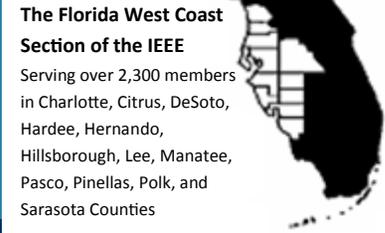




# THE SUNCOAST SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

Volume 61—No. 2 February 2016



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## Upcoming Meetings

### *EXCOM Meeting*

Tuesday, February 02, 2016 5:30PM at TECO Plaza

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

Open to all FWCS Members

### *Grounding and Bonding Best Practices*

Friday, February 19, 2016

Details on page 6

### *Tampa Bay E-Week Banquet*

Friday, February 26, 2016

Details on page 4 & 5

### *Laws & Rules and Ethics for Professional Engineers*

Monday, March 21, 2016

Details on page 7

### *Industrial Power Distribution*

Friday, April 15th, 2016

Details on page 8

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Dr. Andrew Hoff, [hoff@usf.edu](mailto:hoff@usf.edu)STUDENT BRANCH MENTOR: Jim Howard, Lakeland Electric (863) 834-6585 [j.howard@ieee.org](mailto:j.howard@ieee.org) (H) (813) 876-1748

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Chris Allemang - IEEE - [callemang@mail.usf.edu](mailto:callemang@mail.usf.edu)Sayed Abdullah Sadat - IEEE PES/IAS - [sayed\\_abdullah@ieee.org](mailto:sayed_abdullah@ieee.org)CONFERENCES: Richard Beatie, PE, [r.beatie@ieee.org](mailto:r.beatie@ieee.org)WEB PAGE: <http://www.ieee.org/fwcs>WEB MASTER: Herman Amaya [hamaya@tampabay.rr.com](mailto:hamaya@tampabay.rr.com)

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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.

Address all correspondence to:

Donna Howard

3133 W Paris Street Tampa, FL 33614-5964  
Home Phone 813-876-1748 E-MAIL: [dhoward@frcc.com](mailto:dhoward@frcc.com)

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**PE Corner**

Art Nordlinger, PE, Senior Member

**Non-Technical Continuing Education**

One of the major changes to Florida's continuing education requirements for professional engineers is in the area of non-technical continuing education. For the last licensure renewal in 2015, PEs had to have four continuing education hours in the Florida Rules and Laws that govern the practice of engineering in the State. This has changed substantially in that only one hour of Rules and Laws will be required for the next renewal. In addition, all PEs will be required to have one CEU in Engineering Ethics.

Since the ethics continuing education requirement is new, rules need to be written spelling out the details of managing this new continuing education area. These new rules were finalized recently and can be found online at: [https://www.flrules.org/gateway/RuleNo.asp?title=LICENSE\\_RENEWAL\\_CONTINUING\\_EDUCATION&ID=61G15-22.0105](https://www.flrules.org/gateway/RuleNo.asp?title=LICENSE_RENEWAL_CONTINUING_EDUCATION&ID=61G15-22.0105). Not surprisingly, the Board integrated the new ethics rules into those currently existing for Rules and Laws. However, note that being provider of Rules and Laws CEUs doesn't automatically allow a provider to offer Ethics CEUs. The provider must apply to the Board to offer Ethics content.

IEEE is a registered provider with the Florida Board as a national professional society. The local chapter puts on a wide variety of seminars that are both educational and qualify for technical CEHs. However, IEEE and others who are professional society-affiliated providers may only provide technical CEHs unless they otherwise apply to the Board. Last year, your local chapter applied to the Board to be both a Rules and Laws and an Ethics CEU provider. Our applications are still pending Board approval, and we are hopeful that this will be received soon.

Anticipating this approval, IEEE has scheduled our first Rules and Laws and Ethics seminar for March 21, 2016. We are extremely fortunate to have Mr. William Bracken, PE, and chair of the Florida Board of Engineers, present back-to-back one hour seminars which will satisfy both the Rules and Laws and Ethics continuing education requirements for the next renewal period. A separate article with the details of these seminars may be found in this edition of the Signal and on our website.

