

pcim

ASIA SHENZHEN

26 – 28 August 2026

Shenzhen World Exhibition &
Convention Center, China



mesago

CONFERENCE PROGRAM

messe frankfurt



pcim
ASIA SHANGHAI

pcim
ASIA SHANGHAI

Frankfurt

Contents

Welcome Address	04
Advisory Board	05
Conference Program at a Glance	08
Award Finalists	10
Keynotes	14
Wednesday Special Session & Oral Sessions	16
Thursday Special Session & Oral Sessions	20
Friday Oral Sessions	24
Wednesday Poster Dialogue Sessions	26
Thursday Poster Dialogue Sessions	30
Prominent Conference Speakers in 2026	34
Registration Information 2027	34
Concurrent Forums	35
Industry-Academia-Research Collaboration Zone	36
Speaker Dialogue Zone	37
Exhibition grounds plan	39
Topics of Papers 2027	41
Call for Papers	

Welcome Address



Chairman

Leo Lorenz

ECPE, DE

Dear PCIM Asia Shenzhen participants,

It's my great honor and pleasure to welcome all of you to the PCIM Asia 2026 Exhibition and Conference in Shenzhen.

Power Electronics is the key enabling technology for electrifying the world and mitigating global warming. As a cross-sectional technical discipline, it covers everything from new materials, future semiconductor devices and smart power electronic building blocks, up to the power electronics conversion systems key to e-mobility, powering AI data centers and operating future sustainable state grid systems. The PCIM Asia Shenzhen Conference is one of the world's leading power electronic platforms, bringing together top experts from industry and academia to discuss future technology trends while showcasing the next generation of new components and systems. This integration is key to advancing current application fields and opening new market segments. At this year's conference we will cover innovations along the power electronics technology roadmap alongside keynote presentations from four leading experts and a special session highlighting highly relevant, current applications. PCIM remains a magnet for design engineers and researchers in the field of power electronics as well as company decision makers looking to generate new market segments and drive future research directions.

Pioneering research work and new products will be discussed during this year's PCIM Asia Shenzhen Conference

The technical programme this year has a very strong focus on new achievements in the field of power semiconductor devices, such as the new generation of SiC and GaN transistors, including innovations in advanced packaging designs that significantly increase reliability and extend lifetime. Another very hot topic this year will be AI in power electronics and highly efficient power converters for data centers and e-mobility.

Conference highlights and cutting-edge technologies will be demonstrated and discussed during keynote presentations.

We are very pleased to have invited top experts from industry and academia to discuss powering hyperscale data centers to enable future AI computing as well as the revolutionary development of 10kV SiC devices, including the relevant packaging technologies for direct connection to medium voltage power supplies.

Furthermore, I would like to draw special attention to the research achievements carried out by engineers from industry and academia through their presentations as well as the "Best Paper Award", "Young Engineer Award" and "University Scientist Award" handed out during the PCIM Asia Shenzhen Conference 2026.

I wish you an enjoyable and successful conference, open dialogue with all the experts attending and the generation of many new ideas for your future product innovation and business success.

A handwritten signature in black ink that reads "Leo Lorenz". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

PCIM Asia

Advisory Board

Chairman



Leo Lorenz
ECPE, DE

Board of Directors



Naoto Fujishima
Fuji Electric, JP



Yongdong Li
Tsinghua University, CN



Jinjun Liu
Xi'an Jiaotong University,
CN



Gourab Majumdar
Mitsubishi Electric
Corporation, JP



Abhijit D. Pathak
ADP-Power LLC,
USA



Norbert Pluschke
CN-iCuTech Semiconductor,
HKSAR, CN



Xinbo Ruan
Nanjing University of
Aeronautics and
Astronautics, CN



Tianhao Tang
Shanghai Maritime
University, CN



Dehong Xu
Zhejiang University, CN



Dianguo Xu
Harbin Institute of
Technology, CN



Jianping Ying
Delta Electronics, CN



Dapeng Zheng
Shenzhen Hopewind
Electric, CN

Technical Committee



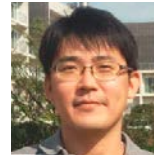
Jean-Paul Beaudet
Schneider Electric, FR



Yijen Chan
Cyntec Co., Ltd, TW, CN



Min Chen
Zhejiang University, CN



Youngchul Choi
Panjit International, USA



Ziying Chen
CN



Lifeng Chen
Infineon Technologies, CN



Bo Chen
LEM Electronics (China)
Co.,Ltd., CN



Pete Chia
Akkodis Shanghai Co., Ltd,
CN



Francesco Gennaro
STMicroelectronics, IT



Ziyang Gao
Hong Kong
Microelectronics Research
and Development Institute,
CN



Wei Jing
Semikron Danfoss, CN



Jinsong Kang
Tongji University, CN



Yong Kang
Huazhong University of
Science and Technology,
CN



Teng Liu
China Southern Power
Grid Electric Power
Research Institute, CN



Fangcheng Liu
Canadian Solar Inc., CN



Haihui Luo
Zhuzhou CRRC Times
Semiconductor, CN



YuKang Lo
LITE-ON Technology,
TW, CN



Dong Li
Infineon Technologies
Asia Pacific Pte Ltd, SG



Meiqin Mao
Hefei University of
Technology, CN



Mingping Mao
Infineon Technologies Asia
Pacific Pte. Ltd., SG

Technical Committee



Gaosheng Song
Mitsubishi Electric &
Electronics (Shanghai)
Co. Ltd, CN



Masahiro Sasaki
Fuji Electric Co., Ltd., JP



Yi Tang
Starpower Semiconductor,
CN



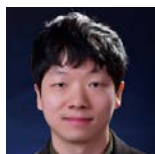
Yi Tang
Nanyang Technological
University, SG



Shunli Wang
Inner Mongolia University
of Technology, CN



Xuhui Wen
Institute of Electrical
Engineering, Chinese
Academy of Sciences,
CN



Xuanlyu Wu
Shenzhen Xihe Future
Technology, CN



Teng Wu
Schneider Electric, CN



Lie Xu
Tsinghua University, CN



Gang Yao
Shanghai Maritime
University, CN



Bo Zhang
University of Electronic
Science and Technology of
China, CN



Xing Zhang
Hefei University of
Technology, CN



Guoqiang Zhang
Harbin Institute of
Technology, CN



Miao Zhu
Shanghai Jiao
Tong University,
CN

Conference Program at a Glance

Wednesday, 26 August 2026

09:00 – 09:40	Conference Room 14B	Conference Opening & Award Ceremony Conference Director: Leo Lorenz, ECPE, DE		
09:40 – 10:20	Conference Room 14B	Keynote 1: Challenges and Innovations in Data Center Power Systems to Meet the AI Power Demand Speaker: Dehong Xu, Zhejiang University, CN Chair: Leo Lorenz, ECPE, DE		
10:20 – 10:35	Tea break			
10:35 – 12:25	Conference Room 14B	Special Session 1: Power Supply for AI Data Center Chair: Yenan Chen, Zhejiang University, CN		
12:25 – 13:30	Lunch Break & Room change			
13:30 – 15:00	Poster Dialogue Session 1 Power Devices Chair: Yijen Chan, Cynotec Co., Ltd, TW, CN Haihui Luo, Zhuzhou CRRC Times Semiconductor, CN	Poster Dialogue Session 2 Power Devices, Packaging and Reliability Chair: Yong Kang, Huazhong University of Science and Technology, CN Wei Jing, Semikron Danfoss, CN	Poster Dialogue Session 3 Smart Grid and AI Chair: Miao Zhu, Shanghai Jiao Tong University, CN Teng Liu, China Southern Power Grid Electric Power Research Institute, CN	
15:00 – 16:50	Conference Room 14B Oral Session 1: WBG Power Semiconductor Devices Chair: Bo Zhang, University of Electronic Science and Technology of China, CN Masahiro Sasaki, Fuji Electric Co., Ltd., JP		Conference Room 14A Oral Session 2: High Efficiency Power Converter Chair: Min Chen, Zhejiang University, CN Teng Wu, Schneider Electric, CN	
16:50 – 17:00	Excellent Poster Award Ceremony Poster Dialogue Session 1-3			



Thursday, 27 August 2026

09:30 – 10:10	Conference Room 14B	Keynote 2: Semiconductor contribution to performance & efficiency of Automotive Traction Inverters Speaker: Mark Nils Muenzer, Infineon Technologies AG, DE Chair: Gourab Majumdar, Mitsubishi Electric Corporation, JP	
10:10 – 10:25	Coffee Break & Room Change		
10:25 – 12:15	Conference Room 14B Special Session 2: AI in Power Electronics Chair: Jianing Wang, Hefei University of Technology, CN	Conference Room 14A Oral Session 3: Advanced Power Semiconductor Devices Technology Chair: Norbert Pluschke, CN-iCuTech Semiconductor, HKSAR, CN Yi Tang, Starpower Semiconductor, CN	
12:15 – 13:30	Lunch Break		
13:30 – 15:00	Poster Dialogue Session 4 High Performance Power Conversion Chair: Lie Xu, Tsinghua University, CN	Poster Dialogue Session 5 Motor Drive & Motion Control Chair: Jinsong Kang, Tongji University, CN Gaosheng Song, Mitsubishi Electric & Electronics (Shanghai) Co., Ltd.	Poster Dialogue Session 6 Automotive Power Electronics and Electrified Transportation Chair: Guoqiang Zhang, Harbin Institute of Technology, CN Gang Yao, Shanghai Maritime University, CN
15:00 – 16:50	Conference Room 14B Oral Session 4: AI in Power Electronics Chair: Jinjun Liu, Xi'an Jiaotong University, CN Lifeng Chen, Infineon Technologies, CN	Conference Room 14A Oral Session 5: Packaging and Reliability for Power Semiconductors Chair: Naoto Fujishima, Fuji Electric, JP Xuhui Wen, Institute of Electrical Engineering, Chinese Academy of Sciences, CN	
16:50 – 17:00	Excellent Poster Award Ceremony Poster Dialogue Session 4-6		

