

 MAREW 2013
Microwave and Radio Electronics Week 2013

23th International Conference Radioelektronika 2013
13th Conference on Microwave Techniques COMITE 2013

General Chair
Pavel Bezousek

Technical sponsors



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Pardubice, Czech Republic
April, 16 - 18, 2013

 MAREW 2013
Microwave and Radio Electronics Week 2013

23th International Conference
Radioelektronika 2013

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MAREW 2013 - Conference program

Tuesday - April, 16			Wednesday - April, 17			Thursday - April, 18		
			9:00			9:00		
10:00			Opening Session A5 (Room H)			Opening Session A10 (Room H) 9:40		
Opening Session A1 (Room H) 10:40			10:15			Coffee break 10:00		
Coffee break 11:00			Coffee break 10:40			COMITE 2013 Modeling A11 (Room A)	COMITE 2013 Systems (in. EMC) B11 (Room B)	COMITE 2013 Propagation C11 (Room B) 11:20
RADIO 2013 ECaS A2 (Room A)	RADIO 2013 SPaA B2 (Room B)	RADIO 2013 SPaA C2 (Room C) 12:40	COMITE 2013 Antennas A6 (Room A)	RADIO 2013 SPaA B6 (Room B)	RADIO 2013 ECaS C6 (Room C) 12:00	COMITE 2013 Lightwaves A12 (Room A)	COMITE 2013 Systems (in. EMC) B12 (Room B)	COMITE 2013 Propagation C12 (Room B) 12:20
Lunch 13:40			COMITE 2013 Lightwaves A7 (Room A)	RADIO 2013 SPaA B7 (Room B)	RADIO 2013 ECaS C7 (Room C) 13:00	Closing Session & Award ceremony (Room H) 13:00		
Lunch 14:00			Lunch 14:00			Lunch 14:00		
RADIO 2013 ECaS A3 (Room A)	RADIO 2013 SPaA B3(Room B)	RADIO 2013 SPaA C3(Room C) 15:00	COMITE 2013 Circuits A8 (Room A)	RADIO 2013 SPaA B8 (Room B)	RADIO 2013 ECaS C8 (Room B) 15:20	Wednesday RADIO 2013 COMITE 2013 Poster Session - Room P 17:00	Wednesday 19:00 - 23:00 Evening party - Castle	
Coffee break 15:20			Coffee break 15:40					
RADIO 2013 ECaS A4 (Room A)	RADIO 2013 ECaS B4 (Room B)	RADIO 2013 SPaA C4 (Room C) 16:40	COMITE 2013 Modeling A9 (Room A)	RADIO 2013 SPaA B9 (Room B)	RADIO 2013 ECaS C9 (Room B) 16:40			
Special Session for Exhibitors and Sponsors - Room Z								
Tuesday - Wednesday 9:00 - 16:40, Thursday 9:00 - 12:00								

RADIO 2013			Tuesday, April 16, 10:00 - 10:40
A1 - Opening Session (Room H) <i>Session Chair: Bezousek Pavel, University of Pardubice</i>			
		Welcome addresses	Bezousek P. , University of Pardubice
		Digital Broadcasting, Future Cyberspace & Cyber Security	Babulak E. , Sungkyunkwan University, South Korea
	A1/1	Recent Progress in Application of GNSS and Advanced Communications for Railway Signaling	Rispoli F. , Ansaldo STS, S.p.A, Italy Filip A. , University of Pardubice, Czech Republic Castorina M. , European Space Agency, The Netherlands Di Mambro G. , ITALCERTIFER, S.p.A, Italy Neri A. , RADIOLABS, Italy Senesi F. , RFI, Italy
RADIO 2013			Tuesday, April 16, 11:00 - 12:40
A2 - Electronics Circuits and Systems (Room A) <i>Session Chair: Dolecek Radovan, University of Pardubice</i>			
11:00 - 11:20	A2/1	Low Complexity FBMC Transceiver for FPGA Implementation	Varga L. , University of Technology and Economics, Hungary Kollar Z. , University of Technology and Economics, Hungary
11:20 - 11:40	A2/2	Design of CMOS based Programmable Gain Operational Amplifier	Dessai S. R. , Manipal Institute of Technology, India Keny P. , Manipal Institute of Technology, India Gaitonde U. , Manipal Institute of Technology, India Chandra S. M. V. , Manipal Institute of Technology, India Nozer J. T. , Manipal Institute of Technology, India
11:40 - 12:00	A2/3	Remotely Testable Setup of Soft CPU with Cryptographic TRNG Coprocessor Extension Embedded into Altera FPGA	Drutarovsky M. , Technical University of Kosice, Slovakia Varchola M. , Technical University of Kosice, Slovakia Petrvalsky M. , Technical University of Kosice, Slovakia
12:00 - 12:20	A2/4	An on-chip dynamic supply current monitor for testing digital circuits	Gyepes G. , Slovak University of Technology, Slovakia Arbet D. , Slovak University of Technology, Slovakia Brenkus J. , Slovak University of Technology, Slovakia Stopjakova V. , Slovak University of Technology, Slovakia Mihalov J. , Slovak University of Technology, Slovakia

12:20 - 12:40	A2/5	Simply Adjustable Triangular and Square Wave Generator Employing Controlled Gain Current and Differential Voltage Amplifiers	Sotner R. , Brno University of Technology, Czech Republic Jerabek J. , Brno University of Technology, Czech Republic Herencsar N. , Brno University of Technology, Czech Republic Prokop R. , Brno University of Technology, Czech Republic Vrba K. , Brno University of Technology, Czech Republic Petrzela J. , Brno University of Technology, Czech Republic Dostal T. , College of Polytechnics Jihlava, Czech Republic
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RADIO 2013

Tuesday, April 16, 11:00 - 12:40

B2 - Signal Processing and Applications (Room B)

