

**The Florida West Coast
Section of the IEEE**

Serving over 2,300 members
in Charlotte, Citrus, DeSoto,
Hardee, Hernando,
Hillsborough, Lee, Manatee,
Pasco, Pinellas, Polk, and
Sarasota Counties



IEEE

THE SUNCOAST SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

Volume 65—No. 9 September 2019

IN THIS SIGNAL:

Page 2

- ◆ [PE Corner— The Steps to Professional Licensure, Part 3](#)

Page 3

- ◆ [Leader's Center—Getting a Team to Work Together - Listening](#)

Page 4—5

- ◆ [Distribution Automation and Distributed Energy Resources](#)

Page 6

- ◆ [Welcome to WAMI Forum 2019](#)
- ◆ [Announcement of upcoming Anniversary Celebration!](#)
- ◆ [Free Audio-Book](#)

Page 7

- ◆ [How Secure is Your Modern Network?](#)

Page 8

- ◆ [IEEE FWCS RAS Report](#)
- ◆ [IEEE USF Students and Professionals Picnic](#)

Page 9

- ◆ [Advertising](#)

Page 10

- ◆ [Calendar](#)

Upcoming Meetings

Tuesday, October 1, 2019 5:30PM

EXCOM Meeting

at TECO Plaza Register online at

[http://time2meet.com/fwcs-excom/
index.html](http://time2meet.com/fwcs-excom/index.html)

Open to all FWCS Members

Designing a Combined Cycle Unit

Date: Friday, October 25, 2019

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

Seminar: 9:00AM - 2:00PM

Speakers: Joseph P. Simpson, PE, Fossil Hydro Operations Florida Regional
Engineering Manager, Duke Energy

Chuck Walters, PE, Project Engineering Manager, Tampa Electric

Nodale Exceus, Project Engineer, Tampa Electric

James Cooksey, Field Engineer, Tampa Electric

Thomas Blair, PE, Engineering Services, Tampa Electric

Course Level: Intermediate.

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

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

Cost: \$100 Members, \$200 Non-Members, \$10 IEEE Students, \$20 non-
IEEE students. Includes Light 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 li-
cense. IEEE Florida Provider Number is 0003849.

RSVP: Online at <http://time2meet.com/fwcs-meetings/> (Select Meeting)

Make checks payable to: IEEE FWCS

Send checks to: Jim Howard, IEEE FWCS Treasurer, 3133 W. Paris Street, Tampa,
FL 33614-5964

Questions: Tom Blair at 813-849-8368, or tom_blair@ieee.org

The IEEE Power & Energy Society (PES) along with Duke Energy & Tampa Electric
will present a seminar discussing design considerations for a Natural Gas com-
bined cycle (NGCC) powerplant. We will review the current Big Bend Combined
Cycle project and Lessons Learned from the other recent Combined Cycle projects
for "real world" examples. Some of the topics that will be discussed are:

Milestones & Planning

Understanding LGIA and POI Responsibilities

NERC compliance & coordinating startup activities with MOD-025/-027/-032
Applicable Standards

Lessons Learned

Generator & distribution system design

Fast bus transfer design

Design of standby diesel generator - starting and operating philosophy.

Mitigation of harmonics from non-linear loads

Arc rated switchgear vs. standard switchgear

Goals of an EPC vs Utility O&M

Maintaining effective technical conscience during large projects

System Impact Study Validations

Greenfield vs. retrofit of existing facility.

2019 IEEE EXECUTIVE COMMITTEE - FLORIDA WEST COAST SECTION

CHAIR: Claude Pitts - claudie.pitts@ieee.org

VICE CHAIR: Paul Belussi - paul_belussi@selinc.com

SECRETARY: Sean Denny - venner20@ieee.org, (727) 678-0183

TREASURER: Jim Howard - jhoward@ieee.org, (863) 834-6585

SIGNAL EDITORS: Donna Howard - amberdon3133@gmail.com

AWARDS & BYLAWS: Richard Beatie, PE - r.beatie@ieee.org

MEMBERSHIP: Jim Howard - j.howard@ieee.org, (863) 834-6585

TEACHER IN-SERVICE: Sean Denny - venner20@ieee.org, (727) 678-0183

Computer / Aerospace & Electronic Systems (**COMP/AESS**) Joint Chapter:
Jim Anderson—jim.anderson@ieee.org (813) 425-2467

