Conference Program PCIM Asia Shanghai 2025

Wednesday, 24 September 2025

Stage: Conference Room 1

09:10	**Conference opening & Award Ceremony** **Conference Director: Leo Lorenz, ECPC, DE**
10:00	Keynote Technology Trends and Future Perspectives of Power Electronics for Electric Vehicles Liu Chang, SuZhou Inovance Automotive Co., ltd., CN **Chairperson:** Meiqin Mao, Hefei University of Technology, CN
10:40	Coffee break & Room change

Stage: Conference Room 1
WBG I_SiC
Chairperson: Naoto Fujishima, Fuji Electric, JP

10:55	Chair’s opening speech
11:05	**400 V SiC MOSFET Unlocks New Efficiency and Power Density Ranges for Server and AI Power Supply Solutions** Owen Song, Infineon Semiconductors, CN
11:30	**Impact of P-well Contact on Dynamic Losses in Scaled 1.2 kV SiC MOSFETs for Parallel Switching Applications** Paula Reigosa Diaz, SwissSEM Technologies AG, CH
11:55	**Research on Overcurrent Interruption Capability and Influencing Factors of SiC MOSFETs in DCCBs** Xiangyu Wan, Huazhong University of Science and Technology, CN
12:20	**Online Monitoring of SiC MOSFET Junction Temperature with Full-range and Gate oxide Defect Insensitivity** Dan Zheng, Institute of Electrical Engineering, Chinese Academy of Sciences, CN

Stage: Conference Room 2
Smart Grid Power Electronics
Chairperson: Dapeng Zheng, Shenzhen Hopewind Electric, CN

10:55	Chair’s opening speech
11:05	**A High-Power Step-Up DC Transformer for Renewable Energy Distribution Systems** Jiahui He, Harbin Institute of Technology, CN
11:30	**Design and Testing of 1.44 kVac / 270 Vdc 50 kW Solid-state Transformer Cell for Data Centers** Xin Wu, Zhejiang University, CN
11:55	**Advanced Energy Management to Effectively Utilize Buildings’ Renewable Energy Generation and Storage Capabilities** Christos Mademlis, Aristotle University of Thessaloniki, GR
12:20	**Adaptive Switching Frequency Boundary in Hybrid DCM and BCM Method for Flyback Micro-Inverter** Lwena Delgado, Shanghai University, CN
12:45	Lunch break
13:30	Poster Dialogue Sessions

Stage: N4C60
Power Si-Devices
Chairperson: Shunli Wang, Inner Mongolia University of Technology, CN

PP001	**Superjunction MOSFET with a Trench Contact and Embedded SiO2 Insulator for Excellent Reverse Recovery** Rui Li, Chengdu Semi-Future Technology Co., Ltd., CN
PP002	**New developed 3.3kV/2.4kA Trench IGBT for Traction application** Xing Chen, Zhuzhou CRRC Times Semiconductor Co. Ltd., CN
PP003	**Plasma Shaping in Silicon Diodes by Cathode-Side Lifetime Recovery** Nick Schneider, SwissSEM Technologies AG, CH
PP004	**Benefits of EDT3 750V Technology in Automotive Inverter Applications** Jiong Wu, Infineon Technologies AG, DE
PP005	**The Impact of Gate Driver Loop Output Capability and Stray Parameters on Switching Performance** Jie Dong, Infineon Technologies, CN
PP006	**Optimized Water Jacket Pin-Fin design for Reducing Pressure Drop in Cooling System** Juyoung Kim, onsemi, KR
PP007	**1200V and 650V Automotive Power Module Applications in Various EV OBC and DC/DC Converters** Younhee Lee, onsemi, KR
PP008	**New intelligent power module, CIPOS™ Mini DCB IPM with 7th generation IGBTs for motor drive applications** Bokkeun Song, Infineon Technologies Korea, KR