Session Chair: Bezousek Pavel, University of Pardubice

11:00 - 11:20	B2/1	The Fusion of Ultrasonic and Optical Measurement Device for Autonomous Mapping	Chmelar P. , University of Pardubice Pardubice, Czech Republic Dobrovolny M. , University of Pardubice Pardubice, Czech Republic
11:20 - 11:40	B2/2	Fingertip Detection for Virtual Keyboard Based on Camera	Hagara M. , University of Technology Bratislava, Slovakia Pucik J. , University of Technology Bratislava, Slovakia Kulla P. , University of Technology Bratislava, Slovakia
11:40 - 12:00	B2/3	Performance Evaluation of Feature-based Steganalysis in Steganography	Banoci V. , Technical University of Kosice, Slovak Republic Broda M. , Technical University of Kosice, Slovak Republic Levicky D. , Technical University of Kosice, Slovak Republic Majercak D. , Technical University of Kosice, Slovak Republic Bugar G. , Technical University of Kosice, Slovak Republic
12:00 - 12:20	B2/4	The Eye Tracking System for Positioning of the High Definition Camera	Cerny M. , University of Pardubice, Pardubice, Czech Republic Dobrovolny M. , University of Pardubice, Pardubice, Czech Republic
12:20 - 12:40	B2/5	Objective Image Quality Assessment of Multiframe Super-Resolution Methods	Lukes T. , University in Prague Prague, Czech Republic Fliegel K. , University in Prague Prague, Czech Republic Klima M. , University in Prague Prague, Czech Republic

RADIO 2013

Tuesday, April 16, 11:00 - 12:40

C2 - Signal Processing and Applications (Room C)

Session Chair: Babulak Eduard, Sungkyunkwan University, South Korea

11:00 - 11:20	C2/1	Behavior of the BICM Module of the DVB-T2 Standard in the MRE Channel with Erasures	Polak L. , University of Technology, Brno, Czech Republic Kratochvil T. , University of Technology, Brno, Czech Republic
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11:20 - 11:40	C2/2	Implementation of FBMC Transmission Link using SDR	Horvath B. , Budapest University of Technology and Economics Budapest, Hungary Bakki P. , Budapest University of Technology and Economics Budapest, Hungary
11:40 - 12:00	C2/3	Increasing the Robustness of the Wireless Communication Links in Hostile Radio Frequency (RF) Environment	Szabo A. , National University of Public Service Budapest, Hungary Nemeth A. , National University of Public Service Budapest, Hungary
12:00 - 12:20	C2/4	BER Performance of 802.11p Standard over an ITU-R Multipath Channel	Kukolev P. , University of Technology Brno, Czech Republic
12:20 - 12:40	C2/5	Influence of the GNSS satellite elevation on the position error	Jonas M. , University of Pardubice Pardubice, Czech Republic Mandlik M. , University of Pardubice Pardubice, Czech Republic
RADIO 2013			Tuesday, April 16, 13:40 - 15:00
A3 - Electronics Circuits and Systems (Room A) <i>Session Chair: Stofanik Vladimir, STU Bratislava</i>			
13:40 - 14:00	A3/1	Investigation of Amplitude Effects on Higher Overtones in Stress Compensated Quartz Resonators	Stofanik V. , Slovak University of Technology, Slovakia Brezovic Z. , Slovak University of Technology, Slovakia Minarik M. , Slovak University of Technology, Slovakia Cocherova E. , Slovak University of Technology, Slovakia Kubinec P. , Slovak University of Technology, Slovakia
14:00 - 14:20	A3/2	Distortion Correction in Radio on Visible Light (RoVL) Communication System for Mobile Applications	Vijay A. , University of Warwick, United Kingdom Green R. J. , University of Warwick, United Kingdom
14:20 - 14:40	A3/3	Experimental Investigation of the Impact of Phase vs. Frequency Characteristic Properties on Steady State Oscillations Existence in Feedback Oscillators	Kudjak V. , Slovak University of Technology, Slovakia Brezovic Z. , Slovak University of Technology, Slovakia Minarik M. , Slovak University of Technology, Slovakia Balaz I. , Slovak University of Technology, Slovakia Olexa J. , Slovak University of Technology, Slovakia Stofanik V. , Slovak Academy of Sciences, Slovakia
14:40 - 15:00	A3/4	Port Crosstalk Effects in Six-port Modulator	Dusek M. , University of Technology, Czech Republic Sebesta J. , University of Technology, Czech Republic

RADIO 2013			Tuesday, April 16, 13:40 - 15:00
B3 - Signal Processing and Applications (Room B) <i>Session Chair: Krajcuskova Zuzana, STU Bratislava</i>			
13:40 - 14:00	B3/1	Signals Deinterleaving	Zak J. , Transportation air forces, Prague, Czech Republic Cihak J. , URC Systems, spol. s.r.o, Brno, Czech Republic
14:00 - 14:20	B3/2	Improving The Resolution Capability of The Parametric Power Spectrum Density on The Base of An Additive Linear Prediction Process	Tykhonov V. A. , University of Radioelectronics, Kharkiv, Ukraine Kudriavtseva N. V. , University of Radioelectronics, Kharkiv, Ukraine
14:20 - 14:40	B3/3	Pulse Swallowing Frequency Synthesizer	Stork M. , University of West Bohemia Plzen, Czech Republic
14:40 - 15:00	B3/4	Astronomical Image Denoising using Curvelet and Starlet Transform	Anisimova E. , FEE CTU in Prague, Prague, Czech Republic Bednar J. , FEE CTU in Prague, Prague, Czech Republic Pata P. , FEE CTU in Prague, Prague, Czech Republic
RADIO 2013			Tuesday, April 16, 13:40 - 15:00
C3 - Signal Processing and Applications (Room C) <i>Session Chair: Sedivy Pavel, Retia, a.s.</i>			
13:40 - 14:00	C3/1	Three-Dimensional Image Fusion of Moving Human Target Data Measured by a Portable Through-Wall Radar	Safarik M. , University of Pardubice, Czech Republic Mrkvica J. , RETIA, a.s. Pardubice, Czech Republic Protiva P. , RETIA, a.s. Pardubice, Czech Republic Sikl R. , RETIA, a.s. Pardubice, Czech Republic
14:00 - 14:20	C3/2	5.8 GHz Microwave Doppler Radar for Heartbeat Detection	Othman M. A. , Universiti Teknikal Malaysia Melaka, Malaysia Sinnappa M. , Universiti Teknikal Malaysia Melaka, Malaysia Azman H. , Universiti Teknikal Malaysia Melaka, Malaysia Aziz M. Z. A. A. , Universiti Teknikal Malaysia Melaka, Malaysia Ismail M. M. , Universiti Teknikal Malaysia Melaka, Malaysia Hussein M. N. , Universiti Teknikal Malaysia Melaka, Malaysia Sulaiman H. A. , Universiti Teknikal Malaysia Melaka, Malaysia Misran M. H. , Universiti Teknikal Malaysia Melaka, Malaysia Said M. A. M. , Universiti Teknikal Malaysia Melaka, Malaysia Ramlee R. A. , Universiti Teknikal Malaysia Melaka, Malaysia Ahmad B. H. , Universiti Teknikal Malaysia Melaka, Malaysia Jack S. P. , Universiti Teknikal Malaysia Melaka, Malaysia

