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IEEE

THE SUNCOAST SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

Volume 62—No. 10 October 2016

IN THIS SIGNAL:

- Page 2 Statutes and Rules Governing the Practice of Engineering
Page 3 SP/COMM: PowerPoint for Conferencing Free E-Book Teacher In Service
Page 4 PACE Meeting August Tampa Airport Solar Tour
Page 5 Covanta Hillsborough County Resource Recovery Tour
Page 6 Student News
Page 7 Energy Production Systems Engineering
Page 8 Generator Protection Fundamentals
Page 9 Advertising Section
Page 10 Calendar



Date: Thursday, February 23, 2017
Time: 4:30-6:30 PM Networking & Exhibits
6:30-9:00 PM Dinner Program & Awards
Place: Pepin Hospitality Center, 4121 N 50th Street, Tampa, FL 33610.
Karen A. Swager, P.E., Vice President, Concentrates for the phosphates business unit of The Mosaic Company, will be the keynote speaker.

FWCS Seeking Volunteers for Officers

The FWCS Nominating Committee is seeking volunteers for the following positions within the Section Executive Committee:

Chair Vice-Chair Secretary Treasurer

If you are willing to volunteer and have the time to dedicate to these prestigious positions, please contact Jim Howard (j.howard@ieee.org), Richard Beatie (r.beatie@ieee.org), or Robert Aasheim (robert.aasheim@duke-energy.com).

Message from the Section Chair

At the September Executive Committee meeting, I had the pleasure of presenting Dr. James Anderson an Outstanding Service Award on behalf of the Florida Council. This award recognizes the countless hours and tireless efforts Dr. Anderson has dedicated to the service of not only the Florida West Coast Section but also IEEE in Florida and Region 3. Well done Jim, well done!



The Excom also had a discussion on the proposed constitutional amendment up for approval. My goal was to provide time for discussion among the Excom members during August for a recommendation in September. After discussing this proposed Constitutional Amendment again at the September Excom meeting, we are making the recommendation of a NO vote on the proposed

amendment. As an Excom, we do not feel that the proposed amendment is in the best interest for proper representation of IEEE members and societies. I would ask that you consider our recommendation and please be sure and cast your NO vote for this proposed Constitutional Amendment as you cast your votes for the future leaders of IEEE. Voting is open through October 15th.



2016 Outstanding Section Membership Recruitment Performance Florida West Coast Section

Claude Pitts Chair, Florida West Coast Section

Upcoming Meetings

EXCOM Meeting

Tuesday, October 4th, 2016 5:30PM at TECO Plaza
Register online at http://time2meet.com/fwcs-excom/index.html
Open to all FWCS Members

SP/COMM—PowerPoint for Conferencing

Tuesday, October 18th, 2016
Details on page 3

PACE Presents: Will Your Next Job Be In the Power Industry?

Wednesday, October 19th, 2016
Details on page 4

Covanta Hillsborough County Resource Recovery Tour

Friday, October 21, 2016
Details on page 5

2016 IEEE EXECUTIVE COMMITTEE - FLORIDA WEST COAST SECTION

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THE SUNCOAST SIGNAL is published monthly by the Florida West Coast Section (FWCS) of the Institute of Electrical and Electronics Engineers, Inc. (IEEE). THE SUNCOAST SIGNAL is sent each month to members of the IEEE on Florida's West Coast. Annual subscription is included in the IEEE membership dues.

The opinions expressed, as well as the technical accuracy of authors, advertisers or speakers published in this newsletter are those of the individual authors, advertisers, and speakers. Therefore, no endorsement by the IEEE, its officers, or its members is made or implied.

All material for THE SUNCOAST SIGNAL is due in electronic form by 1st Sunday after the 1st Tuesday of the month preceding the issue month.

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Useful links:

<http://www.ieee.org/benefits> Global Benefits Finder
<http://www.ieee.org/discounts> Discounts Page

PE Corner

Art Nordlinger, PE, Senior Member

Statutes and Rules Governing The Practice of Engineering

Chapter 471 of the Florida Statutes governs the practice of engineering in the state. In some areas, the Statutes are very specific, and maybe even prescriptive. For example, Section 471.017 contains the continuing education requirements for engineers' license renewal. And as you are hopefully aware by now, the number of continuing education hours required increased from 8 to 18, and the mix of those hours have changed as well. The statute says (verbatim):

1. One hour must relate to this chapter and the rules adopted under this chapter.
2. One hour must relate to professional ethics.
3. Four hours must relate to the licensee's area of practice.
4. The remaining hours may relate to any topic pertinent to the practice of engineering.

