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THE SUNCOAST SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.



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This Month's Meetings

Tuesday, June 1st: EXCOM Meeting
Meeting starts at 5:30PM At TECO Plaza
Register online at <http://time2meet.com/fwcs-excom/index.html>
Meeting is open to all FWCS Members

FECA Annual Engineers Conference
Thursday, June 10, 2010
Sand Pearl Resort, 500 Mandalay Ave Clearwater, Florida
[Details on Page 5](#)

Robotics and Automation Society Meeting
Tuesday, June 15, 2010
Location is Whiskey Joe's
7720 W. Courtney Campbell Causeway

Upcoming Event!
Smart Grid Double Header
Friday July 30, 2010
Seminole Electric, 16313 North Dale Mabry Hwy,
[Details on Page 6!](#)

Intelligent Motor Control Centers
WIE Seminar
Wednesday June 16, 2010
TECO Plaza
[Details on Page 7!](#)

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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. Address all correspondence to:

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This Month...(Editor's Column)

It's hard to believe that I, an avid space fan, missed the May 14th launch of the space shuttle Atlantis on what is one of the few remaining launches scheduled before the program is shut down. Two of the original goals of the shuttle program were to provide lower cost access to space and for space flight to be more commonplace. The original plan called for monthly launches and reuse of as many components as possible to reduce the cost per pound of payload. The shuttle never really achieved either of these goals but it has to be the most versatile spacecraft ever flown. It was also the most complex space system ever developed. I do believe however, that it succeeded in making space flight more routine. The shuttle program has had many benefits to consumers as well as the government and has been an example of the engineering excellence and innovation of the United States. Although the follow-on Ares/Orion system is being tested it will be a couple of years before it is operational. We will have to depend on the Russians for access to the International Space Station in the meantime. I think that President Obama was wrong in canceling the Altair lunar vehicle from the program. This will cause the U.S. to lose the lead in space and open the way for other countries to fill the void.



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Florida Laws and Rules Seminar

Do you have Professional Engineering (PE) Members who are looking for a way to meet their Florida Rules and Laws Continuing Education requirements?

As part of the Annual AICHE Central Florida **International Phosphate Fertilizer and Sulfuric Acid Technology Conference** held annually at the Sheraton Sand Key Hotel, AICHE will be holding a Florida Laws and Rules 4 credit PDH Seminar Friday June 11th from 1:00 PM till 5:00 PM. **AICHE Central Florida Section** is one of only a small number of authorized Florida Laws and Rules providers. We are opening this seminar to other Tampa Bay Area Engineering Week Banquet organizations at the AICHE member prices

Early Registration (On or Before June 4th) \$50.00
Late Registration or On Site \$65.00

Register On-line via credit card at

<http://www.acteva.com/booking.cfm?bevaaid=203725> or you can download a registration form from the AICHE - Central Florida Web Site www.aiche-cf.org. Follow links to the PE Rules and Laws Workshop page.

Questions? Please contact AICHE Chairman Bob Andrew @ 863-665-7867 or chair@aiche-cf.org Please feel free to forward this information to your society membership

Editor's note: Mr. Andrew was at the recent EXCOM to discuss the upcoming Engineers Week Banquet. He has made this seminar available to our members. Please contact him for any additional information.



Employment Data Gives Cause for Optimism About Engineering Rebound

Job market experts, including members of IEEE-USA's Career and Workforce Policy Committee (CWPC), say they are cautiously optimistic about signs of recovery in American engineering labor markets, rebounding from the severe recession that has plagued the U.S. and world economies over the past two years. For the complete article, click on the link below.

