

# Call for Papers

## 2020 Asia-Pacific International Symposium on Electromagnetic Compatibility & Signal Integrity and Technical Exhibition

The 2020 Asia-Pacific International Symposium on Electromagnetic Compatibility & Signal Integrity and Technical Exhibition (APEMC2020) will be held in Sydney, Australia, May 19 to 22, 2020. APEMC originated in Singapore in 2008. It has become one of the premier international conferences of EMC community. After APEMC was held in Melbourne in 2013, the event is now back in Australia. Sydney has the world's most beautiful harbour and is proud to be selected to host the APEMC 2020.

Continuing APEMC spirit and addressing the global EMC challenges and explorations, APEMC 2020 will offer a rich and diverse scientific program of the highest quality, with invited speakers from all over the world and serve as a broad exchange platform for both academia and industry. The symposium will recognize innovations and technology leaderships through the Best Symposium Paper Award, the Best Student Paper Award, and other recognitions. The symposium will cover the entire scope of electromagnetic compatibility, electromagnetic environment, signal integrity issues and feature emerging EMC technologies. Prospective authors are invited to submit original papers on their latest research results. Proposals for special sessions, industrial forums, workshops and tutorials are also cordially solicited.

We welcome you to join this unique symposium, meet international peers, present your latest research findings, share your insight and perspectives, discuss with experts and innovators, explore collaborations, visit exhibitions and catch up new products.

### Important Dates

■ Proposals for Special Sessions, Workshops and Tutorials	Jun. 06, 2019 – Nov. 29, 2019
■ <b>3-page</b> Preliminary Paper Submissions	Jun. 06, 2019 -
■ Or <b>One-page</b> Abstract Submission (not be included in IEEE Xplore) <b>Deadline extended!</b>	<b>Dec. 13, 2019</b>
■ Notification of Acceptance	Jan. 22, 2020
■ Final Paper Submission	Feb. 18, 2020

*All accepted and presented full papers will be included in IEEE Xplore.*

#### Symposium Chair

Mark MIFSUD  
Nova Systems, Australia

#### Technical Program Committee Chairs

Richard Xian-Ke GAO  
A\*STAR, Singapore  
Kevin GOLDSMITH  
Australia

#### Technical Paper Co-Chairs

Xingchang WEI  
Zhejiang University, China  
Junwei LU  
Griffith University, Australia

#### Special Session Co-Chairs

Mark MIFSUD, Australia  
Hui Min LEE, Singapore

#### Workshop Co-Chairs

Hongmei FAN, Australia  
Zaifeng YANG, Singapore

#### Finance Chair

Kingsley McRAE, Australia

#### Publication Chair

Alice WEARNE, Australia

#### Publicity Chair (local)

Steve OFFER, Australia

#### Publicity Chair (international)

Janet O' NEIL, USA

#### Exhibition Chairs

Paul PAYNE, Australia  
Vignesh RAJAMANI, USA

#### Experiment & Demonstration Chair

Kevin GOLDSMITH, Australia

#### Registration Chair

Tarryn SILVER, Australia

#### Secretary

Alice WEARNE:  
[apemc2020@engineersaustralia.org.au](mailto:apemc2020@engineersaustralia.org.au)



## Symposium Topics

### ■ EMC Management, Standards and Regulations

EMC Specifications & Standards; EMC Control and Management; Laboratory Accreditation; EMC Personnel Certification; National and Regional EMC Legislation; Mutual Recognition Agreements; EMC Education

### ■ EMC Measurements and EM Environment

Test Instrumentation; Test Procedures, Time-Domain Measurements; Emission and Immunity Testing; Test Facilities (reverberation and anechoic chambers etc); Confidence and Reproducibility; EM Environment

### ■ Lightning

Lightning Parameters and Models; Coupling of Lightning EMF to Lines; Effects in the Atmosphere; Protection and Standards; High Altitude Electromagnetic Pulse

### ■ High Power Electromagnetics

NEMP, HPM, EMP; High Power Protection; Intentional EM Interference (IEMI), High Voltage Power Grid EMC

### ■ System-Level EMC and Protection

Electrically Large and Complex Systems including Transmission Lines; Shielding, Coupling and Grounding; EMC Product Design; EMC Topologies; System Installation Aspects; EMC Quality Assurance; EMC Cost Factors; Neural Networks and AI for EMC; Visualization for EMC; Virtual EMC-Environment; PCB EMC

### ■ Transportation EMC, Automotive/Railway/Ship EMC

Automotive Components, Car Controllers; Radar Detection System EMC; Automotive System EMC; High Speed Rail EMC; Metropolitan Transit System EMC

### ■ Aerospace 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; Avionics EMI

### ■ Smart Grid and Low Frequency EMC

Power Quality and Conducted EMC; Power Electronics EMI; Cell System EMC, Wind Energy System EMC, Wireless Power Charging; Wireless Energy Transmission; Power Delivery EMC; Electrostatic Discharge; EM Information Leakage

### ■ IC and Semiconductor EMC

ESD for Chips; Measurement of IC EMC; Modeling of IC EMC; EMC in System-on-Chip; EDA tools for IC EMC; RFIC EMC; RFID EMC; Smart Power IC EMC; Harsh EM Environment Effects on ICs

### ■ Signal Integrity and Power Integrity

Simulation Techniques; Measurement Techniques; Interconnects; Package Integration; PCB; System-in-Package; Chip-package and PCB Co-design and Simulation

### ■ Computational Electromagnetics & Multiphysics Modeling

Numerical Techniques in EMC Problems; Fast Methods for Large/Complex Systems; Hybrid Methods; Validation and Benchmarking; Model Order Reduction Techniques; Advances in EM-based Electronic Design Automation Tools; Statistical Analysis