Not atypical of the way our laws are written, however, it is up to the agency that administers that part of the law to craft detailed rules that put the law into practice. In this case, the Florida Board of Professional Engineers (FBPE) is tasked with that responsibility. Chapter 61G15 of the Florida Administrative Code contains the rules governing the practice of engineering. The rule creation process is not done in a vacuum but rather in a public forum with input invited from any interested party.

Practice of Engineering rule changes may begin in a number of ways, including as a result of a change to the Florida Statutes, or from a suggestion from an engineer or other interested party. The Board often assigns a committee, chaired by a Board member and including participation from interested parties and Board staff, to review the suggested change and come up with language as a starting point. The process is somewhat iterative, with the FBPE proposing changes to the rules, followed by a comment period, followed by more proposed changes, etc. until consensus is reached on final rules.

The Board is currently looking at a number of rule changes, including changes to the Electrical Rules, which are in Chapter 61G15-33. The electrical rules may be found online at <https://fbpe.org/wp-content/uploads/2015/10/61G15-as-of-6.15.16-for-website.pdf>. A committee has been formed to review suggested changes to the electrical rules. Any interested party may suggest changes by sending them to Rebecca Sammons at the FBPE. rsammons@fbpe.org

Whether you are a PE looking to attain required CEHs, or an engineer looking to learn something new or keep current with the latest trend in the profession, IEEE has seminars that will meet your needs. And for the PEs, don't forget that the next renewal deadline is only 4 months away. Better start earning those CEHs now!

SP/COMM Meeting

PowerPoint for Conferencing

Date: Tuesday October 18th, 6:30 PM

Location: Largo STAR Center
7887 Bryan Dairy Road Largo, FL 33777
(Corner of Bryan Dairy and Belcher)

Abstract: Writing for conferencing

Description: Using PowerPoint, we will replicate the presentation provided for the Int. Space Conference in Orlando of 2014, which is a preview of the 2017 IEEE Regional presentation. Discussion will follow on the experience encountered with application to the 2016 regional and an overview of present-day book publishing—the do’s and do nots with examples.

The current space conference presentation is an accepted social topic concerning the need for alien engineers. The question is whether alien construction should be considered as a possibility with some of the anomalies found by the various spacecraft of today.

Speakers: *John Hanna* and *Harold Hanna* John is an avid researcher and author considering active AI already in this solar system. Harold, with a long career in computer security, will assist. Both are principals with Hanna Information Systems.

John has a computer engineering degree from the University of South Florida. His specialty during school was programming and his interest lie in AI. John has a long career as a computer consultant. He was placed in DC during Y2K and, having certified expert with C programming, spent a few months in Austin teaching the language for IBM. He developed a crossword puzzle machine during after-hours. This expert system wouldn’t work by grinding out the iterations, so beginning his understanding of AI and expert systems.

Harold spent his military time with computers in army intelligence and later spent the better part of a decade with General Dynamics.

Organizers: For more specific information please contact Paul Belussi, paul.belussi@selinc.com, 509-334-8895 or Jim Cavanaugh, james.a.cavanaugh@ieee.org, 484-459-9418

Cost is \$2 for Students and Life Members, \$4 for IEEE Members, and \$6 for Non Members.

Food and beverages will be provided.

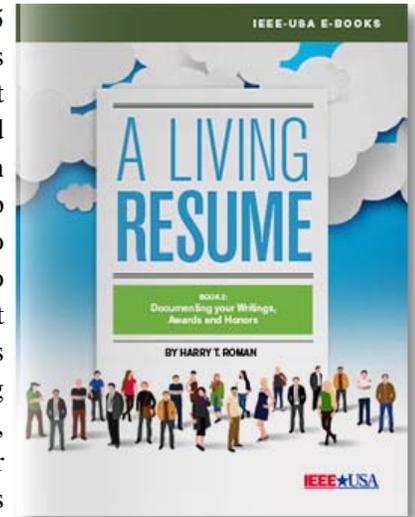
Reservations: <https://meetings.vtools.ieee.org/m/41081>

FREE EBOOK

This E-book helps engineers document accomplishments.

