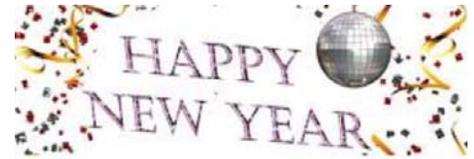


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THE SUNCOAST SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

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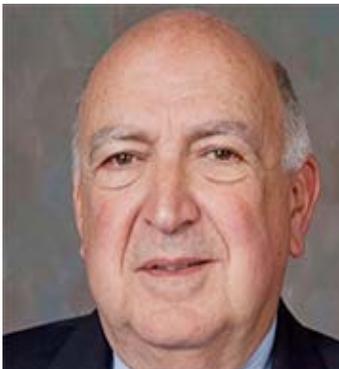
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***Frank DiBello—Keynote
Speaker at E-Week Banquet***

Mr. Frank DiBello, CEO and President of Space Florida Corporation, will be the keynote speaker at this year's E-Week banquet, which will be held on Thursday February 22 at TPepin's Hospitality Centre. Mr. DiBello develops and executes programs designed to retain, grow, and expand aerospace business in Florida. He also focuses on the development of Florida aerospace workforce retention and vendor appreciation programs.

He has more than 40 years of experience in the aerospace and defense industries. He also has been appointed by NASA to serve on a number of critical space commissions and committees. *(continued on Page 3...)*



FWCS Anniversary Celebration

The Florida West Coast Section celebrated its 61st anniversary in style on December 2 at the South Florida Museum in Bradenton. The well-attended event included the presentation of pins and certificates to members recognizing their service to the section. Dr. Paul Schnitzler was recognized for 63 of service to IEEE—a truly remarkable accomplishment.

After lunch, the members in attendance toured the museum, the Parker Manatee aquarium, and the Bishop planetarium. In addition to a wonderful opportunity to visit and catch up with FWCS members, the museum provided a great opportunity to learn about Florida's natural history, its marine ecology, and the universe around us.

The upcoming year will be another milestone for the FWCS, as the section will host the Region 3 annual conference, SoutheastCon, for the third time. Watch the Signal for opportunities to participate in the conference.



FWCS Chair Claude Pitts checks out a manatee at the Parker Manatee Aquarium during the section's 61st anniversary celebration.

Upcoming Meetings

EXCOM Meeting

Tuesday, January 2, 2018 5:30PM at TECO Plaza
Register online at <http://time2meet.com/fwcs-excom/index.html>
Open to all FWCS Members

Trench Reactor Seminar

Friday January 19, 2018 8:30AM
Register online at <http://time2meet.com/fwcs-pes2/index.html>
Details—Page 4

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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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Home Phone: (813) 876-1748 E-mail: amberdon3133@gmail.com**The Signal, Copyright © 2017****Useful links:**<http://www.ieee.org/benefits> Global Benefits Finder<http://www.ieee.org/discounts> Discounts Page**PE Corner**Art Nordlinger, PE, Senior Member
2017 FBPE Review

2017 was a busy year for the Florida Board of Professional Engineers. A comprehensive review would be impossible in this space so I'll just hit a few highlights.

This year was a renewal year and the FBPE staff ably handled some 60-odd thousand renewals. This monumental task was made all-the-more challenging since more than half of these came in during the last few weeks prior to the February 28 deadline. The Board has discussed ways to incentivize PEs not to wait until the last minute to renew. The Board's options in this regard are limited by statute and the scope of possible incentives is still unclear. Several possibilities have been floated including a sliding payment scale like is done for property taxes. Stay tuned.

Just over a thousand PEs were audited as part of this renewal for verification of continuing education completion. Those being audited received a request to send in evidence of completing their continuing education last spring (assuming that they met their obligation to keep their contact information up-to-date with the Board). About ten percent of those audited either didn't have the required continuing education hours, or didn't respond at all (a small group). The Board's next step, for those that have not rectified their deficiency, is to begin proceedings that could ultimately result in license revocation for non-compliance.

As of this writing, the Board has one open Board Member position and two others whose terms are ending. Board positions do turn over periodically. If you are interested in serving on the Board, contact the Board office for information on how to apply. For 2018, Kenneth Todd was elected Chair and C. Kevin Fleming will continue as Vice-Chair.

