

ISABEL 2009 Preliminary Programme

(small changes within each day might be applied, schedule of lectures is 99% settled)

	Room 1	Room 2	Room 3	Room 4	
24.11. Tuesday					
8.00-10.00h	Registration				
10.00-10.10	Opening session				
10.10-12.10	Lectures:	Workshop - Advanced Ultra-Wideband Radio Technology_1, Chair: Jung (6)	Special session - Heterogenous wireless networks, Chair: Gavrilovska (5)	Special session - Biomaterials and Biosensors, Chair: Labuda (6)	Special session - Self-Organization in Wireless Networks, Chair: Tyrrell (5)
	10.10-10.30	Michael Horvat, Cecilia Carbonelli, Zijian Bai and Peter Jung. Analytic Performance Evaluation of an LTE SFBC System with Wiener Channel Estimation	Ognjen Ognjenoski, Vladimir Atanasovski, Pero Latkoski, Liljana Gavrilovska. Resource Management Aspects in Future Wireless Systems: RIWCoS Approach	Jana Šefćovičová, Peter Tomčík, Jaroslav Filip, Peter Gemeiner and Jan Tkac. A mediatorless electrochemical detection of NADH on a biopolymer dispersed carbon nanotube layer	B. Ghimire, S. Sinanovic, H. Haas and G. Auer. Self-Organized Interference Mitigation in Wireless Networks Using Busy Bursts
	10.30-10.50	Christoph Spiegel, Sebastian Rickers, Guido Bruck, Peter Jung, Woojin Shim, Rami Lee and Jaehwang Yu. Low Power Networks – The ZigBee Competition	Pero Latkoski, Valentin Rakovic, Ognjen Ognjenoski, Liljana Gavrilovska. Modeling and Simulation of Wireless Heterogeneous Networks	Stella Girousi and Vasiliki Kinigopoulou. Detection of Short Oligonucleotide Sequences Using an Electrochemical DNA Hybridization Biosensor	Philipp Sommer. Clock Synchronization in Wireless Sensor Networks: Local vs. Global
	10.50-11.10	Alexander Viessmann, Andreas Waadt, Christoph Spiegel, Christian Kocks, Admir Burnic, Guido H. Bruck, Peter Jung, Eutaek Lim and Hyeon Woo Lee. A Novel Threshold Selection for Hypotheses Tests in Cognitive Radios	Valentin Rakovic, Vladimir Atanasovski, Liljana Gavrilovska. Velocity Aware Vertical Handovers	Erik Vavrinsky, Sona Flickyngerova, Pavol Gaspierik, Jaroslava Skrinjarova, Ivan Novotny, Viera Stopjakova, Radovan Viglasky, Vladimir Tvarozek and Pavol Sutta. Micro- / Nano- structuralized interfaces of conductive and transparent thin-film microelectrodes	Johannes Klinglmayr, Christian Bettstetter and Marc Timme. Globally Stable Synchronization by Inhibitory Pulse Coupling
	11.10-11.30	Andreas Waadt, Guido H. Bruck and Peter Jung. An overview of positioning systems and technologies	Eduard C. Popovici Eduard, Valentin Andrei Valentin and Octavian Fratu Octavian. Real-time Monitoring Design of a Wireless Network Device for Vertical Handover on Multimod Terminals	Ján Labuda. Concepts and terms at electrochemical nucleic acidbased biosensors	Abdalkarim Awad, Reinhard German and Falko Dressler. Data-Centric Cooperative Storage in Wireless Sensor Network
	11.30-11.50	Alexander Viessmann, Andreas Waadt, Christoph Spiegel, Christian Kocks, Admir Burnic, Peter Jung, Guido Bruck, Euntaek Lim and Hyeon Woo Lee. Log-likelihood Ratio Based Signal Sensing Strategy for Cognitive Radios	Eduard C. Popovici Eduard, Adrian Ciocoiu Ady and Octavian Fratu Octavian. SIP-based Application Level Mobility for Reconfigurable Hybrid Wireless Systems	Gabriela Lutišanová, Eva Kuzielová, Martin T. Palou, Jana Kozánková and Ján Labuda, Preliminary comparison static and dynamic in vitro test of bioactivity of glass-ceramics	Ehssan Sakhaee, Kenji Leibnitz, Naoki Wakamiya and Masayuki Murata. Bio-inspired Layered Clustering Scheme for Self-adaptive Control in Wireless Sensor Networks
	11.50-12.10	Christian Kocks, Ernest Scheiber, Xu Dong, Alexander Viessmann, Shangbo Wang, Guido H. Bruck and Peter Jung. A Localization and Tracking Application for UWB			

