



# Call for Experiments & Demonstrations

## 1) HARDWARE EXPERIMENTS & DEMONSTRATIONS

The popular EMC & Signal/Power Integrity (SI/PI) hardware experiments and demonstrations will take place at the 2018 Joint IEEE EMC & APEMC Symposium. Its purpose is to demonstrate important EMC and SI/PI concepts through interactive experiments and demonstrations, which focus on, for example, EM coupling phenomena and effects, EMC and SI/Power Integrity measurements and troubleshooting methods. Experiments new to the EMC symposium are encouraged and popular demonstrations from previous years are reprised. Hardware experiments and demonstrations should focus on innovative concepts and methods that are of interest to practicing EMC engineers.

### Potential topics include:

- Application of magnetic pickup loops and current probes
- Transmission-line effects on PCBs
- Use of ferrites for EMI control
- Measurement versus calculation of signal spectra
- Minimizing magnetic field susceptibility
- Measurement of common versus differential mode coupling
- Proper application of LISNs
- Electrostatic discharge phenomena
- Effects of clock frequencies
- Electromagnetic leakage through seams and joints
- Electromagnetic product safety
- Signal integrity issues for PCBs

## 2) COMPUTER MODELING & SIMULATIONS DEMONSTRATIONS

In this 2018 joint symposium, various computational electromagnetic (CEM) modeling techniques and simulation methods for solving EMC and SI/Power Integrity problems are also to be illustrated through a series of interactive computer demonstrations. These include the application of the Moment Method (MoM), Uniform Theory of Diffraction (UTD), Ray Tracing Method (RTM), Finite Difference Time-Domain (FDTD), Finite Element Method (FEM), Transmission Line (TL) theory, and other useful methods. New demonstrations as well as an interactive participation during the demonstrations is encouraged.

### Potential topics include:

- Modeling shielding effectiveness
- Radiation through apertures, gaskets and joints
- Large complex system analysis Using MLFMA
- Modeling of simultaneous switching noise in high speed systems
- EMC simulation techniques for PCBs
- Emission environment modeling and analysis
- Model validation for electromagnetic codes
- Visualization of fields in radiated test sites
- Complex coupling phenomena

## Important Notes & Dates

- Presenters are to submit a brief ONE-page proposal describing their proposed experiment or demonstration.
- Each presenter is to indicate the equipment and audio visual needs.
- Each presenter is also required to provide proof of registration prior to release the final program.
- Note that no experiment or demonstration (E&D) is commercial in nature. The E&D activity is to provide a practical, hands-on experience for attendees, highlighting aspects of the discipline of EMC. It is NOT intended to provide an opportunity for the advertisement or sale of any equipment or software. Any such activity is counter to EMC Society policy, and is cause for immediate cessation of the offending presentation.

**Proposal Submission**  
(1-page with author names, affiliations, telephone & email contact information)

**15 January 2018**

All submissions must be electronic to the E&D Chairs: Bob Scully ([bobscully@comcast.net](mailto:bobscully@comcast.net)), Albert Lee ([albert.lee@rohde-schwarz.com](mailto:albert.lee@rohde-schwarz.com)), and Zaifeng Yang ([yang\\_zweifeng@ihpc.a-star.edu.sg](mailto:yang_zweifeng@ihpc.a-star.edu.sg)).

More information can be found at [www.apemc.org](http://www.apemc.org)

**Notification of Acceptance**

**05 February 2018**

Organized by



Supported by

