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ASIA



29 – 31 August 2023

Shanghai New International Expo Centre,
China

International Exhibition and Conference for
Power Electronics, Intelligent Motion, Renewable
Energy and Energy Management

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→ Exchange experiences with power electronics experts and expand your knowledge on current and upcoming industry trends.

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Dates to remember

- Submission of abstracts before **15 March 2023**
- Notification of acceptance on **May 2023**
- Submission of full paper before **30 June 2023**
- ★ The official language for presentations is ENGLISH



Chance to win the awards

The awards will be selected by the Advisory Board from the accepted papers, and will be granted at PCIM Asia 2023 Conference.



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Topics of Interest

★ Highlighted Topic : Electrification of Transportation Systems

1. Advanced Power Semiconductors

- 1.1 High Power Semiconductors
- 1.2 MOSFETs, IGBTs, FREDs & Schottkys
- 1.3 Power Modules and Power Hybrids
- 1.4 SiC, GaN and other Wide Bandgap Devices and their Applications
- 1.5 Power Supply Control IC and Power Management ICs
- 1.6 Gate Driver and Device Protection
- 1.7 IPM and Power Electronic Building Blocks

2. Packaging and Reliability

- 2.1 Packaging and Interface Technologies
- 2.2 Advanced Cooling Systems
- 2.3 Thermal Modelling and Simulations
- 2.4 Power Electronic Components Reliability
- 2.5 Power Embedding
- 2.6 High Power Density Designs

3. Passive Components and Integration

- 3.1 Higher Frequency and Low Loss Materials & Techniques for Inductors and Capacitors
- 3.2 Planar Inductors and Transformers and Thin Film Magnetic Component
- 3.3 Filters and Passive Integration

4. AC/DC Converter

- 4.1 High Efficiency/High Density Power Converters/Inverters
- 4.2 Resonant and Quasi Resonant Topologies for Power Supplies
- 4.3 Stand-alone Power Supplies (Adapters) and on Board Supplies
- 4.4 New Topologies (Single Switch, Phase Shift, ZVS, ZCS, ZVZCS)

5. DC/DC Converter

- 5.1 DC/DC Converter Topologies for Enhanced Efficiency and Control
- 5.2 Synchronous Rectification
- 5.3 Smart Battery Management Concepts
- 5.4 Point of Load Converters
- 5.5 New Topologies for Distributed Power Supply Systems (Single or Multi-Stage Architecture, ZVS, ZCS, ZVZCS)

6. Digital Power Conversion

- 6.1 PMBus and other Digital Power Control Protocols
- 6.2 Digital Control for Power Converters
- 6.3 Advantages of Digital Power Conversion and Associated Challenges
- 6.4 System on a Chip (SOC)
- 6.5 Energy Harvesting

7. Motor Drive & Motion Control

- 7.1 Home Appliances
- 7.2 Small Power Motor "General Purpose Drive" with Highly Sophisticated Control Strategies and Low Cost Solutions
- 7.3 New Converter/Inverter Types for Single- and Three Phase Systems
- 7.4 Advanced Motor Concepts for Industrial Application and Traction Drives
- 7.5 New Control Architectures DSP, Microcontroller or FPGA
- 7.6 Advanced Sensor Concepts for Motor Drives
- 7.7 Intelligent Motion Control and Architecture

Submission requirements available at
www.pcimasia-expo.com

8. High Frequency Power Electronic Converters and Inverters

- 8.1 Thermal Design, Packaging and EMI Issues
- 8.2 Sensors Specific to Power Electronics (e.g. voltage, current, power, frequency, phase, temperature)
- 8.3 Techniques to Reduce Switching Losses to Improve Efficiency and Reduce Size and Weight
- 8.4 Wireless Power Transfer

9. Automotive Power Electronics

- 9.1 Hybrid-/ Electric Vehicle
- 9.2 MOSFET and IGBT Modules in Motor Traction Applications
- 9.3 DC/DC Conversion in Automobiles
- 9.4 Bidirectional DC/DC Converters
- 9.5 Electronics for Powertrain and Power Management
- 9.6 Energy Storage and Management, including Battery Types, Super Capacitors and Fly Wheels
- 9.7 DC circuit Breaker

10. System Reliability

- 10.1 Reliability and Health Management of Power Electronic Components and Systems
- 10.2 Fail-safe and Fault-tolerant Applications
- 10.3 Redundancy Concepts in Power Electronics
- 10.4 Life Cycle Cost Analysis

11. Power Quality Solutions

- 11.1 UPS Systems and Inverters
- 11.2 Active Power Filter (APF), DVR, SVG
- 11.3 Energy Storage System (Battery Technologies, Flywheel, Super (ultra) Capacitors)
- 11.4 Harmonics and Power Factor Correction

12. Smart Grid Power Electronics

- 12.1 Grid Inverter Control
- 12.2 Battery Charging and V2G
- 12.3 Energy Storage System and Control
- 12.4 Micro-Grid
- 12.5 Solid State Transformers
- 12.6 Medium Voltage Multilevel Converters
- 12.7 Modular Multilevel Converters
- 12.8 Novel Converter Topologies
- 12.9 Wind Energy Systems
- 12.10 Solar and Photovoltaic Energy Systems

13. Power Electronics in Transmission Systems

- 13.1 FACTS
- 13.2 Converters for Offshore/Onshore HVDC Links
- 13.3 Power Generation, Transmission and Distribution
- 13.4 DC Grids
- 13.5 HVDC Systems

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General Conference Director



» Being able to identify the industry's development trends, this makes the PCIM Asia Conference platform even more important for industry players to focus on developing the right products and technologies to meet the demands of the future. «

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* No specific order

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