

**Wednesday, November 6, 2024** **Join POETS Meeting (No Virtual Option)**

Germany	Taiwan	South Korea	Time Allotted	Start (CST)	End (CST)	NSF Center for GRid-connected Advanced Power Electronics Systems (GRAPES) Annual Meeting	
9:00 PM	4:00 AM	5:00 AM	30	2:00 PM	2:30 PM	<b>GRAPES Overview</b> <i>Yue Zhao, Executive Director</i>	Apple Blossom
9:30 PM	4:30 AM	5:30 AM	30	2:30 PM	3:00 PM	<b>UA Power Group</b> <i>Alan Mantoath, Founding Director</i>	Apple Blossom
10:00 PM	5:00 AM	6:00 AM	30	3:00 PM	3:30 PM	<b>Transfer to tours</b>	2055 S. Innovation Way Fayetteville, AR 72701
10:30 PM	5:30 AM	6:30 AM	120	3:30 PM	5:30 PM	<b>Tours of MUSiC (Multi-User Silicon Carbide National Semiconductor Research and Fabrication Facility), HiDEC (High Density Electronics Center), and NCREPT (National Center for Reliable Electric Power Transmission)</b>	40 minutes for each tour
12:30 AM	7:30 AM	8:30 AM	30	5:30 PM	6:00 PM	<b>Transfer to hotel</b>	Hilton Garden Inn 1325 N. Shiloh Drive Fayetteville, AR 72704
1:00 AM	8:00 AM	9:00 AM	120	6:00 PM	8:00 PM	<b>Dinner and UARK Student Interaction and Poster Session</b>	Dogwood

**Thursday, November 7, 2024** **GRAPES Meeting**

Germany	Taiwan	South Korea	Time Allotted	Start (CST)	End (CST)	NSF Center for GRid-connected Advanced Power Electronics Systems (GRAPES) Annual Meeting	
2:00 PM	9:00 PM	10:00 PM	60	7:00 AM	8:00 AM	<b>In Person Attendees:</b> Breakfast  <b>Virtual Attendees:</b> <i>Join the Meeting - test your speakers, microphones, get that morning cup of coffee</i>	Dogwood
3:00 PM	10:00 PM	11:00 PM	20	8:00 AM	8:20 AM	<b>Welcome &amp; Introductions, Meeting Agenda &amp; Plan for the Day</b> <i>Yue Zhao, Executive Director</i>	Apple Blossom
3:20 PM	10:20 PM	11:20 PM	25	8:20 AM	8:45 AM	<b>GRAPES-Korea Updates: Collaboration with KEPCO</b> <i>Yong-June Shin and Doin Kim</i>	Apple Blossom
3:45 PM	10:45 PM	11:45 PM	25	8:45 AM	9:10 AM	<b>Industry Presentation - ITRI</b>	Apple Blossom

Thursday, November 7, 2024						GRAPES Meeting	
Final Project Updates (presentation 20 mins)							
Germany	Taiwan	South Korea	Time Allotted	Start (CST)	End (CST)	Facilitator: Yue Zhao	
4:10 PM	11:10 PM	12:10 AM	20	9:10 AM	9:30 AM	<b>GR-23-07: Development of GaN based Compact Scalable Multilevel Inverter Building Block</b> <i>Xiaoqing Song</i>	Apple Blossom
4:30 PM	11:30 PM	12:30 AM	20	9:30 AM	9:50 AM	<b>GR-23-06: Phasor Measurement Unit Based Methods for Implementing Dynamic Line Rating Capabilities</b> <i>Roy McCann</i>	Apple Blossom
4:50 PM	11:50 PM	12:50 AM	30	9:50 AM	10:20 AM	<b>Break</b>	Dogwood
5:20 PM	12:20 AM	1:20 AM	20	10:20 AM	10:40 AM	<b>GR-23-03: IBR Transient Response Improvements to Transmission Faults</b> <i>Rob Cuzner</i>	Apple Blossom
5:40 PM	12:40 AM	1:40 AM	20	10:40 AM	11:00 AM	<b>GR-23-01: Novel Electrical Insulators and Partial Discharge Detection Techniques for Resilient Medium Voltage Distribution Systems</b> <i>Chanyeop Park</i>	Apple Blossom
6:00 PM	1:00 AM	2:00 AM	20	11:00 AM	11:20 AM	<b>Welcome &amp; Introductions of POETS attendees</b> <i>Yue Zhao, Executive Director</i>	Apple Blossom
6:20 PM	1:20 AM	2:20 AM	20	11:20 AM	11:40 AM	<b>POETS Introduction</b> <i>Alan Mantooth, Deputy Director, POETS</i>	Apple Blossom
6:40 PM	1:40 AM	2:40 AM	20	11:40 AM	12:00 PM	<b>GRAPES State of the Center</b> <i>Yue Zhao, Executive Director, GRAPES</i>	Apple Blossom
7:00 PM	2:00 AM	3:00 AM	60	12:00 PM	1:00 PM	<b>Lunch</b>	Dogwood
New Project Proposals (presentation 15 mins, Q&A 5 mins)							
Germany	Taiwan	South Korea	Time Allotted	Start (CST)	End (CST)	Facilitator: Adel Nasiri	
8:00 PM	3:00 AM	4:00 AM	20	1:00 PM	1:20 PM	<b>GR-25-01: Low Rth, Dense Ceramic Isolation Enabling Direct Substrate Integration on Cold Plate</b> <i>David Huitink</i>	Apple Blossom
8:20 PM	3:20 AM	4:20 AM	20	1:20 PM	1:40 PM	<b>GR-25-02: A Fully Modularized SiC Modular Multilevel Converter with Embedded Submodule Controllers</b> <i>Alan Mantooth</i>	Apple Blossom