14:20 - 14:40	C3/3	White RHINO: A Low Cost Whitespace Communications Radar Hardware Platform	Hazarika O. , University of Cape Town, South Africa Langman A. , University of Cape Town, South Africa Mishra A. K. , University of Cape Town, South Africa Inggs M. , University of Cape Town, South Africa
14:40 - 15:00	C3/4	Combined Communication and Radio Navigation System for Small UAVs	Miko G. , BHE Bonn Hungary Ltd. Budapest, Hungary Nemeth A. , National University of Public Service Budapest, Hungary
RADIO 2013			Tuesday, April 16, 15:20 - 16:40
A4 - Electronics Circuits and Systems (Room A) <i>Session Chair: Smith David</i> , Northumbria University			
15:20 - 15:40	A4/1	Development, Simulation and Construction of Cost-effective GTEM Cells	Stander T. , University of Pretoria, South Africa Sinha. , University of Pretoria, South Africa
15:40 - 16:00	A4/2	Novel Antenna for 3D-Radar System	Zavodny V. , Eldis Pardubice, s.r.o., Czech Republic Mandlik M. , University of Pardubice, Czech Republic
16:00 - 16:20	A4/3	Design of Wideband Wilkinson Dividers using Neural Network	Tejmlova L. , University of Technology, Czech Republic Sebesta J. , University of Technology, Czech Republic
16:20 - 16:40	A4/4	Cavity-backed Slot Antenna for Wireless Sensor Integration	Cała P. , Wroclaw University of Technology, Poland Stobodzian P. , Wroclaw University of Technology, Poland
RADIO 2013			Tuesday, April 16, 15:20 - 16:40
B4 - Electronics Circuits and Systems (Room B) <i>Session Chair: Hagara Miroslav</i> , STU Bratislava			
15:20 - 15:40	B4/1	Low Cost Selective Nuclear Quadrupole Resonance (NQR) Probe	Zatloukal P. , University of Technology, Czech Republic Lukes Z. , University of Technology, Czech Republic
15:40 - 16:00	B4/2	The Influence of the Amplitude of Driving Signal in Measurement of the Active Points on Human Skin	Kukucka M. , Slovak University of Technology, Slovakia Krajcuskova Z. , Slovak University of Technology, Slovakia Stopjakova V. , Slovak University of Technology, Slovakia Durackova D. , Slovak University of Technology, Slovakia

16:00 - 16:20	B4/3	Experimental Satellite Communication and Data Handling System	Urbanec T. , University of Technology, Czech Republic Vagner P. , University of Technology, Czech Republic Baran O. , University of Technology, Czech Republic Kasal M. , University of Technology, Czech Republic
16:20 - 16:40	B4/4	Modular System for Measurement and Processing of Evoked Potentials Aquired from Labolatory Rats	Liptak J. , Technical University of Kosice, Slovak Republic Michaeli L. , Technical University of Kosice, Slovak Republic Saliga J. , Technical University of Kosice, Slovak Republic Galik J. , Academy of Sciences Kosice, Slovak Republic
RADIO 2013			Tuesday, April 16, 15:20 - 16:40
C4 - Signal Processing and Applications (Room C) <i>Session Chair: Gino Di Mambro, ITALCERTIFER, S.p.A</i>			
15:20 - 15:40	C4/1	Multi-frequency Encoding Technique Using Phase Coupling in Wireless Communication Systems	Molchanov P. A. , Tampere University of Technology, Finland Astola J. T. , Tampere University of Technology, Finland Egiazarian K. O. , Tampere University of Technology, Finland Totsky A. V. , National Aerospace University, Ukraine Zelensky A. A. , National Aerospace University, Ukraine
15:40 - 16:00	C4/2	Hybrid Modulation as Beacon Replacement in CubeSat Picosatellite	Vertat I. , University of West Bohemia Pilsen, Czech Republic Linhart R. , University of West Bohemia Pilsen, Czech Republic Dudacek L. , University of West Bohemia Pilsen, Czech Republic Mejzr J. , University of West Bohemia Pilsen, Czech Republic
16:00 - 16:20	C4/3	Optimization of 16-APSK Modulation for SC-FDMA Transmission System	Dupak D. , Technical University of Kosice, Slovak Republic Gazda J. , Technical University of Kosice, Slovak Republic Kocur D. , Technical University of Kosice, Slovak Republic Sendrei L. , Technical University of Kosice, Slovak Republic
16:20 - 16:40	C4/4	OFDM Signal PAPR Reduction Method by Pre-scrambling and Clipping for Frequency Domain Comb-type Channel Estimation Case	Litvinenko A. , Technical University Riga, Latvia