WBG Devices

Chairperson: Ziying Chen, CN

PP009	**Investigation on Channel Mobility of SiC Trench MOSFET** Qijun Liu, Zhuzhou CRRC Times Semiconductor Co., LTD, CN
PP010	**A Robust and Reproducible Gate Charge Measurement Approach for SiC MOSFET Characterization** Wenqi Zhou**,** Robert Bosch GmbH, DE
PP011	**Application of SiC Hybrid Discrete in Photovoltaic and Energy Storage Systems** Shuai Cao, MACMIC SCIENCE&TECHNOLOGY CO., LTD., CN
PP012	**Switching behavior investigation of 1200V CoolSiC™ MOSFET G2 discrete** Jia Zhao, Infineon Semiconductors (Shenzhen) Co. Ltd., CN
PP013	**Leveraging Ultra-High Efficiency in High Power Open Frame Flyback Applications** Han Cui, Power Integrations Ltd, CN
PP014	**Low-cost SOI-based level-shift gate driver for high-voltage and >1MHz switching in GaN applications** Weidong Chu, Infineon Technologies Americas Corp., USA
PP015	**Comparative Analysis of Gate Driver Control Topologies: Effects on SiC MOSFET Switching Performance in Half-Bridge Configurations** Lan Fang, Robert Bosch GmbH, DE
PP016	**New 1200 V SiC MOSFET-based CIPOS™ Maxi Intelligent Power Module for High-Efficiency Motor Drives** Kihyun Lee, Infineon Technologies Korea, KR

Packaging & Reliability
Chairperson: Gaosheng Song, Great China Mitsubishi Electric Semiconductor, CN

PP017	**Application of Cu Sintering Technology in High-Power-Density Double-Sided Cooling SiC Module** Haobin Chen, Zhejiang University, CN
PP018	**Investigation of Large Area Solder with TrueHeight™ Preform on Bare Cu Substrates** Liuchang Hu, Macdermid Alpha Electronics Solutions, CN
PP019	**Design and Assessment of Si/SiC Hybrid Power Module With Cu Clip Interconnection for Solar Inverter** Xiankun Zhang, China Resources Runan Chongqing Co., Ltd., CN
PP020	**Influence of the Junction Temperature on the Dynamic Gate Bias Test of SiC MOSFETs** Xiaogang Hu, Nanjing NARI Semiconductor Co., Ltd., CN
PP021	**Spatial-Temporal Customizable Topology Graph Networks Combined with LSTM for Power Device RUL Prediction** Xu Gao, Beijing University of Technology, CN
PP022	**Fault Classification Method for PEMFC Based on Equivalent Circuit and SVM** Jiahui Zhang, Hefei University of Technology, CN

Power Converter

Chairperson: Guoqiang Zhang, Harbin Institute of Technology, CN

PP023	**Highly Efficient Auxiliary Power Supply Solution using Infineon ZVS Flyback Controller** Zhidan Luo, Infineon Technologies Asia Pacific Pte Ltd, SG
PP024	**An Optimized Driver Design Strategy for Energy Storage System Applications** Qibin Wu, Infineon Technologies Center of Competence (Shanghai) Co. Ltd., CN
PP025	**Realize High Performance 200kVA Auxiliary Power Supply with 1.7kV SiC MOSFET** Jian Sun, Mitsubishi Electric & Electronics (Shanghai) Co., Ltd., CN
PP026	**An active method to solve the touch current issue of totem-pole bridgeless PFC rectifier** Desheng Guo, Texas Instruments, CN
PP027	**High voltage converter input units with improved input current quality** Yury Skorokhod, Transconverter, RU
PP028	**48-12 V High Frequency LLC resonant Converter with FPCB Transformer for Data Center** Siyao Hu, Kyushu University, JP
PP029	**A Dual-phase Interleaved AC Link Converter for HPC Processors** Zhaoliang Wen, Harbin Institute of Technology, CN