FREE SEPTEMBER EBOOK: A Living Resume - Vol. 2: Documenting your Writings, Awards and Honors BY HARRY T. ROMAN

This month (through 15 October), IEEE members can download this eBook at no charge. To download your free eBook, sign in with your IEEE web account, add the book to your cart and use promo code SEPTFREE16 at checkout. Volume 2 of this trilogy emphasizes realizing the power your writing, awards and honors. Author Harry Roman advises documenting them in your



living resume - not sweeping that powerful information into a corner. Further, he explains that such documentation should be carefully itemized and detailed. After all, companies like to see what characterizes the professional side of the engineers they will hire.

Teacher In Service

2016 HCPS Professional Study Day at Spoto HS

On August 4th, the annual *Hillsborough County Public Schools (HCPS) Professional Study Day* was held at Spoto High School. Emma Alaba and Mike Okneski joined FWCS’s Sean Denny to prepare for a double session at the request of Dan McFarland, HCPS Secondary Science Supervisor. We welcomed eight high school teachers to discuss “FAILURE: SEEDS OF INNOVATION” from www.tryengineering.org. It gave examples of products we use often that began as failures like Superglue, Liquid Paper, Silly Putty, and the Apollo 13 Mission.

After the presentation, we invited the teachers to discuss how students handle failures in today’s society. One teacher commented, “The website is a great resource. The presenter led a good discussion after the presentation.” The second session was the “Arduino Blink Challenge,” which also was a well-received success.

In-service presentation topics suggested included “How to create an environment that will help facilitate learning with and without technology”, “Expand on teacher-student Interpretation of Failure”, and “Spectroscopy, light and matter, scientific investigation math in science, teamwork or competition in science”.

Thanks to all who participated.

PACE Meeting

Will Your Next Job In The Power Industry?



I hope that you have a job right now – but, what will your next job be? Is there a possibility that it might be in the power industry? It turns out that roughly half of the people who currently work in the power industry are very close to retirement age. What this means for you, is that there are going to be a huge number of open jobs in this industry over the next five years.

At the same time, the power industry is undergoing massive changes. Nuclear is starting up again, solar and wind power have arrived in full force, and everyone is involved in massive "smartgrid" projects that promise to generate a tsunami of data and complexities that the industry has never had to deal with before. Could this be your next job?

Join your Florida West Coast PACE group's meeting to talk about what the power industry has to offer you. We've put together a panel of representatives from three of the local power companies (Duke, TECO, and Lakeland Electric) who are going to share all of the inside details about how the power industry is organized, what kind of jobs you might want (and which ones to stay away from!).

Join us on Wednesday evening, October 19th at 6:00pm. We'll be meeting at TECO Hall which is located at TECO Plaza, 702 N. Franklin St., Tampa. If you have any questions, feel free to contact the meeting organizer, Jim Anderson at 813-417-8854. I'll see you there!



August Tampa Airport Solar Tour

Did You Miss this Outstanding Tour?

On Tuesday, August 23rd your PE/IA Chapter held a meeting at the new TECO Photovoltaic (PV) installation on top of the parking garage at Tampa International Airport (TIA).

On this *extremely* hot day, a large group of our members braved the heat to get the latest information on the new PV installation at TIA.



Ms. Shelly Whitworth from Tampa Electric Company gave the group many details of the installation including information on the design needed to support the PV installation on the parking garage.

TECO also shared information on the output for the installation and their plans for future PV installations in their service area.

A special thanks to Mr. Tom Blair, Mr. Bill Fowler, and Ms. Shelly Whitworth for helping facilitate this outstanding meeting and tour.

Also, a special thanks to Mr. Steve Antman for providing the ice and water for the group - it was greatly appreciated.

Recruitment Goal Met

I am pleased to recognize the Florida West Coast Section for meeting its recruitment goal for the 2016 membership year. Congratulations!

The membership development goals were developed based on your Section's four year performance. You are to be commended for continuing to grow IEEE membership in the Florida West Coast Section.

Regards,

Antonio Luque
2016 Chair
IEEE Membership Recruitment and
Recovery Committee



2016 Outstanding Section Membership
Recruitment Performance
Florida West Coast Section

		
<h2 style="color: red; margin: 0;">Covanta Hillsborough County Resource Recovery Tour</h2>		

