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IEEE

SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

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*SouthCon 2005
February 16-17, Orlando*

Celebrate Engineering 2005 Banquet

You and Your Guest are Cordially Invited to Participate at this Gala Event!

RSVP Your Reservation & Mark your calendar today!
FLASH NEWS! IEEE MEMBERS qualify for REDUCED Admission

Date: Friday, February 18, 2005

Time: Social, Registration, Vendor Displays: 5:30 – 7:00 pm
Dinner, Events: 7:00 – 10 pm

Place: WYNDHAM WESTSHORE HOTEL,
4860 W Kennedy BL, Tampa

At the intersection of Kennedy Ave & Westshore BLVD

Menu: Choice of Prime Rib, Chicken, Fish or Vegetarian dinner,
with all the trimmings & dessert!

Cost: Only \$20 per person for IEEE member and one guest.

The FWCS Executive Committee voted to subsidize a limited number of our members an additional \$10 off the \$30 cost charged to other participating Society members. Don't miss this opportunity, **already heavily subsidized by Sponsors and Vendors for your enjoyment and entertainment!**

Reservations **must** be made in advance for planning purposes – no reservations taken at the door! Credit cards are accepted! Contact Angela Alexander at 727-539-2331 for tickets or reserve online at: <http://weiquality.com/celebrate2005> For Banquet details visit the website or see last month's newsletter!

PROGRAM:

- Keynote Speaker: Surprise – details being finalized
- Master of Ceremonies: Local personality & commentator
- Awards to Heros: Recognition of outstanding officers, members, Students & Science Teachers
- Entertainment: Live musicians, door prizes and more!
- Vendors & Sponsors: See the latest Technology & Services available at their exhibits!



ENGINEERS WEEK®
FEBRUARY 20-26, 2005

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Chair's Comments

By Angela Alexander

February 20 – 26 is Engineer's Week, celebrating the positive contributions of engineering to quality of life and motivating youth to pursue engineering careers. Each year, IEEE joins with 50 other societies and organizations to increase public awareness of engineers' involvement in our world. There are several activities planned locally; I encourage you to get involved.

In addition to the E-Week activities, there are many activities planned for the coming months. The latest event information is available on the website at:

<http://www.weiquality.com/fwcs-meetings/>

Thanks in advance to all of you for your time to make these events a great success!

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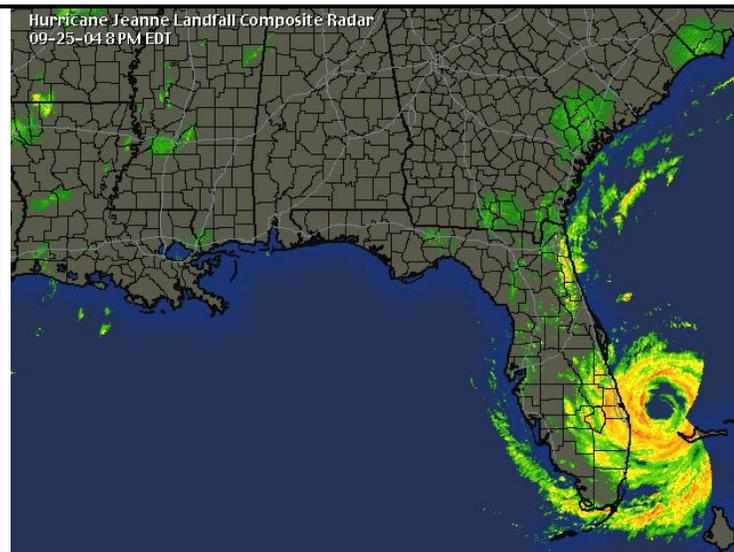


PES/IAS Annual Engineers Week Luncheon
**System Restoration After
 Charlie, Frances, and Jeanne**