Engineering in Medicine & Biology (**EMBS**) Chapter: Sylvia Thomas - sylvia@usf.edu

Microwave Theory & Techniques/Antennas & Propagation/Electron Devices
(**MTT/AP/ED**) Joint Chapter: Jing Wang - jingw@usf.edu

Power & Energy / Industry Applications (**PES/IAS**) Joint Chapter:
Serge Beazile - serge.beazile@ieee.org, (863) 834-6511

Robotics & Automation (**RAS**) Chapter: Sean Denny - venner20@ieee.org,
(727) 678-0183

Signal Processing / Communications (**SP/COMM**) Joint Chapter: Paul Belussi -
paul.belussi.us@ieee.org

WOMEN IN ENGINEERING Affinity Group: Ammara Ghani—ammamamehd@mail.usf.edu

LIFE MEMBER Affinity Group: Richard Beatie, PE - r.beatie@ieee.org

YOUNG PROFESSIONALS: T.J. Ross - a.j.ross@ieee.org, (505) 620-7734

PACE: Jim Anderson - jim.anderson@ieee.org, (813) 425-2467

CONSULTANTS NETWORK: Herman Amaya - hamaya@tampabay.rr.com

STUDENT BRANCH MENTOR: Jim Howard - jhoward@ieee.org, (863) 834-6585

USF STUDENT BRANCH ADVISORS:

Dr. Chung Seop Jeong - Student Branch Co-Advisor - jeong@usf.edu

Dr. Andrew Hoff - Student Branch Co-Advisor - hoff@usf.edu

Dr. Srinivas Katkoori—CS Chapter Advisor—katkoori@mail.usf.edu

Dr. Jing Wang—MTT Chapter Advisor—jingw@mail.usf.edu

STUDENT BRANCH / CHAPTERS:

USF Student Branch, Chair - Thomas DeCanio - tjdecanio@mail.usf.edu

USF Computer Society Chapter - Vishalini Laguduvu Ramnath - vishalini@mail.usf.edu

USF Microwave Theory & Techniques Chapter - Enrique Gonzalez -
enriquegonza@mail.usf.edu

USF Power & Energy / Industry Applications Chapter - Joe Ghisu - jghisu@mail.usf.edu

CONFERENCES: Richard Beatie, PE - r.beatie@ieee.org

WEB PAGE: <http://sites.ieee.org/fwcs/>

WEB MASTER: T.J. Ross - a.j.ross@ieee.org, (505) 620-7734

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.

The opinions expressed, as well as the technical accuracy of authors, advertisers or speakers published in this newsletter are those of the individual authors, advertisers, and speakers. Therefore, no endorsement by the IEEE, its officers, or its members is made or implied.

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.

Address all correspondence to:

Donna Howard

3133 W Paris Street Tampa, FL 33614-5964

Home Phone: (813) 876-1748 E-mail: amberdon3133@gmail.com

The Signal, Copyright © 2018

Useful links:

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

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

PE Corner

Art Nordlinger, PE, Senior Member

The Steps to Professional Licensure, Part 3

Last month I discussed the experience necessary to qualify to apply to become a Professional Engineer. Now I'll address the last piece of the PE puzzle, the Principles and Practices of Engineering exam, also called the PE exam, and the final steps to licensure.

Recent Florida statute changes “decoupled” the experience requirement from qualifications to take the PE exam, removing the potential four-or-more-year time lag between graduation and taking the exam. That leaves only passing the FE as a hurdle to sitting for the PE, and paying the \$230 exam fee, of course. The Florida Board of Professional Engineers is currently writing the rules and procedures to adopt these new statutes.

As I discussed previously, the FE exam is now exclusively computer based, given in a designated testing center, and no longer restricted to a twice-per-year schedule. The PE exam is moving that way as well. The exams are being converted to computer-based gradually, with all intended to be so by 2024. The electrical exams are scheduled to be computer-based beginning in 2021. For now, most of the tests are still written, multiple choice exams and given twice a year, in April and October. More information may be found on the Board's website at <https://fbpe.org/licensure/application-process/principles-practice-examination/>

The PE exam is discipline specific, and most disciplines include sub-disciplines. For example, the Electrical and Computer exam includes three sub-disciplines: Computer Engineering, Electrical and Electronics, and Power. The NCEES website includes statistics for each sub-discipline exam, including the number of people who took it and the pass rate, both for first-time examinees and repeat examinees. This may be found at: <http://ncees.org/engineering/pe/>