Date: Friday, October 21, 2016

Time: 11:00am—2:00pm

Location: 350 N. Faulkenburg Rd
Tampa, FL 33619

Cost: FREE for IEEE Members and Students
\$5 for Non-Members

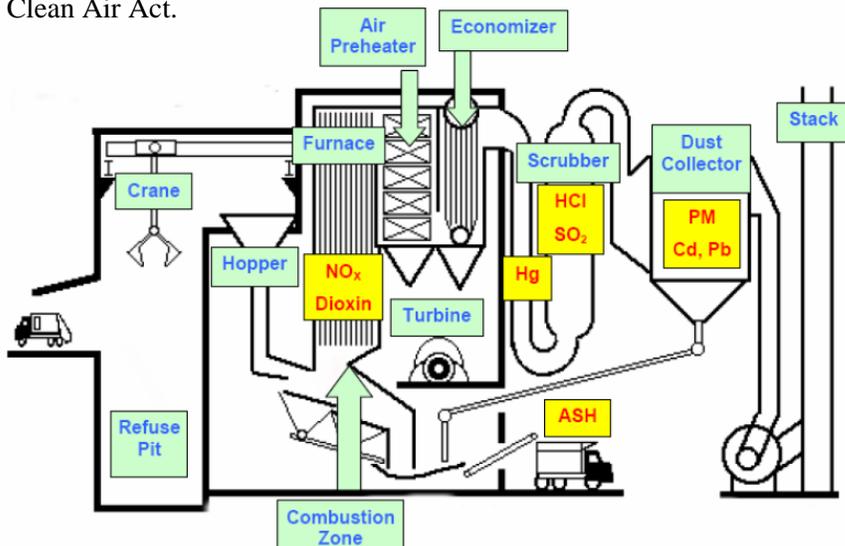
RSVP: Online at <http://time2meet.com/fwcs-pes3/index.html>

Space limited to first 25 registrants!!!

Questions: Steve Antman at steve.antman@cepowersol.com or (863) 701-4170

Tour Description:

This is a walking tour of the Covanta Energy Hillsborough County Resource Recovery Facility. The Hillsborough County Resource Recovery Facility, operating as Covanta Hillsborough, Inc., began commercial operation in October 1987. After a 2009 expansion that increased its processing capacity, the facility now processes up to 1,800 tons per day of solid waste. The facility, located near Tampa, FL, generates up to 46.5 megawatts of renewable energy and is owned by Hillsborough County, which supplies the waste processed at the facility. Covanta Hillsborough recycles secondary sewer treatment runoff from the adjacent wastewater treatment plant as part of its process water. It also maintains emissions control equipment in compliance with the United States Environmental Protection Agency's Clean Air Act.



Directions: The Hillsborough Facility will be visible on your left. Enter second driveway and proceed up the road on far right around the facility following visitor signs. Parking is available and visible once you circle facility.

As this is an operating industrial facility, proper attire (closed shoes, long pants, etc.) is required for your safety. Contact Steve Antman (steve.antman@cepowersol.com or (863) 701-4170) if you have any questions.

USF Student Branch

The IEEE student branch at USF is kicking off this Fall semester with an arc flash of events. We started off with the IEEE Picnic at Riverfront Park on Sept 17th, where students, faculty, and FWCS members interacted, enjoyed food, and participated in games and giveaways. On Oct 4th, the USF IEEE members are coming together to celebrating IEEE Day. We will have food, t-shirts, and electronic kit demos. On Oct 21st-22nd, USF students will be pushing their coding skills to the limit by participation in the IEE-EXTREME 10.0 - a 24 hour coding competition. A global event that lets some of the smartest minds among IEEE student members come together, network, and compete among each other. We will close out October with our Officer Meeting on Oct 25th, and our General Body meeting on Oct 26th. If you are interested in collaborating with our USF Student Branch or have any questions about our events, please contact the chair Victoria Leopold (victorialepp@mail.usf.edu) or vice-chair Ivan Chekerov (ichekere@mail.usf.edu).

USF PES/IAS Joint Student Chapter

The PES/IAS student chapter is glad to welcome everybody back to its second year after reactivating the chapter last year with much success! We had a great turnout at our first meeting of the Fall semester on September 15th with many new enthusiastic members and new officers who are ready to lead this great chapter. We continue to grow at a steady rate and have big goals in mind for the 2016-2017 school year like doubling our member count. The chapter will also collaborate with other student engineering organizations and professional engineering societies in the Tampa area to continue building our network opportunities. Some upcoming tours that we will have this semester include one of TECO's power plants, a Duke Energy power plant, a solar plant, two distribution substations, and the ever-popular Yuengling brewery facility. Seminars on substation engineering and power electronics are also being planned.

We want to continue having success with our student chapter. We welcome professionals to give a technical talk on any relevant topic. If you are interested contributing your expertise to our group, please contact the PES/IAS student chapter chair Jairo Garcia (jairog@mail.usf.edu) or the advisor Ralph Fehr (r.fehr@ieee.org).