Friday, 28 August 2026

09:30 – 10:10	Conference Room 14B	Keynote 3: Enabling the Medium-Voltage Revolution: Innovations in 10kV SiC Power Packaging Platforms Speaker: Ziyang Gao, Hong Kong Microelectronics Research and Development Institute, HKSAR, CN Chair: Dong Li, Infineon Technologies Asia Pacific Pte Ltd, SG	
10:10 – 10:25	Coffee Break & Room Change		
10:25 – 12:15	Conference Room 14B Oral Session 6: Motor Drives and Electrified Transportation Chair: Yongdong Li, Tsinghua University, CN Dapeng Zheng, Shenzhen Hopewind Electric, CN	Conference Room 14A Oral Session 7: Power Electronics for Smart Grid Chair: Meiqin Mao, Hefei University of Technology, CN Jianping Ying, Delta Electronics, CN	
12:15 – 13:30	Lunch Break		
13:30 – 18:00	The PCIM Asia Shenzhen Tour *only by invitation, First in first served		

Award Finalists

BEST PAPER AWARD FINALIST (1 WINNER)



pcim
ASIA SHENZHEN
Best Paper Award
FINALIST

This award is sponsored by:



Yuhao Wang, Shenzhen Pinghu Laboratory, CN

Low-Voltage p-GaN Gate HEMTs on 200-mm GaN-on-Si Platform with Record-Low $R_{ON, SP}$ and $R_{ON} \times Q_G$ for Advanced AI Power Delivery

27.8 | 11:25 a.m. | Conference Room 14A



Yanzeng Wen, ASTRI Science and Technology Research (Shenzhen) Company Limited, CN

Lightweight Arc Fault Detection by Optimized Machine Learning with Multi-dimensional Features

27.8 | 16:25 p.m. | Conference Room 14B



Ziyi Xu, Hefei University of Technology, CN

Current Balancing Control for Microsecond-Ranged Pulsed Current Generation in Laser Applications

27.8 | 13:30 p.m. | Poster Gallery

YOUNG ENGINEER AWARD FINALISTS (1 WINNER)



pcim
ASIA SHENZHEN
Young Engineer Award
FINALIST

This award is sponsored by:



Yanzeng Wen, ASTRI Science and Technology Research (Shenzhen) Company Limited, CN

Lightweight Arc Fault Detection by Optimized Machine Learning with
Multi-dimensional Features

27.8 | 16:25 p.m. | Conference Room 14B



Xin Li, Naval University of Engineering, CN

A Solid-State High-voltage High-frequency Pulse Power Supply with Adjustable
Pulse Speed for Multi-Type Loads

26.8 | 13:30 p.m. | Poster Gallery



Chuanchuan Liang, Southeast University, CN

A Robust PPO-based Control Scheme for 1 MHz DC-DC Converters with
Multi-Domain Disturbance Resilience

27.8 | 16:00 p.m. | Conference Room 14B

UNIVERSITY SCIENTIST AWARD FINALISTS (5 WINNER)



pcim
ASIA SHENZHEN
University Scientist Award
FINALIST

This award is sponsored by:



Ziyi Xu, Hefei University of Technology, CN

Current Balancing Control for Microsecond-Ranged Pulsed Current Generation in Laser Applications

27.8 | 13:30 p.m. | Poster Gallery



Rui He, Harbin Institute of Technology, CN

Research on Online Apparent Inductance Identification Method for PMSMs Based on dq- Axis Coupling Suppression

27.8 | 13:30 p.m. | Poster Gallery



Valentyna Afanasenko, University of Stuttgart, DE

Non-Destructive Bond Wire Failure Detection in SiC Power Transistors Using Reflectometry Signals

26.8 | 13:30 p.m. | Poster Gallery



Christos Mademlis, ARISTOTLE UNIVERSITY OF THESSALONIKI, GR

Coordinated and Market-Oriented Virtual Power Plants for Enhancing Building Energy Performance

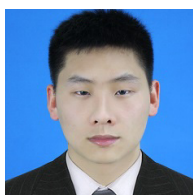
28.8 | 11:50 a.m. | Conference Room 14A



Xin Li, Naval University of Engineering, CN

A Solid-State High-voltage High-frequency Pulse Power Supply with Adjustable Pulse Speed for Multi-Type Loads

26.8 | 13:30 p.m. | Poster Gallery



Chuanchuan Liang, Southeast University, CN

A Robust PPO-based Control Scheme for 1 MHz DC-DC Converters with Multi-Domain Disturbance Resilience

27.8 | 16:00 p.m. | Conference Room 14B



Jiahao Zheng, Zhejiang University, CN

A Dual-Symmetric S-Channel Composite Heatsink for High-Reliability PEBB Modules

27.8 | 16:25 p.m. | Conference Room 14A



Xinyi Yan, Harbin Institute of Technology, CN

A Three-Module Parallel Megahertz Inverter System with Wide Power Regulation Range

26.8 | 16:00 p.m. | Conference Room 14A

EXCELLENT POSTER AWARD



pcim
ASIA SHENZHEN
Excellent Poster Award
FINALIST

This award is sponsored by:



This award will be conducted on-site by the Session Chair based on paper quality, poster design, presentation, and Q&A performance.

26 – 27.8 | 16:50-17:00 p.m. | Conference Room 14B

Keynotes



Speaker:
Dehong Xu, Zhejiang University, CN



Chair:
Leo Lorenz, ECPE, DE

Wednesday, 26 August 2026 09:40 a.m., Conference Room 14B

Challenges and Innovations in Data Center Power Systems to Meet the AI Power Demand

AI is not only changing our society it's having an impact on the next wave of industrialization. To satisfy the AI power consumption large Data Centers are required. This key-note will highlight important challenges we are faced with.

Unique highlights of this presentation will examine the power delivery pathway from the grid edge all the way to the chips, addressing key aspects such as new data center power supply architectures, power conversion stages, mitigation of fast GPU load fluctuations, and the integration of renewable energy sources.

Specific points of discussion will highlight: Why is it necessary to upgrade to medium voltage? What is advantage to use solid state transformer and what is challenge? To understand the demand of AI data centers to the power system will be practical takeaways.

For the audience from industry and academia it's attractive to inspire researchers and engineers to explore next-generation power supply technologies that can support the sustainable and scalable development of AI data centers. It will help you understand the opportunity and challenge with respect to the power supply systems, power conversion, and components.



Speaker:
Mark Nils Muenzer, Infineon Technologies AG, DE



Chair:
Gourab Majumdar, Mitsubishi Electric Corporation, JP

Thursday, 27 August 2026 09:30 a.m., Conference Room 14B

Semiconductor contribution to performance & efficiency of Automotive Traction Inverters

Selecting power semiconductor devices which meet performance, efficiency and cost targets is a challenge during every development of an automotive traction inverter. Today various materials Si, SiC & GaN and device structures IGBT, MOSFET and HEMT are investigated. While silicon IGBTs offer cost effective peak power, introduction of SiC MOSFETs boosted the efficiency of automotive traction inverters to more than 98% with the support of latest trench cell design. By combining both technologies in a Fusion switch an additional trade off point is available in the market. Finally, advancements in the development of GaN HEMTs are promising competitive devices for future generations of traction inverters. Setting the basis, all these solutions are evaluated as they support various voltage classes and vehicle configurations. To harvest the full performance of any of these power semiconductor devices, gate controls can be adapted. Increased switching speed reduces losses, but Electromagnetic Compatibility (EMC) has to be managed. Furthermore, switching speed will influence effective dead times. The paper explores the possibilities for slew rate control with optimized dead times under consideration of Electromagnetic Interference (EMI) aspects. To demonstrate these effects the paper is supported by experimental results of a 1200V power module with latest asymmetric trench SiC MOSFETs from a 3rd generation. How improved gate control influences the power semiconductor selection will be discussed by comparing CLTP range for 400V and 800V powertrain designs with Si IGBT, SiC MOSFET, Fusion switch and GaN HEMT.



Speaker:
Ziyang Gao, Hong Kong
Microelectronics Research and
Development Institute (MRDI), CN



Chair:
Dong Li, Infineon
Technologies Asia Pacific
Pte Ltd, SG

Friday, 28 August 2026 09:30 a.m., Conference Room 14B

Enabling the Medium-Voltage Revolution: Innovations in 10kV SiC Power Packaging Platforms

The rapid expansion of AI data centers, electrified transportation, and medium-voltage distribution grids has driven an urgent need for highly efficient solid-state transformers. Utilizing 10kV Silicon Carbide (SiC) devices can drastically simplify converter topologies, reducing the required switching cells from approximately thousands to just tens. However, the packaging of 10kV SiC devices presents severe physical challenges: extreme electric field concentrations at the packaging "triple points" leading to partial discharge, high-frequency parasitic parameters causing severe electromagnetic interference (EMI), and dynamic current imbalances in multi-chip configurations. This talk provides a comprehensive review of state-of-the-art 10kV SiC power module packaging technologies aimed at overcoming these critical bottlenecks. It systematically examines recent advancements in high-voltage insulation, including novel substrate geometries and advanced dielectric materials used to regulate electric field stress. Additionally, it explores low-parasitic design strategies—such as integrated common-mode screens and optimized commutation loops—to mitigate EMI and transient overshoots. Finally, the review discusses multi-chip integration methods and advanced current monitoring techniques to ensure reliable dynamic sharing. By synthesizing the current literature, this talk highlights the technological pathways necessary to unlock the full potential of 10kV SiC devices for the next medium-voltage power electronics revolution.