<http://www.todaysengineer.org/2010/May/employment.asp>



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Consultants Network Meeting Follow-up

The consultants Network Affinity Group convened on Tuesday April 27th for its monthly meeting and as expected, the largest turn out of this year was registered for this occasion. The topic to discuss was “Professional Engineer Licensure” by Mr. Henn Rebane, P.E. who came to us highly recommended by Ms. Carrie Flynn, Executive Director of the Florida Board of Professional Engineers. Henn, who is a registered professional Electrical Engineer and a current IEEE member shared his experience as past Chairman of the Florida Board of Professional Engineers to explain to us the intricacies of professional registration as contained in Chapter 471 of the Florida Statutes http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&URL=Ch0471/ch0471.html and he presented to us a very comprehensive program of slides that covered Why Licensure?, Laws and Rules, When is licensure required, Certificate of Authorization, Exemptions from Licensure (with specific cases), the next Licensure Model (3-Es), Endorsement, Exams and when is it permissible to wave these exams, the Electrical PE, emerging issues like the PE licensure in Software Engineering. The PowerPoint presentation will be available for all to view in our Group’s Website for all to see.

The membership in attendance found these topics very interesting and generated many questions involving personal experiences and cases (I know since I did have one such case) for Henn who was very keen in responding each and every one of them to everyone’s satisfaction. Attendance to our meeting by registered PE members rendered a very practical approach to our discussion since they were able to contribute their personal experience to the various topics to be discussed. Did you know that Employees of a firm, corporation, or partnership who are the subordinates of a person in responsible charge, licensed under this chapter are exempt from licensure? For the same token, such company or organization must have a Certificate of Authorization issued by the Florida Engineers Management Corporation. Also, If you market Engineering Services to the public you must be licensed as a P.E. by the Florida Board of Professional Engineers, otherwise we understand that the penalties can be very stringent.

Given the number of questions posed, the meeting extended beyond the regular time which indicated to me that it was a very successful event since members were able to resolve personal issues associated with Licensure and this is one of the purposes of the Consultants Network Affinity Group. On behalf of the FWCS of IEEE Consultants Network Affinity Group I wish to extend Mr. Henn Rebane our sincere appreciation for his presentation and remind him that he may be called upon to do it again in the future.

Hermann Amaya
Chairman/Founder
FWCS of IEEE Consultants Network Affinity Group



SMARTGRIDCOMM 2010

<http://www.ieee-smartgridcomm.org>

October 4 – 6, 2010

Developing the Smart Grid has become an urgent global priority as its economic, environmental, and societal benefit will be enjoyed by generations to come. Information and communications technologies are at the core of the Smart Grid vision as they will empower today’s power grid with the capability of supporting two-way energy and information flow, isolating and restoring power outages more quickly, facilitating the integration of renewable energy sources into the grid and empowering the consumer with tools for optimizing their energy consumption.

The 1st IEEE International Conference on Smart Grid Communications (SmartGridComm) is centered on all communications aspects that are relevant to the Smart Grid and aims at bringing together researchers from Academia, Industry, and National Labs to exchange novel ideas, explore enabling technologies, analyze theoretical issues, discuss innovative designs, address open problems, and share field trial experiences and lessons learnt.





FECA Annual Engineers Conference

Distribution System Protection

Date: Thursday, June 10, 2010
Time: Seminar: Speaker 8:00am-12:30pm
Speaker: Adrian Zvarych, Marion Cooper, Fennell, Everett C, Sowell, Alonzo.
Location: Sand Pearl Resort, 500 Mandalay Ave Clearwater, Florida
Cost: Will range between \$60-\$ 70
PDH Credit 4 Professional Development Hours will be awarded

Topic #1 – Symmetrical Components Concepts

- Provide basic training in symmetrical components, Per-Unit conversions from phase values, using base-MVA ratings, etc.

Topic #2 – Distribution System Overview

- Typical overall distribution system overview and how it interfaces with the overall traditional generation and transmission system.
- Basic review of hardware components: pole mounted cap banks (fixed, timer, and dynamic control), reclosers, fuses, voltage regulators, etc., and why they are needed
- Radial systems and components such as feeder tie point, operating concerns and benefits
- Networked distribution systems and components, operating concerns and benefits (Perhaps use I-Drive UG network as an example)
- Voltage Regulation concepts. Voltage control at the bus (aka PEF) and at the feeder (aka FPL), load reduction profile, Underfrequency/Undervoltage load shedding concepts