Stay connected with our student chapter on social media:

Our Facebook Page: <https://www.facebook.com/PES.IAS/>

Our Bullsnc Page: <https://orgsync.com/127120/chapter>

Stay tuned for the rest of our upcoming Fall semester activities, which are going to be announced at the next general body meeting on Thursday, October 13th from 5:00-6:15pm. Come join us!



Washington Internships for Students of Engineering (WISE)

Connecting Engineers & Scientists with Public Policy Since 1980

Each year, IEEE selects three outstanding engineering student members to participate in the nine-week WISE program in Washington, D.C. Students discover how government officials make decisions on complex technological issues, while also learning how engineers and scientists can contribute to legislative process and regulatory decision-making.

The WISE Program is ranked as one of the best Internship opportunities in the U.S. by the *Princeton Review*.

IEEE-USA, IEEE Life Members, and IEEE Technical Activities Board collectively support IEEE's participation in the annual WISE program. For more information on the program and application forms, please visit: <http://www.wise-intern.org>.

**Deadline for the 2017 program
31 December 2016**

**WISE Summer 2017 program dates
June 5 - August 4**



2017-2018 IEEE-USA Science & Technology Government Fellowships

Connecting Engineers & Scientists with Public Policy

Congressional Fellowship – Seeking two U.S. IEEE members interested in spending a year working for a Member of Congress or a congressional committee.

Engineering & Diplomacy Fellowship – Seeking one U.S. IEEE member interested in spending a year serving as a technical adviser at the U.S. Department of State.

Engineering & International Development Fellowship – Seeking one U.S. IEEE member interested in serving as a technical advisor to the U.S. Agency for International Development.

The Fellowships run from September 1 to August 30 every year. For eligibility requirements and application information, go to www.ieeeusa.org/policy/govfel.

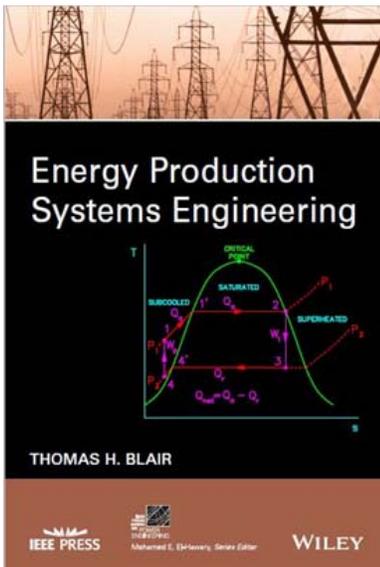
**The application deadline for 2017-2018 Fellowships is
23 December 2016.**

		
<h2>Energy Production Systems Engineering</h2>		

Date:	January 20, 2017	Time:	8:00am-8:30am Registration 8:30am-3:30pm Seminar
Speaker:	Thomas Blair, P.E., Engineering Fellow Tampa Electric Company	Cost:	\$150 Members \$250 Non-Members \$100 Students
Location:	FRCC Headquarters, 3000 Bayport Dr #600 Tampa, FL 33607		

Use parking lot for Hyatt (North side only).

Includes lunch and a copy of *Energy Production Systems Engineering* by Tom Blair (Wiley/IEEE Press - 2017) **\$140 value!**



PDH Credits: **6 Continuing Education Hours (CEHs)** will be awarded for this seminar. Be sure to enter your name and PE number on the signup website as it appears on your license. IEEE Florida Provider Number is 3849.

RSVP: Online at: <http://time2meet.com/fwcs-meetings/>
Make checks payable to IEEE FWCS and mail a check in advance to:

John Stankowich
IEEE PE/IA Chapter Treasurer
2593 Forest Run Court
Clearwater, FL 33761-3716

Questions: Serge Beuzile at 863-834-6511 or serge.beuzile@lakelandelectric.com, or
Jim Howard 863-834-6585 or jim.howard@lakelandelectric.com

Tom Blair will cover the key concepts of energy production systems, as covered in the newly-published first edition of his textbook:

Electrical Safety • Basic Thermal Cycles • Boilers & Steam Generators • Fossil Fuels & the Basic Combustion Process • Hydraulic Turbines • Nuclear Power • Conveyors • Fans • Pumps • Condenser Cooling System • Steam Turbines • Gas Turbines • Reciprocating Engines • Electrical System • Transformers & Reactors • Generators • Motors • Variable Frequency Drive Systems • Switchgear • Battery / Vital Bus Systems • Ground System • Electrical System Protection / Coordination • Control Systems • Instruments and Meters • Valves & Actuators • Emission Control Systems • Water Treatment • Solar & Wind Energy

These topics are thoroughly covered in the Energy Production Systems Engineering course offered by the University of South Florida (USF), but in a single day, we will cover the highlights of the course and give you a good feel for what each of these essential topics entails. This seminar is ideal for new engineers in the power industry and veteran power engineers looking to brush up on some old concepts or learn some new ones. Current industry practices in regards to safety and emerging trends such as solar power will be discussed.