12.10-13.10	Lunch				
13.10-14.50	Lectures:	Workshop - Advanced Ultra-Wideband Radio Technology_2, Chair: Jung (5)	Special session - ICT Solutions for Medical and Healthcare Applications_1, Chair: Li (5)	Special session - Challenges in Ubiquitous Personal Healthcare and Ambient Assisted Living, Chair: Bernardos (4)	General track_1 (3)
	13.10-13.30	Xu Dong, Zijian Bai, Andreas Waadt, Guido H. Bruck and Peter Jung. MIMO with Network Coding in Relay Networks: A Combination of Multiplexing and Diversity	Takehiko Kobayashi. Recent Progress of Ultra Wideband Radio Propagation Studies for Body Area Network	Minna Isomursu, Mari Ervasti and Vili Törmänen. Medication Management Support for Vision Impaired Elderly - Scenarios and Technological Possibilities	Pierce Brady, Martin Hill, Joe Connell, John Barrett and Derry O'Hare. The Identification of Bone Regions for the Assistance of Temporal Bone Surgery through Analysis of the Drill Acoustics
	13.30-13.50	Alexander Viessmann, Christian Kocks, Andreas Waadt, Christoph Spiegel, Admir Burnic, Guido H. Bruck, Peter Jung, Jerry Kim, Julie Lim and Hyeon Woo Lee. A Software Defined Radio Realization of a Multimedia HDTV Receiver	Wen-Bin Yang, Kamran Sayrafian-Pour, John Hagedorn, Judith Terrill, Kamy Yekeh Yazdandoost. Simulation Study of Body Surface RF Propagation for UWB Wearable Medical Sensors	Rodrigo Cilla, Miguel Angel Patricio, Antonio Berlanga and Jose M. Molina. Non-supervised Discovering of User Activities in Visual Sensor Networks for Ambient Intelligence applications	Laura Zimmermann, Markus Guttman, Andreas Guber and Volker Saile. A novel fabrication method to integrate super hydrophobic nanostructures into microfluidic systems
	13.50-14.10	Alexander Viessmann, Christian Kocks, Andreas Waadt, Christoph Spiegel, Admir Burnic, Guido Bruck, Peter Jung, Jerry Kim, Julie Lim and Hyeon Woo Lee. An Implementation-friendly Synchronization Algorithm for Multimedia HDTV Receivers	Jianqing Wang and Qiong Wang. Channel Modeling and BER Performance of an Implant UWB Body Area Link	Henar Martín, Ana M. Bernardos, Luca Bergesio and Paula Tarrío. Analysis of key aspects to manage Wireless Sensor Networks in Ambient Assisted Living environments	Sangwook Shn, Youngbin Lim, HyeonDeok Bae and Hun Choi. Blind MIMO Equalization using Subband Affine Projection Algorithm with IIR FilterBank
	14.10-14.30	Admir Burnic, Xu Dong, Mohammed A. A Olofi, Andreas Waadt, Alexander Viessmann, Peter Jung, Wolfgang Fischer, Erhard Bassow and Martin Schirmacher. UWB Coverage in Public Transport Scenarios	Harri Viittala, Matti Hämäläinen, Jari Iinatti, Attaphongse Taparugssanagorn. Different experimental WBAN channel models and IEEE802.15.6 models: comparison and effects	Ines Frederix. A cardiac patient training companion	
	14.30-14.50	Shangbo Wang, Andreas Waadt, Sebastian Rickers, Christian Kocks, Xu Dong, Alexander Viessmann, Guido H. Bruck and Peter Jung. Java implementation of localization and tracking application based on HDR-UWB platform	Pedro Antonio Moreno, Maria Elena Hernando, Enrique J. Gomez, Ruth Pallares, Oscar Blanco, Antoine De Poorter, Alberto Hernandez and Francisco Gonzalez. Teleconsulting: A Medical Application Based on IP Multimedia Subsystem Technology for Ambient Assisted Living		
14.50-15.05	Coffee break				
15.05-16.05	Meeting the Editors				
16.05-16.15	Coffee break				
16.15-17.30	Keynote 1 - Bruce Wheeler				
17.30-18.30	Poster session - 17 posters				

