

	Paper Title	All Authors for Program	All Affiliations
--	-------------	-------------------------	------------------

**May 13, 2014, 10:00 - 11:20, Room H**

**[13A1-H] Numerical Modeling (1)**

13A1-H1	Inductance Extraction of a Meander Line on a Coplanar Plane using Partial Element Method	B. Pu, K. Kim, W. Nah	Sungkyunkwan University, Korea
13A1-H2	Software-related EMI Model Reduction for Two-stage Pipeline Microcontroller	S.-Y. Yuan <sup>1</sup> , M. S. Lin <sup>2</sup>	<sup>1</sup> Feng Chia University, Taiwan, <sup>2</sup> Bureau of Standards, Metrology and Inspection, Taiwan
13A1-H3	Analysis of Emission From a Slot Nearby a Microstrip Line on a Printed Circuit Board	T. Tobana, T. Sasamori, Y. Isota	Akita Prefectural University, Japan
13A1-H4	Electromagnetic Compatibility Concepts at Nanoscale	V. Mordachev <sup>1</sup> , E. Sinkevich <sup>1</sup> , G. Slepyan <sup>2</sup> , A. Boag <sup>2</sup> , S. Maksimenko <sup>3</sup> , P. Kuzhir <sup>3</sup> , G. Miano <sup>4</sup> , M. Portnoi <sup>5</sup> , A. Maffucci <sup>6</sup>	<sup>1</sup> Belarusian State University of Informatics and Radioelectronics, Belarus, <sup>2</sup> Tel-Aviv University, Israel, <sup>3</sup> Belarusian State University, Belarus, <sup>4</sup> University of Naples Federico II, Italy, <sup>5</sup> University of Exeter, United Kingdom, <sup>6</sup> University of Cassino and Southern Lazio, Italy

**May 13, 2014, 11:40 - 13:00, Room H**

**[13A2-H] Numerical Modeling (2)**

13A2-H1	Numerical Modeling of ESD Events Including Both Charging and Discharging Processes with FDTD-SPICE Direct Linking Solver	K. Fujita	Fujitsu Limited, Japan
13A2-H2	Determination of EM Coupling on an Electrical Wiring Interconnection System Application of condensation approaches on cable models	M. Ridet, J. P. Parmantier	ONERA - the French Aerospace Lab, France
13A2-H3	EMC/EMI Problems and Diffraction Modeling: Finite Difference Time Domain vs. Method of Moments	L. Sevgi <sup>1</sup> , G. Apaydin <sup>2</sup> , M. A. Uslu <sup>1</sup>	<sup>1</sup> Dogus University, Turkey, <sup>2</sup> Zirve University, Turkey
13A2-H4	Discrete Optimization of EMI Filter Using a Genetic Algorithm	M. Ferber <sup>1</sup> , R. Mrad <sup>1,2</sup> , F. Morel <sup>1</sup> , C. Vollaire <sup>1</sup> , G. Pillonnet <sup>2</sup> , A. Nagari <sup>3</sup> , J. Vasconcelos <sup>4</sup>	<sup>1</sup> Laboratoire Ampère (CNRS UMR5005), France, <sup>2</sup> CPE INL (CNRS UMR5270), France, <sup>3</sup> Advanced Audio Design, AMS BU ST Ericsson, France, <sup>4</sup> Universidade Federal de Minas Gerais, Brazil

**May 13, 2014, 14:30 - 15:50, Room H**

**[13P1-H] Numerical Modeling (3)**

13P1-H1	Three-Dimensional Dipole Source Identification Using Two Fixed Receiving Antennas and Its New Algorithm	A. Nishikata, Y. Wada, M. Tawada, Y. Takabe	Tokyo Institute of Technology, Japan
13P1-H2	Simulation Objects to be used as Unintentional Radiators	B. Menssen, F. Burghardt, H. Garbe	Leibniz Universität Hannover, Germany
13P1-H3	Study on Charge Oscillation-Induced Low-Frequency Electric Field	K. Kikunaga, H. Yamashita, M. Egashira, K. Nonaka	National Institute of Advanced Industrial Science and Technology, Japan
13P1-H4	Research on the Simulation System of the Complex Electromagnetic Environment	L. M. Chen <sup>1</sup> , D. Shi <sup>2</sup> , Y. G. Gao <sup>3</sup>	<sup>1</sup> Beijing University, P.R. China

**May 13, 2014, 16:10 - 17:40, Room H****[13P2-H] Plenary Session**

13P2-H1	A New Paradigm in ICT and the Role of EMC	M. Sakauchi	National Institute of Information and Communications Technology (NICT), Japan
13P2-H2	EMC Applications of Electromagnetic Time Reversal	F. Rachidi	Swiss Federal Institute of Technology, Switzerland

**May 13, 2014, 10:00 - 11:20, Room A****[13A1-A] Power Electronics & Vehicles (1)**

13A1-A1	Investigation of Relation between Switch Timing Difference and Common-mode Voltage on Cable	T. Uchida <sup>1</sup> , N. Kuwashiro <sup>1</sup> , H. Sato <sup>2</sup>	<sup>1</sup> Kyushu Institute of Technology, Japan, <sup>2</sup> Daiwa Industries Ltd., Japan
13A1-A2	Inductive Coupling Matrix of a Multiconductor System for a Winding-on-Core Prototype	F. Abdallah, M. Alaküla	Lund University, Sweden
13A1-A3	Conductive Noise Analysis of Inverter Circuits for Vehicle Equipments Using an Equivalent Circuit	Y. Shiraki, Y. Sasaki, N. Oka	Mitsubishi Electric Corp., Japan
13A1-A4	Common-Mode Noise Reduction with Two Symmetrical Three-Phase Inverters	X. C. Zhang, M. Shoyama	Kyusyu University, Japan

**May 13, 2014, 11:40 - 13:00, Room A****[13A2-A] Power Electronics & Vehicles (2)**

13A2-A1	Calculation of Interference between Railway Traction Inverters and Balises	S. Hatsukade <sup>1</sup> , A. Yamanaka <sup>2</sup>	<sup>1</sup> Railway Technical Research Institute, Japan, <sup>2</sup> West Japan Railway Company, Japan
13A2-A2	Experimental Evaluation on Time Variation of Conducted Noise Spectrum for a PFC Converter	T. Ibuchi, R. Kamikomaki, T. Funaki	Osaka University, Japan
13A2-A3	A Study of Common Mode Noise Current of Bridgeless PFC Circuit Considering Voltage Change in Y-Capacitors	K. Shi <sup>1</sup> , S. Tomioka <sup>2</sup> , M. Shoyama <sup>1</sup>	<sup>1</sup> Kyushu University, Japan, <sup>2</sup> TDK Lambda, Japan
13A2-A4	Impact of Thermal Aging on Emission of a Buck DC-DC Converter	A. Boyer, H. Huang, S. Bendhia	LAAS-CNRS, France

**May 13, 2014, 14:30 - 15:50, Room A****[13P1-A] EMC Management and Standards**

13P1-A1	Research of Test Site Validation by using Reference Site Method Frequency Range of 9 kHz to 30 MHz Validation for Test Site by accroding to CISPR 16-1-4 Document	S. Lee <sup>1</sup> , N. Kim <sup>1</sup> , H. S. Keum <sup>2</sup> , B. H. Kim <sup>2</sup> , S. H. Choi <sup>2</sup> , J. K. Yang <sup>3</sup>	<sup>1</sup> Chungbuk National University, Korea, <sup>2</sup> Korea Radio Promotion Association, Korea, <sup>3</sup> National Radio Research Agency, Korea
13P1-A2	Consideration for Evaluation Method of Proficiency Test Program on EMI Measurement	K. Osabe, T. Kato	Voluntary EMC Laboratory Accreditation Center Inc., Japan
13P1-A3	Use of FFT-based measuring instruments for EMI compliance measurements	J. Medler	Rohde & Schwarz GmbH & Co. KG, Germany
13P1-A4	Timing Considerations using FFT-based Measuring Receivers for EMI Compliance Measurements	J. Medler <sup>1</sup> , C. Reimer <sup>2</sup>	<sup>1</sup> Rohde & Schwarz GmbH & Co. KG, Germany, <sup>2</sup> Rohde & Schwarz International Operations GmbH, Germany

**May 13, 2014, 10:00 - 13:00, Room B****[Organized Session: 13A-B] Signal Integrity and Unintentional EM Radiation Related to Printed Circuit Boards**

13A-B1	Generalized Debye Model for PCB Dielectrics and Conductors	A. E. Engin, E. Kozachenko	San Diego State University, USA
--------	--	----------------------------	---------------------------------

13A-B2	Evaluation Method of Balance Mismatch Using CMRR Measurement for Printed Circuit Board	M. Shimazaki <sup>1</sup> , H. Asai <sup>2</sup>	<sup>1</sup> MITSUBISHI ELECTRIC Corp., Japan, <sup>2</sup> Research Institute of Electronics Shizuoka University, Japan
13A-B3	Application of the MREMC Algorithms for Performance-Based Circuit Board Design	T. H. Hubing, C. Zhu	Clemson University, USA
13A-B4	A Metamaterial-Inspired and Embedded Structure to Damp the Resonance of the Power/Ground Planes	S. Kahng <sup>1</sup> , K. Jang <sup>1</sup> , J. Jeon <sup>1</sup> , H. Oh <sup>2</sup>	<sup>1</sup> Incheon National University, Korea, <sup>2</sup> Innertron Ltd., co., Korea
13A-B5	Identifying Dominant Factor of Imbalance Component and EM Radiation from Differential-Paired Lines with Serpentine Equi-Length Routing	Y. Kayano <sup>1</sup> , H. Inoue <sup>2</sup>	<sup>1</sup> Akita University, Japan, <sup>2</sup> The Open University of Japan, Japan
13A-B6	Modal Equivalent Circuit of Bend Discontinuity in Differential Transmission Lines	Y. Toyota, S. Kan, K. Iokibe	Okayama University, Japan
13A-B7	Signal Integrity: Influence of Non-linear Driver, Different Bit Rates, and Estimation by Different Algorithms	S.-Y. Hsu, C.-C. Chou, T.-L. Wu	National Taiwan University, Taiwan

**May 13, 2014, 14:30 - 15:50, Room B**

**[13P1-B] Chip, Package, PCB & Cables (1)**

13P1-B1	Imbalance Control by Open Stub for Reduction of Common-Mode Conversion at Differential Transmission Line Bend	T. Matsushima, O. Wada	Kyoto University, Japan
13P1-B2	Suppression of Mode Conversion by Decreasing Path Difference by using an Asymmetrically Tapered Bend in Differential Transmission Lines	S. Kan <sup>1</sup> , Y. Toyota <sup>1</sup> , K. Iokibe <sup>1</sup> , T. Watanabe <sup>2</sup>	<sup>1</sup> Okayama University, Japan, <sup>2</sup> Industrial Technology Center of Okayama prefecture, Japan
13P1-B3	Weak-Coupled Cross-Sectional Differential-Paired Lines with Bend Discontinuities for SI and EMI Performances	Y. Kayano <sup>1</sup> , M. Ohkoshi <sup>1</sup> , H. Inoue <sup>2</sup>	<sup>1</sup> Akita University, Japan, <sup>2</sup> The Open University of Japan, Japan

