



2023 Fall General Meeting
 November 6th – 7th, 2023
 Hosted by Clemson University
 The Madren Conference Center, Bellsouth Auditorium
 (Eastern Standard Time)

“Grid-Edge Technologies and Their Impacts on the Grid”

Agenda

Nov 6th, 2023	Tutorial: <i>Cybersecurity and FERC Order 2222</i> For students, faculty, and industry-No cost All must pre-register - Location – BellSouth Auditorium	Steve Whisenant Duke Energy
8:15 - 8:30 am	Introductions	Badrul Chowdhury
8:30 - 9:00 am	FERC Order 2222 - Participation of DER Aggregations in Markets Operated by RTOs/ISOs	Sammy Roberts Duke Energy (Virtual)
9:00 - 10:15 am	Cyber Threats and Security at the Grid Edge	Meera Sridhar UNC Charlotte (Virtual)
10:15 - 10:30 am	BREAK	
10:30 - 11:00 am	Human Factors at the Grid Edge	Cori Faklaris UNC Charlotte
11:00 - 11:30 am	Research Opportunities Initiative - Research Capacity Building for a Secure and Reliable Power Grid 2050	Meera Sridhar (Virtual) Rob Cox UNC Charlotte
11:30 - 11:50 am	Q&A	
11:50 - 12:45 pm	Lunch - For Tutorial Attendees	
Nov 6th, 2023	General Meeting	
12:45 - 1:00 pm	Clemson Welcome	Anand Gramopadhye Professor & Dean of the College of Engineering and Hai Xiao ECE Chair
1:00 - 1:15 pm	Welcome, Safety, Objectives of the meeting and In the News	Steven Whisenant CSC Chair

	Plenary Session – Grid Risks Generated by Grid-edge Technologies	Johan Enslin Center Co-Director Clemson
1:15 - 1:45 pm	What does the system still allow to be done?	Mike Collins Advanced Cybersecurity Research at NSA
	Session I – Cyber Risks Generated by Grid-edge Technologies	Johan Enslin Center Co-Director Clemson
1:45 - 2:10 pm	Grid Edge Evolution: Operations and Security	TJ Losier Duke Energy
2:10 - 2:35 pm	Zero Trust Applications for the Grid (ZTAG)	David Lawrence Lawrence Group, LLC
2:35 - 3:00 pm	Purposeful Design – Defending Critical Infrastructure	Michael Friedrich SEL
3:00 - 3:15 pm	PD-05: Inertia Estimate Using Synchrophasor Measurements	Ramtin Hadidi Clemson/UNCC
3:15 - 3:30 pm	DM-03: Integrated Grid Operations System for Inverter-based Resources	Johan Enslin Clemson/NCSU
3:30 - 3:35 pm	BREAK	
	Session II - CAPER Sponsored Sr. Design Project	Steven Whisenant CSC Chair
3:35 - 4:03 pm	UNC Charlotte Team	Badrul Chowdhury
4:03 - 4:31 pm	NC State Team	Mesut Baran
4:31 - 5:00 pm	Clemson Team	Johan Enslin
5:00 - 7:00 pm	Reception - Madren Center Ballrooms A & B	
5:00 - 7:00 pm	Career Fair - Madren Center Grand Hallway	
Nov 7th, 2023	General Meeting	
8:00 - 8:10 am	Highlights from Day 1 and Objectives for the day	Steven Whisenant CSC Chair
	Session III - Impacts to the Grid Generated by EV Charging	Johan Enslin Center Co-Director Clemson
8:10 - 8:30 am	Power Demand Impacts of EV Charging to the Grid	Westy Westmoreland Dominion Energy - SC
8:30 - 8:50 am	Impacts to the Grid Generated by EV Charging	Robbie Cook

		Duke Energy
8:50 - 9:10 am	Integration of large-scale EV Charging	Gaurav Singh EPRI (Virtual)
9:10 - 9:30 am	MRA-02-PD: Impacts of Managed Charging and Other Innovative Rates for Electric Vehicle Charging on Utility Load and the Grid System	Peter Schwarz/Badrul Chowdhury/Mesut Baran/Students
9:30 - 9:50 am	EHP-09-PG: DER Recloser Settings for Ride-Through	Johan Enslin Clemson/NCSU/UNCC
9:50 - 10:10 am	MRA-01-PD: Comparative Power Flow Analysis and Power Flow Quality Criteria	Valentina Cecchi UNCC/NCSU
10:10 - 10:30 am	BREAK	
	Session IV – Benefits Generated by SMART Homes and SMART Buildings	Ning Lu NCSU
10:30 - 10:50 am	Utility Valuation of Energy Efficiency and Demand Side Management Components of SMART Homes	Tim Duff Duke Energy
10:50 - 11:10 am	Stochastic load scheduling for commercial building cooling systems	Sen Huang ORNL (Virtual)
11:10 - 11:30 am	Smart Industrial Buildings	Jason Massey Industrial Inc.
11:30 - 11:50 am	PG-03: AI based Arc Fault Detection for PV Systems	Tiefu Zhao UNCC/Clemson
11:50 - 12:10 pm	PD-06: A Machine Learning based Automated Load Model Parameterization Tool	Ning Lu NCSU/Clemson
12:10 - 1:00 pm	LUNCH	
1:00 - 1:15 pm	2024 Research Planning Session Introduction	Steve Whisenant CSC Chair
1:15 - 2:15 pm	Session V - 2024 Research Planning Session Group #	Shannon Jenkins CAPER Administrator
	Power Delivery Infrastructure and Systems 1	Drew Clarke
	Energy Policy, Markets and Economics 2	Peter Schwarz
	Data Management, Analytics and Security 3	Rebecca Rye
	Power Generation, Storage and Integration 4	Johan Enslin
	Power Utilization and Energy Efficiency 5	Valentina Cecchi
2:15 - 2:30 pm	BREAK	

2:30 - 3:30 pm	Break Out Reports	Steve Whisenant CSC Chair
	Research Solicitation Process - Notice of Intent, Wrap up, Next Steps, and Next Meeting	Steve Whisenant CSC Chair
3:30 - 4:00 pm	CLOSED MEETING- IAB Members Meeting Open to all attendees of companies that are Industry Members of CAPER	Drew Clarke IAB Chair
	Election of Officers for 2024	
	IAB Business	
	Adjourn	