

*: Speaker SC: Student Contest

Session 1: Broadband Powerline Communications [BPC]

Chair: Mike Marcus

Date: Tue 11:00-12:10, Room F1

Technical considerations for broadband powerline (BPL) communication

Robert G. Olsen*: Washington State University, USA

SC **Sensitivity of a short-wave receiving station regarding PLC transmission**

Sven Battermann*, Heyno Garbe: University of Hannover, Germany

Effects of broadband over power line communication systems on aeronautical HF-services

Frank Sabath: Federal Armed Forces Research Institute for Protective Technologies and NBC Protection, Munster, Germany; Lawrence Steven Cohen*, Edmond Tomas: US Naval Research Laboratory, Washington DC, USA

Session 2: EMC in Communications [Com]

Chair: Pascal Leuchtmann

Date: Tue 11:00-12:30, Room E7

Higher-order effects of radiated interference - future challenging research domains within EMC in dynamic wireless communication networks

Peter F. Stenumgaard*: Swedish Defence Research Agency; Leif Junholm: Swedish Defence Materiel Administration

SC **Bandwidth conversion of the amplitude probability distribution for emission requirements of pulse modulated interference**

Kia Wiklundh*: Swedish Defence Research Agency, Sweden

SC **Immunity of bluetooth-transmitters against interfering electromagnetic fields with high field-strengths**

Adrien Schoof, Jan Luiken ter Haseborg: Hamburg University of Technology, Germany

Electromagnetic emission of xDSL systems transmitted on twisted copper pairs

Fahd Hassoun: Blaise Pascal University (Clermont-Ferrand), France; Ahmed Zeddami, Rabah Tarafi, J.-M. Debraux: France Télécom

Session 3: Reverberation Chambers and TEM Cells [Rev]

Chair: Heyno Garbe

Date: Tue 11:00-12:30, Room F7

Parameter estimates for the stirrer efficiency in reverberation chambers

Niklas Wellander*, Olof Lundén, Mats Bäckström: Swedish Defence Research Agency, Sweden

SC **Mode perturbation induced by the stirrer rotation in a reverberating chamber**

Gerard Orjubin*, Elodie Rchalot, Stephanie Mengue, Odile Picon: Université de Marne la Vallée, France

The influence of stirrer size and chamber load on the number of uncorrelated samples created in a reverberation chamber

Magnus Otterskog*: Örebro University, Sweden

SC **Modeling coupling phenomena between septum and loop at low frequency**

Aubry Picard*, François Fouquet, Anne Louis, Belahcène Mazari: IRSEEM-ESIGELEC, Rouen, France; Olivier Maurice: EADS, France; Bernard Demoulin: IEMN-TELICE, Lille, France

Session 4: Miscellaneous [Misc]

Chair: Armin Kälin

Date: Tue 11:00-12:10, Room F3

Band ratio and frequency-domain norms

Carl E. Baum*, Air Force Research Laboratory, USA; Daniel H. Nitsch, German Armed Forces Institute for Protective Technologies, Münster, Germany

Managing EMC and safety compliance for telecommunication products

Subramanian Chidambaram*: Hewlett Packard, Singapore

Distribution of levels of intrasystem electromagnetic interference in systems of co-located radio equipment

Nikalai I. Azamatov: Defence Industry Committee of the Republic of Belarus; Vladimir I. Voloshin*, Yury I. Mosienko: Agat State Research and Production Association, Minsk, Belarus

Session 5: History of EMC [Hist]

Chair: Rüdiger Vahldieck

Date: Tue 14:00-16:30, Room F1

A general history of the evolution of the discipline of EMC

Daniel D. Hoolihan, Hoolihan EMC Consulting, USA; Nigel Carter, QinetiQ, UK

Three decades of EMC Zurich and the impacts of a changing environment

Peter E. Leuthold*: Communication Technology Laboratory, ETH Zurich, Switzerland

A history of the evolution of EMC regulatory bodies and standards

Donald Heirman, New Jersey, USA; Manfred Stecher, Rohde and Schwarz, Germany

A brief history of EMC Education

Todd Hubing, University of Missouri Rolla, USA; Antonio Orlandi: University of L'Aquila, Italy