**May 13, 2014, 10:00 - 13:00, Room S**

**[Organized Session: 13A-S] Electromagnetic Phenomena Associated with Earthquakes: Earthquake Prediction**

13A-S1	ULF Geomagnetic Anomalous Changes Related to Large Earthquakes : Case and Statistical Studies	K. Hattori, P. Han, M. Hirokawa, C. Yoshino	Chiba University, Japan
13A-S2	Physics of Electromagnetic Phenomena associated with the Rupture of a Finite Fault Model	Q. H. Huang <sup>1</sup> , H. X. Ren <sup>2</sup> , D. Zhang <sup>1</sup>	<sup>1</sup> Peking University, P.R. China, <sup>2</sup> University of Science and Technology of China, P.R. China
13A-S3	Ultra-Low-Frequency Magnetic Field Depression for Three Huge Oceanic Earthquakes in Japan and in the Kurile Islands	A. Schekotov <sup>1</sup> , M. Hayakawa <sup>2</sup>	<sup>1</sup> Russian Academy of Sciences, Russia, <sup>2</sup> University of Electro-Communications, Japan
13A-S4	Detections of Electromagnetic Waves Excited by Earthquakes	M. Tsutsui	Kyoto Sangyo University, Japan
13A-S5	Stochastic Relation between the Line-of-sight VHF Propagation and Earthquakes	K. Motojima, N. Haga	Gunma University, Japan
13A-S6	Seismo-Ionospheric Perturbations, and the Precursors to the 2011 Japan Earthquake	M. Hayakawa	University of Electro-Communications, Japan
13A-S7	Preseismic Lithosphere-Atmosphere-Ionosphere Coupling Associated With Earthquake Preliminary Mission Analysis for Nano-Satellite Observation	M. Kamogawa, Y. Orihara, M. Nakamura, Y. Suto, S. Togo, R. Tanaka	Tokyo Gakugei University, Japan

**May 13, 2014, 14:30 - 15:50, Room S**

**[13P1-S] Biological Effects, EMF Safety & EMC in Medical Applications and Safety (1)**

13P1-S1	Analysis of Body Hair Movement in ELF Electric Field Exposure—For Mechanism of Seasonal Change in Perception Threshold—	H. O. Shimizu <sup>1</sup> , K. Shimizu <sup>2</sup>	<sup>1</sup> Hokkaido Institute of Technology, Japan, <sup>2</sup> Hokkaido University, Japan
13P1-S2	Effect of Two-times 24 hour Exposures to 60 GHz Millimeter-waves on Neurite Outgrowth in PC12VG Cells in Consideration of Polarization	T. Shiina <sup>1</sup> , Y. Suzuki <sup>1</sup> , Y. Kasai <sup>1</sup> , Y. Inami <sup>1</sup> , K. Wake <sup>2</sup> , M. Taki <sup>1</sup>	<sup>1</sup> Tokyo Metropolitan University, Japan, <sup>2</sup> National Institute of Information and Communications Technology, Japan
13P1-S3	Effect of 915 MHz RFID Exposure on Changes of Body Temperature in Rats	H. S. Kim <sup>1</sup> , Y. H. Lee <sup>1</sup> , A. K. Lee <sup>2</sup> , H. D. Choi <sup>2</sup> , Y.-S. Lee <sup>3</sup> , J.-K. Pack <sup>4</sup> , N. Kim <sup>5</sup> , Y. H. Ahn <sup>1</sup>	<sup>1</sup> Ajou University School of Medicine, Korea, <sup>2</sup> Electronics and Telecommunications Research Institute, Korea, <sup>3</sup> Ewha Woman's University, Korea, <sup>4</sup> Chungnam National University, Korea, <sup>5</sup> Chungbuk National University, Korea
13P1-S4	Relationship between Spatial-Averaged SAR and Temperature Elevation in Human Head Models from 1–10 GHz	A. Hirata, S. Ohta, I. Laakso, O. Fujiwara	Nagoya Institute of Technology, Japan

**May 14, 2014, 09:30 - 10:50, Room H**

**[14A1-H] Numerical Modeling/Biological Effects**

14A1-H1	Estimation of the Electromagnetic Fields Excited by a Cellular Phone in a Typical Aircraft Cabin	M. Shirafune <sup>1</sup> , T. Hikage <sup>1</sup> , T. Nojima <sup>1</sup> , S. Futatsumori <sup>2</sup> , A. Kohmura <sup>2</sup> , N. Yonemoto <sup>2</sup>	<sup>1</sup> Hokkaido University, Japan, <sup>2</sup> Electronic Navigation Research Institute, Japan
14A1-H2	Millimeter-Wave Power Absorbed into Rabbit Eye Due to Different Exposure Environments	J. Chakarothai <sup>1,3</sup> , Y. Suzuki <sup>1</sup> , M. Taki <sup>1</sup> , M. Kojima <sup>2</sup> , K. Sasaki <sup>3</sup> , K. Wake <sup>3</sup> , S. Watanabe <sup>3</sup>	<sup>1</sup> Tokyo Metropolitan University, Japan, <sup>2</sup> Kanazawa Medical University, Japan, <sup>3</sup> National Institute of Information and Communication, Japan
14A1-H3	Comparison of SAR in Human Body Radiated from Mobile Phone and Tablet Computer	A. Tateno <sup>1</sup> , K. Tanaka <sup>1</sup> , T. Nagaoka <sup>2</sup> , K. Saito <sup>1</sup> , S. Watanabe <sup>2</sup> , M. Takahashi <sup>1</sup> , K. Ito <sup>1</sup>	<sup>1</sup> Chiba University, Japan, <sup>2</sup> National Institute of Information and Communications Technology, Japan
14A1-H4	Numerical Modeling and Dosimetry of Pregnant Females at Various Stages of Pregnancy	T. Nagaoka <sup>1</sup> , T. Niwa <sup>2</sup> , S. Watanabe <sup>1</sup>	<sup>1</sup> National Institute of Information and Communications Technology, Japan, <sup>2</sup> Tokai University School of Medicine, Japan

**May 14, 2014, 11:10 - 12:40, Room H**

**[Kyenote: 14A2-H]**

14A2-H1	EMC Research Trends in Europe	M. D'Amore	Sapienza University of Rome, Italy
14A2-H2	EMC Research Trends in the World	R. Scully	NASA, USA/President of IEEE EMC Society
14A2-H3	Overview of EMC related issues in Japan and Vicinity	L. R. Koga	Okayama University, Japan

**May 14, 2014, 14:00 - 16:00, Room H**

**[14P1-H] Biological Effects, EMF Safety & EMC in Medical Applications and Safety (2)**

14P1-H1	A Study on Exposure Level Measurement of the IH Cooker	K. Sato <sup>1</sup> , Y. Kamimura <sup>2</sup>	<sup>1</sup> Tohoku Gakuin University, Japan, <sup>2</sup> Utsunomiya University, Japan
14P1-H2	Exposure Assessment for a Wireless Multi-phone Charger	W. G. Kang <sup>1</sup> , A. I. Zhanov <sup>2</sup> , H. Y. Jun <sup>3</sup> , Y. H. Park <sup>3</sup> , J. K. Pack <sup>1</sup>	<sup>1</sup> Chungnam National University, Korea, <sup>2</sup> Electromagnetic Environment Research Center, Korea, <sup>3</sup> SAMSUNG Electronics, Korea
14P1-H3	Computational Dosimetry for Wireless Charging of an Electrical Vehicle	I. Laakso, A. Hirata, O. Fujiwara	Nagoya Institute of Technology, Japan

14P1-H4	Numerical Evaluation of Exposure to the Electromagnetic Fields of an Electronic Article Surveillance System with Postured Infant Model	C. Li <sup>1,2</sup> , T. Wu <sup>2</sup>	<sup>1</sup> University of Science and Technology Beijing, P.R. China, <sup>2</sup> China Academy of Telecommunication Research, P.R. China
14P1-H5	Dosimetry for Two modes of Resonance-based Wireless Power Transfer System	S. W. Park <sup>1</sup> , E. H. Kim <sup>1</sup> , K. Wake <sup>2</sup> , S. Watanabe <sup>2</sup>	<sup>1</sup> Korea Automotive Technology Institute, Korea, <sup>2</sup> National Institute of Information and Communications Technology, Japan
14P1-H6	Electromagnetic Interference with Medical Devices from Third Generation Mobile Phone Including LTE	S. Ishihara <sup>1</sup> , J. Higashiyama <sup>1</sup> , T. Onishi <sup>1</sup> , Y. Tarusawa <sup>1</sup> , K. Nagase <sup>2</sup>	<sup>1</sup> NTT DOCOMO, INC., Japan, <sup>2</sup> Kanazawa University Hospital, Japan

**May 14, 2014, 16:20 - 18:40, Room H**

**[Organized Session: 14P2-H] Active Implantable Medical Device EMI**

14P2-H1	A New Improved Electrode for the Human Body Model: Application for EMI Assessment of Active Implant Medical Devices	H. Fujimoto <sup>1</sup> , T. Toyoshima <sup>1</sup> , T. Hikage <sup>2</sup> , T. Nojima <sup>2</sup>	<sup>1</sup> Medtronic Japan Co., Ltd., Japan, <sup>2</sup> Hokkaido University, Japan
14P2-H2	Implantable Cardiac Pacemaker EMI Triggered by HF-band Wireless Power Transfer Coils	T. Hikage, M. Shirafune, T. Nojima	Hokkaido University, Japan
14P2-H3	Study of Effects of Commercial Shielding Products Attached to Mobile Phone on Human Body with Implanted Medical Device	Y. L. Diao, W. N. Sun, K. H. Chan, S. W. Leung, Y. M. Siu	City University of Hong Kong, Hong Kong
14P2-H4	Platform for the Modeling of In Vivo Effects Relevant to Implant EM Exposure Safety	E. Neufeld, N. Kuster	IT'IS Foundation, Switzerland
14P2-H5	Reconsideration of EMI Phenomenon in Active Implantable Medical Devices in the Age of MR	T. Toyoshima	USCI Holdings, Inc., Japan
14P2-H6	Safety Assessment of AIMDs under MRI Exposure: Tier3 vs. Tier4 Evaluation of Local RF-induced Heating	E. Cabot <sup>1</sup> , E. Zastrow <sup>1,2</sup> , N. Kuster <sup>1,2</sup>	<sup>1</sup> IT'IS Foundation, Switzerland, <sup>2</sup> ETH Zurich, Switzerland
14P2-H7	Piece-wise Excitation System for the Characterization of Local RF-Induced Heating of AIMD during MR Exposure	E. Zastrow <sup>1,2</sup> , M. Capstick <sup>1</sup> , E. Cabot <sup>1</sup> , N. Kuster <sup>1,2</sup>	<sup>1</sup> IT'IS Foundation, Switzerland, <sup>2</sup> ETH Zurich, Switzerland