17.30-18.30	Poster session - 17 posters				
		Nikolay Chumerin, Agostino Gibaldi, Silvio Sabatini and Marc Van Hulle. Convolutional Network for Vergence Control	Rezaul Hasan and Nazmul Ula. A Micro-sequenced Circuit Model for Phagocytic Bio-chemical Pathway	Michal Teplan and Anna Krakovská. EEG features of psycho-physiological relaxation	Konstantin Gurevich, Ekaterina Fabrikant, Pavel Salmanov and Alexander Airapetov. Development of distance learning for health promotion
		Vidas Raudonis, Rimvydas Simutis and Gintautas Narvydas. Discrete Eye Tracking for Medical Applications	Michael Walsh, Brendan O'Flynn, John Barton and Cian O'Mathuna. An Energy Efficient Power Controller Switching Methodology for an Ambient Healthcare Network	Ranjan Pal, Bharat Gupta and Ramjee Prasad. An Efficient Information Processing Technique for Ultra-Low Power Wireless Networks	Maged N. Kamel Boulos and eCAALYX Project Consortium. An Enhanced Ambient Assisted Living Experiment for Older People with Multiple Chronic Conditions
		Gintare Kersulyte - Raudone, Alfonsas Vainoras, Zenonas Navickas and Liudas Gargasas. Clinical decision support method based on coherence and complexity of cardiac signals	Yifan Ma, Dongmei Zhou, Xiaofang Xie, Bohan Dong, Yan Zhuang and Mingbin Zheng. A novel low-toxic liposomal adjuvant: different liposome compositions regulate monocyte activation and viability	Bharat Gupta, Ernestina Cianca, Marina Ruggieri and Ramjee Prasad. A novel FM-UWB system for Vital Sign Monitoring and its comparison with IR-UWB	Ally Yahaya Simba, Soichi Watanabe, Takashi Hikage and Toshio Nojima. Effect of Passive RF Exposure From Mobile Phones on Passengers Inside an Elevator: Comparison Between adult and child passengers
		Guanghe Zhang, Carmen Poon and Yuan-Ting Zhang. A Biometrics Based Security Solution for Encryption and Authentication in Tele-Healthcare Systems	Ze Zhao, Chung-Yan Poon and Yuan-Ting Zhang. Non-invasive Estimation of Cardiac Output from Finger Photoplethysmogram	Darina Šimková and Ján Labuda. Electrochemical flow-through system with DNA biosensor for biomedical and food technology applications	Seyed Reza Mirfayzi. Signal detection of Neural Activity
		Huixue Song, Tan Chen and Baoyue Zhang. An Integrated Microfluidic Cell Array for High-throughput and High-content Drug Screening			

18.30-20.30 Welcome reception

25.11. Wednesday

Start 9h-10.30h	Tutorial 1a,2a,3a			
10.30-10.45h	Coffee break			
10.45-12.15h	Tutorial 1b,2b,3b			
12.15 -13.30h	Lunch			
13.30-14.45h	Keynote 2 - Sergio Cerutti			
14.45-15.00	Coffee break			
15.00-16.15	Keynote 3 - Huang Bang Li			
16.15-16.25	Coffee break			
16.25-17.40	Keynote 4 - Constantinos B. Papadias			
19.30-24h	Gala dinner			