### ■ Bio-Medical Electromagnetics & Wearable Devices EMC

EM Interaction with Biological Systems at any Frequency; Exposure Studies; Medical Applications in Diagnosis and Therapy; Cellular Phone Dosimetry

### ■ Wireless Communication EMC

Cellular Devices & Systems; Internet Systems; Sub-station EMC; UWB, Wireless LAN EMC, Wireless Regulations

### ■ Nanotechnology and New Materials

Nanotube Interconnects; Nanomaterial for EMC; Metamaterials; PBG/EBG for EMI; Nanoelectronic EMC

### ■ Military EMC

Military Radar; Military EMC Standard Testing; HERF, HERO; HETO

### ■ Special Topics

## Paper Submission APEMC Paper Prizes

**Authors have the options for 3-page or one-page paper submissions.**

a) Authors can submit **3-page** paper in length, including title, author's affiliation, abstract, figures and references. The presented papers will be included *in IEEE Xplore*.

b) Authors can choose to submit **one-page** abstract including title, author's affiliation, key findings, max 2 figures and 2-3 references. One page abstract will not be included in IEEE Xplore.

The submission must be in electronic format (PDF). A Word template is available on the symposium website. No hardcopies will be accepted.

APEMC2020 Prizes consist of Best Symposium Paper and Best Student Paper. Papers considered for the Student Paper Prize are expected to be predominantly the work of the student. Papers co-authored by a student and his advisor are eligible, provided the student is the principal author and also the presenter. Please indicate in your electronic submission if you want to be considered for the Student Paper Prize.

## Accepted Papers Exhibition

Notifications of paper acceptance and the necessary information to electronically submit the final version of the paper will be sent to the authors. Final papers shall be **three pages** for full paper or **one page** for abstract, including figures, tables and references.

Technical Exhibition has always been a major highlight of the Asia-Pacific Symposium on Electromagnetic Compatibility (APEMC). The exhibition offers an excellent opportunity for all segments of EMC and Microwave community to meet, providing an international gathering for everyone involved in technologies associated with RF, Microwave, EMC Instrumentation and analysis software, etc.

### Exhibition contact:

Ms. Alice Wearne

Tel: 612 9410 5662

Email: [apemc2020@engineersaustralia.org.au](mailto:apemc2020@engineersaustralia.org.au)



## Call for Proposal: Special Sessions

The APEMC2020 Technical Program Committee cordially invites proposals for Special Sessions. The proposals may cover any current or emerging research areas of EMC, SIPI and related technologies.

Prospective organizers of Special Sessions should send their proposals via email to Special Sessions Chairs: Hui Min Lee ([leehm@ihpc.a-star.edu.sg](mailto:leehm@ihpc.a-star.edu.sg)) and Mark Mifsud ([mark.mifsud@novasystems.com](mailto:mark.mifsud@novasystems.com)). Submissions must be in **Word** or **PDF format** following the **proposal template** that can be found on the symposium website (<https://apemc2020.org/>).

### Schedule for Special Session Proposals

- Proposals for Special Sessions: **06 June 2019 – 29 November 2019**
- Notification of acceptance: **01 December 2019**

### Schedule for Special Session Papers

- Special Session papers submission: **13 December 2019**
- Notification of acceptance: **22 January 2020**
- Final versions of Special Session papers: **18 February 2020**

### Proposals will be reviewed and evaluated for:

- Relevance
  - Novelty and originality
  - Readability and clarity of proposal
  - Importance of topic
  - Technical depth
  - Expected attendance
- ❖ A special session is expected to have at least 5 papers. If more papers are received for a special session, it will be split into part A and part B.
  - ❖ One-page abstract is allowed for the special session but the one-page abstract will not be included in IEEE Xplore.
  - ❖ Please note that all proposals will be evaluated by the committee considering various factors. All papers will be reviewed as regular submissions by external reviewers besides session organizers.
  - ❖ All organizers and speakers are required to register for the conference with corresponding registration fees.
  - ❖ We would like to seek your understanding that the special sessions may be cancelled or combined with other sessions of similar topics should there be insufficient number of speakers.

## Call for Proposal: Workshops & Tutorials

The APEMC2020 Technical Program Committee cordially invites proposals for workshops and tutorials. The proposals may cover any current or emerging research areas of EMC, SI, PI and related technologies.

If interested in submitting a proposal for a workshop or tutorial, please find the **instructions** and the **proposal template** on the symposium official website ([www.apemc2020.org](http://www.apemc2020.org)). Prospective organizers of workshops and tutorials are required to send their proposals in **Word** or **PDF** format via email to Hongmei Fan ([gladys\\_fan@hotmail.com](mailto:gladys_fan@hotmail.com)) and Zaifeng Yang ([yang\\_zaifeng@ihpc.a-star.edu.sg](mailto:yang_zaifeng@ihpc.a-star.edu.sg)).

### Schedule for Workshop & Tutorial Proposals & Presentation Material

- Proposals for Workshop and Tutorial: **06 June 2019 – 29 November 2019**
- Notification of acceptance: **26 December 2019**
- Presentation materials submission: **28 February 2020**

### Proposals will be reviewed and evaluated on:

- Relevance
  - Novelty and originality
  - Readability and clarity of proposal
  - Importance of topic
  - Technical sophistication and depth
  - Expected attendance
- ❖ Proposals with only one speaker are not encouraged.
  - ❖ The workshops and tutorials have to adhere to the IEEE EMC Society rules for Commercialism in Workshops.