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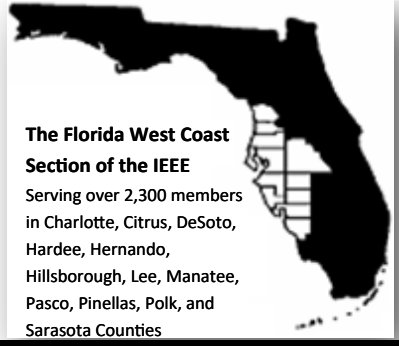

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THE SUNCOAST SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

Volume 63—No. 9 September 2017

IN THIS SIGNAL:

Free E-Book

Best of Backscatter – Book 5

By Donald Christiansen

Now through 15 September, IEEE members can download a free copy of this eBook. To download, sign in with your IEEE account, add the book to your cart and use promo code AUGFREE17 at checkout.

The fifth volume in the *Best of Backscatter* series is based on a selection of columns that previously appeared in *IEEE-USA Insight* and *Today's Engineer*. The columns chosen are related to design issues, engineering writing and communicating, historical recollections, and the engineering gender gap.

SoutheastCon 2018 Preparations Continue

In just about six months, the Florida West Coast Section will be hosting SoutheastCon, the annual Region 3 conference, in St. Petersburg. Upwards of 800 people are expected to attend this 4-day event. A local planning committee has been formed, and volunteers are being recruited to help plan and implement an outstanding event.

The University of South Florida is the host university for the conference, and will take the lead in planning and implementing the student portion of the conference. Florida Polytechnic University will assist USF with the student events.

The last time the Florida West Coast Section hosted SoutheastCon was 1996. We hope to put together a successful event that the attendees will enjoy and remember for years to come. Don't worry—it's not too late for you to help! Numerous volunteer and sponsorship opportunities exist. To become part of the major event, contact and FWCS officer (see Page 2 of this Signal).

Upcoming Meetings

EXCOM Meeting / Senior Membership Roundup
Tuesday, September 5, 2017 5:30PM at TECO Plaza
Register online at http://time2meet.com/fwcs-excom/index.html
Open to all FWCS Members

Glass Core Technology and Through-Glass Vias
September 11, 2017 6:30PM to 8:00PM
Details—Page 5

Tour of Tampa Electric Big Bend Solar
September 22, 2017 1:00PM to 3:00PM
Details—Page 4

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.

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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PE Corner

Art Nordlinger, PE, Senior Member

Proposed Continuing Education Rule Changes

As I previously reported, the Florida Board of Professional Engineers established a committee to consider continuing education rule changes. The committee consists of Board members and public contributors interested in this area. The Board's continuing education rules may be found in Chapter 61G15-22 FAC.

A number of issues surrounding continuing education were received from various sources, including Board members, PEs, continuing education providers, and members of the public. These were eventually "boiled down" to 26 topics for discussion. The committee decided to consider some of these issues for rulemaking while dropping others for a variety of reasons. For example, some of the suggestions, while the committee felt they had merit, couldn't be considered for rulemaking because they conflicted with the underlying Statutes governing continuing education, or were outside the authority granted to the Board in this area. Ultimately, three rule changes were presented to the Board by the committee for consideration. I will summarize them here.

First, changes to Rule 61G15-22.006 are proposed that specify that the Board will randomly audit a minimum of 3% of licensees for compliance with continuing education requirements. The previous rule didn't specify how many licensees were to be audited. Additionally, the rules are clarified to state that failure to demonstrate compliance will result in disciplinary action, and that any licensee who failed to demonstrate compliance in the previous renewal cycle will automatically be audited in the next cycle.

Second, the committee proposed an addition to Rule 61G15-22.011 which addresses ways in which an applicant may become a continuing education provider. The committee is proposing to add that anyone registered as a CE provider with the International Association for Continuing Education and Training and applies to be a provider in Florida should automatically qualify.

And last, an addition to Rule 61G15.22-012 requires providers to make available sufficient information about their courses to "allow a participant to clearly understand the course content, learning objectives and outcomes, and level of difficulty prior to enrolling in the course." This is in response to complaints by licensees that some courses offered turned out to be very simplistic or otherwise not as advertised.

The next step in the process is for the Board to start a rule-change proceeding. The Board may propose to adopt all of the committee's suggested changes or a subset thereof. The Board's proposed changes are then published publicly and a comment period ensues. After considering comments the Board may make changes to the proposed rules and publish them again. This iterative process continues until the Board votes to finalize the rule change. I will provide updates as the process proceeds.

Whether you are a PE looking to attain required CEHs, or an engineer looking to learn something new or keep current with the latest trends in the profession, IEEE has seminars that will meet your needs. Better start earning those CEHs now!

