav Jelínek (Czech Republic)

Co-Chair: Helena Jelínková (Czech Republic)

Day and time: Thursday 24th November, 16.00-17.30 (format 10+3 minutes)

Hall: Club C

Id	Title	Paper Authors	Authors' Institutions
1578 16.00	LASER BASED MAPLE DEPOSITION TECHNIQUE AND FILM GROWTH RATE; APPLICATION TO CRYOGLOBULIN	M. Jelinek ^{1,2} , R. Cristescu ³ , T. Kocourek ² , M. Vrbova ² , L. Stamatina ⁴ , A. Moldovan ³ , D. Mihailescu ⁵ , C. Mirea ⁶ , I. Stamatina ⁷ , I.N. Mihailescu ³	¹ Institute of Physics ASCR (Czech Republic); ² Faculty of Biomedical Engineering CTU (Czech Republic); ³ National Institute for Laser, Plasma and Radiation Physics (Romania); ⁴ Longhin Scarlat Dermato-Venerologic Hospital (Romania); ⁵ University of Agriculture Sciences and Veterinary Medicine (Romania); ⁶ National Institute of Forensic Expertise (Romania); ⁷ University of Bucharest, Faculty of Physics (Romania)
2684 16.13	MORPHOLOGY OF BIOMEDICAL THIN FILMS PREPARED BY MAPLE	Veronika Vymětalová ¹ , Miroslav Jelinek ^{1,2} , Rodica Cristescu ³ , T. Kocourek ² , Miroslava Vrbova ¹ , I.N. Mihailescu ³	¹ Czech Technical University, Faculty of Biomedical Engineering (Czech Republic); ² Academy of Science Czech Republic, Institute of Physics (Czech Republic); ³ National Institute for Laser, Plasma and Radiation Physics (Romania)
1582 16.26	HYDROXYAPATITE/ ZRO2 AND ZRO2 FILMS FABRICATED BY PULSED LASER DEPOSITION FOR DENTAL IMPLANTS APPLICATIONS	P. Masinova ¹ , M. Jelinek ^{1,2} , T. Kocourek ¹ , K. Jurek ¹ , V. Studnicka ¹ , W. Mroz ⁴ , T. Dostalova ³ , K. Smetana ³ , Z. Strnad ⁵	¹ Institute of Physics, Academy of Sciences of the Czech Republic (Czech Republic); ² Faculty of Biomedical Engineering, Czech Technical University in Prague (Czech Republic); ³ 1st Medical Faculty, Charles University in Prague (Czech Republic); ⁴ Institute of Optoelectronics, Military University of Technology (Poland); ⁵ LASAK (Czech Republic)

1869 16.39	MATRIX ASSISTED PULSE LASER DEPOSITION OF LARGE MOLECULES AND GAS SENSORS APPLICATION	<u>Rudolf Frycek</u> ^{1,4} , Miroslav Jelinek ^{4,3} , Miroslava Vrbova ⁴ , Tomas Kocourek ³ , Premysl Fitl ^{1,4} , Martin Vrnata ² , Vladimir Myslik ¹	¹ Department of Solid-State Engineering, Institute of Chemical Technology (Czech Republic); ² Dept. of Physics and Measurement, Institute of Chemical Technology (Czech Republic); ³ The Academy of Sciences of the Czech Republic, Institute of Physics (Czech Republic); ⁴ Czech Technical University of Prague, Institute of Biomedical Engineering (Czech Republic)
2378 16.52	MAPLE PROCESSING OF TOSYLATE-PULLULAN-TAILOR-MADE BIOMATERIAL THIN FILMS FOR DRUG DELIVERY SYSTEMS	<u>Rodica Cristescu</u> ^{1,2} , M. Jelinek ² , T. Kocourek ² , E. Axente ¹ , A. Moldovan ¹ , J. Dybal ⁵ , M. Albulescu ³ , T. Buruiana ⁴ , I. Stamatin ⁶ , I.N. Mihailescu ¹	¹ National Institute for Lasers, Plasma and Radiation Physics (Romania); ² Institute of Physics, Academy of Sciences of Czech Republic (Czech Republic); ³ National Institute for Chemical-Pharmaceutical R&D (Romania); ⁴ Petru Poni Institute of Macromolecular Chemistry (Romania); ⁵ Institute of Macromolecular Chemistry, Academy of Sciences of the Czech Republic (Czech Republic); ⁶ University of Bucharest, Faculty of Physics (Romania)
1930 17.05	DIAMOND-LIKE CARBON - A VERSATILE BIOCOMPATIBLE COATING	<u>Joe Franks</u>	Brunel University (United Kingdom)
1871 17.18	PROGRESS IN BIOMIMETIC METAL IMPLANTS FOR ORTHOPEDIC AND DENTISTRY WITH LASER DEPOSITED CA PHOSPHATES COATINGS	<u>Ion N. Mihailescu</u> , G. Socol, S. Grigorescu, E. Axente, C. Ristoscu, M. Miroiu, A. Bigi, I. Mayer, J. Werckmann, F. Cuisinier	