**Thursday, November 7, 2024**

**New Project Proposals (presentation 15 mins, Q&A 5 mins)**

Germany	Taiwan	South Korea	Time Allotted	Start (CST)	End (CST)	<b>Facilitator: Adel Nasiri</b>	
8:40 PM	3:40 AM	4:40 AM	20	1:40 PM	2:00 PM	<b>GR-25-03: Packaging Methodology for an Electrically Scalable SiC Half-Bridge Module</b> <i>David Huitink</i>	Apple Blossom
9:00 PM	4:00 AM	5:00 AM	20	2:00 PM	2:20 PM	<b>GR-25-04: Resilient Transmission Expansion Planning Considering Probabilistic Security Constraints Using AI Techniques</b> <i>Roy McCann</i>	Apple Blossom
9:20 PM	4:20 AM	5:20 AM	20	2:20 PM	2:40 PM	<b>GR-25-05: Development of All-SiC Modular-Paralleled ANPC Building Blocks for Power-to-Hydrogen Energy Storage Systems</b> <i>Feng Guo</i>	Apple Blossom
9:40 PM	4:40 AM	5:40 AM	20	2:40 PM	3:00 PM	<b>GR-25-06: Power Quality Assessment of Power Systems with Large Penetration of IBRs</b> <i>Rob Cuzner</i>	Apple Blossom
10:00 PM	5:00 AM	6:00 AM	15	3:00 PM	3:15 PM	<b>Group Photo and Break</b>	Dogwood
Germany	Taiwan	South Korea	Time Allotted	Start (CST)	End (CST)	<b>Facilitator: Roy McCann</b>	
10:15 PM	5:15 AM	6:15 AM	20	3:15 PM	3:35 PM	<b>GR-25-07: Probabilistic Modeling for Planning – System Resiliency and Robustness</b> <i>Rob Cuzner</i>	Apple Blossom
10:35 PM	5:35 AM	6:35 AM	20	3:35 PM	3:55 PM	<b>GR-25-08: A modular Solid State Transformer (SST) Using 10kV Switching Devices</b> <i>Adel Nasiri</i>	Apple Blossom
10:55 PM	5:55 AM	6:55 AM	20	3:55 PM	4:15 PM	<b>GR-25-09: Design and Development of a 20kV High Voltage SiC Switch for Next Generation Energy Conversion and Grid Modernization</b> <i>Xiaoqing Song</i>	Apple Blossom

**Thursday, November 7, 2024**

**Continued Funding Requests/Current Project Updates (presentation 12 mins, justification for funds 3 mins, Q&A 5 mins)**