Session 6: Automotive EMC [Auto]

Chair: Robert Weigel

Date: Tue 14:00-17:10, Room E7

Simulating the electromagnetic susceptibility of automotive vehicles in their early design stage

Frédéric Bocquet: RENAULT Research Center, France; Jean-Claude Kedzia*: ESI Group, Rungis, France

Harness influence in bulk current injection testing

Frédéric LAFON*, Laurent Caves, VALEO EMC Departement, Créteil, France; François De-daran: VALEO, Center of electronic expertise, Créteil, France

Periodic frequency modulation applied to noise cancellation between power and communication buses

Alfonso Santolaria, David Gonzalez, Javier Gago, Josep Balcells: Universitat Politècnica de Catalunya, Spain; Stephane Brehaut, Jean-Charles Le Bunetel, Didier Magnon: Université François Rabelais, Tours, France

Investigation of automotive emissions measurement frequencies, test methods and operating modes

Alastair R. Ruddle*: MIRA Limited, Warks, UK

SC Application of geometry based strategies in the development of EMC-conformable motors in the automotive industry

Linh-Thao Stubenbord*, Claus Schmiederer: Robert Bosch GmbH, Germany

SC Influence of the PCB traces of an automotive electronic equipment in the case of random cable harnesses

Stephane Egot*, Marco Klingler: PSA Peugeot Citroën, France; Lamine Kone, Sylvie Baranowski, Bernard Demoulin: Université des Sciences et Technologies de Lille, France

Application of adaptive scheme for the method of moments in automotive EMC problems

Roman Jobava*, Faik Bogdanov, Anna Gheonjian: EMCoS, Tbilisi, Georgia; Stephan Frei: AUDI AG, Ingolstadt, Germany

Session 7: Bioelectromagnetics [Bio]

Chair: Michal Okoniewski

Date: Tue 14:00-16:50, Room F7

SC Spectral analysis of simulated currents for the study of the interaction between electromagnetic fields and cellular ionic channels

Alessandra Paffi*, Giuseppe Cotignola, Micaela Liberti, Francesca Apollonio, Guglielmo D'Inzeo: "La Sapienza" University of Rome, Italy

MSRC measurements of high frequency non ionizing electromagnetic radiations (NIR) on living organisms

David Roux*, Alain Vian, Pascale Goupil, Gérard Ledoigt, Sébastien Girard, Françoise Paladian, Pierre Bonnet: Blaise Pascal University (Clermont-Ferrand II), France

Modelling electromagnetic field exposure and SAR in vehicles due to on-board transmitters

Alastair R. Ruddle*: MIRA Limited, Warks, UK

The estimation of the maximum SAR with respect to various types of wireless device usage

Teruo Onishi*, Takahiro Iyama, Shinji Uebayashi: NTT DoCoMo, Inc., Japan

SC FDTD analysis of SAR from a cell phone inside a vehicle

Gabriel Anzaldi*: Technical Superior School, Buenos Aires, Argentina, Eduard Canela, Pere J. Riu, Ferran Silva: Technical University of Catalonia, Spain

The SAR evaluation method with optical fiber thermometer

Yoshinobu Okano*, Youji Sugama, Minoru Abe: Musashi Institute of Technology, Tokyo, Japan

Session 8: Sensors and Antennas [Sens]

Chair: Jan Luiken ter Haseborg

Date: Wed 9:00-12:30, Room F1

Time domain characteristics of resistively-loaded electric field sensors

James McLean*: TDK R&D Corp., Texas, USA; Heinrich Foltz, Robert Sutton: The University of Texas—Pan Am, USA

Comparison between three antenna method and measuring impedance method for the antenna factor of a small half loop antenna

Masanori Ishii*, Koji Komiyama: National Institute of Advanced Industrial Science and Technology, National Metrology Institute of Japan, Japan

SC A novel indirect method to determine the radiation impedance of an unknown antenna structure

Jari Jekkonen*: NOKIA Corporation, Finland; D. Ian Flintoft, Myles Capstick, Andrew Marvin: University of York, UK

Analyzing the coupling principles of radiated immunity tests for automotive components in the UHF-band