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 is only 12 months away. Better start earning those CEHs now!



### USF Student Branch Call for Speakers

The Spring 2016 semester is underway and the USF Student Branch is looking for guest speakers. They would like to hear from you about anything from professional development to technical seminars. If you would like to be a speaker, please contact Christopher Allemang, IEEE USF Student Branch Chair, at [calleman@maill.usf.edu](mailto:calleman@maill.usf.edu) or 863-430-4241 with your ideas.

### New SP/COMM Leadership

Hello SP / COMM members,

My name is Paul Belussi. I will be picking up the SP / COMM chair for Chris Lambrecht. In the next couple of weeks. I will be reaching out to SP / COMM members asking for volunteers willing to give some of their time to build on SP / COMM's successes in 2016.

Paul Belussi  
 Application Eng - Comm  
 Schweitzer Engineering Laboratories, Inc.  
 6220 Hazeltine National Drive #116  
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### It's that Time of Year Again!

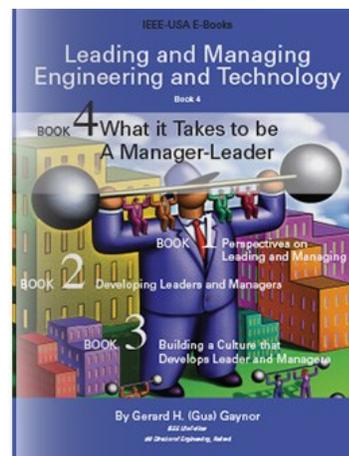
You should have already received your **IEEE Renewal** notice and now is the time to make sure you visit: <http://www.ieee.org/go/renew>

We are working to have everyone renew early this year, so when you get a chance, please send yours in!

### FREE EBOOK: Leading and Managing Engineering and Technology - Book 4: What It Takes to Be a Manager-Leader

This month (through 15 February), 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 JANFREE at checkout. The fourth and final book of this series explores managing, leading, and the role of Independent Professional Contributors (IPCs); finding problems and opportunities; developing a new mindset; gives examples of taking the lead; examines becoming the Manager-Leader; and offers parting thoughts.

<http://shop.ieeeusa.org/usashop/product/careers/74765>



# DISCOVER ENGINEERS WEEK

## Tampa Bay E-Week Banquet

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## “Exploring New Earth Like Worlds”

### John Troeltzsch

Kepler Mission Program Manager  
Keynote Speaker

John Troeltzsch is the Kepler mission program manager for Ball Aerospace. Troeltzsch received his Bachelor of Science in Aerospace Engineering from the University of Colorado in 1983 and was immediately hired by Ball Aerospace. While working at Ball, Troeltzsch continued his studies at C.U. and received his Masters of Science in Aerospace Engineering in 1989.

During his 31 years at Ball Aerospace, Troeltzsch has worked on three of Hubble's science instruments and in program management for the Spitzer Space Telescope. Following Spitzer's launch in 2003, Troeltzsch joined Ball's Kepler team and was named program manager in 2007. For the Kepler mission, Troeltzsch has managed the Ball team, including responsibility for cost, schedule, and performance requirements.

**DATE:** Friday, February 26, 2016

**TIME:** 4:30 – 6:30 PM Networking & Exhibition  
6:30 - 9:00 PM Dinner Program & Awards

**LOCATION:**



4121 N 50th St, Tampa, FL 33610

## Registration & Sponsorship Information

[www.tbewb.org](http://www.tbewb.org)



### Speaker Level Sponsorship (1 only)

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- Front Row Center Table with Speaker
- Company logo displayed on signage at the event.
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- 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.

**No Longer Available**

### Platinum Level Sponsorship

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- 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 \$1000

- 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 \$750

- 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.