RADIO 2013			Wednesday, April 17, 9:00 - 10:15
A5 - Opening Session (Room H) <i>Session Chair: Schejbal Vladimir, University of Pardubice</i>			
		Welcome addresses	Bezousek P. , University of Pardubice
	A5/1	The use of Indirect Holographic Techniques for Microwave Imaging (RADIO 2013)	Smith D. , School of CEIS, Northumbria University, UK
	A5/2	Recent Development in Electrostatic Discharge (ESD) Protection of RF Integrated Circuits (COMITE 2013)	Liou J.J. , Pegasus Distinguished Professor, University of Central Florida, Orlando, Florida, USA
RADIO 2013			Wednesday, April 17, 10:40 - 12:00
B6 - Signal Processing and Applications (Room B) <i>Session Chair: Babulak Eduard, Sungkyunkwan University, South Korea</i>			
10:40 - 11:00	B6/1	Differential Power Analysis of Advanced Encryption Standard on Accelerated 8051 Processor	Petrvalsky M. , Technical University of Kosice, Slovakia Drutarovsky M. , Technical University of Kosice, Slovakia Varchola M. , ELIT SYSTEMS, s. r. o., Kosice, Slovakia
11:00 - 11:20	B6/2	Simulation and Implementation of LDPC Code in FPGA	Straus P. , University of Technology Brno, Czech Republic Kolka Z. , University of Technology Brno, Czech Republic
11:20 - 11:40	B6/3	Performance of Parallel Algorithms Using OpenMP	Mego R. , University of Technology Brno, Czech Republic Fryza T. , University of Technology Brno, Czech Republic
11:40 - 12:00	B6/4	Low Level Source Code Optimizing for Single/Multi/core Digital Signal Processors	Fryza T. , University of Technology Brno, Czech Republic Mego R. , University of Technology Brno, Czech Republic
RADIO 2013			Wednesday, April 17, 10:40 - 12:00
C6 - Electronics Circuits and Systems (Room C) <i>Session Chair: Bezousek Pavel, University of Pardubice</i>			
10:40 - 11:00	C6/1	Complex Dielectric Parameter Measurement by Coaxial Resonator and ISM Band Radio Module	Szalay Z. , Budapest University of Technology and Economics, Hungary Ther I. , Budapest University of Technology and Economics, Hungary Nagy L. , Budapest University of Technology and Economics, Hungary

11:00 - 11:20	C6/2	Waveguide Power Combiner with Adjustable Amplitude and Phase Response	Stander T., University of Pretoria, South Africa Sinha S., University of Pretoria, South Africa
11:20 - 11:40	C6/3	Impact of SiGe HBT Parameters to the Performance of LNAs for Highly Sensitive SKA Receivers	Bimana A., University of Pretoria, South Africa Sinha S., University of Pretoria, South Africa
11:40 - 12:00	C6/4	Measurement of Conductivity of Carbon Fibers at Microwave Frequencies	Gona S., Tomas Bata University in Zlin, Czech Republic Tomasek P., Tomas Bata University in Zlin, Czech Republic Kresalek V., Tomas Bata University in Zlin, Czech Republic
RADIO 2013			Wednesday, April 17, 12:00 - 13:00
B7 - Signal Processing and Applications (Room B) <i>Session Chair: Krajcuskova Zuzana, STU Bratislava</i>			
12:00 - 12:20	B7/1	Elementary Sound Based Audio Pattern Searching	Gubka R., University of Zilina, Zilina, Slovakia Kuba M., University of Zilina, Zilina, Slovakia
12:20 - 12:40	B7/2	Speaker Dependent Changes in Formants Based on Normalization of Vowel Triangle	Stanek M., University of Technology Brno, Czech Republic Sigmund M., University of Technology Brno, Czech Republic
12:40 - 13:00	B7/3	Novel Parameter-based Models estimating Quality of Synthesized Speech Transmitted over IP Network Based on Genetic Programming Approach	Mrvova M., University of Zilina, Slovakia Pocta P., University of Zilina, Slovakia
RADIO 2013			Wednesday, April 17, 12:00 - 13:00
C7 - Electronics Circuits and Systems (Room C) <i>Session Chair: Brancik Lubomir, Brno University of Technology</i>			
12:00 - 12:20	C7/1	Test Frequency Selection for Over-determined System of Fault Equations	Kindl Z., University of Technology, Czech Republic Kolka Z., University of Technology, Czech Republic
12:20 - 12:40	C7/2	An Optimized Multiphase Oscillator with Harmonic Balance Analysis for Oscillation Frequency and Amplitude Prediction	Alberts A. C., University of Pretoria, South Africa Sinha S., University of Pretoria, South Africa
12:40 - 13:00	C7/3	Removal of Super-Imposed Synchronization Sequence Using Matched Filter	Aboltins A., Riga Technical University, Latvia Misans P., Riga Technical University, Latvia

RADIO 2013			Wednesday, April 17, 14:00 - 15:20
B8 - Signal Processing and Applications (Room B) <i>Session Chair: Bilik Vladimir, STU Bratislava</i>			
14:00 - 14:20	B8/1	Adaptive-order Polynomial Methods for Power Amplifier Model Estimation	Dvorak J. , University of Technology Brno, Czech Republic Marsalek R. , University of Technology Brno, Czech Republic Blumenstein J. , University of Technology Brno, Czech Republic
14:20 - 14:40	B8/2	Using Information about Weather Conditions to Define Availability and Reliability of FSO Links	Tatarko M. , Technical University of Kosice, Slovakia Ovsenik L. , Technical University of Kosice, Slovakia Turan J. , Technical University of Kosice, Slovakia
14:40 - 15:00	B8/3	Comparison of Modeling Techniques for Power Amplifiers	Gotthans T. , Universite Paris-Est Noisy Le Grand, France Baudoin G. , Universite Paris-Est Noisy Le Grand, France Mbaye A. , Universite Paris-Est Noisy Le Grand, France
15:00 - 15:20	B8/4	3D Scanning Method for Foot Medial Arch Description	Kaller O. , University of Technology Brno, Czech Republic Bolecek L. , University of Technology Brno, Czech Republic Kratochvil T. , University of Technology Brno, Czech Republic Vorlickova L. , Masaryk University Brno, Czech Republic
RADIO 2013			Wednesday, April 17, 14:00 - 15:20
C8 - Electronics Circuits and Systems (Room C) <i>Session Chair: Kasal Miroslav, Brno University of Technology</i>			
14:00 - 14:20	C8/1	New Voltage Mode Universal Filter Based on Promising Structure of Voltage Differencing Buffered Amplifier	Khatib N. , University of Technology, Czech Republic Biolek D. , University of Technology, Czech Republic
14:20 - 14:40	C8/2	Fundamental Analog Cells for Fractional-order Two-port Synthesis	Petrzela J. , University of Technology, Czech Republic
14:40 - 15:00	C8/3	A Frequency Agile Switched Delay Line Slow-wave BiCMOS Filter	Bhana V. , University of Pretoria, South Africa Stander T. , University of Pretoria, South Africa Sinha. , University of Pretoria, South Africa
15:00 - 15:20	C8/4	DCCII Based Inductance Simulator Circuit with Minimum Number of Element	Metin B. , Bogazici University, Turkey Herencsar N. , University of Technology, Czech Republic Koton J. , University of Technology, Czech Republic

