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SIGNAL**

*THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.*

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**IEEE**

**Inside This  
Signal...**

**Page 2**  
\*SP/Comm Presents  
Active Optics & IC to  
Board Solutions

**Page 3**  
\* Change to Continuing  
Education Requirement  
For your P.E. License  
\* July Free E-Book

**Page 4**  
\* Consultants Networks  
Affinity Group Projected  
Meeting and Courses for  
2014  
\* Electrathon Dinner  
Award Dinner

**Page 5**  
OSHA 29 CFR  
1910.269 Electrical  
Safety Revisions  
Seminar

**Page 6**  
\* Teacher In Service  
Update For June 2014

**Page 7**  
\*Advertising Section  
\*FWCS PES Utility  
USERS Group Meeting

**Page 8**  
\*Calendar

---

***This Month's Meetings***  
***Tuesday, July 1: EXCOM Meeting***  
***Meeting starts at 5:30PM At TECO Plaza***  
***Register online at <http://time2meet.com/fwcs-excom/index.html>***  
***Open to all FWCS Members***

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***SP/Comm Presents Active Optics and IC-to-Board Solutions***  
***Details on page 2***

---

***Changes to Continuing Education Requirement For your P.E. License***  
***July Free E-Book***  
***Details on page 3***

---

***Consultants Networks Affinity Group***  
***Projected Meeting and Courses for 2014***  
***Details on page 4***

---

***OSHA 29 CFR 1910.269 Electrical Safety Revisions Seminar***  
***Details on page 5***

---

***TEACHER IN SERVICE UPDATE FOR JUNE 2014***  
***Details on page 6***

---

***FWCS PES UTILITY USERS GROUP MEETING***  
***Details on page 7***

---

***Calendar***  
***Details on page 8***

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**SP/Comm Presents Active Optics and  
IC-to-Board Solutions**

**Topic:** Active Optics and IC-to-Board Solutions

**Date:** Tuesday July 29<sup>th</sup>, 6 PM

**Location:** Largo STAR Center Corner of Bryan Dairy and Belcher

7887 Bryan Dairy Road Largo, FL 33777

**Abstract:**

- Active products (PCIe Optical Cables, QSFP+ Cables and FireFly Micro Flyover System)
- Advanced IC Packaging (flip chip, wirebond, die attach, dam/encapsulation and lid attach)
- Micro Interposer Fabrication (ultra-low profile and high density, termination flexibility, profile & pitch flexibility)
- Industry-Specific Applications (Avionics & Defense, Medical & Healthcare and Oil, Industrial & Commercial)

**Speaker:** **Matt Davis** – Samtec's technical resource for the south east, with 17 years of sales, engineering and electronics packaging design experience.

**Organizer:** For more specific information please contact: Chris Lambrecht. E-mail: [chris.lambrecht@ieee.org](mailto:chris.lambrecht@ieee.org), Phone: 727-458-9061

Cost is \$2 for IEEE Member and \$4 for Non Members.

Food and beverages will be provided.

**Reservations:**

[https://meetings.vtools.ieee.org/meeting\\_view/list\\_meeting/26729](https://meetings.vtools.ieee.org/meeting_view/list_meeting/26729)

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**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**

**July Free E-Book**

In July, IEEE-USA will offer "Leading and Managing Engineering & Technology – Book 1: Perspectives on Leading and Managing."

Author Gerard H. "Gus" Gaynor writes that the competencies needed to lead and manage continue to be misunderstood. As a society, he says, we focus on leadership demonstrated by politicians, industry executives and individual effort related to some major accomplishment.

"Perspectives on Leading and Managing" takes a step beyond the usual focus on leadership to explore the following questions: Are leading and managing different, the same or complementary? Is it possible to lead without managing? Is it possible to manage without leading? Does the technical professional have a greater role in leading and managing?

This e-book will be available to members beginning 1 July.

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## *Consultants Networks Affinity Group– Projected Meeting Talk and Courses for 2014*

The Consultants' Network Affinity Group of the Florida West Coast Section of IEEE has a plan to present the following courses:

### *Business Plans for New and Existing Businesses (June 24)*

There are lots of different ways to accomplish a business plan from easy to very complex. Whether you're seeking a loan, trying to increase profits, or just want a better way to plan and keep track of your business, we can show you a variety of plan formats to fit your purpose. We'll also share a variety of resources to guide your plan and research.