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- Receives up to 1 ticket to the awards banquet

### Vendor Level Sponsorship \$250

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

**[More information and Registration can be found at:](#)**

**<http://events.r20.constantcontact.com/register/event?oeidk=a07e9tjvzoq42b73460&llr=bvqrglcb>**

**[Note that all donations may be tax deductible. FIN # 13-1656633](#)**



## ***Grounding and Bonding Best Practices***

**Date:** Friday, February 19, 2016

**Time:** 8:30am-9am Registration, 9am-3pm Seminar

**Cost:** \$100 members, \$200 Non-Members, \$20 Students (Includes Breakfast & Lunch)

**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*

**Speakers:** Ralph D. Painter, Esq., P.E, Engineering Fellow, Tampa Electric Company

**Pdh's:** 4 Pdh's (CEH's) 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

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

**Parking:** Use parking lot for Hyatt (North side only).

**RSVP:** Online at: <http://time2meet.com/fwcs-pes2/index.html> Space limited to the first 45 registrants!!!

**Cancellation must be submitted online 24 Hrs prior to the seminar at:**

<http://time2meet.com/fwcs-pesX/index.html>

**No shows will be invoiced for the total cost of the seminar.**

**Questions:** Tom Blair at 813-228-1111, ext 48179 or [tom\\_blair@ieee.org](mailto:tom_blair@ieee.org)

This training will cover the various types of grounding configurations such as solidly grounded, low and high impedance grounded and ungrounded systems. We will review NEC terms and IEEE standards that apply to grounding. We will cover IEC susceptibility curves and mold case circuit breaker operation for GFCI protection. We will discuss the difference between the grounded conductor and grounding conductor and the function of each along with NEC requirements for sizing. We will explain requirements for grounding and bonding equipment enclosures and how to terminate shields on medium voltage cables correctly. Lastly we will discuss basic lightning protection and will review instrument grounding systems.

Ralph D. Painter, Esq., P.E. graduated from the University of South Florida, Tampa, Fl. in 1977 with a MSEE degree and from Stetson University College of Law, Tampa Fl., in 2008 with a Juris Doctor degree. He is a senior member of the IEEE. He has over 35 years of electrical engineering experience in the design, commissioning, operation and maintenance of electric utility large coal and natural gas fired power plants. He is currently an Engineering Fellow at Tampa Electric Company and he is a licensed Professional Engineer in the State of Florida.



## *Laws & Rules and Ethics for Professional Engineers*

**Date:** Monday, March 21, 2016

**Time:** 11:00am-11:30 am Registration, 11:30-12 Lunch, 12pm-2pm Meeting

**Cost:** \$30 members, \$50 Non-Members, \$20 Students (Includes Lunch)

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*

**Speakers:** Mr. William C. Bracken, PE, SI, CFM, Chair of the Florida Board of Professional Engineers

**Presentations:** The Rules and Laws That Govern the Practice of Engineering in Florida  
Ethics and the Practice of Engineering in Florida

**CEHs:** One Rules & Laws CEH will be awarded, One Ethics CEH will be awarded, which will meet the current requirements for PE Renewals. Be sure to enter your name and PE number on the signup website as it appears on your license.

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

**Parking:** Use parking lot for Hyatt (North side only).

**RSVP:** Online at: <http://time2meet.com/fwcs-pes4/index.html>

**Space limited to the first 65 registrants!!!**

Cancellation must be submitted online 24 Hrs prior to the seminar at:

<http://time2meet.com/fwcs-pesX/index.html>

No shows will be invoiced for the total cost of the seminar.

**Questions:** Jim Howard at 863-834-6585 or [jim.howard@lakelandelectric.com](mailto:jim.howard@lakelandelectric.com).

IEEE is fortunate to have **Mr. William Bracken**, PE, Chair of the Florida Board of Professional Engineers, join us for two presentations: The Rules and Laws That Govern the Practice of Engineering in Florida and Ethics and the Practice of Engineering in Florida. This is a unique opportunity to hear Mr. Bracken's perspective as the Chair of the Florida Board on these topics.

Bill Bracken is president of Bracken Engineering in Tampa. He has been a structural engineer for more than 25 years and is licensed in 35 states. His career has centered on the practice of structural engineering, forensics, building-related codes and disaster response. Bill is a structures specialist with the state of Florida, a member of Hillsborough County Fire Rescue and has been an instructor for ICC for the last 15 years and currently serves as the chair of Florida's engineering licensure board.



