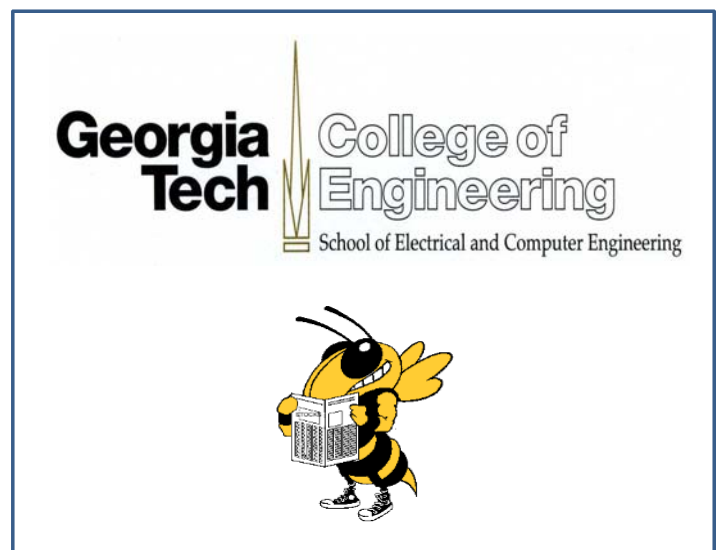


73rd Annual Georgia Tech Protective Relaying Conference

May 1-3, 2019 - Georgia Tech Hotel and Conference Center, Atlanta, GA

Tuesday April 30, 2019	
4:30 - 6:30 PM	Registration - Salon 1-2-3-4-5-6
5:00 - 9:00 PM	Vendor Exhibits Open

Wednesday May 1, 2019	
Salon 1-2-3-4-5-6	Session Chair: Robert Frye , Tennessee Valley Authority Backup: Steve Kunsman , ABB Inc.
7:00 AM	Registration
7:50 - 8:00 AM	<i>Conference Opening - Welcoming Remarks</i> Sakis Meliopoulos Professor, School of Electrical and Computer Engineering
8:00 - 8:35 AM WA-0-P1	<i>Lessons Learned From Implementation of Microgrid Islanding Detection Schemes Based on Rate of Change of Frequency (ROCOF) and Synchrophasor Measurements</i> Aleksandar Vukojevic , Duke Energy Shyam Bhaskaram, Justin McDevitt, John Town Schweitzer Engineering Laboratories, Inc.
8:35 - 9:10 AM WA-0-P2	<i>Anti-Islanding Protection Philosophy: Past, Present and Unintended Consequences</i> Manish Patel, James Warren , Southern Company Services
9:10 - 9:25 AM	Break



Wednesday May 1, 2019	
Salon 4-5-6	Session Chair: Bruce Mackie , Nashville Electric Service Backup: Bridget Coffman , Santee Cooper
9:25 - 10:00 AM WA-1-P1	<i>Sequence Component Applications in Protective Relays – Advantages, Limitations, and Solutions</i> Bogdan Kasztenny, Normann Fischer, Venkat Mynam Schweitzer Engineering Laboratories, Inc.
10:05 - 10:40 AM WA-1-P2	<i>Analysis of Microprocessor Relay Response on Surge Arrester Protection Schemes</i> Jeff Brogdon, Sadel Fetic, Addis Kifle , Georgia Transmission Corporation
10:45 - 11:20 AM WA-1-P3	<i>Control House and Relay Design Considerations for EMP Resiliency</i> Roy Mao, Harsh Vardhan , GE Grid Solutions Aaron Ingham, Barry Howe, Sarah Pink , Trachte Curtis Birnbach , Advanced Fusion Systems Mark Adamiak , Adamiak Consulting
11:25 - 12:00 PM WA-1-P4	<i>Innovative Approach to Meet NYC System Reliability and Resilience Needs</i> Ed Wah Chen, Anastasia O'Malley, Nadia Ali, Leslie Philp, Diego Pichardo, Fabricio Mantilla Consolidated Edison of New York Rogério Scharlach, Satish Samineni , Schweitzer Engineering Laboratories, Inc.
12:00 - 1:15 PM	Lunch - On Your Own

