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# IEEE

## THE SUNCOAST SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

Volume 62—No. 9 September 2016

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### Save The Date—2017 E-Week Banquet

Plans are fully underway for the next Tampa Bay Engineering Week Banquet for 2017. The location again will be the Pepin Hospitality Center, 4121 N 50<sup>th</sup> Street, Tampa, FL 33610.

Date: Thursday, February 23, 2017

Time: 4:30-6:30 PM Networking & Exhibits

6:30-9:00 PM Dinner Program & Awards

Watch future Signal newsletters for more details and registration information.

### 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](mailto:j.howard@ieee.org)), Richard Beatie ([r.beatie@ieee.org](mailto:r.beatie@ieee.org)), or Robert Aasheim ([robert.aasheim@duke-energy.com](mailto:robert.aasheim@duke-energy.com)).

## 2016 Annual Election and Constitutional Amendment

In addition to voting for candidates for President-Elect, Division Delegate-Elect and Director-Elect, Region Delegate-Elect and Director-Elect, Standards Association Board of Governors Member-at-Large, Technical Activities Vice President-Elect, IEEE USA President-Elect, and IEEE USA Member-at-Large, a very important constitutional amendment appears of this year's ballot.

A proposal was made at the November 2015 Board of Directors meeting to move certain language related to the governance structure of IEEE from the Constitution to the Bylaws. The difference being that changes can be made to the Bylaws without approval of the volunteer membership, while constitutional changes require approval of the volunteer membership.

Several societies and past IEEE officers have voiced strong opinions, some in favor of and some opposing, this constitutional change. The FWCS urges members to become familiar with this proposed amendment and cast an informed vote. The details of the proposed amendment can be found at [https://www.ieee.org/about/corporate/election/2016\\_constitutional\\_amendment.html](https://www.ieee.org/about/corporate/election/2016_constitutional_amendment.html).

Information on the members running for office can be found at <https://www.ieee.org/about/corporate/election/candidates.html>.

Balloting is open through 1:00pm ET on October 3. You can cast your vote at <https://www.ieee.org/about/corporate/election/index.html>. Exercise your member right to vote today!

### Upcoming Meetings

#### EXCOM Meeting

Tuesday, September 6th, 2016 5:30PM at TECO Plaza

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

Open to all FWCS Members

#### Zephyrhills Bottled Water Plant

Tuesday, September 13th, 2016

Details on page 4

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

Wednesday, October 19th, 2016

Details on page 3

#### Covanta Hillsborough County Resource Recovery Tour

Friday, October 21, 2016

Details on page 5

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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.

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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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### Useful links:

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

<http://www.ieee.org/discounts> Discounts Page

## PE Corner

Art Nordlinger, PE, Senior Member

### License Renewal

We're almost there — license renewal time. This rite of passage occurs every two years, and every cycle is a little different. You must renew your license on or before February 28, 2017. The renewal process officially opens Monday, November 7, 2016.

License renewal is easily accomplished on the Florida Department of Business and Professional Regulation's website, [www.myfloridalicense.com](http://www.myfloridalicense.com). Though you can't renew your license yet, you can go to this website at any time to verify and update the information that the Department has on file for you. You can also confirm that your login is working as expected. Most folks, I would guess, haven't logged on or looked at their information in nearly two years. Now might be a good time to check that everything is as expected to avoid any surprises when you are trying to renew, especially if it's coming down to the wire!

The renewal fee for the next biennium is \$98.75. That should be the easy part. More challenging may be the continuing education requirement. For the next renewal, you will need to have completed eighteen (18) Continuing Education Hours (CEHs), which includes one (1) hour related to Florida engineering practice laws and rules, one (1) hour related to professional ethics, four (4) hours related to the engineer's area of practice, and the remaining twelve (12) hours related to any topic pertinent to the practice of engineering.

The process of reporting continuing education hours has changed over the years. Providers no longer submit documentation to the Board for continuing education hours that they have awarded. So you won't find that information on the renewal website as you once did. It is the engineer's responsibility to retain certificates of completion from the continuing education provider as evidence of hours completed. These do not have to be submitted when renewing your license. The Board randomly audits engineers and will request documentation at that time. Documentation must be retained for two renewal periods.

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 5 months away. Better start earning those CEHs now!

## 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!).

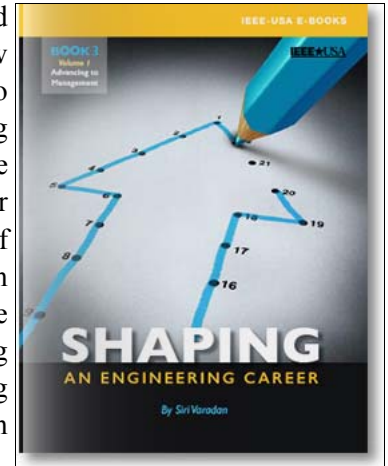
Join us on Wednesday evening, October 19<sup>th</sup> at 6:00pm. We'll be meeting at TECO Hall which is located at TECO Plaza, 702 N. Franklin St., Tampa. If you have any questions, feel free to contact the meeting organizer, Jim Anderson at 813-417-8854. I'll see you there!



