

# May 2009 Meeting Report of the IEEE EMCS Chapter, Pittsburgh Section, Region 2

A technical meeting of the IEEE Pittsburgh EMC Society Chapter was conducted on May 18, 2009 at the Westinghouse Energy Center in Monroeville PA. Michael Oliver, IEEE EMCS Chapter Chair hosted the technical meeting with 64 people in attendance. The meeting started with a social at 6:30 pm prior to a 7:00 pm technical presentation. We had the privilege of having Mr. Elya Joffe as our technical speaker; Elya is President of the IEEE EMC Society.

As an introduction, electromagnetic theory is surrounded by mystery and magic, mostly because the mathematics required for solving Maxwell's equations are messy enough that most of us avoid them at all costs! Never mind solving them, few of us even have a clear perception of what they actually say...EMC is even worse, often considered black magic!

The presentation is intended to demystify the very basics of electromagnetic theory - Maxwell's Equations. The presentation provided explanations in everyday terms and without the need for complex mathematics the meaning and implication of Maxwell's equations for the practicing engineer. Some of the basic symbols used in mathematics, such as integration, derivatives, and bizarre vector symbols and their implication were explained. An example related to the flow of return currents in circuits is used to illustrate the principles described. Through these simple explanations, Maxwell's equations will then "see the light".



**About the presenter:** Mr Joffe is president of the IEEE EMC Society and has over 20 years of experience in government and industry involving Electromagnetic Compatibility/Electromagnetic Environmental Effects (EMC/E3). He is actively involved in the EMC design of commercial and defense aircraft and aerospace systems from circuits to full platforms. His work covers various fields in the discipline of EMC, such as NEMP and Lightning Protection design, as well as numerical modeling for solution of EMC Problems.

Mr. Joffe has authored and co-authored over 30 papers in the IEEE Transactions on EMC and Broadcasting, as well as in the proceedings of International EMC Symposia. He is also the lead author of the book "The Grounds for Grounding" to be published by IEEE Press and John E. Wiley and Sons. He is a Senior Member of IEEE, President of the IEEE EMC Society and member of the IEEE EMC Board of Directors. He is also the Past Chairman of the Israel IEEE EMC Chapter and has served as a "Distinguished Lecturer" of the IEEE EMC Society.

Mr. Joffe has received several awards and recognitions from the IEEE and EMC Society for his activities. He is a recipient of the prestigious IEEE "Larry K. Wilson" Transnational Award,, 2005, the "Lawrence G. Cumming Award for Outstanding service" of the IEEE EMC Society, 2002, the "Honorary Life Member Award" of the IEEE EMC Society, 2004, as well as the IEEE EMC Society "Technical Achievement Award". He is also recipient of the "Third Millennium Medal".

Mr Joffe is an iNARTE certified EMC and ESD Control Engineer and a member of the "dB Society".



**Pittsburgh IEEE EMCS Chapter Technical Meeting on May 18, 2009**



**Good Food**



**A Well Deserved Plaque and "Official Steelers Shirt" Presented to Elya Joffe**



**ON BEHALF OF ALL OF US IN  
PITTSBURGH PA...**

**"THANK YOU ELYA FOR YOUR  
CONTRIBUTION TO OUR EMCS  
PITTSBURGH CHAPTER"**