

72nd Annual Georgia Tech Protective Relaying Conference

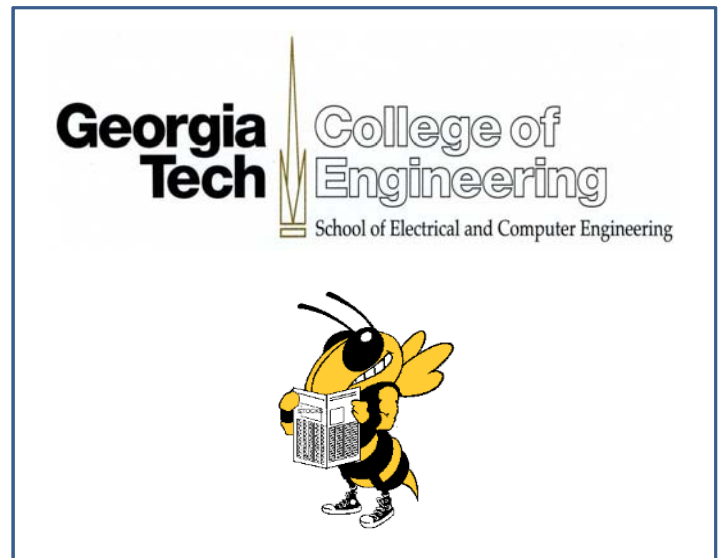
May 2-4, 2018 - Georgia Tech Hotel and Conference Center, Atlanta, GA

Tuesday May 1, 2018	
4:30 - 6:30 PM	Registration - Salon 1-2-3-4-5-6
5:00 - 9:00 PM	Vendor Exhibits Open

Wednesday May 2, 2018	
Salon 1-2-3-4-5-6	Session Chair: Marion Cooper , POWER Engineers Backup: Andre Smit , Siemens Industry
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>IEEE Standard C37.113 - 2015 - Guide for Protective Relay Applications to Transmission Lines</i> Gustavo Brunello , IEEE Power System Relaying and Control Committee
8:35 - 9:10 AM WA-0-P2	<i>Hidden Failure Detection in Protection System via Centralized Substation Protection</i> Sakis Meliopoulos , George Cokkinides Georgia Institute of Technology Hussain Albinaly Aramco Paul Myrda , Evangelos Farantatos Electric Power Research Institute
9:10 - 9:25 AM	Break

Wednesday May 2, 2018	
Salon 4-5-6	Session Chair: Mike Collum , Schweitzer Engineering Laboratories, Inc. Backup: Alexander Apostolov , OMICRON electronics
9:25- 10:00 AM WA-1-P1	<i>Analysis of Ground Distance Protection Response on a Non-Bolted Fault at National Grid</i> Y. Irene Lu , Song Ji, National Grid
10:05 - 10:40 AM WA-1-P2	<i>Changing Protection in Real-Time - Applying Adaptive Protection</i> Roy Moxley , Farel Becker, Siemens Industry
10:45 - 11:20 AM WA-1-P3	<i>A Creative Line Differential Protection Scheme for the Hudson River Crossing Section of a 345kV Transmission Line</i> Mike Kockott , Bharadwaj Vasudevan, ABB Inc. Alex Echeverria , Eric Anderson, NYPA
11:25 - 12:00 PM WA-1-P4	<i>Analyzing Faulted Transmission Lines: Phase Components as an Alternative to Symmetrical Components</i> Steven Chase , Sumit Sawai, Amol Kathe Schweitzer Engineering Laboratories, Inc.
12:00 - 1:15 PM	Lunch - On Your Own

Salon 4-5-6	Session Chair: Stephen Ladd , Duke Energy Backup: Colin Mott , Dominion Virginia Power
1:15 - 1:50 PM WP-1-P1	<i>High-Impedance Differential Applications With Mismatched CTs</i> Russ Franklin , Alliant Energy Hossein Nabi-Bidhendi , ABB Inc. Michael Thompson , Héctor Altuve Schweitzer Engineering Laboratories, Inc.
1:55 - 2:30 PM WP-1-P2	<i>Interfacing IEC 61850 System Bus Protection to Existing Protection in a Brownfield Substation</i> Donald Pratt , Mark Seiter, Consolidated Edison Company of New York, Inc.
2:35 - 3:10 PM WP-1-P3	<i>Distance Protection: Why Have We Started With a Circle, Does It Matter, and What Else Is Out There?</i> Edmund Schweitzer , Bogdan Kasztenny Schweitzer Engineering Laboratories, Inc.
3:10 - 3:40 PM	Break
3:40 - 4:15 PM WP-1-P4	<i>Tutorial on Protection of Three Single-Phase Transformers</i> Stephan Picard , GE Grid Solutions Yujie Yin , Quanta Technology, LLC Nicolas Keough , Nalcor Energy
4:20 - 4:55 PM WP-1-P5	<i>A Study of Behavior of Differential Protection Under the Influence of Ferroresonance</i> Hemanth Kumar Vemprala , Dr. Bruce A. Mork Michigan Technological University
4:55 PM	Adjourn
5:00 - 9:00 PM	Vendor Exhibits Open



