

THURSDAY INCLUDES:*

Technical Paper Sessions

- Measurements 2 & Reverberation 3
- Capturing the Electromagnetic Environment 1
- Signal Integrity II
- Transmission Line Noise Concerns

Special Sessions

- Modeling/Simulation Validation

Poster Paper Session 2

- Display and meet the author

Global EMC University (Page 54)

Exhibit Hall & Demonstrations

Meetings

- Technical Advisory Committee (Page 52)

Other Events

- Jr. Technical Program (Page 15)
- Awards Luncheon (Page 58)
- PSES Colloquium (Page 55)
- Exhibitor Hospitality Night (Page 58)

Tours

- Japanese Gardens and Museums (Page 61)
- Riverfront Cruise (Page 65)
- Jungle Queen Dinner Cruise (Page 65)

* All events are subject to change. Check www.emc2010.org and the Registration Area daily for updates.

Measurements 2 & Reverberation 3

TH-AM-1 | Room 223/222

Chairs: Dr. Galen Koepke, NIST & Bob Hofmann, Hofmann EMC Engineering

8:30–9 a.m.

Conductive Fabric SE Measurement in a Mode Stirred Reverberation Chamber
M. R. Poci, Pisa, Italy; I. Dotto, CISAM, S. Piero a Grado, Italy; D. G. Festa, IBD, Chiari, Italy

9–9:30 a.m.

An Improved Model for Antennas in Reverberation Chambers
J. M. Ladbury, D. A. Hill, National Institute of Standards and Technology, Boulder, U.S.A.

9:30-10 a.m.

On the Use of a Reverberation Chamber to Test the Performance and the Immunity of a WLAN System
V. Mariani Primiani, Universita` Politecnica delle Marche, Ancona, Italy; F. Moglie, Universita` Politecnica delle Marche, Ancona, Italy; R. Recanatini, Universita` Politecnica delle Marche, Ancona, Italy

Break

10:30–11 a.m.

Modern Vessels and their Problems in EMC – Examples in Practice
C. Kluender, Hamburg University of Technology, Hamburg, Germany; T. Pilsak, Hamburg University of Technology, Hamburg, Germany; J. L. ter Haseborg, Hamburg University of Technology, Hamburg, Germany; H. Hanneken, Meyer Werft GmbH, Papenburg, Germany

11-11:30 a.m.

Forward and Reverse Link Constraints in UHF RFID with Passive Tags
D. G. Kuester, NIST, Boulder, U.S.A.; D. R. Novotny, NIST, Boulder, U.S.A.; J. R. Guerrieri, NIST, Boulder, U.S.A.;

11:30-noon

Primary and Induced Currents from Cable Discharges
T. J. Maloney, Intel Corp

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Capturing the Electromagnetic Environment 1

TH-AM-2 | Room 221/220


Chairs: Dr. Randy Jost, Univeristy of Utah & David Hilton

8:30-9 a.m.

Multi-band Microstrip Antenna with Minimalization of Radiation towards Head
M. Wnuk, Military University of Technology, Warsaw, Poland

9–9:30 a.m.

Assessment of Emissions from Electrical Equipment Regarding Human Exposure Approaches for Application of the Generic Standard IEC 62311



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MORNING SESSIONS  8:30 AM-NOON

Capturing the Electromagnetic Environment 1

Continued from page 38

B. W. Jaekel, Siemens AG, Erlangen, Germany; A. N. Mladenovic, University of Nis, Nis, Yugoslavia; M. Peric, University of Nis, Nis, Yugoslavia; D. Vuckovic, University of Nis, Nis, Yugoslavia; N. Cvetkovic, University of Nis, Nis, Yugoslavia; S. Aleksic, University of Nis, Nis, Yugoslavia

9:30–10 a.m.

Low Frequency Electromagnetic Field Exposure Study with Posable Human Body Model

X. Chen, ITIS Foundation, Zurich, Switzerland; S. Benkler, SPEAG Schmid & Partner Engineering AG, Zurich, Switzerland; C. Li, ITIS Foundation, Zurich, Switzerland; N. Chavannes, SPEAG Schmid & Partner Engineering AG, Zurich, Switzerland; N. Kuster, ITIS Foundation, Zurich, Switzerland

Break

10:30–11 a.m.

