



2022 IEEE INTERNATIONAL SYMPOSIUM ON
ELECTROMAGNETIC COMPATIBILITY, SIGNAL & POWER INTEGRITY

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CALL FOR PAPERS

The IEEE EMC Society is seeking original, unpublished papers covering all aspects of EMC and technologies that are affected by EMC, Signal & Power Integrity

Join your colleagues **IN-PERSON** in Spokane (WA), where you can share your insight, ask questions, learn from the experts/innovators and see new products at the 2022 IEEE International Symposium on Electromagnetic Compatibility, Signal & Power Integrity. Your published paper will be seen by thousands in the EMC community and across the wide array of disciplines that look to the IEEE EMC Society for technical guidance. In addition, it will be uploaded to IEEE *Xplore*® with the exposure and recognition that brings.

The committee proposed **Special Topic Areas: Automotive, Intentional EMI and Cybersecurity, Wireless (co-site EMI, WiFi, 5G), Robotics, and Model Based Engineering.**

In addition to **Traditional Papers**, the Symposium also invites authors to participate through other formats. Authors who wish to present their work without the burden of writing a full manuscript may submit an extended abstract (**Abstract-Reviewed Paper**). For authors wishing to informally present their work in the interactive environment of a poster paper, this option is also available.

If there is a special area that warrants a dedicated session with papers from a variety of excellent authors, organizers should work with one of the Technical Committees to propose a **Special Session** with invited papers (you are advised to discuss this with one of the Technical Committees to act as the sponsor).

Workshops and Tutorials offer another way to cover a topic area. Presentations from invited speakers are submitted instead of abstract-reviewed or traditional papers.

Contributors who prefer to present their work as a live experiment or demonstration can submit a proposal for **Experiments & Demonstrations**.

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
- Measurement Uncertainty

TC-3 EM Environment

- EM Signal Environment
- Atmospheric & Man-Made Noise
- Characterization of the EM Environment

TC-4 EM Interference Control

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

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 Power System EMC
- Conducted Emission Due to Power Converters
- Transportation and Electrical Vehicles
- Renewables and Smart Grid
- Topics for Future Standardization

TC-8 Aeronautics and Space EMC

- Aircraft
- Atmospheric Environment
- Drones (Unmanned Aerial Vehicles)
- Spacecraft
- Space Environment
- Launch Vehicles
- Missiles
- Other Aerospace Topics

TC-9 Computational Electromagnetics

- Computer Modeling and Circuit Simulation Methods
- Multi-Physics Techniques, Tools, and Applications
- SI/PI/EMC Co-Simulation
- Best Practice and Validation Methods
- Surrogate Modeling and Optimization Techniques
- Design of Experiments (DoE) and Statistical Analysis

TC-10 Signal and Power Integrity

- High-Speed Interconnects
- Device Modeling & Characterization
- Crosstalk, Jitter, Noise Coupling, BER Analysis
- 3D IC & TSV
- Power Distribution Networks & Decoupling
- SI/PI/EMI Co-Design
- Simulation and Modeling Techniques
- Chip-level Advanced Packaging
- Topics for Future Standardization

TC-11 Nanotechnology & Advanced Materials

- Nanomaterials & Nanostructures
- Smart Materials
- Topics for Future Standardization

TC-12 EMC for Emerging Wireless Technologies

- EMC Planning/Testing/Specifications
- Wireless Coexistence
- Intra-System Interference
- RF Desense

SC-1 Smart Grid EMC

- Renewable Generation
- Grid Communications

SC-5 Power Electronics EMC

- AC/DC, DC/DC, DC/AC and AC/DC Power Conversion
- Passive Components and Semiconductor Devices
- Automotive, aerospace, and communication systems, wireless power transfer
- Wireless Power Transfer
- Medical, Aviation, Consumer Electronics and Power Applications
- Topics for future standardization



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GUIDELINES FOR AUTHORS & SESSION ORGANIZERS

TRADITIONAL PAPERS

A preliminary manuscript (4 - 6 pages), including all relevant results and conclusions.

ABSTRACT-REVIEWED PAPERS

An extended abstract (one page), including relevant results and conclusions.

SPECIAL SESSIONS

A proposal that includes:

- Title of Special Session
- Abstract detailing the content of the session
- Statement of what makes the session special
- List of planned authors and paper subjects with titles, if available
- Primary and secondary audience

WORKSHOPS & TUTORIALS

A proposal that includes:

- Title of Workshop or Tutorial
- Format: Workshop or Tutorial
- Abstract describing the workshop/tutorial, including objectives, content, and novelty
- List of planned presenters and affiliations with topics/titles
- Primary and secondary audience

EXPERIMENTS & DEMONSTRATIONS

A proposal that includes:

- Title of Experiment or Demonstration
- Abstract describing the experiment or demonstration with sufficient detail for the chairs to review
- List of presenters and affiliations
- A detailed listing of any test equipment required

All paper and proposal submissions will be uploaded into the Review System using the link provided on the symposium website (www.emc2022.emcss.org) beginning November 1, 2021. During the electronic submission process, a unique author code is created for tracking purposes. Failure to comply with submission requirements may result in rejection.

Delivery will be a 20-minute LIVE presentation in-person followed by a short question and answer period. Times will vary for Workshops and Tutorials based upon the number of presentations in any given session. Further details will be communicated to authors in due course.

CRITERIA FOR PAPER ACCEPTANCE

- Importance of Topic: Does it have direct significance to the EMC, Signal and Power Integrity 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? Is it clear that the work has been substantially completed or is the submission an interim progress report on a long-term project?
- 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? Does it present new information on an EMC, Signal or Power Integrity issue that is still in the developmental stage?

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. It is expected the co-authors of student papers will be limited to those who provided DIRECT contributions to the paper; in general cases the limit is no more than six authors total, including the student.

STUDENT DESIGN CONTEST

A Student Design Contest is also being held. Obtain the design kit, rules, and award details from the website after March 1, 2022.

KEY DATES

December 15, 2021: Proposal for Special Sessions Submittal Deadline

January 17, 2022: Traditional and Special Session Paper Submission Deadline

February 21, 2022: Notification of Acceptance/Rejection for Traditional and Special Session Papers, first Round

March 7, 2022: Abstract-Reviewed Paper and Workshop, Tutorial, and Experiments & Demonstrations Proposals Submission Deadline

March 21, 2022: Revised Traditional and Special Session Paper Submission Deadline

April 15, 2022: Notification of Acceptance/Rejection for Workshops, Tutorials, Experiments & Demonstrations

May 2, 2022: Notification of Acceptance/Rejection for Traditional,

Abstract-Reviewed and Special Session Papers, Final

May 16, 2022: Final Paper, Workshop and Tutorial Submission Deadline

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