**May 14, 2014, 09:30 - 12:30, Room A**

**[Organized Session: 14A-A] Improving the Measurement Uncertainty of EMI Testing**

14A-A1	Main Objective of this Organized Session "Improving the measurement uncertainty of EMI testing"	K. Osabe	Voluntary EMC Laboratory Accreditation Center Inc., Japan
14A-A2	Reducing the Standard Compliance Uncertainty by using Ferrite Type CMADs during Radiated Disturbance Measurements Acc. to CISPR 16-2-3	J. Medler	Rohde & Schwarz GmbH & Co. KG, Germany
14A-A3	Measurement Method, Uncertainty and Cable Balance - with Implications for the CDNE-M	D. M. Lauder <sup>1</sup> , R. C. Marshall <sup>2</sup>	<sup>1</sup> University of Hertfordshire, United Kingdom, <sup>2</sup> Richard Marshall Limited, United Kingdom
14A-A4	Improvement of Radiated Emission Measurement Reproducibility by VHF-LISN - Interim Results of International Inter-Laboratory Comparison -	S. Okuyama <sup>1</sup> , K. Tanakajima <sup>2</sup> , K. Osabe <sup>3</sup> , H. Muramatsu <sup>4</sup>	<sup>1</sup> NEC AccessTechnica, Ltd., Japan, <sup>2</sup> Intertek Japan K.K., Japan, <sup>3</sup> Voluntary EMC Laboratory Accreditation Center Inc., Japan, <sup>4</sup> VCCI Council, Japan
14A-A5	A Case Study on the Consistency Improvement in Radiated-Emission Testing by Using LISN	Y. Tang <sup>1</sup> , J. Chen <sup>1</sup> , C. Lee <sup>2</sup> , C. Chiu <sup>3</sup>	<sup>1</sup> Bureau of Standards, Metrology and Inspection (BSMI), Taiwan, <sup>2</sup> Electronics Testing Center, Taiwan, <sup>3</sup> Da-Yeh University, Taiwan
14A-A6	Influence of Termination Impedance to Radiated Emission from AC Cable with Ferrite Cores Array below 300 MHz	N. Kuwabara <sup>1</sup> , T. Nakanushi <sup>1</sup> , K. Osabe <sup>2</sup> , H. Muramatsu <sup>3</sup>	<sup>1</sup> Kyushu Institute of Technology, Japan, <sup>2</sup> Voluntary EMC Laboratory Accreditation Center, Japan, <sup>3</sup> VCCI Council, Japan

14A-A7	Asymmetric Artificial Networks (AAN) for Balanced Telecommunications Cables Conducted Common Mode Emissions Testing	B. L. Harlacher	Fischer Custom Communications, Inc, USA
14A-A8	Impact of table materials on measurements up to 18 GHz	A. Griffin	Cisco Systems Inc, USA

**May 14, 2014, 14:00 - 16:00, Room A**

**[Organized Session: 14P1-A] Metrological Approach for Result Validation and Improvement of Measurement Quality**

14P1-A1	Uncertainties in sVSWR and A Proposal for Improvement Using Vector Response Measurements	Z. Chen	ETS-Lindgren, USA
14P1-A2	Effects of Incident Directions on Reflection Coefficients of Pyramidal Electromagnetic Wave Absorber	T. Aoyagi <sup>1</sup> , K. Kurihara <sup>2</sup> , T. Takizawa <sup>2</sup> , Y. Hirai <sup>2</sup>	<sup>1</sup> Tokyo Institute of Technology, Japan, <sup>2</sup> TDK Corp., Japan
14P1-A3	Propagation Characteristics of Data Communication System for Protection and Disaster Relief Operations Using TV White Space	M. Noda <sup>1</sup> , T. Yukimatsu <sup>1</sup> , T. Kinoshita <sup>2</sup> , M. Shida <sup>2</sup>	<sup>1</sup> Hitachi, Ltd., Japan
14P1-A4	Electromagnetic Wave Source Visualization System with Lüneburg Lens	A. Ohmae, I. Hoda, U. Paoletti, W. Li, T. Suga, H. Osaka	Hitachi Ltd., Japan
14P1-A5	Loop Antenna Calibration Methods in Low-frequency	M. Ishii <sup>1</sup> , K. Fujii <sup>2</sup>	<sup>1</sup> National Institute of Advanced Industrial Science and Technology, Japan, <sup>2</sup> National Institute of Information and Communications Technology, Japan
14P1-A6	A Look at the Emissions of Three Low-Power Wireless Charging Devices	D. Novotny	National Institute of Standards and Technology, USA

**May 14, 2014, 16:20 - 18:20, Room A**

**[Organized Session: 14P2-A] EM Information Leakage**

14P2-A1	Efficient Method for Estimating Propagation Area of Information Leakage via EM Field	Y. Hayashi, N. Homma, T. Mizuki, T. Aoki, H. Sone	Tohoku University, Japan
14P2-A2	Analysis on Equivalent Current Source of AES-128 Circuit for HD Power Model Verification	K. Iokibe <sup>1</sup> , K. Maeshima <sup>1</sup> , T. Watanabe <sup>2</sup> , H. Kagotani <sup>1</sup> , Y. Nogami <sup>1</sup> , Y. Toyota <sup>1</sup>	<sup>1</sup> Okayama University, Japan, <sup>2</sup> Industrial Technology Center of Okayama Prefecture, Japan
14P2-A3	Correlation Power Analysis using Bit-Level Biased Activity Plaintexts against AES Cores with Countermeasures	D. Fujimoto <sup>1</sup> , N. Miura <sup>1</sup> , M. Nagata <sup>1</sup> , Y. Hayashi <sup>2</sup> , N. Homma <sup>2</sup> , T. Aoki <sup>2</sup> , Y. Hori <sup>3</sup> , T. Katashita <sup>3</sup> , K. Sakiyama <sup>4</sup> , T. Le <sup>5</sup> , J. Bringer <sup>5</sup> , P. Bazargan-Sabet <sup>6</sup> , S. Bhasin <sup>7</sup> , J. Danger <sup>7</sup>	<sup>1</sup> Kobe University, Japan, <sup>2</sup> Tohoku University, Japan, <sup>3</sup> National Institute of Advanced Industrial Science and Technology, Japan, <sup>4</sup> The University of Electro-Communications, Japan, <sup>5</sup> Morpho, France, <sup>6</sup> Pierre-and-Marie-Curie University, France, <sup>7</sup> Telecom ParisTech, France
14P2-A4	NICV: Normalized Inter-Class Variance for Detection of Side-Channel Leakage	S. B. Bhasin <sup>1,2</sup> , J. Danger <sup>1,2,3</sup> , S. Guilley <sup>1,2,3</sup> , Z. Najm <sup>1,2</sup>	<sup>1</sup> Institut MINES-TELECOM, France, <sup>2</sup> TELECOM ParisTech, France, <sup>3</sup> Secure-IC S.A.S., France
14P2-A5	Chosen-message Electromagnetic Analysis against Cryptographic Software on Embedded OS	H. Uno, S. Endo, Y. Hayashi, N. Homma, T. Aoki	Tohoku University, Japan
14P2-A6	Malicious Wave: a Survey on Actively Tampering Using Electromagnetic Glitch	S. Bhasin <sup>1</sup> , P. Maistri <sup>2</sup> , F. Regazzoni <sup>3</sup>	<sup>1</sup> Telecom ParisTech, France, <sup>2</sup> University Grenoble, France, <sup>3</sup> ALaRI - University of Lugano, Switzerland

**May 14, 2014, 09:30 - 10:50, Room B**

**[14A1-B] Chip, Package, PCB & Cables (2)**

14A1-B1	Modeling of Differential Line Across a Ground Slot	F. Xiao, Y. Kami	The University of Electro-Communications, Japan
---------	--	------------------	---



14A1-B2	Enhanced Passive Equalizer Using the Open Stub Compensation Technique	S.-H. Huang <sup>1</sup> , C.-W. Kuo <sup>1</sup> , C.-C. Wang <sup>2</sup> , T. Kitazawa <sup>3</sup>	<sup>1</sup> National Sun Yat-Sen University, Taiwan, <sup>2</sup> Advanced Semiconductor Engineering Inc., Taiwan, <sup>3</sup> Ritsumeikan University, Japan
14A1-B3	A Novel S-Bridged Power Plane With Ultra Wideband Suppression of Ground Bounce Noise Using Open Stub	M. H. Lu <sup>1</sup> , C. Wang <sup>2</sup> , C. Kuo <sup>1</sup> , T. Kitazawa <sup>3</sup>	<sup>1</sup> National Sun Yat-Sen University, Taiwan, <sup>2</sup> Advanced Semiconductor Engineering Inc., Taiwan, <sup>3</sup> Ritsumeikan University, Japan
14A1-B4	Radiated Emission of Various PDN Designs	O. V. Tereshchenko <sup>1</sup> , F. J. K. Buesink <sup>1</sup> , F. B. J. Leferink <sup>1,2</sup>	<sup>1</sup> University of Twente, The Netherlands, <sup>2</sup> Thales Nederland B.V. , The Netherlands

**May 14, 2014, 11:10 - 12:30, Room B**

**[14A2-B] Chip, Package, PCB & Cables (3)**

14A2-B1	Forward Wave Analysis for EMC Power Supply Design above 1 GHz	U. Paoletti, Y. Komiya, T. Suga, H. Osaka	Hitachi, Ltd., Japan
14A2-B2	Reduction Technique for Power Supply Noise of Analog-Digital Mixed Circuit Boards -Adjustment of Attached Resistor Method-	S. Baba, S. Sasaki	Saga University, Japan
14A2-B3	A Low Cost Capacitor Approach for Suppressing Resonance in Power Distribution Networks	K. Yamanaga <sup>1</sup> , H. Yamamoto <sup>1</sup> , T. Sato <sup>2</sup>	<sup>1</sup> Murata Manufacturing Co., Ltd., Japan, <sup>2</sup> Kyoto University, Japan
14A2-B4	The Analysis of EMI Noise Coupling Mechanism for GPS Reception Performance Degradation from SSD/USB Module	H.-N. Lin <sup>1</sup> , C.-C. Lu <sup>1</sup> , H.-Y. Tsai <sup>1</sup> , T.-W. Kung <sup>2</sup>	<sup>1</sup> Feng-Chia University, Taiwan, <sup>2</sup> Bureau of Standards, Metrology & Inspection, M.O.E.A, Taiwan

