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SIGNAL

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THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.



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This Month's Meetings

Tuesday, August 6: 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

Tour of Wheelabrator Ridge Energy Inc.

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"Lunch & Learn"

The Real Reasons Change Fails!

And what you can do about it

For Managers at all levels and actually everyone else

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Florida Transmission 10 Year Plan

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COMMITTEE**

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Sunday after the 1st Tuesday of the month preceding the issue month.
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Tour of Wheelabrator Ridge Energy Inc.

Date: Wednesday, August 21, 2013

Time: 2:00PM - 4:00PM.

Speaker: Jose Tirado

Location: 3131 K-ville Avenue Auburndale, FL 33823

Cost: Free for IEEE Members, \$20 Non-Members,

RSVP: Online at: <http://time2meet.com/fwcs-pes2/index.html>

Questions: Serge Beauzile at 863-834-6511 or Serge.Beauzile@ieee.org

Come join your PE/IA Chapter for an educational Tour of the Wheelabrator Ridge Energy in Auburndale, Florida. Wheelabrator Ridge independent power plant provides dependable, environmentally safe disposal of waste wood, scrap tires, and landfill gas, while generating 50 MW of clean renewable electricity for sale to local utility.

Wheelabrator Ridge accepts both processed and unprocessed waste wood and scrap tires. On-site shredding equipment grinds waste wood and scrap tires, which are then put on a conveyor belt that feed into hoppers. The hoppers deliver the material to a boiler that produces 345,000 pounds per hour of steam, which drive a turbine generator to produce electricity.

The facility meets stringent air quality control requirements. The air quality control system consists of a selective non-catalytic reduction system for controlling NOx, and a dry scrubber and fabric filter baghouse for control of acid gases and particulate matter

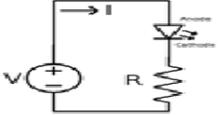
Wheelabrator Ridge is one of the largest and most successful developers, owners, and operators of commercial waste-to-energy and independent power plant projects.

Facts on the facility:

Gross Capacity: 50MW
steam

Furnaces/Boilers: 345,000 lbs./hr.

Fuel Consumption: 300,000 tons of waste wood, 30,000 tons of scrap tires and 500,000Mcf of landfill gas.



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Well attended PACE seminar

On Wednesday evening, June 26th, your IEEE Florida West Coast Section's PACE group held a seminar titled "What Engineers Need To Know About Social Media". This packed meeting was attended by over 20 members who were eager to sort through the clutter and discover just what this social media phenomenon is all about.

Dr. Jim Anderson presented an overview of the current landscape of social media -- what is and what you can do with it. Care and attention was spent diving into what social media tools can offer to engineers -- how can we use these new tools in order to perform our jobs better.

The seminar concluded by having Dr. Anderson step through the most popular social media tools (Facebook, Twitter, YouTube, Pinterest, Tumbler) and show the audience what they looked like, how they can be used, and what information they can provide.

When the session was over, all participants raced home to sign up for free accounts on the most popular social media tools. Remember: social media isn't just for kids anymore!

Xilinx for Signal Processing Applications

Date: Wednesday August 28th, 6 PM

Location: Largo STAR Center (Planning Center Room)
Corner of Bryan Dairy and Belcher

Abstract: The role of FPGAs in designs has expanded over the years due to increased performance, lower power, and the availability of both hard and soft IP that has allowed for more integration and faster time to market. This is especially the case in DSP applications where dedicated DSP macros (pre-adders, multipliers, accumulators, etc.) as well as customizable IP functions (DDS, FFT/IFFT, FIR, CIC filters, etc.) provide for greater system integration and higher performance. While in the past FPGAs mainly performed ancillary roles (processor glue logic, interface to data converters, etc.), their capabilities have greatly expanded due to the availability of powerful front-end design tools (SysGen/Matlab, High Level Synthesis, etc.) that allow for a higher level of abstraction as well as a more ubiquitous interface for system designers.