RADIO 2013			Wednesday, April 17, 15:40 - 16:40
B9 - Signal Processing and Applications (Room B) <i>Session Chair: Skvor Zbynek</i> , Czech Technical University in Prague			
15:40 - 16:00	B9/1	Effect of Co-Existence Interferences on QoS of HSPA/WCDMA Mobile Networks	Klozar L. , University of Technology, Brno, Czech Republic Polak L. , University of Technology, Brno, Czech Republic Kaller O. , University of Technology, Brno, Czech Republic Prokopec J. , University of Technology, Brno, Czech Republic
16:00 - 16:20	B9/2	SDR Implementation for DCF77	Zaplata F. , University of Technology, Brno, Czech Republic Kasal M. , University of Technology, Brno, Czech Republic
16:20 - 16:40	B9/3	Prototype System for Phase-advance Measurements of LHC Small Beam Oscillations	Olexa J. , University of Technology, Bratislava Brezovic Z. , University of Technology, Bratislava Ondracek O. , University of Technology, Bratislava Gasior M. , CERN Geneva, Switzerland
RADIO 2013			Wednesday, April 17, 15:40 - 16:40
C9 - Electronics Circuits and Systems (Room C) <i>Session Chair: Karwowski Andrzej</i> , Silesian University of Technology			
15:40 - 16:00	C9/1	Multi-platform Wireless Measurement System for Continuous Biomonitoring	Mihalov J. , Slovak University of Technology, Slovakia Stopjakov V. , Slovak University of Technology, Slovakia Zalusky R. , Slovak University of Technology, Slovakia Majer L. , R-DAS s.r.o., Slovakia
16:00 - 16:20	C9/2	Modulated and Pulse Electromagnetic Field - generation and Measurement	Bienkowski P. , Wroclaw University of Technology, Poland Zubrzak B. , Wroclaw University of Technology, Poland
16:20 - 16:40	C9/3	Metrological Aspects of Measuring Modulated and Multi-frequency Electromagnetic Field	Bienkowski P. , Wroclaw University of Technology, Poland Cafa P. , Wroclaw University of Technology, Poland Zubrzak B. , Wroclaw University of Technology, Poland

RADIO 2013		Wednesday, April 17, 15:40 - 16:40
Poster Session (Room P) <i>Session Chairs: Pidanic Jan, University of Pardubice</i> Nemec Zdenek , University of Pardubice		
P/1	Barkhausen Criterion and Another Necessary Condition for Steady State Oscillations Existence	Balaz I. , Slovak University of Technology, Slovakia Brezovic Z. , Slovak University of Technology, Slovakia Minarik M. , Slovak University of Technology, Slovakia Kudjak V. , Slovak University of Technology, Slovakia Stofanik V. , Slovak Academy of Sciences, Slovakia
P/2	A new trigger unit for the Super Proton Synchrotron	Levens T. , CERN, Switzerland Valuch D. , CERN, Switzerland
P/3	Digital Measurement and Conditioning System for the HIE Isolde Quarter Wave Superconducting Resonators	Valuch D. , CERN, Switzerland Elias M. , CERN, Switzerland
P/4	The Effect of Fault States of the Twelve-pulse Rectifier During the Recuperation	Dolecek R. , University of Pardubice Pardubice, Czech Republic Mlynarik L. , University of Pardubice Pardubice, Czech Republic
P/5	Mutual Influence between Measuring Devices and Traction Drives Powered by Battery	Dolecek R. , University of Pardubice Pardubice, Czech Republic Cerny O. , University of Pardubice Pardubice, Czech Republic
P/6	Repetition Rate Method of the Air Flow Velocity Measurement	Hribik J. , Slovak University of Technology, Slovakia Bobek P. , Slovak University of Technology, Slovakia Fuchs P. , Slovak University of Technology, Slovakia
P/7	Radar Detection Probability by a Monte Carlo Method	Kupcak D. , Eldis Pardubice, s.r.o., Czech Republic Zavodny V. , Eldis Pardubice, s.r.o., Czech Republic
P/8	Near-field Antenna Measurement Facility	Cernik L. , T – CZ a. s., Czech Republic Krcmar V. , T – CZ a. s., Czech Republic Cesik O. , T – CZ a. s., Czech Republic Trkal Z. , T – CZ a. s., Czech Republic
P/9	TEM Horn Antenna for High Energy Pulse Emission	Zalabsky T. , University of Pardubice, Czech Republic Bezousek P. , University of Pardubice, Czech Republic
P/10	Simulation of Stochastic Responses at Multiconductor Transmission Lines with Fluctuating Parameters	Brancik L. , University of Technology, Czech Republic Kolarova E. , University of Technology, Czech Republic