**May 14, 2014, 14:00 - 16:00, Room B**

**[Organized Session/Workshop: 14P1-B] IC Chip Level EMC for Telecommunication**

14P1-B1W	Through Silicon Via (TSV) Noise Coupling Effects on RF LC-VCO in 3D IC	J. Lim, J. Cho, M. Lee, B. Bee, J. Kim	<sup>1</sup> Korea Advanced Institute of Science and Technology
14P1-B2W	Measurements and simulation of RF noise coupling and its impacts on LTE wireless communication performance	M. Nagata <sup>1</sup> , S. Shimazaki <sup>1</sup> , N. Azuma <sup>1</sup> , N. Miura <sup>1</sup> , S. Muroga <sup>2</sup> , Y. Endo <sup>2</sup> , S. Tanaka <sup>2</sup> , M. Yamaguchi <sup>2</sup>	<sup>1</sup> Kobe University, <sup>2</sup> Tohoku University
14P1-B3W	Development of micro magnetic field probe to evaluate near field on RFIC chip	Y. Endo <sup>1</sup> , M. Yamaguchi <sup>1,2</sup> , Y. Shigeta <sup>1</sup> , M. Onishi <sup>1</sup> , K. Arai <sup>1</sup> , S. Muroga <sup>1</sup>	<sup>1</sup> Graduate School of Engineering, Tohoku University, <sup>2</sup> New Industry Creation Hatchery Center, Tohoku University
14P1-B4	On-chip magnetic thin-film noise suppressor for SI-compatible digital noise reduction	M. Yamaguchi <sup>1,2</sup> , S. Muroga <sup>1</sup> , Y. Endo <sup>1</sup> , S. Tanaka <sup>2</sup> , Y. Shimada <sup>2</sup> , T. Ito <sup>2</sup> , N. Azuma <sup>3</sup> , S. Shimazaki <sup>3</sup> , M. Nagata <sup>3</sup>	<sup>1</sup> Tohoku University, Japan, <sup>2</sup> Kobe University, Japan
14P1-B5	Evaluation and Analysis of Electromagnetic Noise Coupling in a Board with a Mixed Signal IC	K. Tsukamoto, M. Iwanami, E. Hankui	NEC Corporation, Japan

**May 14, 2014, 16:20 - 18:20, Room B**

**[Organized Session: 14P2-B] 3D-IC and Packages**

14P2-B1	In-Stack Monitoring of Signal and Power Nodes in Three Dimensional Integrated Circuits	Y. Araga, R. Miura, N. Ueda, N. Miura, M. Nagata	Kobe University, Japan
14P2-B2	SI/PI Co-simulation including Voltage Regulating Circuitry for High-Performance Multi-Chip Package	J. H. Lim, J. J. Lee, S. Y. Jung	Samsung Electronics, Korea
14P2-B3	Measurement and Analysis of Wireless Power Distribution Network using Magnetic Field Resonance in 3D Package and IC	E. S. Song, D. Jung, Y. Kim, J. Kim	KAIST, Korea

14P2-B4	Crosstalk Reduction in TSV Arrays with Direct Ohmic Contact between Metal and Silicon-substrate	D. C. Yang <sup>1</sup> , E. P. Li <sup>1</sup> , J. L. Li <sup>1</sup> , X. C. Wei <sup>1</sup> , J. Y. Xie <sup>2</sup> , M. Swaminathan <sup>2</sup>	<sup>1</sup> Zhejiang University, P.R. China, <sup>2</sup> Georgia Institute of Technology, USA
14P2-B5	Design of Compact and Low-EMI Waveguide Structures based on Through Glass Vias	X. C. Wei, X. Wang, D. Yang, J. Li, X. Wei	Zhejiang University, P.R. China
14P2-B6	Designing Test Patterns for Effective Measurement of Typical TSV Pairs in a Silicon Interposer	Q. Wang <sup>1</sup> , K. Shringarpure <sup>1</sup> , J. Fan <sup>1</sup> , C. Hwang <sup>2</sup> , S. Pan <sup>3</sup> , B. Achkir <sup>3</sup>	<sup>1</sup> Missouri University of Science and Technology, USA, <sup>2</sup> Samsung, Korea, <sup>3</sup> Cisco Systems, Inc., USA

**May 14, 2014, 09:30 - 12:30, Room S**

**[Workshop: 14A-S] Recent Lightning Current Data from Instrumented Towers**

14A-S1W	Introduction to Lightning Current Measurements	M. Rubinstein <sup>1</sup> , F. Rachidi <sup>2</sup>	<sup>1</sup> University of Applied Sciences of Western Switzerland, <sup>2</sup> Swiss Federal Institute of Technology, Lausanne
14A-S2W	Lightning Measurements at the Gaisberg Tower in Austria	G. Diendorfer	Austrian Electrotechnical Association (OVE), Dept. ALDIS
14A-S3W	Lightning Observations at Tokyo Skytree	T. Shindo	CRIEPI
14A-S4W	The Peissenberg Tower in Germany	F. Heidler	University of the Federal Armed Forces, Munich
14A-S5W	Säntis Tower in Switzerland	M. Paolone <sup>1</sup> , M. Ruinstein <sup>2</sup> , F. Rachidi <sup>1</sup>	<sup>1</sup> Swiss Federal Institute of Technology, Lausanne' <sup>2</sup> University of Applied Sciences of Western Switzerland

**May 14, 2014, 14:00 - 16:00, Room S**

**[14P1-S] High Power & High Voltage EMC**

14P1-S1	Calculation of Electromagnetic Fields Inside a Building with Layered Reinforcing Bar Struck by Lightning Using the FDTD Method	A. Tatematsu <sup>1</sup> , F. Rachidi <sup>2</sup> , M. Rubinstein <sup>3</sup>	<sup>1</sup> Central Research Institute of Electric Power Industry, Japan, <sup>2</sup> Swiss Federal Institute of Technology, Lausanne, Switzerland, <sup>3</sup> University of Applied Sciences Western Switzerland, Switzerland
14P1-S2	The Most Powerful Lightning Discharges in Winter Thunderstorms in Japan Sea Coast	T. Wu, S. Yoshida, T. Ushio	Osaka University, Japan
14P1-S3	Lightning Surge Voltage Characteristics between the Ports of Telecommunications Equipment for FTTH Service	M. Shintaku, T. Masuda, K. Yano, Y. Honma, J. Kato	NTT Energy and Environment Systems Laboratories, Japan
14P1-S4	VHF Radio Observations of Lightning Discharges on JEM-GLIMS	H. Kikuchi <sup>1</sup> , T. Morimoto <sup>2</sup> , T. Ushio <sup>1</sup> , M. Sato <sup>3</sup> , A. Yamazaki <sup>4</sup> , M. Suzuki <sup>4</sup>	<sup>1</sup> Osaka University, Japan, <sup>2</sup> Kinki University, Japan, <sup>3</sup> Hokkaido University, Japan, <sup>4</sup> Japan aerospace Exploration Agency, Japan
14P1-S5	Current Intentional EMI studies in Europe with a Focus on STRUCTURES	G. S. van de Beek <sup>1</sup> , F. B. J. Leferink <sup>1,2</sup>	<sup>1</sup> University of Twente, The Netherlands, <sup>2</sup> Thales Nederland B.V., The Netherlands

**May 14, 2014, 16:20 - 17:40, Room S**

**[14P2-S] Power System EMC**

14P2-S1	Electromagnetic Radiated Emissions from a Wireless Power Transfer System using a Resonant Magnetic Field Coupling	S. Kong, J. Kim, B. Bae, J. J. Kim, S. Kim, J. Kim	KAIST, Korea
14P2-S2	Short Range Wireless Power Charging on Small Electric Vehicles	W. Khan-ngern, H. Zenkner	King Mongkut's Institute of Technology Ladkrabang, , Thailand
14P2-S3	Harmonic Current Reduction Method of Hand-Held Resonant Magnetic Field Charger (HH-RMFC) for Electric Vehicle	C. Song, H. Kim, H. Jung, E. Song, S. Kim, J. Kim, J. Kim	Korea Advanced Institute of Science and Technology, Korea



14P2-S4	Various Approaches to Problems of Multicriterion Optimization Processes of Electric Power Systems	N. V. Korovkin <sup>1,2</sup> , M. V. Odintsov <sup>1,2</sup> , N. A. Belyaev <sup>1,2</sup> , O. V. Frolov <sup>2</sup> , M. Hayakawa <sup>3,4</sup>	<sup>1</sup> Theoretical Electrical Engineering dept. St.Petersburg State Polytechnical University, Russia, <sup>2</sup> Joint Stock Company «scientific and Technical Center of Unified Power System», Russia, <sup>3</sup> Hayakawa Institute of Seismo Electromagnetics Co. Ltd., The Univ. of Electro-Communications (UEC) Incubation Center, Japan, <sup>4</sup> Advanced Wireless Communications Research Center and Research Station on Seismo Electromagnetics. UEC, Japan
---------	---	--	--

**May 15, 2014, 09:30 - 10:50, Room H**

**[Organized Session: 15A-H] EMC Aspects of Wireless Power Transfer Systems**

15A-H1	Magnetic Shielding of Wireless Power Transfer Systems	T. Campi, S. Cruciani, M. Feliziani	University of L'Aquila, Italy
15A-H2	Low Frequency Electromagnetic Compatibility of Wirelessly Powered Electric Vehicles	M. Kim <sup>1</sup> , S. Kim <sup>1</sup> , Y. Chun <sup>2</sup> , S. Park <sup>2</sup> , S. Ahn <sup>1</sup>	<sup>1</sup> KAIST, Korea, <sup>2</sup> Chungbuk National University, Korea
15A-H3	Applicability of Quasistatic Approximation for Exposure Assessment of Wireless Power Transfer	I. Laakso <sup>1</sup> , T. Shimamoto <sup>1</sup> , A. Hirata <sup>1</sup> , M. Feliziani <sup>2</sup>	<sup>1</sup> Nagoya Institute of Technology, Japan, <sup>2</sup> University of L'Aquila, Italy
15A-H4	Analysis of Power Dissipation and Temperature Rise of an Inductive Link for Retinal Implants	D. C. Ng <sup>1,2</sup> , E. Skafidas <sup>1,2</sup>	<sup>1</sup> National ICT Australia, Australia, <sup>2</sup> University of Melbourne, Australia
15A-H5	Undesired Emission from Coupled-Resonant Wireless Power Transfer Antenna for Fundamental and Harmonics Frequency	H. Hirayama, H. Yamada, N. Kikuma, K. Sakakibara	Nagoya Institute of Technology, Japan
15A-H6	Investigation and analysis on EMC reduction with impedance matching technique in Wireless Power Transfer system	F. Bien, S. Oruganti	School of ECE, UNIST, Korea
15A-H7	Coexistence of Wireless Power Transfer via Microwaves and Wireless Communication for Battery-less ZigBee Sensors	N. Shinohara, T. Ichihara	Kyoto University, Japan
15A-H8	Induced Field and SAR in Human Body Model Due to Wireless Power Transfer System with Induction Coupling	T. Sunohara <sup>1</sup> , I. Laakso <sup>1</sup> , A. Hirata <sup>1</sup> , T. Onishi <sup>2</sup>	<sup>1</sup> Nagoya Institute of Technology, Japan, <sup>2</sup> NTT DOCOMO, INC., Japan

