21ST ANNUAL GEORGIA TECH

Fault and Disturbance Analysis Conference

April 30 - May 1

Monday, April 30, 2018

8:00 AM	**Registration**
8:30 AM	**Conference Opening - Welcoming Remarks** A.P. Sakis Meliopoulos *Professor, School of Electrical and Computer Engineering, Georgia Tech* Kyle Thomas *Dominion Energy* *Chairman, Transient Recorder Users Council*
Morning Session - Session Chair: Danny Aramouni, **Session Vice-Chair:** Jon Goodson	
8:40 AM	**Transmission Line Fault Location Explained** R. Orndorff, K. Thomas, P. Hawks, B. Starling, *Dominion Energy* A. Makki, M. Rothweiler, *SoftStuf*
9:20 AM	**The Blimp Event of 2015 – Description and Analysis of the Outages Caused by a Runaway Blimp on PPL Electric Utilities Transmission System** G. Bray, *PPL Electric Utilities*
10:00 AM	Break
10:20 AM	**Instrumentation Error Correction within Merging Units** S. Meliopoulos, G. Cokkinides, Y. Kong, *Georgia Institute of Technology*
11:00 AM	**TVA's Transmission Voltage Unbalance Evaluation** G. Kobet, T. Laughner, D. Marler, A. Murphy, J. Rossman, *TVA*
11:40 AM	**Best Paper Award, Recognitions**
11:50 AM	Lunch - On Your Own
Afternoon Session - Session Chair: Doug Dunay, **Session Vice-Chair:** Jim Hackett	
12:50 PM	**NERC Update** Bob Cummings
1:30 PM	**Analysis of the unexpected operations at a 345kV National Grid substation associated with capacitor bank switching** S. Ji, I. Lu, D. Markis, M. Gregg, *National Grid*
2:10 PM	Break
2:30 PM	**230kV Substation Shunt Capacitor Bank Failure And Cascading Area Disturbances** L. Hisugan, *Pacific Gas & Electric*
3:10 PM	**Display and discussion of Actual Fault Records brought by participants** **Moderator:** Robert Orndorff
3:50 PM	Break
4:00 PM	**User Forum - Moderator:** Kyle Thomas
5:00 PM	Adjourn

Tuesday, May 1, 2018

Morning Session - Session Chair: Irene Lu, **Session Vice-Chair:** Marlin Browning

8:00 AM	**Centralized Disturbance Recording Systems in IEC 61850 Based Digital Substations – Principles, Benefits and Challenges** A. Apostolov, OMICRON Electronics
8:40 AM	**Automated Waveform Characterization for Providing Situational Awareness to Distribution System Operators** C. Benner, D. Russell, Texas A&M University
9:20 AM	**Accurate and Economical Traveling-Wave Fault Locating Without Communications** A. Guzmán, B. Kasztenny, V. Mynam, Y. Tong, *Schweitzer Engineering Laboratories, Inc.*
10:00 AM	**Break**
10:20 AM	**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** G. Krefta, L. Barcelos de Oliveira, S. Zimath, C. Pimentel, *COPEL*
11:00 AM	**Back to the Basics – Event Analysis Using Symmetrical Components** A. Sudan, *Schweitzer Engineering Laboratories, Inc.*
11:40 AM	**Lunch - On Your Own**

Afternoon Session - Session Chair: Tony Napikoski, **Session Vice-Chair:** Greg Bradley

12:40 PM	**Strategic Data Sharing for Improved Fault Analysis** F. Elmendorf, *Grid Protection Alliance*
1:20 PM	**230kV Power System Cascade Event by Single Phase Power Swing Phenomenon** J. F. Piñeros, J. F. Llano, L. Y. Agudelo, F. H. Montaño, G. A. Gutiérrez, T. Rivera *XM S.A. E.S.P. Colombia Power System Operator*
2:00 PM	**Modern On-line Monitoring for High Voltage Circuit Breakers** N. Gariboldi, *Qualitrol* P. Corliss, *PMC-Consulting*
2:40 PM	**Break**
3:00 PM	**Common Format for Naming Intelligent Electronic Devices (COMDEV)** J. Hackett, *Mehta Tech* Rick Cornelison A. Makki, *SoftStuf*
3:40 PM	**Case Studies in Facility Wide Time Synchronization** T. Smith, C. Crites, *GE Grid Solutions*
4:20 PM	**Analysis of NPCC Protection System Misoperations** Q. Le, R. Sahiholamal, *NPCC*
5:00 PM	**Closing Remarks - Adjourn**

Alternate Papers & Coordinator: Lucas Barcelos

Intelligent Circuit Sensor based Fault Detection, Isolation and Restoration for Transmission Lines with T⊠connection Taps
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 Elétricas do Madeira*