Speaker: Tom Blair is an Engineering Fellow with Tampa Electric in the Generation Engineering Department. He performs electrical system analysis and uses the results to specify electrical equipment ratings, protective relay settings, and electrical system arrangement. Tom is also an adjunct professor and occasionally instructs courses at the University of South Florida. He has instructed the Electrical Machines and Drives Course, the Energy Production Systems Engineering course and a PE (power) exam preparation course at USF. Mr. Blair is a Senior Member of IEEE.

		
Generator Protection Fundamentals		

Date: Friday, February 17, 2017

Time: Registration & Breakfast 11:00am—2:00pm
Seminar 9:00am—2:00pm

Location: FRCC 3000 Bayport Dr. #600, Tampa, FL 33607

Parking: Use parking lot for Hyatt (North side only) Cost: \$100 Members, \$200 Non-Members, and \$20 Students

Speaker: **Wayne Hartmann** — VP, Protection and Smart Grid Solutions — Beckwith Electric

RSVP: Online at: <http://www.ewh.ieee.org/r1/floridawc/> (Select Reservations)

Make checks payable to: IEEE FWCS

Send checks to: Jim Howard, IEEE FWCS Treasurer
3133 W. Paris Street
Tampa, FL 33614-5964

Questions: Serge Beuzile at 863-834-6511, or serge.beuzile@ieee.com

Generators are subject to internal faults, external faults, and abnormal operating conditions caused by turbine and excitation system issues, as well as power system events over which the generator has no control, but must cope with. False (nuisance) trips are costly as the generator output is lost. Inability to trip due to lack of sensitivity, lack of certain protections, or deficiencies in protection application may cause severe damage to generators, resulting in prolonged outage and revenue loss, plus increased system instability risk. Achieving the ideal balance of secure and dependable protection involves use of an array of elements that protect the generator for all operating modes: off-line, start up, synchronizing, various levels of power output and when challenged by system faults and anomalies.

Who should attend this course: power plant protection engineers and technicians, as well as power plant operators and protection generalists who desire a deeper background on the subject.

- | | | |
|--|---|---|
| Generator construction and operation | - | Grounding and connections |
| IEEE standards for generator protection | - | Generator and power system interaction |
| Generator protection element review | - | Internal faults (in the generator zone) |
| Abnormal operating conditions | - | External faults |
| Protection Application Exploration | - | Tripping considerations and sequential tripping |
| Discuss tactics to improve reliability | - | Redundancy concepts |
| Generator protection upgrade considerations | - | Lessons learned from NE Blackout (2003) |
| Explore Setting, Commissioning and Event Investigation Tools | | |

Wayne Hartmann is VP, Protection and Smart Grid for Beckwith Electric. He provides customer and industry linkage to Beckwith Electric's solutions, contributing expertise for application engineering, training and product development.

Before joining Beckwith Electric, Wayne performed in application, sales and marketing management capacities with PowerSecure, General Electric, Siemens Power T&D and Alstom T&D. During the course of Wayne's participation in the industry, his focus has been on the application of protection and control systems for electrical generation, transmission, distribution, and distributed energy resources.

Advertising Section



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Or fax your address changes to (732) 562-5445

October 2016 Calendar of Events (For more information see P. 1) in this Signal...

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4 <i>EXCOM Meeting 5:30 TECO Plaza IEEE Day</i>	5	6	7	8
9	10	11	12	13 <i>PES/IAS Student Chapter General Body Meeting</i>	14	15
16	17	18 <i>SP/COMM Meeting Details - P. 3</i>	19 <i>PACE Meeting Details - P. 4</i>	20	21 <i>Covanta Tour Details - P. 5 IEEEEXTREME 10.0</i>	22 <i>IEEEEXTREME 10.0</i>
23	24	25 <i>Student Branch Officer Meeting</i>	26 <i>Student Branch General Body Meeting</i>	27	28	29
30	31 Halloween					