Several of the Board's rules came up for review this year. IEEE participated in the review and modification of both the rules for Electrical Practice and those regarding Continuing Education. These revisions are both now in the process of being published for comment prior to final adoption by the Board. As I noted in a previous column, the Electrical rules were revised for clarity and consistency between topics. The Continuing Education rules were also clarified, an additional means of becoming certified as a provider was added, and an obligation was placed on providers to be sure that their course descriptions allow the student to understand the level of the course's content; i.e. whether it's a basic or advanced treatment of the topic.

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. With renewal only 13 months away demand for our seminars is high. Sign up now!

...continued from Page 1

Frank DiBello—Keynote Speaker at E-Week Banquet

Mr. DiBello was also awarded the Medal for Distinguished Public Service, the Defense Department's highest civilian honor, for his work as president of the United Services Organization. His talk is sure to be an interesting one.

But there is much more on the agenda in addition to Mr. DiBello's speech. The E-Week banquet 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 to local engineering students excelling in their studies.

The banquet also features the Lignell Awards, named after a former IEEE chair, which are awarded to local high school educators involved in the STEM (science, technology, engineering, and math) fields. The event is a combined effort of numerous local engineering organizations.

The E-Week banquet will be held on Thursday February 22, 2018 at TPepin's Hospitality Centre, 4121 North 50th St., Tampa, FL 33610. Vendor expo and cocktails are from 4:30pm—6:30pm, and the dinner, speaker, and awards begin at 6:30. To learn more about the 2018 E-Week banquet and to make your reservations to attend, please visit the event's website at <http://www.tbewb.com>.



Sponsored by:



GE Instrument Transformers

The Florida West Coast Section had a great presentation on High Accuracy Current Transformers (CTs) on December 8 from Frank Lopez, GE Field Application Engineer and Kent Jones, Senior Product Manager. We discussed the physics, material, operation, accuracy and how to use the right CT in various applications. Frank and Kent answered questions from the attendees that ranged from USF students to seasoned professional engineers.



We walked away knowing the selection of CTs available, how to select the proper CT, and how to use them properly in metering circuits. After the presentation we toured the factory to see how CTs are made and the Faraday rooms used for testing. We left with a good understanding of how CTs are made and the manufacturing concerns that arise when producing high-accuracy devices. What great host GE was and what valuable knowledge was gained by our members. Thank you to all who were involved!



Do you have an idea for a meeting, tour, or seminar that would be of interest to our members? If so, please contact a section officer (see Page 2 of this Signal).

		
<i>Reactor Seminar</i>		

Date: Friday, January 19, 2018

Time: Registration & Breakfast: 8:30AM-9:00AM

Seminar: 9:00AM – 2:00PM

Speaker: David Caverly, VP Business Development – Coil Products

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

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

Cost: \$100 Members, \$200 Non-Members, \$20 Students. Includes Breakfast and Lunch.

PDH Credits: 4 Professional development hours will be awarded. Be sure to enter your name and PE number on the signup website as it appears on your license. Florida exempt provider #00015.

RSVP: Online at: <http://www.ewh.ieee.org/r3/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

Space limited to the first 50 registrants!!!

Agenda

1. Introduction
2. Overview: Reactor Applications & Trench Capabilities
3. General Update – What’s New
4. Quick Summary: Design and Construction
5. Innovations
 - § Improvements in Sound Performance
 - § New Coil Construction Technologies
 - § High Voltage Shunt Reactors
6. Reactor Applications
 - § Shunt Reactors (Tertiary and High Voltage)
 - § Current Limiting Reactors
 - § Power Flow Control Reactors
 - § Capacitor Switching (Damping) Reactors
 - § Harmonic Filter Reactors
 - § SVC Reactors and HVDC Reactors
7. Design, Construction, Installation, Testing, Standards and Specifications



 IASSE IEEE INDUSTRY APPLICATIONS SOCIETY	 IEEE	 IEEE PES Power & Energy Society [®]
IEEE 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems		

Date: Friday, February 16, 2018

Time: Registration & Breakfast: 8:30AM-9:00AM
Seminar: 9:00AM – 2:00PM

Speaker: **Babak Enayati PhD, PE** - Lead Research Development and Demonstration Engineer at National Grid, Waltham, MA

Location: FRCC 3000 Bayport Dr. #600, Tampa, FL 33607
Parking: Use parking lot for Hyatt (North side only).

