

PCIM Asia Presents Latest Power Electronics Research And Innovation

Known as one of the most important conferences for power electronics in Asia, the [PCIM Asia Conference 2019](#) will once again enhance the academic and industrial development of power electronics by assembling the latest research results from around the globe. Professionals from industry and academia will cultivate innovations by giving in-depth analysis on various power electronic applications, technological breakthroughs and upcoming industry trends.

PCIM Asia is a leading international exhibition and conference for power electronics, intelligent motion, renewable energy and energy management. Jointly organized by Shanghai Pudong International Exhibition, Guangzhou Guangya Messe Frankfurt and Mesago Messe Frankfurt, the fair will be held from June 26 to 28 at the Shanghai World Expo Exhibition and Convention Center. It is expected that the three-day show will attract over 8,000 visitors and host nearly 100 exhibitors, showcasing the latest products and technologies of power semiconductors and modules, power electronics components, power converters, test and measurement, and more.

One of the highlights of the exhibition is the PCIM Asia Conference, which will take place across the three-day fair period. As in the past, the conference will showcase the latest developments in silicon carbide (SiC) and gallium nitride (GaN) devices and their respective applications in renewable energy, transmission, and especially electric vehicles. This year, a total of 49 conference papers will be presented, including 27 oral presentations and 22 posters. One of the major focuses of the 2019 edition will be the applications in the field of electrified transportation, which are also covered in two keynote speeches. These speakers and their presentation topics include:

- **Topic:** Electric Vehicles Charging—An Ultrafast Overview
Speaker: Prof. Drazen Dujic, Power Electronics Laboratory, Ecole Polytechnique Fédérale de Lausanne, Switzerland
- **Topic:** Traction Motors and Power Electronic Drives of Electric Powertrains for Electrified Vehicles
Speaker: William Cai, Jing-Jin Electric Technologies, China

In addition, there will be four brand new tutorial sessions led by renowned scholars, covering a wide range of advanced technologies in power electronics. Confirmed topics and speakers include:

- **Topic:** Topology and Control of 3-level/Multi-level Converters
Presented by: Prof. Yongdong Li, Tsinghua University, China
- **Topic:** Power Converter Technology for Industrial Induction Heating
Presented by: Prof. Enrique J. Dede, University of Valencia, Spain
- **Topic:** Basics of IGBT Modules Application in Power Stack Design
Presented by: Jun Li and Song Chen, Fuji Electric (China), China
- **Topic:** Advances in Planar Magnetics for High Frequency Switched Mode Power Supply
Presented by: Prof. Ziwei Ouyang, Technical University of Denmark, Denmark

Furthermore, in recognition of the remarkable contribution made by those in the industry each year, The Best Paper Award and The Young Engineer Award will be granted to the winners from submissions that highlight the latest discoveries in power electronics.

The finalists of the Best Paper Award 2019 are:

- **Presentation:** Highly Reliable Protection of Power Module for Automotive Inverter Application
Speaker: Baoqi Wang, Mitsubishi Electric & Electronics (Shanghai), China
- **Presentation:** An Integrated Gate Driver Solution for Silicon Carbide Semiconductor Applications
Speaker: Hao Wang, Power Integrations, China

- **Presentation:** A New Fast Reverse Recovery Super-Junction MOSFET for High Efficiency and Reliable EV Charging Applications
Speaker: Sunnam Kim, ON Semiconductor, Korea

The finalists of the Young Engineer Award 2019 are:

- **Presentation:** A High-Power Miniaturized Wireless EV Charger with a New SiC-VMOSFET Driven Single-Ended Inverter
Speaker: Yuki Tono, Osaka Institute of Technology, Japan
- **Presentation:** Evaluation of the Square-Root-T Method in Junction Temperature Measurement
Speaker: Haiyang Cao, Delta Electronics, China
- **Presentation:** A Novel 20-MHz DC-DC Resonant Converter with Soft-Switching Characteristics and Small Volume
Speaker: Yueshi Guan, Harbin Institute of Technology, China

E-mobility Forum and Power Electronics Applied Technologies Forum cater to strong market demand. At present, electric drives of an electric vehicle (EV) are mainly composed of silicon (Si) based power devices. However, higher requirements have been placed on the miniaturization and weight reduction of electric drives due to the relentless development of EVs. Many manufacturers have therefore switched their choice of materials from Si to SiC, a third-generation semiconductor which has obvious advantages over traditional semiconductor materials.

In light of the huge application potential of silicon carbide devices and the surging demand for new-energy vehicles, PCIM Asia has been focusing on this sector in recent years. Apart from the E-mobility Zone, the E-mobility Forum, scheduled to take place on the first day of the show, is also expected to be one of the highlights of the fair. The theme of the forum this year will be the applications of charging and driving technology for new-energy vehicles and applications of different power electronics technologies.

The forum will be led by renowned industry experts who will share their experiences on the technological breakthroughs and development trends of SiC devices. Currently, 13 exhibitors have already expressed their interest in participating in the forum by giving presentations to demonstrate their company's technical achievements.

Moreover, the well-received Power Electronics Applied Technologies Forum will return once again to foster business interaction between exhibitors and the audience. The forum offers an alternative gateway for exhibitors to promote their latest products and technologies. It is anticipated that over 30 presentations will be given, allowing participants to keep track of the latest industry trends and technological developments.

The online registration for the PCIM Asia Conference 2019 is now open. Interested parties can register for the conference [here](#).

To find out more about the 2019 show, please visit www.pcimasia-expo.com, or email pcimasia@china.messefrankfurt.com.