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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 7th: 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

Robotics and Automation Society Meeting

Meeting is June 21, 2011
Go to the RAS Page of FWCS Website for Latest Info!

Symmetrical Components and Fault Calculations

Thursday, June 16, 2011
Registration 8:00AM-8:30AM
Seminar from 8:30AM-12:30PM
[Details on page 5](#)

WIE/Consultants Network Event

Tuesday, June 21st, 2011
Time 6:00PM to 7:30PM
[Details on Page 6](#)

Life Member Seminar

Thursday, June 18th, 2011
Lunch at 11:30AM
Seminar begins after lunch
[Details on page 5](#)

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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.

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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.

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This Month...(Editor's Column)

The Space Shuttle program is down to its last launch later this summer and there has not been much word on what will follow. The Orion spacecraft was planned to be part of a program to return the U.S. to the Moon as a part of the Constellation Program. That mission has been canceled but the Orion spacecraft lives on as a vehicle to both service the Space Station and with another version, serve as an emergency escape vehicle. These roles have been filled by the Russian Soyuz spacecraft, a reliable and relatively simple craft. NASA announced recently that there will be still another version of the Orion, one for deep space exploration to places like near-asteroids and also Mars. Called the Multi Purpose Crew Vehicle (MPCV), it will be capable of taking a four man crew on missions of up to 21 days. It is designed to be ten times safer during ascent and re-entry than the Shuttle it replaces. Transportation to the International Space Station will be handled by private sector companies.



Green STEM Electrathon Festival

The recent Green STEM Electrathon Festival at the Florida State Fairgrounds drew (14) Electrathon Electric Race Cars (College and High School) from as far away as Miami and (21) Junior Solar Sprint Cars (4th-8th grade). There were several photovoltaic exhibits including a range of products from Posey Battery. Our own Team Duct Tape anchored the Robotic exhibits. Sun Coast Electric Cars of Clearwater drew many interested spectators with their Wheego LiFe all electric vehicles. A fun time was had by all with teachers in attendance from many of the surrounding counties.

(Ken is founder of ElectrathonOfTampaBay.Org, Inc. a Florida non profit umbrella club of 14 school based electric car clubs from USF,HCC, (6) high schools and down to 5 clubs in the middle and elementary schools in Hillsborough County. Editor)

Ken Fiallos

kfiallos@tampabay.rr.com



*Attend Your Local IEEE Meetings
and Take Advantage of the*

Networking Opportunities

Teacher In-Service Program

Dear Friends,
Happy June to all Teachers & Engineers. I sincerely hope the School Year that is coming to a close has been a great year for you. The following are important announcements for education and engineering around the Tampa Bay Area.

Please continue to browse the Teacher In Service Lesson Plans at the following URL for topics:

<http://www.ieee.org/web/education/preuniversity/home.html> or www.tryengineering.org. We want to assign an engineer to a project that is appropriate for your science educators. We encourage every school to take a look at the lesson plans. I need you to pick a lesson plan most appropriate for the event. Please contact me at venner20@ieee.org to ask an engineer to do a presentation for your school going forward. We ask all IEEE members and Certified Engineers to volunteer with your local schools. Please let me know if you are volunteering so that I can provide you with IEEE surveys that need to be given and collected. The IEEE is dedicated to also helping your districts as well. We can arrange to do these any time at the convenience of the schools and the engineers. We are offering effective and economical alternatives to promote engineering. This is to inspire the educator to perform these activities themselves while enriching their Students. If the teachers and the volunteers work together, students have a better chance at successful careers in engineering. In the long run, it helps "the technological literacy of tomorrow's leaders."

I have available two Engineers, who serve on our Executive Committee, who are prepared to do a presentation on "Making Sense of Sensors" for a Professional Study Day of your choice. Please contact me to arrange their availability.

