



# POWERAMERICA

Next Generation Power  
Electronics Manufacturing  
Innovation Institute

## Wide Bandgap Devices and Applications Short Course November 16-17, 2021

*All times are Eastern Standard Time (EST)*

<b>Tuesday November 16</b>	
10:50 – 11:00	<b>Welcome</b> Victor Veliadis, PowerAmerica Executive Director & CTO
11:00 – 12:00	<b>1. SiC Power Device Technology and System Benefits</b> Peter Friedrichs, Infineon
12:00 – 1:00	<b>2. SiC Power Devices: Volume Applications, Market Outlook, and Introduction to Fabrication</b> Victor Veliadis, NC State University
10 min	Break
1:10 - 2:10	<b>3. SiC Bulk Substrate: Advantages, Challenges and Solutions</b> Elif Balkas, Wolfspeed
2:10 – 3:10	<b>4. Silicon Carbide Epitaxy for Beginners</b> Michael MacMillan, Epiluvac
10 min	Break
3:20 – 4:20	<b>5. SiC Power Device Reliability</b> Don Gajewski, Wolfspeed
4:20 - 5:20	<b>6. Optimizing SiC MOSFET Chip and Package Design to Match Specific Application Requirements</b> David Levett, Infineon

<b>Wednesday November 17</b>	
11:00 – 12:00	<b>7. Power Electronics for Electric Vehicles</b> Burak Ozpineci, Oak Ridge National Lab
12:00 – 1:00	<b>8. WBG Power Electronics Driving High-Speed Electric Machines for Electric Vehicles</b> Iqbal Husain, NC State University
10 min	Break
1:10 - 2:10	<b>9. GaN Power Devices and Applications Reliability</b> Sandeep Bahl, Texas Instruments
2:10 – 3:10	<b>10. Electronic Packaging of Wide Bandgap Devices</b> Alan Mantooh, University of Arkansas
10 min	Break
3:20 – 4:20	<b>11. High Voltage SiC-based Power Conditioning System Development for Grid Application</b> Fred Wang, University of Tennessee at Knoxville
4:20 - 5:20	<b>12. Application of 650V GaN in 45W to 10kW Power Levels</b> Tushar Dhayagude , Transphorm