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# IEEE

## THE SUNCOAST SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

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### *Presentation on Software Containers is a Success!*

The IEEE's Florida West Coast Section's Computer Society hosted a panel discussion about software containers on Wednesday, February 13<sup>th</sup>. The panel was made up of three knowledgeable participants: George Willis (DTCC), Jason Olmsted (Nielsen), and Jess Bodzo (Nielsen).

A little company called Docker came up with a really smart idea called "containers". The basic idea is that if you shove all of your software into a container then you can move it around, run it anywhere, and it will always work. The panel discussion covers what containers are, how they are used, what problems they solve, how they compare to virtualization, what Docker is, and what Kubernetes is.

The panel session was hosted by Dr. Jim Anderson who can be reached at [jim.anderson@ieee.org](mailto:jim.anderson@ieee.org).

A video of this panel session was created and has been uploaded to YouTube. The video can be viewed here: <https://youtu.be/cq9JP7DOWYE>

### Upcoming Meetings

#### *EXCOM Meeting*

Tuesday, March 5, 2019 5:30PM at TECO Plaza  
Register online at <http://time2meet.com/fwcs-excom/index.html>  
Open to all FWCS Members

**FPL Babcock Ranch Solar Energy Center Tour**  
**March 29, 2019, 1:30—3:30PM**

**Dc Systems, Battery Management and Utility Applications**

**April 26, 2019, 10:00 am—2:30pm**

#### **NEW FWCS Women in Engineering(WIE) Chair**

We are pleased to welcome Ammara Ghani as the new FWCS WIE Chair. Ammara will be assisted by Diana Aristizabal, who will be serving as Vice-Chair for our WIE Affinity Group.

Planning is already underway for the first get together for the FWCS WIE members and they are looking forward to meeting the other WIE members and sharing ideas and thoughts on upcoming events and meetings.

**Ammra Ghani, FWCS WIE Chair is on the left,**

**Diana Aristizabal, FWCS WIE Vice-Chair is on the right.**



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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  
**Continuing Education Audit Results***Reprinted from the FBPE Connections Newsletter*  
[www.fbpe.org](http://www.fbpe.org)

**Over 60 Professional Engineers licensed in Florida have been disciplined for failing to complete the required 18 hours of continuing education during the 2015-17 renewal period, and two cases are still pending before the Florida Board of Professional Engineers.**

As part of the online renewal process, PEs attest that their CE hours have been or will be completed by Feb. 28 of the renewal year, as required by Rule 61G15-22.006, Florida Administrative Code, Demonstrating Compliance; Audits; Investigations.

FBPE will again be conducting random audits in 2019 to confirm that PEs have done their CE by the close of the previous biennium.

CE providers must furnish completion and attendance certificates to course participants, and PEs are required to maintain those records for four years (or two renewal cycles). If selected for the audit, a PE must produce those records as proof that he or she completed 18 hours of CE within the two-year period. Failure to produce those documents could result in a reprimand and \$1,000 fine or suspension of license until the PE demonstrates compliance.

In 2017, 3 percent of Florida-registered PEs were randomly selected from among licensees for CE audits as required by the rule; just over one thousand in total. FBPE investigators opened 104 initial complaints; about 11 percent of those audited. After review, two were closed because the PEs were incorrectly listed as non-compliant and complaints should not have been opened; and another was closed because the PE was deceased. Of the remaining complaints, 101 were investigated, and 62 of those ultimately could not demonstrate they had completed the CE requirements. These 62 have been disciplined by the Board.

The Board staff will soon send letters to the 3 percent of licensees selected for audit for 2019. The 62 PEs who have recently been disciplined will be audited in the coming months as well. PEs found in violation a second or subsequent time could have their license revoked.

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.

## *Leader's Center* **Concurrent Engineering—A Small Example**

**Paul Schnitzler, Ph.D—Life Senior Member**

Concurrent Engineering doesn't apply you? Your projects are too small for CE to be useful. Not so!

One time, I used Concurrent Engineering on part of a relatively small sub-project. We were to develop a high-data-rate multiplexer. It was a large circuit board, 12" x 12," which would have two microprocessors, several large memory chips and many specialized chips. It had its own power management system and over 50 input/output connections.

