

3D-PEIM 2023 Preliminary Program

Day 1 - Wednesday February 1, 2023

Description/Title	Presenter	Affiliation
S1: Plenary I : Design for Power		
<i>To be Announced</i>		
Finite-Element Predictive Modeling for Power Modules	Dr. Brandon Passmore	Wolfspeed
Break		
S2: IVR for Computers and Servers		
Session Chair	Dr. Siddharth Ravichandran	Chiptetz
Keynote: Practical challenges with advanced IVR solutions for microprocessors	Dr. Michael J. Hill	Intel
3D Power Delivery for High Performance Processors Architecture, Magnetics, and Performance Bottlenecks for 48V-1V CPU VRM	Dr. Noah Sturcken	Ferric, Inc
	Dr. Minjie Chen	Princeton University
Reserved for Submitted Papers		
Lunch		
S3: Multiphysics Design & Tools		
Session Chair	Dr. Rajen Murugan	Texas Instruments
To be Announced	Prof. Vanessa Smet	Georgia Tech.
Multiphysics System Co-Design Modeling: State-of-the-Art, Challenges, and Opportunities	Dr. Rajen Murugan	Texas Instruments
New Challenges in Transportation Electrification, Powertrain Drives & New Power Electronics Architectures	Dr. Osama Muhammed	Florida International University
Reserved for Submitted Papers		
Break		
S4: Additive Manufacturing		
Session Chair	Dr. Peter Friedrichs	Infineon
Keynote: Unlocking New Design Frontiers for Power Density and Specific Power Using Heterogenous Packaging, Embedded Cooling, and 3D Printed PCBs	Dr. Thomas Foulkes	Pacergy
Additive deposition technologies: from 2D towards 3D electronic systems	Dr. M. Wiemer	Fraunhofer Institute
Additive manufacturing of high performance pure copper components with PureForm™ for thermal and electrical applications	Dr. Arian Aghababaie	Holo, Inc.
Reserved for Submitted Papers		
S5: Manufacturing Technologies		
Session Chair	Jason Rouse	Taiyo America
To be Announced	Dr. Matt Kelly	IPC
To be Announced	Dr. Bill Chen	ASE
Enabling Increased Aluminum Utilization within Power Electronic Packaging	Divyakant P Kadiwala	Averatek
Reserved for Submitted Papers		
WELCOME RECEPTION		

Day 2 - Thursday February 2, 2023

Description/Title	Presenter	Affiliation
S6: Plenary II: Improved Electrical Performance for Power		
PCB based Integrated Magnetics	Prof. Fred C. Lee	Virginia Tech.
Superior heat dissipation by low pressure Ag sinter joining and real time AI lifetime prediction for SiC power module	Prof. Katsuaki Suganuma	University of Osaka
Break		
S7: Materials I Interconnects & Lead Attachments		
Session Chair	Andy Mackie	Indium Corporation
Keynote: Cu Sintering/Interconnect Analysis	Prof. Gordon Elger	Fraunhofer Application Center

Description/Title	Presenter	Affiliation
Keynote: Die Top System: Advanced interconnect for Power Electronics Module Packaging	Dr. Habib Mustain	Heraeus
Reserved for Submitted Papers		
Reserved for Submitted Papers		
Lunch with Posters		
S8: Materials II Substrates & Encapsulants		
Session Chair	Dr. Ninad Shahane	Texas Instruments
Keynote: A Polymer-Nanoparticle Composite for Nonlinear Resistive Field-Grading in Medium-Voltage Power Modules	Prof. G. Q. Lu	Virginia Tech.
New Substrate Technology for Power Applications	Neda Ameli	Rogers Corporation
Reserved for Submitted Papers		
Break		
S9: High Power Module Integration		
Session Chair	Cyril Buttay	
US Navy Power Electronics needs	Dr. L. J. Petersen	US Navy
To be Announced	Dr. S. Idaka	Mitsubishi
Reserved for Submitted Papers		
S11: Thermal Management and Reliability		
Session Chair	Patrick McCluskey	University of Maryland
Keynote: integrated thermal management in power electronics and motors	Satish Kumar	Georgia Tech.
To be Announced	Steve Martell	Sonoscan
To be Announced	Na Li	Carbice Corporation
S10: Partners Session		
BANQUET DINNER		
Day 3 - Friday February 3, 2023		
Description/Title	Presenter	Affiliation
S14: Plenary III: Improved Electrical Performance for Power		
Emerging Power electronics packaging and system integration for automotive applications	Dr. Mahadevan Iyer	Amkor
Integrated Power Delivery for AI Computing: Technology Gaps & Opportunities	Prof. Madhavan Swaminathan	Georgia Tech
Break		
S12: Passive Component Integration		
Session Chair	John Bultitude	KEMET
Keynote: Enabling Sustainable Power Electronics Through Miniaturization and Integration of Power Magnetics	Dr. Matt Wilkowski	Enachip
Application of Circuit Board Technology for Passives Packaging	B. K. Summey	KEMET
High-density nanoporous silicon decoupling capacitors	Dr. Mohamed Jatlaoui	Murata
Reserved for Submitted Papers		
Lunch		
S13: Low Power & Telemetry		
Session Chair	TBA	
Keynote: eSiP (energy source in package) - 3D packaging considerations for self-powered IoT edge devices	Dr. Mike Hayes	Tyndall
To be Announced	Prof. Sakhrat Khizoev	University of Miami
Reserved for Submitted Papers		
Reserved for Submitted Papers		
Break		
S15: LABORATORY TOUR - Florida International University		