Salon 1-2-3	Session Chair: Flavio Graciaa , Southern Company Backup: Stephen Ladd , Duke Energy Carolinas
9:25 - 10:00 AM WA-2-P1	<i>PNM Approach to Protecting Overcompensated High-Voltage Lines</i> Kamal Garg, Venkat Mynam, Eric Chua, Jordan Bell Schweitzer Engineering Laboratories, Inc. Henry Moradi , Public Service Company of New Mexico
10:05 - 10:40 AM WA-2-P2	<i>Analysis of Directional Overcurrent Protection Over-trip on Leading Power Factor Load & Application of Load Encroachment at National Grid</i> Yujie (Irene) Lu, Song Ji , National Grid USA
10:45 - 11:20 AM WA-2-P3	<i>An Introduction to Completing a NERC PRC-026 Study for Traditional Generation Applications</i> Matt Horvath, Matthew Manley , POWER Engineers, Inc.
11:25 - 12:00 PM WA-2-P4	<i>Dominion Energy's Open Phase Project</i> Richard Tuck, Francisco Velez, Gerald Warchol, Michael Morris Dominion Energy
12:00 - 1:15 PM	Lunch - On Your Own

Salon 4-5-6	Session Chair: Murty Yalla , Beckwith Electric Company Backup: David Busot , Tampa Electric Company
1:15 - 1:50 PM WP-1-P1	<i>Utility Experience with Travelling Wave Fault Locating on Lower Voltage Transmission Lines</i> Robert James, Scott Hayes , Pacific Gas & Electric Company
1:55 - 2:30 PM WP-1-P2	<i>Traveling Wave Fault Location for Faults During Line Energization and Reclose</i> Lucas Barcelos, Adriano Pires, Rodrigo Donadel, Paulo De-Souza, Hengxu Ha, Terrence Smith GE Grid Solutions
2:35 - 3:10 PM WP-1-P3	<i>Protection Solutions for Refinery Transmission Upgrade from a Radial to Looped Configuration</i> Heath Lessard , Marathon Petroleum Company Kyle Bennett , POWER Engineers, Inc.
3:10 - 3:40 PM	Break
3:40 - 4:15 PM WP-1-P4	<i>Advanced Distribution Automation Application with Mis-coordination Correction Algorithm Based on Neural Network</i> Alexandr Stinskiy, Andre Smit , Siemens Christopher Huff, Bryan Pham, Nicholas Duong , Southern California Edison
4:20 - 4:55 PM WP-1-P5	<i>Site Acceptance Testing of a Duke Energy Distribution Automation Project Utilizing a Simulation Based Test Approach</i> John Hart, Peter Hoffman , Duke Energy Erich Keller, Bob Westphal , G&W Electric Company Robert Wang, Scott Cooper, Christopher Pritchard , OMICRON Electronics
4:55 PM	Adjourn
5:00 - 9:00 PM	Vendor Exhibits Open

Salon 1-2-3	Session Chair: Joe Schaefer , Florida Power & Light Backup: Craig Wester , GE Grid Solutions
1:15 - 1:50 PM WP-2-P1	<i>Review of Capacitor Bank Control Practices</i> Ilia Voloh , GE Grid Solutions
1:55 - 2:30 PM WP-2-P2	<i>Application Considerations for Protecting Transformers With Dual Breaker Terminals</i> Ryan McDaniel, Michael Thompson, Kunal Salunkhe Schweitzer Engineering Laboratories, Inc. Shahab Uddin, Abu Bapary , American Electric Power
2:35 - 3:10 PM WP-2-P3	<i>IEC 61850 Digital Substation Design Tutorial for Novices</i> Antonio Riccardo , National Grid Harsh Vardhan , GE Grid Solutions
3:10 - 3:40 PM	Break
3:40 - 4:15 PM WP-2-P4	<i>Packet-Based Teleprotection Design and Testing</i> Stephen Craven, Ha Vo, Tuan Tran, Gary Kobet Tennessee Valley Authority
4:20 - 4:55 PM WP-2-P5	<i>Mitigating Carrier Holes in Power Line Carrier</i> Tony Bell , Ametek Jeff Brown , Georgia Transmission Corporation
4:55 PM	Adjourn
5:00 - 9:00 PM	Vendor Exhibits Open