The PE exam format is open book and 8 hours long, given in two 4-hour sessions. Each session has 40 multiple choice questions and you must answer all of them. You can bring in any bound textbooks or notebooks. No computers or phones of any kind are allowed into the exam room, so there is no option to bring your references electronically. Only certain calculators are allowed, a list of which is on the NCEES website. Exam grades are available about 8-10 weeks after the exam is given. Examinees are notified by the Board if they pass, or provided information on retaking the exam if they don't. The Florida Board allows an examinee three tries to pass the exam. If the examinee fails three times, the board will typically require the examinee to take some classes at the college level in the appropriate subject matter before another attempt.

I will summarize the new rules as they relate to licensure once they are finalized. However, it appears that with the PE exam decoupled from the experience requirement, the potential licensee, having obtained a qualified degree, passed both exams, and obtained the required experience will submit all of this information to the Board, along with the required personal and professional references. The Board will then evaluate the submittal, certify that the licensee has completed all the requirements, and issue their license number.

To learn more about the examination and application process for the FE and PE exams go to the *Application Process* page under the *Licensure* section of FBPE's website at www.fbpe.org. or contact the Board office at (850) 521-0500 and ask to speak to someone in the *Licensure* department.

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.

Leader's Center

Getting a Team to Work Together: Try Listening—1

Paul Schnitzler, Ph.D—Life Senior Member

A good leader always works toward a SMART* objective. There must be a strong need which will be satisfied by the proposed activity. The need might be a desire to increase sales, create a new product to improve competition, or improve production quality or quantity. The need might indirect such as improving the relationships between employees. With the objective clear, the leader engages the team to seek the solution.

The objective is often identified by higher management. The leader's task is to see that the objective is met. However it is not necessary for *the leader* to find the solution; in fact, it is better when the solution comes from team members. While the leader is responsible for the achievement of the objective, the successful leader will present the objective to the team and get the team members to determine how to get there.

Here is how it might work.

The company's market share has been declining. You are the president and believe an increase in sales is essential. You assemble the team members and say "the business is at risk if we don't increase sales. I want your help to find ways to increase our market share. All ideas are welcome and will be considered." Then ask for ideas. As people make suggestions, the ideas are written on flip-chart sheets and hung on the wall.

Initially, every idea is captured *without discussion*. When new ideas seem to have slowed down, start with the first item on the list and write it on a new sheet. Ask the group "what do you *like* about this idea?" Don't let anyone say that they don't like an idea! Then

"what can be added to this idea to make it even better?" Write down these points. Do this for every item on the original list.

Then ask the team "which ideas do you want to explore?" Look for just a few, usually 2 or 3.

"What are we losing by not using the other ideas?" "Can we incorporate those points into the ideas we are using?"

Do you see how this works? Everyone's ideas are considered. None are labeled as "bad." Important ideas have been identified and will be included. Some ideas may be deferred for the future. All will see that every person's thoughts were considered. And you have a strong plan.

Is this easy? No! But the payoff is huge. You get a better plan to achieve your objective and you have a team who wants to make it a success. *Leading requires listening!*

Next time a real example.

**

Have you any ideas for possible topics for this column? Please let me know. Contact info below.

Want to see more about change and leadership? Need a speaker? Have questions? Ideas? Contact me at pauls@usf.edu or go to <http://leadchangewithoutfear.com/> and click the tab "Successful Real Change."

* SMART: Specific, Measureable, Assignable, Realistic, Time-based

SAVE THE DATE!!!

On Friday, November 15, 2019, Mr. Art Nordlinger will present the Laws and Rules, and Ethics seminar at FRCC. Two CEU's will awarded for those PE's that attend. Art will be reviewing any updates in these for the upcoming renewal.

Mark Your calendars NOW!!



Distribution Automation* and Distributed Energy Resources

***Special Presentation by incoming PES President – Frank Lambert**

During this special Seminar, you will have a chance to meet and discuss issues with the incoming PES President, Frank Lambert – Don't Miss this Great Opportunity!