Specific Absorption Rate Evaluation for People using Wireless Communication Device in Vehicle

K. Chan, S. Leung, Y. Siu, City University of Hong Kong, Hong Kong, Hong Kong

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SPECIAL SESSION:
Modeling/Simulation Validation
TH-AM-3 | Room 209/210

Chairs: Dr. Andy Drozd, Andro Consulting & Dr. Bruce Archambeault, IBM

Abstract

This special session will explore the new modeling and simulation validation standard and explore the new Feature Selective Validation (FSV) technique for use in quantifying the quality of the agreement between the initial model result and the validation (whether measurements or other simulation).

8:30–9 a.m.

Antenna Co-Site Performance Analysis for Complex Systems Using Feature Selective Validation

I. Kasperovich, A. L. Drozd, A. A. Croneiser, C. E. Carroll, ANDRO Computational Solutions, LLC, Rome, U.S.A.

9–9:30 a.m.

Quantifying the Quality of Agreement between Data for Multiple Data Sets

B. Archambeault, IBM, Raleigh, U.S.A.; J. Diepenbrock, IBM, Raleigh, U.S.A.

9:30–10 a.m.

Applying Feature Selective Validation (FSV) as an Objective Function for Data Optimization

S. Pan, H. Wang, J. Fan, Missouri University of Science and Technology, Rolla, U.S.A.

Break

10:30–11 a.m.

Challenges in Developing a Multidimensional Feature Selective Validation Implementation

B. Archambeault, IBM, Raleigh, U.S.A.; A. Duffy, De Montfort University, Leicester, United Kingdom; H. Sasse, De Montfort University, Leicester, United Kingdom; X. Li, De Montfort University, Leicester, United Kingdom; M. Scase, De Montfort University, Leicester, United Kingdom; M. Shafiullah, De Montfort University, Leicester, United Kingdom; A. Orlandi, University of L'Aquila, L'Aquila, Italy; D. De Febo, University of L'Aquila, L'Aquila, Italy

11-11:30 a.m.

Comparison of Measured and Computed Near and Far Fields of a Heatsink using the Feature Selective Validation (FSV) Method

A. U. Bhoje, P. Sochoux, Cisco Systems, San Jose, U.S.A.

11:30-noon

Validating the FSV Method Using Reverberation Chamber Measurements

G. J. Hankins, D. Lewis, The Boeing Company, Seattle, U.S.A.

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Transmission Line Noise Concerns

TH-AM-4 | Room 207/208

Chairs: Michael McInerney, U.S. Army Engineer Research and Development Center & Fin O'Connor, Alion Science

8:30–9 a.m.

Modeling Connector Contact Condition Using a Contact Failure Model with Equivalent Inductance

Y. Hayashi, Tohoku University, Sendai, Japan; S. Wu, Missouri University of Science and Technology, Rolla, U.S.A.; J. Fan, Missouri University of Science and Technology, Rolla, U.S.A.; T. Mizuki, Tohoku University, Sendai, Japan; H. Sone, Tohoku University, Sendai, Japan

9–9:30 a.m.

Predicting CM Radiation from Strip Line Structure by Equivalent Circuit Model

Y. Kayano, H. Inoue, Akita University, Akita, Japan

9:30–10 a.m.

Lumped-Element Circuit Model of Ferrite Chokes

A. Orlando, Missouri University of Science and Technology,



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MORNING SESSIONS  8:30 AM-NOON

Transmission Line Noise Concerns

Continued from page 40

Rolla, U.S.A.; M. Y. Koledintseva, Missouri University of Science and Technology, Rolla, U.S.A.; D. G. Beetner, Missouri University of Science and Technology, Rolla, U.S.A.; P. Shao, Missouri University of Science and Technology, Rolla, U.S.A.; P. H. Berger, John Deere, Waterloo, U.S.A.

Break

10:30-11 a.m.

Far-End Crosstalk Reduction in Adjacent PCB Traces Employing High/Low-Z Configurations

M. J. Almalkawi, University of Toledo, Toledo, U.S.A.; Z. A. Khan, University of Toledo, Toledo, U.S.A.; V. Devabhaktuni, University of Toledo, Toledo, U.S.A.; C. Bunting, Oklahoma State University, Stillwater, U.S.A.

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Signal Integrity II

TH-AM-5 | Room 203/204

Chairs: Dr. Tzong-Lin Wu - National Taiwan University & Dr. Jounggho Kim - KAIST Korea

8:30-9 a.m.