Germany	Taiwan	South Korea	Time Allotted	Start (CST)	End (CST)	Facilitator: Rob Cuzner	
11:15 PM	6:15 AM	7:15 AM	10	4:15 PM	4:25 PM	<b>LIFE Form Instructions</b> <i>Yue Zhao</i>	Apple Blossom
11:25 PM	6:25 AM	7:25 AM	20	4:25 PM	4:45 PM	<b>GR-23-02: Compact, GaN Based, 100kW 480VAC Bidirectional Inverter</b> <i>Adel Nasiri</i>	Apple Blossom
11:45 PM	6:45 AM	7:45 AM	20	4:45 PM	5:05 PM	<b>GR-24-03: Advanced Press-Pack Power Module Design for Ultra-High Voltage (&gt;10kV) Gallium Oxide Devices</b> <i>Alan Mantooth</i>	Apple Blossom
12:05 AM	7:05 AM	8:05 AM	20	5:05 PM	5:25 PM	<b>GR-24-05: Design and Demonstration of 6.5kV SiC based Medium Voltage Shunt Active Power Filter (MV-SAPF)</b> <i>Yue Zhao</i>	Apple Blossom
12:25 AM	7:25 AM	8:25 AM	5	5:25 PM	5:30 PM	<b>Day One Wrap Up</b> <i>Yue Zhao, Executive Director</i>	Apple Blossom
12:25 AM	7:25 AM	8:25 AM	30	5:30 PM	6:00 PM	<b>Break</b>	
12:30 AM	7:30 AM	8:30 AM	90	6:00 PM	7:00 PM	<b>Dinner</b>	Dogwood

**Friday, November 8, 2024**

Germany	Taiwan	South Korea	Time Allotted	Start (CST)	End (CST)	NSF Center for GRI-d-connected Advanced Power Electronics Systems (GRAPES) Annual Meeting	
2:00 PM	9:00 PM	10:00 PM	60	7:00 AM	8:00 AM	<b>In Person Attendees:</b> Breakfast  <b>Virtual Attendees:</b> <i>Join the Meeting - test your speakers, microphones, get that morning cup of coffee</i>	Dogwood
3:00 PM	10:00 PM	11:00 PM	15	8:00 AM	8:15 AM	<b>Welcome, Day 2 Agenda</b> <i>Yue Zhao, Executive Director</i>	Apple Blossom

**Friday, November 8, 2024**

**No Cost Extension/Current Project Updates (presentation 10 mins)**

Germany	Taiwan	South Korea	Time Allotted	Start (CST)	End (CST)	Facilitator: Roy McCann	
3:15 PM	10:15 PM	11:15 PM	10	8:15 AM	8:25 AM	<b>GR-22-02: Development and Applications of Fine-grained Digital Twins for Power Electronic Modules</b> <i>Lingfeng Wang</i>	Apple Blossom
3:25 PM	10:25 PM	11:25 PM	10	8:25 AM	8:35 AM	<b>GR-23-04: Modeling and Design of Clean-Power Inverter-Based Resources</b> <i>Rob Cuzner</i>	Apple Blossom
3:35 PM	10:35 PM	11:35 PM	10	8:35 AM	8:45 AM	<b>GR-23-05: Investigating the Reliability and Resiliency Benefits of Smart Monitoring for Renewables-rich Transmission &amp; Distribution Systems</b> <i>Lingfeng Wang</i>	Apple Blossom
3:45 PM	10:45 PM	11:45 PM	10	8:45 AM	8:55 AM	<b>GR-24-01: 120kVA Three-Phase Grid-tied Inverter with Active Controlled Parallel SiC MOSFETs</b> <i>Alan Mantooth</i>	Apple Blossom
3:55 PM	10:55 PM	11:55 PM	10	8:55 AM	9:05 AM	<b>GR-22-03: Short-term, Operational Reliability Evaluation of HVDC/MVDC Networks Considering Real-time Influence of Power Electronics</b> <i>Lingfeng Wang</i>	Apple Blossom
4:05 PM	11:05 PM	12:05 AM	25	9:05 AM	9:30 AM	<b>Life Form Completion &amp; Break</b>	Dogwood
4:30 PM	11:30 PM	12:30 AM	90	9:30 AM	11:00 AM	<b>Life Form Review</b> <i>Yue Zhao, Executive Director</i>	Apple Blossom
6:00 PM	1:00 AM	2:00 AM	120	11:00 AM	1:00 PM	<b>IAB Lunch &amp; Voting Session</b>	Apple Blossom
6:00 PM	1:00 AM	2:00 AM	60	11:00 AM	12:00 PM	<b>Faculty &amp; Student Lunch</b>	Dogwood
8:00 PM	3:00 AM	4:00 AM	20	1:00 PM	1:20 PM	<b>IAB Report Out</b>	Apple Blossom
8:20 PM	3:20 AM	4:20 AM	0	1:20 PM	1:20 PM	<b>Students Dismissed</b>	
8:20 PM	3:20 AM	4:20 AM	100	1:20 PM	3:00 PM	<b>IAB &amp; Faculty Business Meeting</b>	Apple Blossom
10:00 PM	5:00 AM	6:00 AM	0	3:00 PM	3:00 PM	<b>Meeting Adjourned</b>	