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THE SUNCOAST SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

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Upcoming Meetings

EXCOM Meeting

Tuesday, May 1, 2018 5:30PM at TECO Plaza
Register online at <http://time2meet.com/fwcs-excom/index.html>
Open to all FWCS Members

NFPA 70E-2018

Electrical Safety in the Workplace

Friday May 11, 2018 8:30AM
Register at <http://time2meet.com/fwcs-pes3/index.html>
Details—Page 4

SoutheastCon 2018: Mission Accomplished

The annual Region 3 conference, SoutheastCon, was held from April 19-22 at the St. Petersburg Hilton Bayfront. Student events were also held at the USF St. Petersburg campus and at Duke Energy headquarters. Over 800 IEEE members attended the event, which included Region 3 business meetings and training sessions, a technical program, two 4-hour tutorials, and student competitions. New this year at SoutheastCon were several Young Professional events, a student networking competition (business networking, not TCP/IP), and a hackathon.



The technical program included the presentation of 183 papers in 10 tracks, and 67 posters in two sessions. The student program included hardware (robotics), software, hackathon, webpage, ethics, networking, technical paper, and T-shirt competitions.

The University of South Florida and Florida Polytechnic University worked together to plan and implement much of the student program. Students from Florida Poly developed a conference mobile app to assist the conference attendees in locating conference events and navigating the downtown St. Petersburg area. The hardware competition, based on a pirate theme, was conceived and implemented by students from USF. Four playing fields had to be constructed, complete with electronic scoring capability. This hosting a major IEEE conference will hopefully be the first of many synergistic collaborations between the Florida West Coast section’s two universities.



Above—Conference-goers enjoy the awards banquet
Left—Some of the 800 conference attendees

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

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

PE Corner

Art Nordlinger, PE, Senior Member
Rules and Laws and Ethics, oh my!

For the last licensure renewal and going forward, the requirements for non-technical Continuing Education Hours changed substantially in that only one hour of Rules and Laws are now required. In addition, all PEs are required to have one CEH in Engineering Ethics.



Rules governing Rules and Laws and Ethics CEHs are found in the Board's rules at *61G15-22.010 Qualifying Activities for Laws and Rules Requirements* and *61G15-22.0105 Approval of Continuing Education Courses in Laws and Rules and Courses in Professional Ethics*. 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 CEHs doesn't automatically allow a provider to offer Ethics CEHs. The provider must apply to the Board to offer Ethics content separately. And each course to be presented by a provider on either topic must be individually approved by the Board as well.

IEEE is a registered provider with the Florida Board as a national professional society. The Florida West Coast Section 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. The Florida West Coast Section applied to the Board, and was approved, to be both a Rules and Laws and an Ethics CEH provider.

The FWCS has scheduled a Rules and Laws and Ethics seminar for June 29, 2018. These will be presented as 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.

On an unrelated note, at the last FBPE board meeting the Board voted to discontinue the practice of printing and mailing physical license cards to engineers for each renewal cycle. As it turns out, Florida was one of only three states that still did this. All of the others, and now Florida, email the image of the renewal card to the engineer, who may then print it out as they see fit, or not. So that printed certificate and card you received for your last renewal may become a collectable relic as the last of its kind, or not.

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 9 months away demand for our seminars is high. Sign up now!

SoutheastCon 2018

Close to 200 volunteers helped make SoutheastCon a huge success. Below are some of the many highlights from the conference.



Student volunteers (L-R) Cooper Neal and Jordan Irby from USF and Xhino Domi, Vincent Drewes, and Chelsea Reeves from Florida Polytechnic University



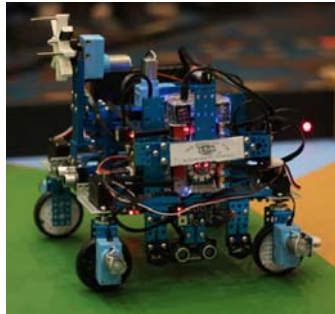
(L-R) Poster author Dr. George Antoniou of St. Thomas University and Poster Session Chair Dr. Ashwin Parthasarathy



Cole Schnitzer, student volunteer and hardware competition lead from USF, shows where the treasure from the pirate-themed hardware contest is hidden. Arrrrrr...