Conference

Wednesday, 26 August 2026

Morning Special Session

09:00 – 09:40 Conference Room 14B **Conference Opening & Award Ceremony**
Conference Director: Leo Lorenz, ECPE, DE
Moderator: Yongdong Li, Tsinghua University, CN



09:40 – 10:20 Conference Room 14B **Keynote 1**
Challenges and Innovations in Data Center Power Systems to Meet the AI Power Demand
Speaker: Dehong Xu, Zhejiang University, CN
Chair: Leo Lorenz, ECPE, DE

10:20 – 10:35 **Tea break**

Conference room 14B

Power Supply for AI Data Center



Chairperson:
Yenan Chen, Zhejiang University

10:35
Chair's opening speech



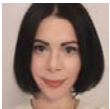
10:45
Challenges and Trends of Energy Efficiency Solutions for AI Data Center

Jinfa Zhang, Delta Electronics (Shanghai) Co., Ltd., CN



11:35
Powering the AI Revolution: Power Supply Units for next Generation AI Data Centers

Diogo Varajao, Infineon Technologies, DE



11:10
Powering the Future of AI
Ilknur Colak, VenterA Grid, DE



12:00
Topology and Magnetics for Vertical Power Delivery
Yenan Chen, Zhejiang University, CN

12:25 – 13:30 **Lunch Break & Room Change**

13:30 – 15:00 **Poster Dialogue Session**



Conference

Wednesday, 26 August 2026

Afternoon Oral Sessions

Conference room 14B

WBG Power Semiconductor Device

15:00 Chair's opening speech



Chairperson:
Bo Zhang,
University of Electronic Science and
Technology of China, CN



Chairperson:
Masahiro Sasaki,
Fuji Electric Co., Ltd., JP



15:10
**Time-variant and Hysteresis Effects in the
Thermal Characterization of Wide Band Gap
Components**

Zoltan Sarkany, Gabor Farkas, Sandor Ress, Wang
Gang, Siemens Digital Industry Software, HU
Sandor Ress, Department of Electron Devices, Budapest
University of Technology and Economics, HU



16:00
**Overload Investigation of 3.3kV SiC-MOSFET
Power Module for Medium-Power Applications**

Bochen Liu, Muhammad Nawaz, Lu Wang, Tim Augustin,
Hitachi Energy, SE



15:35
**All-SiC Power Modules Using 3rd-Gen Trench
SiC MOSFETs with Expanded Current Ratings
and SBD-Less Architecture**

Song Chen, Fuji Electric (China) Co., Ltd., CN
Taku Takaku, Aiko Takasaki, Junya Kawabata, Yoshiaki
Toyoda, Keiji Okumura, Fuji Electric Co., Ltd., JP



16:25
**New 6.5 kV IGBT Press-Pack Module and FRD for
Multi-GW VSC- HVDC Applications**

Evgeny Tsyplakov, Alexey Sapozhnik, Athanasios
Mesemanolis, Umamaheswara Vemulapati, Boni Boksteen,
Arthur Su, Milad Maleki, Makan Chen, Hitachi Energy, CH



Conference room 14A

High Efficiency Power Converter

15:00 Chair's opening speech



Chairperson:
Min Chen,
Zhejiang University, CN



Chairperson:
Teng Wu,
Schneider Electric, CN



15:10 **TLVR-Enhanced Interleaved Class-D Power Amplifier for High-Bandwidth Motor Emulation**

Wei Cao, Ruitie Li, Binbin Li, Licong Wu, Yingzong Jiao, Dianguo Xu, School of Electrical Engineering, Harbin Institute of Technology, CN



16:00 **A Three-Module Parallel Megahertz Inverter System with Wide Power Regulation Range**

Xinyi Yan, Yueshi Guan, Yijie Wang, Dianguo Xu, Harbin Institute of Technology, CN



15:35 **Development of A 3-level ANPC 800kW-class Power Stack based on 1200V IGBT Module for Renewable Energy Application**

Zhengfeng Li, Nobuya Nishida, Mitsubishi Electric Corporation, JP
Takamasa Oda, MELCO Semiconductor Engineering Corporation, JP
Bo Hu, Jian Sun, Mitsubishi Electric & Electronics (Shanghai) Co., Ltd, CN



16:25 **A Wide Bandgap (WBG) Based Bidirectional LLC Converter for Energy Storage Systems (ESSs)**

Wenping Zhang, David Zhang, Fred Hao, Chris Shang, Hobart Hua, Albert Chen, Infineon, CN
Stefano de Filippis, Gerald Deboy, Infineon Technologies Austria AG, AT
Jonathan Schmitt, Stahl Juergen, Christian Burrer, Infineon Technologies AG, DE



Scan the code to follow the official WeChat account for more informations.



Conference

Thursday, 27 August 2026

Morning Special Session & Oral Sessions

09:30 – 10:10

Conference room 14B **Keynote 2**

Semiconductor contribution to performance & efficiency of Automotive Traction Inverters

Speaker: Mark Nils Muenzer, Infineon Technologies AG, DE

Chair: Gourab Majumdar, Mitsubishi Electric Corporation, JP

10:10 – 10:25

Tea Break & Room Change

Conference room 14B

Special Session: AI in Power Electronics

10:25 **Chair's opening speech**



Chairperson:

Jianing Wang,
Hefei University of Technology, CN



10:35

From Local Optimization to General Design Platform — An Intelligent Practices and Demo for Power Electronic Converters and Component Design

Jianing Wang, Hefei University of Technology, CN



11:25

AI-Enabled Optimization of Modulation Techniques in Power Electronics

Weihao Hu, University of Electronic Science and Technology of China, CN



11:00

AI for Power Electronics Design: From Smart Algorithms to Intelligent Systems

Yu Chen, Huazhong University of Science and Technology, CN



11:50

Understanding, Not Just Search — Engineer-Experience-Driven Vertical Agents for Semiconductors

Ying Wu, Hangzhou Junction Magic Technology Co., Ltd., CN

12:15 – 13:30

Lunch Break

13:30 – 15:00

Poster Dialogue Session

Conference room 14A

Oral Sessions: Advanced Power Semiconductor Devices Technology

10:25 Chair's opening speech



Chairperson:
Norbert Pluschke,
CN-iCuTech Semiconductor, HKSAR, CN



Chairperson:
Yi Tang,
Starpower Semiconductor, CN



10:35 Next-Generation 2300 V IGBT Chipset for Renewable Energy Applications

Nick Schneider, Roger Stark, Tommaso Steconi, Nicolo Oliva, Paula Reigosa, Lars Knoll, SwissSEM Technologies AG, CH
Norbert Plüschke, SunKing Pacific Semiconductors Hong Kong, HKSAR, CN



11:25 Low-Voltage p-GaN Gate HEMTs on 200-mm GaN-on-Si Platform with Record-Low $R_{ON,SP}$ and $R_{ON} \times Q_G$ for Advanced AI Power Delivery

Yuhao Wang, Yu Shi, Yan Cheng, David Zhou, Xinying Huang, Yu Zhang, Changan Li, Zidong Cai, Haolin Hu, Wei Zeng, Xiaoping Wang, Yuxi Wan, Shenzhen Pinghu Laboratory, CN
Yan Cheng, Zongjie Zhou, Yat Hon Ng, Kevin J. Chen, The Hong Kong University of Science and Technology, HKSAR, CN



11:00 Performance of a New Power MOSFET Technology Designed to Serve the Requirements of Motor Drive Applications

Owen Song, Infineon Semiconductors Company Ltd., CN
Li Juin Yip, Alexander Breymesser, Tien Quang Tran, Cesar Braz, Joachim Schoenle, Tomasz Naeve, Gregor Toschkoff, Ralf Siemienieć, Infineon Technologies Austria AG, AT



11:50 Temperature Dependent Characterization of the Dynamic $R_{DS,ON}$ of Medium Voltage GaN Power HEMTs

Maximilian Goller, Madhu Lakshman Mysore, Gengqi Li, Mohamed Alaluss, Josef Lutz, Thomas Basler, Chemnitz University of Technology, DE

Conference

Thursday, 27 August 2026

Afternoon Oral Sessions

Conference Room 14B

AI in Power Electronics

15:00 Chair's opening speech



Chairperson:

Jinjun Liu,
Xi'an Jiaotong University, CN



Chairperson:

Lifeng Chen,
Infineon Technologies, CN



15:10

Topology-Aware Attention-Enhanced Heterogeneous Graph Convolution for MMC Fault Diagnosis

Zhangtiancheng Wen, Tianzhen Wang, Haoran Wang,
Logistics Engineering College of Shanghai Maritime
University, CN



16:00

A Robust PPO-based Control Scheme for 1 MHz DC-DC Converters with Multi-Domain Disturbance

Chuanchuan Liang, Chaohong Zhang, You Du, Yida Chen,
Guanghui Liu, Xueyong Zhang, Shen Xu, Weifeng Sun,
Southeast University, CN
Yunwu Zhang, National Silicon Integrated Circuit Technology
(Wuxi) Co., Ltd., CN



15:35

A Novel Reinforcement Learning-based Controller for DC-DC Buck Converter

Chaohong Zhang, Xueyong Zhang, Yida Chen, You
Du, Guanghui Liu, Shen Xu, Weifeng Sun,
Southeast University, CN



16:25

Lightweight Arc Fault Detection by Optimized Machine Learning with Multi-dimensional Features

Victor Cheung, Hong Kong Applied Science and Technology
Research Institute, CN
Yanzeng Wen, ASTRI Science and Technology Research
(Shenzhen) Company Limited, CN



