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**THE
SUNCOAST
SIGNAL**

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

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Register online at <http://time2meet.com/fwcs-excom/index.html>*

Open to all FWCS Members

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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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E-MAIL: dhoward@frcc.com
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PE Renewal is Almost Upon Us. Below are Opportunities to Get Your 4 Technical Hours Before the February 2015 Deadline

Brought to you by YOUR IEEE PE/IA Chapter

Friday, January 23rd - *Symmetrical Components & Fault Calculations* - Ralph Fehr Presenting – Location: Seminole Electric

Thursday, February 26th – *Power Transformer Overview* – Don Seay, General Electric - Location: Seminole Electric

Watch your upcoming Signals for more information!

PE Renewal Requirements will change, effective March 1, 2015. Information regarding this change is below.

Changes to Continuing Education Requirement For your P.E. License

Licensed professional engineers are **currently** required to obtain eight (8) continuing education (CE) course hours every two years in order to renew their licenses. Of the eight hours, four hours are required to be on the laws and rules of professional engineers.

Effective March 1, 2015, HB713 requires a total of **18 continuing education course hours** in order for licensed professional engineers to renew their licenses. Of the 18 hours, one must be related to the laws and rules of professional engineers, one must relate to professional ethics, and four must relate to the licensee's area of practice. The remaining hours may correlate to any topic pertinent to the practice of engineering. Four hours of the continuing education course hours may be obtained by being an officer for a Board-recognized professional or technical engineering society. The required hours relating to law, rules and ethics may also be earned by a PE serving as a member of the Legislature or as an elected state or local official. Since the portion of the Bill relating to CE requirements does not take effect until March 1, 2015, **the new CE requirements will not apply until the 2015-2017 biennial renewal.**

<p>Wayne Ellis President</p>		<p>Steve Antman Sales Engineer Cell: 813-523-3161</p>
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IEEE USA Free e-Book

IEEE-USA is once again offering a complimentary e-book to IEEE members. The December featured selection is “Starting Your Start-Up -- Book 2: Market Size and Strategy,” by Tanya Candia.

The “Starting Your Start-Up” e-book series is designed for the engineer or entrepreneur who has a promising product or service idea, but no real marketing expertise. “Book 2: Market Size and Strategy” helps flesh out the initial plan and find the real market size, even when dealing with a disruptive technology in which market size data is hard to find. The book also helps the entrepreneur better understand the target buyer and how to communicate the value of their product or service, thus increasing the probability of early and ongoing sales.

Candia shares that “choosing a market cannot be done lightly, yet many startups ignore this step and rush to market with a product that they feel is suited to anyone.” Choosing the first market segment involves the following steps, among others: selecting the candidate industries/markets; segmenting the markets; defining characteristics of each segment; determining the optimal category; short-listing and sizing the segments; and selecting your target market and segment.

“Starting Your Start-Up -- Book 2: Market Size and Strategy” can be downloaded at <http://www.ieeeusa.org/communications/ebooks/files/oct14/28vknso/Starting-Your-Start-Up-Book-2.pdf> for free to IEEE members. It’s \$9.99 for non-members.

In January, IEEE-USA E-books will offer to members a complimentary copy of Gus Gaynor’s “Shaping an Engineering Career -- Book 1: Responding to Career Challenges -- A Personal Journey”.

Call for Authors

IEEE-USA E-books seek authors to write an e-book or e-book series on career guidance and development topics. If you have an idea that you think will benefit members in a particular area of expertise, please email your proposal to IEEE-USA Publishing Manager Georgia C. Stelluto at g.stelluto@ieee.org, and IEEE-USA Communications Committee Chair Gus Gaynor at g.gaynor@ieee.org.

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Symmetrical Components and Fault Calculations

Date: Friday, January 23, 2015

Time: Registration: 8:30 A.M. Seminar: 9:00 A.M. - 2:30 P.M.

Speaker: Dr. Ralph E. Fehr III, P.E., Instructor, University of South Florida

Location: Seminole Electric Cooperative
16313 North Dale Mabry Hwy. – Tampa, Florida

Cost: \$100 Members, \$150 Non-Members, \$25 IEEE Student Members

PDH Credits: 4 professional development hours will be awarded. Be sure to provide your name as it appears on your Florida license and your license number to insure proper credit. Florida Provider #0003849 I

Reservations: Online at: <http://time1meet.com/fwcs-meetings/> (Select Reservations)
Make checks payable to IEEE FWCS and mail a check in advance to
IEEE PE/IA Chapter Treasurer:
PES/IAS Chapter 2593 Forest Run Court Clearwater, FL 33761-3716
Space limited to the first 40 registrants!!!