P/11	Investigation of Single Stub on Circular Polarized Patch Antenna at 2.4GHz	Aziz M. Z. A. A., Universiti Teknikal Malaysia Melaka, Malaysia Mufit N. A. A., Universiti Teknikal Malaysia Melaka, Malaysia Suaidi M.K., Universiti Teknikal Malaysia Melaka, Malaysia Othman M. A., Universiti Teknikal Malaysia Melaka, Malaysia Johar M. F., Universiti Teknikal Malaysia Melaka, Malaysia Hassan N., Universiti Teknikal Malaysia Melaka, Malaysia Rahim M. K. A., Universiti Teknikal Malaysia Melaka, Malaysia
P/12	Specification of Camera Parameters for Virtual Keyboard	Hagara M., Slovak University of Technology Bratislava, Slovakia Pucik J., Slovak University of Technology Bratislava, Slovakia Kulla P., Slovak University of Technology Bratislava, Slovakia
P/13	An Accurate Time-Difference Measurement Method for Passive Radar Applications	Mandlik M., University of Pardubice, Czech Republic Nemec Z., University of Pardubice, Czech Republic
P/14	Unconventional Reliability Growth Models – Comparison and Evaluation	Krajcuskova Z., Slovak University of Technology, Slovakia Kukucka M., Slovak University of Technology, Slovakia Durackova D., Slovak University of Technology, Slovakia Stopjakova V., Slovak University of Technology, Slovakia
RADIO 2013		Thursday, April 18, 12:20 - 13:00
Closing Session & Award ceremony (Room H) <i>Session Chair:</i> Bezousek Pavel, University of Pardubice Schejbal Vladimir, University of Pardubice		
12:20 - 13:00	Closing Session & Award ceremony	

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Pardubice, Czech Republic

April, 17 - 18, 2013

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MAREW 2013 - Conference program

Tuesday - April, 16			Wednesday - April, 17			Thursday - April, 18		
			9:00			9:00		
10:00			Opening Session A5 (Room H)			Opening Session A10 (Room H) 9:40		
Opening Session A1 (Room H) 10:40			10:15			Coffee break 10:00		
Coffee break 11:00			Coffee break 10:40			COMITE 2013 Modeling A11 (Room A)	COMITE 2013 Systems (in. EMC) B11 (Room B)	COMITE 2013 Propagation C11 (Room B) 11:20
RADIO 2013 ECaS A2 (Room A)	RADIO 2013 SPaA B2 (Room B)	RADIO 2013 SPaA C2 (Room C) 12:40	COMITE 2013 Antennas A6 (Room A)	RADIO 2013 SPaA B6 (Room B)	RADIO 2013 ECaS C6 (Room C) 12:00	COMITE 2013 Lightwaves A12 (Room A)	COMITE 2013 Systems (in. EMC) B12 (Room B)	COMITE 2013 Propagation C12 (Room B) 12:20
Lunch 13:40			COMITE 2013 Lightwaves A7 (Room A)	RADIO 2013 SPaA B7 (Room B)	RADIO 2013 ECaS C7 (Room C) 13:00	Closing Session & Award ceremony (Room H) 13:00		
Lunch 14:00			Lunch 14:00			Lunch 14:00		
RADIO 2013 ECaS A3 (Room A)	RADIO 2013 SPaA B3(Room B)	RADIO 2013 SPaA C3(Room C) 15:00	COMITE 2013 Circuits A8 (Room A)	RADIO 2013 SPaA B8 (Room B)	RADIO 2013 ECaS C8 (Room B) 15:20	Wednesday RADIO 2013 COMITE 2013 Poster Session - Room P 17:00	Wednesday 19:00 - 23:00 Evening party - Castle	
Coffee break 15:20			Coffee break 15:40					
RADIO 2013 ECaS A4 (Room A)	RADIO 2013 ECaS B4 (Room B)	RADIO 2013 SPaA C4 (Room C) 16:40	COMITE 2013 Modeling A9 (Room A)	RADIO 2013 SPaA B9 (Room B)	RADIO 2013 ECaS C9 (Room B) 16:40			
Special Session for Exhibitors and Sponsors - Room Z								
Tuesday - Wednesday 9:00 - 16:40, Thursday 9:00 - 12:00								

COMITE 2013			Wednesday, April 17, 9:00 - 10:15
A5 - Opening Session (Room H) <i>Session Chair: Bezousek Pavel, University of Pardubice</i> Schejbal Vladimir, University of Pardubice			
		Welcome addresses	Bezousek P., University of Pardubice
	A5/1	The use of Indirect Holographic Techniques for Microwave Imaging (RADIO 2013)	Smith D., School of CEIS, Northumbria University, UK
	A5/2	Recent Development in Electrostatic Discharge (ESD) Protection of RF Integrated Circuits (COMITE 2013)	Liou J.J., Pegasus Distinguished Professor, University of Central Florida, Orlando, Florida, USA
COMITE 2013			Wednesday, April 17, 10:40 - 12:00
A6 - Antennas (Room A) <i>Session Chair: Schejbal Vladimir, University of Pardubice</i>			
10:40 - 11:00	A6/1	Novel Components for Antenna Array Feed	Chyba M., University of Pardubice, Czech Republic Bezousek P., University of Pardubice, Czech Republic
11:00 - 11:20	A6/2	CPW-fed Double Triangular Slot Antenna for Biomedical Applications	Hebelka V., Brno University of Technology, Czech Republic Raida Z., Brno University of Technology, Czech Republic
11:20 - 11:40	A6/3	Cross-Coax Fed Wideband Solar Patch Antenna	Yurduseven O., Northumbria University, UK Smith D., Northumbria University, UK Eldson M., Northumbria University, UK
11:40 - 12:00	A6/4	Tri-band Minkowski Island Patch Antenna with Complementary Split Ring Resonator at the Ground Plane	Ahmad B. H., Universiti Teknikal Malaysia Melaka, Malaysia Nornikman H., Universiti Teknikal Malaysia Melaka, Malaysia Abd Aziz M. Z. A., Universiti Teknikal Malaysia Melaka, Malaysia Othman M. A., Universiti Teknikal Malaysia Melaka, Malaysia Othman R. A., Universiti Teknikal Malaysia Melaka, Malaysia
COMITE 2013			Wednesday, April 17, 12:00 - 13:00
A7 - Lightwaves (Room A) <i>Session Chair: Zvanovec Stanislav, Czech Technical University in Prague</i>			
12:00 - 12:20	A7/1	Comparison of Gaussian Beams with Different Halfwidths using the Method of Available Power in Turbulent Atmosphere	Hudcova L., Brno University of Technology, Czech Republic Barcik P., Brno University of Technology, Czech Republic

