



# 2018 JOINT IEEE INTERNATIONAL SYMPOSIUM ON ELECTROMAGNETIC COMPATIBILITY AND ASIA-PACIFIC SYMPOSIUM ON ELECTROMAGNETIC COMPATIBILITY

[www.apemc.org](http://www.apemc.org) [www.emc2018.emcss.org](http://www.emc2018.emcss.org)



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## Call for Papers

The 2018 Joint IEEE International Symposium on Electromagnetic Compatibility & Asia-Pacific Symposium on Electromagnetic Compatibility (2018 Joint IEEE EMC & APEMC) will take place at the Suntec Convention and Exhibition Center in Singapore from 14 to 17 May 2018. The joint symposium combines the 60<sup>th</sup> IEEE International Symposium on EMC with the 9<sup>th</sup> APEMC Symposium. For the former, it is only the 4th time for it to be held outside the North America Continent in 60 years and the first time in Asia over the past three decades. For the latter, it is a homecoming to where the APEMC originated 10 years ago.

The symposium Technical Program Committee invites you to submit your original and unpublished papers in all aspects of electromagnetic compatibility (EMC) as well as signal and power Integrity (SI/PI), including but not limited to EMC/SI/PI design, modeling, management, measurements, and education.

All eligible papers (excluding abstract-reviewed papers) will be submitted for online publication at the IEEE Xplore, and authors will also be invited to submit extended versions of those papers for possible publication in a special issue of the IEEE Transactions on Electromagnetic Compatibility.

Plan ahead and join this unique symposium, meet international colleagues, present your latest research findings, share your insight and perspectives, ask questions, learn from experts and innovators, explore collaborations, visit exhibitions and see new products. Experience Singapore, where east meets west, and much more!

### Important Dates

<input type="checkbox"/> <b>Preliminary Full-Paper Submission</b> <i>(3 to 6 pages in PDF format; without author names &amp; affiliations)</i>	<b>18 Aug. to 24 Nov. 2017</b>
<input type="checkbox"/> <b>Abstract Reviewed Paper Submission</b> <i>(with author names &amp; affiliations)</i>	<b>18 Aug. 2017 to 08 Jan. 2018</b>
<input type="checkbox"/> <b>Acceptance Notification</b>	January 2018
<input type="checkbox"/> <b>Final Paper Due</b>	28 February 2018

Turn pages to see more information about

Topics of Interest

Embedded Conference  
on SIPI

Call for Special  
Sessions

Call for Workshops &  
Tutorials

Call for Abstract  
Reviewed Papers



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# Paper Topics of Interest

## TC-1 EMC Management

- Personnel & Laboratory Accreditation
- EMC Education
- Legal Issues

## TC-2 EMC Measurements

- Test Instrumentation & Facilities
- Measurement Techniques
- Standards and Regulations

## TC-3 EM Environment

- EM Signal Environment
- Atmospheric & Man-Made Noise

## TC-4 EM Interference

- Shielding, Gasketing & Filtering
- Cables and Connectors
- Circuit & System EMC Analysis
- Grounding

## SC-7 Aeronautics and Space EMC

- EMI/EMC Issues in Aircraft, Spacecraft & Space Launch Vehicles, Robotic and Crewed
- EMC Analysis, Design, Test and Performance of Space Systems
- Part, Board, Box, System, Multi-System, Planetary & Interplanetary Levels
- Launch and Space Environments

## TC-5 High Power Electromagnetics

- ESD & Transients
- EMP, IEMI & Lightning
- Information Leakage
- Electric Power EMC

## TC-6 Spectrum Engineering

- Spectrum Characterization and Modeling
- Design for Spectrally Efficient Systems
- Adaptive Interference Mitigation

## TC-7 Low Frequency EMC

- Power Quality and Conducted EMC
- Power Electronics
- Intentional EM Interference
- High Altitude Electromagnetic Pulse
- Lighting
- Electrostatic Discharge
- EM Information Leakage

## TC-9 Computational Electromagnetics

- Computer Modeling Methods
- Tools and Techniques
- Validation Methods
- Statistical Analysis

## TC-10 Signal and Power Integrity

See *Embedded Conference on SIPI*

## TC-11 Nanotechnology & Advanced Materials

- Nanomaterials and Nanostructures
- Smart Materials

## TC-12 EMC for Emerging Wireless Technologies

- EMC Planning/Testing/Specifications
- Wireless Coexistence
- Intra-System Interference
- Wireless OTA Testing