**May 15, 2014, 14:00 - 17:00, Room H**

**[Organized Session/Workshop: 15P-H] Automotive EMC**

15P-H1	Application of the Imbalance Difference Method to the EMC Design of Automotive ECUs	L. Niu, T. H. Hubing	Clemson University, USA
15P-H2	Estimation of Radiated Emissions of an Automotive HV-Inverter in a Distributed System	D. Schneider, M. Boettcher, S. Tenbohlen, W. Koehler	University of Stuttgart, Germany
15P-H3	S-parameter Estimation for the Components in Automotive High-voltage Units with Partial Measurements	N. Maeda <sup>1</sup> , S. Fukui <sup>1</sup> , T. Murakami <sup>2</sup> , T. Naito <sup>2</sup> , T. Sekine <sup>3</sup> , Y. Takahashi <sup>3</sup>	<sup>1</sup> Nippon Soken, Inc., Japan, <sup>2</sup> Toyota Motor Corporation, Japan, <sup>3</sup> Gifu University, Japan
15P-H4	On the Radiation from Common Mode Currents on Cables Placed over Joined Conducting Planes Commonly Used in Vehicles	J. Carlsson, U. Carlberg	SP Technical Research Institute of Sweden, Sweden
15P-H5	High Quality Factor of CNT-Based Spiral Inductors	F. Maradei <sup>1</sup> , M. D'Amore <sup>1</sup> , S. Cruciani <sup>2</sup> , M. Feliziani <sup>2</sup>	<sup>1</sup> Sapienza University, Italy, <sup>2</sup> L'Aquila University, Italy
15P-H6	RF Coupling between High-Voltage and Low-Voltage Systems on a System and Component Level	J. Hohloch, S. Tenbohlen, W. Köhler	University of Stuttgart, Germany

15P-H7	EMC Aspects in Test Benches for Automotive Equipments	M. Perialisi <sup>1</sup> , V. Mariani Primiani <sup>1</sup> , P. Russo <sup>1</sup> , A. De Leo <sup>1</sup> , G. Cerri <sup>1</sup> , M. Fioravanti <sup>2</sup>	<sup>1</sup> Università Politecnica delle Marche, Italy, <sup>2</sup> Loccioni Group, Italy
15P-H8W	Full Wave MoM Simulations of High-frequency EM Interactions in EMC Filters	A. Gheonjian <sup>1</sup> , B. Khvitia <sup>1</sup> , D. Eremyan <sup>1</sup> , Z. Kut Chadze <sup>1</sup> , R. Jobava <sup>1</sup> , X. Bunlon <sup>2</sup>	<sup>1</sup> EMCoS Ltd., <sup>2</sup> Renault, Technocentre

**May 15, 2014, 09:30 - 10:50, Room A**

**[15A1-A] EMC Measurements (1)**

15A1-A1	Measurement Method of Near Electric field from LED Bulb and Power Line	T. Kasuga <sup>1</sup> , Y. Saito <sup>1</sup> , T. Ohashi <sup>1</sup> , S. Yamada <sup>1</sup> , H. Inoue <sup>2</sup>	<sup>1</sup> Nagano National College of Technology, Japan, <sup>2</sup> The Open University, Japan
15A1-A2	The Influence of the Scattering Probe on the Measurement Results of Electromagnetic Fields by the Monostatic Modulated Scatterer Technique	R. A. Vogt-Ardatjew <sup>1</sup> , A. E. Sowa <sup>2</sup>	<sup>1</sup> University of Twente, The Netherlands, <sup>2</sup> Wroclaw University of Technology, Poland
15A1-A3	Test Setup for Radio Emission from a Load-wire Connecting LEDs	W. A. Arriola, I. S. Kim	Kyung Hee University, Korea
15A1-A4	A Fundamental Study on Estimation Method of 10 m Test-range Electric Field Strength by Near-field Measurement	M. Midori <sup>1</sup> , H. Kurihara <sup>1</sup> , T. Aoyagi <sup>2</sup>	<sup>1</sup> TDK Corporation, Japan, <sup>2</sup> Tokyo Institute of Technology, Japan

**May 15, 2014, 11:10 - 12:30, Room A**

**[15A2-A] EMC Measurements (2)**

15A2-A1	A Stable and Low-Cost Site Source for Conducted- and Radiated-Emission Consistency Confirming and Daily Checking of Test Sites	C. H. Lee <sup>1</sup> , T. Y. Yang <sup>1</sup> , H. C. Hsieh <sup>2</sup> , J. S. Chen <sup>2</sup> , C. N. Chiu <sup>3</sup>	<sup>1</sup> Electronics Testing Center, Taiwan, <sup>2</sup> Bureau of Standards, Metrology and Inspection (BSMI), Taiwan, <sup>3</sup> Da-Yeh University, Taiwan
15A2-A2	Deviations of Conducted Disturbance Voltages Measured with AMN Due to Differences in Height of the AMN and Its Grounding Conditions	Y. Akiyama <sup>1</sup> , K. Kakuda <sup>2</sup> , T. Shimasaki <sup>3</sup>	<sup>1</sup> NTT Energy and Environment Systems Laboratories, Japan, <sup>2</sup> NTT Advanced Technology Corp., Japan, <sup>3</sup> VCCI Council, Japan
15A2-A3	The Electric Field Response of the Van Veen Loop	J. S. McLean, K. Takizawa, A. Medina, R. Sutton	TDK R&D Corp., USA

**May 15, 2014, 14:00 - 15:20, Room A**

**[15P1-A] EMC Measurements (3)**

15P1-A1	The Advantages of Spatial Domain Probe Compensation Technique in EMC Near-Field Measurements	M. Schmidt, M. Albach	Friedrich-Alexander-University Erlangen-Nuremberg, Germany
15P1-A2	Automated EMC/EMI Near-Field Testbed	S. Kuehn <sup>1</sup> , N. Kuster <sup>1</sup> , M. Wild <sup>2</sup> , E. Grobbelaar <sup>2</sup> , P. Sepan <sup>2</sup> , B. Kochali <sup>2</sup> , A. Fuchs <sup>2</sup> , J. Lienemann <sup>2</sup>	<sup>1</sup> IT'IS Foundation / ETH Zurich, Switzerland, <sup>2</sup> Schmid & Partner Engineering AG, Switzerland
15P1-A3	Study on the Measurement of Microscopic RF Field Distribution with a MFM Tip Exploiting a Beat Signal Between a CPW and an Exciting Coil	Y. Endo, M. Onishi, M. Fukushima, K. Arai, K. Yanagi, Y. Shimada, M. Yamaguchi	Tohoku University, Japan
15P1-A4	Measurement of Complex Near Magnetic Fields by Using 6-port Network	M. Kawakami <sup>1</sup> , T. Nambu <sup>1</sup> , K. Murano <sup>2</sup> , Y. Kami <sup>1</sup> , F. Xiao <sup>1</sup>	<sup>1</sup> University of Electro-Communications, Japan, <sup>2</sup> Tokai University, Japan

**May 15, 2014, 15:40 - 17:20, Room A**

**[15P2-A] Biological Effects, EMF Safety & EMC in Medical Applications and Safety (3)**

15P2-A1	Design a Dual-Band High-Impedance Surface Structure for Electromagnetic Protection in WLAN Applications	M. S. Lin <sup>1</sup> , Y. H. Huang <sup>2</sup> , C.-I G. Hsu <sup>3</sup>	<sup>1</sup> National Yunlin University of Science & Technology (NYUST), Taiwan
---------	---	--	---

15P2-A2	Measurement of Electromagnetic Field in the Vicinity of Wireless Power Transfer System for Evaluation of Human-Body Exposure	T. Iwamoto <sup>1,2</sup> , T. Arima <sup>1</sup> , T. Uno <sup>1</sup> , K. Wake <sup>2</sup> , K. Fujii <sup>2</sup> , S. Watanabe <sup>2</sup>	<sup>1</sup> Tokyo University of Agriculture and Technology, Japan, <sup>2</sup> National Institute of Information and Communications Technology, Japan
15P2-A3	A Dispersion Modeling Approach for Designing Broadband Tissue-Simulating Fluids	K. Quéféver <sup>1,2</sup> , B. Derat <sup>1</sup> , O. Meyer <sup>3</sup> , T. Coradin <sup>2</sup> , C. Bonhomme <sup>2</sup>	<sup>1</sup> ART-FI SAS, France, <sup>2</sup> Sorbonne Universités, UPMC Univ Paris 06, CNRS, UMR 7574, Laboratoire de Chimie de la Matière Condensée de Paris, Collège de France, Paris, France, <sup>3</sup> Laboratoire de Génie Electrique de Paris Sorbonne Universités, UPMC Univ Paris 06, Sup élec, Univ Paris Sud 11, CNRS UMR 8507, LGEP Gif-sur-Yvette, France
15P2-A4	Dielectric Property Measurement of Skin and Dosimetry for Millimeter Wave Irradiation up to 100 GHz	K. Sasaki, T. Nagaoka, K. Wake, S. Watanabe	National Institute of Information and Communications Technology, Japan
15P2-A5	Complex Permittivity Measurement Method of High Loss Materials Using Cylindrical Cavity Resonator in Millimeter-wave Band	A. Tameishi <sup>1</sup> , T. Kamijo <sup>1</sup> , Y. Suzuki <sup>1</sup> , A. Kik <sup>1</sup> , K. Sasaki <sup>2</sup> , M. Taki <sup>1</sup>	<sup>1</sup> Tokyo Metropolitan University, Japan, <sup>2</sup> National Institute of Information and Communications Technology, Japan