Our company use an Engineering Quality (EQ) team whose task was to be certain that the design worked and satisfied the customer's specification. The product would not be sent to Manufacturing until EQ was satisfied.

Usually, a design went to EQ when the engineers decided it was complete. The EQ team then developed a test process, which took a week or more, and then began testing. Typically, the first fault was discovered in a short time—often under an hour! Back to Engineering.

The engineering team usually found the problem quickly but often the fix forced changes elsewhere in the design. These tasks might take several weeks. Always? Of course not. But often enough to be costly to the company. When corrected, the unit went back to EQ.

This time it might take a few hours for a problem to be identified—and back to Engineering. These corrections would take less time, perhaps a week or so. Back to EQ. And so it went until, finally, everyone was satisfied. And the product would be sent to Manufacturing.

The multiplexer we were starting was expected to take about ten weeks to get to the first EQ evaluation. The EQ/Engineering cycle was expected to take another five weeks for a total of 15 weeks.

Enter Concurrent Engineering. I told engineering and EQ that I wanted the product given to EQ as soon as *anything* was

working, perhaps as little as the power management system. EQ was to test that and report back.

There was an uproar! Everyone had something to say. EQ: If we do that, we will have to retest the same things over and over again. I pointed out that they do that now. Engineers: It won't be ready; there is no point in giving it to EQ because they will have nothing to work with. I asked the engineers, "What is the harm there?" This went on for a while; you can imagine other comments.

While I value Participative Management, here I invoked the Boss's privilege: You will do this because I say so! (Not quite that abruptly but still...) Grumble, grumble.

The results:

- EQ developed their test plan immediately and discovered that the *current* engineering design already had problems. This was discussed with Engineering which made important design changes—all before any significant work was done. That was judged to save a week or more.
- Since the test design was done in parallel with the Engineering work, the time for that task was taken from the overall lifecycle.
- As each successive version was given to EQ, testing went very quickly since the earlier sections passed immediately and only the newest section took much time.
- Final acceptance occurred at 11 weeks, not 15!

How about that? (With a nod to Mel Allen—who remembers him?) Few projects are too small for CE.

Watch for more on leadership in engineering (and other) organizations. Questions? Ideas? Contact me at [pauls@usf.edu](mailto:pauls@usf.edu) or go to <http://leadchangewithoutfear.com/> and click the tab "Successful Real Change."

## **Guardian ad Litem Program of Pinellas and Pasco Counties Seeks Volunteer Child Advocates for Abused and Neglected Children**

Guardians ad Litem work on a team with professional staff to advocate for children who have been removed from their homes due to neglect or abuse and come under the jurisdiction of the courts often due to parental drug abuse or domestic violence. Guardians ad Litem identify what is in the best interest of the child to the courts by making monthly visits to the child in their current placement to identify what the child's needs are. They work to find a permanent placement for the child. Training is free. To learn more about making a difference to a child visit [www.herotoachild.org](http://www.herotoachild.org) or call Karen in Pinellas at 727-464-6147, Larnelle in Pasco at 727-727-834-3493 or visit [www.guardianadlitem.org](http://www.guardianadlitem.org) for information in other counties. For other ways to help contact our local foundation at [AmyF@galf6.org](mailto:AmyF@galf6.org).



## **FPL Babcock Ranch Solar Energy Center Tour**

**Date:** Friday, March 29, 2019

**Time:** 1:30 PM – 3:30 PM\*

**Cost:** NONE

**Speakers:** FPL Babcock Ranch Tour Guide

**CEH's:** None available for this Tour

**Location:** GPS Coordinates; 26.7836693, -81.7471969. Take I-75 S to exit 143 for FL-78 E. Continue on FL -78 E/Bayshore Rd to your destination in Charlotte County

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

**Space limited to the first 25 registrants!!!**

**Questions:** Steve Antman at 863-701-4170 or [steve.antman@cepowersol.com](mailto:steve.antman@cepowersol.com)

### **Welcome to Babcock Ranch, Florida**

Babcock Ranch is an innovative new town that sets a whole new standard for sustainable, responsible growth. Located in Southwest Florida just north of Fort Myers, Babcock Ranch combines the best of America's great hometown traditions with all the conveniences of today and tomorrow. From the largest solar-plus-storage system operating in the U.S. today, the expansive public green spaces and trails to the gigabyte of fiber-optic connectivity standard to every home and free wi-fi everywhere you may roam, it's a place where families can benefit from the most advanced technologies, then walk out their doors to reconnect with nature and neighbors. Babcock Ranch will ultimately include 19,500 homes and six million square feet of commercial space.