## SC-1 Smart Grid EMC

- RF Environment
- Performance Degradation

## SC-5 Power Electronics EMC

- Power Electronics Converters EMI/EMC
- Switching Frequency Schemes
- Grid-Connected PV Systems, Wind Farms, Automotive, Aerospace, and Comms Systems
- Inverters

## SC-6 Unmanned Aircraft Systems EMC

- Spectrum Management on Intra and Inter-System Interactions
- System Level Design, Testing, Modeling/Simulation
- Robust Performance in the Presence of High Intensity Radiated Fields (HIRF)

## Embedded Conference on SIPI

As high-speed designs continue evolving, signal/power integrity and other EMC problems become tightly related to each other. The embedded conference on Signal and Power Integrity (SIPI), which is an integral part of the 2018 Joint IEEE EMC & APEMC Symposium, provides a unique opportunity for attendees to exchange ideas and share experiences relevant for today's high-speed designs.

**Topics include but not limited to the following TC-10 technical areas.**

### Interconnects

- High-Speed Interconnect Design and Optimization (Component and/or System Level)
- Interconnect Modeling and Extraction
- Channel Analysis

### Power Delivery Network and Decoupling

- PDN (power delivery network) design and Optimization
- Design, Analysis, Simulation, Modeling and Measurement Techniques
- Power Supply Induced Jitter

### Chip Level

- On-Chip and Off-Chip High-Speed Signaling Techniques
- 3-D IC and TSV
- Advanced Packaging

### Tools and Methodologies

- Jitter/Noise/Crosstalk/BER Budgeting, Analysis, and Measurement
- De-embedding Method
- Time Domain and Frequency Domain Measurement Techniques

### Simulation and Modeling Techniques

- High-Frequency and Electromagnetic Simulation Techniques
- Simulation and Measurement Correlation
- Advanced Simulation Tools/Algorithms
- Device Modeling and Characterization
- Multiphysics Modeling for Analog/RF/MEMS/ Optical Chip-Package-Systems
- Macromodeling and Model Order Reduction for Signal and Power Integrity

### System Co-Design

- Signal/Power integrity for Chip/Package/Board/ Connector/Cable Design
- Signal Integrity and Power Integrity Co-Analysis
- System-Level SI/PI/EMI Co-Design

### Others

- RF, Microwave and Mixed Signal Analysis
- Silicon Photonics

### SIPI-TPC Chairs:

Zhiping YANG (zhipingyang@google.com)

Er-Ping LI (erpingli@ieee.org)



# Call for Papers

## Student Paper Contest

Graduate and undergraduate authors are eligible for the Best Student Paper contest. The student must be the primary author and should indicate that they wish to be considered for the contest when submitting the preliminary manuscript. Each student's professor will be asked to certify that the paper is primarily the work of the student.

## Special Issues of IEEE Transactions on EMC

Authors of accepted papers will be invited to submit an extended version of their symposium paper for possible inclusion in a special issue of the IEEE Transactions on Electromagnetic Compatibility featuring papers from the EMC/APEMC 2018. These submissions will be subjected to the same rigorous review as papers submitted for publication in regular issues of the IEEE Transactions on EMC.

## Paper Acceptance Criteria

- **Importance of Topic:** Does it have direct significance to the EMC community?
- **Technical Sophistication and Depth:** Does it present information that is a significant contribution, advancement, application or refinement of the state of the art? Does it expose the reader to a higher knowledge level than currently available from other sources?
- **Readability, Clarity and Presentation:** Is the value of the submission clearly defined? Is the material written in clear and concise English, with topics presented in an organized and logical manner?
- **Novelty and Originality:** Does it propose a new and unique concept or expand on an existing premise from a unique point of view?

## Paper Presentation Formats

- **Traditional Oral presentation:** Presentation for those interested in presenting to large groups with limited potential for interactions with attendees.
- **Open Forum:** Presentation for those interested in direct interaction with individuals or small groups.

## Guidelines for Authors & Submittal Procedures

Prospective authors must submit electronically\*\*.

- **A preliminary full manuscript (less than 6 pages) including all relevant results and conclusions.**
- **Choice of presentation format (traditional oral or open forum).**

\*\* Preliminary Manuscripts and Final papers are to be submitted using the link provided on the symposium website after 18 August 2017. During the electronic submission process a unique author code is created for tracking purposes. Submissions are reviewed anonymously, so please **do not include author names or affiliations on the Preliminary full Manuscript**. Failure to comply with submission requirements may result in rejection.