Salon 1-2-3	Session Chair: Craig Wester , GE Grid Solutions Backup: Tom Austin , Southern Company
9:25- 10:00 AM WA-2-P1	<i>Summary of Revision, IEEE C37.119-2016, Guide for Breaker Failure Protection of Power Circuit Breakers</i> Bruce Mackie , IEEE Power System Relaying and Control Committee
10:05 - 10:40 AM WA-2-P2	<i>A Unified Approach to Controlled Switching of Power Equipment</i> Gabriel Benmouyal , Normann Fischer, Doug Taylor, Mark Talbott-Williams , Ritwik Chowdhury Schweitzer Engineering Laboratories, Inc.
10:45 - 11:20 AM WA-2-P3	<i>Experience with a Digital Substation Pilot in North America</i> Wojciech Szela , Edward Gdowik, PECO Philadelphia Harsh Vardhan , Mike Ramlachan, GE Grid Solutions
11:25 - 12:00 PM WA-2-P4	<i>Circuit Breaker Ratings – A Primer for Protection Engineers</i> Joe Rostron , Southern States, LLC Bogdan Kasztenny , Schweitzer Engineering Laboratories, Inc.
12:00 - 1:15 PM	Lunch - On Your Own

Salon 1-2-3	Session Chair: Benjamin Kazimier , Basler Electric Company Backup: Flavio Graciaa , Southern Company
1:15 - 1:50 PM WP-2-P1	<i>AEP Experience with Sub-Harmonic Oscillation Phenomenon</i> Zachary Campbell , Kiril Andov, American Electric Power
1:55 - 2:30 PM WP-2-P2	<i>Directional Element Design for Protecting Circuits with Capacitive Fault and Load Currents</i> Mike Benitez , Electric Power Systems Joe Xavier , Karl Smith, David Minshall, ABB Inc.
2:35 - 3:10 PM WP-2-P3	<i>Microgrid Protection and Control Strategies at Duke Energy</i> Aleksandar Vukojevic , Duke Energy
3:10 - 3:40 PM	Break
3:40 - 4:15 PM WP-2-P4	<i>Teleprotection with MPLS Ethernet Communications - Development and Testing of Practical Installations</i> Tariq Rahman , James Moralez, San Diego Gas & Electric Company Eric Udren , Solveig Ward, Quanta Technology, LLC Michael Bryson , Kamal Garg, Schweitzer Engineering Laboratories, Inc.
4:20 - 4:55 PM WP-2-P5	<i>Revision of IEEE Std C37.238, Power Profile for IEEE-1588: Why The Big Changes?</i> Galina Antonova , IEEE Power System Relaying and Control Committee
4:55 PM	Adjourn
5:00 - 9:00 PM	Vendor Exhibits Open

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Thursday May 3, 2018	
Salon 4-5-6	Session Chair: Bridget Coffman , Santee Cooper Backup: Bruce Mackie , Nashville Electric Service
8:00 - 8:35 AM TA-1-P1	Fault Induced Delayed Voltage Recovery – What it is and How IEC 61850 can Help Alexander Apostolov , OMICRON electronics
8:40 - 9:15 AM TA-1-P2	Utilizing the IEC 61850 Process Bus Architecture for Robust Protection Functionality in Digital Substations Paul Robinson , National Grid
9:20 - 9:55 AM TA-1-P3	CCVT Failures and Their Effects on Distance Relays Sophie Gray , CenterPoint Energy Ryan McDaniel, Derrick Haas Schweitzer Engineering Laboratories, Inc.
9:55 - 10:10 AM	Break
10:10 - 10:45 AM TA-1-P4	What Can We Learn From a Failed Transformer? Roy Moxley, Stefan Nohe , Siemens Industry
10:50 - 11:25 AM TA-1-P5	Impact of Incipient Faults on Sensitive Protection Zhihan Xu, Ilia Voloh , GE Grid Solutions Leonardo Torelli , CSE Uniserve
11:40 - 12:30 PM	Conference Awards and Keynote Speaker Keynote Speech: Grid Modernization – Opportunities and Challenges Damir Novosel , President of IEEE Power and Energy Society (PES)
12:30 - 1:30 PM	Lunch - Main Dining Room - 1st Floor
Salon 1-2-3	Session Chair: Jorge Pardo , Duke Energy Florida Backup: Murty Yalla , Beckwith Electric Company
8:00 - 8:35 AM TA-2-P1	Considerations and Benefits of Using Five Zones for Distance Protection Ricardo Abboud, Jordan Bell, Brian Smyth Schweitzer Engineering Laboratories, Inc.
8:40 - 9:15 AM TA-2-P2	Locating Faults Before the Breaker Opens - Adaptive Autoreclosing Based on the Location of the Fault Bogdan Kasztenny, Armando Guzmán, Venkat Mynam, Titiksha Joshi Schweitzer Engineering Laboratories, Inc
9:20 - 9:55 AM TA-2-P3	Analysis of Cascading Operations for Adjacent Line Faults at National Grid Y. Irene Lu, Song Ji , National Grid
9:55 - 10:10 AM	Break
10:10 - 10:45 AM TA-2-P4	Transmission and Generation Mis-operations During an Extreme Weather Event Taylor Raffield , Duke Energy
10:50 - 11:25 AM TA-2-P5	Generator Third-Harmonic Protection Explained Ritwik Chowdhury, Dale Finney, and Normann Fischer Schweitzer Engineering Laboratories, Inc.
11:40 - 12:30 PM	Conference Awards and Keynote Speaker Keynote Speech: Grid Modernization – Opportunities and Challenges Damir Novosel , President of IEEE Power and Energy Society (PES)
12:30 - 1:30 PM	Lunch - Main Dining Room - 1st Floor