YIC - Young Investigator Competition Finalist

SS57 Bioelectromagnetism (Standard Session - oral contributions)

Chair: Jaakko Malmivuo (Finland)

Co-Chair: Stanko Tonkovic (Croatia)

Day and time: Thursday 24th November, 16.00-17.30 (format 10+2 minutes)

Hall: Club D

Id	Title	Paper Authors	Authors' Institutions
1973 16.00	A MULTICHANNEL FIBER-OPTIC MAPPING SYSTEM FOR INTRAMURAL RECORDING OF CARDIAC ACTION POTENTIALS	<u>Ann Pitruzzello</u> ¹ , Wanda Krassowska ^{1,2} , Adrian Lam ¹ , Salim Idriss ^{1,3}	¹ Department of Biomedical Engineering, Duke University, Durham, NC (USA); ² Center for Nonlinear and Complex Systems, Duke University, Durham, NC (USA); ³ Department of Pediatric Cardiology, Duke University, Durham, NC (USA)
1444 16.12	MATHEMATICAL MODELING OF A NEW METHOD FOR LOCATION OF ISCHEMIC LESION WITH THE USE OF THE FRANK-M LEAD SYSTEM	<u>Leonid Titomir</u> ¹ , Peter Kneppo ² , Vladimir Trunov ¹ , Eduard Aidu ¹	¹ Institute for Information Transmission Problems, Russian Academy of Sciences, Moscow (Russia); ² Institute of Biomedical Engineering, Prague (Czech Republic)
1922 16.24	ASYMMETRIC CHANGES IN MEMBRANE CONDUCTANCE DUE TO HYPER- AND DEPOLARIZATION: PROBING WITH CURRENT AND VOLTAGE CLAMP	<u>Uwe Pliquett</u> ¹ , Henning Krassen ² , Catalin Gabriel Frantecu ² , Daniel Wesner ² , Eberhard Neumann ² , K.Schoenbach ¹	¹ Center for Bioelectrics, Old Dominion University, Norfolk, VA (USA); ² University of Bielefeld, Biophysical and Physical Chemistry, Bielefeld (Germany)
2190 16.36	COMPUTER SIMULATION OF TRANSESOPHAGEAL PACING WITH CONVENTIONAL AND SELECTIVE LEADS USING 3-D MODELS	<u>Igor Lacković</u> ¹ , Ratko Magjarević ¹	¹ Faculty of Electrical Engineering and Computing, University of Zagreb (Croatia)
1676 16.48	EFFECT OF INTERFERENTIAL CURRENT ON ELECTROMYOGRAM SIGNALS FOR MYOELECTRIC PROSTHETIC HAND	<u>Kunihiko Nomura</u> ¹ , Keita Yada ¹ , Masafumi Saihara ¹ , Masaki Yoshida ¹	¹ Department of Biomedical Engineering, Osaka Electro-Communication University (Japan)
2439 17.00	DETERMINATION OF EFFICIENT STIMULATION PATTERNS FOR FES-CYCLING	<u>Werner Reichenfeller</u> ¹ , Margit Gföhler ¹ , Tanja Kakebeeke ² , Peter Lugner ³ , G. Feik ³	¹ Department for Maschine Design and Rehabilitation Engineering, TU Vienna (Austria); ² Swiss Paraplegic Centre, Nottwil (Switzerland); ³ Institute for Mechanics and Mechatronics, TU Vienna (Austria)

2230 17.12	VENOUS BLOOD CONTRIBUTION TO fMRI SIGNAL IN THE AUDITORY CORTEX	<u>Sergio Casciario</u> ^{1,2} , Domenico Zaca ² , Roberto Bianco ² , Graziano Palma ² , Ernesto Casciario ^{1,2} , Alessandro Distante ^{1,2}	¹ National Council of Research, Institute of Clinical Physiology, Lecce (Italy); ² ISBEM Euro Mediterranean Biomedical Scientific Institute, Brindisi (Italy)
1923 17.24	ULTRA-SHORT HIGH VOLTAGE PULSES FOR EARLY POSTMORTEM ASSESSMENT OF MEAT QUALITY	<u>Uwe Pliquet</u> ¹ , Monika Altmann ² , K. Schoenbach ¹	¹ Center for Bioelectrics, Old Dominion University, Norfolk, VA (USA); ² Faculty of Agriculture, University of Halle, Halle (Germany)

SS112 Computer Support of People with Special Needs (Standard Session - oral contributions)