**May 15, 2014, 09:30 - 10:50, Room B**

**[15A1-B] Chip, Package, PCB & Cables (4)**

15A1-B1	Guard Trace with Periodic Structure for Reducing Common-mode Radiation and Maintaining Signal Integrity	Y. Terai <sup>1</sup> , Y. Toyota <sup>1</sup> , K. Iokibe <sup>1</sup> , T. Watanabe <sup>2</sup>	<sup>1</sup> Okayama University, Japan, <sup>2</sup> Industrial Technology Center of Okayama Prefecture, Japan
15A1-B2	Analysis of Radiated Emission Performance of Various Passive Signal Integrity Improvement Techniques	Y. Ji, K. Mouthaan, N. Venkatarayalu	National University of Singapore, Singapore
15A1-B3	Estimation of Common Mode Current on Coaxial Cable with Twisted Wire Pair	T. Takahashi <sup>1</sup> , L. Niu <sup>2</sup> , T. Hubing <sup>2</sup>	<sup>1</sup> Takushoku University, Japan, <sup>2</sup> Clemson University, USA
15A1-B4	Evaluation of Practical Model of an On-board Type Common Mode Choke Coil for 3D EMC Simulation	F. Nakamoto, Y. Sasaki, Y. Watanabe, C. Miyazaki, N. Oka	Mitsubishi Electric Corporation, Japan

**May 15, 2014, 11:10 - 12:30, Room B**

**[15A2-B] Chip, Package, PCB & Cables (5)**

15A2-B1	Power and Ground Phase Relation in LSI Power Distribution Network at Common-mode Noise Reduction	T. Murakami <sup>1</sup> , Y. Mabuchi <sup>2</sup> , T. Matsushima <sup>1</sup> , T. Hisakado <sup>1</sup> , O. Wada <sup>1</sup>	<sup>1</sup> Kyoto University, Japan, <sup>2</sup> Hitachi, Ltd., Japan
15A2-B2	Parasitic Inductive Coupling of Integrated Circuits with their Environment	D. Ioan <sup>1</sup> , G. Ciuprina <sup>1</sup> , W. Schilders <sup>2</sup>	<sup>1</sup> Polytecnic University of Bucharest, Romania, <sup>2</sup> T. U. Eindhoven, The Netherlands
15A2-B3	High Spatial Resolution On-chip Active Magnetic Field Probe for IC Chip-Level Near Field Measurements	Y. Shigeta <sup>1</sup> , N. Sato <sup>1</sup> , K. Arai <sup>1</sup> , M. Yamaguchi <sup>1</sup> , S. Kageyama <sup>2</sup>	<sup>1</sup> Tohoku University, Japan, <sup>2</sup> Toppan Technical Design Center Corp., Japan
15A2-B4	Investigation on Realizing 1 Ω Current Probe Complied with IEC 61967-4 Direct Coupling Method	Y.-C. Chang <sup>1,2</sup> , P.-Y. Wang <sup>2</sup> , S. S. H. Hsu <sup>2</sup> , Y.-T. Chang <sup>3</sup> , C.-K. Chen <sup>3</sup> , H.-C. Cheng <sup>1</sup> , D.-C. Chang <sup>1</sup>	<sup>1</sup> National Applied Research Laboratories, Taiwan, <sup>2</sup> National Tsing Hua University, Taiwan, <sup>3</sup> Bureau of Standards, Metrology & Inspection, M.O.E.A., Taiwan

**May 15, 2014, 14:00 - 17:00, Room B**

**[Organized Session/Workshop: 15P-B] EMC Topics Related to Smart Grid**

15P-B1	EMI in the Frequency Range 2 - 150 kHz	G. F. Bartak <sup>1</sup> , A. Abart <sup>2</sup>	<sup>1</sup> Consultant, Austria, <sup>2</sup> Netz OÖ GmbH, Austria
15P-B2	Electromagnetic Interference Examples of Telecommunications System in the Frequency Range from 2kHz to 150kHz	K. Murakawa, H. Hirasawa, H. Ito, Y. Ogura	NTT EAST, Japan

15P-B3	CISPR limits for the Conducted Disturbances of DC ports of PV-GCPCs	Y. Yoshioka	Fuji Electric Co., Ltd., Japan
15P-B4	EMC issues around traction power supply system	H. Hayashiya	East Japan Railway Company, Japan
15P-B5	Lightning Strike Fault Risk on Wind Power Generation System	T. Shindo	Central Research Institute of Electric Power Industry, Japan
15P-B6	Geomagnetic Storm Impacts on the High-Voltage Power Grid: Current understanding and mitigation concepts	W. Radasky	Metatech Corporation, USA
15P-B7	EMC Issues on Wireless Power Transfer	S. Obayashi <sup>1</sup> , H. Tsukahara <sup>2</sup>	<sup>1</sup> Toshiba Corp., Japan, <sup>2</sup> Nissan Motor Co., Ltd., Japan
15P-B8W	EMC standards for charging system of electric vehicle	H. Ohsaki	Nissan Motor Co., Ltd.

**May 15, 2014, 09:30 - 12:30, Room S**

**[Workshop: 15A-S] Recent Trend of EMC on Smart Grid**

15A-S1W	Recent Trend of EMC on Smart Grid in the USA	W. Radasky	Metatech Corporation
15A-S2W	Recent EMC standardization activity related to Smart Grid in EU	H. Rochereau	EDF
15A-S3W	Recent Trend of EMC on Smart Grid in Japan	M. Tokuda	The University of Tokyo
15A-S4W	Recent Trend of EMC on Smart Grid in Korea	H. Ahn	KESRI: Korea Electrical Engineering & Science Research Institute
15A-S5W	Recent Trend of EMC on Smart Grid in China	J. Zheng	STIEE: Shanghai Testing & Inspection Institute for Electrical Equipment
15A-S6W	Recent Trend of EMC on Smart Grid in IEC	H. Ohsaki	The University of Tokyo

**May 15, 2014, 14:00 - 15:20, Room S**

**[Organized Session: 15P1-S] Electromagnetic Noise Radiation and EMI Effects Caused by ESD**

15P1-S1	Frequency Analysis of Transient Electromagnetic Wave Caused by Low Voltage ESD in Spherical Electrode	K. Kawamata <sup>1</sup> , S. Minegishi <sup>1</sup> , O. Fujiwara <sup>2</sup>	<sup>1</sup> Tohoku Gakuin University, Japan, <sup>2</sup> Nagoya Institute of Technology, Japan
15P1-S2	ESD Study on Discharge Current and Radiated Electromagnetic Wave with Conductive Polycarbonate Composite Resin	T. Ohtsu <sup>1</sup> , H. Doyama <sup>1</sup> , K. Sagisaka <sup>2</sup> , T. Shirayama <sup>2</sup>	<sup>1</sup> Suzuka National College of Technology, Japan, <sup>2</sup> Yukadenshi Co.,Ltd., Japan
15P1-S3	Characteristics of Small Gap Discharge Event and their EMI Effects	M. Honda <sup>1</sup> , S. Isofuku <sup>2</sup>	<sup>1</sup> Impulse Physics Laboratory, Inc., Japan, <sup>2</sup> Tokyo Electronics Trading Co., Ltd., Japan
15P1-S4	The Distinction among Electromagnetic Radiation Source Models Based on Directivity with Support Vector Machines	Z. Liu <sup>1</sup> , D. Shi <sup>1</sup> , Y. G. Gao <sup>1</sup> , Y. Q. Shen <sup>2</sup> , J. J. Bi <sup>3</sup> , Z. L. Tan <sup>3</sup>	<sup>1</sup> Beijing University, P.R. China, <sup>2</sup> Telecommun. Metrol.Center, P.R. China, <sup>3</sup> Key Lab. of Electromagn. Environ. Effect, Shijiazhuang Mech. Eng., P.R. China

**May 16, 2014, 09:30 - 10:30, Room H**

**[16A1-H] Biological Effects, EMF Safety & EMC in Medical Applications and Safety (4)**

16A1-H1	Evaluation of Magnetic Field Generated by Power Facilities in Accordance with IEC 62110	Y. Miyaji <sup>1</sup> , M. Shimada <sup>1</sup> , Y. Mizuno <sup>1</sup> , K. Naito <sup>2</sup>	<sup>1</sup> Nagoya Institute of Technology, Japan, <sup>2</sup> N. S. Co., Ltd., Japan
16A1-H2	Impact of Malaysian EMF Standard on Electrical Line Design and Performance	B. H. K. Chia	Sarawak Energy Berhad, Malaysia
16A1-H3	An Estimation Method for Vector Probes Used in Determination SAR of Multiple-Antenna Transmission Systems	D. T. Le <sup>1</sup> , L. Hamada <sup>1</sup> , S. Watanabe <sup>1</sup> , T. Onishi <sup>2</sup>	<sup>1</sup> National Institute of Information and Communications Technology (NICT), Japan, <sup>2</sup> NTT DOCOMO, INC., Japan

**May 16, 2014, 10:50 - 12:30, Room H**

**[Organized Session: 16A2/P1-H]**

**Recent Trends of Standardization Activities and Evaluation Techniques for the Electromagnetic Exposure to the Human Body**

16A2-H1	Research in ITU-T SG5 about Method for Evaluating of Human Exposure Levels when Installing a New Wireless installation	B. C. Kim, H. Choi	ETRI, Korea
16A2-H2	Low-EMF Future Networks: the LEXNET EU Project	J. Wiart <sup>1</sup> , E. Conil <sup>1</sup> , N. Varsier <sup>1</sup> , T. Sarrebourg <sup>1</sup> , A. Hadjem <sup>1</sup> , L. Martens <sup>2</sup> , G. Wermeeren <sup>2</sup> , Y. Yoann Corre <sup>3</sup>	<sup>1</sup> Orange Labs / WHIST lab, France, <sup>2</sup> Iminds / Ghent University, Belgium, <sup>3</sup> SIRADEL, France
16A2-H3	EMF Regulation Changes and Some Related Studies of Human Exposure to Electromagnetic Fields in S. Korea	D. G. Choi <sup>1</sup> , K. H. Kim <sup>1</sup> , S. Y. Chung <sup>1</sup> , Y. M. Gimm <sup>2</sup>	<sup>1</sup> National Radio Research Agency, Korea, <sup>2</sup> Dankook University, Korea
16A2-H4	Simulated Near-Field Gain and E-Field Intensity of Insulated Loop Antenna in the Liquid at 30 MHz	N. Ishii <sup>1,2</sup> , R. Takezawa <sup>1</sup> , L. Hamada <sup>2</sup> , S. Watanabe <sup>2</sup>	<sup>1</sup> Niigata University, Japan, <sup>2</sup> National Institute of Information and Communications Technology, Japan
16A2-H5	An Ultra Wideband Alternative to Dipoles for SAR System Verification	B. Derat <sup>1</sup> , A. Lages <sup>1</sup> , L. Aberbour <sup>1</sup> , T. Julien <sup>1</sup> , D. Manteuffel <sup>2</sup>	<sup>1</sup> ART-Fi, France, <sup>2</sup> CAU Kiel, Germany

**May 16, 2014, 14:00 - 14:40, Room H**

**[Organized Session: 16A2/P1-H]**

**Recent Trends of Standardization Activities and Evaluation Techniques for the Electromagnetic Exposure to the Human Body**

16P1-H1	Design of Electric Field Meter to Assess Human Exposure in Environment with Mobile Base Station	J. Higashiyama, Y. Tarusawa	NTT DOCOMO, INC., Japan
16P1-H2	Novel Fast SAR Methods for Compliance Testing of Wireless Devices	N. Kuster, M. G. Douglas	IT'IS Foundation / ETH Zurich Switzerland, Switzerland

**May 16, 2014, 14:40 - 16:20, Room H**

**[Workshop: 16P2-H] Photonics-applied Electromagnetic Measurement**

16P2-H1W	Activities of PEM research and development in Japan	S. Kurokawa	National Institute of Advanced Industrial Science and Technology (AIST)
16P2-H2W	Lecture of EO effect and its sensors	H. Murata	Osaka University
16P2-H3W	Product Trends of Optical E-field Sensor	J. Ichijoh	SEIKOH GIKEN Co.,Ltd.
16P2-H4W	Antenna Pattern Measurements Using Photonic Sensor	M. Hirose	National Institute of Advanced Industrial Science and Technologies
16P2-H5W	Photonic Technologies Applied to Evaluation of the Human Exposure to Electromagnetic Fields	T. Onishi	NTT DOCOMO INC.