Contact: Serge Beauzile at 863-834-6511 or serge.beauzile@ieee.org

The seminar will include:

- Review of Basics
 - Phasors, Per-Unit
- Symmetrical Components
 - Physical Example of Vector Components
 - Application of Symmetrical Components to Three-Phase Power Systems
 - Electrical Characteristics of the Sequence Currents
 - The Delta-Wye Transformer
- Sequence Networks
 - Thevenin Reduction of the Sequence Networks
- Fault Calculations
 - Momentary versus Interrupting
 - Short-Circuit Faults
 - Open-Circuit Faults

Ralph Fehr earned a B.S. degree in Electrical Engineering from Penn State, an M.E. degree in Electrical Engineering, concentrated in Power, from the University of Colorado at Boulder, and a Doctor of Philosophy degree in Electrical Engineering from the University of South Florida at Tampa. He has over 20 years of experience in the electric power industry and over 25 years experience in post-secondary teaching. In addition to serving on the USF Electrical Engineering faculty, he conducts power engineering training throughout the United States and worldwide.

Dr. Fehr was selected by the Institute of Electrical and Electronics Engineers (IEEE) from the 12 sections in the Florida Council, representing over 9,500 members, and named *Outstanding Engineering Educator* for 2009. Then in 2010, he was awarded the Joseph M. Biedenbach award for excellence in engineering education by IEEE Region 3. He also received the 2014 IEEE Power and Energy Society Florida West Coast Chapter Outstanding Engineer award. Dr. Fehr authored *Industrial Power Distribution* in 2002 (Prentice Hall). The second edition will be published later this year by Wiley/IEEE Press. He is a registered professional engineer in Florida and New Mexico.



Power Transformer Overview

Last Chance to Earn Your PDHs for this Renewing Period

- Date: Thursday, February 26, 2015
- Time: Registration: 8:00 A.M. Seminar: 8:30 A.M. - 2:30 P.M.
- Speaker: Don Seay, P.E., General Electric
- Location: Seminole Electric Cooperative
16313 North Dale Mabry Hwy. – Tampa, Florida
- Cost: \$100 Members, \$150 Non-Members, \$25 IEEE Student Members
- PDH Credits: 4 professional development hours will be awarded. Be sure to provide your name as it appears on your Florida license and your license number to insure proper credit. Florida Provider #0003849 I
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Space limited to the first 40 registrants!!!
- Contact: Jim Howard at 863-834-6511 or james.howard@lakelandelectric.com

Power Transformer Overview

This course covers various topics pertaining to power transformers including:

- Basic concepts, definitions, ratings, and components
- General design concepts & construction phases
- Specification considerations, including factors to consider during planning, application, engineering; loss evaluation; unusual conditions
- Factors typically considered during customer-manufacturer joint design reviews
- Factory acceptance test description
- Metrics used to measure quality assurance; procedures for ensuring acceptability
- Procedures/steps performed after receiving transformer prior to installation

Don Seay is a registered Professional Engineer in NC, serving as technical application engineer with General Electric since 2010. He has 27 years of electrical utility experience in various T&D engineering roles including Southern Company, CLECO, Florida Power & Light, and Progress Energy. He also has 5 years of T&D consulting experience with KEMA & Doble Engineering. His areas of expertise include T&D transformers, circuit breakers, voltage regulators, and underground cables covering all aspects including design, manufacture, specification, application, operation and maintenance. Don holds both Bachelor of Electrical Engineering and Master of Electrical Engineering degrees from Auburn University.

SAVE THE DATE

Tampa Bay Engineers Week Banquet

February 27, 2015

Keynote Speaker:

Story Musgrave

Story was a NASA astronaut for over 30 years and flew on six spaceflights. He performed the first shuttle spacewalk on Challenger's first flight, was a pilot on an astronomy mission, conducted two classified DOD missions, was the lead spacewalker on the Hubble Telescope repair mission and on his last flight, he operated an electronic chip manufacturing satellite on Columbia.



Join us to what will surely be an entertaining and inspirational presentation from one of NASA's greatest astronauts.