Conference Room 14A
Packaging and Reliability for Power Semiconductors

15:00 **Chair's opening speech**



Chairperson:
 Naoto Fujishima,
 Fuji Electric, JP



Chairperson:
 Xuhui Wen,
 Institute of Electrical Engineering, Chinese
 Academy of Sciences, CN



15:10
New Pressure Technology for SiC Power Modules
 Norbert Pluschke, CN-iCuTech Semiconductor Co., Ltd
 Hongkong, HKSAR, CN
 Owen Qiu, CN-iCuTech Ltd, CN



16:00
Power cycling and thermal shock reliability of novel copper preforms
 Sri Krishna Bhogaraju, Alberto Siligardi, CuNex GmbH, DE
 Yi Zhang, Xinyue Zhang, The Hong Kong Polytechnic
 University, The Department of Electrical and Electronics
 Engineering, CN
 Stephen Shu, Schlenk Metallic Pigments (Shanghai)
 Co., Ltd, CN



15:35
Application of Sintering Technology in SiC Modules
 Shaolun Yang, Chun-Kai Chang, Sung-Hung Chiang,
 Kai-Mou Chou, Ji-Ming Li, Advanced Semiconductor
 Engineering, Inc. (ASE), CN



16:25
A Dual-Symmetric S-Channel Composite Heatsink for High-Reliability PEBB Modules
 Jiahao Zheng, Haoqi Zhu, Hongyu Feng, Xiaoshuang
 Li, Guozhu Chen, Zhejiang University, CN
 Haoqi Zhu, Hong Qin, Shaoxing Institute Zhejiang
 University, CN



Scan the code to visit the
 official website for more
 informations.



Conference

Friday, 28 August 2026

Morning Oral Sessions

09:30 – 10:10

Conference Room 14B **Keynote 3**

Enabling the Medium-Voltage Revolution: Innovations in 10kV SiC Power Packaging Platforms

Speaker: Ziyang Gao, Hong Kong Microelectronics Research and Development Institute (MRDI), CN

Chair: Dong Li, Infineon Technologies Asia Pacific Pte Ltd, SG

10:10 – 10:25

Coffee Break & Room Change

Conference Room 14B

Motor Drives and Electrified Transportation

10:25 **Chair's opening speech**



Chairperson:

Yongdong Li,
Tsinghua University, CN



Chairperson:

Dapeng Zheng,
Shenzhen Hopewind Electric, CN



10:35

DCVO-ESO Fusion for High-Precision Position Estimation in Sensorless PMSM Drives

Linna Ji, Guodong Yu, Xinyang Li Yalong Gao,
Yongxiang Xu, Harbin Institute of Technology, CN



11:25

A Novel CMV and ZSC Simultaneous Suppression Method for Open-Winding PMSM with Common DC Bus Based on DPCC

Bowen Wang, Xiaoguang Zhang, North China University of Technology, CN



11:00

Analysis of Two In-Phase Current Sensing Implementations for Humanoid Robotic Motor Control

Alan Lun Wai-Keung, Yau Man Wai, Tsui Chi Lok,
Infineon Technologies Hong Kong Ltd., HKSAR, CN
Michael Schmidt, Patrick Haselwanter, Martin Schiestl,
Infineon Technologies Austria AG, AT



11:50

SiC Power Module for xEV with High Power-Density, Low Stray-Inductance, and Optimized Chip Paralleling Design

Yuhang Yang, Hengyuan Peng, Haoyang Xu, Mingli Ma, Lei Zhang, Jiemin Cao, Hangzhou Silan Microelectronics Co., Ltd., CN
He Xu, Jingkui Shi, Zinsight Technology (Shanghai) Co., Ltd., CN

12:15 – 13:30

Lunch Break

13:30 – 18:00

The PCIM Asia Shenzhen Tour

*only by invitation, First in first served

Conference Room 14A

Power Electronics for Smart Grid

10:25 Chair's opening speech



Chairperson:
Meiqin Mao,
Hefei University of Technology, CN



Chairperson:
Jianping Ying,
Delta Electronics, CN



10:35 Proper Design of Energy-Supporting for Sustainable Li-ion Battery Performance in Electric Vehicles

Christos Mademlis, Nikolaos Jabbour, Evangelos Tsioumas,
ARISTOTLE UNIVERSITY OF THESSALONIKI, GR



11:00 Simplified Modeling and Analysis of Multi-Phase COT Buck Converter with Overlapping Operation based on Pade Approximation

Na Yan, QiDong Wang, ShiQing Ye, FengZe Hou, Xiangan You, ZhiDan Fang, Institute of Microelectronics of the Chinese Academy of Sciences, CN
YiJie Qian, Southeast University, CN



11:25 SSR-Based Reconfiguration and Power Sharing in a Three-Port PV-Battery-AC Converter under PV Power Drop

Peng Yang, Junyv Cheng, Kaiyin Mo, WenJing Wang, ShunChen Yao, Yun Xu, National High Magnetic Field Center, School of Electrical and Electronic Engineering, Huazhong University of Science and Technology, CN



11:50 Coordinated and Market-Oriented Virtual Power Plants for Enhancing Building Energy Performance

Christos Mademlis, Despoina Antoniadou, Nikolaos Jabbour, Evangelos Tsioumas, ARISTOTLE UNIVERSITY OF THESSALONIKI, GR

Conference Wednesday, 26 August 2026 Poster Dialogue Session

13:30 – 15:00 Poster Dialogue Session 1 – 3

Power Devices



Chairperson:
Yijun Chan,
Cycotec Co., Ltd, TW, CN



Chairperson:
Haihui Luo,
Zhuzhou CRRC Times Semiconductor, CN

PP001



A Simulation Investigation into HPD Power Modules

Lei Zhang, Hao Liu, Sen Wang, Kegiang Ma, Rui Li, Xianfeng Dai, Chengdu Semi-Future Technology Co., Ltd, CN

PP002



900V high junction temperature and high reliability SiC MOSFET for Automotive Drive Applications

Xin Yuan, Yafei Wang, Wei Liu, Guodong Cheng, Yao Yao, Qiang Xiao, Haihui Luo, Wenqing Mei, Zhuzhou CRRC Times Semiconductor Co., Ltd., State Key Laboratory of Power Semiconductor and Integration Technology, CN

PP003



High power density 1700V/1000A RC IGBT module for Wind energy application

Hai Cai, Liheng Zhu, Qiqi Liu, Rongzhen Qin, Qiang Xiao, Haihui Luo, State key Laboratory of Advanced Power Semiconductor Devices, Zhuzhou CRRC Times Semiconductor Co., Ltd., CN

PP004



A New 6 Inch IGCT Platform for up to 8.5 kV with Outstanding Current Capability

Christian Winter, Umamaheswara Vemulapati, Tobias Wikström, Thomas Stiasny, Chiara Corvasc, Hitachi Energy Ltd. Semiconductors, CH

PP005



High Robustness Operation of 4.5 kV / 1500 A IGBT Modules in a 2-Parallel Configuration for HVDC Submodules

Shota Saito, Yoichi Hironaka, Ryo Tsuda, Nobuhiko Tanaka, Kenji Hatori, Mitsubishi Electric Corporation, JP
Jian Sun, Bo Hu, Gaosheng Song, Mitsubishi Electric & Electronics (Shanghai) Co., Ltd., CN

PP006



Research on Current Sharing and Optimization of Three-Chip Parallel IGBT Modules During Switching Process

Rui Li, Ke Yang, Kegiang Ma, Min Hu, Hao Liu, Lei Zhang, Yu Zhang, Sen Wang, Chengdu Semi-Future Technology Co., Ltd., CN

PP007



High-Temperature Design Considerations for Silicon Based Automotive Inverters with 750V EDT HiT

Nebojsa Levkovski, Mathias Geike, Tomas Reiter, Matthias Fiebig, Alexandra Bausch, Infineon Technologies AG, DE

PP008



New-Generation 1400V U4 IGBT Module for Higher Power Density PV Inverter Applications

Hanwen Deng, Di Li, Lixiao Liang, Liheng Zhu, Rongzhen Qin, Qiang Xiao, State key Laboratory of Advanced Power Semiconductor Devices, Zhuzhou CRRC Times Semiconductor Co., Ltd., CN

PP009



8th Generation LV100 IGBT Module for High Power Central-type PCS

Bo Hu, Jian Sun, Siqing Lu, Gaosheng Song, Mitsubishi Electric & Electronics (Shanghai) Co., Ltd., CN
Nobuya Nishida, Zhengfeng Li, Mitsubishi Electric Power Device Works, JP

PP010



Replacing 4PP: Non-Contact Sheet Resistance Measurement for Power Module Materials

Bo Chen, Michael Hofmann, Marcus Klein, SURAGUS GmbH, DE

PP011



New Generation 6500V/600A Full SiC Power Module for High Speed Railway Traction Application

Guangyuan Qin, Yanxi Li, Haihui Luo, Tingchang Shi, Chengchen Liu, Hui Wang, Qiang Xiao Zhuzhou CRRC Times Semiconductor Co., Ltd., CN

PP012



Design Considerations of Active Neutral Point Clamped Inverter for Energy Storage System

Andrew Yang, Yongtaek Lee, onsemi, KR
Lei Yang, Liwei Yin, Yi Liu, onsemi, CN

PP013



Performance Benchmarking of Si IGBT and SiC MOSFET in a 1200 V / 600 A Automotive EVD Power Module

Lars Knoll, Tommaso Stecconi, Raffael Schnell, Paula Reigosa, Sven Matthias, Nick Schneider, Roger Stark, Nicolo Oliva, SwissSEM Technologies AG, CH
Coris Li, Leon Liang, Sun.King Pacific Semiconductor Technology, CN