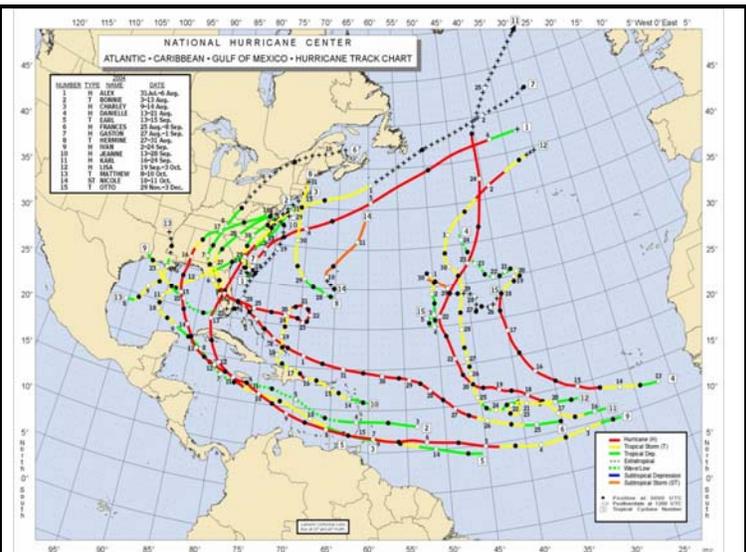


Date: Thursday, 24th February 2005
Time: 11:30 A.M.
Location: Teco Hall, Tampa Electric Company 702 N. Franklin St. Tampa
Speakers: *David McDonald*, Director of Distribution Asset Management, Progress Energy
Alan Shaffer, Director, Energy Delivery, Lakeland Electric
T.J. Szelistowski, Director, Transmission and Distribution Operations, Tampa Electric
Cost: \$10 for members, \$20 for non-members, \$5 for student members
Reservations: On line at http://www.ewh.ieee.org/r3/floridawc/pes_titles.html

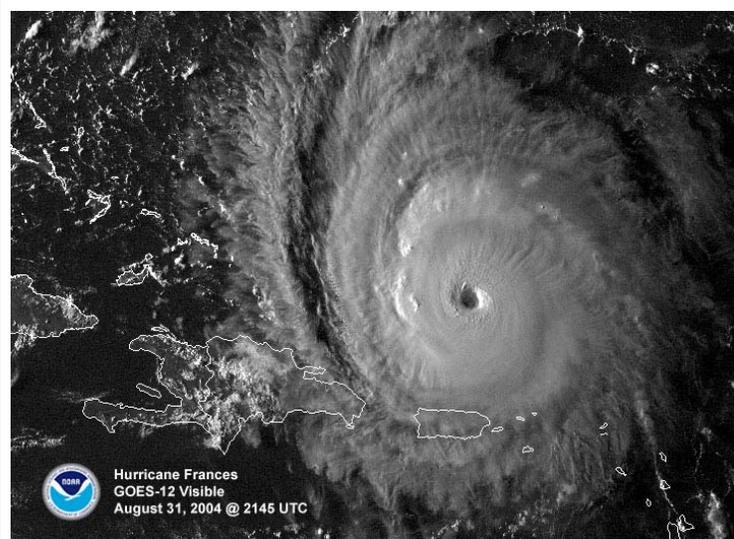
What did it take to restore power after the three hurricanes that impacted our state last year? The people directing those efforts at three of our local utilities will show us in multimedia presentations. Don't miss this opportunity to hear first hand the details of system restoration that don't make the newspapers!



Hurricane Jeanne About to Make a Landfall..



2004 Map of All Hurricane Paths



Hurricane Frances Overshadowing Florida



5 Day Projected Path of Hurricane Frances

USF Engineering EXPO 2005

By Eva Fernandez, USF

Welcome to the College of Engineering EXPO at the University of South Florida. EXPO is our Celebration of Engineering produced by our engineering students. This year we will host the 31st Annual Engineering EXPO and Open House on February 18-19, 2005.

Our main goal is to educate students on how math, science, engineering, and technology affect our everyday lives. During this event, students tour College of Engineering's laboratories; participate in exhibits from the University and private industry in: public works projects, energy conservation systems, space age advancements, environmental conservation projects, computer technology, and robotics; view shows, such as, "Fun with Physics", "Chemistry Magic", and "Laser Lights." Students can also compete in competitions such as the: Mouse-Trap Powered Car, Balsa Wood Bridge Building Contest, MacGyver Challenge Competition, and the Engineering Olympics. We also host the Scouting Badge Program where boys and girls can earn an EXPO patch for completing requirements found in the Boy Scouts Engineering Merit Badge program.

EXPO is held in the Engineering Quad and the day begins at 8am and concludes by 4pm. Food services and souvenirs are available for purchase. Typically, Fridays usually brings out the public schools via field trips, with the general public visiting on Saturday.