Tour of Tampa Electric Big Bend Solar

Date: September 22, 2017
Time: 1pm-3pm
Cost: Free for IEEE Members and Students, $10 Non-Members and $5 for non-IEEE Students
Make checks payable to: IEEE FWCS
Send checks to: Jim Howard, IEEE FWCS Treasurer
3133 W. Paris Street
Tampa, FL 33614-5964
Speaker: Ryan Copley, Tampa Electric Electrical Engineer
Location: US41, west side, ½ mile south of the US41 & Big Bend Road intersection
(see map below)
RSVP: Online at: http://time2meet.com/fwcs-meetings/
Space limited to the first 30 registrants!!!

Your local IEEE FWCS will host a tour of the new Tampa Electric Big Bend Solar Electric Generation station - the largest solar energy installation in the Tampa Bay area. The 23-megawatt (MW) photovoltaic array includes more than 200,000 thin-film solar panels that track the sun. Tracking solar arrays produce over 30 percent more energy than fixed solar arrays. The array will provide environmental savings of up to 30,000 tons of carbon dioxide every year – which is the equivalent of removing up to 6,000 cars from the road.

The project sits on 106 acres of company-owned land at the Big Bend Power Station in Apollo Beach and has the capacity to power nearly 3,300 homes. It began commercial operation in February 2017. "Tampa Electric is proud to have built the Tampa Bay area's largest solar array," said Gordon Gillette, president of Tampa Electric. "This investment in large-scale solar using the latest technology further demonstrates our commitment to clean energy, as part of our commitment to deliver affordable and reliable energy to our 730,000 customers."

The Big Bend installation is the third large-scale solar project for Tampa Electric since 2015. The first, a 2-MW facility on the top floor of Tampa International Airport's south economy parking garage, produces enough electricity to power up to 250 homes. Tampa Electric also installed a 1.8-MW solar facility at LEGOLAND® Florida Resort.

IEEE Signal Processing Society

IEEE ComSoc™ IEEE Communications Society

Glass Core Technology and Through-Glass Vias

Date: **Monday, September 11, 2017**

Time: **6:30pm—8:00pm**

Location: **7887 Bryan Dairy Rd.—Largo, FL 33777 (Largo STAR Center, corner of Bryan Dairy and Belcher)**

Cost: **FREE**

Presenter: **Shane Dabrowski, Samtec Application Engineer**

RSVP: **Online at:** https://events.vtools.ieee.org/m/46620

Questions: **Paul Belussi, Schweitzer Engineering Laboratories, Inc., paul_belussi@selinc.com**

- Glass Core Technology—What is it and why do we care?
- Microelectronic Packaging—Quick background on silicon substrates and packaging techniques
- Glass Core Applications and Use Cases—RF, Optics, Micro-Fluidics
- Current glass capabilities in the market and roadblocks that need to be overcome

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Software-Defined Networking Enhances Communication-Assisted Protection Scheme

Date: **Thursday, October 12, 2017**

Time: **6:30pm—8:00pm**

Location: **7887 Bryan Dairy Rd.—Largo, FL 33777 (Largo STAR Center, corner of Bryan Dairy and Belcher)**

Cost: **FREE**

RSVP: **Online at:** https://events.vtools.ieee.org/m/46670

Questions: **Paul Belussi, Schweitzer Engineering Laboratories, Inc., paul_belussi@selinc.com**

SEL SCHWEITZER ENGINEERING LABORATORIES

There is considerable interest in the potential advantages that software-defined networking (SDN) brings to the real-time power utility networks in terms of fast healing, more deterministic latencies, and deny-by-default security. This presentation reviews the communication channel performance requirements for communication-assisted protection schemes and explains the challenges of using Ethernet for teleprotection applications. You will learn how SDN can be used to provide a breakthrough solution that solves the limitations of using Ethernet for mission-critical services within the substation.

Tampa Armature Works (TAW) Factory Tour

Date: **Friday, November 10, 2017** **Time:** **Noon – 3PM** **Location:** **440 South 78th Street, Tampa, FL 33619**

Cost: **$10 Members, $20 Non-Members, $5 IEEE Student Members**

RSVP: **Online at: http://time2meet.com/fwcs-meetings/**
Make checks payable to: IEEE FWCS
Send checks to:
Jim Howard, IEEE FWCS Treasurer
3133 W. Paris Street
Tampa, FL 33614-5964

Questions: **Tom Blair at 813-228-1111, ext 34407 or thblair@tecoenergy.com**

IEEE invites you to a Tour of the TAW Motor Repair Facility in Riverview, Florida.

Tampa Armature Works Inc. is a family of integrated power solution providers. TAW has been providing design and repair services for electric motors, generators, transformers, pumps, drives, metal clad switchgear, metal enclosed switchgear, and all rotating apparatus since 1921. If it spins, turns, or rotates, chances are TAW has seen it and repaired it.