PP014



A Solid-State High-voltage High-frequency Pulse Power Supply with Adjustable Pulse Speed for Multi-Type Loads

Xin Li, Yifei Luo, Fei Xiao, Weichao Li, Honglin Li, Naval University of Engineering, CN
Rui Zhang, School of Integrated Circuits, Wuhan University, CN
Fengming Yang, School of Electrical and Electronic Engineering, Huazhong University of Science and Technology, CN

PP015



Effects of Gate Stress on Parameter Stability and Switching Losses in SiC MOSFETs

Wenqi Zhou, Bosch (China) Investment Ltd., CN
Caixia Xiao, Jochen Streit, Karl Oberdieck, Robert Bosch GmbH, DE

PP016



Impact of V_{th} Mismatch, Layout Symmetry, and Gate Resistance on Current Sharing in Parallel SiC MOSFETs

Nima Lotfi, Reinhold Elferich, Dr. Sebastian Fahlbusch, Nexperia Germany GmbH, DE
Thilo Steinbock, Prof. Klaus F. Hoffmann, Helmut-Schmidt-University, DE

PP017



48 V GaN Motor Drive with Diode-Less Operation and Short 30 ns Dead Time for 70A/100kHz systems

Nima Lotfi, Nexperia Germany GmbH, DE
Harvey Cheng, Filippo Scrimizzi, Sebastian Heinz, Tim Lischka; Pradip Chatterjeet, Nexperia B.V., IT

PP018



Research on Packaging Structure of T-Type Three-Level GaN/SiC Hybrid Power Module

Yuhui Kang, Xingjia Yang, Tianyu Zhao, Institute of Electrical Engineering, Chinese Academy of Sciences, State Key Laboratory of High Density Electromagnetic Power and Systems, CN
Puqi Ning, Tao Fan, Institute of Electrical Engineering Chinese Academy of Sciences, University of Chinese Academy of Sciences, State Key Laboratory of High Density Electromagnetic Power and Systems

PP019



Optimization of Gate Driver Current Shaping to Enhance Switching Performance of SiC-MOSFETs

Lan Fang, Choudhary Junaid Arshad, Pushkar Kulkarni, Mobility Electronics, Robert Bosch GmbH, DE

Power Devices, Packaging and Reliability



Chairperson:
Yong Kang,
Huazhong University of
Science and Technology, CN



Chairperson:
Wei Jing,
Semikron Danfoss,
CN

PP020



Design Considerations for Gate Driver Active Gate Control: Voltage Peak Suppression and Turn-off Loss

Kyusik Ma, Jaewon Choi, Dongsoo Kim, Jungdoo Kim, Jeongmin Son, Kyoungdeok Kim, Infineon Technologies, KR

PP021



Development of a New Package Supporting Both Through Hole and Surface Mount Types for Fan Applications

Masafumi Jochi, Toma Takao, Power Device Works, Mitsubishi Electric Co., Ltd., JP
Xiaoling Wang, Bizhe Zhu, Mitsubishi Electric & Electronics (Shanghai) Co., Ltd, CN

PP022



New Automotive Grade 1200 V SiC MOSFET-based Intelligent Power Module for Auxiliary Motor Drive Applications on BEVs

Kihyun Lee, Soohyuk Han, Kyoungpil Kang, Hyongsu Jo, Minsub Lee, Infineon Technologies Korea Co., KR

PP023



Compact DIPIPM used in dual axles servo

Siqing Lu, Yuancheng Zhang, Jinxin Shi, Semiconductor Division, Mitsubishi Electric & Electronics (Shanghai) Co., Ltd., CN

PP024



Thermal correlation among junction, NTC, and heatsink in 1200 V automotive-grade CIPOS™ Maxi IPM for automotive auxiliary motor drives

Hyongsu Jo, Jungdoo Kim, Jinhyeok Kim, Kihyun Lee, Soohyuk Han, Bokkeun Song, Infineon Technologies Korea, KR

PP025



Efficiency and Thermal Performance Comparison of SiC-MOSFET and Si-IGBT IPMs in the SPM31

Seonghyeon Kim, Sangmin Park, Junho Lee, Juyoung Kim, onsemi, KR

PP026



System-Level Short-Circuit Failure Mechanisms of IPMs in Practical Motor-Drive Applications

Yuquan Su, Shao-Nan Wang, Hao Lan, MiSilicon Semiconductor Technologies Co., Ltd., CN
Yuquan Su, Shao-Nan Wang, Hao Lan, StarPower Semiconductor Ltd

PP027



Junction Temperature Evolution of IGBTs under Power Cycling conditions

Juyoung Kim, Aster Park, onsemi, KR
Lei Yang, onsemi, CN

PP028



Non-Destructive Bond Wire Failure Detection in SiC Power Transistors Using Reflectometry Signals

Valentyna Afanasenko, Marius Niculescu, Ingmar Kallfass, Institute of Robust Power Semiconductor Systems, University of Stuttgart, DE
Markus Pfeiffer, Tim Sailer, Robert Bosch GmbH, DE

PP029



Advanced Thermal Management Solutions for Enhanced Compact 3D Power SiP Technologies

Po-An Lin, Hsin-Han Lin, Shih-Wen Lu, Harrison Chang, Advanced Semiconductor Engineering Inc, Taiwan, CN



Conference Wednesday, 26 August 2026 Poster Dialogue Session

13:30 – 15:00 Poster Dialogue Session 1 – 3

PP030



Research on the Optimal Combination of Plasma Cleaning for Power Modules under Square Wave Voltage

Yuntian Gao, Lingyu Zhu, Yingbin Li, Hao Sun, Xia Gong, Xi'an Jiaotong University, CN

PP031



Reliability and Manufacturing Comparison of Flexible and Straight Pin Interconnects for Pin-Array Power Modules

Sven Matthias, Raffael Schnell, Coris Li, SwissSEM Technologies AG, CH
Xu Quinn, Morax Wang, Ian Wang, Sunking Pacific Semiconductors Technology (Zhejiang) Co. Ltd, CN

PP032



Application of Laser Welding Technology in Power Module

Yi Chen, Ming-Hung Chen, Yi-Chun Chou, Ren-Jieh Kao, Yun-I Yeh, Advanced Semiconductor Engineering, INC, Taiwan, CN

PP033



Ceramic Packaging Technology for 250°C Medium High-Voltage Silicon Carbide Power Electronic Devices

Wenjie Wu, Zizhen Cheng, Kai Peng, Zhiqiang Zhao, Fengtao Yang, Laili Wang, Yongmei Gan, Xi'an Jiaotong University, CN

PP034



Thermal Characterization and Design Optimization of a Double Sided Cooled SiC Power Module for Automotive High Power Density Inverters

Devin Xu, Infineon Technologies China Co.,Ltd, CN
Alex Widhalm, Waldemar Jakobi, Christian Müller, Infineon Technologies AG, DE

PP035



Modeling Pressure Drop in Self-Circulating Phase-Change Cooling Systems for HVDC Converter Valves

Bendong Ma, Institute of Electrical Engineering, Chinese Academy of Sciences, University of Chinese Academy of Sciences, CN

PP036



Influence and Analysis of Different Device Modeling and Optimization on T_{vj} Calculation of SiC MOSFET under Extreme Operating Conditions

Hao Zhang, Xiaobo Jing, Infineon Technologies China Co. Ltd., CN
Xing Liu, Qing Sun, Ghazaryan Areg, Andreas Huerner, Maria Cotorogea, Infineon Technologies AG, DE

PP037



Effect of Humidity on the Reliability of Next-generation Chip Embedded PCB Packaging

Feng Li, Jun Wang, Miaoran Liu, Haozhe Chen, State Key Laboratory of Environmental Adaptability for Industrial Products, China National Electric Apparatus Research Institute Co., Ltd., CN
Rajan Ambat, Department of Civil and Mechanical Engineering, Technical University of Denmark, DK

PP038



A Newly 6-in-1 SiC Power Module Electro-Thermal-Reliability Co-Analysis

Feng Zhu, Yu Zhang, Mike Zeng, Yong Wu, Huihui Li, Daohui Li, Beijing NEXIC Technology Co., Ltd., CN
Youyang Wang, Nanjing University of Science and Technology, CN

PP039



Research and Development of a Low - Inductance, High - Power - Density Power Module Based on Transfer Molding Encapsulation Technology

Yuanjian Liu, Qiang Xiao, Haiding Shi, Guiqin Chang, QianYing Guo, TingChang Shi, Haihui Luo, Zhuzhou CRRRC Times Semiconductor Co.,Ltd, CN

PP040



Overview of High Heat Capacitor Materials for eMobility Applications

Adel Bastawros, SABIC, USA
Yuan Zhou, SABIC, CN
Fumio Yu, SABIC, JP

Smart Grid and AI



Chairperson:
Miao Zhu,
Shanghai Jiao Tong University, CN



Chairperson:
Teng Liu, China Southern Power Grid Electric Power Research Institute, CN

PP041



Application of Easy3B Module with new 7th Fast IGBT in String and Industrial & Commercial Energy Storage Systems

Kai Zhao, Mingdan Zhang, Infineon Semiconductors (Shenzhen) Co. Ltd., CN
Jiabao Jing, Shaoxiong Yao, Shenzhen Sinexcel Electric Co., Ltd, CN

PP042



A Zero-Vector-Based DC Chopper Control Strategy for Current-Source Converter Wind Turbines to Enhance LVRT Capability

Junye Chen, Michael Schütt, Hans-Günter Eckel, Rostock University, DE

PP043



From Passive Loads to Proactive Supporters: AC Motor Drives Providing Reactive Power for Grid under Low-Voltage Ride-Through