This Engineers Week, the engineering societies of the Tampa Bay area have put together the fifth annual Tampa Bay Engineers Week Banquet to be held on Friday, February 27, 2015, at the:

A La Carte Event Pavillion (4050 Dana Shores drive, Tampa, Florida, 33634)

To register: <http://tbewb.org/>

This premier event brings together local leaders and engineering professionals to recognize the outstanding achievements of Engineers, Science Teachers, Math Teachers, and Students in our community.

Additionally, awards will be presented to outstanding engineers in each discipline, as well as local engineering students excelling in their engineering related studies and Young Professionals. The banquet also features the Lignell Awards. These awards, named after a former Chairman for the Institute of Electrical and Electronics Engineers (IEEE), are given to local High School educators who are performing outstanding work in the instruction of the STEM topics (science, technology, engineering and math). The organizers of the event recognize the important role these individuals play in encouraging students to pursue technological degrees in college.

The banquet is a combination of efforts by all the Engineering Societies of West Central Florida This event brings together professionals in all fields from all around Tampa and Florida's west coast.

(continued)

VENDOR/SPONSOR INFORMATION FOR TAMPA BAY ENGINEERS WEEK BANQUET

Platinum Level Sponsorship - \$1250 Donation

- Company logo displayed on signage at the event.
- Receives up to 10 tickets to the awards banquet
- Presents the Lignell Award.
- Receives recognition at Platinum Sponsor level on event slideshow & program.
- Receives recognition and link to website on the TBEWB website. Information about company and special acknowledgement will be made on the website.
- Display Table in Reception Area

Gold Level Sponsorship - \$900

- Company logo displayed on signage at the event.
- Receives up to 5 tickets to the awards banquet.
- Has company logo displayed at Gold Sponsor level on event slideshow & program.
- Receives recognition and link to website on the TBEWB website.
- Display Table in Reception Area, (if space available)

Silver Level Sponsorship - \$600

- Company logo displayed on signage at the event.
- Receives up to 2 tickets to the awards banquet.
- Has company logo displayed at Silver Sponsor level on event slideshow & program
- Receives recognition and link to website on the TBEWB website

Vendor Level Sponsorship - \$400

- Receives display table to present company products during the Pre-Dinner Social.
- Receives recognition at Vendor level in program and on the TBEWB website
- Receives up to 2 tickets to the awards banquet

Donor Level Sponsorship - \$200 or More

- Donor Level individual names will receive recognition at Donor Level on event slideshow, TBEWB website and signage at the event
- All Donations are greatly appreciated
- All individual donors will be listed in the program unless requested

Friends Level Sponsorship - \$50 or More

- Friends Level individual names will receive recognition at Friends Level on event slideshow and will be listed in the program unless otherwise requested.

Speaker Sponsor - \$1,500

- Speaker will join you at your Company Table for the event!
- Company logo displayed on signage at the event.
- Receives up to 10 tickets to the banquet.
- Company representative may participate in Lignell Award presentations.
- Recognized as Speaker Sponsor level in program and event slideshow (5 slides).
- Company Logo and link to website on the TBEWB website. Display Table in reception area.



Funding Bill Boosts Cyber Security Spending

Cyber security spending would mostly increase under the nearly \$1.1 trillion spending package lawmakers agreed to on Tuesday night.

The bill is expected to get a vote in the House and Senate later this week or on Saturday. In the meantime, both chambers are expected to vote on a stopgap-funding bill to avoid a government shutdown on Dec. 11, originally slated as the last day of the lame-duck session.

Passage of **the larger bill**, called the “cromnibus,” would fund cyber security at consistent or increased levels through fiscal 2015.

“The cyber dollars keep going up, which is appropriate,” said Sen. Sheldon Whitehouse (D-R.I.) early Tuesday, when asked about the bill before its release. Whitehouse chairs the Senate Judiciary Subcommittee on Crime and Terrorism.

The FBI would get \$8.3 billion, \$81 million above 2014 levels. The bureau has been ramping up its cyber crime work, said Joe Demarest, assistant director of the FBI’s cyber division.

It’s “one of the top priorities for the bureau,” he said at a Bloomberg Government event Tuesday. The bureau has roughly 1,200 people within the cyber division, he said. Overall, 20 to 30 percent of the FBI’s time — “and growing” — is spent on cyber issues, he added.