### *Marketing Your Business for New & Existing Business (July 29)*

Customers are the key to every successful business. Effective, strategic, marketing is the way to attract the most and best customers to increase revenue. Learn a simple strategic marketing plan that will attract customers and increase revenues without increasing expenses. Discover your unique selling proposition and choose the right strategies to win over the best customers and crush the competition!



### *ELECTRATHON APPRECIATION DINNER-MAY 17, 2014*



The *Electrathon Appreciation Dinner* was held in Ybor City. This was the third annual appreciation dinner at the Spaghetti Warehouse Restaurant at Centro Ybor. *Electrathon* combines Arduino Microcontroller Technology with Race Cars driven by High School Students. Larry Plank, Hillsborough STEM Director came and congratulated all the schools who participated over the past year. Larry asked the students to focus on the grand challenges of the future. He wrapped up by saying, "Hillsborough has blazed the path with Electrathon". Hillsborough County Schools Vice-Chair Susan Valdez was also present. Trophies and plaques were distributed to the students and mentors. Ken Fiallos announced the potential competitions for Fall 2014. Finally the Electrathon of Tampa Bay Board Member of the Year went to Vic Nieves.



## OSHA 29 CFR 1910.269 Electrical Safety Revisions

(Effective Date: July 10, 2014)

- Date:** Monday July 21, 2014
- Time:** Registration: 8:30 A.M. Seminar: 9:00 A.M. - 2:30 P.M
- Speaker:** Thomas Blair, P.E., Engineering Fellow, Tampa Electric Company
- Location:** Seminole Electric, 16313 N Dale Mabry Hwy, Tampa, FL 33618
- Cost:** Students with ID \$20, IEEE members \$100 Members, \$200 Non-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
- RSVP:** Online at: <http://time2meet.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!!!
- Questions:** Tom Blair at 813-228-1111, ext. 48179 or [tom\\_blair@ieee.org](mailto:tom_blair@ieee.org)

### Your local IEEE PES/IAS Chapter is offering this seminar that will cover recent changes to the Code of Federal Regulations (CFR 29) 1910.269 – Electric Power Generation, Transmission, and Distribution.

The Occupational Safety and Health Administration (OSHA) published the final rule revising the Code of Federal Regulations (CFR) for power generation, transmission and distribution on April 11, 2014. The last revision was in 1994. The document is now available in the Federal Register at <http://federalregister.gov/a/2013-29579>. The document is free for download.

The document becomes law July 10, 2014, although OSHA has adopted delayed compliance deadlines for certain requirements including Fall Protection, PPE, new determination of MAD distances and arc flash hazard assessment. Substantial changes were made to the following sections of 1910.269;

- Section (a)(2) Training
- Section (a)(4) Contractors (i) Host... (ii) Contract...
- Section (c) Job Briefing
- Section (e) Enclosed Spaces
- Section (g)(2) Fall Protection
- Section (l) Working on or near exposed energized parts
- Section (m) De-energizing lines and equipment for employee protection
- Section (n) Grounding for the protection of employees
- Section (p) Mechanical Equipment
- Section (t) Underground electrical installations
- Section (x) Definitions

This seminar will review the law and will focus on sections that have been modified during this latest update to the Code of Federal Regulations.

Thomas H. Blair graduated from the University of South Florida, Tampa, FL in 1991 with a BSEE degree and in 2001 with a MSEE degree. He is a senior member of the IEEE. He has over 25 years of industrial and utility experience. He is currently a Fellow Engineer at Tampa Electric Company and he is a licensed Professional Engineer in the State of Florida.

Thomas has worked as an adjunct professor at the University of South Florida and instructed courses in Electric Machine and Design & Energy Production Systems. Thomas Blair is an Engineering Fellow with Tampa Electric and works in the Generation Engineering department. He performs electrical system analysis and uses the results to specify electrical equipment ratings, protective relay settings, and electrical system arrangement.