Xin Qi, Yuhang Zhao, Xiuchen Xu, University of Science and Technology Beijing, CN
Chaobo Dai, Zhenggang Lu, China Electric Power Research Institute, CN
Mario Pacas, University of Siegen, DE
Joachim Holtz, University of Wuppertal, DE

PP044



A Review of Global V2G Research from an Energy Technology Economics Perspective

Yueran Ni, Shanghai University of Engineering Science, CN

PP045



Application of Gallium Nitride (GaN) Bidirectional Switches (BDS) in Single-Stage Cycloconverter for Micro PV and Storage Systems

Wenping Zhang, Cici Chen, David Zhang, Chris Shang, Infineon Technologies (China) Co., Ltd., CN
Stefano de Filippis, Infineon Technologies Austria AG, AT
Jonathan Schmitt, Infineon Technologies AG, DE

PP046



A Power Converter Hardware-in-the-Loop System for Energy-Domain AI Evaluation

Fan Zhang, Shenzhen Power Bell Technology Co., Ltd., CN
Pingyang Sun, Georgios Konstantinou, School of Electrical Engineering and Telecommunications, UNSW Sydney, AU

PP047



TD3-Based Current Control for Grid-Tied Inverters: Markov-State Design and Per-Unit Normalization

Licong Wu, Ruitie Li, Binbin Li, Wei Cao, Chao Qi, Dianguo Xu, School of Electrical Engineering, Harbin Institute of Technology, CN
Yu Chen, College of Electrical Engineering and Automation, Shandong University of Science and Technology, CN

PP048



Analysis of Over-Current Withstand Capability of Discrete SiC MOSFETs for Interrupting MOV Paths in Solid-State Circuit Breakers

Wenqi Zhou, Bosch (China) Investment Ltd., CN
David Schadow, Jochen Kurfiss, Karl Oberdieck, Robert Bosch GmbH, DE

PP049



Coordinated network protection in DC grid

Xin Li, Shek Mong Wong, Tin Ho Li, Hong Kong Applied Science and Technology Research Institute, CN
Yanzeng WEN, ASTRI Science and Technology Research (Shenzhen) Company Limited, CN

PP050



A Solid-State Contactor for DC Electrical Power Systems

Yury Skorokhod, Dmitry Sorokin, Transconverter, RF
Sergey Volskiy, Moscow Aviation Institute (National Research University), RF



Conference Thursday, 27 August 2026 Poster Dialogue Session

13:30 – 15:00 Poster Dialogue Session 5 – 7

High Performance Power Conversion



Chairperson:
Lie Xu, Tsinghua University, CN

PP051



Integrated Matrix Transformer with Loss Optimization for High-Efficiency & High-Power-Density Asymmetric Half-Bridge Resonant Converters

Xiaojun Liang, Wang Zan, Qian Jiafa, Infineon Technologies, CN

PP052



Control of a GaN-Based T-Type Three-Level Converter

Tianyu Zhao, Jing Guo, Puqi Ning, Tao Fan, Xingjia Yang, University of Chinese Academy of Sciences, Institute of Electrical Engineering, Chinese Academy of Sciences, Key Laboratory of Power Electronics and Electric Drive, Institute of Electrical Engineering, Chinese Academy of Sciences, CN

PP053



Power Conversion Solutions for Next Generation 2000Vdc to 3000Vdc PV Inverter

Heng Wang, Infineon Integrated Circuit (Beijing) Co., Ltd., CN
Lifeng Chen, Infineon Technologies Center of Competence (Shanghai) Co., Ltd., CN

PP054



DPWM-Based Synergetic Control for Wide-Range Quasi-Single- Stage Three-Phase Voltage DC-Link Converters

Yushuo Pei, Yu Tang, Hebei University of Technology, CN
Danning Ji, State Grid Jibei Electric Power Company Limited, CN

PP055



Fast-Settling Dual-Loop 5 kV PSFB-CW HVDC Supply for Power Device Testing

Jing Tian, Jin Zhang, Xinyu Zou, Jing Chen, State Key Laboratory of High Density Electromagnetic Power and Systems, Institute of Electrical Engineering, Chinese Academy of Sciences, CN
Jing Tian, Xinyu Zou, Jing Chen, University of Chinese Academy of Sciences, CN

PP056



Current Balancing Control for Multi-phase Pulsed Laser Power Supply

Ziyi Xu, Helong Li, Zhiqing Yang, Xianbin Qi, Lijian Ding, State Key Laboratory of High-Efficiency and High-Quality Conversion for Electric Power, Hefei University of Technology, CN
Helong Li, Xianbin Qi, Anhui Province Key Laboratory of Semiconductor Packaging and Reliability, Hefei University of Technology, CN
Zhiqing Yang, Weibo Tian, Lijian Ding, Institute of Energy, Hefei Comprehensive National Science Center, Anhui Province Energy Laboratory, CN



PP057



Reduced-Order Time-Domain Modeling and ZVS-Oriented Design of Symmetric LCL-DAB Converters

Kaiyin Mo, Wenjing Wang, Junyu Chen, Peng Yang, Shuchen Yao, Miaomiao Li, Yun Xu, National High Magnetic Field Center, School of Electrical and Electronic Engineering, Huazhong University of Science and Technology, CN

PP058



Modeling and Optimal Control Strategy for LCC Resonant Converters Based on State Plane Analysis

Shuchen Yao, Wenjing Wang, Kaiyin Mo, Peng Yang, Junyu Chen, Huazhong University of Science and Technology, CN

PP059



Design and Development of a Low-Ripple, Low-Power High-Voltage Power Module for Spaceborne TRD

Yalin Liu, Gang Wang, Bin Zhao, Discipline and Technology Center of Vacuum Electronic Devices and Systems, Aerospace Information Research Institute, Chinese Academy of Sciences, CN
Gang Wang, Bin Zhao, School of Electronic, Electrical and Communication Engineering, University of Chinese Academy of Sciences, CN
Yizhong Wang, Shanghai Micro-Source Technology Co., Ltd., CN

PP060



Design of a Hybrid EMI Filter for High-Voltage High-Power Motor Drive Systems

Kun Ai, Jiulin Jin, Institute of Electrical Engineering, Chinese Academy of Sciences, CN
Kun Ai, Dong Zhang, Jiulin Jin, Jing Guo, Institute of Electrical Engineering, Chinese Academy of Sciences, CN

PP061



A Control Method for Input Voltage Feedforward Using Secondary-Side PWM Waveforms in High Power Density Isolated DC-DC Brick Power Modules

Shilin Guo, Yuting Hua, Peijun Cai, Weijian Tang, Hefei Institute of Technology, CN
Meiqin Mao, Jianhui Su, Hefei University of Technology, CN

PP062



Magnetic self-alignment for high power wireless charging applications

Yanzeng Wen, ASTRI Science and Technology Research (Shenzhen) Company Limited., CN
Chung Yin LAU, Xin Li, Tin Ho Li, Hong Kong Applied Science and Technology Research Institute, CN

PP063



Metal Foreign Object Detection Method in Wireless Power Transfer Systems Based on circuit currents

Nikolay Kalugin, Artem Haldobin, Valentin Gura, Energet LLC, RU

Motor Drive & Motion Control



Chairperson:
Jinsong Kang,
Tongji University, CN



Chairperson:
Gaosheng Song, Mitsubishi
Electric & Electronics
(Shanghai) Co. Ltd, CN

PP064



Fault-Tolerant Control for a Single Current Sensor Fault in Dual Three-Phase PMSM

Wenhao Lv, Guodong Yu, Hang Zhang, Jinyang Cai, Yongxiang Xu, Harbin Institute of Technology, CN

PP065



A Low-parameter-sensitivity DPCC Algorithm Based On Reference Voltage Error Compensation

Jiaying Xu, Xiaoguang Zhang, North China University of Technology, CN

PP066



3D-SVPWM for Three-Phase Three-Level Series-End Winding PMSM

Zhixuan Luo, Xingbang Liu, Yuanjin Ji, Tongji University, CN
Senyi Liu, ShanghaiTech University, CN

PP067



Polyimide-Based Isolator with Ultra-High Withstand Voltage for Motor Drivers

Yong Wang, Yantao Liu, Zhongzhi Chen, CrossChip MicroSystems, Inc., CN

PP068



Thrust Ripple Suppression of Symmetric Dual Three-Phase Linear Motor Based on Zero Vectors Optimization

Xinyue Li, Zongbo Hu, Jinsong Kang, Tongji University, CN
Xinmai Gao, CRRC Qingdao Sifang Co Ltd, State Key Laboratory of High-speed Maglev Transportation Technology, CN

PP069



Research on Electromagnetic Transient Modeling Based on 12-Phase Synchronous Generator

Bowen Yu, Jinsong Kang, Xinyue Li, Tongji University, CN

PP070



Speed-Dependent Electromagnetic-Thermal Analysis of LSLSM Mover

Lin Fan, Cheng Tian, Fei Ni, Jinsong Kang, Tongji University, CN
Fei Ni, National Maglev Transportation Engineering R&D Center, Tongji University, CN

PP071



A Power Pulsations Control Model based on Digital Motor Control Processing Tehniques DSP

Nicușor Totor, University Timișoara, RO

PP072



Deadbeat Direct Speed Control for IPMSM Based on Extended State Observer

Jinyang Cai, Guodong Yu, Lingbo Wang, Wenhao Lv, Yongxiang Xu, Harbin Institute of Technology, CN

PP073



Research on Online Apparent Inductance Identification Method for PMSMs Based on dq-Axis Coupling Suppression

Rui He, Qiwei Wang, Gaolin Wang, Dianguo Xu, Harbin Institute of Technology, CN



PP074



MLP-PI Current Control Strategy for PMSM Considering Inverter Nonlinearity

Jinlong Li, Xiaofeng Shen, Infineon Technologies AG, CN

PP075



Modeling of Permanent Magnet Synchronous Motors Based on Physics-Informed Neural Network