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Thursday May 2, 2019	
Salon 4-5-6	Session Chair: Alexander Apostolov , OMICRON electronics Backup: Marion Cooper , POWER Engineers, Inc.
8:00 - 8:35 AM TA-1-P1	<i>The Impact of Distributed Energy Resources on Arc Flash Incident Energy</i> Gefei "Derek" Kou, Jonathan Deverick, Tin Nguyen, Francisco Velez , Dominion Energy Kevin Phelps , Virginia Polytechnic Institute and State University
8:40 - 9:15 AM TA-1-P2	<i>Assessment of Protection Functionality and Performance with Respect to Declining System Fault Levels and Inertia due to a Significant Increase of Inverter Based Generation on National Grid's Transmission System in the United Kingdom</i> Juergen Holbach, Solveig Ward, Bryan Gwyn , Quanta Technology Ray Zhang, Barrie Ellison , National Grid UK
9:20 - 9:55 AM TA-1-P3	<i>Implementation of IEC 61850 Based Protection and Control Techniques within Duke Energy's Mount Holly Microgrid</i> Aleksandar Vukojevic , Duke Energy
9:55 - 10:10 AM	Break
10:10 - 10:45 AM TA-1-P4	<i>Compensator Ground Fault Coverage Through a Wye-Delta Transformer – A Case Study</i> Ryan McDaniel, Harish Chaluvadi, Michael Thompson Schweitzer Engineering Laboratories, Inc. Dustin Hohenbery , Caterpillar
10:50 - 11:25 AM TA-1-P5	<i>Case Study: Analysis of 138/13.8 kV Transformer Differential Mis-operation Points to Faulty CT</i> Morgan Smith , Enmax JC Theron , GE Grid Solutions
11:40 - 12:30 PM	Conference Awards and Keynote Speaker Keynote Speech: Purposeful Wealth Management: Liquidity, Longevity, Legacy Michael Crook , UBS Financial Services Inc.
12:30 - 1:30 PM	Lunch - Main Dining Room - 1st Floor

Salon 4-5-6	Session Chair: Russell Patterson , Patterson Power Engineers Backup: Mike Collum , — Schweitzer Engineering Laboratories, Inc.
1:30 - 2:05 PM TP-1-P1	<i>Intelligent Direct Transfer Trip over Cellular Communication</i> Terry Fix, Joseph Petti , Dominion Energy Joseph Key , Central VA Electric Cooperative Andre Smit, Suraj Chanda , Siemens
2:10 - 2:45 PM TP-1-P2	<i>Tutorial on Network Configuration for Digital Substations</i> Richard Hunt, Carlos Pimentel, Gustavo Silvano, Marcelo Zapella GE Grid Solutions
2:45 - 3:15 PM	Break
3:15 - 3:50 PM TP-1-P3	<i>Challenges Testing Low Impedance Bus Differential Relays</i> Terrence Smith, Paul Smith , GE Grid Solutions Jason Eames , Tennessee Valley Authority
3:55 - 4:30 PM TP-1-P4	<i>Arc Resistance Coverage and Mho Expansion - The Devil is in the Details</i> Craig Holt, Russell Patterson, Akram Saad Patterson Power Engineers, LLC
4:35 - 5:10 PM TP-1-P5	<i>Implementation of a New Algorithm to Detect Turn-to-Turn Faults in Shunt Reactors and Identify the Faulted Phase</i> Paul Nyombi , XCEL Energy Pratap Mysore , Pratap Consulting Services, LLC Zhiying Zhang , GE Grid Solutions
5:10 PM	Adjourn
5:00 - 9:00 PM	Vendor Exhibits Open