Topic #3 – Distribution Protection Coordination

- Starting at the substation, provide an overview of coordination alternatives between substation breaker, reclosers, and lateral fuses
- Transformer damage curve
- Coordination curves – fuses, relays, reclosers
- “Fuse Save” vs. “Fuse Blow”
- Run through an example coordination for a typical radial feeder with a modicum of reclosers and lateral fuses

Topic #4 – Smart Grid Concepts

- AMI/AMR
- RF Network Connections to the Meter
- Dynamic Recloser and Cap Bank Controls
- Communications to reclosers and cap banks
- Improving Power Factor at the station bus
- Dynamic load controls at the home, along the feeder (cap banks & voltage regulators), and in the substation



		
<p><i>Smart Grid Double Header</i></p> <p><i>Round Table and Grounding of Smart Grid Equipment in the Substation Control House</i></p>		

Date: Friday, July 30, 2010
Time: Seminar: Registration 8:30am-9:00am, Speaker 9:00am-3:00pm
Speakers: Adrian Zvarich, TRC – Jason Flynt Progress Energy –Lee Collins TECO – Randy Dotson, Lakeland Electric- Kent Hedrick Progress Energy.
Location: Seminole Electric, 16313 North Dale Mabry Hwy, Tampa, FL 33618
Cost: \$50 Members, \$100 Non-Members, \$10 Students. (Includes Breakfast & Lunch)
RSVP: Online at: <http://time2meet.com/fwcs-pes1/index.html>
 Make checks payable to: IEEE FWCS
 Send checks to: John Stankowich, IEEE PES/IAS Treasurer
 2593 Forest Run Court
 Clearwater, FL 33761-3716
 Space limited to the first 45 registrants!!!
Cancellation must be submitted online 24 Hrs prior to the seminar at:
<http://time2meet.com/fwcs-pes1/index.html>
No shows will be invoiced for the total cost of the seminar.

Questions: Serge Beuzile at 863-834-6511 or serge.beuzile@lakelandelectric.com

Unlike previous events, FWCS will have representatives from the local utility industry present to discuss the Smart Grid Vision of their respective utilities. This will be an interactive presentation affording you the opportunity to participate and ask questions while they provide their respective plan objective and timeline for implementation
 As a bonus we will have a 2 hours presentation on Grounding and Bonding where we will explore the confluence of legacy and new technologies and find meaningful and practical ways of accommodating the latest Smart Grid communications requirements, building for reliability, in our substations.
 Smart Grid requires the deployment of advanced communications systems that may require some combination of RF/wireless, fiber, and leased copper services in order to route data from field locations to data processing centers.

One key for reliable installations of equipment in the substation control house is an understanding of grounding and bonding techniques for communications equipment and circuits that may not be "Substation Hardened".

Adrian Zvarich - Principal Engineer, TRC

Kent Hedrick -Manager of Demand Response DSM & Alternative Energy Strategy, Progress Energy

Jason Flynt-Smart Grid Engineer, Progress Energy

Lee Collins -Business Process Consultant, Tampa Electric Company

Randy Dotson - Manager of Substation Engineering, Lakeland Electric



Smart Factory: Intelligent Motor Control Centers Technology and Integrated Architecture (WIE Seminar)

Date: Wednesday June 16th

Place: TECO PLAZA

Time: 5:30 - 7:00PM

Sandwiches or Salads will be provided.

An actual Intelligent Motor Control Center will be at the seminar for viewing which will include the latest in intelligent motor control devices, such as AC Drives, soft starters and electronic overload relays.

The Intelligent Motor Control Center also includes "IntelliCENTER" software which offers the ultimate window into the Intelligent Motor Control Center.

The IntelliCENTER software provides both real-time diagnostics and Motor Control Center (MCC) documentation at the user's fingertips, to maximize MCC and related equipment performance.

The software's flexibility allows monitoring of the MCC from anywhere within a facility over DeviceNet, ControlNet or Ethernet.

This means that IntelliCENTER screens can easily be viewed within software packages that have ActiveX containers, e.g. Human Machine Interface (HMI) packages such as RSView.

HMI programmers can quickly and easily incorporate several of the IntelliCENTER Screens into their application.