Stage: Conference Room 1
Si Devices
Chairperson: Yi Tang, Starpower Semiconductor, CN

15:00	Chair's opening speech
15:10	**A new IGCT Platform for up to 8.5 kV with unprecedented turn-off current capability** Umamaheswara Vemulapati, Hitachi Energy Ltd. Semiconductors, CH
15:35	**Enhanced 900 A 1700 V ED Module with Micropattern Trench IGBT for High Performance and Reliability** Nick Schneider, SwissSEM Technologies AG, CH
15:50	**Next Generation 1200V IGBT and Diode Technology for Automotive Drivetrain Applications** Jiong Wu, Infineon Technologies AG, DE
16:15	**Asymmetric ESD protection in bidirectional trench power MOSFETs for Li-ion battery applications** Xueqing Liu, Alpha and Omega Semiconductor, USA

Stage: Conference Room 2
Packaging & Reliability I
Chairperson: Norbert Pluschke, CN-iCuTech Semiconductor, HKSAR, CN

15:00	Chair's opening speech
15:10	**Effect of Processing Condition on Reliability Performance of SiC package by Pressure-less Silver Sintering** Ziying Li, Guangdong Fenghua Semiconductor Technology Co., Ltd., CN
15:35	**Full SiC SLIMDIP for High Efficiency Applications** Takakura Kazuki, Mitsubishi Electric Corporation, JP
15:50	**High Performance Materials Developing for Power Module** Shihuan Lu, Sumitomo Bakelite (Suzhou) Co., Ltd., CN
16:15	**All in One Copper Sintering – Die attach and Substrate Attach in Single Step with Soft Tool** Sri Krishna Bhogaraju, CuNex GmbH, DE

Thursday, 25 September 2025

Stage: Conference Room 1

09:30	Keynote Ultra-Compact and Efficient Power Supply Enabling AI Computing Teng Long, University of Cambridge, CN **Chairperson**: Xuhui Wen, Institute of Electrical Engineering, Chinese Academy of Sciences, CN
10:10	Coffee break & Room change

Stage: Conference Room 1
Motor Control
Chairperson: Jinsong Kang, Tongji University, CN

10:25	Chair’s opening speech
10:35	**System benefit of drone driven by GaN based inverter** Alan Wai Keung Lun, Infineon Technologies Hong Kong Limited, HKSAR, CN
11:00	**Dynamic On-Resistance Characterization of GaN HEMTs under High Temperature Using Multigroup Double Pulse Test** Xu Jiang, Zhejiang University, CN
11:25	**1700V GaN Switch with Adaptive Zero-Voltage Switching for Multi-Output Flyback Converters** Han Cui, Power Integrations, CN
11:50	**25kW/L 99.2% Efficiency Wide Output Three-phase PFC based on Modular Inductive Switching Network** Wending Zhao, Zhejiang University, CN

Stage: Conference Room 2
Motor Drive & Motion Control
Chairperson: Tianhao Tang, Shanghai Maritime University, CN

10:25	Chair’s opening speech
10:35	**Deadbeat predictive Control of Dual Three-Phase Linear Motors Based on Sliding Mode Observer** Huifei Cheng, Tongji University, CN
11:00	**Dual Position Feedback-Based Oscillation Suppression Method for Full Closed-Loop Position Control** Xiangrui Xu, Harbin Institute of Technology, China
11:25	**A Flexible Operated Li-ion Battery Management System for Motor Drives in Electric Vehicle Applications** Christos Mademlis, Aristotle University of Thessaloniki, GR
11:50	**Artificial Intelligence Augmented P(AI)ID Cycle-by-Cycle Controller for Automotive DC-DC Converter Applications Based on AURIX TC4x** Mihail Jefremow, Infineon Technologies, DE
12:45	**Lunch break**
13:30	Poster Dialogue Sessions

