

Mr. Jeremy Campbell, received a B.S. degree in Electrical Engineering from West Virginia Institute of Technology in 1999 and a M.S. degree in Power Electronics from the University of Tennessee, Knoxville in 2005.

Currently, he is the EMC Laboratory Manager at the General Motors Powertrain Advanced Technology Center in Torrance, California.

At GM, Jeremy is responsible for testing & troubleshooting EMC issues related to Electric Vehicles & Hybrid Powertrains. This includes the integration of all Electrical Systems within these vehicles.

Jeremy has previously worked for NAVSEA in Dahlgren, Virginia and Oak Ridge National Laboratory in Knoxville, Tennessee.

EMC Tutorial
by
Jeremy Campbell, PE



Jeremy is the author and/or co-author of many publications and patent pending topics related to EMC, RFI, and Power Electronics. He is an IEEE and EMC Society Member.

His professional activities include Secretary for the Special Committee on Transportation Systems EMC and a committee member of the Special Committee on Smart Grid. He is a licensed Professional Engineer, Journeyman Electrician, Amateur Radio Operator, and a private pilot.



**This Program will qualify for
.6 Continuing Educational Unit Credits**

Welcome ... from Jim Blaha, EMC Chapter Chairperson



**EMC
SOCIETY.**

2012 is our 12th year in offering an IEEE EMC Seminar.

This year's program is focused on bringing EMC Engineering out of the text book and into the hands of the engineer. Mr. Jeremy Campbell has successfully overcome the EMC Engineering challenges created by tomorrow's Leading Edge Technologies. His discussion on future Radiated RF Immunity Levels and their effects on design considerations are based on his many years of EMC Laboratory Testing experiences. We are very excited to have Jeremy share his knowledge and case study examples with us in Milwaukee.

Our Goal of providing an EMC Seminar that is Local, Affordable and Providing the Highest Level of Educational Value is again accomplished through Mr. Campbell.

Our Program Committee invites you to participate in this year's outstanding program.

Designing a Product to Meet Today's Emission and Immunity Requirements

~~~ Attendance will be Limited to 150 ~~~ Register Early ~~~

**7:30 – 8:20am**

**Registration and Continental Breakfast**

**8:20 – 8:30am**

**Welcome and Introductions**

**8:30 – 10:00am**

**1st Technical Session**

**EMC and Power Electronics**

EMC issues with Power Electronics

PCB and Wiring considerations

Filtering techniques

**10:00 – 10:30am**

**Morning Refreshment Break**

Exhibitors Display and Demonstrations

**10:30 – 12:00pm**

**2nd Technical Session**

**Grounding & Bonding of Circuits, Enclosures,  
and Cables**

Lessons Learned

Grounding

Enclosures

Shielded Cable

**12:00 – 1:00pm**

**Lunch with the Exhibitors and  
IEEE Acknowledgments**

**1:00 – 2:30pm**

**3rd Technical Session**

**Immunity - The Other EMC Requirement**

Design Techniques to meet Radiated and

Conducted Immunity

Effects of a 10 fold increase in

RF Immunity Levels

**2:30 – 3:00pm**

**Afternoon Refreshment Break**

Exhibitors Display and Demonstrations

**3:00 – 3:15pm**

**IEEE Recognition Awards**

**3:15 – 4:45pm**

**4th Technical Session**

**Case Studies - What not to Do!**

Case study - Radiated Emissions

Case study - Increase in RFI Field Strength

Case study - Temperature Cycling

**4:45 – 4:50pm**

**Mr. Jim Blaha**

Closing Comments and Seminar Survey

**4:50 – 5:45pm**

**Last Chance with Exhibitors  
Post Seminar Social**