### **A Sustainable City for All**

Sustainability is at the core of everything we do at Babcock Ranch. From the building materials we use to the energy source that powers us and everything else in between, we're minimizing our environmental footprint.

### **The Babcock Ranch Foundation**

The Babcock Ranch Foundation is a Florida, 501(c)3 non-profit corporation with the mission to support, enhance, and implement projects that positively impact many worthy causes in Southwest Florida. Passionate about the issues that most affect children, current and future Foundation projects will build on the rich heritage and abundant opportunities in the areas of health and wellness, technology, energy and the environment to connect resources with those in our region who need them the most.

### **The Babcock Ranch Discovery Center**

Come early and visit.

<https://www.babcockranch.com/discovery-center-must-see-first-stop-visitors-babcock-ranch/>





## **DC System, Battery Management & Utility Applications**

- Date:** Friday, April 26, 2019
- Time:** 10:00am – 10:30am Registration, 10:30am-2:30pm Seminar and Questions
- Cost:** \$50 Members, \$100 Non-Members, \$20 Students
- Speakers:** Power Grid and CE Power Solutions
- CEH's:** 3 CEH's 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 3000 Bayport Drive, #600, Tampa, FL 33607  
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!!!
- Questions:** Steve Antman at 863-701-4170 or [steve.antman@cepowersol.com](mailto:steve.antman@cepowersol.com)

**Attendees will learn about the application of battery storage across the globe, with a focus on US Markets. The program will address state-of-the-art concepts, and challenges for the energy industry to successfully utilize and optimize battery and energy storage as part of their energy portfolio and resource mix.**

**This three-hour seminar will look at how battery storage is providing services into wholesale power markets, how it is being used as a tool for utility system management, and how it is being utilized by end use customers.**

**Battery storage, including definitions, technologies, applications and business models. In addition, it will address important relationship between battery storage and its interaction with other resources on the grid as the power grid evolves.**



## **WANTED**

### **TECHNICAL WRITER & ILLUSTRATOR**

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We are Beckwith Electric, a creator of Smart Grid solutions by engineering and manufacturing protective relays and advanced volt/VAR optimization controllers. These solutions are key to modernizing the electric power system.

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We seek an innovative and detail oriented professional to create, review and edit User Documentation for Beckwith Electric's next generation of Protection and Control systems for advanced power distribution grids (also known as Smart Grid). User Documentation includes Specifications, Marketing Brochures, Instruction Books, Application Guides, Quick Start Guides, and interactive pdf Record Forms.

Working with Subject Matter Experts as a member of the Product Engineering Team, you will incorporate new firmware, software and hardware features into User Documentation. Excellence is maintained through proofreading, editing and optimizing document format, ensuring that Company style is consistent in all material. Diagrams and images provide clarity and detail using Adobe Illustrator, Corel Photoshop and Microsoft Visio. Final output is realized using Adobe InDesign and Acrobat Professional.

The work location is our headquarters in Largo, Florida. Our Compensation Package includes a Competitive Salary, Paid Vacation and Holidays, 401(k) Plan, Health/Dental Insurance, Life and Short/Long Term Disability Insurance and Educational Assistance. We are a Drug Free Workplace and Equal Opportunity Employer.

Please see our website, [www.beckwithelectric.com](http://www.beckwithelectric.com), under Contact Us – Careers – Technical Writer for details and how to apply.

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## Opportunity

for a

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**March 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 TECO Plaza 5:30pm	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24 31	25	26	27	28	29 Babcock Ranch Solar Tour—See P. 4	30