This talk will center on the increased DSP capabilities of the newer Xilinx FPGA families as well as the latest offerings in design tools targeted for signal processing applications. Through the inherent parallelism afforded by FPGAs as well as support for both fixed and floating point algorithms, these devices are no longer just the bridge between the front-end signal chain and the DSP/processor, but are now capable of incorporating almost all of these tasks on-chip. This affords designers greater flexibility as well as highly scalable designs, while allowing for greater size, weight, and power optimization.

Food and beverages will be provided. Please sign up at:

<http://time2meet.com/fwcs-mtt/index.html>

The cost is \$2 for IEEE Member and \$4 for Non-Member to offset the cost of the room and food.

Speaker: Steve Candreva graduated with a Bachelors of Engineering in Electrical Engineering from Manhattan College, as well as a Masters of Business Administration from University of South Florida. He has ten years of ASIC/FPGA design as well as Systems Engineering experience at Honeywell Space Systems in Clearwater, FL. He is going on ten years as a Field Applications Engineer supporting Xilinx throughout the state of Florida.

Organizer: For more specific information or directions, please contact Chris Lambrecht (e-mail: chris.lambrecht@ieee.org, Ph: (727)458-9061)

Reservations: <http://time2meet.com/fwcs-mtt/index.html>

An IEEE PACE, PE/IA Event



The *Real* Reasons Change Fails!

And what *you* can do about it
For Managers at all levels and actually everyone else.

Speaker: Paul Schnitzler, Ph.D. (E.E.)

Date: Friday, Aug. 9, 2013

Time: 11:30 to 1:30 PM

Location: Lakeland Electric Company

Lakeland Training Center, 989 E. Memorial Blvd., Florida 546/Highway 92

Please register at <http://time2meet.com/fwcs-pes3/index.html>

Need to improve product quality, delivery times or profits? Perhaps you want to reduce costs, inventory or waste? Did you know that 70% of the time attempts to accomplish these objectives fail? You can be in the other 30%!

Team members often resist change because it makes them feel uncomfortable; this interferes with their success. As a leader, you want your team to feel challenged and motivated; you want them to perform their best and achieve *your* goals.

There is a wealth of help out there—80,000 hits on Amazon Book; 150,000 new MBAs each year—but, clearly, the failing managers do not use any of this. Managers stop themselves—in a variety of ways—from doing what the experts teach.

Paul will put you on the right track to avoid the major pitfalls. You will learn his innovative, unique, three-point Y E S model for initiating successful change which leads to the Y E S benefits:

You will have a clear urgent objective!

Everyone will enthusiastically support your objective!

Staff will buy-in and accomplish rapid results!

During Paul's interactive presentation, you will get actual tools which you can use. These will get you started to achieve the results you want. You will both understand this approach and experience how to use it so that you can save time, energy and money.

You can be part of the 30 percent who accomplish the results they want!

* * *

Dr. Paul Schnitzler, Ph. D. is a keynote speaker, author, educator, engineer and consultant specializing in Successful Change, Motivation, and Creativity which work together for overall business success.

In more than a dozen situations, Dr. Schnitzler has successfully introduced significant changes defying the usual 70% failure rate. One of these achievements led to the now ubiquitous use of fiber optics for undersea communications. Another was the creation of the first broadcast-quality CCD video camera which won a television Emmy! Each of these had billion dollar benefits to the industries involved. Large and small companies have benefitted from his work.

Besides helping in various areas of technology, he teaches courses in Change, Motivation, and Creativity for University of South Florida. He has presented seminars in change and entrepreneurship in China and Saudi Arabia as well as a talk for TEDx Tampa Bay.

He earned his Ph. D. from the Polytechnic Institute of NYU and has received a number of honors for his work. He can be reached at www.paulschnitzler.com.