# Call for Special Sessions

The symposium Technical Program Committee is seeking proposals for Special Sessions to be presented at the 2018 Joint IEEE EMC & APEMC Symposium. The proposals may cover any current or emerging areas of EMC, SIPI and related technologies.

Prospective organizers of a Special Session should send their proposals via email to Special Session Chairs: Richard Gao ([gaoxk@ieee.org](mailto:gaoxk@ieee.org)) and Bob Davis ([robert.h.davis@lmco.com](mailto:robert.h.davis@lmco.com)). Submissions must be in **Word or PDF format** following the **proposal template** that can be found at the symposium website ([www.apemc.org](http://www.apemc.org)).

## Special Session Proposal Schedule

- Proposals for Special Sessions: **18 August 2017 – 14 October 2017**
- Notification of acceptance: **07 November 2017**

## Special Session Paper Schedule

- Special Session Paper must be submitted by **23 December 2017**
- Notification of review feedback by **22 January 2018**
- Final versions of Special Session papers from all authors are due on **28 February 2018**.

## Proposals will be reviewed and evaluated for:

- Relevance
- Novelty and originality
- Readability and clarity of proposal
- Importance of topic
- Technical depth

Special Sessions with only one speaker will not be accepted. Late proposals and papers will not be accepted.

# Call for Workshops & Tutorials

The symposium Technical Program Committee is seeking proposals for workshops and tutorials to be presented at the 2018 Joint IEEE EMC & APEMC Symposium. The proposals may cover any current or emerging areas of EMC, SIPI and related technologies.

Prospective organizers of workshops and tutorials should send their proposals via email to John Maas ([johnmaas@us.ibm.com](mailto:johnmaas@us.ibm.com)) and Martin Leung ([martin.Leung@cst.com](mailto:martin.Leung@cst.com)). Submissions must be in **Word or PDF format** following the **proposal template** that can be found at the symposium website ([www.apemc.org](http://www.apemc.org)).

## Schedule for Workshop & Tutorial Proposal & Presentation Material

- Proposals to be submitted during **18 August 2017 – 14 October 2017**
- Notification of acceptance: **07 November 2017**
- Presentation materials from all presenters are due by **05 March 2018**.

**Proposals will be reviewed and evaluated for:**

- Relevance
- Novelty and originality
- Readability and clarity of proposal
- Importance of topic
- Technical sophistication and depth
- Expected attendance

■ Proposals with only one speaker are discouraged.

■ The workshops and tutorials have to adhere to the IEEE EMC Society rules for Commercialism in Workshops.

# Call for Abstract Reviewed Papers

The Technical Program Committee of the 2018 Joint IEEE EMC & APEMC Symposium are warmly inviting EMC and SIPI engineers and researchers to participate in a specially-tailored technical-program element: Abstract Reviewed Papers. Only an abstract of about 500 words is required for the initial submission for Abstract Reviewed Papers. Upon acceptance, the final manuscript must follow the regular IEEE EMC paper format. Abstract Reviewed Papers will be published in the conference proceedings. If scheduling conflicts arise, regular papers will have scheduling priority over Abstract Reviewed Papers.

Abstract Reviewed Papers are expected to provide unique opportunities for EMC and SIPI engineers and researchers to exchange experiences and ideas, and to socialize at the renowned EMC conference. This special program will contribute not only to the technological advancement, but also to members' career development in our professional community.

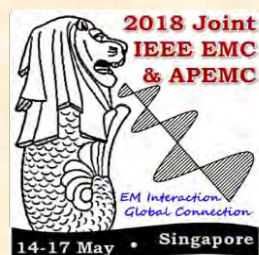
## Schedule for Abstract Reviewed Papers

- Abstract submissions (about 500 words): **18 August 2017 – 08 January 2018**
- Notification of acceptance: **29 January 2018**
- Final Paper Material (1 to 6 pages) due: **28 February 2018**

### Paper Acceptance Criteria

- Importance of topic
- Technical sophistication and depth
- Novelty and originality

■ *The abstract reviewed papers will be invited for resubmission to a special issue of the IEEE EMC Magazine. When accepted and published, they will be archived in the IEEE Xplore.*



Scan QR code to visit symposium website for more details  
[www.apemc.org](http://www.apemc.org)    [www.emc2018.emcss.org](http://www.emc2018.emcss.org)