Bernd Koerber*, Dieter Sperling: Zwickau University of Applied Sciences, Germany; Karl-Heinz Gonschorek, Dresden University of Technology, Germany

Calibration of small antennas in a GTEM cell

Claudio Piutti, Marco Falda, Alessandro Giardina: TESEO S.p.A., Druento (Torino), Italy; Michele Borsero*, Giuseppe Vizio: IEN Galileo Ferraris, Torino, Italy; Ernesto Arri: Polytechnic of Turin, Italy

Quasi free-space antenna calibration in anechoic room

Frédéric Conrad Pythoud*: Swiss Federal Office of Metrology and Accreditation, Switzerland

Requirement to input impedance of common mode absorbing device

Peter Mosshammer*: emc GmbH, Traufkirchen, Germany; Lutz Dunker: Regulierungsbehörde für Telekommunikation und Post, Berlin, Germany

SC The dynamic range of a time-domain EMI measurement system using several parallel analog to digital converters

Stephan Maximilian Braun*, Peter Russer: Technische Universität München, Germany

Session 9: Lightning and its Effects I [Light1]

Chair: Vladimir A. Rakov

Date: Wed 9:00-12:10, Room E7

Simple model of repeating lightning-leader pulses

Carl E. Baum*, Air Force Research Laboratory, USA

SC Incorporation of distributed capacitive loads in the antenna theory model of lightning return stroke

Siamak Bonyadi-ram*: Comm. Regulation Authority, Iran; Rouzbeh Moini, Seyed Hossein Sadeghi: Amirkabir University of Technology, Tehran, Iran; Vladimir Rakov: University of Florida, USA

Influence of lightning channel tortuosity and branches on a magnetic field distribution

Grzegorz Maslowski*: Rzeszow University of Technology, Poland

Time-frequency resolution of the electric field radiated from a lightning discharge

Stefano Marchi*, Riccardo E. Zich: Politecnico di Milano, Italy

A method approach for lightning return stroke characterization

Joan Montanyà*, Pedro Rodriguez, David Romero: Technological University of Catalonia, Spain; Blas Hermoso: Public University of Navarre, Spain; Angel Illa: Ingescio, Terrassa (Barcelona), Spain

The temporal characteristics of leader fields at ground level when a part of the lightning channel is inclined

Chandima Gomes*: University of Colombo, Sri Lanka; Vernon Cooray: Uppsala University, Sweden

Finite difference analyses of Schumann resonance and reconstruction of lightning distribution

Yoshiaki Ando*, Masashi Hayakawa: The University of Electro-Communications, Tokyo, Japan

Session 10: Chip Level EMC (invited) [Chip]

Chair: Albert Rühli

Date: Wed 9:00-12:30, Room F7

SC Single summation expression for the rectangular power ground plane cavity

Joe Trinkle*: University of Western Australia; Antonio Cantoni: Western Australian Telecommunications Research Institute

SC The impact of decoupling capacitors on the impedance of rectangular PCB power-bus structures

Matthias Hampe*, Stefan Dickmann: Helmut-Schmidt-University, Hamburg, Germany

SC Impedance analysis of power ground planes loaded with multiple capacitors

Joe Trinkle*: University of Western Australia; Antonio Cantoni: Western Australian Telecommunications Research Institute

Mixed volume and surface PEEC circuit and electromagnetic solver

Albert E. Ruehli*: IBM Research Division, Yorktown Heights, USA; Dipanjan Gope, Vikram Jandhyala: University of Washington, Seattle, USA

SC Parasitic extraction and simulation of simultaneous switching noise in on-chip power distribution networks

Subramanian N. Lalgudi, Jifeng Mao, Madhavan Swaminathan: Georgia Institute of Technology, Atlanta, USA

PCB interconnects characterization from S-parameter measurements

Vittorio Ricchiuti*: Siemens CNX S.p.A., Italy; Antonio Orlandi, Giulio Antonini: Univ. of L'Aquila, Italy

Analog and mixed-signal simulation of EMC at system level

Flavio G. Canavero*, Stefano Grivet-Talocia, Ivano A. Maio, Igor Simone Stievano: Politecnico di Torino, Italy