26.11.Thursday					
start 9h-10.15h	Keynote 5 - Mischa Dohler				
10.15-10.30h	Coffee break				
10.30-12.10h	Lectures:	Special session - Medical Image Detection, Acquisition, Analysis and Processing , Chair: Doellinger (5)	General track_2 (5)	Special session - Mathematics Applied to Information and Communication Theory and Technology_1, Chair: Marchetti (4)	Special session - ICT Solutions for Medical and Healthcare Applications_2, Chair:Li (5)
	10.30-10.50	Bohr C, Bumm K, Wurm J, Iro H, Comparison analysis of registration techniques for opto-electric Computernavigationsystems in ENT-surgery	Ioan Buciu and Alexandru Gacsadi. Gabor Wavelet Based Features for Medical Image Analysis and Classification	Natasa Zivic. Estimation of the Number of Reliability Values needed for Correction of Long Soft Input Decryption Blocks	Nobuo Nakajima. Short-Range Wireless Network and Wearable Bio-Sensors for Healthcare Applications
	10.50-11.10	Gebhard A., Maier S., Steidl M., Scibor R., Handschu M., Stürmer J., Penne M., Schuster Elmar Nöth. Telemedical Approach for Multimodal Analysis of Facial Paresis.	Danjun Yang, Yihua Dou and Baobao Wang. Polyp Detection in Digestive Endoscopic Images Based on Ellipse Fitting	Tobias Mirco Koch. Is the Assumption of Perfect Channel-State Information in Fading Channels a Good Assumption?	Kimio Oguchi, Dai Hanawa, Shingo Yamakawa, Taisuke Koide and Shohei Terada. Vital Information Transfer and Supporting Technology in a Home Environment
	11.10-11.30	Jörg Lohscheller. Towards evidence based Diagnosis of Voice Disorders using Phonovibrograms.	Sara Lioba Volpi, Michela Antonelli, Beatrice Lazzerini, Francesco Marcelloni and Dan C. Stefanescu. Segmentation and reconstruction of the lung and the mediastinum volumes in CT images	Mark F. Flanagan and Enrico Paolini. On the Weight and Stopping Set Distributions of LDPC Codes and their Generalizations	John Farserotu. Performance of an FM-UWB based Medical BAN
	11.30-11.50	Muhammad Mobeen Movania, Feng Zhao, Lee Sing Cheong, Feng Lin, Kemao Qian and Hock Soon Seah. GPU-based Surface Oriented Interslice Directional Interpolation for Volume Visualization	Dobrea Dan Marius and Dobrea Monica Claudia. Optimisation of a BCI system using the GA tehniqe	Juan J. Sánchez-Sánchez, Unai Fernández-Plazaola, M.C. Aguayo-Torres and J.T. Entrambasaguas. On the Bivariate Pearson type VII and its application to the BER analysis for SC-FDMA	Wei Chen, Son Tung Nguyen, Roland Coops, Sidarto Bambang Oetomo and Loe Feijs. Wireless Transmission Design for Health Monitoring at Neonatal Intensive Care Units
	11.50-12.10	Syed Muhammad Monir and Mohammed Yakoob Siyal. A region homogeneity approach to overcome the ill-balanced data problem in functional MRI clustering analysis	Dobrea Monica Claudia and Dobrea Dan Marius. The selection of proper discriminative cognitive tasks – a necessary prerequisite in high-quality BCI applications		Zhibo Pang. A Pervasive and Preventive Healthcare Solution for Medication Noncompliance and Daily Monitoring
12.10 -13.30h	Lunch				
13.30-14.45	Keynote 6 - Yuan-Ting Zhang				
14.45-15.00	Coffee break				

15.00-17.00h	Lectures:	Special session - Bioelectronics and Signal Processing for Prostheses and Wearable Medical Devices, Chair: Turicchia (6)	Special session - Communication Networks for Sustainability, Chair: Pedersen (4)	Special session - Mathematics Applied to Information and Communication Theory and Technology_2, Chair: Marchetti (4)	General track_3 (5)
	15.00-15.20	Doug Kim and Philip Loizou. On the Design of a Flexible Stimulator for Animal Studies in Auditory Prostheses	Jens Myrup Pedersen	Maxime Guillaud and Mérouane Debbah. Soft Channel Information for Wireless Communications	Erik Vavrinsky, Viera Stopjakova and Libor Majer. Electrical Biomonitoring towards Mobile Diagnostics of Human Stress Influence
	15.20-15.40	Shawn Kelly, Douglas Shire, Jinghua Chen, Patrick Doyle, Marcus Gingerich, William Drohan, Luke Theogarajan, Stuart Cogan, John Wyatt and Joseph Rizzo. The Boston Retinal Prosthesis: A 15-Channel Hermetic Wireless Neural Stimulator	Muhammed Tahir Riaz	Abdellatif Zaidi and Luc Vandendorpe. On Cooperative Encoding with Partially Known Non-Causal Interference	Qing Liu, Chung-Yan Poon, Yee-Man Wong and Yuan-ting Zhang. Time-frequency Analysis of Variabilities of Heart Rate, Systolic Blood Pressure and Pulse Transit Time on Normotensive Subjects after Exercise
	15.40-16.00	Sourabh Ravindran and Randy Cole. Low Complexity Algorithms for Heart Rate and Epileptic Seizure Detection	Ahmed Patel	Jerzy Konorski. Ad Hoc WLAN with Selfish, Secretive, and Short-Sighted Stations	Dagmar Faktorová. Couplet Numerical - Experimental Method for Frequency and Temperature Dependences of Biological Materials Dielectric Properties Investigation at Microwave Frequencies
	16.00-16.20	Elio Guidetti - STMicroelectronics	Jose Gutierrez, Tahir Riaz, Jens Pedersen and Ole B. Madsen. A Survey On Environmental Backbone Design and Implementation	Gordhan Das Menghwar and Christoph F. Mecklenbraeuer. Block-Markov Encoding Implementation with Network Coding for Cooperative Communications: A Diversity-Multiplexing Tradeoff Perspective	Femke Ongenaë, Thomas Dupont, Wannes Kerckhove, Wouter Haerick, Kristof Taveirne, Filip De Turck and Johan Decruyenaere. Design of ICU medical decision support applications by integrating service oriented applications with a Rule-based system
	16.20-16.40	Keng Hoong Wee - National University of Singapore			Branislav Bosansky and Lenka Lhotska. Agent-Based Process-Critiquing Decision Support System
	16.40-17.00	Cyril Lahuec, Matthieu Arzel, Gouriou Manuel and François Gallée. A ligament laxity telemetry system architecture for a knee replacement prosthesis			Faisal Al-kamali. A New DCT-Based SC-FDMA System For Future Uplink Communications