EXPO is an excellent opportunity to get inside of engineering and connect with engineering undergraduate and graduate students and faculty. Volunteers are always welcome help. This year we are seeking engineers to: tour the boy and girl scout troops through the exhibits, and facilitate the discussions leading to completion of the merit badge requirements; and, participate in running some of the competitions. Please contact Eva Fernandez at 813.974.9503 or by email at ecferman@eng.usf.edu if you would like to volunteer.

Normally, information may be found on the website at: <http://www.eng.usf.edu/expo>. The site includes on-line registration, competition rules and guidelines, program of activities, photos, etc. Due to technical difficulties, the website is not available. Please contact Paul McCright at 813.974.2709 or by email at pmcright@eng.usf.edu for additional information.

We look forward to celebrating with you at USF Engineering EXPO 2005.

Programmable Logic Users Group (PL-UG) donates \$500 to FWCS

By Jim Lumia

To show appreciation for the local IEEE and Computer Society, the Programmable Logic Users Group (PL-UG) donated \$500 to the FWCS of IEEE in January 2005. PL-UG and the local Computer Society provide many joint meetings throughout the year.

On October 28, 2004, PL-UG and the FWCS Computer Society sponsored their annual "PL-UG Fest" in Largo, FL, which was a full day of presentations and exhibits for electronic designers and users of field programmable gate arrays (FPGA), complex programmable logic devices (CPLD), and other programmable devices. The event was free for the attendees. Xilinx provided a complementary breakfast and complementary lunch was provided by Lattice Semiconductor.

Industry application engineers presented information on their latest technology, devices, synthesis tools, simulation tools, and development tools; plus there were short seminars from local engineers covering hardware description language (HDL) bus functional simulation models, code coverage, and reconfigurable computing. The vendors included AccelChip, Aldec, Avnet, Memec/ Insight, Lattice Semiconductor, Marathon Sales, Mentor Graphics, Siliconexion, Xilinx, and wEDA/ Prover Technologies. It was quite a day for the attendees who took the opportunity to get the latest updates from all the vendors at the local event.

The full agenda can still be viewed on www.pl-ug.org for more information. If you wish to be on the mailing list for "PL-UG Fest 2005", you can join PL-UG (it's free) at this PL-UG web site.

Excerpts from IEEE SCOOP, January 2005*

EXPRESSING APPRECIATION OF OUTSTANDING VOLUNTEER CONTRIBUTIONS

www.ieee.org/rabawards

How can you convey appreciation of significant volunteer contributions? One way is through peer recognition. You can take the opportunity to honor distinguished colleagues, inspiring teachers and corporate leaders with the prestigious RAB Awards. For nomination forms and more information go to the Regional Activities website at <http://www.ieee.org/rabawards>.

The Regional Activities Board (RAB) is currently accepting nominations for the William W. Middleton Award. This award honors an individual, who over a long and sustained period of leadership contributed in an exemplary manner to the Regional Activities Board, its activities and achievements and the attainment of its goals and objectives. The award is named for William W. Middleton, who for over thirty years was associated with and contributed to the growth and maturation of RAB through service on it and its various Committees and Task Forces and was chosen to be the first recipient. Submission deadline is 1 June 2005. For additional details, go the RAB awards web page at <http://www.ieee.org/rabawards> and select the William W. Middleton link on the left menu bar.

IEEE FOUNDATION ANNOUNCES ONLINE GRANT APPLICATION

www.ieee.org/foundation

Grant seekers now have a new way to apply for a grant from the IEEE Foundation. Effective January 2005, the IEEE Foundation will only be accepting grant applications and project reports through its new, simple-to-use online forms. As in the past, the IEEE Foundation will consider projects that:

- Improve education in mathematics, science, and technology from pre-university through continuing education;
- Preserve, study, or promulgate the history of IEEE-associated technologies;
- Recognize major contributions to these technologies and their applications; or
- Show promise of making a major contribution to the worldwide communities the IEEE serves or significantly advancing the profession.

To learn more about the IEEE Foundation's grant guidelines, deadline dates and to submit an online application, visit <http://www.ieee.org/foundation>.