Students competing in the software contest.



One of the 49 robots competing in the hardware competition



Relaxing and socializing at the reception.

Leader's Center

Organizational Change

Manager's Anxiety with Production Improvement—Part 2*

Paul Schnitzler, Ph.D—Life Senior Member

Last month's column suggested that the Production Manager (PM) seek the help of his employees to improve productivity. Here is an example of how this can be done.

Remember that the PM had a production problem. But he was worried that his solution might fail and if it did, his company would be in more trouble...not to mention his job. I suggested getting help from his employees—but how can he do that?

Here is what I have done. Imagine this scene

The PM has assembled all in his group including *you*. The PM says:

"I'm sure that you all are aware that our production difficulties are costing us sales and profits. We have to do something about it. Here is what I suggest that we do."

He then proceeds to explain his plan. Imagine he has told you what he proposes.

The PM is completing his suggestion: "So that is what I think we need to do."

There may be several things he could do right now; for example he could say: "Okay, everyone, let's get on with it. Thank you." That would be a fairly typical ending, right?

However suppose instead he said: "That is what I think we need to do. However, I am not sure it covers everything. In fact, I am concerned that my plan may be wrong in some ways. I would like your help to improve the plan."

Imagine that he looks directly at you and says, "I think many of you may be able to help make this plan better. Would you please help me...help us?"

How do *you* feel—right now—as you read these words? If you had an idea, would you be willing to tell the PM?

Suppose you noticed that he has been moving his gaze to others as he is speaking, asking all of you to help. How do you think others in the group are feeling?

Are you feeling valued? Are the other employees? If yes, think about why; if no, think about what was missing.

If you were PM, do you think you could ask your employees for help?

More on that next month. Don't want to wait? Then go to <http://leadchangewithoutfear.com/> and check the tab "Successful Real Change."

* Adapted from *Lead Change without Fear* by Paul Schnitzler



NFPA 70E-2018
Electrical Safety in the Workplace

Date: Friday, May 11, 2018

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

Seminar: 9:00AM – 2:00PM

Speaker: John Leedy, P.E., Owner, LEEDY ELECTRIC EAST, LLC

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

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

Cost: \$150 Members, \$300 Non-Members, \$100 Students. Includes Breakfast, Lunch, and the seminar text, *NFPA 70E—2018 Standard for Electrical Safety in the Workplace* (a \$74 value)

CEH Credits: 4 continuing education hours will be awarded. Be sure to enter your name and PE number on the sign-up website as it appears on your license. Florida exempt provider #00015.

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

Make checks payable to: IEEE FWCS

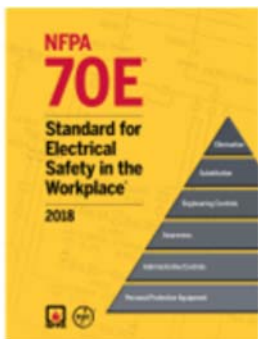
Send checks to: Treasurer—IEEE PE/IA Chapter

3133 W. Paris Street

Tampa, FL 33614-5964

Questions: Tom Blair at 813-228-1111, ext 48179 or thblair@tecoenergy.com

Seminar Text



A \$74 Value

Your local IEEE PES/IAS Chapter is offering this 4 hour training on *Electrical Safety in the Workplace* by John Leedy, Owner of Leedy Electric East.

This training session will be devoted to the subject of Electrical Safety in the workplace as it related to the latest edition of the NFPA 70E-2018 released in January. This training will cover details of the standard and highlight updates new to 2018. Topics such as “how does electrical safety and the NFPA-70E apply to the workplace” and “what is required to be compliant with the standard” will be covered. Real world examples and lessons learned will be presented.

A copy of the standard, NFPA-70E-2018 Standard for Electrical Safety in the Workplace is included in the training costs.