Adaptive broadband macromodeling of passive high-speed components using vector fitting

Tom Dhaene*: University of Antwerp, Belgium

Session 11: EMC Innovation [Innov]

Chair: Antonio Orlandi

Date: Wed 14:45-17:30, Room F1

Source identification of electromagnetic radiation in electronic circuits using artificial neural network

Kraison Aunchaleevarapan: Electrical and Electronic Products Testing Center, Bangkok, Thailand; Sathit Intrajak*, Werachate Khan-Ngern, Yothin Preampaneerach: King Mongkut's Institute of Technology, Thailand; Prasit Teekaput: Chulalongkorn University, Thailand; Shuichi Nitta: Salasiean Polytechnic, Tokyo, Japan

SC 2mm industrial connector modeling with EM-ANN and polynomial description

Arnaud Argouarch*, Gérard Levanic: Thales Airborne System, Brest France; Mhamed Drissi: IETR CNRS UMR Rennes, France

Experimental study of thermal influence on EMC emissions of digital circuit on PCB

Jean-marc Dienot*: LESIA/ IUT Tarbes, France; Lourdel Guillaume: PEARL/ALSTOM, France

SC Influence of the short-channel effects in HEMTs on EMC characteristics of the HEMT-based amplifier

Igor V. Khrebtov*, Anatoly M. Bobreshov: Voronezh State University, Russia

A universal method for setting up macromodels from frequency response of devices

Nikolay Korovkin*, T. Minevich: State Polytechnic University, St. Petersburg, Russia

A new broadband double ridge guide horn with improved radiation pattern for electromagnetic compatibility testing

Vicente Rodriguez*: ETS-Lindgren, USA

Session 12: Lightning and its effects II [Light2]

Chair: Riccardo Zich

Date: Wed 14:45-17:10, Room E7

The performance of charge transfer system against lightning rod at the communication towers analyzed by using lightning video system and Rogowski coils

Annur Ramli*, Nurul Idris, Baharin Shariff, Telekom Research & Development, Malaysia

A novel model for lightning induced current computation

Afef E. Slama*: Villanova University, USA; Jack Nachamkin: Boeing Company, USA

SC A wavelet based classifier for classification of cloud-to-ground lightning strokes

Keyhan Sheshyekani, Paria Sattari, Aryan Nicoomanesh, Hossein Sadeghi*, Rouzbeh Moini: University of Technology, Tehran, Iran

Electromagnetic radiated field by a direct lightning stroke on an aircraft model

Edoardo Alfassio Grimaldi*, Morris Brenna, Fulvio Martinelli, Riccardo E. Zich: Politecnico di Milano, Italy

Model variations of global lightning activity derived from the optical transient detector data

Alexander P. Nickolaenko*: Ukrainian National Academy of Sciences, Kharkov, Ukraine; Olga Pechony, Colin Price: Tel Aviv University, Israel; Gabriella Satori: Hungarian Academy of Sciences, Hungary

Session 13: Chip and Package Level EMC [ChiPa]

Chair: Giulio Antonini

Date: Wed 14:45-17:30, Room F7

A modal transmission technique providing a large reduction of crosstalk and echo

Frédéric Broydè*, Evelyne Clavelier: Excem, Maule, France

Accurate identification long interconnects with the generalized method of characteristics

Massimiliano de Magistris, L. De Tommasi, G. Miano: Università di Napoli Federico II, Italy; A. Maffucci: Università di Cassino, Italy

SC Using ICEM models for substrate noise

Olivier Valorge*, Pierre Dautriche: STMicroelectronics, Grenoble, France; Bertrand Vrignon: STMicroelectronics, Crolles, France; Cristian Andrei, Francis Calmon, Christian Gontrand, Jacques Verdier: LPM INSA Lyon, Villeurbanne, France

SC Assessment of resonance properties of electrically small PCBs via radar cross-section measurements in a GTEM cell

David Pouhè*, Gerhard Mönich, Wilfried Fami Kemi: Technical University Berlin, Germany

Analysis of the effect of radio frequency interference on the DC performance of operational amplifiers

