Day 1 - Wednesday February 1, 2023		
Description/Title	**Presenter**	**Affiliation**
S1: Plenary I : Design for Power		
Finite-Element Predictive Modeling for Power Modules	*Dr. Brandon Passmore*	*Wolfspeed*
Integrated Power Delivery for AI Computing: Technology Gaps & Opportunities	*Prof. Madhavan Swaminathan*	*Georgia Tech.*
Break		
S2: IVR for Computers and Servers		
Session Chair	Siddharth Ravichandran	Chipletz
Keynote: Practical challenges with advanced IVR solutions for microprocessors	Michael J. Hill	Intel
3D Power Delivery for High Performance Processors	Noah Sturcken	Ferric, Inc
Topology and Magnetics Co-Investigation for 48V-1V Point-of-Load VRM	Minjie Chen	Princeton University
Inductor-Linked Multi-Output Chiplet Power Delivery Architecture	Mian Liao, Ping Wang, Minjie Chen	Princeton University
Lunch		
S3: Multiphysics Design & Tools		
Session Chair	Rajen Murugan	Texas Instruments
Keynote: Machine-learning-based optimization: the future of power package design	Vanessa Smet	Georgia Tech.
Keynote: Multiphysics System Co-Design Modeling: State-of-the-Art, Challenges, and Opportunities	Rajen Murugan	Texas Instruments
New Challenges in Transportation Electrification, Powertrain Drives & New Power Electronics Architectures	Osama Muhammed	Florida International University
Performance Analysis of Thin- and Thick-Film Graphene-Based EMI Shields in Integrated Power Modules	Ghaleb Al Duhni (John Volakis, Markondeyaraj Pulugurtha)	Florida International University
Reliability Analysis of Wireless Power Transfer for Electric Vehicle Charging Based on Continuous Markov Process	Arif Sarwat (Milad Behnamfar, Md Abu Taher, Alexis Polowsky, Sukanta Roy)	Florida International University
Break		
S4: Additive Manufacturing		
Session Chair	Peter Friedrichs	Infineon
Keynote: Nano Additive Manufacturing of Challenging Materials	Wendy Gu	Stanford University
Additive deposition technologies: from 2D towards 3D electronic systems	M. Wiemer	Fraunhofer Institute, Germany
Additive manufacturing of high performance pure copper components with PureForm™ for thermal and electrical applications	Arian Aghababaie	Holo, Inc.
S5: Manufacturing Technologies		
Session Chair	Jason Rouse	Taiyo America
Keynote: Insights from Microelectronic Packaging for Power Packaging Advancement	Matt Kelly	IPC
Vertical Integrated High Density Power Packaging Technology	C.P. Hung, Matt Li, Kay Essig	ASE
Enabling Increased Aluminum Utilization within Power Electronic Packaging	Divyakant P Kadiwala	Averatek
Reticular Graphene Reinforced Copper for Low-Stress Thermal Management Application	Ambreem Nisar (Cheng Zhang, Markondeyaraj Pulugurtha, Arvind Agarwal, Al Dunni Ghaleb)	Florida International University
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.*
Future of Packaging and the Role of Power Integration	*Prof. Rao R. Tummala*	*3D Electronic Systems Packaging Research Center(PRC)*
Break		

Day 2 - Thursday February 2, 2023 cont'd		
Description/Title	**Presenter**	**Affiliation**
S7: Materials I Interconnects & Lead Attachments		
Session Chair	Andy Mackie	Indium Corporation
Keynote: Roadmap for Copper Sintering - Next Interconnect for Power Electronic Module Packaging	Gordon Elger	Fraunhofer Application Center
Keynote: Die Top System: Advanced interconnect for Power Electronics Module Packaging	Habib Mustain	Heraeus
Rapid Development of Electrically Conductive Materials for Additive Manufacturing Feasibility and Applications	Gilad Nave, Patrick McCluskey	University of Maryland
S8: Materials II Substrates & Encapsulants		
Session Chair	Ninad Shahane	Texas Instruments
Keynote: A Polymer-Nanoparticle Composite for Nonlinear Resistive Field-Grading in Medium-Voltage Power Modules	G. Q. Lu	Virginia Tech.
New Substrate Technology for Power Applications	Neda Ameli	Rogers Corporation
Lunch with Posters		
S9: Module Integration		
Session Chair	Vanessa Smet	Georgia Tech.
Keynote: Heterogeneous Roadmap Update	Patrick McCluskey	University of Maryland
Towards next generation power module package technology blooming	S. Idaka	Mitsubishi Electric R&D Centre Europe
An intelligent power module	Julien Morand, Johan Le Lesle	Mitsubishi Electric R&D Centre Europe
WAVELET-Based Parameter Estimation of High Voltage Impulse Signals	Emel Onal	Istanbul Technical University
NMOS/NLDMOS LSS dead-Time Minority Carrier Isolation Optimization	Gang Liu, Olivier Causse	onsemi
Break		
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.
Power Electronics Thermal Design with Carbice Nanotubes for Reliability and Cost Saving	Craig Green	Carbice Corporation
Inverter/Converter Power Density and Flexibility Improvements Through Modularity and Novel Thermal Management Architecture	Ian Byers	Marel Power Solutions, Inc.
S10: Partners Session		
Amkor Technology		
KEMET Electronics Corporation		
FIU Biomedical Engineering		
Indium Corporation		
POSTERS & BENCHTOP PARTNERS		
BANQUET DINNER		