Chair: Detlef Richter (Germany)

Vice-Chair: Timo Jämsä (Finland)

Day and time: Thursday 24th November, 16.00-17.30 (format 10+3 minutes)

Room: Club E

Id	Title	Abstract Authors	Authors' Institutions
1940 16.00	ELECTRONIC MUSICAL INSTRUMENT USING MANDIBULAR AND TONGUE MOVEMENTS	Ryosuke Kawachi ¹ , Takuya Niikawa ¹	¹ Osaka Electro-Communication University (Japan)
1954 16.13	HUMAN-COMPUTER INTERFACE SYSTEM USING ORAL FUNCTIONS	Takuya Niikawa ¹ , Ryosuke Kawachi ¹	¹ Osaka Electro-Communication University (Japan)
2037 16.26	SYSTEM I4CONTROL: THE EYE AS A NEW COMPUTER PERIPHERY	Marcela Fejtová ¹ , Jan Fejt ¹	¹ Czech Technical University in Prague (Czech Republic)
2188 16.39	THE DEVELOPMENT OF AN ACCELEROMETER AND GYROSCOPE BASED SENSOR TO DISTINGUISH BETWEEN ACTIVITIES OF DAILY LIVING AND FALL-EVENTS	Karen Culhane ¹ , Alan Bourke ¹ , Jacinta O' Brien ² , Gerard Lyons ¹	¹ Biomedical Electronics Laboratory, Department of Electronic and Computer Engineering, University of Limerick, Limerick (Ireland); ² Department of Physical Education and Sports Sciences, University of Limerick, Limerick (Ireland)
1615 16.52	DIFFERENCES IN LIGHT SLEEP AND DEEP SLEEP MEASURED BY IST VIVAGO® WRISTCARE	Elina Lamminmäki ¹ , Ari Saarinen ² , Jyrki Lötjönen ¹ , Markku Partinen ^{3,4} , Ilkka Korhonen ¹	¹ VTT Information Technology (Finland); ² Rokua and Kajaani Rehabilitation Centres (Finland); ³ Skogby Sleep Clinic (Finland); ⁴ Rinnekoti Research Center (Finland)
2018 17.05	TELEMETRIC DIAGNOSIS FOR BRUXISM AND SLEEP DISEASES	Johannes Clauss ¹ , Alexander Scholz ¹ , Hans-Georg Gruber ¹ , Alexander Probst ¹ , Bernhard Wolf ¹	¹ Heinz-Nixdorf Lehrstuhl für medizinische Elektronik, Technische Universität München (Germany)
2092 17.18	DEVELOPMENT OF A TELEMEDICINE SYSTEM FOR THE PATIENT WITH RESPIRATORY DISEASES	Jaemin Kang ¹ , Seung Yup Lee ¹ , Hyunjoong Kong ¹ , Hee Chan Kim ²	¹ Interdisciplinary Program, Biomedical Engineering Major, Graduate School, Seoul National University (South Korea); ² Department of Biomedical Engineering, College of Medicine & Institute of Medical & Biological Engineering, Medical Research Center, Seoul National University (South Korea)

SS47 Biological Effects of Electromagnetic Field II. (Special Session - SS5 II. - oral contributions)

Chair: Jan Vrba (Czech Republic)

Co-Chair: Hiie Hinrikus (Estonia)

Day and time: Thursday 24th November, 16.00-17.30 (format 15+5 minutes)

Hall: Club H

Id	Title	Paper Authors	Authors' Institutions
2034 16.00	ACUTE EXPOSURE TO 50 HZ, 8 MT MAGNETIC FIELD CAN IMPAIR RAT SPATIAL MEMORY	M. Djajidi ^{1,2} , S. Mohammad P. Firoozabadi ¹ , A.A. Sajadi ² , A.A. Taherian ²	¹ Tarbiat-Modares University (Iran); ² Semnan University of Medical Sciences (Iran)
2194 16.20	RESEARCH OF INTERACTIONS OF EM FIELD AND BIOLOGICAL SYSTEMS	Jan Vrba ¹ , Luca Vannucci ^{2,8} , Peter Peschke ³ , Frantisek Vozeh ⁴ , Max Vojtisek ⁵ , Jiri Kubes ⁶ , Jakub Cvek ⁶ , Josef Kvech ⁷	¹ Czech Technical University in Prague (Czech Republic); ² Institute of Microbiology of the Czech Academy of Sciences (Czech Republic); ³ German Cancer Research Institute in Heidelberg (Germany); ⁴ Medical Faculty of Charles University in Pilsen (Czech Republic); ⁵ Czech Institute of Health in Prague (Czech Republic); ⁶ Institute of Radiation Oncology in Prague (Czech Republic); ⁷ Hospital in Motol, Prague (Czech Republic); ⁸ University of Pisa (Italy)
2494 16.40	SENSITIVITY OF HUMAN EEG TO MODULATION FREQUENCY OF MICROWAVE RADIATION	Ruth Tomson ¹ , Hiie Hinrikus ¹ , Maie Bachmann ¹ , Jaanus Lass ¹ , Viuu Tuulik ¹	¹ Tallinn University of Technology (Estonia)
2519 17.00	EFFEECT OF MODULATED AT 7 HZ, 14 HZ AND 21 HZ MICROWAVES ON HUMAN EEG RHYTHMS	Hiie Hinrikus ¹ , Maie Bachmann, Jaanus Lass, Viuu Tuulik	¹ Tallinn University of Technology (Estonia)