Utility Battery Systems Seminar

- Date:** October 25, 2013
- Time:** Registration: 8:00 A.M. Seminar: 9:00 A.M. - 3:00 P.M.
- Speaker:** Art Salander, Roy Gates
- Location:** Seminole Electric Cooperative, 16313 North Dale Mabry,
Tampa, Florida 33618
Parking: Use parking lot in front of building
- Cost:** \$100 Members, \$200 Non-Members, \$20 IEEE Student Members
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
- 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:** Online at: <http://time2meet.com/fwcs-pes1/index.html>
Space limited to the first 45 registrants!!!
- Questions:** Jim Howard at 863-834-6585 or Jim.Howard@Lakelandelectric.com

Topics

- I. 19th Century Battery History
- II. A study of Phased Controlled SCR charging
- III. Determine Recharge Voltages
- IV. Alarm settings
- V. Enclosure types defined and considerations provided
- VI. Ripple Content on the bus and what the allowable numbers really are.
- VII. Battery Charger Sizing Calculations
- VIII. Practical Application of Modular Battery/charger Enclosures
- IX. Mobile Power Systems
- X. Using Diode Isolation Systems
- XI. Stationary Batteries Defined: Flooded Lead Acid Batteries, Valve Regulated Lead Acid (VRLA) Batteries, Nickel Cadmium Batteries:
- XII. Battery Sizing
- XIII. Installation / Maintenance / Testing / Maximizing your Investment
- XIV. NERC PRC-005, DC System considerations with a review of the pertinent sections in the Supplemental Reference and how they may be implemented.

Speakers:

Art Salander – Graduate Adelphi University/Physics & Engineering, IEEE Senior Member, Art has lectured on many aspects of battery and charger applications and has worked on developing battery load profile and sizing techniques and standards in use today. He is also the current Conference Manager for the IEEE NewNEB Conference and is currently providing application engineering and business development for HindlePower, Inc.

Roy Gates - 25-years' experience with stationary batteries, currently with HindlePower, Inc. Experienced in a variety of electro-chemistries, including alkaline, lithium and traditional lead acid designs, his responsibilities ranged from systems design engineering to installation, testing and long-term maintenance, as well as training and education. A sought after speaker within the IEEE Continuing Education on Demand community, Roy has given numerous papers and presentations on selection, sizing, configuring and operating all types of energy storage devices.



Tampa Bay Times Forum Tour

- Date:** Tuesday, August 20, 2013
- Time:** 4pm-5pm
- Speaker:** Bob Buckhorn & Kim Austin, Forum Staff
- Location:** 401 Channelside Dr. Tampa, Florida 33602
- Cost:** Members \$3, Students \$2
- Parking:** Free (provide Directions)
- RSVP:** Online at: <http://time2meet.com/fwcs-pesX/index.html>
Space limited to the first 15 registrants!!!
- Questions:** Jeff Basiaga at 813-541-5758 or Jeff.Basiaga@stantec.com

A recent \$35 million renovation was made for a convention in 2012. The renovation includes a rebuilt grand plaza entrance, elimination of 2 lower-level suites in each corner (8 of current 28 suites) leaving views from the concourse area to the playing area, renovation of each suite, elimination of sections 323 and 324 on the terrace level (574 seats) for a bar and stage area that will feature a new digital theatre organ, more concessions areas on the terrace level, an 11,000-sq ft outdoor deck and party area overlooking outside plaza and facing the downtown skyline, new climate controls that improve both the ice surface and spectator comfort, new lighting, all new padded seats, resurfaced and redecorated concourse, combining Icons and Medallions restaurants into one venue, and updated restrooms.

Also in 2012, the Tampa Bay Times Forum installed a new video display board. The board is billed as the largest of its kind in North America.

Its two larger faces measure 28×50 feet (8.5×15 m), while its two smaller faces are 28×20 feet.

Please register and join your chapter in a behind the scenes tour of this facility. Also, please note that we will meet at the Lighting Bolts on exterior west side of the building at 3:30 sharp



Early Bird rates Expire 8/15/13
Papers to be submitted by 6/3/13
Paper Acceptance by 7/8/13
Final Papers to be submitted by 8/26/13
Paper acceptance notifications 9/2/13
Power-Point submissions by 9/16/13

**Important
Dates**



**IEEE NewNEB
DC Utility Power
Conference & Exhibition**

October 7th & 8th 2013

Reliable DC Power – NERC in the 21st Century
“A conference uniquely devoted to the reliability
of DC power in an electric utility environment”

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Invest In Your Legacy Today!