Liangrong Sun, Zongbo Hu, Tongji University, CN
Andong Song, Shanxi Key Laboratory of Rail Transit Locomotive System Integration, CRRC DaTong Co.,Ltd., CN

PP076



High Performance Sensorless Control of Permanent Magnet Synchronous Motor under Low Carrier Ratio

Kaixin Gao, Qiwei Wang, Gaolin Wang, Dianguo Xu, Harbin Institute of Technology, CN

PP077



Exact-Discrete PDC-Based Self-Correcting Deadbeat Predictive Current Control for Short-Stroke Ironless PMSLMs

Zhiyu Zhang, Ming Yang, Harbin Institute of Technology, CN

PP078



Deadbeat Predictive Control Strategy Based on Parameter Tuning

Shan Wang, Qiwei Wang, Gaolin Wang, Dianguo Xu, Harbin Institute of Technology, CN

PP079



Fixed-Time Consensus-Based Cooperative Speed Control for Multi-PMSM Systems with Optimal Current Regulation

Zhexi Xu, Shitao Song, Jun Gu, Xiaodong Ma, Wei Wang, Harbin Institute of Technology, CN

Conference Thursday, 27 August 2026 Poster Dialogue Session

13:30 – 15:00 Poster Dialogue Session 5 – 7

Automotive Power Electronics and Electrified Transportation



Chairperson:

Guoqiang Zhang, Harbin Institute of Technology, CN



Chairperson:

Gang Yao, Shanghai Maritime University, CN

PP080



A Four-Stage Model Predictive Current Control for PMSM Based on Voltage Vector Action Mode Reconstruction

Weihe Jing, Xiaoguang Zhang, Jiaying Xu, North China University of Technology, CN

PP081



Model Predictive Pulse Shifting Control Method for Permanent Magnet Synchronous Motor Based on SHEPWM

Xilin Jin, Xiaoguang Zhang, Bowen Wang, North China University of Technology, CN

PP082



Model Predictive Current Control of PMSM Based on Bayesian Recursive Least Squares

Bing Song, Xiaoguang Zhang, Ge Gao, Xiang Yu, North China University of Technology, CN

PP083



Novel observer for permanent magnet synchronous motor drive systems

Ge Gao, Xiaoguang Zhang, Xuanping Zhou, Song Bing, North China University of Technology, CN

PP084



Fault-Tolerant Model Predictive Current Control of Dual Three-Phase PMSM Based on Virtual Vectors

Xi Rao, Jinsong Kang, Tongji University, CN

PP085



The Information Network Architecture and Intelligent Motor Processing

Nicușor Totor, University Timișoara, RO

PP086



Deadbeat Compensation-Based Current Harmonic Suppression Strategy for PMSM Using Extended State Observer

Shan Wang, Qiwei Wang, Gaolin Wang, Dianguo Xu, Harbin Institute of Technology, CN

PP087



New Generation Automotive-Grade 1500V SiC MOSFET devices for Applications with 950V bus voltage

Wei Liu, Yao Yao, Chengrui Shao, Pengxiang Wang, Zixiang Zhang, Yafei Wang, Qiang Xiao, Zhuzhou CRRC Times semiconductor Co., LTD., State Key Laboratory of Power Semiconductor and Integration Technology, CN

PP088



Comparative Study on Short-Circuit Evaluation of Automotive Power Modules with SiC MOSFETs

Jiani He, Wenqi Zhou, Yanlin Li, Bosch (China) Investment Ltd., CN
Manuel Horvath, Josef Göppert, Robert Bosch GmbH, DE
Zaiman Xiang, Fudan University, CN

PP089



Advanced Isolated Gate Driver IC for High-Power-Density SiC/Si Power Modules in xEV Applications

Yo Habu, Shohei Sano, Kentaro Yoshida, Takuichiro Shitomi, Shuhei Matsuo, Mitsutaka Hano, Atsushi Ito, Mitsubishi Electric Corporation, JP
Kazuaki Hiyama, Takashi Watanabe, Melco Semiconductor Engineering Corporation, JP

PP090



Optimized Multi-Degree-of-Freedom Modulation for a 6.6 kW Integrated OBC–LDC Charger for Electric Vehicles

Chenli Zhou, Jianping Xu, Mingjing Li, Southwest Jiaotong University, CN
Shuman Miao, State Grid Chongqing Electric Power Company, CN

PP091



A Low Conduction Loss Modulation Strategy with Resonant Current Suppression for Dual Active Resonant Converters

Hongze Bu, Ru Cheng, Hao Niu, China Electronic Product Reliability and Environmental Test Institute, CN
Jiabao Jing, Shaoxiang Yao, Shenzhen Sinexcel Electric Co., Ltd, CN

PP092



Heterogeneous Test Bench Concept for Grid-Constrained Fast DC Charging

Nikolay Volskiy, Mikhail Kravivnoi, Charge Evolution Ltd, RU

32 | 33

Prominent Conference Speakers in 2026



Not in specific order

Registration Information

For Speaker

Speakers (Industry) Full Conference 1500 CNY

Speakers (University/Academia) Full Conference 750 CNY

* Lunch & a current e-proceeding & tea break & welcome dinner & award ceremony for inclusive

For Audience

3 Days Full Ticket 3,200 CNY

1 Day Ticket 1,600 CNY

* Lunch & a current e-proceeding & tea break for inclusive

Conference Proceedings

E-Proceedings of PCIM Asia Shenzhen 2026 (USB)	2,000 CNY
E-Proceedings of PCIM Asia Shanghai 2025 (USB)	800 CNY
E-Proceedings of PCIM Asia 2015-2024 (USB)	750 CNY



Scan to registration

Note

Your personal data will be encrypted on being forwarded and used by Guangzhou Guangya Messe Frankfurt Co., Ltd. And its affiliated companies only. If you do not wish to receive further information, please let us know immediately.

Concurrent Forums

Alongside the main exhibition, PCIM Asia Shenzhen hosts a selection of concurrent forums that provide additional opportunities for learning and interaction. On the concurrent forums, entrepreneurs, experts and industry representatives from the exhibitors, industry leaders and universities will share exciting innovations and forward-looking solutions in their speeches. We expect every audience could have an efficient and intensive opportunity to gather insights into the future of power electronics and contact industry technology representatives.

Summits

•Global Strategy Summit

Bringing together experts from academia, leading manufacturers, and end-users, the summit delivers authoritative insights on five critical themes—industry outlook, global strategy, technology roadmaps, product innovation, and capacity investment—to guide corporate strategy and investment decisions.

•Power Semiconductor Rising Stars Summit

The Power Semiconductor Rising Stars Summit focuses on cutting edge technologies and emerging applications in domestic power devices. Leading enterprises will share real world cases and cost optimization strategies, showcasing China's full chain technical breakthroughs and commercial success in power semiconductors.

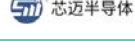
Themed Forums

- IGBT
- WBG_SiC
- WBG_GaN
- E-mobility
- Power Electronics
- Applications of SiC
- Packaging and Testing I
- AI Power Supply Applications
- Solid State Circuit Breaker (SSCB)
- Power Electronics Dominated Power System
- Intelligent Drive and Motion Control

Media-Joint Forum

- Packaging and Testing II
- Computing Power, Electric Vehicle, WBG Semiconductors
- GaN for Physical AI
- Ultra-wide Semiconductor

Speakers

Not in specific order

Industry-Academia-Research Collaboration Zone

The university, college and academic organization are playing professional and creative role in the industry. PCIM Asia Shenzhen always cares the current and future needs of them, and tries to bridge the research force and application practice.

To achieve this, PCIM Asia Shenzhen offers a series of supportive participation policies for universities, college and academic organizations.

Conference

pleasant price for the speakers and attendees who are from the university, college, academic organization.

Exhibition

opportunity to display in Industry-Academia-Research Collaboration Zone.

The mission of this Zone is to put industry-related university, college, academic organization and student first. PCIM Asia Shenzhen attempt to offer them a stage to stay with the company, and to influence, inspire with each other for professional and creative careers.

PCIM Asia Shenzhen works with advisory board nationally and internationally to ensure that the enterprises catch the innovative potentials, schools find the current application in real industry and students meet the future needs of employers.



Speaker Dialogue Zone

The Speaker Dialogue Zone is dedicated to enabling deep technical exchange between attendees and leading innovators. PCIM Asia Shenzhen recognizes the critical need for direct knowledge transfer in power electronics, and strives to dissolve barriers between theoretical research and industrial implementation.

To achieve this mission, PCIM Asia Shenzhen offers tailored engagement opportunities:

Conference Priority access to exclusive engagements with keynote speakers and advisory experts for in-depth technical discussions, case analysis, and collaboration matching.

Exhibition

- Dedicated space for case studies and prototype feedback
- Open forum for posting collaboration opportunities

The Speaker Dialogue Zone exists to put your technical challenges at the forefront. By facilitating unfiltered conversations between engineers, researchers, and industry leaders, we empower you to:

- Translate breakthrough concepts into viable solutions
- Discover real-world validation for research projects
- Forge partnerships that redefine industry standards

PCIM Asia Shenzhen collaborates with global technical leaders to ensure speakers address your immediate design dilemmas while enterprises gain early access to transformative innovations.