SS45 Health Care Technology Assessment IV. (Special Session - posters - SS36 IV.)

Day and time: Thursday 24th November, 9.00-17.30, 12.30-14.00 mandatory presence of authors

Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
2275 1	RESEARCH OF OPERATING THEATRE PLANINGS BY DIFFERENT FACTORS AT HOSPITALS IN TURKEY	Yelda Durgun ² , Cigdem Belgin Tipi ¹ , Cenk Sahin ³	¹ Erciyes University (Turkey); ² Erciyes University (Turkey); ³ Çukurova University (Turkey)
2649 2	THE QUALITY OF THE IMAGE IN TELE-ECHOCARDIOGRAPHY : THE ROLE OF THE ISS IN AN ITALIAN PROJECT	<u>DANIELE GIANANTI</u> ¹ , Velio Macellari ¹ , Andrea Giordano ² , Francesco Martelli ¹ , Giovanni Maccioni ¹ , Sandra Morelli ¹	¹ Istituto Superiore di Sanità (Italy); ² Fondazione Maugeri (Italy)
2657 3	THE EFFECTS OF NEGATIVE IONS ON THE HUMAN BODY IN AN INDOOR ENVIRONMENT USING CHARCOAL COATING MATERIAL	<u>Mitsuo Terasawa</u> ¹ , Takeshi Shirahama ² , Michiharu Yoshimatsu ²	¹ Tamagawa university (Japan); ² Atech Kobo Co. Ltd. (Japan)
1663 4	A STUDY FOR SUITABLE SPECIFICATION OF MEDICAL USE RFID	<u>Ryosuke HOSAKA</u> ¹	¹ Shonan Institute of Technology (Japan)

**SS41 Instrumentation and Measurement Applied to Biomedical Engineering II.
(Special Session - posters - SS2 II.) organised by Akos Jobbágy and technically
sponsored by IEEE Hungary Section I & M and EMBS Joint Chapter**

Day and time: Thursday 24th November, 9.00-17.30, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
2029 5	LOW-COST BIOSENSORS: CERAMIC-BASED MULTI-PARAMETRIC SENSORCHIP FOR FUNCTIONAL SCREENING	<u>Johann Ressler</u> ¹ , Helmut Grothe ¹ , Martin Brischwein ¹ , T. Asmus ² , K. Wienand ² , Bernhard Wolf ¹	¹ Technical University of Munich, Heinz Nixdorf-Chair for Medical Electronics, Munich (Germany); ² Heraeus Sensor Technology GmbH, Reinhard Heraeus-Ring 23, 63801 Kleinostheim (Germany)
2320 6	BIOMECHANICAL INTERPRETATION OF THE REFLECTED WAVES IN THE INTRAORGAN BEDS: A NOVEL METHOD OF DIAGNOSTICS	<u>Natalya Kizilova</u> ¹ , Helen Philippova ¹ , Oleg Zenin ^{1,2}	¹ Kharkov National University (Ukraine); ² Donetsk National Medical University (Ukraine)
2635 7	INTELLIGENT INTRA-ORAL THERAPEUTIC DEVICES	Andy Wolff ¹ , <u>Ben Z. Beiski</u> ¹	¹ Saliwell Ltd. (Israel)
1727 8	INVESTIGATION OF MICRO-MECHANICAL PROPERTIES OF STOMATOLOGIC MATERIALS	<u>Vadim (student)</u> <u>Zakiev</u> ¹ , Alexandr (student) Markovsky ¹ , Emir (prof.) Aznakayev ¹ , Iclam (eng.) Zakiev ¹ , Evgen (student) Gursky ¹	¹ National Aviation University (Ukraine)
2398 9	AUTOMATIC FOOT PRESSURE CORRECTION FOR PATIENTS WITH FOOT DEFORMITIES	Sanjeevirayar Bagyaraj	
2475 10	INFLUENCE OF LOW FREQUENCY ELECTROMAGNETIC FIELD ON PACEMAKER OPERATION	<u>BABOURI Abdesselam</u> ¹ , HEDJIEDJ Ahcene ¹ , ANDRETZKO Jean-Paul ¹ , GUENDOZ Laoues ¹ , NADI Mustapha ¹	¹ Laboratoire d'Instrumentation Electronique de Nancy, Faculté des Sciences et Techniques, Université Henri Poincaré Nancy 1 (France)
2621 11	INSTALLATION AND OUTFITTING OF A LABORATORY FOR INSTRUMENTATION AND BIOMEDICAL MEASUREMENT	<u>Jimenez Aida</u> ¹ , Ortiz Rocio ¹ , Martinez Alfonso ¹	¹ Electrical Engineering Department, Universidad Autonoma Metropolitana-Iztapalapa (Mexico)