12:20 - 12:40	A7/2	Device for measurement of optical visibility	Rejfk L., University of Pardubice, Czech Republic Brazda V., University of Pardubice, Czech Republic Fiser V., Institute of Atmospheric Physics, Czech Republic
12:40 - 13:00	A7/3	Influence of Random Fluctuations of Laser Beam Propagation Direction on FSO Power Design	Bonev B. G., Technical University of Sofia, Bulgaria
COMITE 2013			Wednesday, April 17, 14:00 - 15:20
A8 - Circuits (Room A) <i>Session Chair: Machac Jan, Czech Technical University in Prague</i>			
14:00 - 14:20	A8/1	A Frequency Tunable Broadband Amplifier Utilizing Tunable Capacitors and Inductors	Nesimoglu T., Middle East Technical University, Turkey Aydın Ç., Istanbul University & Işık University, Turkey Atilla D. Ç., Istanbul University & Işık University, Turkey Yarman B.S., Istanbul University & Işık University, Turkey
14:20 - 14:40	A8/2	Design of Microstrip Meander-Folded Hairpin Resonator Filters	Nedelchev M., Technical University Sofia, Bulgaria
14:40 - 15:00	A8/3	A Novel Transition from Grounded Coplanar Waveguide to Substrate Integrated Waveguide for 60 GHz Radio-over-Fiber Photonic Transmitters	Flammia I., University of Duisburg-Essen, Germany Khani B., University of Duisburg-Essen, Germany Stöhr A., University of Duisburg-Essen, Germany
15:00 - 15:20	A8/4	Transistor oscillator 24.7GHz Stabilized by HEM ₂₂₁ Mode of Rectangular Dielectric Resonator	Haase M., Czech Technical University in Prague, Czech Republic Hoffmann K., Czech Technical University in Prague, Czech Republic
COMITE 2013			Wednesday, April 17, 15:40 - 16:40
A9 - Modeling (Room A) <i>Session Chair: Cocherova Elena, STU Bratislava</i>			
15:40 - 16:00	A9/1	A Building Element of an Active Negative Permeability Metamaterial	Machac J., Czech Technical University in Prague, Czech Republic Jelinek L., Czech Technical University in Prague, Czech Republic
16:00 - 16:20	A9/2	High Temperature AlGaIn/GaN HFET Microwave Characterization and Modeling	Tomaska M., Slovak University of Technology, Slovak Republic
16:20 - 16:40	A9/3	Assembling a Formula for Current Transferring by Using a Summary Graph and Transformation Graphs	Matousek D., University of Pardubice, Czech Republic Brtník B.

COMITE 2013			Thursday, April 18, 9:00 - 9:40
A10 - Opening Session (Room H) <i>Session Chair: Bezousek Pavel, University of Pardubice</i> Schejbal Vladimir, University of Pardubice			
		Welcome addresses	Bezousek P. , University of Pardubice, Czech Republic
	A10/1	Atmospheric Refractivity Profiles and Microwave Propagation on a Terrestrial Path – Experiment and Simulation	Grabner M. , Czech Metrology Institute, Czech Republic Kvicera M. , Czech Metrology Institute, Czech Republic Pechac P. , Czech Technical University in Prague, Czech Republic Valtr P. , Czech Technical University in Prague, Czech Republic Jicha O. , Czech Technical University in Prague, Czech Republic
COMITE 2013			Thursday, April 18, 10:00 - 11:20
A11 - Modeling (Room A) <i>Session Chair: Karwowski Andrzej, Silesian University of Technology</i>			
10:00 - 10:20	A11/1	Directivity Coupler with a Very Low Coupling Coefficient	Shejbal T. , University of Pardubice, Czech Republic
10:20 - 10:40	A11/2	High power solid state pulse compressor modeling and simulations	Matousek D. , University of Pardubice, Czech Republic Bezousek P. , University of Pardubice, Czech Republic
10:40 - 11:00	A11/3	Microwave Imaging: Comparison of Direct Scattering Problem Solvers	CiganeK J. , Brno University of Technology, Czech Republic Kadlec P. , Brno University of Technology, Czech Republic Raida Z. , Brno University of Technology, Czech Republic Wiktor M. , Medical University of Gdańsk, Poland
11:00 - 11:20	A11/4	Error Analysis of Phase Retrieval Method Combining Global and Local Approaches	Puskely J. , Brno University of Technology, Czech Republic
COMITE 2013			Thursday, April 18, 10:00 - 11:20
B11 - Systems (incl. EMC) (Room B) <i>Session Chair: Bezousek Pavel, University of Pardubice</i>			
10:00 - 10:20	B11/1	Radar Sidelobe Canceller Performance Evaluation	Sedivy P. , RETIA, a. s.
10:20 - 10:40	B11/2	Radar PRF Staggering and Agility Control Maximizing Overall Blind Speed	Sedivy P. , RETIA, a. s.