John Leedy graduated from University of Florida in 1982 with a Bachelor of Science in Electrical Engineering with an emphasis in Power Delivery. John worked for Dillard Smith Construction as a protective relay technician. He joined General Electric as a Field Engineer, specializing in Power Substations and DC Electronic Drive Systems in Paper Mills as well as Project Management of Paper Machine Drive System retrofits and substation construction and commissioning. John left GE to join the family business, Leedy Electric Corp, in 1987. He earned his PE license for the State of Florida in 1992 and the State of Georgia in 2013 and received his Masters in Engineering Management from the USF in 2002. John has been working with NFPA 70E regulation since 2002, performing hundreds of Arc Flash Risk assessments throughout the SE United States, training management and employees on the standard. Leedy Electric is located in Mulberry Florida, and has been in business since 1975, specializing in Engineering and Electrical Service for the commercial and industrial industries.

 IAS IEEE INDUSTRY APPLICATIONS SOCIETY	 IEEE	 IEEE PES Power & Energy Society™
<i>Laws & Rules and Ethics for Professional Engineers</i>		

Date: Friday, June 29, 2018

Time: registration and light breakfast at 8:30AM

Presentation: 9:30AM—11:30AM

Speaker: Mr. Art Nordlinger, PE, IEEE Representative to 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. IEEE Florida Provider Number is 0003849.

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

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

Cost: \$30 for Members, \$50 for Non-Members, \$20 for Students.

Make checks payable to: IEEE FWCS

Send checks to: Treasurer—IEEE PE/IA Chapter
3133 W. Paris Street
Tampa, FL 33614-5964

**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.**

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

Questions: Art Nordlinger at a.nordlinger@ieee.org or (813) 630-6203

The Rules and Laws That Govern the Practice of Engineering in Florida. This course is at a basic to intermediate level.

Florida Statute 471 – Engineering
FBPE and FEMC
Florida Administrative Code
Updates from NCEES and FBPE

Ethics and the Practice of Engineering in Florida. This course is at a basic to intermediate level

Basic Engineering Ethics Precepts
Florida Administrative Code 61G15
Recent Cases and Examples

Art Nordlinger is the Manager, Transmission Tariff and Contracts at Tampa Electric Company. Art earned a Bachelor of Science degree in Electrical Engineering from Northwestern University in 1979 and his Master of Engineering degree in Electric Power Engineering in 1988 from Rensselaer Polytechnic Institute. Art is a senior member of IEEE and a registered PE in Florida.

Advertising Section



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JOIN A SOCIETY

The Florida West Coast Section has 6 active technical societies:

- Computer / Aerospace & Electronic Systems (COMP/AESS) Joint Chapter
- Engineering in Medicine & Biology (EMBS) Chapter
- Microwave Theory & Techniques/Antennas & Propagation/ Electron Devices (MTT/AP/ED) Joint Chapter
- Power & Energy / Industry Applications (PES/IAS) Joint Chapter
- Robotics & Automation (RAS) Chapter
- Signal Processing / Communications (SP/COMM) Joint Chapter

Three student society chapters are active at the University of South Florida:

- USF Computer Society Chapter
- USF Microwave Theory & Techniques Chapter
- USF Power & Energy/Industry Applications Chapter

If one of these technical societies interests you, get involved by contacting a chapter representative, listed on Page 2 of this Signal.

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Metal-Clad switchgear with air-magnetic medium voltage circuit breakers was typically used in the past for motor starting applications for station service equipment. Frequent operation of these circuit breakers led to excessive wear of the breaker contacts and operating mechanism, and premature failure of the air-magnetic circuit breakers. Over the years these breakers required extensive reconditioning and overhaul, using OEM and after-market parts and components. Increasing cost of maintenance and obsolescence by OEM's requires a new approach.

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
- Proper interlocking and controls design
- New microprocessor motor control relay provides improved protection, remote monitoring and communication



FOR MORE INFORMATION CALL

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Advertising Section



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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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PRODUCT OF THE YEAR 17



- 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 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
Temperature Range	0°C to 50°C

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Full Page	\$140	\$182	\$670	\$838	\$1,175	\$1,410
Insert / Sheet	\$200	\$260	\$800	\$1,000	\$2,000	\$2,400

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Or fax your address changes to (732) 562-5445

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

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 <i>EXCOM Meeting 5:30pm TECO Plaza</i>	2	3	4	5
6	7	8	9	10	11 NFPA 70E—P. 4	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		