

## **Basics of EMC Diagnostics and Troubleshooting**

### **ABSTRACT**

The discipline of Electromagnetic Compatibility (EMC) is concerned with the design of Electronic Systems, while minimizing electromagnetic interference between the system and its environment. However, despite our best efforts, inevitably - an EMI situation may arise. Anyone who has experienced an EMI problem the difficulty of solving it using "rule of thumb" approach can appreciate its complexity and the necessity for a systematic solution approach.

While many consider EMC as "Black Magic", EMI troubleshooting may be considered as "Black Art". This Workshop will present the systematic and "strategic" approach for the diagnosis and troubleshooting methodology of an EMI problem, beginning from the identification of the problem, through its solution. Practical "real life troubleshooting case studies", from various fields of EMC, ranging from radiated EMI field interference, through conducted EMI, ESD and Lightning, as well as circuit and system design (including some brand new ones), will be used as examples in the workshop. Those cases will be extensively analyzed and discussed as to the phenomenon, the approach for solution, as well as the lessons learnt from the case.