

Tutorial Sessions Location: **Fusion Ballroom**

Start	End	Agenda Item
9:00 AM	10:20 AM	Tutorial: “Designing for Switching Stresses in a Circuit Breaker Application using SiC Semiconductors” DOUGLAS HOPKINS, <i>North Carolina State University</i>
10:20 AM	11:40 AM	Tutorial: “Simulation including Layout Parasitic in the Design Phase of Power Modules Reduces the Laboratory Workload” STIG MUNK-NIELSEN, <i>Aalborg University, Denmark</i>
12:00 PM	1:00 PM	Lunch (State View Hotel)
1:00 PM	2:20 PM	Tutorial: “GaN and SiC Switched Tank Converter for Data Center and Electric Vehicle” DONG CAO, <i>University of Dayton</i>
2:20 PM	3:40 PM	Tutorial: “Best Practices Using Voltage Acceleration to Determine Device Reliability in High Voltage GaN” RONALD BARR, <i>Transphorm Inc.</i>
3:40 PM	5:00 PM	Tutorial: “Performance Evaluation and Design Considerations of HV SiC 10kV MOSFETs and SiC 15kV IGBT for Soft and Hard Switching Medium-Voltage Converter Applications” SUBHASHISH BHATTACHARYA, <i>North Carolina State University</i>
5:15 PM	6:15 PM	Optional Tour of FREEDM Systems Center Lab
6:30 PM	8:30 PM	Vendor Exhibits and Social Reception Synergy Ballroom

SCHEDULE AT A GLANCE: TUESDAY

October 29, 2019

Start	End	Agenda Item
1:00 PM	5:00 PM	ITRW Meeting (Viewpoint Room)
7:00 PM	10:00 PM	JEDEC Meeting <i>JC-70</i> (Viewpoint Room) <i>(committee members and invited guests only)</i>



MISSION

The International Technology Roadmap for **W**ide bandgap power semiconductors (ITRW) will provide reference, guidance and services to identify the future research and technology development needs of wide bandgap power semiconductors and their application, and thereby provide a reliable and comprehensive view on the Strategic Research Agenda and Technology Roadmap.

JEDEC is the global leader in developing open standards for the microelectronics industry, with more than 3,000 volunteers representing nearly 300 member companies.

JEDEC brings manufacturers and suppliers together to participate in more than 50 committees and subcommittees, with the mission to create standards to meet the diverse technical and developmental needs of the industry.

Having already established important test methods and datasheet parametric standards for Power MOSFETs, JEDEC is working towards establishing standards for wide bandgap power semiconductors.

JEDEC publications and standards are adopted worldwide. JEDEC is accredited by [ANSI](#) and maintains liaisons with numerous standards bodies throughout the world.

SCHEDULE AT A GLANCE: WEDNESDAY

October 30, 2019

Start	End	Agenda Item
8:00 AM	8:15 AM	<p>Welcome Address</p> <p>VICTOR VELIADIS, <i>PowerAmerica/North Carolina State University</i></p>
8:15 AM	8:45 AM	<p>Keynote</p> <p>“SiC Power Devices Beyond e-mobility – a Wide Adoption in the Industrial Landscape is Reality”</p> <p>PETER FRIEDRICHS, <i>Infineon Technologies</i> (Fusion Ballroom)</p>
8:45 AM	9:15 AM	<p>Keynote</p> <p>“The Power SiC and GaN Market in 2019 ”</p> <p>KEVIN ANDERSON , <i>IHS Markit</i> (Fusion Ballroom)</p>
9:15 AM	9:40 AM	Break
9:45 AM	10:45 AM	<p>Panel Session</p> <p>“GaN Power Device Market Adoption – What is the Status and What are the Barriers and Accelerators to Market Penetration?”</p> <p>ALAIN CHARLES, <i>Infineon Technologies</i> SANDEEP BAHL, <i>Texas Instruments</i> PETER DI MASSO, <i>GaN Systems</i> TIM MCDONALD, <i>Infineon Technologies</i> ROBERT KAPLAR, <i>Sandia National Laboratories</i> (Fusion Ballroom)</p>
10:45 AM	11:45 AM	<p>Panel Session</p> <p>“Challenges and Opportunities for SiC in High Power Applications”</p> <p>BRIJ SINGH, <i>John Deere</i> KAMIAR KARIMI, <i>Boeing</i> PETER FRIEDRICHS, <i>Infineon</i> SATISH PRABHAKRAN, <i>GE Global Research</i> SUBHASHISH BHATTACHARYA, <i>North Carolina State University</i> DAVID GRIDER, <i>Wolfspeed</i> (Fusion Ballroom)</p>
11:45 AM	1:15 PM	Lunch