Muhammad Taher Abuelmaatti*: King Fahd University of Petroleum and Minerals, Saudi Arabia

SC A PLL-based clock generator with improved EMC

Fabio Pareschi*, Luca Antonio De Michele, Riccardo Rovatti, Gianluca Setti: University of Bologna, Italy and University of Ferrara, Italy

Session 14: HEMP Effects (invited) [Hemp]

Chair: William Radasky

Date: Thu 9:00-10:30, Room F1

The effects of HEMP and UWB pulses on complex computer systems

Daniel Nitsch, Andre Bausen, Jörg Maack: Research Institute for Protective Technologies, Münster, Germany; Roland Krzikalla*, Technical University of Hamburg-Harburg, Germany

Fast pulse testing of power system control equipment to determine their susceptibility to HEMP conducted transients

Edward Savage*, Kenneth Smith, Michael Madrid, James Gilbert, William Radasky: Metatech Corporation, Goleta, California USA

Simulator test results of the withstand of distribution class insulators to steep-front/short duration (SFSD) impulses to simulate the early-time HEMP

John G. Kappenman*: Metatech Corporation, Duluth (MN), USA; William A. Radasky: Metatech Corporation, Goleta (CA), USA; Stan Grzybowski, Y Song: Mississippi State University (MS), USA

Research of power line insulator flashover due to the joint effect of a high voltage disturbance and line operating voltage

A. Kozlov, S. Louzganov, Yu. Parfenov, M. Povareshkin, V. Polischouk, A. Shurupov, L. Zdoukhov: Institute for High Energy Densities, Moscow, Russia; William Radasky: Metatech Corporation, Goleta, California USA

Session 15: Emission Testing [EmT]

Chair: Karl-Heinz Gonschorek

Date: Thu 9:00-10:30, Room E7

SC A study and improvement of open-ended coaxial probe used for near-field measurements

David Baudry*, Anne Louis, Bélahcène Mazari: IRSEEM, Technopôle du Madrillet, France

SC Complex deconvolution for improvement of standard monopole in near-field measurement results

Adam Tankielun*: University of Paderborn, Germany; Uwe Keller, Werner John: Fraunhofer Institute for Reliability and Microintegration, Germany; Heyno Garbe: University of Hannover, Germany

Multi-purpose anechoic chambers - EMC (SAR/FAR) to antenna measurements

Martin A.K. Wiles*: ETS-Lindgren, UK; Alexander Kriz: ARC Seibersdorf Research GmbH, Austria

SC How to test emissions of really big machines. Investigations to improve the test wire method

Karl-Heinz Gonschorek, Samuel Hochauf*: Dresden University of Technology, Germany; Franz Schlagenhauser: The University of Western Australia

Session 16: Computational Electromagnetics I [Comp1]

Chair: Daniel de Zutter

Date: Thu 9:00-12:30, Room F7

SC EMC relevant arrangements - a combination of MoM and GMT

Stefan Balling*, Dirk Plettemeier, Karl-Heinz Gonschorek: Technical University of Dresden, Germany

A partitioned MoM scheme for treating EMC problems on a series of geometries with a predominant common part

Faik G. Bogdanov, Roman Jobava*, Paata Tsereteli: EMCoS, Tbilisi, Georgia; Stephan Frei: AUDI AG, Ingolstadt, Germany

SC Geometrical optimization embedded in the method of moments

Natalie Baganz, Dirk Plettemeier, Karl-Heinz Gonschorek: Dresden University of Technology, Germany

SC Combined-node moment method analysis of through hole vias

Reza Sabbagh Amirkhizi*, Hermann Singer: Hamburg University of Technology, Germany

Boundary integrodifferential equations for the solution of electromagnetic scattering problems for metal - dielectric bodies

Alexei M. Serebrennikov*: Perm Federal Technical University and Ural Branch of Russian Academy of Sciences, Russia

Numerical simulation of power-bus structures on printed circuit boards

Marco Leone*: Siemens AG, Germany; Heinz-D. Brüns, Dietmar Leugner: Technische Universität Hamburg-Harburg, Germany

Analysis of the coupling of a deterministic plane wave to a stochastic twisted pair of wires