SS48 Biological Effects of Electromagnetic Field III. (Special Session - SS5 III. - posters)

Day and time: Thursday 24th November, 9.00-17.30, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1507 12	EVALUATION OF THE LEARNING CAPABILITY IN RATTUS NORVEGICUS SUBMITTED TO MICROWAVE RADIATION (850 MHz)	Anna Karina Ribeiro Lopes Lino, Marcelo Sampaio Alencar	
1668 13	ELECTROMAGNETIC FIELD DEPOSITION IN LAYERED SPHERICAL MODELS OF BIOLOGICAL OBJECTS EXPOSED	Simona Miclaus ¹ , <u>Ovidiu Valentin Olariu</u> ^{1,2} , Paul Bechet ² , Stefan Demeter ¹ , Gheorghe Ioan Saiin	¹ Land Forces Academy, Tech. Sci. Dept., Sibiu (Romania); ² Information Systems and Communications Training Centre, Sibiu (Romania); (Romania)
1669 14	PRACTICAL ISSUES CONCERNING CELLULAR BASE STATION EMISSIONS AND POPULATION EXPOSURE IN ROMANIA	Simona Miclaus ¹ , Paul Bechet ² , Cristian Goiceanu ³ , Radu Mitran ² , Stefan Demeter ¹ , <u>Ovidiu Valentin Olariu</u> ^{1,2}	¹ Land Forces Academy, Tech. Sci. Dept., Sibiu (Romania); ² Information Systems and Communications Training Centre, Sibiu (Romania); ³ Public Health Institute, Non-ionising Radiation Dept., Iasi (Romania)
1748 15	Static Electric Field Effects on Radical Generating System and Blood Lipids	Goknur Guler, Z Türközer, Nesrin Seyhan	
1858 16	DETERMINATION THE EFFECT OF ELECTRIC FIELD ON HUMAN BLOOD RHEOLOGY BY MEASURING SYSTEM AND DATA ACQUISITION SYSTEM FOR ROTATIONAL VISCOMETER	Nadia Antonova, Rumen Zlatev	
2017 17	MAGNETIC FIELDS HAVE AN EFFECT ON ANTIOXIDANT DEFENSE SYSTEM IN HEART TISSUE	<u>Ayşe G. CANSEVEN</u> ¹ , Sule COSKUN ² , Nesrin SEYHAN ³	¹ Gazi University Medical Faculty (Turkey); ² Gazi University Art And Sciences Faculty (Turkey); ³ Gazi University Medical Faculty (Turkey)
2019 18	ELF MAGNETIC FIELDS' EFFECTS ON LIPID PEROXIDATION IN LUNG AND KIDNEY	<u>Ayşe G. CANSEVEN</u> ¹ , Sule COSKUN ² , Nesrin SEYHAN ³	¹ Gazi University Medical Faculty (Turkey); ² Gazi University Art and Science Faculty (Turkey); ³ Gazi University Medical faculty (Turkey)
2020 19	EFFECTS OF ENVIRONMENTAL ELF MAGNETIC FIELDS ON MYELOPEROXIDASE (MPO) ACTIVITY	<u>Ayşe G. CANSEVEN</u> ¹ , Ummühani OZEL ² , Ayşe BILGIHAN ³ , Nesrin SEYHAN ⁴	¹ Gazi University Medical Faculty (Turkey); ² Gazi University Medical Faculty (Turkey); ³ Gazi University Medical Faculty (Turkey); ⁴ Gazi University Medical Faculty (Turkey)

2047 20	DESIGN, INSTALLATION AND STANDARDIZATION OF HOMOGENOUS MAGNETIC FIELD SYSTEMS FOR EXPERIMENTAL ANIMALS	<u>Ayse G. CANSEVEN</u> ¹ , Nesrin SEYHAN ²	¹ Gazi University Medical Faculty (Turkey); ² Gazi University Medical Faculty (Turkey)
2049 21	SCALING OF MF FROM GUINEA PIG TO HUMAN	Ayse G. CANSEVEN, Nesrin SEYHAN	
2585 22	CALCULATION OF ELECTROMAGNETIC FIELD INFLUENCES ON HUMANS WITH METALIC IMPLANTS	Lidija Ololoska-Gagoska, Suzana Loskovska, Ljuben Janev	