10:40 - 11:00	B11/3	Stub Swapping in Automatic Three-Stub Impedance Matching Systems	Bilik V. , Slovak University of Technology at Bratislava, Slovak Republic
11:00 - 11:20	B11/4	Design and Modeling of an Output Microwave Filter for S Band Primary Radar Transmitter	Zalabsky T. , University of Pardubice, Czech Republic
COMITE 2013			Thursday, April 18, 10:00 - 11:20
C11 - Propagation (Room C) <i>Session Chair: Fiser Ondrej, AV CR Prague</i>			
10:00 - 10:20	C11/1	Diamond-Shaped Hole Array as a Fishnet Metamaterial for Negative Refraction	Sabah C. , Middle East Technical University, Turkey Yilmaz A. , KTO Karatay University, Turkey
10:20 - 10:40	C11/2	Attenuation of optical signal in free space – event analysis	Brazda V. , University of Pardubice, Czech Republic Fiser O. , University of Pardubice, Czech Republic Rejcek L. , University of Pardubice, Czech Republic Mandlik M. , University of Pardubice, Czech Republic
10:40 - 11:00	C11/3	LTE network planning challenges	de Cosson, C. , ATDI, United Kingdom Novel L. , ATDI, France
11:00 - 11:20	C11/4	Transmission Tunneling through the Periodic Sequence of Double-Negative and Double-Positive Layers	Sabah C. , Middle East Technical University, Turkey Tastan T. , ISGUM, Center Laboratory of Ankara, Turkey Dincer F. , Mustafa Kemal University, Turkey Karaaslan M. , Mustafa Kemal University, Turkey Unal E. , Mustafa Kemal University, Turkey Kemal M. , Mustafa Kemal University, Turkey Delihacioglu K. , Kilis 7 Aralik University, Turkey
COMITE 2013			Thursday, April 18, 11:20 - 12:20
A12 - Lightwaves (Room A) <i>Session Chair: Grabner Martin, Czech Metrology Institute</i>			
11:20 - 11:40	A12/1	Characterization of Metals using Plasma	Taraporewalla J. H. , Manipal Institute of Technology, India Potty K. A. , Manipal Institute of Technology, India
11:40 - 12:00	A12/2	Modeling of the multichannel optical wireless link	Poliak J. , Brno University of Technology, Czech Republic Pavlu M. , Brno University of Technology, Czech Republic

12:00 - 12:20	A12/3	Automatically low clouds or fog detection, based on two visibility meters and FSO	Pesek J., University of Pardubice, Czech Republic Fiser O., University of Pardubice, Czech Republic
COMITE 2013			Thursday, April 18, 11:20 - 12:20
B12 - Systems (incl. EMC) (Room B) <i>Session Chair: Sedivy Pavel, Retia, a.s.</i>			
11:20 - 11:40	B12/1	Microwave Solid State Power Amplifier Technology	Kasal M., Brno University of Technology, Czech Republic
11:40 - 12:00	B12/2	Parameters Measurement of Power Amplifier Using Vector Network Analyzer	Cerny P., Czech Technical University in Prague, Czech Republic
12:00 - 12:20	B12/3	Model comparison of bistatic radar clutter	Pola M., University of Pardubice, Czech Republic Bezousek P., University of Pardubice, Czech Republic Pidanic J., University of Pardubice, Czech Republic
COMITE 2013			Thursday, April 18, 11:20 - 12:20
C12 - Propagation (Room C) <i>Session Chair: Smith David, Northumbria University</i>			
11:20 - 11:40	C12/1	On Forward and Backward Scattering from Fog and Rain Drops	Fiser O., University of Pardubice, Czech Republic Rejfek L., Institute of Atmospheric Physics, Czech Republic Brazda V., Institute of Atmospheric Physics, Czech Republic
11:40 - 12:00	C12/2	Realistic Simulation of IEEE 802.11p Channel in Mobile Vehicle to Vehicle Communication	Islam T., Delft University of Technology, The Netherlands Hu Y., Delft University of Technology, The Netherlands Onur E., Delft University of Technology, The Netherlands Boltjes B., M de Jongh J. F. C., Netherlands Organization for Applied Scientific Research, The Netherlands
12:00 - 12:20	C12/3	Compensation of Self Phase Modulation by Anomalous Dispersion in Non Linear Optical Systems	Jagtap S., Vidyalankar Institute of Technology, India Chadha A., Vidyalankar Institute of Technology, India Satam N., Vidyalankar Institute of Technology, India

COMITE 2013		Wednesday, April 17, 14:00 - 17:00
Poster Session (Room P) <i>Session Chairs:</i> Jan Pidanic, University of Pardubice Zdenek Nemec, University of Pardubice		
P/1	Coupling Performance of Microstrip Triangular Spiral Resonators	Araujo L. S. , Federal University of Pernambuco, Brazil Belfort de Oliveira A. J. , Federal University of Pernambuco
P/2	Design of a Microwave Triplexer Based on Coupling Coefficient Optimization	Araujo L. S. , Federal University of Pernambuco, Brazil Belfort de Oliveira A. J. , Federal University of Pernambuco
P/3	Design a 3.5 slot Antenna using Coplanar Waveguide (CPW) for Dual Band Application	Aziz M.Z.A. Abd. , Univ. Teknikal Malaysia Melaka, Malaysia Shukor M. Md. , Univ. Teknikal Malaysia Melaka, Malaysia Suaidi M.K. , Univ. Teknikal Malaysia Melaka, Malaysia Ahmad B. H. , Univ. Teknikal Malaysia Melaka, Malaysia Othman M. A. , Univ. Teknikal Malaysia Melaka, Malaysia Hasan N. , Univ. Teknikal Malaysia Melaka, Malaysia
P/4	Investigation Of Dual And Triple Meander Slot Antenna To Microstrip Patch Antenna	Aziz M.Z.A. Abd. , Univ. Teknikal Malaysia Melaka, Malaysia Husain M. N. , Univ. Teknikal Malaysia Melaka, Malaysia Zainuddin N. A. , Univ. Teknikal Malaysia Melaka, Malaysia Othman M. A. , Univ. Teknikal Malaysia Melaka, Malaysia Ahmad B. H. , Univ. Teknikal Malaysia Melaka, Malaysia
COMITE 2013		Thursday, April 18, 12:20 - 13:00
Closing Session & Award ceremony (Room H) <i>Session Chair:</i> Bezousek Pavel, University of Pardubice Schejbal Vladimir, University of Pardubice		
12:20 - 13:00	Closing Session & Award ceremony	