Bas L. Michielsen*: ONERA DEMR, Toulouse, France

Modeling of composite walls in hospitals for ray-tracing and FDTD simulations

Thomas M. Schäfer, Thorsten Kayser*, Mario Pauli, Michael Baldauf, Werner Wiesbeck: Universität Karlsruhe (TH), Germany

Session 17: Power System EMC I [Pow1]

Chair: Farhad Rachidi

Date: Thu 11:00-12:30, Room F1

Electric power grid vulnerability to natural and intentional geomagnetic disturbances

John G. Kappenman*: Metatech Corporation, Duluth (MN), USA; William A. Radasky, James L. Gilbert: Metatech Corporation, Goleta (CA), USA

Electromagnetic noise emission measurements near the FACTS device at the inez (AEP) station

David Klinect, David Nichols, Ben Mehraban: American Electric Power, Columbus (Ohio), USA; Stephen Sebo, Longya Xu, Xin Liu: The Ohio State University, USA; Brian Cramer, Michael Silva: EPRI, Palo Alto (California), USA; Robert Olsen*: Washington State University, USA; Jerry Ramie: ARC Technical Resources, Inc., San Jose (California), USA

SC Analysis of the heatsink influence on conducted EMI generation in SMPS

Andrea Dolente*, Ugo Reggiani, Leonardo Sandrolini: University of Bologna, Italy

Crossed-frequency-admittance matrix approach for voltage quality study in distribution power system

Andrzej Bachry, Rainer Krebs: Siemens AG, Germany; Cezary Dzienis*, Zbigniew Styczynski: Otto-von-Guericke-University Magdeburg, Germany

Session 18: Measurement Validation [MeaV]

Chair: Ralf Vick

Date: Thu 11:00-12:30, Room E7

A practical analysis of test site validation methods for radiated RF measurements above 1 GHz

Angela Nothofer*, David Knight, Martin Alexander: National Physical Laboratory, UK; Andrew Rowell, Andrew Ward, Andy Marvin: University of York, UK

Inter-laboratory tests of electromagnetic field measurements

Michael Mann*, Bernd Gutheil, Karsten Glöser, Paul Weiß: University of Kaiserslautern, Germany; Hauke Brüggemeyer, Lower Saxony State Office for Ecology, Germany

Reduction of the uncertainty in radiated susceptibility testing by introduction of the compound polarisation efficiency

Magnus Höijer*: Swedish Defence Research Agency FOI, Sweden

SC **Practical validation of a low cost truck container as EMC pre-compliance test facility**

Wilbert M. Ellema*: Queensland University of Technology, Australia

Session 19: Power System EMC II [Pow2]

Chair: Michel Ianoz

Date: Thu 14:00-17:10, Room F1

Voltages and currents distribution along an A.C. electrified railway line: Comparison between Measurements and Calculations

Giovanni Lucca*, Maurizio Moro, Alberto Pagani, Livio Zucchelli: Sirti S.p.A., Italy

Calculation of overvoltage of powertransformer windings under VFTO based on network functions

Guishu Liang, Xile Zhang, Xiaohui Wang, Xiang Cui: North China Electric Power University, China

Calculation of very fast transient overvoltages in transformer windings

Xile Zhang, Guishu Liang, Haifeng Sun, Xiang Cui: University of North China, Heibei

SC **Application of the wavelet transform to the analysis of conducted EMI in SMPSS**

Luisa Coppola*, Simone Buso: University of Padova, Italy

Interactions between an input EMI filter and a power supply

Stephane Brehaut, Jean-Charles Le Bunetel, Didier Magnon: Laboratoire de Micro-électronique de puissance Tours, France; Antoine Puzo: SAFT POWER SYSTEMS GROUP; Chambray-Lès-Tours, France; Alfonso Santolaria, David González*, Javier Gago, Josep Balcells: Universitat Politècnica de Catalunya, Spain

Radio frequency characteristics of high power common-mode chokes

Stefan-Peter Weber*, Marcus Schinkel, Eckart Hoene, Stephan Guttowski, Werner John, Herbert Reichl: Fraunhofer IZM, Berlin, Germany