27.11. Friday					
start 9h-10.15h	Keynote 7 - Milos Oravec				
10.15-10.30h	Coffee break				
10.30-12.10h	Lectures:	Special session - Biosignals: detection, acquisition and processing, Chair: Cianca (5)	Special session - Bionic devices for handicapped and novel diagnostics, Chair: Roska (5)	Special session - Delivery of integrated ICT services for elderly with mild dementia for independent living and enhanced quality of life, Chair: Kyriazakos (5)	General track_4 (5)
	10.30-10.50	Neda Baheri, Mohammadhossein Miranbaygi and Rasoul Malekfar. Improved Skin Xerosis Detection by Combining Extracted Features from Raman Spectra	Attila Kis, Gábor Vásárhelyi. Event Detection with 3D Tactile Sensors	Sofoklis Kyriazakos, Anelia Mitseva, Antony Litke, Neeli Prasad and Ramjee Prasad, Independent living for elderly with dementia based on ICT - The ISISEMD initiative	Ali Khosrozadeh, Abolfazle Akbari and Naser Lasemi. Clustering algorithms in Ad Hoc Networks
	10.50-11.10	Raúl Chávez-Santiago, Ali Khaleghi, Ilangko Balasingham, and Tor A. Ramstad. Architecture of an Ultra Wideband Wireless Body Area Network for Medical Applications	Kristóf Karacs, Mihály Radványi, Márton Görög, Ákos Kusnyerik, Tamás Roska, Mihály Szuhaj. A Mobile Visual Navigation Device: New Algorithms for Crosswalk and Pictogram Recognition	Carrie Peterson, Anelia Mitseva, Albena Mihovska, Neeli Prasad and Ramjee Prasad. The phenomenological experience of mild dementia and user interface development	Stanislav Marcek, Martin Drozda, Gabriel Juhas and Fedor Lehocki. Network Intrusion Detection in High Dimensional Space
	11.10-11.30	Luigi Bianchi, Saber Samid, Arjan Hillebrandd, Lucia Rita Quitadamo, Stefano Seri. Introducing the NPXLab BCI facilities: a set of tools for the analysis and optimization of P300 based Brain-Computer Interfaces	József Laczkó, Tamás Pilissy, Róbert Tibold. Neuro-mechanical Modeling of Human Limb Movements for Controlling Neuroprostheses of Spinal Cord Injured Patients	Anelia Mitseva, Technology services for care for elderly with mild dementia, seen from the end-user point of view - the ISISEMD perspective	Martin Drozda and Sven Schaust. Costimulation and Priming: Can it Help Protect Ad Hoc Wireless Networks?
	11.30-11.50	Enrico M. Staderini, Graziano Varotto. Vertebral traction assessment system	Gergely Feldhoffer and Balázs Oroszi. An Efficient Voice Driven Face Animation Method For Cyber Telepresence Applications	Antony Litke, Nikolaos Papadakis, Integrating services and systems	Mi Zhang and Alexander Sawchuk. A Customizable Framework of Body Area Sensor Network for Rehabilitation
	11.50-12.10	Giovanni Saggio, Stefano Bocchetti, Carlo Alberto Pinto, Giancarlo Orengo and Franco Giannini. A novel application method for wearable bend sensors	Adam Tamas Balogh and Ferenc Kovacs. Application of Heart Sound Analysis in Preterm Neonates with Patent Ductus Arteriosus	Anne Abildgaard, Carrie Peterson, Neeli Prasad. Evaluating the increase of Quality of Life of a pilot	Marco Hernandez. Ultra Low Power UWB Transceiver Design for Body Area Networks
12.10-12.20	Closing session				