IEEE JOB SITE

www.ieee.org/jobs

The IEEE Job Site is an online recruitment service that offers all IEEE members exclusive, free access to real time job matching capabilities. You can use your IEEE Web Account to register a job candidate profile in five easy steps:

1. Visit <http://www.ieee.org/jobs>
2. Click on the "IEEE Members" link
3. Choose "Register/profile your ideal job" on the landing page
4. Complete the basic information for your job candidate profile
(professional skills, required salary, location of desired position, etc.)
5. Post your resume online and set up a job search agent

Positions of interest will automatically be routed to you by email. Your identity will be hidden until you choose to reveal it to prospective employers. Take advantage of the expanding technology job opportunities throughout the global community. Whether or not you are actively seeking new employment, please register with the IEEE Job Site today! <http://www.ieee.org/jobs>

*The SCOOP, <http://www.ieee.org/scoop>, +1 732 562 5564 (voice), +1 732 463 9359 (fax), scoop@ieee.org

Students' Corner

IEEE Student Branch Engineering EXPO is the highlight of Engineer's Week and the IEEE Laser Light Show promises to be one of the most exciting events at EXPO. The laser show will be held every hour on the hour from 8am-4pm on Friday February 18th and again on Saturday, February 19th. We would like to thank Bob Ash, of New Method Laser, for allowing us to borrow his laser for what should be another award winning show. Thanks for all the officers and volunteers for their efforts. Ready for another picnic? On March 5th, join the party as Florida West Coast Section sponsors another student-industry picnic at Riverfront Park. Walk with your student id, or alumni id, and \$3 for an afternoon of food, canoeing, and volleyball!

February 18th	Celebrate Engineering Banquet
March 5th	Spring Picnic with FWCS & PES (tentative)
March 14-19th	Spring Break
April 6th	WAMICON 2005 Student Reception at MC Ballroom
April 7-8th	WAMICON 2005
April 8-10th	IEEE Southeastcon 2005 at Nova University
April 29th	Spring Senior Awards Banquet
May 7th	Spring Graduation

IEEECS Student Chapter at USF has a lot of activities lined up for the spring '05. USF's Computer Science and Engineering department will be celebrating the 25th anniversary in April and IEEE-CS will be an integral part of it. IEEE-CS is inviting Dr. Nikil Dutt of University of California, Irvine, to deliver a talk on Embedded Systems for the celebration.

IEEECS is also working on creating some puzzles, which it will use for a Treasure hunt competition for the engineering students. The competition will be organized during the first week of February. IEEE-CS is planning to organize a picnic sometime during the mid-semester and there are a few more activities which will be organized during this semester.

An active member of the chapter, Ruben Dominguez is a member of the team participating in the robotics competition of the *Southeastcon*. The student chapter will be starting its regular and executive committee meetings every other week starting from Thursday, January 20th.

Brain Teaser Challenge Column

By Butch Shadwell

January BTC Going to an acting job was the progenitor of last month's BTC. "...if you had an air bladder that had negligible resistance to expansion, kept at sea level, by what percentage would the volume change as you raised the temperature of the gas inside from 27° Celsius to 100° Celsius?"

Once again I want to start with the ideal gas law, $PV=nRT$. In this problem, all of the terms are constant, except for V and T, which means they are directly proportional to each other. A certain percentage change in temperature would result in the same percentage change in volume. Since the above equation uses the Kelvin temperature scale, we must add 273 degrees to the starting and ending temperature before we do the percentage calculation. So $((373-300)/300)*100 =$ the right answer, or 24.3% increase in volume. But I bet you already knew that.

February BTC I think that cars are amazing. When you look at all of the sophisticated technology and the remarkable reliability that one can buy for under \$13,000, it is a marvel. Consider what cars were like just 50 years ago, not to mention other consumer technologies. It seems like people used to get flat tires all the time. Tire and road technology has really advanced.

With the addition of plastics and microprocessors, Henry Ford would have a hard time relating to today's automobile. But you know, it wasn't that long after vacuum tube radios became common in peoples homes that they also appeared in automobiles. This month's question is about a component in those early car radios that used to fail pretty often. It wasn't a vacuum tube, but it was the heart of the power supply that allowed the vacuum tubes to operate on a 6 or 12 volt car battery. It was installed in a socket just like a vacuum tube, but it was usually accessible from outside of the metal chassis so that one could change it without removing the radio or opening the enclosure.

I know some of you older folks will get this right away. Maybe you can explain it to the younger ones. What is this mystery device? I'm not going to ask how many of you actually owned a positive ground car, another eccentricity of the era.