Stage: N4C60

Motor Control

Chairperson: Jinsong Kang, Tongji University, CN

PP030	**Double-Ratio Based PI Parameters Design Method of Two-Mass Speed loop System** Pengcheng Lan, Harbin Institute of Technology, CN
PP031	**Ellipse Condition Based Controller Parameter Tuning for Refined Stability Performance** Pengcheng Lan, Harbin Institute of Technology, CN
PP032	**Research on narrow pulse suppression strategy of three-level inverter based on dual modulation wave CBPWM** Xudong Bai, Harbin Institute of Technology, CN
PP033	**A Comprehensive Review of the Longitudinal End Effects in Linear Motors** Bining Liu, Tongji University, China
PP034	**Parameter Identification of Robotic Joint with Harmonic Drive** Xinyuan Liu, Harbin Institute of Technology, CN
PP035	**PDC-Based Hybrid Flux Observer with Flux Error Estimation for Sensorless SPMSM Drives** Xubo Gong, Harbin Institute of Technology, CN
PP036	**Resonance Ratio Control for Vibration and Disturbance Suppression in Force Servoing** Zhiyu Zhang, Harbin Institute of Technology, CN
PP037	**Optimization method of stator winding temperature model of permanent magnet synchronous motor** **Songze Zhao,** University of Chinese Academy of Sciences, CN

High Frequency Power Converter

Chairperson: Min Chen, Zhejiang University, CN

PP038	**Reducing the Size and Weight of Filter Inductor for NPC 3-Level Inverter with 240CPWM** Jiaxuan Yu, Shanghai University, CN
PP039	**Comparative Analysis on Series Resonant Converter and CLLC Resonant Converter for Micro-Inverter Application** Chaojie Zhu, Shanghai University, CN
PP040	**Small Signal Models of Wireless Power Transfer Converters for Unmanned Vehicles Charging Stations** Nikolay Kalugin, Energet LLC, RU
PP041	**Isolated Bi-directional Grid-connected Micro-inverter Based on Series Resonant Converter** Deliang Wu, Shanghai University, CN
PP042	**Multi-functional chip contributes to the compact design of automotive SiC power module** Lizhong Zhao, Mitsubishi Electric & Electronics (Shanghai) Co., Ltd., CN
PP043	**Optimized Extended Phase Shift Modulation for Dual Active Bridge Converters in Automotive Battery Systems** Jiaming Wang, Harbin Institute of Technology, CN
PP044	**Multi-Objective Optimization Design of Bidirectional Series Resonant Converter Based on Deep Reinforcement Learning** Xiang Pan, Hefei University of Technology, CN
PP045	**Fast Charging Station for Simultaneous Recharging of Three Electric Vehicles** Nikolay Volskiy, Charge Evolution ltd, RU

Smart Grid & Energy Transmission
Chairperson: Teng Liu, China Southern Power Grid Electric Power Research Institute, CN

PP046	**New Generation Ultra High Power Semiconductors for VSC-HVDC Applications** Evgeny Tsyplakov, Hitachi Energy, CH
PP047	**Performance Analysis of Basic and Active Neutral Point Clamped Inverter for Energy Storage System** Andrew Yang, onsemi, KR
PP048	**High Efficiency SiC MOSFET Solutions for Solar System** Wenmin Hua, Infineon Technologies Center of Competence (Shanghai) Co. Ltd., CN
PP049	**Probability Predication of Electric Vehicle Schedulable Capacity Based on Improved Informer with Copula** Zhibo Liu, Hefei University of Technology, CN
PP050	**A Comparative Evaluation of Efficiency and Volume for Monolithic Rectifier and Solid-State Transformer** Ruiye Li, Harbin Institute of Technology, CN
PP051	**The Economical Solution of Offshore HVDC for Wind Power Integration and Performance Comparison** Zuoyu Wei, Infineon Technologies (Xi’an) Co., Ltd., CN

Stage: Conference Room 1
SiC related hybrid switch
Chairperson: Yijen Chan, Cyntec Co., Ltd, TW, CN

