IWIPP 2019 FULL SCHEDULE
Wednesday, April 24, 2019

Time	Event
8:00 AM – 8:15 AM	**Welcome Comments by General Chair** Thierry Lebey (LAPLACE Institute, University of Toulouse, CNRS)
8:15 AM – 9:35 AM	**Tutorial 1: Reliability and System Level Design Considerations for SiC Power Modules** Ty McNutt (Wolfspeed)
9:35 AM – 10:20 AM	**Plenary 1: Silicon Carbide for Power Devices: History, Evolution, Applications, and Prospects** Ahmed Elasser (General Electric)
10:20 AM – 10:45 AM	**PowerUp & Networking Break**
10:45 AM – 11:30 AM	**Plenary 2: Electrification Challenges in Aeronautics** Christophe Lochot (Airbus)
11:30 PM – 1:00 PM	**Networking Lunch & Poster Session 1** Poster Session Chair: Brandon Passmore (Wolfspeed)
1:00 PM – 2:40 PM	**Systems & Circuits Technical Session** Chair: Jin Wang (Ohio State University) Co-chair: Rolando Burgos (Virginia Tech University)
1:00 PM – 1:25 PM	**Module level and system level integrations of WBG devices for high power applications [Invited]** Jin Wang (Ohio State University)
1:25 PM – 1:50 PM	**Technology Challenges in SiC-based Medium Voltage Power Conversion [Invited]** Rolando Burgos (Virginia Tech University)
1:50 PM – 2:15 PM	**Metrology Considerations for Accurate Characterization of High-Bandwidth Power Electronics Components & Applications [Invited]** Andy Lemmon (University of Alabama)
2:15 PM – 2:40 PM	**Evaluation of the PCB-Embedding Technology for a 3 kW Converter**

	Remy Caillaud, Johan Le Leslé, Cyril Buttay (Univ. Lyon), Florent Morel, Roberto Mrad, Nicolas Degrenne, Stefan Mollov
2:40 PM – 3:05 PM	**PowerUp & Networking Break**
3:05 PM – 5:10 PM	**Power Modules Technical Session** Session Chair: Ty McNutt (Wolfspeed)
3:05 PM – 3:30 PM	**A New Packaging Concept for Highly Reliable Power Modules [Invited]** Shiori Idaka (Mitsubishi Electric)
3:30 PM – 3:55 PM	**ABB LinPak: smart design for efficient converters [Invited]** Fabian Fischer (ABB)
3:55 PM – 4:20 PM	**The Development of 1200 V SiC Hybrid Switched Power Modules** Puqi Ning (Chinese Academy of Sciences), Lei Li, Xuhui Wen
4:20 PM – 4:45 PM	**Stacked DBC Cavitied Substrate for a 15-kV Half-Bridge Power Module** Amol Deshpande (University of Arkansas), Ange Iradukunda, David Huitink, Fang Luo, Lauren Boteler
4:45 PM – 5:10 PM	**A Study of Dielectric Breakdown of a Half-Bridge Switching Cell with Substrate Integrated 650 V GaN Dies** Eduard Dechant (Technical University of Applied Sciences, Rosenheim), Norbert Seliger
5:10 PM – 7:00 PM	**Welcome Reception**
7:00 PM – 8:15 PM	**Laboratory Tours** 1) Power Electronics and Integration – 20 min 2) Smart Grid and Emulation – 20 min 3) Actuation and Electro-Active Morphing – 20 min

Thursday, April 25, 2019

8:00 AM – 8:15 AM	**Welcome Comments by General Chair** Thierry Lebey (LAPLACE Institute, University of Toulouse,