Cyber security funding for the Department of Justice (DOJ) would be kept steady at 2014 levels — \$722 million. DOJ played an increased cyber security role in 2014, indicting five members of the Chinese army for hacking. Last week, the department revealed **it was launching** a dedicated cyber security unit within its criminal division.

The Department of Defense would get support for “requested personnel increases for intelligence and cyber mission areas,” according to **a summary** of the budget.

The “cromnibus” would keep the Department of Homeland Security’s (DHS) funding frozen at 2014 levels via a continuing resolution through February. The other appropriations fund agencies for the rest of fiscal 2015. Congress has been working in recent weeks to **clarify** and **authorize** a number of the DHS’s cyber security responsibilities.

The Department of Energy would get a notable cyber security bump, up \$25 million from 2014 to \$304 for fiscal 2015.

Lawmakers have consistently reiterated a cyber attack on the energy industry is one of their main security concerns.

“Considering what a crazy mad jam this was at the end, as I understand it, I’m pretty satisfied,” Whitehouse said a few hours before the budget was released.

Mark your Calendar – March 10, 2015

Tour DeSoto Next Generation Solar

Please mark your calendar for an exciting tour of FPL DeSoto Solar Power Plant. The plant can accommodate optimal 20-25 participants.

The Tour will start with a presentation and Q&A and then we will proceed to the observation deck to view the entire site from above.

The address for the DeSoto Next Generation Solar Center is 4051 NE Karson St., Arcadia 34266. The GPSs will take you directly to the site. But for reference, it is located approx. 8 miles north of Arcadia right off US 17.

Coming from the north on US 17 we're about 1 mile south of the Hardee/DeSoto County line. When you turn onto Karson Street, go to the end of the road and fork to the right, come in through the gate and follow the road to a second gate, toward the building. (It's easy and you won't miss it). There is no signage on US 17, so you do have to look for Karson St.

When you pull up to the gate, press the call button and the gate will be remotely opened for you.

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<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="width: 10%;">Size</th> <th colspan="2" style="width: 15%;">One Month</th> <th colspan="2" style="width: 15%;">6 Months</th> <th colspan="2" style="width: 15%;">12 Months</th> </tr> <tr> <th style="width: 5%;">Member</th> <th style="width: 5%;">Non-Member</th> <th style="width: 5%;">Member</th> <th style="width: 5%;">Non-Member</th> <th style="width: 5%;">Member</th> <th style="width: 5%;">Non-Member</th> </tr> </thead> <tbody> <tr> <td>Business Card</td> <td>\$25</td> <td>\$33</td> <td>\$120</td> <td>\$150</td> <td>\$210</td> <td>\$252</td> </tr> <tr> <td>¼ Page</td> <td>\$40</td> <td>\$52</td> <td>\$190</td> <td>\$238</td> <td>\$335</td> <td>\$402</td> </tr> <tr> <td>½ Page</td> <td>\$75</td> <td>\$98</td> <td>\$360</td> <td>\$450</td> <td>\$630</td> <td>\$756</td> </tr> <tr> <td>¾ Page</td> <td>\$110</td> <td>\$143</td> <td>\$530</td> <td>\$663</td> <td>\$925</td> <td>\$1,110</td> </tr> <tr> <td>Full Page</td> <td>\$140</td> <td>\$182</td> <td>\$670</td> <td>\$838</td> <td>\$1,175</td> <td>\$1,410</td> </tr> <tr> <td>Insert / Sheet</td> <td>\$200</td> <td>\$260</td> <td>\$800</td> <td>\$1,000</td> <td>\$2,000</td> <td>\$2,400</td> </tr> </tbody> </table>							Size	One Month		6 Months		12 Months		Member	Non-Member	Member	Non-Member	Member	Non-Member	Business Card	\$25	\$33	\$120	\$150	\$210	\$252	¼ Page	\$40	\$52	\$190	\$238	\$335	\$402	½ Page	\$75	\$98	\$360	\$450	\$630	\$756	¾ Page	\$110	\$143	\$530	\$663	\$925	\$1,110	Full Page	\$140	\$182	\$670	\$838	\$1,175	\$1,410	Insert / Sheet	\$200	\$260	\$800	\$1,000	\$2,000	\$2,400
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January 2015 Calendar of Events (For more information see P. 1) *inside this Signal...*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
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4	5	6 <i>EXCOM Meeting, 5:30 TECO Plaza</i>	7	8	9	10
11	12	13	14	15	16	17
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