SS58 (SS57 II.) Bioelectromagnetism II. (Standard Session - posters)

Day and time: Thursday 24th November, 9.00-17.30, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1613 23	INFLUENCE OF ANISOTROPIC COMPARTMENTS ON MAGNETIC FIELD DISTRIBUTION CREATED BY ARTIFICIAL CURRENT DIPOLES	<u>Mario Liehr</u> ¹ , Jens Haueisen ¹	¹ Biomagnetic Center, Department of Neurology, University Jena (Germany)
1966 24	COMPARISON OF MULTIPOLE EXPANSION AND LEVENBERG-MARQUARDT METHOD FOR THE LOCALISATION OF MAGNETICALLY MARKED CAPSULES IN THE INTESTINAL TRACT	<u>Bernd Hilgenfeld</u> ¹ , Hannes Nowak ² , Jens Haueisen ¹	¹ Biomagnetic Centre, Department of Neurology, Friedrich Schiller University Jena (Germany); ² Jena SQUID GmbH (Germany)
2256 25	ELECTROCHEMICAL THERAPY APPLIED TO TREAT DOG'S CANCEROUS MAMMARY GLANDS AND MODEL FOR LYMPHOCYTES TUMOR CELLS POPULATION UNDER ELECTROCHEMICAL THERAPY	<u>Augusto Cardona</u> ¹ , Marcos Telló ¹ , Guilherme Dias ¹ , Rodrigo Zanella ¹ , Luciana Oliveira ² , Rosemari Oliveira ²	¹ PUCRS (Brazil); ² UFRGS (Brazil)
1897 26	FLUORESCENCE AND DIFFERENTIAL SCANNING MICROCALORIMETRY STUDY OF INTERACTION OF TWO	<u>Katarzyna Michalik</u> ¹ , Aneta Kluczevska ¹ , Zofia Drzazga ¹	¹ University of Silesia, A.Chelkowski Institute of Physics, Department of Medical Physics, Katowice (Poland)
1531 27	EXPLORING STIMULUS WAVEFORM SPACE FOR SELECTIVE STIMULATION OF NEURAL FIBERS	<u>A. Mahnam</u> ¹ , S.M.P. Firoozabadi ² , R.M. Hashemi ¹ , M. Janahmadi ³	¹ Amirkabir University of Technology (Iran); ² Tarbiat-Modares University (Iran); ³ Shaheed Beheshti University of Medical Sciences (Iran)
2481 28	THALAMUS ELECTRICAL STIMULATION ON VEGETATIVE COMA PATIENTS	<u>Bareaa Zabach</u> ¹ , Mihaela Ungureanu ¹ , Sever Pasca ¹ , Jean Ciurea ²	¹ Politehnica University (Romania); ² Bagdazar Hospital (Romania)
2316 29	CONTROL OF ELECTRICAL STIMULATION TO SUPPORT STANDING EXERCISES FOR PERSONS WITH SPINAL CORD INJURY	<u>Marian Silviu Poboroniuc</u> ¹ , Dinu Cristian Popescu ² , Lucian Nita ¹	¹ "Gh. Asachi" Technical University of Iasi (Romania); ² University of Medicine and Pharmacy of Iasi (Romania)

1732 30	EXAMINATION OF ELECTRIC FIELD EFFECTS ON OXIDANT AND ANTIOXIDANT ENZYMES BY USING HYBRID GENETIC ALGORITHM AND NEURAL NETWORK	<u>Goknur Guler</u> ¹ , Firat Hardalac ²	¹ Gazi University, Faculty of Medicine, Biophysics Department (Turkey); ² Firat University, Faculty of Medicine, Biophysics Department (Turkey)
1879 31	SPECTRAL DISTRIBUTION AND DYNAMICS OF STIMULATORS FOR SELECTIVE CONE EXCITATION	<u>Sascha Klee</u> ¹ , Patrick Beßler ¹ , Peter Husar ² , Guenter Henning ¹	¹ Technische Universität Ilmenau (Germany); ² Saarland University Hospital (Germany)
1468 32	SPEECH RECONSTRUCTION FOR COCHLEAR IMPLANTS	<u>Martin Vondrasek</u> ¹ , Tomas Tichy ¹ , Pavel Sovka ¹	¹ Czech Technical University in Prague, Electrotechnical Faculty (Czech Republic)
2411 33	2D FINITE ELEMENT MODELLING OF CURRENT DENSITY DISTRIBUTION DURING THE APPLICATION OF ELECTRICAL STIMULATION USING SURFACE ARRAYS	<u>M.A. Hernandez Silveira</u> ^{1,2} , D.J. Ewins ¹	¹ University of Surrey, Centre for Biomedical Engineering (U.K.); ² Universidad del Tachira, Grupo de Bioingenieria UNET (Venezuela)