Utilization of these concepts will enable customers to:

- Reduce Downtime
- Increase Operational Efficiency
- Reduce Startup Time on New Installation
- Increase Personnel Safety
- Incorporate Remote Monitoring

Cost: \$10.00 Members, \$15.00 Non Members

Contact: Valerie Tur, WIE Chair, 813-362-5022

Speaker Biography

John Kirchner

jckirchner@ra.rockwell.com

35 Years Experience with Rockwell Automation/Allen-Bradley Co.

- Account Sales Engineer – Buffalo, NY
- Branch Manager – Erie, PA
- Product Specialist (PLC, Electric Servo, CNC, DC Drives, AC Drives) – Ft Lauderdale, FL
- Area Manager (Power Products) – Tampa, FL

Since 1987, John has worked as a technical specialist assisting customers in the application of the following products:

- MV Voltage AC drives for fan and pump applications
- drives for packaging and material handling
- Large Hp Low Voltage AC drives for pump
- Assisting Customers with installation issues
- Assisting Customers with product integration

Education: BS Electrical Engineering – Valparaiso University



EMBS Meeting at VA Patient Safety Center

At our EMBS meeting on April 8th, Dr Lloyd, the Director of Research Labs at the VA Patient Safety Research Center, discussed the biomechanics of falling and prevention of fall-related head injury.



He covered some of the consequences of fall related injuries. Specifically, injuries to the head, and the propensity of the elderly or handicapped persons to suffer these types of injuries.

For patients that are prone to falling, one of the key factors in preventing head related injuries during a fall is compliance in wearing a protective helmet. Unfortunately, due to many reasons, including fashion, some patients are reluctant to wear a helmet.

As a result, Dr Lloyd and the team at the Patient Safety Research center has been investigating new, thinner, materials for use in more fashionable designs of protective head gear, with the end result being greater patient compliance and reduced risk of head injury after a fall.



Dr Lloyd demonstrated some of the testing methodologies that he uses at the patient safety research center to gather data during the design and testing process of various impact dampening materials and the resulting helmet designs. Dr Lloyd concluded the discussion and demonstrations with a tour of some of the labs at the facility.

The discussion and tour was well received by all who attended the event.



Robotics and Automation Follow-up

I have been talking about having a collaborative project that will fulfill our “**Learn-Do-Teach**” mission statement. We have had some ideas brought to the table, but nothing has solidified. So I took the initiative to create a sample that pulls together all three aspects of our mission statement. The results will be displayed at our next meeting for your viewing pleasure.

Steve Nies brought to the table his concerns, that to complete any project, we are not meeting often enough, yet to schedule more meetings, would overload everyone's already busy schedules. As a result he has volunteered to provide a value added service, in the form of a WEB base collaborative interface. He will be presenting it and giving us a demonstration along with a challenging project challenge.

The meeting will start at 6:30 PM and will be held at:

Whiskey Joe's
7720 W. Courtney Campbell Causeway
Tampa, FL

It will be a dinner meeting, but come early and socialize.

The entrees are:

Chopped Salad	\$19.25
Chicken Sandwich	\$16.70
Signature Burger	\$16.70
Fish & Chips	\$19.25

The entree price includes meal, non-alcoholic drink, tip and tax. If you select not to eat, there will be a minimum \$2.00 charge. You will need to pay by check or cash at the meeting. Make your check payable to IEEE FWCS. RSVP by replying to this email or sending an email to george@imbedded.com and provide the names, IEEE member number (if a member) and the entree selection, for each person in your group.. This meeting is open to anyone that is interested.

George H. Schott

Tampa Bay IEEE RAS Chapter Chairman

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Florida West Coast Section, Tampa

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June 2010 Calendar of Events (For more information see P. 1) *inside this Signal...*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30	31	1 EXCOM Meeting at TECO Hall	2	3	4	5
6	7	8	9	10 FECA Conference See Page 5	11	12
13	14	15 RAS Chapter Meeting	16 Smart Factory Seminar See page 7	17	18	19
20 Fathers Day 	21	22	23	24	25	26
27	28	29	30	1	2	3