The student branch of the Institute of Electrical and Electronics Engineers (IEEE) at University of South Florida has an exciting opportunity for your company! In addition to investing in the future generation of engineers, we also offer a number of benefits to our sponsors.

The purpose of the USF IEEE student branch is to focus on the technical and professional development of our student members. This includes hosting various events throughout the semester such as technical tours, professional talks, workshops, social events, and many others. As an employer with engineering interests, your company will profit from the exposure and networking opportunities that associating yourself with the University of South Florida's IEEE student chapter will provide.

Exciting Benefits

As a sponsor of the University of South Florida's IEEE student branch your company would gain the following benefits:

1. The opportunity to arrange volunteer services to be provided by IEEE USF students who may one day be considered to become employees of your firm.
2. Community involvement credit for your firm through the addition of your company to the Sponsorship page of University of South Florida's IEEE student branch website
3. Special mention of your firm at all our events and recognition on hand-out materials at our events
4. Boosting awareness of your firm by the addition of your logo to our USF T-Shirts
5. Free attendance by your management and employees to any of our events
6. Tax deductible contributions!

Donation Information

Contributions are tax deductible to the extent provided by law. All gifts will be sent a receipt and thank you letter acknowledging your contribution.

Any monetary amount would greatly benefit the cause of USF IEEE. Support ranging from \$1,000+ (Gold Level) to Project Assignments (Mini Projects) will be greatly appreciated. For detailed information about the use of funds, and how different funding levels benefit your company please visit <http://sites.ieee.org/sb-usf/sponsorship/>

Please make the check payable to IEEE USF Student Branch and please fill out the form below and return the form along with your donation to:

Department of Electrical Engineering
College of Engineering
University of South Florida
4202 E. Fowler Ave., ENB 118
Tampa, FL 33620

Contact Information (The donation receipt and thank you letter will be written to and sent to the information provided below)

Name: _____

Address: _____

Phone Number: _____

Date: _____

To further discuss how both of our organizations could benefit by working together, please contact Kenneth Alfeo Almirol, IEEE USF Chapter Chair, at aalmirol1@mail.usf.edu or call (813)-760-9596.

PACE Presents: How to Create and Deliver Powerful Engineering Presentations

Every year a survey of Americans is taken asking them what they fear the most. Can you guess what the #1 response is every year? Snakes? Nope (#4). Enclosed spaces? Nope (#7). The answer is always the same: #1 is Public Speaking. How do YOU feel about getting up in front of people and giving a speech?

If this is not something that you feel comfortable doing, then I've got some great news for you. We're going to solve this problem for you. Your IEEE Florida West Coast Section PACE group has just the seminar for you. In this one meeting we're going to give you the system that you need in order to transform yourself from a so-so speaker into a powerful communicator.

In this 7-step process, we're going to show you how to create a speech that is going to "stick" with your audience. We'll show you just exactly what you need to do in order to create slides that will work with, not against, your speech. Finally, we'll talk about the tricky job of actually giving a speech: what should you be doing and what do you need to make sure that you don't do?

Being an engineer is a tough job – our profession seems to always be changing. We are being called on more and more often to update the people that we work with and customers on the latest designs and technology changes. In order to do this effectively, we need to get good at this public speaking thing.

The good news is that once you master this skill, it's going to serve you for the rest of your career. Sure sounds like a great return on the investment of a bit of time in attending a seminar doesn't it?

If you sign up for this seminar, then you will receive the following:

- An reserved spot at the Wednesday, August 21st seminar.
- A hardcopy of the Clear Blue Technical Presentation System
- An electronic copy of the report "What Every Speaker Needs To Know: Secrets To Connecting With Your Audience". This report is packed with real-life stories and examples of just what a speaker needs to do in order to really connect with your audience and have your next speech make a difference.