Experimental Validation of Common-Mode Filtering Performances of Planar Electromagnetic Band-gap Structures

F. de Paulis, UAQ EMC Laboratory, L'Aquila, Italy; L. Raimondo, UAQ EMC Laboratory, L'Aquila, Italy; D. Di Febo, UAQ EMC Laboratory, L'Aquila, Italy; B. Archambeault, IBM, Raleigh, U.S.A.; S. Connor, IBM, Raleigh, U.S.A.; A. Orlandi, UAQ EMC Laboratory, L'Aquila, Italy

9-9:30 a.m.

Equivalent Circuit Models for Evaluation of Bandgap Limits for Planar Electromagnetic Bandgap Structures

F. de Paulis, UAQ EMC Laboratory, L'Aquila, Italy; L. Raimondo, UAQ EMC Laboratory, L'Aquila, Italy; A. Orlandi, UAQ EMC Laboratory, L'Aquila, Italy; L. Ren, Missouri University of Science & Technology, Rolla, U.S.A.; J. Fan, Missouri University of Science & Technology, Rolla, U.S.A.

9:30-10 a.m.

An Ultra Compact Common-Mode Filter for RF Interference Control in 3G Wireless Communication Systems

I. Ao Jeong, C. Tsai, T. Wu, National Taiwan University, Taipei, Taiwan

Break

10:30-11 a.m.

Radiating Emissions from the Planar Electromagnetic Band-gap (EBG) Structures

B. Mohajer-Iravani, EMWaveDev, Fayetteville, U.S.A.; O. M. Ramahi, University of Waterloo, Waterloo, Canada

11-11:30 a.m.

Systematic Analysis of the Signal Integrity Performances of Surface Integrated Waveguides

A. Ciccomancini Scogna, CST, Framingham, U.S.A.; A. Orlandi, University of L'Aquila, L'Aquila, Italy

11:30-noon

Surface Impedance Approach to Calculate Loss in Rough Conductor Coated with Dielectric Layer

M. Y. Koledintseva, Missouri University of Science and Technology (MS&T), Rolla, U.S.A.; A. Koul, Missouri University of Science and Technology (MS&T), Rolla, U.S.A.; F. Zhou, Missouri University of Science and Technology (MS&T), Rolla, U.S.A.; J. L. Drewniak, Missouri University of Science and Technology (MS&T), Rolla, U.S.A.; S. Hinaga, CISCO Systems, Inc., San Jose, U.S.A.

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AFTERNOON SESSIONS  3:30 PM-5 PM

Special Topics

TH-PM-1 | Room 223/222

Chair: Larry Cohen, Naval Research Labs

3–3:30 p.m.

Investigations of the EM-Coupling in the Near and Far Field of a transmitting antenna according to EUROCAE ED-130
T. Dyballa, J. ter Haseborg, Hamburg University of Technology, Hamburg, Germany

3:30–4 p.m.

Including EMC in Risk Assessments
K. Armstrong, Cherry Clough Consultants, Stafford, United Kingdom

4–4:30 p.m.

Analysis on Coexistence of UWB with IEEE802.11n
Z. Li, F. Zhao, Z. Zhou, W. Zou, B. Li, C. Zhao, Beijing University of Posts and Telecommunications, Beijing, China

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Systems Simulation

TH-PM-2 | Room 221/220

Chairs: Sam Connor, IBM & Dr. Jun Fan, Missouri University of Science & Technology

3–3:30 p.m.

Analysis of the Shielding Performance of 2-D Periodic Screens Against Near Sources
R. Araneo, G. Lovat, S. Celozzi, University of Rome, Roma, Italy

3:30–4 p.m.

Vent Hole Size Analysis for High-Frequency Systems Chassis Design
E. N. Chikando, E. J. Bodette, S. R. Connor, B. Archambeault, IBM Corporation, Raleigh, U.S.A.

4–4:30 p.m.

Modeling the Near-Field Coupling of the EMC Filters Components
S. Zangui, Umr cnrs 5005, Ecully, France; K. Berger, Umr cnrs 5005, Ecully, France; C. Vollaïre, Umr cnrs 5005, Ecully, France; E. Clavel, Umr cnrs 5269, St Martin d'H res, France; R. Perrussel, Umr cnrs 5005, Ecully, France; B. Vincent, Umr cnrs 5005, Ecully, France

4:30-5 p.m.