Cost: \$100 Members, \$200 Non-Members, \$20 Students. Includes Breakfast, Lunch.

CEH Credits: 4 Professional development hours will be awarded. Be sure to enter your name and PE number on the signup website as it appears on your license.

RSVP: Online at: <http://www.ewh.ieee.org/r1/floridawc/> (Select Reservations)
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Questions: **Serge Beauzile** at 813-207-7982, or serge.beauzile@ieee.com

Due to the increasing amount of DER interconnections with the Electric Power System, the IEEE 1547TM standard is going through a major revision to address some of the technical issues associated with high penetration of DERs- i.e., grid support functionalities, etc.

The participants will learn about the major changes to the IEEE 1547TM, i.e., voltage regulation, response to abnormal system conditions (including voltage and frequency ride through), power quality, islanding, interoperability, etc. They will also learn about utility concerns/solutions to adopt the revised IEEE 1547TM standard. In addition, participants will learn the impact and considerations for those having jurisdiction. Attendees will also gain a better understanding of the difference between a type test and a commissioning test as defined in the IEEE 1547.1TM standard.

Babak Enayati, PhD, PE received his PhD in Electrical Engineering from Clarkson University, Potsdam, NY in 2009. He is currently a Lead Research Development and Demonstration Engineer at National Grid, Waltham, MA. He joined IEEE in 2006 and currently is Senior Member, IEEE and the IEEE PES Governing Board Member-At-Large. Babak is the Vice Chair of the IEEE Standards Coordinating Committee 21 (SCC21) and IEEE 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems. Babak is also the Chair of IEEE PES Distributed Resources Integration working group. Babak is a registered Professional Engineer (PE) in the state of Massachusetts.



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CE Power has developed a solution to extend the life of existing metal-clad switchgear. By performing a MV fused vacuum contactor retrofit, the most vulnerable components are replaced while the integrity of the switchgear is maintained. This significantly reduces maintenance costs and increases reliability of the system.

Overview

- Vacuum contactors designed and tested for switchgear applications, up to 2,500,000 operation cycles
- Primary contacts sealed inside a vacuum bottle
- Operating mechanism consists of few moving parts and components
- Primary fuses sized to protect the motor and cable from short circuit condition
- Non-load break isolation switch provides a visible disconnect of the primary circuit
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- New microprocessor motor control relay provides improved protection, remote monitoring and communication



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The new DSP-ADM provides total system protection from ground faults and arc flash. As a base model it is designed to detect the event of a single ground fault, signal an alarm, and provide pulsing capability so that maintenance personnel can locate the faulted circuit without interrupting the process. Maintenance can be immediately alerted to the problem and an operator dispatched to located the fault to isolate it promptly.

The DSP SYSTEM can assist in locating the fault with a pulsing fault location circuit. In the event of a second ground fault, the DSP acts quickly to prevent loss of two feeders by selectively tripping the lower priority feeder only.

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- Ground faults cause havoc on plant production processes, shutting down power and equipment and critical loads.
- Ground faults disrupt the flow of products through manufacturing processes and cause data loss in computer centers leading to hours or even days of lost productivity.
- Ground faults pose health and safety risks to personnel, creating hazards such as equipment malfunctions, fire and electric shock.

TECHNICAL SPECIFICATIONS

Power Requirements	100-240V, 50/60 Hz or DC, 25 VA
Dielectric	Relay contacts to chassis 1500 V rms for 1 minute alarm level
	Control terminals to chassis 1500 V rms for 1 minute alarm level
Trip Level Inhibit	IEC-60255-5
Contact Ratings	25% of systems ground current
	DSP-DFM: Trip Contacts- Form "C" SPDT 10 Amp., 240 V AC resistive
Temperature Range	DSP-DPS: Alarm Contacts- Form "C" SPDT 8 Amp., 240 V AC resistive
	IEC-60950
	DSP-DFM: Pickup Accuracy: $\pm 10\%$ of system let-through current
	0°C to 50°C

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January 2018 Calendar of Events (For more information see P. 1) *in this Signal...*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 	2 <i>EXCOM Meeting 5:30 TECO Plaza</i>	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19 <i>Reactor Seminar Details—P. 4</i>	20
21	22	23	24	25	26	27
28	29	30	31			