When: Wednesday, August 21st, 2013, 6:00pm – 7:30pm

Where: TECO Hall, 702 N Franklin St, Tampa, 33602-4429

Price: \$25 Non-Members, \$17 Members, \$5 Students, \$5 Life Members

Registration: <http://goo.gl/PBqkm>

Instrumentation & Measurement Chapter Call for Volunteers

We are looking for volunteers to assist in establishing an Instrumentation & Measurement Chapter in The Florida West Coast Section of the IEEE. We are considering IEEE members who share an interest in Instrumentation & Measurement to contact Karl Anderson by email at Karl.Anderson@IEEE.org.

Karl Anderson
Member, IEEE



***Electrical Engineering Professor Emeritus Rudolf Henning, PE, age 89,
passed away on July 9.***

The Passing of a Microwave Legend

A Brief Memorial to Dr. Rudolf Henning: PE, IEEE Fellow, Mentor and Friend

“YES! We Care” was the community outreach program that Rudy Henning started in 1983 and directed for fifteen years. It’s also how several generations of microwave/wireless engineers feel about the man who always had time to answer questions, always gave great counsel, and always seemed to have more energy and clarity than anyone else in the room.

Dr. Henning was born in Hamburg, Germany, and received his BS, MS and D.of Eng Sci in electrical engineering from Columbia University, where he was also a cellist in the university orchestra. He served in the U.S. Army Signal Corps from 1944-46. After Columbia University, he became the engineering section head for the Sperry Gyroscope Co. in New York. In 1958, he joined the Sperry Microwave Electronics Division of the Sperry Rand Corporation in Clearwater where he was Chief Engineer. In 1970 Rudy joined the University of South Florida where he held posts as acting chair of the EE Department and Associate Dean of the College of Engineering. He also achieved the rank of Distinguished Professor at USF. In 1995 Dr. Henning led and inspired the faculty team that developed what became the Center for Wireless and Microwave Information Systems (the WAMI Center) and with it the Florida-based IEEE Wireless and Microwave Technology Conference (WAMICON), a 3-day international conference heading into its sixteenth successful year (www.wamicon.org).

A Fellow with the IEEE, Dr. Henning received many awards during his career, including the IEEE Centennial Medal, USF President’s Affirmative Action Award, and IEEE-MTT-ARFTG Automated Measurements Career Award. He was the 1986 Florida West Coast Engineer of the Year. For his work with the YES! We Care program Rudy received from President George Bush the highly prestigious NSF Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring in 2004, with a credit that read: *For more than 20 years, Henning’s activities to expand the diversity pool have been reward based, supporting parental participation with students. His focus is on increasing self-esteem and motivation by fostering tolerance and mutual respect, encouraging the communication writing skills of students.* In 2008 he received the IEEE Microwave Career Award from the Microwave Theory and Techniques Society. In 2009, the IEEE Florida West Coast Section established the Rudolf Henning Mentoring Award given each year at the WAMICON conference in recognition of his extraordinary commitment to mentoring activities.

One of the great things about being an engineer is that you get to know a lot of great people. But to know someone like Rudy you also need to be very lucky. His technical excellence earned him two career awards and a centennial award; remembrances from those he influenced describe him as an educator’s educator, selfless volunteer and father of the microwave community. You probably noticed above that he was born in Germany and served in the U.S. Army in WW II. YES! We are lucky that Rudy decided to become an engineer and spend his time with us.

A scholarship fund will be established in Dr. Rudy Henning’s name at the University of South Florida College of Engineering (contact dunleavy@modelithics.com or weller@usf.edu).