## FREE EBOOK

*This E-book helps engineers transition to management.*

In his review of career management, author Dr. Siri Varadan presents a useful and imaginative insight into how young engineers can begin to address career aspirations. Using his own career as a metaphor, he explores how career advancement is a function of opportunity, meeting preparation and readiness. In this context, he is able to illustrate how taking certain proactive steps, selecting a mentor, staying connected with industry events and colleagues, continuing to pursue personal development opportunities, can intersect with, and even create, key opportunities to pursue career advancement. By following his career as it unfolded to date, he is also able to incorporate aspects of career that may not be evident to young engineers beginning in the workforce. For example, Varadan examines the unique challenges created by family obligations relative to career, how do you balance both to be successful with both aspects of life/personal and professional? In doing so, Dr. Varadan has personalized learning to help illustrate the nuances of decision-making in the context of optionality.



As a special benefit to IEEE members, IEEE-USA provides members with one complimentary eBook each month. Through September 15, members can download *Shaping an Engineering Career—Book 3: Advancing to Management (Vol. 1)*. To download your free eBook, go to the IEEE-USA Shop, sign in with your IEEE web account, add the book to your cart, and use promo code AUGFREE16 at checkout.

### Seeking Authors

Do you have an idea for an e-book you think will benefit your fellow members? If so, IEEE-USA E-BOOKS would like to hear from you. We are seeking authors to write an individual E-book, or a series, on career guidance and development topics.

Please email your proposal to IEEE-USA Publishing Manager Georgia C. Stelluto at [g.stelluto@ieee.org](mailto:g.stelluto@ieee.org).

*IEEE-USA serves the public good and promotes the careers and public policy interests of nearly 200,000 engineering, computing and technology professionals who are U.S. members of IEEE.*

		
<h2>Zephyrhills Water Bottling Plant</h2>		

Date: Tuesday, September 13, 2016

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

Time: 4:00pm

Location: 4330 20th St.  
Zephyrhills, FL 33542-6703

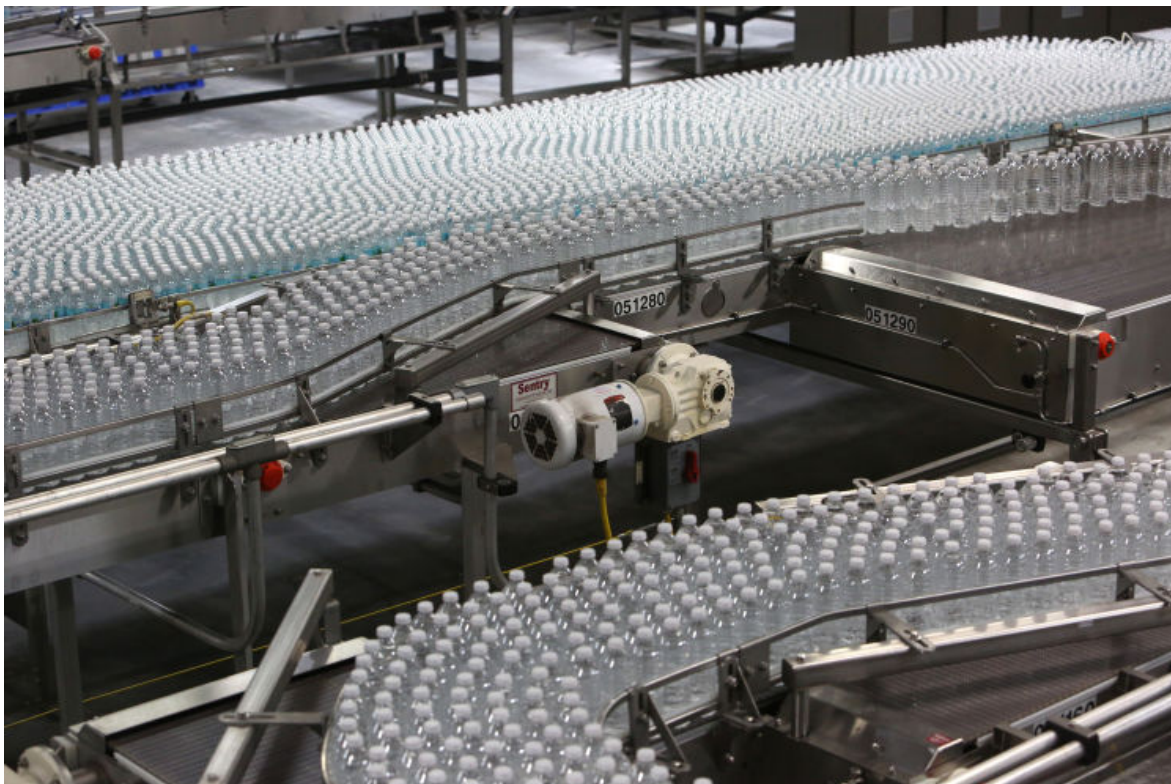
RSVP: Online at  
<http://time2meet.com/fwcs-pes4/index.html>  
*Space limited to first 15 registrants!!!*

Questions: Claude Pitts at [claudie.pitts@ieee.org](mailto:claudie.pitts@ieee.org) or (727) 418-5272



### Tour Description

This is a walking tour of the Zephyrhills Water Bottling Plant. Zephyrhills Water, a division of Nestle Waters North America, is located in Zephyrhills Florida in a community originally named Abbott Station. Zephyrhills Water produces several types of bottles, one of which is a specially designed "Eco-Shape" bottle that requires 30 percent less plastic to manufacture, features reduced-size labeling, and is 100 percent recyclable. Please join us as we see the incredible transformation of a piece of plastic into a variety of containers ranging from "child-sized" to 5-gallon containers of spring water.