15:00 Chair’s opening speech

15:10 **Introducing a new 650 V SOI Gate Driver with Improved DESAT Protection**
Zhou Chen, Infineon Technologies Americas Corp., USA

15:35 **FusionPlus – Novel Hybridswitch to improve efficiency and reduce system cost in 800V battery electrical vehicles inverter**
Norbert Pluschke, CN-iCuTech Semiconductor Co. Ltd., HKSAR, CN

15:50 **Practically achievable WLTC loss improvements for the Si/SiC hybrid switch approach in a 400 V automotive traction inverter application – a retrofitting case study**
Hariprasad Baburajan, Valeo eAutomotive Germany GmbH, DE

16:15 **Active DC-Link capacitor discharge methods with Si/SiC Fusion power module for addressing vehicle cost down**
Tomas Reiter, Infineon Technologies AG, Neubiberg, DE

Stage: Conference Room 2
Packaging & Reliability II
Chairperson: Wei Jing, Semikron Danfoss, CN

15:00 Chair’s opening speech

15:10 **Analysis and Study on the Advantages of one Innovative SiC Chip Embedding PCB Solution for xEV Main Inverter Application**
Hao Zhang, Infineon Technologies China Co., Ltd. Shanghai, CN

15:35 **3D Wiring Technology Development for Power Modules to Achieve High-Power Density**
Akito Nakagome, Fuji Electric Co., Ltd., JP

15:50 **Advanced cooling of power electronics with copper cold sprayed aluminum heatsinks & busbars**
Michael Dasch, Impact Innovations, DE

16:15 **Increased power density and lifetime of thin automotive inverter chips through Cu bonding**
Maria Spies, Infineon Technologies AG, Neubiberg, DE

Friday, 26 September 2025

Stage: Conference Room 1
09:30 Keynote
Evolutionary Trends in Power Supply for AI Data Centers
Zhaozheng Hou, Huawei Digital Power, China
Chairperson: Jinjun Liu, Xi´an Jiaotong University, CN

10:10 Coffee break & Room change

Stage: Conference Room 1
Invited Session: “Power Chiplet” technology, ultra-high-power density platform for future power electronics
Organizer: Ichiro Omura, Kyushu Institute of Technology, JP
Chairperson: Naoto Fujishima, Fuji Electric, JP

10:25 Chair’s opening speech

10:30 **Power Chiplet Technology for Next Generation Power Electronics Systems**
Ichiro Omura, Kyushu Institute of Technology, JP

10:50 Advanced Packages With Power-On-Substrate Solutions
Frye Fung, ACCESS Semiconductor Co., Ltd., CN

11:15 **Chip Embedded Panel level Power Package for AI and Vehicles**
Yoshiaki Aizawa, AOI ELECTRONICS CO.,LTD., JP

11:40 **Novel Integration Concepts for Power Electronics – Embedding of SiC MOSFET for High-performance Power Modules**
Lars Boettcher, Fraunhofer IZM Berlin, DE

Stage: Conference Room 2
Advanced low power Module Design
Chairperson: Lifeng Chen, Infineon Technologies, CN

10:25	**Inductor-Induced Oscillations in SiC Device Characterization: A Comparative Study** Nguyen-Nghia Do, PowerX Semiconductor, TW, CN
11:00	**New Transfer-Molded Compact DIPIPM™** Takamasa Miyazaki, Mitsubishi Electric Corporation, JP
11:25	**Thermal Performance Analysis and Study on one Top Side Cooling discrete package for xEV OBC Application** Jiming Li, Infineon Technologies China Co., Ltd. Shanghai, CN
11:50	**SiC MOSFET based CCM Totem-pole PFC with Ultra-slim Design** Guoxing Zhang, Zan Wang, Infineon Technologies, CN
12:15	**Voltage Derating Behavior of High Temperature Capacitors for DC-Link Applications** Adel Bastawros, SABIC, USA