- Date:** Friday, August 16, 2013
Time: 11:30 AM (includes Lunch)
Speaker: Vince Ordax, FRCC Director of Planning
- Location:** FRCC, 3000 Bayport Drive, Suite 600, Tampa, FL 33607
- Cost:** \$100 Members, \$200 Non-Members, \$20 IEEE Student Members
 Make checks payable to IEEE FWCS and mail a check in advance to IEEE PE/IA Chapter
 2593 Forest Run Court, Clearwater, FL 33761-3716
- Parking:** In the North Side of Parking Garage across from Hyatt Hotel and the Bayport Office Building
RSVP: Online at: <http://time2meet.com/fwcs-pes2/index.html>
 Space limited to the first 45 registrants!!!
- Questions:** Donna Howard at 813-207-79656 or DHoward@frcc.com

Transmission in the State of Florida (FRCC Region) is the key to getting energy to where it needs to be to keep consumers supplied. This meeting will examine the impacts of; 1) The potential impacts to the region of the loss of Coal fired generation and its impacts on the generation system; 2) Any plans for future 500kv, 230kv or other high voltage transmission line in order to secure an adequate energy supply for our area; 3) the importance of the 500kV tie lines to Georgia (as well as other tie lines to the north).

This meeting will discuss the current 10 year plan for the area's high voltage transmission and we will share with you the prospects for Florida as we move through the next 10 years. Don't miss this up-to-date analysis of the regions transmission plans and needs for 10 years into the future.



Results of the Board of Governors Election Ballot

Ballot for the election of six members to the IEEE Aerospace and Electronic Systems Society Board of Governors was issued on 15 May 2013. The ballots returned have been counted, and the following candidates have been elected for the three-year term 1 January 2014 – 31 December 2016:



- Erik P. Blasch
- Robert L. Ewing
- Alfonso Farina
- James Howard
- Frank Reyes
- Peter K. Willett

We wish the newly elected members of the Board of Governors success and thank all candidates for their willingness to serve and for permitting their names to be included on the ballot.



IEEE FWCS Robotics and Automation Society Chapter Call for Volunteers For FWC BEST Robotics Competition

We, as Educators and Engineers know STEM Careers are a major driving force in our economy. However College enrollment trends in the U.S. indicate that there is a significant drop in students enrolling in engineering, science and technology related fields. Research indicates that students perceive these fields as too difficult and involves extensive course studies. In the Greater Tampa Bay Area our RAS Chapter estimates that less than 1% of the High School Students participate in Robotics Education.

As a result of these trends, the IEEE membership of our RAS Chapter set up a non-profit corporation called the Florida Robotics Alliance (FRA) with our Partners HCC, HCPS, FLATE, the USF Stavros Center, supportive USF Engineering Faculty and the East Lake Community Library to help foster interest among school aged students in the fields of engineering, business and science. Specifically FRA's focus is to engage our youth in hands-on Robotics Competitions designed to expose them comprehensively to Robotics and Automated Manufacturing based Business Possibilities.

FRA's first project: "FWC BEST (Boosting Science Technology and Mathematics) at HCC" needs volunteers in quest to expose to students to the basic aspects of design, engineering, business and manufacturing augmented by other workplace skills such time management, team leadership, problem solving skills, critical thinking and conflict resolution. Won't you please help us? Volunteer at <http://bit.ly/18FPeFk>.

Ken Fiallos P.E.

Chair IEEE FWCS RAS Chapter

Advertising Section

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August 2013 Calendar of Events (For more information see P. 1) *inside this Signal...*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28	29	30	31	1	2	3
4	5	6 <i>IEEE EXCOM TECO Plaza 5:30pm</i>	7	8	9 <i>The Real Reason Change Fails 12:00pm</i>	10
11	12	13	14	15	16 <i>Florida Transmission 10 Year Plan FRCC 12:00pm</i>	17
18	19	20 <i>Tampa Bay Time Forum Tour 2:00pm</i>	21 <i>Weelabrator Tour Ridge Energy Inc 2:00pm</i>	22	23	24
25	26	27	28 <i>Xilinx for Signal Processing Application 6:00pm</i>	29 <i>PES/IAS EXCOM Village Inn 6:00am</i>	30	31