

**Technical Workshop and Program Kickoff**  
**Advanced Power Electronics Design for Solar Applications**

National Transportation Research Center, 2360 Cherahala Boulevard, Knoxville, TN 37932

**AGENDA**

<b>8:00-8:30</b>	<b>Sign-in</b>	
<b>8:30-9:00</b>	Welcome from DOE Solar Energy Technologies Office	Guohui Yuan, Jeremiah Miller - DOE
<b>9:00-9:20</b>	Modular HF Isolated Medium-Voltage String Inverters Enable a New Paradigm for Large PV Farms	Deepak Divan, Georgia Tech
<b>9:20-9:40</b>	PV Inverter Systems Enabled by Monolithically Integrated Silicon Carbide-Based Four Quadrant Power Switch	Subhashish Battacharya, North Carolina State University
<b>9:40-10:00</b>	A Reliable, Cost-Effective Transformerless Medium-Voltage Inverter for Grid Integration of Combined Solar and Energy Storage	Yue Zhao, University of Arkansas
<b>10:00-10:20</b>	Compact and Low-Cost Microinverter for Residential Systems	Alireza Khaligh, University of Maryland College Park
<b>10:20-10:40</b>	Break	
<b>10:40-11:00</b>	Modular Wide-Bandgap String Inverters for Low-Cost Medium-Voltage Transformerless PV Systems	Brian Johnson, University of Washington
<b>11:00-11:20</b>	Ultra-Compact Electrolyte-Free Microinverter with Megahertz Switching	Jason Lai, Virginia Tech
<b>11:20-11:40</b>	Solar Power Electronics Modular Integrated Node Platform	Robert Dawsey, Flex Power Control Inc.
<b>11:40-12:00</b>	Modular, Multifunction, Multiport, and Medium-Voltage Utility Scale Silicon Carbide PV Inverter	Alex Q. Huang, University of Texas Austin
<b>12:00-1:00</b>	Lunch Break	
<b>1:00-1:20</b>	Multiport Autonomous Reconfigurable Solar Power Plant	Suman Debnath, Oak Ridge National Laboratory
<b>1:20-2:20</b>	Demo of SiC PV Inverter from SunLamp project	Madhusudhan Chintavalli, ORNL and NREL
<b>2:20-2:40</b>	Break	
<b>2:40-3:20</b>	Panel Session on Solar PE Lifetime Cost Reductions - Methods and Calculations	All Attendees
<b>3:20-4:00</b>	Panel Session on Solar PE Lifetime Value and Reliability - Methods and Calculations	All Attendees
<b>4:00-4:45</b>	Combined PV/Battery Grid Integration with High Frequency Magnetics Enabled Power Electronics	Paul Ohodnicki, NETL
<b>4:45-5:00</b>	Concluding Remarks	Jeremiah Miller and Hari Krishnaswami, DOE