Salon 1-2-3	Session Chair: Craig Black , Duke Energy Florida Backup: Andre Smit , Siemens Industry
8:00 - 8:35 AM TA-2-P1	<i>How the Engineering Design Process Can Simplify the Testing of Automation and Control Systems</i> Eugenio Carvalheira, Andreas Klien , OMICRON electronics
8:40 - 9:15 AM TA-2-P2	<i>Challenges One May Not Expect to Face When Applying Digital Relays</i> Miroslav Ristic, Harjeet Singh Gill , Pacific Gas & Electric Company Ilia Voloh , GE Grid Solutions
9:20 - 9:55 AM TA-2-P3	<i>A POTT Scheme, using Transient Directional Elements, for a Complex 500kV Transmission Corridor Comprising Long, Heavily Loaded and Heavily Series Compensated Parallel Lines</i> Michael Kockott, Sinisa Zubic, Zhiying Liu, Hans Jernberg , ABB Inc. Tom Roseburg, Warren Rees , BPA
9:55 - 10:10 AM	Break
10:10 - 10:45 AM TA-2-P4	<i>Exploring IEEE C37.246-2017 Guide for Protection Systems of Transmission-to-Generation Interconnections</i> Manish Patel , IEEE Power System Relaying Committee
10:50 - 11:25 AM TA-2-P5	<i>OOPS, Out-of-Phase Synchronization</i> Nathan Klingerman, Kelvin Barner , Duke Energy Michael Thompson, Ritwik Chowdhury, Dale Finney, Satish Saminen Schweitzer Engineering Laboratories, Inc.
11:40 - 12:30 PM	Conference Awards and Keynote Speaker Keynote Speech: Purposeful Wealth Management: Liquidity, Longevity, Legacy Michael Crook , UBS Financial Services Inc.
12:30 - 1:30 PM	Lunch - Main Dining Room - 1st Floor

Salon 1-2-3	Session Chair: Chris Jones , Southern Company Backup: Ralph Mazzatto , Consolidated Edison
1:30 - 2:05 PM TP-2-P1	<i>To Improve the Security of Line POTT Scheme by Supervising Directional Ground Overcurrent Function with Negative-Sequence Voltage</i> Song Ji, Yujie (Irene) Lu, Michael Gregg, Robert Simpson National Grid USA
2:10 - 2:45 PM TP-2-P2	<i>Development of a Fully Automated Transmission Fault Location System at PG&E</i> Juergen Holbach, Damir Novosel, Eric Udern, Xinyang Dong Quanta Technology Jonathan Sykes, Moinca Anderson , Pacific Gas & Electric Company
2:45 - 3:15 PM	Break
3:15 - 3:50 PM TP-2-P3	<i>Overcurrent Protection Coordination in Automated Distribution Feeders</i> Kernie Houser , Mesa Associates Inc. Tim Morris , Knoxville Utilities Board Andre Smit, Suraj Chanda, Alexandr Stinskyi , Siemens Industry
3:55 - 4:30 PM TP-2-P4	<i>Remote Voltage Bias Technique to Prevent Low Voltages on an Electric Power Distribution Network with a High Penetration of DERs</i> Murty Yalla , Beckwith Electric Company
4:35 - 5:10 PM TP-2-P5	<i>Evaluating Overhead Line Reclosing Sequences Based on Transformer Through-Fault Exposure</i> Ed Atienza, Chris Kelley , Schweitzer Engineering Laboratories, Inc.
5:10 PM	Adjourn
5:00 - 9:00 PM	Vendor Exhibits Open

Friday May 3, 2019	
Salon 1-2-3-4-5-6	Session Chair: Philip VanSant , Dominion Energy Backup: Robert Frye , Tennessee Valley Authority
8:00 - 8:35 AM FA-P1	<i>High-Density Distribution Substation Design at Duke Energy</i> Brett Ross , University of Central Florida
8:35 - 9:10 AM FA-P2	<i>Trend in Fault Currents with Increased Penetration of Solar Generation</i> Manish Patel , Southern Company Services
9:10 - 10:40 AM FA-RWE	<i>Real World Experiences</i> Chair: Andre Smit , Siemens / Vice Chair: Robert Frye , Tennessee Valley Authority This session provides a forum for short presentations on "real life" experiences. Presenters will share protection related events in areas of operations, lessons learned, best practices and/or information on unique events.
10:45 - 12:00 NOON FA-PANEL	<i>Panel Session: Distributed Energy Resources</i> Chair: Murty Yalla , Beckwith Electric Company / Vice Chair: Joe Schaefer , Florida Power & Light This session will provide several short presentations on Distributed Energy Resources by each panelist and a question & answer period with all panelists.
12:00 NOON	Conference Ends