	CNRS)
8:15 AM – 9:35 AM	**Tutorial 2: Conducted EMI in Power Electronics Systems** Aaron Brovont (University of Alabama)
9:35 AM – 10:20 AM	**Plenary 3**: **Novel Thermal & Packaging Paradigms for Next Generation Power Electronics** Ercan Dede (Toyota Research Institute of North America)
10:20 AM – 10:45 AM	**PowerUp & Networking Break**
10:45 AM – 11:30 PM	**Plenary 4: Reliability in Power Electronics Modules: A Challenge to Define Tools and Methodologies in Phase with the Performances of Power Chips and the Constraints of Use** Laurent Dupont (IFSTTAR - SATIE)
11:30 PM – 1:00 PM	**Networking Lunch & Poster Session 2**
1:00 PM – 3:05 PM	**Packaging & Interconnects Technical Session** Chair: Puqi Ning (Chinese Academy of Sciences) Co-Chair: Brian Narveson (PSMA)
1:00 PM – 1:25 PM	**Silver Sintering Die Attach – Myths & Physics [Invited]** Gyan Dutt (Alpha)
1:25 PM – 1:50 PM	**Advanced SiC Power Module Packaging: Layout, Material System and Integration [Invited]** Fang Luo (U. of Arkansas), Amol Deshpande, and Cai Chen
1:50 PM – 2:15 PM	**Rate controlled sintering: A novel approach to improve quality and yield of die-attach interconnects** Merkert Simon, Aaron Hutzler, Thomas Krebs (Pink)
2:15 PM – 2:40 PM	**Aerosol Jet Printing Process for Semi-Embedded Power Assembly** S. Azzopardi (Safran Tech, Magny les Hameaux, France), T. Youssef, R. Khazaka, D. Martineau, J. Lelièvre, Ph. Lasserre, E. Pereira
2:40 PM – 3:05 PM	**A New PCB Based Package and 3D Assembly for High Power Density Converters** Roberto Mrad, Remi Perrin (Mitsubishi Electric), Julien Morand, Stefan Mollov

3:05 PM – 3:30 PM	**PowerUp & Networking Break**
3:30 PM – 5:35 PM	**Modeling and Reliability Technical Session** Chair: Pat McCluskey (University of Maryland) Co-chair: David Huitink (University of Arkansas)
3:30 PM – 3:55 PM	**Reliability for Mission- and Safety-Critical Systems in Aerospace Applications [Invited]** Zak Sorchini (UTC) and Steve Savulak
3:55 PM – 4:20 PM	**Title TBD [Invited]** **TBD**
4:20 PM – 4:45 PM	**3D-FE electro-thermo-magnetic modeling of automotive power electronic modules - Wire-bonding and Copper clip technologies comparison** Abdoulahad THIAM (LAPLACE, University of Toulouse), Emmanuel SARRAUTE, William SANFINS, Frédéric RICHARDEAU, Maël DURAND
4:45 PM – 5:10 PM	**Prognostics and Reliability Assessment of Insulated Gate Bipolar Transistor Power Electronic Modules,** Erick Gutierrez (University of Maryland), Kevin Lin, Patrick McCluskey
5:10 PM – 5:35 PM	**High Temperature, Fast Power Cycling of Silicon Carbide Power Modules with Standard Si IGBT Module Solder Stackup**, Lauren E. Kegley(Wolfspeed), Tim Foster, Sayan Seal, Robert Shaw, Brice McPherson, Brandon Passmore, Marcelo Schupbach, Ty McNutt
5:35 PM – 7:00 PM	**Wine Tasting**
7:00 PM – 10:00 PM	**Conference Banquet Dinner at Espaces Vanel**

Friday, April 26, 2019

8:00 AM – 10:05 AM	**Dielectrics and Insulation Technical Session** Chair: Mona Ghassemi (Virginia Tech University) Co-Chair: Davide Fabiani (University of Bologna)
8:00 AM – 8:25 AM	**Ceramic Substrates and Liquids: Origin of Partial Discharges, and High Temperature Properties [Invited]** Olivier Lesaint (Univ. Grenoble Alpes, CNRS, Grenoble INP), Joko Muslim, Rachelle Hanna