## *TEACHER IN SERVICE UPDATE FOR JUNE 2014*

*By Sean Denny*

### **PINELLAS STEM FAIR-MAY 10, 2014**



The IEEE received a \$20,000 Grant from Louise and Thelma Wallace and the Tampa Bay Area Foundation in September 2013. Eighteen schools and 2000+ students from Pinellas and Hillsborough County Schools requested materials for STEM (Science Technology Engineering and Mathematics) Lesson Plans from [www.tryengineering.org](http://www.tryengineering.org). Ralph Painter, Jim Cavanaugh, and Sean Denny procure the materials and shipped them to the schools. The teachers were able to provide the materials to the students to build Engineering Projects. In the meantime, Laura Spence, new Pinellas County STEM Director, organized a *Pinellas County Schools STEM Expo* on May 10, 2014 at USF St. Pete Campus. The IEEE was invited to the Expo. There were 150 students displaying their projects. A number of them had Robot for their project. Emma Alba stated the projects were “off the chain good.” She is one of the presenters at the Robofest World Championship in Detroit next week. We discussed with Laura Spence the continued partnership of Pinellas County Schools and IEEE STEM and Robotics. I was impressed with her positive enthusiasm and competitive spirit. I believe we have a wonderful STEM Champion now with Pinellas County Schools. We took pictures downstairs and a brief video interview. On camera, Laura expressed her gratitude towards the IEEE sponsorship of the event via the STEM Lesson Plans provided.

### **HILLSBOROUGH COUNTY SCHOOLS APPRECIATION MEETING-MAY 20, 2014**



Hillsborough County Stem Director Larry Plank invited the IEEE to the Hillsborough County Public Schools (HCPS) *Recognition Awards Ceremony* on May 20<sup>th</sup>. After 4pm, the order on the agenda focused on the Sports Teams, Service Teams, STEM Teams, and Teachers. Robotic Competition Champions from McClaine Middle School, Durant High School, Middleton High School, and Lennard High School were present. After 9pm, Larry Plank invited Sean Denny to be recognized for my “service to STEM Education in Hillsborough County” on behalf of the IEEE. I thanked Larry and the Hillsborough County Public School Board for the Honor and Certificate. Larry emailed a link for the online webcast at <http://sdhcwebcasts.com/index.html>. Please click on Index Item 27 to watch the video.



**FWCS PES UTILITY USERS GROUP MEETING**  
**PROTECTION MODERNIZATION**  
**Open only to IEEE Members in Good Standing**



Date: Friday, August 29, 2014  
 Time: 9:00AM – 1:00PM  
 Speaker: Thomas Blair, P.E., Engineering Fellow, TEC

**Location:** MCS Building, Big Bend Station, 13031 Wyandotte Road, Apollo Beach, FL 33572  
**Cost:** FREE (lunch will be provided by Tampa Electric)  
**RSVP:** Online at: <http://time2meet.com/fwcs-meetings/> (Select Reservations)  
**Questions:** Tom Blair at 813-228-1111, ext. 48179 or tom\_blair@ieee.org

Your IEEE PES West Coast Chapter is hosting the next local utility users' group meeting on Friday, August 29, 2014 at the Tampa Electric Big Bend Power Station where TECO will present their work on projects to modernize the protection and control systems. This meeting will cover projects just completed on a unit at Big Bend Station where a 30 year old, 540MVA, hydrogen and water cooled generator had various protection and control systems modernized.

The excitation control system was replaced with an updated unit utilizing solid state controls, the generator protection system was updated to modern relaying, the pilot wire transfer trip system was updated, and the station service transformer protection relaying was updated. The meeting will conclude with a plant tour of the systems and equipment replaced during this latest outage.

To ensure everyone's safety, we ask that attendees wear casual clothing. No shorts are allowed onsite. We also request that attendees wear closed toed shoes (steel toed shoes are preferred). Hard hats, hearing protection, and safety glasses will be provided to attendees, but if you have this PPE, you are welcome to bring it and use it at the meeting. Please have a government issued photo ID when arriving.



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July 2014 Calendar of Events (For more information see P. 1) *inside this Signal...*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	1 EXCOM Meeting, 5:30 TECO Plaza	2	3	4	5
6	7	8 T&D System Protection Seminar – 8 AM - Sand Pearl Resort Clearwater	9	10	11	12
13	14	15	16	17	18	19
20	21	22 CNAG Business Plans for New and Existing Businesses 6 p.m. Largo STAR Center, Largo	23	24 <i>PES/IAS EXCOM Village Inn - 6am</i>	25	26
27	28	29	30	31	1	2