Efficient Mid-Frequency Plane Inductance Computation
F. Zhou, A. Ruehli, J. Fan, Missouri University of Science and Technology, Rolla, U.S.A.

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 **SPECIAL SESSION:**
Nanomaterials and Nanodevices for EMC Applications

TH-PM-3 | Room 209/210

Chairs: Prof. Sabrina Sarto, University of Rome, & Dr. Alessio Tamburrano, University of Rome

3–3:30 p.m.

The Partition Algorithm for Interconnect Analysis in Carbon Nanotube Based ASICs
X. Zhang, R. Luo, Tsinghua University, Beijing, China

3:30–4 p.m.

Experimental Characterization of Electrical Properties of Carbon Nanotube Networks Using Planar Transmission Lines
M. EL Sabbagh, Syracuse University, Syracuse, U.S.A.

4–4:30 p.m.

Skin-Effect Modeling of Carbon Nanotube Bundles: The High-Frequency Effective Impedance
M. D'Amore, M. Sarto, A. D'Aloia, Sapienza University of Rome, Rome, Italy

4:30-5 p.m.

Full-wave Evaluation of Carbon Nanotubes as Microwave Interconnects
K. Kim, University of Colorado, Boulder, U.S.A.; P. S. Rice, University of Colorado, Boulder, U.S.A.; P. Kabos, National Institute of Standards and Technology, Boulder, U.S.A.; D. S. Filipovic, University of Colorado, Boulder, U.S.A.

5-5:30 p.m.

Electromagnetic Absorbing Nanocomposites Including Carbon Fibers, Nanotubes and Graphene Nanoplatelets
M. Sarto, Sapienza University of Rome, Rome, Italy; G. De Bellis, Sapienza University of Rome, Rome, Italy; A. Dinescu, National Institute for Research and Development in Microtechnologies, Bucharest, Romania; A. Tamburrano, Sapienza University of Rome, Rome, Italy; I. M. De Rosa, Sapienza University of Rome, Rome, Italy

5:30-6 p.m.

Predicting of Wideband Electromagnetic Responses of Composites Containing Magnetic Inclusions
K. N. Rozanov, Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences, Moscow, Russian Federation; M. Y. Koledintseva, Missouri University of Science and Technology, Rolla, U.S.A.; J. L. Drewniak, Missouri University of Science and Technology, Rolla, U.S.A.

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AFTERNOON SESSIONS  3:30 PM-5 PM

Capturing the Electromagnetic Environment 2

TH-PM-4 | Room 207/208

Chairs: Dr. Randy Jost, University of Utah & David Hilton

3-3:30 p.m.

An Automated Measurement System for Cosite Interference Analysis

M. A. Young, M. C. Miller, F. German, Delcross Technologies, Champaign, U.S.A.

3:30-4 p.m.

Simulation and Data Management for Cosite Interference Prediction

F. German, K. Annamalai, M. Young, M. C. Miller, Delcross Technologies, Champaign, U.S.A.

4-4:30 p.m.

Off-Hull Radio Frequency Emissions from Below-Deck Spaces in Ships

G. B. Tait, Naval Surface Warfare Center Dahlgren, Dahlgren, U.S.A.; M. B. Slocum, Naval Surface Warfare Center

Dahlgren, Dahlgren, U.S.A.; D. R. Hilton, Space and Naval Warfare Systems Center, San Diego, U.S.A.; C. A. Dilay, Space and Naval Warfare Systems Center, San Diego, U.S.A.; D. F. Southworth, Space and Naval Warfare Systems Center, San Diego, U.S.A.

4:30-5 p.m.

Simulation and Measurement of Electromagnetic Radiation Absorption in a Finished-Product Warehouse

J. Ferrer Coll, KTH Royal Institute of Technology, Kista, Sweden; P. Angskog, University of Gavle, Gavle, Sweden; C. Karlsson, University of Gavle, Gavle, Sweden; J. Chilo, University of Gavle, Gavle, Sweden; P. Stenumgaard, Swedish Defence Research Agency, Linkoping, Sweden

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BREAK TIME

Have a few minutes to spare between sessions? Visit the Exhibit Hall where you will find break areas, EMC hardware experiments and computer modeling and simulation demos, exhibitor product application demonstrations, and the new poster paper program.

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