8:25 AM – 8:50 AM	**Electrical Polymeric Insulation for Power Electronics: Physical Limits and New Tailored Composite Design Concepts [Invited]** Sombel Diaham (LAPLACE Institute, University of Toulouse, CNRS)
8:50 AM – 9:15 AM	**Ceramic substrates for high voltage power electronics: past, present and future** Zarel Valdez-Nava (LAPLACE, University of Toulouse), Driss Kenfaui, Marie-Laure Locatelli, Lionel Laudebat, Sophie Guillemet- Fritsch
9:15 AM – 9:40 AM	**Drastic Change in Non-Linear Resistive Materials I(V) Characteristics** Guillaume Belijar (IRT Saint Exupéry), Loïc Hermette, Masahiro Kozako, Masayuki Hikita
9:40 AM – 10:05 AM	**Effect of film thickness and electrode material on space charge formation and conductivity in polyimide thin films** F. Carrasco (LAPLACE, University Paul Sabatier, France), L. Berquez, S. Diaham, V. Griseri, T. Lebey, M.L. Locatelli, D. Marty-Dessus, H. Muto, K. Tajiri, G. Teyssedre
10:05 AM – 10:15 AM	**PowerUp & Networking Break**
10:15 AM – 12:20 PM	**EMI and Parasitic Implications Technical Session** Chair: Aaron Brovont (University of Alabama) Co-chair: Nicolas Degrenne (Mitsubishi Electric R&D Centre Europe - MERCE)
10:15 AM – 10:40 AM	**Robust On-line Junction Temperature Estimation of IGBT Power Modules Based on V_{on} During PWM Power Cycling [Invited]** Nicholas Degrenne (Mitsubishi Electric), Stefan Mollov
10:40 AM – 11:05 AM	**Packaging and integration of passive components to reduce board space with optimized thermal and electrical performance [Invited]** John Bultitude (KEMET), Tony Burk, Allen Templeton, Nathan Reed, Galen Miller, John McConnell, Javaid Qazi, Abhijit Gurav, Lonnie Jones, Jim Magee, Manuel Ortiz, Mark Laps, Reggie Phillips, Kunihiro Kusano, Kenichi Chatani, Yoshihiro Saito
11:05 AM – 11:30 AM	**Study of the impedance of the bypassing network of a switching cell – influence of the positioning of the decoupling capacitors**

	Yoann Pascal (Lab. SATIE and CNAM, France), Mickaël Petit, Denis Labrousse, François Costa
11:30 AM – 11:55 AM	**Bus Snubber Optimization for Multi-Chip Power Modules** Brian T. DeBoi (University of Alabama), Andrew N. Lemmon
11:55 AM – 12:20 PM	**PEEC Method and Hierarchical Approach Towards 3D Multichip Power Module (MCPM) Layout Optimization** Quang Le (University of Arkansas), Tristan Evans, Yarui Peng, Alan Mantooth
12:25 PM – 1:00 PM	**Networking Lunch**
1:00 PM – 2:40 PM	**Thermal Challenges Technical Session** Chair: Lauren Boteler (Army Research Laboratories) Co-Chair: Ercan Dede (Toyota Research Institute of North America)
1:00 PM – 1:25 PM	**Advanced Thermal Ground Planes for Power Electronics [Invited]** Ryan McGlen (Aavid, Boyd Corp)
1:25 PM – 1:50 PM	**Thermal simulations of SiC MOSFETs under short-circuit conditions: influence of various simulation parameters** Yoann Pascal (Lab. SATIE and CNAM, France), Mickaël Petit, Denis Labrousse, François Costa
1:50 PM – 2:15 PM	**Measurement of Space Charge Distribution Accumulated in Liquid Crystal Polymer and Polyimide at High Temperature Under High Dc Electric Field,** Maimi Mima (Tokyo City University), Yuuki Narita, Hiroaki Miyake, Yasuhiro Tanaka
2:15 PM – 2:40 PM	**Thermal Management and Reliability of Power Electronics and Electric Machines [Invited]** Sreekant Narumanchi (National Renewable Energy Laboratory)
2:40 PM – 3:00 PM	**Concluding Remarks**