		
<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

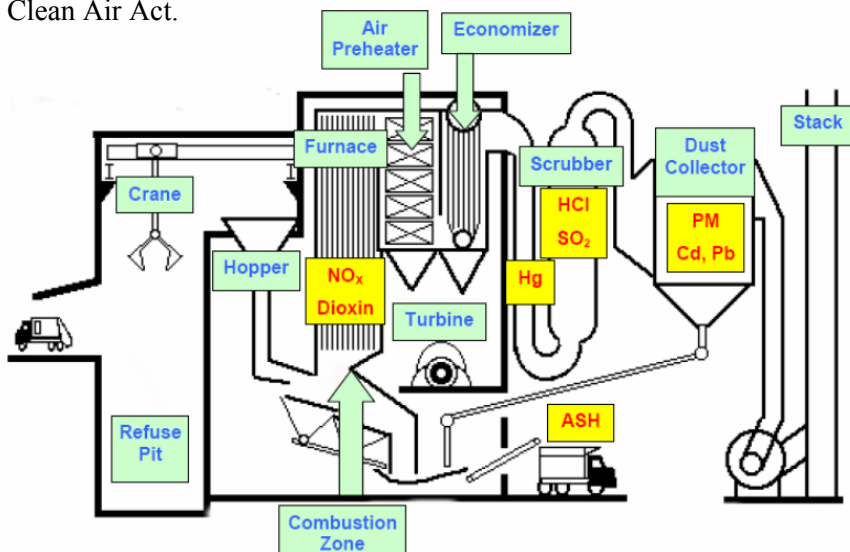
RSVP: Online at <http://time2meet.com/fwcs-pes3/index.html>

*Space limited to first 25 registrants!!!*

Questions: Steve Antman at [steve.antman@cepowersol.com](mailto: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](mailto:steve.antman@cepowersol.com) or (863) 701-4170) if you have any questions.

## Advertising Section



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## Power Engineering Training and Consulting

### Power System Analysis: 8 Sessions @ 3 hours per session for 2.4 CEU's [or 24 PDH's]

This course, designed for engineers and technicians, focuses on the use of symmetrical components to analyze unbalanced power systems. It covers the essential topics necessary for power system analysis including:

- Phasors and Complex Number Mathematics
- Three-Phase Power Calculations
- Per-Unit System
- Delta-Wye Transformer Analysis
- Symmetrical Component Theory
- Sequence Network Development
- Short-Circuit Fault Calculations
- Open-Circuit Fault Calculations

### Fault Current Calculations:

#### 4 Sessions @ 3 hours per session for 1.2 CEU's [or 12 PDH's]

This course is intended for engineers and technicians familiar with basic three-phase system analysis methods seeking a more thorough understanding of symmetrical components and sequence networks. A thorough development of symmetrical components, necessary for a thorough understanding of fault calculations, is presented. Then, a failsafe method of creating sequence networks is covered, followed by short- and open-circuit fault calculation methods.

### Transformer Application: 4 Sessions @ 3 hours per session for 1.2 CEU's [or 12 PDH's]

This course begins with a review of basic transformer theory, then progresses to the analysis of a single-phase transformer using a detailed circuit model. Next, the basic three-phase transformer connections (delta and wye) are studied, followed by an overview of special transformer connections including high-phase order applications, grounding transformers, phase shifting transformers, and autotransformers.

### AC Motor Application: 4 Sessions @ 3 hours per session for 1.2 CEU's [or 12 PDH's]

This course covers the essentials of induction motor application, including a review of basic motor theory, motor nameplate interpretation, speed-torque curves, and starting time calculations. NEMA frame sizes and NEMA starters will be addressed, along with motor and motor circuit protection practices as stipulated by the National Electrical Code. Motor control and special starting methods will also be covered. In addition, use of variable frequency drives (VFDs) will be discussed, along with concerns involving VFDs that need to be understood when working with power electronic technology.

### Other Electrical Power Topics

Power System Planning Strategies and Techniques

Asset Management and Maintenance Strategies

Power System Modernization Methods

Power Engineering for Non-Power Engineers — *this course is ideal for engineers new to the power field who did not have a strong power background at the university. It is also helpful for technicians new to the power engineering field.*

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### FE and PE Review courses for electrical power engineering

Contact Richard Heinze for additional information:

heinzerichard@yahoo.com  
(858) 945-8254

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

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
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4	5 Labor Day	6 EXCOM Meeting 5:30 TECO Plaza	7	8	9	10
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