Day 3 - Friday February 3, 2023		
Description/Title	**Presenter**	**Affiliation**
S14: Plenary III: Improved Electrical Performance for Power		
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, Japan*
Emerging Power electronics packaging and system integration for automotive applications	*Dr. Mahadevan Iyer*	*Amkor*
Break		

Day 2 - Friday February 3, 2023 cont'd		
Description/Title	**Presenter**	**Affiliation**
S12: Passive Component Integration		
Session Chair	John Bultitude	KEMET Electronics Corporation
Keynote: Enabling Sustainable Power Electronics Through Miniaturization and Integration of Power Magnetics	Matt Wilkowski	Enachip
Application of Circuit Board Technology for Passives Packaging	B. K. Summey	KEMET Electronics Corporation
High-density nanoporous silicon decoupling capacitors	Mohamed Jatlaoui	Murata Integrated Passive Solutions, France
Cold-sprayed aluminum capacitors for 3D power packaging	Reshmi Banerjee (Denny John, Cheng Zhang, Arvind Agarwal, P. Markondeya Raj)	Florida International University
Class I Multi-Layer Ceramic Capacitors (MLCCs) Performance As Wide Band Gap (WBG) Snubbers for Hard Switching Applications	Allen Templeton, Nathan Reed, Hunter Hayes, James Davis, John Bultitude	KEMET Electronics Corporation
Lunch		
Lunch Plenary: Magnetoelectric Nanoparticles As a Wireless Brain-Machine Interface	*Sakhrat Khizoev*	*University of Miami*
S13: Low Power & Telemetry		
Session Chair	Girish Wable	Jabil
Keynote: eSiP (energy source in package) - 3D packaging considerations for self-powered IoT edge devices	Brian Zahnstecher	PowerRox
Manufacturing Challenges and Qualification of 3D Packaging	Chuck Woychik	Skywater Technology
Metamaterial beam steering for wireless power	Hae-In Kim, Y.K. Yoon	University of Florida
Laminate-Embedded Multimodal Energy Harvester for Multilevel Power Supply	Jorge A. Caripidis Troccola (Sweta Gupta, Maxence Carvalho, Satheesh Bojja Venkatakrishnan, Pulugurtha Markondey Raj)	Florida International University
Break		
S15: LABORATORY TOUR - Florida International University		
Posters		
Laser-Induced graphene supercapacitors on flex substrates for package-Integrated Power Supply in Wearable and IoT Devices	Reshmi Banerjee, Azmal Chowdhury, Pavar Sai Kumar, Chunlei Wang, Sanket Goel, Pulugurtha Markondeya Raj	Florida International University
Copper nanowired Interconnection for Embedding Power Dies in PCB	Caio De Oliveira Mendes, Julien Morand, Vincent Bley, Jean-Pascal Cambronne, Guillaume Lefevre	Mitsubishi Electric R&D Center Europe
New Design Concepts for PCB-Integration Technology in Power Electronics Reducing Circuit Parasitics to a Minimum	Rando Raßmann, Jasper Schnack, Ulf Schümann	University of Applied Science Kiel
Low Frequency Power Telemetry Using Multiferroic Laminate Heterostructures	Pawan Gaire, Veeru Jaiswal, Markondeyaraj Pulugurtha, Maria Thuy Do, Ravi Mullapudi, Shubhendu Bhardwaj	University of Nebraska-Lincoln
Overview of Power Electronic Converters in Electric Vehicle Applications	S M Sajjad Hossain Rafin, Rejaul Islam, Osama Mohammed	Florida International University
Wide Band Gap Semiconductor Devices for Power Electronic Converters	S M Sajjad Hossain Rafin, Rony Ahmed, Osama Mohammed	Florida International University
A Review of Power Electronics Converters for Electronic Aircrafts	S M Sajjad Hossain Rafin, Md Ashikul Haque, Osama Mohammed	Florida International University
Power Electronic Converters for Wind Power Generation	S M Sajjad Hossain Rafin, Rejaul Islam, Osama Mohammed	Florida International University