**May 16, 2014, 16:40 - 18:20, Room H**

**[Organized Session: 16P3-H] Photonics-applied Electromagnetic Measurement for EMC**

16P3-H1	Development of Optical Electric Field Sensors for EMC Measurement	B. G. Loader <sup>1</sup> , M. J. Alexander <sup>1</sup> , R. Osawa <sup>2</sup>	<sup>1</sup> National Physical Laboratory, United Kingdom, <sup>2</sup> Seikoh-Giken, Japan
16P3-H2	Metal-free Electric-field Probe based on Photonics and its EMC Applications	H. Togo	NTT Microsystem Integration Laboratories, Japan
16P3-H3	Active Electro-Optical Probe System for B1-Field Polarization Mapping in Magnetic Resonance Imaging Systems	S. N. Kuehn <sup>1</sup> , B. Kochali <sup>2</sup> , N. Kuster <sup>1</sup>	<sup>1</sup> IT'IS Foundation, Switzerland, <sup>2</sup> ETH Zurich, Switzerland, <sup>3</sup> Schmid & Partner Engineering AG,

16P3-H4	Antenna Measurement by Simple Optical Link System Using Radio on Fiber Technologies	S. Kurokawa <sup>1</sup> , M. Hirose <sup>1</sup> , M. Ameya <sup>1</sup> , Y. Toba <sup>2</sup>	<sup>1</sup> National Institute of Advanced Industrial Science and Technology, Japan, <sup>2</sup> SEIKOH GIKEN Co.,Ltd., Japan
16P3-H5	Shielding Effectiveness Evaluation of Enclosure with Apertures Using Electro-Optic Sensor	N.-W. Kang <sup>1</sup> , D.-J. Lee <sup>1</sup> , W. Kang <sup>2</sup> , Y.-S. Chung <sup>2</sup>	<sup>1</sup> Korea Research Institute of Standards and Science, Korea, <sup>2</sup> Kwangwoon University, Korea

**May 16, 2014, 09:30 - 10:50, Room A**

**[16A1-A] EMC Measurements (4)**

16A1-A1	Apertures Coupling for Electrical Field Calculation in Ariane 5 Launcher Cavities Experimental Characterization of Apertures' Effective Coupling Cross Section in Oversized Complex Cavities	A. Bertrand, M. Ramos	Airbus Defence and Space, France
16A1-A2	Analysis of Large E Field Generators in Semi-Anechoic Chambers Used for Full Vehicle Immunity Testing: Numerical and Measured Results	V. Rodriguez	ETS-Lindgren Inc., USA
16A1-A3	Influence of Reverberation Chamber Loading on Extreme Field Strength	R. A. Vogt-Ardatjew <sup>1</sup> , S. G. van de Beek <sup>1</sup> , F. B. J. Leferink <sup>1,2</sup>	<sup>1</sup> University of Twente, The Netherlands, <sup>2</sup> Thales Nederland B.V., The Netherlands

**May 16, 2014, 11:10 - 12:30, Room A**

**[16A2-A] Communication System EMC (1)**

16A2-A1	Representation and Analysis of Radio Receivers' Susceptibility and Nonlinearity by the Use of 3D Double-Frequency Characteristics	E. Sinkevich, V. Mordachev, D. Petrachkov	Belarusian State University of Informatics and Radioelectronics, Belarus
16A2-A2	Measurement of Radio Receivers' Front-End Nonlinearity by the Frequency Slipping Technique	E. Sinkevich, V. Mordachev	Belarusian State University of Informatics and Radioelectronics, Belarus
16A2-A3	A Novel LTE MIMO Antenna with Decoupling Element for Mobile Phone Application	J. Chou <sup>1</sup> , D. Lin <sup>2</sup> , C. Wu <sup>2</sup> , H. Li <sup>1</sup>	<sup>1</sup> National Taiwan University, Taiwan, <sup>2</sup> National Taipei University of Technology, Taiwan

**May 16, 2014, 14:00 - 15:20, Room A**

**[16P1-A] Communication System EMC (2)**

16P1-A1	Characteristics of Propagation Conditions in the Container Terminal Environment	S. J. Ambroziak, R. J. Katulski	Gdansk University of Technology, Poland
16P1-A2	Technical Requirements for Portable TVWS Devices	I. Gepko	Ukrainian State Centre of Radio Frequencies, Ukraine
16P1-A3	Concept of Compatibility Region for the Evaluation of IR UWB Electromagnetic Compatibility	R. J. Katulski, J. Sadowski	Gdansk University of Technology, Poland
16P1-A4	An Evaluation of Noise Power Using the Weighted Magnetic Field Product for Intra-EMC Problems	T. Maekawa <sup>1</sup> , K. Ogawa <sup>2</sup>	<sup>1</sup> Panasonic, Japan, <sup>2</sup> Toyama University, Japan

**May 16, 2014, 15:40 - 18:20, Room A**

**[Tutorial: 16P2-A] Recent Topics of EMC Standardization - Role of ACEC**

16P2-A1T	What is ACEC?	W. Radasky	Metatech Corporation
16P2-A2T	IEC International Special Committee on Radio Interference (CISPR) Report	D. Heirman	Don HEIRMAN Consultants
16P2-A3T	Recent Trend of TC 77 and its Subcommittees	H. Ohsaki	The University of Tokyo
16P2-A4T	Emission standardization in 2-150 kHz frequency Band	H. Rochereau	EDF
16P2-A5T	E-mobility	J. Delaballe	Consultant for Schneider Electric
16P2-A6T	Medical Electronics	R. Sitzmann	Siemens AG



16P2-A7T	Human Exposure to RF	D. Heirman	Don HEIRMAN Consultants
----------	----------------------	------------	-------------------------

**May 16, 2014, 09:30 - 10:50, Room B**

**[16A1-B] Immunity / Susceptibility, ESD and Transients (1)**

16A1-B1	Improved Surge Protection of Flip-Chip Gallium Nitride-based HEMTs by Metal-Semiconductor-Metal Two-Dimensional Electron Gas Varactor	L. B. Chang <sup>1</sup> , C. Shih <sup>1</sup> , T. Huang <sup>1</sup> , C. Tien <sup>2</sup> , P. Kuei <sup>2</sup>	<sup>1</sup> Chang Gung University, Taiwan, <sup>2</sup> National Defense University, Taiwan
16A1-B2	Improvement of ESD Robustness in Gallium Nitride-based Flip-Chip HEMT by Introducing Metal-Insulator-Metal Capacitor	P. Kuei <sup>1</sup> , N. Cheng <sup>2</sup> , Y. Ferng <sup>3</sup> , A. Das <sup>3</sup> , S. Lin <sup>3</sup> , C. Lin <sup>3</sup> , L. Chang <sup>4</sup> , Y. Chen <sup>2</sup>	<sup>1</sup> National Defense University, Taiwan, <sup>2</sup> National Central University, Taiwan, <sup>3</sup> Chang Gung University, Taiwan
16A1-B3	A Case Study on ESD Immunity Test for a Small-Type Control Board	C. Ji <sup>1</sup> , D. Anzai <sup>1</sup> , J. Wang <sup>1</sup> , I. Mori <sup>2</sup> , O. Fujiwara <sup>1</sup>	<sup>1</sup> Nagoya Institute of Technology, Japan, <sup>2</sup> Suzuka National Collage of Technology, Japan
16A1-B4	Assessing the Effect of Discharge Gap Shape on High-Speed Electrostatic Discharge Events	M. Masugi <sup>1</sup> , Y. Okugawa <sup>2</sup> , Y. Akiyama <sup>2</sup> , N. Hirasawa <sup>3</sup> , K. Murakawa <sup>3</sup>	<sup>1</sup> Ritsumeikan University, Japan, <sup>2</sup> NTT corp., Japan, <sup>3</sup> NTT east corp., Japan

**May 16, 2014, 11:10 - 12:30, Room B**

**[16A2-B] Immunity / Susceptibility, ESD and Transients (2)**

16A2-B1	Measurement of Spark Length for Air Discharges of Electrostatic Discharge Generators	Y. Taka <sup>1</sup> , O. Fujiwara <sup>2</sup>	<sup>1</sup> Kushiro National College of Technology, Japan, <sup>2</sup> Nagoya Institute of Technology, Japan
16A2-B2	A Measurement on Electromagnetic Noises from ESD Generator just Before and After ESD Testing	T. Ishida <sup>1</sup> , Y. Tozawa <sup>1</sup> , M. Takahashi <sup>1</sup> , O. Fujiwara <sup>2</sup> , S. Nitta <sup>2</sup>	<sup>1</sup> Noise Laboratory Co.,LTD., Japan, <sup>2</sup> University of Electro-Communications, Japan
16A2-B3	Statistical Measurement of Burst Discharge Currents through Fingertip from Charged Human	Y. Kagawa <sup>1</sup> , I. Mori <sup>2</sup> , Y. Taka <sup>3</sup> , O. Fujiwara <sup>1</sup>	<sup>1</sup> Nagoya Institute of Technology, Japan, <sup>2</sup> Suzuka National College of Technology, Japan, <sup>3</sup> Kushiro National College of Technology, Japan
16A2-B4	EMI Evaluation Based on Electromagnetic and Circuit Analysis for Human Body Communication Systems	D. Anzai, J. Wang	Nagoya Institute of Technology, Japan