Salon 4-5-6	Session Chair: David Busot , Tampa Electric Company Backup: Russell Patterson , Patterson Power Engineers
1:30 - 2:05 PM TP-1-P1	Critical Telecoms Issues for Grid Control Roger Bryant , Southern Company Bob Lockhart , Utilities Technology Council
2:10 - 2:45 PM TP-1-P2	Protection and Control Dependencies on Time - Applications, Challenges and Solutions Davis Erwin , Pacific Gas & Electric Company Marc Weiss , Marc Weiss Consulting Galina Antonova , ABB Inc.
2:45 - 3:15 PM	Break
3:15 - 3:50 PM TP-1-P3	Beyond the Knee Point: A Practical Guide to CT Saturation Ariana Hargrave, Michael Thompson, Brad Heilman Schweitzer Engineering Laboratories, Inc.
3:55 - 4:30 PM TP-1-P4	Case Studies of Distance Relay Misoperations John Wang , National Grid
4:35 - 5:10 PM TP-1-P5	Testing Superimposed-Component and Traveling-Wave Line Protection Thomas Hensler, Christopher Pritchard , OMICRON electronics Normann Fischer, Bogdan Kasztenny Schweitzer Engineering Laboratories, Inc.
5:10 PM	Adjourn
5:00 - 9:00 PM	Vendor Exhibits Open

Salon 1-2-3	Session Chair: Ralph Mazzatto , Consolidated Edison Backup: Joe Schaefer , Florida Power & Light
1:30 - 2:05 PM TP-2-P1	Optimizing HV Capacitor Bank Design, Protection, and Testing Benton Vandiver III , ABB Inc.
2:10 - 2:45 PM TP-2-P2	Method of Capacitor Failure Detection and Location in Shunt Capacitor Banks H. Jouybari-Moghaddam , Western University Tarlochan Sidhu , University of Ontario Institute of Technology Ilia Voloh, Mark Adamiak , GE Grid Solutions Mohammad Zadeh , ETAP
2:45 - 3:15 PM	Break
3:15 - 3:50 PM TP-2-P3	What's the Frequency, Heinrich? - From the Æther into the Wire Benjamin Kazimier, Randy Hamilton , Basler Electric Company Rick Gamble , Tennessee Valley Authority
3:55 - 4:30 PM TP-2-P4	Robust Microgrid Control System for Seamless Transition Between Grid-Tied and Island Operating Modes Scott Manson, Bharath Nayak, Will Allen Schweitzer Engineering Laboratories, Inc.
4:35 - 5:10 PM TP-2-P5	A Tutorial on the Application and Setting of Collector Feeder Overcurrent Relays at Wind Electric Plants Martin Best, Stephanie Mora , UC Synergetic, LLC
5:10 PM	Adjourn
5:00 - 9:00 PM	Vendor Exhibits Open

Friday May 4, 2018	
Salon 1-2-3-4-5-6	Session Chair: Steve Kunsman , ABB Inc. Backup: Robert Frye , Tennessee Valley Authority
8:00 - 8:35 AM FA-P1	Clayton Griffin Best Student Paper: Title - TBD Student Name - TBD, University Name - TBD
8:35 - 9:10 AM FA-P2	Analysis of NPCC Protection System Misoperations Quoc Le, Rafael Sahiholamal , Northeast Power Coordinating Council, Inc
9:10 - 10:40 AM FA-RWE	Real World Experiences Chair: Andre Smit , Siemens Industry / Vice Chair: Joe Schaefer , Florida Power & Light 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	Panel Session: IEC61850 Digital Substations Chair: Alexander Apostolov , OMICRON electronics / Vice Chair: Steve Kunsman , ABB Inc. This session will provide several short presentations by each panelist and a question & answer period with all panelists on IEC61850 digital substations related to engineering, design, redundancy, cyber security, communications, and testing.
12:00 NOON	Conference Ends