

SEMINAR



“Effective and Efficient Methods for EMC Pre-Compliance Evaluation of Automotive Components and Systems”



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Politecnico di Torino, C.so Duca degli Abruzzi - Torino

ABSTRACT

The benefit of final vehicle-level EMC testing is that it is the opportunity to demonstrate that the components and systems implemented into the vehicle meet EMC requirements (either for regulatory compliance or for customer satisfaction). Unfortunately, if an EMC issue is discovered at this point, it is also the worst time for an EMC issue to occur. Data has shown that over 80 % of all EMC issues uncovered at final testing stages could have been identified much earlier by the use of basic pre-compliance tests at a supplier’s facility (that many times can be done right at the “design bench”) or with cooperative involvement of local universities. This presentation will discuss the basic issues in vehicle level automotive EMC, how these issues can be identified at a component level by using simple methods, equipment, and techniques, to provide valuable insight and maximizing the number of possible solutions at the earliest possible stages.

Professor Mark Steffka received the B.S. degree in electrical engineering from the University of Michigan in 1981, and a M.S. from Indiana Wesleyan University in 1987. His industry experience consists of over 30 years with the design and development of military, aerospace, and automotive electronics systems. He is currently with General Motors’ Powertrain Electromagnetic Compatibility (EMC) Group. In 2000, he was appointed as a Lecturer at the University of Michigan-Dearborn and in 2006, was also appointed as an Adjunct Professor at the University of Detroit – Mercy. He regularly teaches at both universities with courses on EMC, antennas, and electronic communication systems.

He is an IEEE member and his professional activities include serving as a technical session chair for SAE and IEEE conferences, was the Technical Program Co-Chair for the 2008 IEEE International Symposium on EMC, and has been an instructor the symposium’s “Global EMC University”. He has also been an invited speaker at IEEE and SAE conferences held in the United States and international locations. He was selected as an IEEE EMC Society Distinguished Lecturer for 2010 – 2011. He is a member of the ARRL’s EMC Committee, and holds the amateur radio call sign WW8MS.

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