Reply to Butch Shadwell at b.shadwell@ieee.org (email), 904-223-4510 (fax), 904-223-4465 (v), 3308 Queen Palm Dr., Jacksonville, FL 32250-2328. (<http://www.shadtechserv.com>) The names of correct respondents may be mentioned in the solution.

FREE Admission to Exhibits



Southcon®/2005 FREE VIP Registration

February 16-17, 2005

Orange County Convention Center
Orlando, Florida

Save \$25 / Fax Back to 813-996-4460

Priority Number

9-90101

How to Register

Mail Deadline - January 21, 2005

Southcon 2005
1514 First Street
Manhattan Beach, California 90266

FAX Deadline - February 11, 2005

813-996-4460
Please do not both fax and mail

Electronically www.southcon.org

After January 21, 2005 badges will be held for pick-up at the Orange County Convention Center.

On-Site

Bring this form with you to Southcon/2005 for FREE admittance.

1.

First Name		Last Name	
Job Title		E-mail	
Company			
Mailing Address		Mail Stop	
City	State	Zip	Country
() Telephone	() Fax		

2. Principal Job Function (check only one)

- AA Engineer - Design
- AB Engineer - Manufacturing
- AC Engineer - Quality/Test
- AD Engineering Services
- AE Engineering Management
- AF Corporate/General Management
- AG Press
- AH Purchasing/Procurement
- AJ Marketing/Sales
- AK Student/Educator
- AL Other

3. What is the Primary End Product at this Location (check only one)

- CA Communication Systems
- CB Components/Materials/Hardware Supplies
- CC Computers/Systems and Sub-systems
- CD Consumer Products, Automotive & Appliances

- CE Contract Services-Design/Manufacturing/Test/IC Foundry etc.
- CF Controls
- CG Military/Government/Avionics
- CH Medical Electronics
- CJ Semiconductors/ICs
- CK Test/Masurement/Inspection
- CL Distributors
- CM Other
- BF Contract Services - Design/Manufacturing/Test
- BG EDA Tools & Engineering Software
- BH Interconnection Devices
- BJ Laser & Electro-Optical Devices
- BK Microwave Components
- BL Packaging Hardware/Enclosures
- BM Power Sources
- BN Production Equipment
- BP Production Tools & Supplies
- BQ Sensors & Transducers
- BR System Boards
- BS Test & Measurement Equipment
- BT Other

4. Product Interest - Which of the following do you specify, recommend, approve, purchase or influence the purchase of? (check all that apply)

- BA ASICs, PLDs, FPGAs
- BB Board Level Products
- BC Semiconductors/ICs
- BD Components other than IC's
- BE Computers/Peripherals/Software

5. Years Involved in Industry

- DA 1 - 2
- DB 3 - 5
- DC 6 - 9
- DD 10 or more

6. Size of your organization

- | | At Your Location | In Entire Company |
|---------------|-----------------------------|-----------------------------|
| 1 - 49 | <input type="checkbox"/> EA | <input type="checkbox"/> EB |
| 50 - 99 | <input type="checkbox"/> EC | <input type="checkbox"/> ED |
| 100 - 499 | <input type="checkbox"/> EE | <input type="checkbox"/> EF |
| 500 - 999 | <input type="checkbox"/> EG | <input type="checkbox"/> EH |
| 1,000 or more | <input type="checkbox"/> EI | <input type="checkbox"/> EJ |

GA I would like to receive show and conference updates via e-mail

GB Send me complete Technical Program Information

I am a member of IEEE
(or referred by) ERA



Persons under 18 years of age not admitted. Students 18 or older admitted on Thursday, February 17, only.

Also, please register my colleagues: Express Registration Free Admission-Exhibits Only.

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www.southcon.org

310-937-1006

February 2005 Calendar of Events

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 5:30PM: IEEE FWCS Excom Meeting, TECO Hall, Tampa	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16 Southcon 2005, Orange Cty Convention Center, Orlando Florida	17 Southcon 2005, Orange Cty Convention Center, Orlando Florida	18 8am-4pm: USF Engg. EXPO 2005 5:30pm-10:30pm: Celebrate Engg., Banquet, Wyndham Westshore Hotel	19 8am-4pm USF Engg. EXPO 2005, Tampa Campus
20	21	22	23	24 11:30am: PES/IAS Annual Engineers Week Luncheon, TECO Hall, Tampa	25	26
27	28					

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