

Call for Papers



DESIGN METHODOLOGIES
FOR POWER ELECTRONICS

November 17th-19th, 2025
Fayetteville, Arkansas, USA

Important Dates:

Digest Submission: July 7, 2025

Author Notification: August 11, 2025

Final Manuscripts Submission: September 15, 2025

The Conference topics of interest include, but are not limited to:

DESIGN AUTOMATION

- Automated Design of power electronics devices and systems
- Automated Circuit and Layout Synthesis
- Optimization Techniques
- Design Space Exploration
- Digital Twin and Virtual Prototyping
- Magnetics design optimization
- Device Models and Characterization
- Model Order Reduction
- Thermal & Packaging Design Techniques

AI / ML and DATA-DRIVEN TECHNIQUES

- Artificial Intelligence in power electronics control
- Estimation and maintenance of power electronics systems
- Condition monitoring
- Fault Diagnostics and Prediction
- Classification and Characterization Methods

CYBERSECURITY TECHNIQUES

- Firmware compromise detection and integrity verification
- Cyber-physical attacks and approaches for hardware hardening
- Integration of hardware- and software-based hardening solutions
- Device-level and system-level cybersecurity challenges and solutions
- Resilient power electronic control
- Investigation of cyber-security incidents and mitigation schemes

MEASUREMENT, VERIFICATION & TEST METHODS

- Automated testing & verification Techniques
- Considerations of lifetime prediction
- Advanced Measurements & Techniques
- Multi-Physical Systems Analysis – including Thermal and Mechanical Methods
- Hardware and Power in the Loop
- EMC and EMI

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Digest Submission:

Prospective authors are requested to submit a single column, single spaced digest no longer than five (5) pages summarizing the proposed paper. The digest will address the problem, the major results and its contribution in comparison with previous research works. It should include key equations, figures, tables, and references as appropriate, but no author names or affiliations. Digests not conforming to these requirements will be rejected without review. All digests will go through a double-blind peer review process to ensure a confidential and fair review. The papers presented at the conference will be included in the IEEE Xplore Digital Library. Please refer to the conference website for a detailed list of technical topics and the digest submission method.

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