## *Industrial Power Distribution*

**Date:** Friday, April 15th, 2016

**Time:** 8:00am-8:30am Registration, 8:30am-3:30pm Seminar

**Cost:** \$150 members, \$250 Non-Members, \$100 Students (Includes Breakfast (continental), Lunch, and a copy of Industrial Power Distribution by Ralph Fehr, published by Wiley/IEEE Press - \$135 value!)

*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*

**Speaker:** **Ralph Fehr, Ph.D., P.E.** – University of South Florida. Ralph is an instructor in the Electrical Engineering department, teaching courses in the Power and Energy option as well as circuits, electromagnetics, and engineering mathematics. He is a senior member of IEEE, and received the IEEE FWCS PES Chapter Outstanding Engineer award in 2014, the Region 3 Joseph M. Biedenbach Outstanding Engineering Educator award in 2011, the Florida Council Outstanding Engineering Educator award in 2009, and the T&D World Instructor of the Month recognition in November 2008.

**PDHs:** 6 Professional Development Hours (CEHs) will be awarded for this seminar. Be sure to enter your name and PE number on the sign-up website as it appears on your license. IEEE Florida Provider Number is 3849.

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

**Parking:** Use parking lot for Hyatt (North side only).

**RSVP:** Online at: <http://time2meet.com/fwcs-pes3/index.html> Space limited to the first 45 registrants!!!

Cancellation must be submitted online 24 Hrs prior to the seminar at: <http://time2meet.com/fwcs-pesX/index.html>

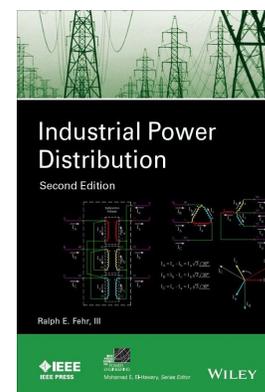
No shows will be invoiced for the total cost of the seminar.

**Questions:** Serge Beuzile at 863-834-6511 or [serge.beuzile@lakelandelectric.com](mailto:serge.beuzile@lakelandelectric.com), or Jim Howard 863-834-6585 or [Jim.Howard@lakelandelectric.com](mailto:Jim.Howard@lakelandelectric.com)

Ralph Fehr will present a seminar covering the key concepts of industrial power distribution, as covered in the newly published second edition of his textbook:

- |  |  |
|--|--|
| · Utility Source                               | · Switchgear and Motor Control Centers |
| · Instrument Transformers and Metering         | · Ladder Logic                         |
| · Transformer Connections                      | · Motor Application                    |
| · Fault Calculations                           | · Lighting Systems                     |
| · Protective Device Selection and Coordination | · Power Factor Correction              |
| · Raceway Design                               | · Power Quality                        |

These topics are thoroughly covered over the course of two semesters at the university, but in a single day, we will cover the highlights and give you a good feel for what each of these essential topics entails. This seminar is ideal for engineers preparing for the PE (Power) licensing exam, engineers new to the power industry, and veteran power engineers looking to brush up on some old concepts or learn some new ones. Current industry practices and emerging trends will be discussed. As always, Dr. Fehr will emphasize understanding of the basic concepts. Everything else is details, and will fall into place readily once the basic concepts are understood.



## *IEEE Florida Council*

The IEEE Florida Council is composed of the 12 IEEE Sections in Florida: Broward, Canaveral, Daytona, Florida West Coast, Gainesville, Jacksonville, Melbourne, Miami, Northwest Florida, Orlando, Palm Beach and Tallahassee. Through this representation the various Sections are able to share each other in areas such as joint meetings and publications, conferences or symposia as well as training for Section Officers. As with the Sections elections were held resulting in the following 2016 Florida Council elected and appointed officers:

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<b>¾ Page</b>	\$110	\$143	\$530	\$663	\$925	\$1,110
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Or fax your address changes to (732) 562-5445

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

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2 <i>EXCOM Meeting 5:30PM TECO Plaza</i>	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19 Grounding and Bonding Best Practices Details on page 6	20
21	22	23	24	25	26 Tampa Bay E-Week Banquet Details on page 4 & 5	27
28	29					