SCHEDULE AT A GLANCE: WEDNESDAY

October 30, 2019

Start	End	Agenda Item	
1:15 PM	1:45 PM	<p>Keynote</p> <p>“To Use or Not to Use and How to Use – These Are the Questions: Wide Bandgap Semiconductor Ecosystem in Power Supply Design”</p> <p>LASZLO BALOGH, <i>Texas Instruments</i> (Fusion Ballroom)</p>	
1:45 PM	2:15 PM	<p>Keynote</p> <p>“Potential and Challenges of Medium Voltage Power Electronic Circuits with WBG Devices”</p> <p>IQBAL HUSAIN, <i>North Carolina State University</i> (Fusion Ballroom)</p>	
2:15 PM	2:45 PM	<p>Keynote</p> <p>“How to Implement SiC-based Power Modules into the AQG 324 Automotive Qualification Guideline”</p> <p>THOMAS HARDER, <i>European Center for Power Electronics</i> (Fusion Ballroom)</p>	
2:45 PM	3:15 PM	<p>Break</p> <p>Coffee, Tea, and Refreshments</p>	
3:15 PM	4:55 PM	Technical Session 1	
		<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 33%; background-color: #FFD700;"> <p>1A</p> <p>SiC Applications 1</p> <p>Fusion A</p> </td> <td style="width: 33%; background-color: #FF8C00;"> <p>1B</p> <p>GaN Devices 1</p> <p>Fusion B</p> </td> <td style="width: 33%; background-color: #008000;"> <p>1C</p> <p>SiC Devices 1</p> <p>Fusion C</p> </td> </tr> </table>	<p>1A</p> <p>SiC Applications 1</p> <p>Fusion A</p>
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5:30 PM	7:00 PM	<p style="text-align: center;">Poster Session</p> <p style="text-align: center;">(Synergy Ballroom)</p>	
7:00 PM	10:00 PM	<p style="text-align: center;">Conference Banquet</p> <p style="text-align: center;">(Fusion Ballroom)</p>	

SCHEDULE AT A GLANCE: THURSDAY

October 31, 2019

Start	End	Agenda Item		
8:00 AM	8:30 AM	Keynote “SiC Devices: Powering the Next Generation of Electric Vehicles” JOHN PALMOUR, <i>Wolfspeed</i> (Fusion Ballroom)		
8:30 AM	9:00 AM	Keynote “Using GaN – Trends, Opportunities, and Challenges from the Perspective of a Power Converter Designer” SANDEEP BALA, <i>ABB</i> (Fusion Ballroom)		
9:00 AM	9:30 AM	Keynote “Vertical GaN: New Medium-Voltage Power Devices on the Horizon” YUHAO ZHANG, <i>Virginia Polytechnic Institute and State University</i> (Fusion Ballroom)		
9:30 AM	10:00 AM	Break/Session Setup Period Coffee, Tea, and Refreshments		
10:00 AM	11:40 AM	Technical Session 2		
		2A SiC Applications 2 Fusion A	2B GaN Applications 1 Fusion B	2C SiC Devices 2 Fusion C
11:40 AM	1:00 PM	Lunch		
1:00 PM	2:40 PM	Technical Session 3		
		3A SiC Applications 3 Fusion A	3B GaN Devices 2 Fusion B	3C SiC Devices 3 Fusion C
2:40 PM	3:00 PM	Break/Session Setup Period Coffee, Tea, and Refreshments		

SCHEDULE AT A GLANCE: THURSDAY

October 31, 2019

1:00 PM	2:40 PM	Technical Session 4		
		4A SiC applications 4 Fusion A	4B GaN applications 2 Fusion B	4C Thermal and Emerging Technologies Fusion C
4:40 PM	5:00 PM	Conference Wrap-up Victor Veliadis, PowerAmerica/North Carolina State University		



Venue

The State View Hotel

2451 Alumni Drive
Raleigh, NC 27606