Sean Denny
IEEE FWCS Teacher in Service Chairman
Venner20@ieee.org
727-678-0183



IEEE-USA News

IEEE-USA is collaborating with the National Academy of Science (NAS) and the National Academy of Engineering (NAE) to increase public awareness of engineers and engineering through television, movies and games. IEEE-USA is sponsoring a special Science & Entertainment Exchange panel with the NAS on "Engineering Our Future: Because Dreams Need Doing!" Some 150 Hollywood professionals and others are expected to attend

The invitation-only forum will be held at the Directors Guild of America from 7-9 p.m. on Thursday, 9 June, in Los Angeles. A panel will provide an "engineering sampler" to consider ways in which new systems are being built with synthetic biology; to describe the revolution in human-robot interactions that take place with socially assistive robots; and to look at the future of space exploration

Panelists are: Frances Arnold, Ph.D., Dickinson Professor of Chemical Engineering, Bioengineering and Biochemistry at the California Institute of Technology; Maja Mataric, Ph.D., professor of computer science, neuroscience and pediatrics at the University of Southern California; and Randii R. Wessen, Ph.D., deputy manager of the Project Formulation Office at Caltech's Jet Propulsion Lab.

The panel will be moderated by Jon Spaihts, who wrote the alien invasion thriller, "The Darkest Hour," and who is collaborating with Ridley Scott on Scott's new movie, "Prometheus."

IEEE.tv will present a special online taped program of the forum in the near future.



Upcoming WIE Event!



WIE is sponsoring a Networking Mixer in July 2011. Please join us for a relaxed evening of networking, great conversation and good food! We'll be announcing the

location date and time on the IEEE FWCS website in the near future and it will appear in the Signal. The link is

http://ewh.ieee.org/r3/floridawc/cms/?page_id=174



Did You Miss it?

If you were not one of the attendees at the Friday, May 20th PE/IA meeting on “Landfill Gas Recovery and Energy Technology” you missed another great meeting.

Mr. Dan Cooper presented a very enlightening presentation on landfills and the technology behind them. This was a very interactive and educational presentation.

Some of the key facts Dan shared with the group included:

- Time of gas production, from the landfill, for energy use (answer 30+ years).
- Maximum MW output from the landfill – (answer - 10.5 MW)
- What type sensors are installed below a landfill – (answer - leak detection)

Dan also shared examples of the liners used in the landfills and the engineering behind the gas collection systems.

We would like to extend a special thanks to Dan Cooper for sharing his knowledge, answering our many questions and for a great presentation.

Jim Howard



Engineering Education Reform

Joint PES/IAS/PACE Meeting

Hold the Date: Thursday June 9, 5:00pm – 7:00pm, TECO Hall – downtown Tampa

Are you curious how the United States compares to other countries when it comes to engineering education? What is being done to address the talent drain in the power engineering field? What is available locally in the way of undergraduate degrees, graduate degrees, certificates, and continuing education courses? How is distance education being implemented to make education available to a wider audience?

These questions and more will be addressed by educators from the University of South Florida Polytechnic on Thursday evening June 9 at TECO Hall in Tampa. This meeting will be of special interest to anybody contemplating a master’s degree, or to those with children in high school having an interest in the STEM (Science, Technology, Engineering, and Mathematics) areas





Symmetrical Components and Fault Calculations

- Date:** Thursday, June 16, 2011
Time: Registration: 8:00 A.M. Seminar: 8:30 A.M. - 12:30 P.M.
Speaker: Dr. Ralph E. Fehr III, P.E., Assistant Professor of Engineering, University of South Florida Polytechnic
Location: Sand Pearl Resort, 500 Mandalay Ave. Clearwater
 in conjunction with the Florida Electric Cooperatives Association (FECA)
Cost: \$100 Members, \$150 Non-Members, \$25 IEEE Student 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 IEEE
Reservations: Contact Ray Trusik at FECA 850-877-6166 Ext. 5 feca@embarqmail.com

The seminar will include:

- Review of Basics
 - Phasors
 - Per-Unit
- Symmetrical Components
 - Physical Example of Vector Components
 - Application of Symmetrical Components to Three-Phase Power Systems
 - Electrical Characteristics of the Sequence Currents
 - The Delta-Wye Transformer
- Sequence Networks
 - Thevenin Reduction of the Sequence Networks
- Fault Calculations
 - Momentary versus Interrupting
 - Short-Circuit Faults
 - Open-Circuit Faults



First 2011 Life Members Seminar!

The first 2011 Life Members Seminar is now scheduled for 18 June. The subject will be: **STATUS OF GEOTHERMAL ALTERNATE ENERGY SYSTEMS: PLANNING AND IMPLEMENTATION WITHIN THE UNITED STATES AND CANADA**

The location will be the same as last year's seminars:

The Red Lobster Restaurant

6151 34th Street N.