Common mode current generated by multiple transient sources on grounding grids

Marcos Mattos: Okime Eletromagnetismo Aplicado, São Paulo, Brazil

Session 20: System Level EMC [SysL]

Chair: Frank Leferink

Date: Thu 14:00-15:30, Room E7

Proposal of a modified Kron computation technic for complex EMC problems

Olivier Maurice*: EADS-CCR, Suresne, France; Mohamed Ramdani: ESEO, Angers, France; Aubry Picard, François Fouquet: ESIGELEC, St. Etienne du Rouvray, France

Analysis of the wire coupling under an aperture illuminated by an incident field by means of a topological approach

Phumin Kirawanich, Nakka S. Kranthi, A.R. Stillwell, Naz E. Islam: University of Missouri, Columbia (MO), USA; Forrest J. Agee*: Air Force Office of Scientific Research, USA; Sumuru Joe Yakura: Air Force Research Lab, USA

SC **Modeling of a large ground structure by an equivalent circuit for low frequency applications**

Thiemo Stadtler*, Jan Luiken ter Haseborg: Hamburg University of Technology, Germany

A closed-form formulation for the total power radiated by a single-wire overhead line

Andrea Cozza*, Flavio Canavero: Politecnico di Torino, Italy; Bernard Démoulin: Université des Sciences et Technologies de Lille, France

Session 21: Computational Electromagnetics II [Comp2]

Chair: Hermann Singer

Date: Thu 14:00-15:30, Room F7

SC Efficient generalized circuit analysis of rectangular semi-anechoic chambers and NSA computation

Ignacio Monterde*, Luis Nuno, Juan V. Balbastre: Universidad Politécnica de Valencia, Spain; Fernando D. Quesada: Universidad Politécnica de Cartagena, Spain

Cubic and corrugated reverberation chambers: mode distribution, correlation and field uniformity

Christian Bruns*, Pascal Leuchtmann, Ruediger Vahldieck: ETH Zurich, Switzerland

Stability of full-wave PEEC models: reason for instabilities and way for correction

Sergey V. Kochetov*, Guenter Wollenberg: Otto-von-Guericke-University of Magdeburg, Germany

SC Optimization of the matching network for microstrip-like antennas using genetic algorithm

Jalil Rasekhi*, Jalil Rashed-Mohassel: Univ. of Tehran, Iran

Session 22: Transmission Lines [Trans]

Chair: Jean-Phillipe Parmantier

Date: Thu 16:00-17:30, Room E7

Transfer admittance and impedance for shielded coaxial cables: evaluation by voltage measurements and model tuning

Giulio Antonini, Antonio Orlandi*, Romeo Michele Rizzi: University of L'Aquila, Italy

Effect of modelling fringing and losses for a microstrip on the radiated emission characteristics

Bert W.J. Wong: Curtin University of Technology, Perth WA, Australia; Antonio Cantoni, Kevin Fynn: Western Australian Telecommunications Research Institute; Joe Trinkle: University of Western Australia

SC Numerical investigation of crosstalk effect in coupled coplanar waveguides with linear frequency dependent loads

Tomasz Stefanski*, R&D Marine Technology Centre, Poland; Bogdan J. Janiczak: Gdańsk University of Technology, Poland

Inclusion of proximity effect on full-wave analysis of interconnects with arbitrary conductor shapes

Antonio Maffucci, Fabio Villone: Università di Cassino, Cassino, Italy; Giovanni Miano, Università di Napoli Federico II, Italy

Session 23: EMC Protection [Prot]

Chair: Robert Olsen

Date: Thu 16:00-17:10, Room F7

Ageing of shielding joints; shielding performance and corrosion

Lena Sjögren*: Swedish Corrosion Institute, Stockholm, Sweden; Mats Bäckström: Swedish Defence Research Agency, Sweden

SC Shielding effectiveness of woven carbon fiber composite materials for aerospace applications

Simon Paul Rea*, David Linton: Queens University, Belfast, UK; Eddie Orr, Jonathan McConnell: Bombardier Aerospace, Belfast, UK

Study on reducing common-mode current on a wire through an aperture with a ring stack

Sungtek Kahng*: University of Incheon, Korea