**May 16, 2014, 14:00 - 16:00, Room B**

**[16P1-B] Shielding, Grounding & Materials (1)**

16P1-B1	A Study on Measurement Method of Shielding Effectiveness using Loop Antenna in Low-frequency	M. Ishii, Y. Yamazaki	National Institute of Advanced Industrial Science and Technology, Japan
16P1-B2		Y. Watanabe, T. Uchida, Y. Sasaki, N. Oka, H. Ohashi	Mitsubishi Electric Corporation, Japan
16P1-B3	Electromagnetic Field Distribution in Areas surrounded by Many Wires	H. Echigo, K. Aizawa	Tohoku Gakuin University, Japan
16P1-B4	Reflection and Transmission of Laminated Structures Consisting a Wire Grid and a Dipole Array Sheet and Dielectric Layer	S. Yamamoto <sup>1</sup> , K. Suezaki <sup>1</sup> , K. Hatakeyama <sup>1</sup> , T. Tsutaoka <sup>2</sup>	<sup>1</sup> University of Hyogo, Japan, <sup>2</sup> Hiroshima University, Japan
16P1-B5	Optimized Shielding Pattern of RF Faraday Cage	N. Ohmura <sup>1</sup> , Y. Okano <sup>2</sup> , S. Ogino <sup>1</sup>	<sup>1</sup> Microwaveabsorbers Inc., Japan, <sup>2</sup> Tokyo City University, Japan
16P1-B6	EM-Wave Absorber Composed of Periodic Patch Antennas Designed for Both H- and V-polarized Waves at 2.4GHz Band	H. Okawa, A. Nishikata	Tokyo Institute of Technology, Japan

**May 16, 2014, 16:20 - 18:20, Room B**

**[16P2-B] Shielding, Grounding & Materials (2)**

16P2-B1	Effect of Height and Width of Pyramid on Temperature Distribution Characteristics of Pyramidal Radiowave Absorbers	S. Imai <sup>1</sup> , K. Taguchi <sup>1</sup> , T. Kashiwa <sup>1</sup> , T. Tabata <sup>2</sup> , K. Kubo <sup>2</sup> , E. Satou <sup>2</sup>	<sup>1</sup> Kitami Institute of Technology, Japan, <sup>2</sup> E&C Engineering Co., Ltd., Japan
---------	--	--	---

16P2-B2	Printed Circuit Board Permittivity Measurement Using Waveguide and Resonator Rings	S. T. Op 't Land <sup>1</sup> , O. V. Tereshchenko <sup>2</sup> , M. Ramdani <sup>1</sup> , F. B. J. Leferink <sup>2</sup> , R. Perdriau <sup>1</sup>	<sup>1</sup> Groupe ESEO, France, <sup>2</sup> University of Twente, The Netherlands
16P2-B3	Analysis of the Permeability Spectra of Fe-Al-Si Granular Composite Materials	T. Tsutaoka <sup>1</sup> , H. Kinoshita <sup>1</sup> , T. Kasagi <sup>2</sup> , S. Yamamoto <sup>3</sup> , K. Hatakeyama <sup>3</sup> , M. Y. Koledintseva <sup>4</sup>	<sup>1</sup> Hiroshima University, Japan, <sup>2</sup> Tokuyama College of Technology, Japan, <sup>3</sup> University of Hyogo, Japan, <sup>4</sup> Missouri University of Science & Technology, USA
16P2-B4	Effect of Demagnetizing Field on Frequency Dispersion of Complex Permeability	S. Muroga, M. Yamaguchi	Tohoku University, Japan
16P2-B5	Multilayer Ground Determination from Apparent Resistivities and Impact on Grounding Resistances	G. P. Papaiz-Garbini <sup>1,2</sup> , L. Pichon <sup>2</sup> , M. Cucchiari <sup>1</sup> , N. Haddad <sup>1</sup>	<sup>1</sup> SNCF Engineering, Electromagnetic Compatibility Service, France, <sup>2</sup> LGEP, France

**May 16, 2014, 09:30 - 11:50, Room S**

**[Organized Session: 16A1-S] Computational Techniques, Modeling, and Simulation for Electromagnetics**

16A1-S1	Numerical Calculation of Electromagnetic Scattering from Multiple Objects by Superposition Solution Combined with MoM — Multilevel Algorithm —	M. Tanaka	Gifu University, Japan
16A1-S2	Scattering Analysis of the Microstrip Array Antenna by Using the PMCHWT-CBFM	T. Tanaka, Y. Nishioka, Y. Inasawa, H. Miyashita	Mitsubishi Electric Corp., Japan
16A1-S3	A Subgridding Technique for the CIP Method	Y. Ando <sup>1</sup> , T. Hirota <sup>2</sup>	<sup>1</sup> The University of Electro-Communications, Japan, <sup>2</sup> Simulatio Co. Ltd., Japan
16A1-S4	Estimation of Induced EMF Value in Ground Wire During Ice-Melting Procedure	K. Neteuba <sup>1</sup> , N. Korovkin <sup>1</sup> , S. Vinogradov <sup>1</sup> , V. Goncharov <sup>1</sup> , M. Hayakawa <sup>2,3</sup> , A. Repin <sup>4</sup> , A. Shershnev <sup>4</sup> , N. Silin <sup>5</sup>	<sup>1</sup> St. Petersburg State Polytechnic University, Russia, <sup>2</sup> The University of Electro-Communications, Japan, <sup>3</sup> Advanced Wireless Communications Research Center, Japan, <sup>4</sup> Research Station on Seismo Electromagnetics, Russia, <sup>5</sup> Joint-Stock Company High Voltage Direct Current Power Transmission Research Institute, Russia, <sup>6</sup> Far Eastern Federal University,
16A1-S5	Pulse Responses in the Dispersion Media	R. Ozaki, T. Yanaka, N. Sugizaki, T. Yamasaki	Nihon University, Japan
16A1-S6	Efficient Reflection/transmission Coefficient by Two-layered Dielectric Slab for Accurate Propagation Analysis	R. Sato <sup>1</sup> , H. Shirai <sup>2</sup>	<sup>1</sup> Niigata University, Japan, <sup>2</sup> Chuo University, Japan

**May 16, 2014, 11:50 - 12:30, Room S**

**[16A2-S] Numerical Modeling (4)**

16A2-S1	Comparison of Steady-State Genetic Algorithm and Asynchronous Particle Swarm Optimization on Inverse Scattering of a Partially Immersed Metallic Cylinder	C. H. Sun <sup>1</sup> , C. H. Chen <sup>2</sup> , C. H. Huang <sup>2</sup> , C. L. Li <sup>2</sup> , E. N. Chiu <sup>2</sup> , S. L. Lee <sup>3</sup>	<sup>1</sup> National Taiwan University of Science and Technology, Taiwan, <sup>2</sup> Taipei College of Maritime Technology, Taiwan, <sup>3</sup> Tamkang University, Taiwan
16A2-S2	Inverse Scattering Problem of a Two-Dimensional Dielectric Cylinder in Slab Medium	C. H. Chen <sup>1</sup> , C. H. Huang <sup>2</sup> , C. H. Sun <sup>1</sup> , C. L. Li <sup>3</sup> , P. R. Lai <sup>3</sup> , G. C. Wang <sup>1</sup>	<sup>1</sup> Taipei College of Maritime Technology, Taiwan, <sup>2</sup> National Taiwan University of Science and Technology, Taiwan, <sup>3</sup> Tamkang

**May 16, 2014, 14:00 - 16:00, Room S**

**[Organized Session: 16P1-S] GPU Computing-based Acceleration of Electromagnetic Simulation**

16P1-S1	Acceleration of Various Direct/Iterative Solvers for MoM by GPU and Its Computational Cost	K. Konno <sup>1</sup> , Q. Chen <sup>1</sup> , H. Katsuda <sup>2</sup>	<sup>1</sup> Tohoku University, Japan, <sup>2</sup> NTT Network Innovation Laboratories, Japan
16P1-S2	High Performance Computing Techniques for Efficient 3D Full-Wave Simulation of EMC Problems	I. Hänninen, F. Wolfheimer, A. Barchanski, D. Kostka	CST AG, Germany

16P1-S3	GPU Acceleration on Computational Dosimetry for Rabbit Eyes Exposed to Millimeter Waves	Y. Suzuki <sup>1</sup> , A. Koike <sup>1</sup> , M. Takamura <sup>1</sup> , M. Taki <sup>1</sup> , M. Kojima <sup>2</sup> , K. Sasaki <sup>3</sup> , J. Chakarothai <sup>3</sup> , K. Wake <sup>3</sup> , S. Watanabe <sup>3</sup>	<sup>1</sup> Tokyo Metropolitan University, Japan, <sup>2</sup> Kanazawa Medical University, Japan, <sup>3</sup> National Institute of Information and Communications Technology, Japan
16P1-S4	GPU Calculation Algorithm for Radiation from MMIC Passive Components	N. Morita	M Wave Solver Lab., Japan

**May 16, 2014, 16:20 - 18:20, Room S**

**[Organized Session: 16P2-S] Aerospace EMC**

16P2-S1	Electromagnetic Interference Control Techniques for Spacecraft Harness	A. Junge <sup>1</sup> , J. Wolf <sup>1</sup> , N. Mora <sup>2</sup> , F. Rachidi <sup>2</sup> , P. Pelissou <sup>3</sup>	<sup>1</sup> ESA - ESTEC, The Netherlands, <sup>2</sup> EPFL, Switzerland, <sup>3</sup> Astrium SAS, France
16P2-S2	EMC ISSUES ON BEPICOLOMBO SPACECRAFT	K. Kempkens	Astrium GmbH, Germany
16P2-S3	Comparison of Rotational-Run vs Hybrid-Measurement by Modelling of a Large Test Object/Satellite	H. Kuegler	IABG, Germany
16P2-S4	Sensitivity to Setup Configuration of the Response of Differential Lines Driven by an External Field	F. Grassi <sup>1</sup> , S. A. Pignari <sup>1</sup> , G. Spadacini <sup>1</sup> , F. Marliani <sup>2</sup>	<sup>1</sup> Politecnico di Milano, Italy, <sup>2</sup> European Space Agency (ESA), The Netherlands
16P2-S5	VHF Switching DC/DC Converter Electromagnetic Emissions Assessment	C. Delepaut <sup>1</sup> , J. Wolf <sup>1</sup> , F. Leroy <sup>2</sup> , O. Deblecker <sup>2</sup> , F. Dualibe <sup>2</sup> , N. Le Gallou <sup>1</sup>	<sup>1</sup> European Space Agency, The Netherlands, <sup>2</sup> University of Mons, Belgium