Not in specific order



pcim

11 – 13.5.2027

NUREMBERG, GERMANY

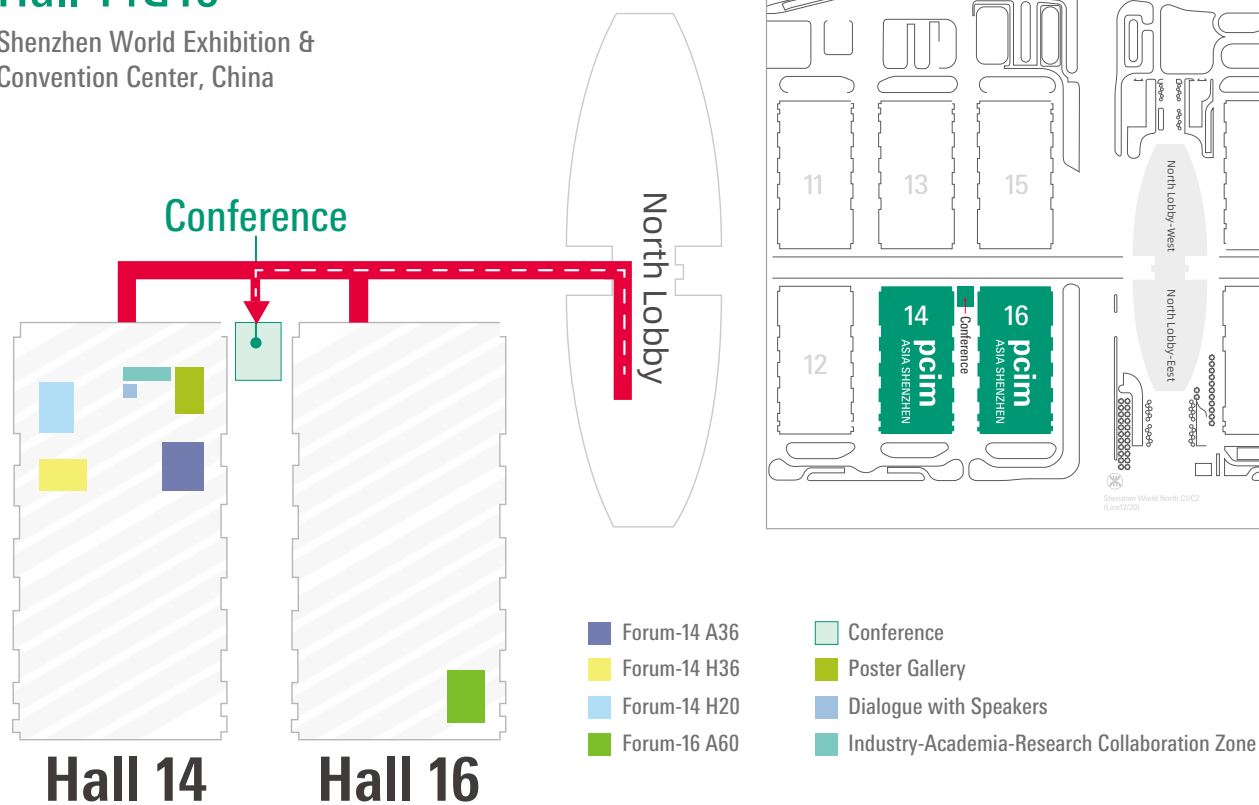
mesago

**EXCELLING
IN POWER
ELECTRONICS**

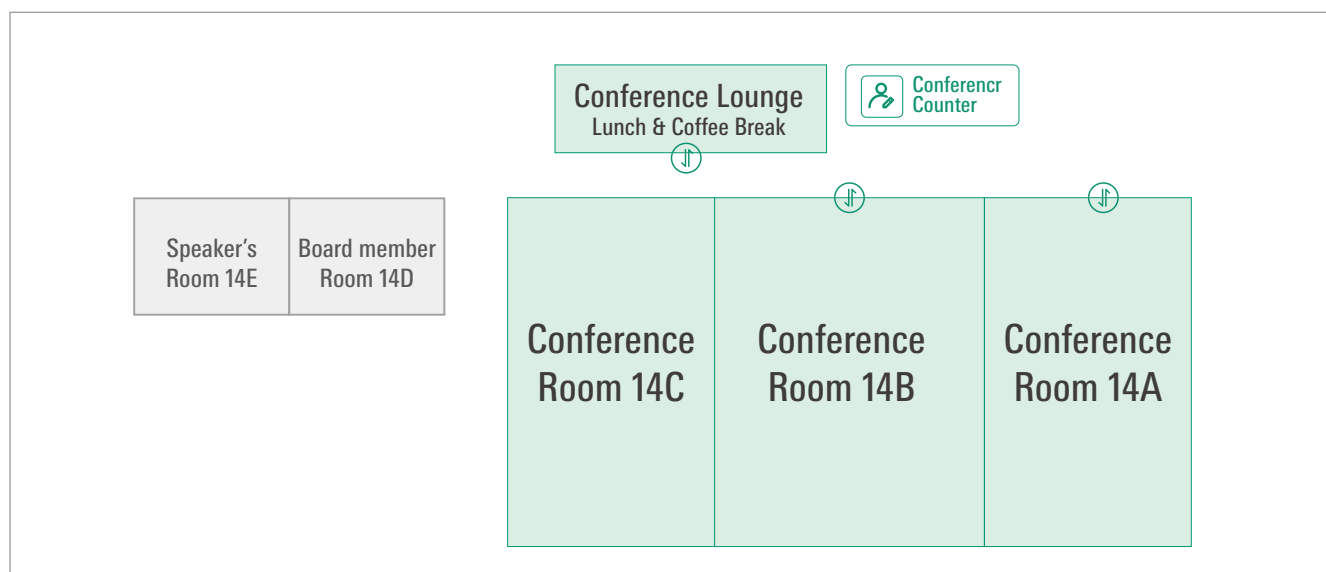
Exhibition grounds plan

PCIM Asia Shenzhen 2026 Hall 14&16

Shenzhen World Exhibition & Convention Center, China



Conference Layout Plan





mesago

pcim

ASIA SHANGHAI

25 – 27 August 2027

Shanghai New International
Expo Centre, China

PCIM Asia Shanghai – International Exhibition and
Conference for Power Electronics, Intelligent Motion,
Renewable Energy and Energy Management

**See you in
2027**

www.pcimasia-expo.com

messe frankfurt

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 Devices
- 1.5 GaN Devices
- 1.6 Other Wide Bandgap Devices
- 1.7 Power Supply Control IC and Power Management ICs
- 1.8 Gate Driver and Device Protection
- 1.9 IPM and Power Electronic Building Blocks

2. Packaging and Reliability

- 2.1 Packaging and Interface Technologies
- 2.2 Advanced Cooling Systems
- 2.3 Thermal Management and Simulations
- 2.4 Power Electronic Components Reliability and Life Time Prediction
- 2.5 Power Embedding
- 2.6 High Power Density Designs
- 2.7 Design Automation and Methodology

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

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 and Electrified Transportation

- 9.1 Hybrid / Electric Vehicle
- 9.2 MOSFET, IGBT and SiC Modules in Motor Traction and Propulsion Applications
- 9.3 DC/DC Conversion in Transportation Systems
- 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
- 9.8 Charging Station Technology

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 Design and 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
- 11.5 Electromagnetic Compatibility and Immunity

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
- 12.11 Communication, Cyber Security and Artificial Intelligence

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
- 13.6 Digital Twin for Transmission Equipment

14. AI in Power and Energy Systems

- 14.1 Smart Grid Management using AI
- 14.2 AI in power Load Balancing
- 14.3 Intelligent Fault Detection and Diagnostics
- 14.4 Predictive Maintenance of Electrical Infrastructure

15. AI in Renewable Energy Systems

- 15.1 Intelligent control of battery energy storage systems

16. AI in Electrical Machines and Drives

- 16.1 Machine Learning for fault diagnosis in induction motors
- 16.2 Predictive maintenance of electrical machines

17. AI in Power Electronics

- 17.1 AI based control of DC-DC And AC-AC Converters
- 17.2 Intelligent inverter design for grid-tied applications
- 17.3 Fault detection in power electronic circuits using AI
- 17.4 Predictive thermal management in power modules
- 17.5 AI-optimized switching strategies to reduce harmonics

18. AI in power Quality Monitoring

- 18.1 AI for classification of power failure probability

19. AI in Electric Vehicle (EV) Power Systems

- 19.1 Smart charging infrastructure using AI
- 19.2 Battery State of Health (SoH) and State of Charge (SoC) prediction
- 19.3 AI-based powertrain optimization
- 19.4 Load management of EV charging in smart grids

pcim

ASIA SHANGHAI

Save the date

25-27 August 2027



Call for Papers

Are you an expert in the field of power electronics and would you like to present your latest developments and research findings to a high-qualified audience from academia and industry?

Take the chance and become a speaker at the PCIM Asia Shanghai Conference from 25-27 August 2027!

Why be a speaker?

- Present your solution to an international audience
- Have your paper published in the PCIM Asia Conference proceedings, EI Compendex, IEEE Xplore, IET Inspec-Direct and Scopus
- Get the chance to win one of the attractive Awards
- Connect and engage with fellow professionals

What Awards Are Up For Grabs?

The awards will be selected by the Advisory Board from the accepted papers, and will be granted at conference opening on the first day morning.

Call for Paper Deadlines

Submission of your abstract **4 March 2027**

Notification of acceptance **May 2027**

Submission of your full manuscript **20 June 2027**

Please find detailed information instructions on submitting your synopsis or abstract online at

www.pcimasia-expo.com



pcim
ASIA SHANGHAI
Best Paper Award
WINNER

1 winner
Prize with RMB 8,000



pcim
ASIA SHANGHAI
Young Engineer Award
WINNER

1 winner
Prize with RMB 8,000



pcim
ASIA SHANGHAI
University Scientist Award
WINNER

5 winners
Prize with RMB 2,000/each



pcim
ASIA SHANGHAI
Excellent Poster Award
WINNER

1 winner/session
Prize with RMB 1,000/each

messe frankfurt