TAW provides portable generator servicing, custom engineered switchgear, generator packaging, power controls and automation to power distribution equipment, motor repair, and service of all kinds of equipment — including wind and nuclear power.

This will be a great opportunity to discuss with the experts any motor control problems you may have had in the past with large motors or drives, as well as see the up-to-date equipment located at this TAW facility.

ITI/GE Instrument Transformer Presentation and Plant Tour

Date: **Friday, December 8th** **Time:** **Presentation begins at 2:30 PM followed by the Tour!**

Cost: **Free for Members, $10 Non-Members and $5 for Students**
Make checks payable to IEEE FWCS and mail a check in advance to IEEE PE/IA Chapter Treasurer:
Jim Howard
3133 W Paris Street
Tampa FL 33614-5964

Speaker: **Claudio Morejon | Southeast Sales Manager for ITI/GE Instrument Transformers**

Location: **GE Plant; 1907 Calumet Street, Clearwater FL 33765**

RSVP: **Online at:** http://time2meet.com/fwcs-pes2/index.html

Space limited to the first 45 registrants!!!

Questions: **Steve Antman at 863 701-4170 or steveantman@gmail.com**

See next month's Signal for additional details

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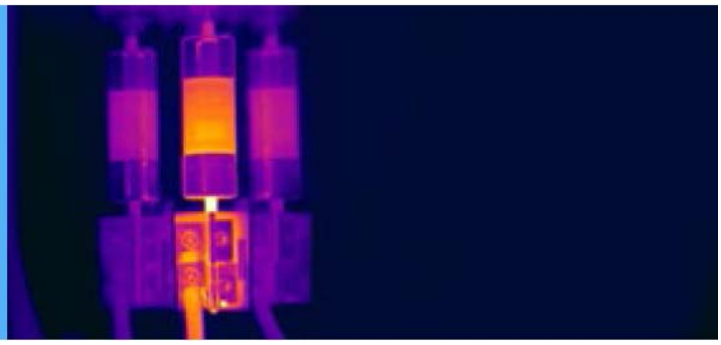
Get your Level I or II Infrared Certification today.

Infrared Electrical Certification



Level I and Level II Infrared Electrical Certification Courses

The 3-day courses are focused on industry specific topics related to electrical applications! Typical infrared courses teach attendees multiple IR applications; we focus on what we do best: the electrical application of infrared.

Level I Infrared Certification -$749.00

Course Level: **Beginner**
Prerequisites: **None**

Overview:

- Understand basic infrared camera setup (using ANY brand and model)
- Understand the fundamentals of infrared
- Understand thermography
- Understand heat transfer
- Understand electrical applications
- Understand software and reporting (using ANY brand of camera)

Level II Infrared Certification $749.00

Course Level: **Intermediate**
Prerequisites: **Level I Certification Course**

Overview:

- Learn How to Perform Heat Transfer Calculations
- Understand Infrared Spectrum/Planck's Law
- Understand Radiosity Problems
- Understand Emissivity / Reflectivity
- Learn to Calculate Transmissivity
- Understand Resolution Tests
- Understand How to Quantifying Measurements
- Understand Importance of Reporting and Documentation

Level I or Level II with IRISS Certified Installer Training - $999.00

This 1-day training can be added to your Level I or Level II certification class. This course allows students to learn how to use IR windows and ultrasound ports correctly. From installation to calculating emissivity/transmissivity, this course is designed to provide the hands-on experience to confidently install and use IRISS IR windows and ultrasound ports. As an IRISS Certified Installer, you will know the critical steps needed to efficiently perform surveys on electrical components while using IR windows.

Overview:

- Full Understanding about safety around electrical cabinets
- Understanding IR inspections for electrical maintenance
- Introduction to ultrasound for electrical testing
- Understanding of IR windows and ultrasound ports
- Overview of IRISS custom IR window solutions
- How to install IRISS product lines
- Understanding the importance of tagging and asset management

Dates	Place	Contact
Level I - October 2-4 2017 Level II - September 11-13 2017	IRISS Headquarters 10306 Technology Terrace, Bradenton, FL 34211	training@iriss.com 941-907-9128

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September 2017 Calendar of Events (For more information see P. 1) *in this Signal…*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	**2**
3	**4**	**5** *EXCOM Meeting / Senior Membership Roundup 5:30 TECO Plaza*	**6**	**7**	**8**	**9**
10	**11** *6:30 Glass Core Technology* Details see P. 4	**12**	**13**	**14**	**15**	**16**
17	**18**	**19**	**20**	**21**	**22** *1:00 Big Bend Solar* Details see P. 3	**23**
24	**25**	**26**	**27**	**28**	**29**	**30**