

# 21st Annual Georgia Tech Fault and Disturbance Analysis Conference

## April 30-May 1, 2018

Monday, April 30, 2018	
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>Kyle Thomas</b> Dominion Energy Transient Recorder Users Council <span style="float: right;">Chairman,</span>
<b>Morning Session - Session Chair: Danny Aramouni, Session Vice-Chair: Jon Goodson</b>	
8:40 AM	<b>Transmission Line Fault Location Explained</b> <b>R. Orndorff, K. Thomas, P. Hawks, B. Starling, Dominion Energy</b> <b>A. Makki, M. Rothweiler, SoftStuf</b>
9:20 AM	<b>The Blimp Event of 2015 – Description and Analysis of the Outages Caused by a Runaway Blimp on PPL Electric Utilities Transmission System</b> <b>G. Bray, PPL Electric Utilities</b>
10:00 AM	<b>Break</b>
10:20 AM	<b>Instrumentation Error Correction within Merging Units</b> <b>S. Meliopoulos, G. Cokkinides, Y. Kong, Georgia Institute of Technology</b>
11:00 AM	<b>TVA's Transmission Voltage Unbalance Evaluation</b> <b>G. Kobet, T. Laughner, D. Marler, A. Murphy, J. Rossman, TVA</b>
11:40 AM	<b>Best Paper Award, Recognitions</b>
11:50 AM	<b>Lunch - On Your Own</b>
<b>Afternoon Session - Session Chair: Doug Dunay, Session Vice-Chair: Jim Hackett</b>	
12:50 PM	<b>NERC Update</b> <b>Bob Cummings</b>
1:30 PM	<b>Analysis of the unexpected operations at a 345kV National Grid substation associated with capacitor bank switching</b> <b>S. Ji, I. Lu, D. Markis, M. Gregg, National Grid</b>
2:10 PM	<b>Break</b>
2:30 PM	<b>Greg 230kV Substation Shunt Capacitor Bank Failure And Cascading Area Disturbances</b> <b>L. Hisugan, Pacific Gas &amp; Electric</b>
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: Kyle Thomas</b>
5:00 PM	<b>Adjourn</b>

Tuesday, May 1, 2018	
Morning Session - Session Chair: Irene Lu, Session Vice-Chair: Marlin Browning	
8:00 AM	<b>Centralized Disturbance Recording Systems in IEC 61850 Based Digital Substations – Principles, Benefits and Challenges</b> A. Apostolov, OMICRON Electronics
8:40 AM	<b>Automated Waveform Characterization for Providing Situational Awareness to Distribution System Operators</b> C. Benner, D. Russell, Texas A&M University
9:20 AM	<b>Accurate and Economical Traveling-Wave Fault Locating Without Communications</b> A. Guzmán, B. Kasztenny, V. Mynam, Y. Tong, Schweitzer Engineering Laboratories, Inc.
10:00 AM	<b>Break</b>
10:20 AM	<b>Fault investigation using data from PMU, DFR and Traveling-Wave fault locators: Experiences from Companhia Paranaense de Energia (COPEL) on combining these tools for optimal fault analysis</b> G. Krefta, L. Barcelos de Oliveira, S. Zimath, C. Pimentel, COPEL
11:00 AM	<b>Back to the Basics – Event Analysis Using Symmetrical Components</b> A. Sudan, Schweitzer Engineering Laboratories, Inc.
11:40 AM	<b>Lunch - On Your Own</b>
Afternoon Session - Session Chair: Tony Napikoski, Session Vice-Chair: Greg Bradley	
12:40 PM	<b>Strategic Data Sharing for Improved Fault Analysis</b> F. Elmendorf, Grid Protection Alliance
1:20 PM	<b>230kV Power System Cascade Event by Single Phase Power Swing Phenomenon</b> J.Saldarriaga, J. Zuleta, L. Zapata, F. Montaña, G. Ramírez, T. Rivera, XM S.A. E.S.P. Colombia Power System Operator
2:00 PM	<b>Modern On-line Monitoring for High Voltage Circuit Breakers</b> N. Gariboldi, Qualitrol P. Corliss, PMC-Consulting
2:40 PM	<b>Break</b>
3:00 PM	<b>Common Format for Naming Intelligent Electronic Devices (COMDEV)</b> J. Hackett, Mehta Tech Rick Cornelison A. Makki, SoftStuf
3:40 PM	<b>Wavelet based Signature Analysis of Grid Events (SAGE) for Identifying the type and location of Event using synchrophasor data</b> S. Mohanan, S P Kumar, Anbunesan G, Aravind M N, Abishek, POSOCO
4:20 PM	<b>Analysis of NPCC Protection System Misoperations</b> Q. Le, R. Sahiholamal, NPCC
5:00 PM	<b>Closing Remarks - Adjourn</b>

Alternate Papers & Coordinator: Lucas Barcelos	
<b>Case Studies in Facility Wide Time Synchronization</b> T. Smith, C. Crites, GE Grid Solutions	
<b>Intelligent Circuit Sensor based Fault Detection, Isolation and Restoration for Transmission Lines with T-connection Taps</b> J. Fan, Southern States	

**Travelling Wave Fault Locator (TWFL) Technology Applied to HVDC Transmission Line**

**A. Soeth Jr, P. Freire de Souza**, GE Grid Solutions

**D. Custódio**, Interligações Eléctricas do Madeira