St. Petersburg, FL

Tel: [727 896-7372](tel:7278967372)

Dutch Lunch will be available to all attendees, with the gathering to begin at 11:30 . The program will begin at the completion of the lunch hour (around 1245-1300).

Our speaker will be the nationally known Jay Egg of EGG GEOTHERMAL of Tampa/Atlanta/San Diego.

As many are aware, both the Federal and State governments within the USA have announced programs, and in some cases subsidies, for the implementation of Geothermal Alternate Energy Systems.

Members (and interested parties) are requested to confirm your plan to attend to:

robert_franklin@ieee.org

Robert (Bob) Franklin

Chair: FWCS Life Member Committee



WIE and Consultants Network Co-Sponsored Event

WIE and The Consultants Network will co-sponsor a dinner seminar on Tuesday, June 21st, 2011 at CDB's Southside (in the Private Dinner area in the back of the restaurant) located at 3671 S. West Shore Boulevard in Tampa, FL, 33629.

Time: 6:00 PM – 7:30 PM

Cost (includes dinner)

IEEE Members – \$ 20.00

Non-Members - \$ 25.00

Please register for this event at the IEEE FWCS Website!

Title: 4G: A Closer Look at Wimax and LTE.

Speaker: Julie Oppegard, 4G RF Engineering and Deployment, Sprint Nextel Corporation

Topic: Do you want to know more about the two top technology contenders vying for the lead 4G technologies in the U.S.? Join us for a seminar by Julie Oppegard describing the basics of Wimax and LTE in which she will cover concepts including the spectral efficiency, network architecture, QoS, and coding and modulation schemes of each. In addition, Julie will briefly touch on other technologies including, HSPA+, UMTS and Edge Evolution.

Bio: Julie has enjoyed her career as an RF engineer in the telecommunications field, first at Nextel and then at Sprint after the merger of the two. Her expertise includes design, performance, frequency planning, optimization and deployment of 2G, 3G and now 4G networks with a heavy focus on in-building systems, from small repeaters to campus-wide base-station-fed systems.

Julie is now part of the 4G RF Engineering and Deployment team at Sprint and manages 4G projects for both internal and external customers. She has experience in deploying 4G repeater systems and base stations for in-building solutions. Julie graduated with her BSEE from USF in August of 1999



Smart Grid Symposium Back by Popular Demand



Following a successful Smart Grid presentation last year, the FWCS will once more have representative from local utilities at hand to discuss their respective company Smart Grid Vision. They will provide an update on their progress implementing that vision and share intimate detail of their plans. It will be an interactive presentation affording you the opportunity to participate and ask question.

Please mark your calendar, and follow the Signal Newsletter this event is coming in August with the date to be announced!

Serge Beauzile



Advertising Section

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Introducing the FWCS Online Store!

Have you ever seen a local IEEE seminar that looked interesting, but for some reason your schedule just didn't allow you to attend. Remember what that hollow pit of longing felt like when you read reviews of just how good the seminar was in the next edition of the Signal. There may have been information that was discussed that could have changed your career or for that matter, your life. Oh well, guess there's nothing that you can do about it now...

But wait! Maybe there is something that can be done -- a second chance perhaps? Not for all of our meetings (yet), but at least for those wildly popular PACE meetings that have been held this year. It turns out that each of those meetings has been video recorded and now those video recordings are being made available to you for a very low price. Not only do you get access to the video of the complete seminar, but you also get to download copies of all of the presentations and handouts that were distributed as part of the seminar.

How's that for a second chance?

Check out the brand-new FWCS Online store and see if there's something there that you'd be interested in. Go to the FWCS web site (<http://www.ieee.org/fwcs>) and click on "Store" on the top menu to get access to all of the videos that are currently for sale.

Life doesn't give us enough second chances; make the most of this one!

Jim Anderson





Florida West Coast Section, Tampa

DATE SENSITIVE MATERIAL. DO NOT DELAY

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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

June 2011 Calendar of Events (For more information see P. 1) *inside this Signal...*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	31	1	2	3	4
5	6	7 <i>EXCOM Meeting at TECO Hall</i>	8	9	10	11
12	13	14	15	16 <i>PES/IAS Seminar, see page 5</i>	17	18 <i>Life Members Seminar, see page 5</i>
19 <i>Fathers Day</i> 	20	21 <i>RAS Meeting, see page 1 / WIE Event, see page 6</i>	22	23	24	25
26	27	28	29	30	3	4