

# 25th Annual Georgia Tech Fault and Disturbance Analysis Conference

May 2-3, 2022

Monday, May 2, 2022	
8:00 AM	<b>Registration</b>
8:30 AM	<b>Conference Opening - Welcoming Remarks</b> <b>A.P. Sakis Meliopoulos</b> Professor, School of Electrical and Computer Engineering, Georgia Tech <b>Lori Hartzog</b> Georgia Transmission Corporation Chair, Transient Recorder Users Council
<b>Morning Session - Session Chair: Doug Dunay , Session Vice-Chair: Luis Collazo</b>	
8:40 AM	<b>Solar Interconnection Case Studies</b> <b>Anthony Murphy, James Rossman, Nathan Hooker</b> , Tennessee Valley Authority
9:20 AM	<b>Infrastructure for Protection and Control of an Active Distribution System</b> <b>Sakis Meliopoulos, George Cokkinides</b> , Georgia Tech <b>Glenn Wilson</b> , Southern Company <b>Kenneth Wilhelm</b> , Avista Utilities <b>Rebecca Rye</b> , Dominion Energy <b>Saeed Lotfifard</b> , Washington State University
10:00 AM	<b>Break</b>
10:20 AM	<b>Using Secondary Voltage Data to Detect Struggling Distribution Transformers</b> <b>Theo Laughner</b> , Lifescale Analytics <b>Chris Bolig, Robert Price, Matthew Wilkin</b> , Whisker Labs
11:00 AM	<b>GTC Fault Trace Tool Case Studies</b> <b>Lori Hartzog</b> , Georgia Transmission Corporation
11:40 AM	<b>Best Paper Award, Recognitions</b>
11:50 AM	<b>Lunch - On Your Own</b>
<b>Afternoon Session - Session Chair: Greg Bradley , Session Vice-Chair: Tony Ranson</b>	
12:50 PM	<b>NERC Update</b> <b>Rich Bauer</b> , NERC
1:30 PM	<b>Learning from Power Signals</b> <b>Jonathan Boyd, Joshua Tyler, Alissa Coleman, Donald Reising</b> The University of Tennessee at Chattanooga <b>Anthony Murphy</b> , Tennessee Valley Authority
2:10 PM	<b>Break</b>
2:30 PM	<b>Disturbance Analysis and Monitoring using IEC 61850 Sampled Values Data in Digital Substations</b> <b>Nuwan Perera, Rene Midence, Anderson Oliveira</b> , ERLPhase Power Technologies Ltd.
3:10 PM	<b>Display and Discussion of Actual Fault Records Brought by Participants</b> <b>Moderator: Robert Orndorff</b>
3:50 PM	<b>Break</b>
4:00 PM	<b>User Forum - Moderator: Angelo Tempone</b>
5:00 PM	<b>Adjourn</b>

**Tuesday, May 3, 2022**

**Morning Session - Session Chair: Jon Goodson, Session Vice-Chair: Irene Lu**

8:00 AM	<b>Voltage Unbalance in a Changing Grid</b> Anthony Murphy, Justin Kuhlert, David DeLoach, Tennessee Valley Authority
8:40 AM	<b>Locating Complex Double-Line-to-Ground Faults: Theory and Field Case Study</b> Steven Chase, Sumit Sawai, Schweitzer Engineering Laboratories, Inc. Doug Taylor, Avista Utilities
9:20 AM	<b>High-Density Distributed Sensor Network For Monitoring Grid Events</b> Theo Laughner, Lifescale Analytics Robert King, Good Company Bob Marshall, Whisker Labs
10:00 AM	<b>Break</b>
10:20 AM	<b>Architecture, Modeling and Role of Digital Fault Recorders in Digital Substations</b> Adriano Pires, Annelise Bittencourt, Igor Cruz, Harsh Vardhan, General Electric
11:00 AM	<b>Double-Ended Traveling-Wave Fault Locating Without Relay-to-Relay Communications</b> Greg Smelich, Jesús Cruz, Richard Kirby, Yusuf Zafer Korkmaz, Gianfranco Patti, Schweitzer Engineering Laboratories, Inc. David López Cortón, Jorge Vaquero Melado, Red Eléctrica de España
11:40 AM	<b>Lunch - On Your Own</b>
<b>Afternoon Session - Session Chair: Theo Laughner , Session Vice-Chair: Shane Haveron</b>	
12:40 PM	<b>Data Sources for Fault and Disturbance Analysis in IEC 61850 Based Digital Substations</b> Alexander Apostolov, Omicron Energy
1:20 PM	<b>Synchrophasor Analysis of Grid Events (SAGE): PMU Based Tool for the Real Time Control Room Security Desk</b> Sudeep Mohanan, Raghava Malapati Venkata Dharun, Ganesh T R, Kumar S P, Suresh V, POSOCO
2:00 PM	<b>Voltage Transformer Failure Prediction With Synchrophasor Data</b> Md Arif Khan, Joshua Wold, Greg Zweigle, Jared Bestebreuer, Schweitzer Engineering Laboratories, Inc. Matthew Rhodes, Salt River Project
2:40 PM	<b>Break</b>
3:00 PM	<b>Analysis of the Unexpected Operations of Line POTT Scheme During Remote 345kV Bus Fault Isolation</b> Song Ji, Irene Lu, Michael Gregg, Dylan Dean, National Grid
3:40 PM	<b>Analysis of Multiple Bus Differential Faults on Double Bus Single Breaker 115kV Substation</b> Leo Hisugan, Ricardo Rangel, Justin Flores, Marvin Ashcroft, Pacific Gas and Electric Company
4:20 PM	<b>Transmission Line Parameter Estimation Using Traveling-Wave Fault Location Data</b> Arun Shrestha, Sathish Kumar Mutha, Schweitzer Engineering Laboratories, Inc
5:00 PM	<b>Closing Remarks - Adjourn</b>

**Alternate Papers & Coordinator: Chair Robert Orndorff ,Vice-Chair Danny Aramouni**

	<b>UHS Relay Testing for Optimal Protection of a Long 345 kV Line with Series Compensation</b> Matthew Lewis, Lonestar Transmission, LLC Richard Kirby, Schweitzer Engineering Laboratories, Inc. Faris Elhaj, OMICRON Electronics Corporation
	<b>Finding Faults Fast Saves Money and Improves Service</b> Ricardo Abboud, Artur Hoff, Renan Bernardes, Paulo Lima, Schweitzer Engineering Laboratories, Inc.
	<b>Transformer Loss of Life Monitoring – an Overview and Review of In-service Installations Highlighting Achieved Benefits</b> Alex Piatniczka, Mike Kockott, Sergiu Paduraru, Galina Antonova, Hitachi-Powergrids