SS74 Biomedical Engineering Education (Standard Session - posters)

Day and time: Thursday 24th November, 9.00-17.30, 12.30-14.00 mandatory presence of authors

Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1574 34	SET OF MODULAR BLOCKS FOR EDUCATION IN BIOPOTENTIAL PROCESSING	Vratislav Fabian ¹ , Tomas Funda ²	¹ CTU in Prague, FEE, Department of Cybernetics (Czech Republic); ² CTU in Prague, FEE, Department of Radioelectronics (Czech Republic)
2056 35	BIONICS: MULTIMEDIAL COURSE	Marcela Fejtová ¹ , Vratislav Fabián ¹	¹ Czech Technical University in Prague (Czech Republic)
1759 36	ON UNIFICATION OF CURRICULA FOR MASTERS TRAINING IN THE FIELD OF BIOMEDICAL ENGINEERING	Zafar Yuldashev, Konstantin Bolsunov	
2693 37	ARTEFACTS IN EEG	Josef Rieger ¹ , Lenka Lhotská ¹	¹ Czech Technical University in Prague - Gerstner Laboratory (Czech Republic)
2532 38	SIMULATION TOOLS FOR BIOMEDICAL ENGINEERING EDUCATION AND TRAINING	Semahat Demir	

SS103 Biotechnology (Standard Session - posters)

Day and time: Thursday 24th November, 9.00-17.30, 12.30-14.00 mandatory presence of authors

Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1569 39	THE PROSPECTIVE AND CHALLENGES FOR BUSINESS GROUP DIVERSIFYING TO BIOTECHNOLOGICAL INDUSTRY – A CASE STUDY IN TAIWAN	<u>Hsi Mei Chung</u> ¹	¹ I Shou University (Taiwan)

SS113 (SS112 II.) Computer Support of People with Special Needs II. (Standard Session - posters)

Day and time: Thursday 24th November, 9.00-17.30, 12.30-14.00 mandatory presence of authors
Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
2154 40	EMU A TEXT PREDICTION SYSTEM TO SPEED UP AND EASE THE TEXT INPUT IN NEARLY ANY APPLICATION FOR DISABLED PEOPLE	Gottfried Seisenbacher ¹ , <u>Georg Edelmayer</u> ¹ , Wolfgang Zagler ¹	¹ Institute 'integrated study', Vienna University of Technology (Austria)
2527 41	A WEB SITE FOR INTEGRATED HOMECARE SERVICE	Marco Lepone ¹ , Paolo Bifulco ¹ , Marcello Bracale ¹	¹ University "Federico II" of Naples (Italy)
1976 42	CHARACTERIZATION OF ELECTRO-MECHANICAL SWITCHES FOR THE OPERATION OF ASSISTIVE DEVICES	Joaquin Roca Dorda ¹ , <u>Joaquin Roca González</u> ¹ , Jairo L. Ramon Valencia ¹ , Elena Del.Campo Adrián ¹	¹ Polytechnic University of Cartagena (Spain)
2149 43	CONCEPT AND EVALUATION METHODOLOGY OF ADJUSTABLE TOILETS FOR OLD PERSONS AND PEOPLE WITH DISABILITIES	<u>Georg Edelmayer</u> ¹ , Paul Panek ¹ , Wolfgang Zagler ¹	¹ Institute 'integrated study', Vienna University of Technology (Austria)
2301 44	SOFTWARE FRAMEWORK FOR ASSISTIVE MOBILE ROBOTS SYSTEM	<u>Motoki Takagi</u> ¹ , Yoshiyuki Takahashi ¹ , Takashi Komeda ¹ , Koyama Hiroyuki ¹ , Yamamoto Shin-ichiro ¹	¹ Shibaura Institute of Technology (Japan)
2512 45	HYBRID MULTI-SOURCE, MULTI-FUNCTION PATIENT ADAPTABLE SYSTEM FOR ASSISTIVE TECHNOLOGY CONTROL APPLICATIONS	<u>Antonio Salazar</u> ¹ , Ricardo Bravo ¹ , Miguel Castro ¹ , Daniel Ponticelli ¹	¹ Universidad Simón Bolívar (Venezuela)
2245 46	TAS-TOURISTIC ASSISTANCE SYSTEM FOR USERGROUPS WITH SPECIFIC HANDICAPS	<u>Carsten Stiller</u> ¹ , Fred Roß ¹ , Ulrike Fröber ² , Stefan Lutherdt ²	¹ Department of System Analysis, Faculty of Informatics and Automation, Technical University of Ilmenau (Germany); ² Department of Biomechatronics, Faculty of Mechanical Engineering, Technical University of Ilmenau (Germany)
2151 47	SCALEABLE TELESUPPORT FOR ENHANCING SERVICE DELIVERY OF REHABILITATION TECHNOLOGY	P. Panek ¹ , <u>Georg Edelmayer</u> ¹ , Christian Beck ¹ , Wolfgang Zagler ¹	¹ Institute 'integrated study', Vienna University of Technology (Austria)

