

## 25th Annual Georgia Tech Fault and Disturbance Conference

### April 22-23, 2024

Monday, April 22, 2024	
8:00 AM	<b>Registration</b>
8:30 AM	<b>Conference Opening - Welcoming Remarks</b> A.P. Sakis Meliopoulos, Professor, School of Electrical and Computer Engineering, Georgia Tech Rene Mendoza, Florida Power and Light, Chair, Transient Recorder Users Council
<b>Morning Session - Session Chair: William Gee , Session Vice-Chair: Lori Hartzog</b>	
8:40 AM	<b>Pilot Testing of an AI Algorithm to Identify Fault Category and Fault Cause from DFR Records</b> Finlay Macleod, Scottish Power; Aaron Acton, Fortive; David Cole, Mark Diamond, & Paul Donegan, Qualitrol Co, LLC
9:20 AM	<b>Power Quality Grid Monitoring at Scale</b> Theo Laughner, Lifescale Analytics; James Anderson & Bob Marshall, Whisker Labs;
10:00 AM	<b>Break</b>
10:20 AM	<b>Analysis of POTT Operation Failure on Complicated Simultaneous Inter-Circuit Faults</b> Song Ji & Irene Lu, National Grid USA
11:00 AM	<b>Understanding the Impact of Time Inaccuracy on Synchrophasors, Traveling-Wave Fault Locating, and Line Current Differential Protection</b> Arun Shrestha, Priyanka Nadkar, & Jackson Fultz, Schweitzer Engineering Laboratories, Inc.
11:40 AM	<b>Best Paper Award, Recognitions</b>
11:50 AM	<b>Lunch</b> - On Your Own
<b>Afternoon Session - Session Chair: TJ Purcell, Session Vice-Chair: Tony Ranson</b>	
12:50 PM	<b>NERC Update</b> - Rich Bauer, NERC
1:30 PM	<b>Digital Fault Recorder Calibration and Other Factors Affecting Fault Location</b> Ethan Mueller & Robert Orndorff, Dominion Energy
2:10 PM	<b>Break</b>
2:30 PM	<b>Disturbance Recording Systems in IEC 61850 Based Digital Substations - Components and Architectures</b> Alexander Apostolov, OMICRON electronics
3:10 PM	<b>Display and Discussion of Actual Fault Records Brought by Participants</b> Moderator: Robert Orndorff Co-Moderator: Theo Laughner
3:50 PM	<b>Break</b>
4:00 PM	<b>User Forum</b> Moderator: TJ Purcell Co-Moderator: Robert Orndorff
5:00 PM	<b>Adjourn</b>
5:00 - 9:00 PM	<b>Vendor Exhibits Open</b>

Tuesday, April 23, 2024	
Morning Session - Session Chair: Grace Piercy , Session Vice-Chair: Irene Lu	
8:00 AM	<b>Optimal Traveling-Wave Fault Locator Deployment and Performance Assessment: A Dominion Energy Case Study</b> Te-Yu Lin, Keanan Zafar, Robert Orndorff, & Micah Till, Dominion Energy
8:40 AM	<b>Analysis of Single-Phasing Event of a Large Pump Storage Motor-Generator and Prevention Methods</b> Frank Ronci, New York Power Authority;
9:20 AM	<b>Interruption of Island Generation and Load when Tie Line Load Limits are Missed</b> Dean Sorensen, National Grid
10:00 AM	<b>Break</b>
10:20 AM	<b>In-situ Frequency Response Measurements for Voltage Sensors and Their Applications</b> Gaurav Singh & Jason Johns, Electric Power Research Institute; Anthony Murphy & Nathan Hooker, Tennessee Valley Authority
11:00 AM	<b>Analysis and Troubleshooting of 500kV line operation with Unit feeder differential misoperation</b> Gary Kobet & George Pitts, Tennessee Valley Authority
11:40 AM	<b>Lunch</b> - On Your Own
Afternoon Session - Session Chair: Angelo Tempone , Session Vice-Chair: Al Ward	
12:40 PM	<b>Identifying Configuration and Monitoring Equipment Issues using PQ Interval Data</b> Jonathan Sides & Anthony Murphy, Tennessee Valley Authority; Christoph Lackner, Grid Protection Alliance
1:20 PM	<b>Analysis of Sub Synchronous Oscillation Events in Power Systems with High Inverter-Based Resource Penetration</b> Thomas Purcell IV, Richard Tuck, Chetan Mishra, & Micah Till, Dominion Energy;
2:00 PM	<b>Estimating Short-Circuit Capacity Using Measurements of Capacitor Switching Operations</b> Anthony Murphy & Jonathan Sides, Tennessee Valley Authority; Surya Santoso, University of Texas-Austin; Gaurav Singh, Electric Power Research Institute;
2:40 PM	<b>Break</b>
3:00 PM	<b>Analysis of a Major Blackout Event at 2x800 MW Thermal Power Station in Southern Region, India</b> Jerin Jacob, Suresh Kumar K, Ramesh M K, Kumar S P, & Muthukumar Thomas, Grid Controller of India Limited
3:40 PM	<b>Measurement Examples Showing Power Quality Aspects of Wind and Solar Power Plants</b> David Mueller, EnerNex
4:20 PM	<b>20 Years of Reliable Service: Revisiting a Distribution Automation Scheme After 2 Decades</b> Chris Stephens & Dustin McNeely, Coweta-Fayette EMC; Greg Hataway, Bryant Grace, & Brett Cockerham, Burns and McDonnell
5:00 PM	<b>Closing Remarks - Adjourn</b>
5:00 - 9:00 PM EST	<b>Vendor Exhibits Open</b>

**Alternate Papers & Coordinator: Chair Greg Bradley ,Vice-Chair Doug Dunay**

**Experience in Implementing Optical Current Transformers within the IEC 61850 Process Bus of a 500 KV Power Substation**

**Carlos Alberto Dutra, Luan Zolin Tominaga, & Jurandir Paz Oliveira**, Power Opticks;  
**Sergio Zimath, Vitor Woyakewicz, Tiago Matsuo, & ,** AQTech;  
**Rubens Nascimento & Luciano Freitas**, ENGIE

**A Review of Current Protection Testing Practices**

**Scott Cooper**, OMICRON