Date: Friday, November 8th, 2019

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

Seminar: 9:00AM - 2:00PM

Speakers: **Frank Lambert, PE – PES 2020 President** - Principal Research Engineer at Georgia Tech's Center for Distributed Energy (CDE) and National Electric Energy Testing Research and Applications Center (NEETRAC).
Wayne Hartman - Wayne Hartmann, Senior VP, Protection and Smart Grid, Beckwith Electric

Course Level: **Intermediate.**

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

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

Cost: \$100 Members, \$200 Non-Members, \$10 IEEE Students, \$20 Non-IEEE Students.

Includes Light 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.

IEEE Florida Provider Number is 0003849.

RSVP: Online at <http://time2meet.com/fwcs-pes1/index.html> (Meeting)

Make checks payable to: IEEE FWCS

Send checks to: Jim Howard, IEEE FWCS Treasurer

3133 W. Paris Street

Tampa, FL 33614-5964

Questions: Jim Howard at 863-834-6585, or jim.howard@lakelandelectric.com

Key Areas to be Covered:

Frank Lambert - Distribution Automation: Past, Present, and Future: A look from the past and into the future moving from a centralized grid to the decentralized and distributed grid.

Wayne Hartman - This technical session provides a background into DER operation and associated protection and control considerations for conventional and inverter-based power sources. We will review types of DER/DG and the modes in which they can operate in parallel with the distribution system.

Key aspects of IEEE 1547-2018 and a sample DER interconnection screening process are highlighted. Details of on-site standby power system conversion to operate in parallel with the distribution system are shown. Protection methodology at the point-of-common coupling (PCC) and point-of-interconnection (PI) is detailed for all types of DER. A treatment of distribution system protection and control considerations and applications with DER is also discussed.

(Continued on Page 5)

(Continued from Page 4)

This session will benefit Electrical Distribution Engineers, Planners and DER P&C practitioners.

- 1) Define Distributed Electrical Resource (DER)
- 2) Explore Types of DERs
- 3) Why DER?,
- 4) Utility and Facility Drivers for DER
- 5) Mission Critical Power and Conversion to DER
- 6) Rates and DER Operational Sequences
- 7) Industry Concerns
- 8) IEEE 1547: Industry DER Guide
- 9) Sample Utility DER Interconnection Guide
- 10) Interconnection Protection: "The Five Food Groups"
- 11) Inverter Active Anti-Islanding Protections
- 12) Interconnection Transformer Impacts
- 13) Generator Types and Impacts
 - a. Synchronous Machine
 - b. Induction Machine
 - c. Inverter Based
- 14) Example Protection Applications
- 15) Distribution Protection Coordination Issues
- 16) Smart Grid / Microgrid and DER
- 17) Impact of IEEE 1547A
- 18) System Control with DER
- 19) Summary and Q&A

Speakers:

Frank C. Lambert, P. E.

Mr. Lambert is a Principal Research Engineer at Georgia Tech's Center for Distributed Energy (CDE) and National Electric Energy Testing Research and Applications Center (NEETRAC). He is responsible for interfacing with members to develop and conduct research projects dealing with transmission and distribution issues. Mr. Lambert previously worked at Georgia Power Company for 22 years in transmission / distribution system design, construction, operation, maintenance and automation. He is serving as the 2018-2019 President Elect of the IEEE Power and Energy Society. Mr. Lambert holds a bachelors and M.S. degree in Electrical Engineering from the Georgia Institute of Technology.

Wayne Hartman

Wayne is Beckwith Electric's top strategist for delivering innovative technology messages to the Electric Power Industry through technical forums and industry standard development. He provides customer and industry linkage to Beckwith Electric's solutions, contributing expertise for application engineering, training and product development.

Before joining Beckwith Electric, Wayne performed in application, sales and marketing management capacities with PowerSecure, General Electric, Siemens Energy and Alstom T&D. During the course of Wayne's participation in the industry, his focus has been on the application of protection and control systems for electrical generation, transmission, distribution, and distributed energy resources.

Wayne is very active in the IEEE as a Senior Member and serving as a Main Committee Member of the IEEE Power System Relaying Committee for 25 years. He is presently chairing the "Investigation of the Criteria for the Transfer of Motor Buses" Working Group. His IEEE tenure includes having chaired the Rotating Machinery Protection Subcommittee ('07-'10), contributing to numerous standards, guides, transactions, reports and tutorials, and teaching at the T&D Conference and various local PES and IAS chapters. He has authored and presented numerous technical papers and contributed to McGraw-Hill's "Standard Handbook of Power Plant Engineering, 2nd Ed."