SS67 (SS65 III. Th) Biomaterials III. (Special Session - posters)

Day and time: Thursday 24th November, 9.00-17.30, 12.30-14.00 mandatory presence of authors

Hall: congress foyer 1st floor, in front of the Club H

Id	Title	Paper Authors	Authors' Institutions
1919 48	HEPARIN FUNCTIONALIZED PEG GELS THAT MODULATE PROTEIN ADSORPTION FOR HMSC ADHESION AND DIFFERENTIATION	<u>Danielle Benoit</u> ¹ , Kristi Anseth ^{1,2}	¹ University of Colorado (USA); ² Howard Hughes Medical Institute (USA)
1980 49	HYDROXYAPATITE NANOPOWDERS AND THEIR CHARACTERIZATION OWING TO ELECTRON WORK FUNCTION MEASUREMENTS	<u>Yuri Dekhtyar</u> ¹ , Anatoli Karlov ² , Alexei Katashev ¹ , Christian Meissner ¹ , Aloiz Patmalnieks ³ , Natalia Polyaka ¹	¹ Riga Technical University (Latvia); ² Centre for Orthopaedy and Medical Material Sciences (Russia); ³ University of Latvia (Latvia)
2122 50	THE INFLUENCE OF GAMMA-IRRADIATION AND HEAT TREATMENT ON WEAR OF UHMWPE AGAINST CO-CR-MO ALLOY IN UN-LUBRICATED CONDITIONS	<u>Mohamed Ibrahim</u> ¹ , F Černý ¹ , J Suchánek ¹ , Z Horák ²	¹ Faculty of Mechanical Engineering, CTU, Prague (Czech Republic); ² Macromolecular Chemistry, Academy of Sciences of the Czech Republic, Prague (Czech Republic)
2376 51	PREDETERMINED BIO-PHYSICAL INTERACTIONS BETWEEN CORTICALIS AND SURFACE LAYER OF REPLACEMENT	<u>Miroslav Petřtýl</u> ¹ , Zdeněk Bastl ² , Milan Adam ³ , Jana Danešová ⁴ , Hana Hulejová ³ , Zdeněk Kruliš, Zdeněk Horák, Zdeněk Starý, Aleš Jíra	¹ Czech Technical University, Faculty of Civil Engineering, Laboratory of Biomechanics and Biomaterial Engineering (Czech Republic); ² Academy of Sciences, Institute of Physical Chemistry (Czech Republic); ³ Institute of Rheumatology (Czech Republic); ⁴ Academy of Sciences, Institute of Macromolecular Chemistry (Czech Republic)
1772 52	BIOLOGICAL PROPERTIES OF CALCIUM PHOSPHATE MATERIALS AND EXPERIMENTAL INVESTIGATION OF THEIR INFLUENCE ON MINERAL EXCHANGE AT TUBULAR BONE FRACTURES	Anatoly Karlov, Vladimir Popov, Victor Savenco, Sergey Kirutenco	
1682 53	ELECTROSPINNING OF COLLAGEN NANOFIBERS AND ITS EFFECT ON CELLS BEHAVIOR AND WOUND HEALING	Byung-Moo Min, Won Ho Park, Young Ku, Sung- Chang Chung	

1696 54	EFFECT OF CALCIUM ION RELEASE FROM A BIOACTIVE POLY(E-CAPROLACTONE)-ORGANOSILOXANE NANO-HYBRID ON THE PROLIFERATION OF HUMAN BONE MARROW STROMAL CELLS	Sang-Hoon Rhee, Yong-Keun Lee, Bum-Soon Lim, Jong Eun Lee, Jeong Joon Yoo, Hee Joong Kim	
1881 55	NOVEL TECHNIQUES FOR MICROPATTERNING INVISCID BIOFUNCTIONALISED HYDROGELS	Robert Keatch, Kenneth Donnelly, Mark Pridham, Seth Schor, Ana Schor, Niall Kelly, Eoin Beakey, Diarmuid Loftus	
2417 56	MECHANICAL PROPERTIES OF HUMAN ARTICULAR CARTILAGE DETERMINATION	<u>Jan Vrana</u> ¹ , Jiri Michalec ¹	¹ Czech Technical University in Prague, Faculty of Mechanical Engineering, Department of Mechanics, Laboratory of Biomechanics (Czech Republic)