WELCOME TO WAMI FORUM 2019!

"The exciting future of wireless and microwave technology - innovation, education and a world of opportunity"

Join us for a day full of recruiters, industry professionals, and students as USF hosts their annual WAMI forum. This is an excellent opportunity for students and members to connect with the local industries to learn about what they have to offer for them in next-era careers focused on wireless communications. Students will be able to attend a panel session with professionals, present poster topics, or mingle at our reception with local companies.

You don't want to pass up this occasion! Sign-up either online at <https://events.vtools.ieee.org/m/203549> or by returning our form to secure your spot in this year's educational and professional event.

GENERAL EVENT INFO

The day will start at 12pm with a lunch panel session on opportunities and career paths, and continue throughout the day with invited papers, tutorials, posters, and exhibits. Up-to-date information on the schedule, location, and more can be found on our website by going to bit.ly/WAMI2019.

SEPTEMBER FREE AUDIO BOOK

IEEE-USA's September New, Free Audio Book for Members Helps Managers Develop Their People by Providing Key Skills

WASHINGTON (1 September 2019) -- "Your people are your most important and versatile resource," says author Harry T. Roman, "They can be upgraded, renewed, rejuvenated and adapted to a wide variety of jobs. Equipped with the proper support, tools, information and leadership, they can make the difference in the global race for market share. As a manager, if you treat them poorly, or ignore the value of their skills, you risk certain failure."

The first in a three-volume series, IEEE-USA's new, free audio book, [**Developing Your People--Commonsense Leadership in the Workplace**](#) Vol. 1: [**Key Skills Employees Will Need**](#), clarifies the distinctive realities of the Information Age; the types of skills that are required for career success; and how managers can create environments that inspire and encourage their employees.

"There's no greater responsibility in the workplace than being a manager in charge of developing employees," says author Harry T. Roman.

This IEEE Senior Life Member ought to know. Roman worked for 36 years, almost all of them in R&D, for Public Service Electric and Gas Company, the largest utility serving the state of New Jersey. A veteran engineering professional and educator, he has helped many employees shape and develop their careers, and has led many interdisciplinary project teams.

From 1 September through 15 October, IEEE members can download their new, free audio book, [**Developing Your People--Commonsense Leadership in the Workplace--Vol. 1: Key Skills Employees Will Need**](#), by going to:

<https://ieeusa.org/shop/careers/management-resources/ebook-developing-people-commonsense->

ANNOUNCEMENT

The IEEE Florida West Coast Section is in the planning stages for the Anniversary Celebration of the 63rd year of the FWCS. We will be scheduling this event in late November or early December. Please watch the Signal for more information.



How Secure Is Your Modern Network?

Date: October 14, 2019

Location: TECO Hall South, 702 N Franklin Street, Tampa

Time: 5:30—7:30 p.m.

Speaker: Dr. Ashutosh Dutta

Your local IEEE Florida West Coast section is pleased to announce that we will be visited by a world class network security expert in October. Dr Ashutosh Dutta is currently Senior Wireless Communication Systems Research Scientist at Johns Hopkins University Applied Physics Labs (JHU/APL). Most recently he served as Principal Member of Technical Staff at AT&T Labs in Middletown, New Jersey.

His career, spanning more than 30 years, includes Director of Technology Security and Lead Member of Technical Staff at AT&T, CTO of Wireless at a Cybersecurity company NIKSUN, Inc., Senior Scientist in Telcordia Research, Director of Central Research Facility at Columbia University, adjunct faculty at NJIT, and Computer Engineer with TATA Motors.

He has more than 90 conference and journal publications, three book chapters, and 30 issued patents. Ashutosh is co-author of the book, titled, “Mobility Protocols and Handover Optimization: Design, Evaluation and Application,” published by IEEE and John & Wiley that has recently been translated into Chinese Language.

Ashutosh served as the chair for IEEE Princeton / Central Jersey Section, Industry Relation Chair for Region 1 and MGA, Pre-University Coordinator for IEEE MGA and vice chair of Education Society Chapter of PCJS. He co-founded the IEEE STEM conference (ISEC) and helped to implement EPICS (Engineering Projects in Community Service) projects in several high schools.

Ashutosh currently serves as the Director of Industry Outreach for IEEE Communications Society and is the founding co-chair for IEEE 5G initiative. He also serves as IEEE Communications Society’s Distinguished Lecturer for 2017-2018.

Ashutosh serves as the general co-chair for the premier IEEE 5G World Forum. He was recipient of the prestigious 2009 IEEE MGA Leadership award and 2010 IEEE-USA professional leadership award.

Ashutosh obtained his BS in Electrical Engineering from NIT Rourkela, India, MS in Computer Science from NJIT, and Ph.D. in Electrical Engineering from Columbia University under the supervision of Prof. Henning Schulzrinne. Ashutosh is a Senior member of IEEE and ACM.

Dr Dutta will be presenting on how to secure new SD-WANs, Virtualized Network Functions and virtualized networks. You are not going to want to miss this event!

IEEE FWCS ROBOTICS SOCIETY

On September 17th, Sean Denny, IEEE Robotics and Automation Society (RAS) Chair of the Florida West Coast Section (FWCS), arranged the IEEE FWCS RAS meeting to be at St. Pete College Seminole Campus. Mike Okneski and Sean met Librarian and Teacher Chad Mairn who would discuss the technology Innovation Lab. Emma Alaba and Roxan Reznor joined Mike and Sean. Roxan demonstrated videos from the website <https://spcilab.tumblr.com/>. Attendees were astounded at the virtual reality environments and arial video footage taken by a drone around the campus. In the lab next door, we saw the 3D Printers, Robots under construction, Arduino and Raspberry Pi experiments, and an old oscilloscope. Photos provided by Emma Alaba.



IEEE USF & YP FALL PICNIC 2019

Our Semester Picnic for students and professionals to network in a relaxed setting.

Date: 19 Oct 2019

Time: 02:00 PM to 05:00 PM

Location: 6550 E Fletcher Avenue, Tampa, Florida

Advertising Section



863-425-2698

www.eesllcfl.com

ELECTRICAL ENGINEERING SERVICE
DESIGN/BUILD
INDUSTRIAL & COMMERCIAL
MAINTENANCE & CONSTRUCTION
INSTRUMENTATION & CONTROLS
ARC FLASH ASSESSMENTS & TRAINING
INFRARED TESTING
ELECTRICAL TESTING SERVICES



formerly **Leedy Electric East, LLC**



Suncoast Signal Advertising Rates

	One Month		6 Months		12 Months	
Size	Member	Non-Member	Member	Non-Member	Member	Non-Member
Business Card	\$25	\$33	\$120	\$150	\$210	\$252
¼ Page	\$40	\$52	\$190	\$238	\$335	\$402
½ Page	\$75	\$98	\$360	\$450	\$630	\$756
¾ Page	\$110	\$143	\$530	\$663	\$925	\$1,110
Full Page	\$140	\$182	\$670	\$838	\$1,175	\$1,410
Insert / Sheet	\$200	\$260	\$800	\$1,000	\$2,000	\$2,400

Opportunity

for a

Forensic Electrical Engineer Expert Witness

The right person for this opportunity has a P.E. license and experience as an electrical engineer with an electric utility or related industry. This can be an ideal part time or contract position for someone that has recently retired.

J. B. Shepherd & Company, Inc.

offices in Plant City, FL and Bushnell, FL

Interested?

email your CV to cefalany@jbsco.com

www.jbsco.com



Florida West Coast Section, Tampa

NON PROFIT ORG
U.S. POSTAGE PAID
TAMPA, FL. PERMIT
No. 1197

DATE SENSITIVE MATERIAL. DO NOT DELAY

Change of address? IEEE Web Contact Update <http://www.ieee.org/membership/coa.html>
Or send address changes including your name, IEEE Member number and all pertinent information to:
IEEE, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331 or call (800) 678-4333
Or fax your address changes to (732) 562-5445

October Calendar of Events (For more information see P. 1) in this Signal...

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	1 EXCOM Meeting, TECO Plaza 5:30pm	2	2	4	5
6	7	8	9	10	11	12
13	14 How Secure is your Modern Net- work—See page 6	15	16	17	18	19 IEEE USF and YP Picnic
20	21	22	23	24 PES/IAS ExCom 6AM Village Inn	25 Designing a Combined Cycle Unit—See pg 4 WAMI @ USF	26
27	28	29	30	31		