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SUNCOAST

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THE

December 2008



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This Month's Meetings

December 2nd: EXCOM Meeting At TECO Plaza

702 N. Franklin Street, Tampa

Meeting starts at 5:30PM and ends at 7:30.

Register online at http://time2meet.com/fwcs-excom/index.html

Meeting is open to all FWCS members and guests

GOLD and WIE Networking Social

Come join us for appetizers at
Bahama Breeze
3045 North Rocky Point Drive E in Tampa
December 3, 2008 6pm to 7pm
See Page 3

Polaris Electrical Connectors Tour! Thursday, December 4th at 6:00 PM

> Polaris Electrical Connectors, Inc 11625 Prosperous Dr Odessa, FL 33556 See Page 5

USF Electrical Engineering Senior Banquet
December 5th, 2008 at 7PM
See Page 5

Life Members Meeting

Village Inn on Dale Mabry Tuesday, December 23rd, 2008 7AM-8AM See Page 3

FWCS SunCoast Signal

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This Month... (Editor's Column)

It's hard to believe that we are at the end of the year already! The election is finally over (whew!) and for better or worse we have a new President. I am sure most of our readers would agree the election process in the US is way too long and distracts from other important events going on at the time. Planning for the Celebrate Engineering Banquet is well under way. For those that are interested you can register online now at

http://ewh.ieee.org/r3/floridawc/celebrate/. Sean Denny has a call in this issue for Lignell Award nominees. Take the time to read it and consider nominating someone.

Finally, I would like to make another call for articles and events. Jim Howard and I notice each month that there are Chapters having meetings or events that don't send them in to me for publication. You are missing a great opportunity for free publicity! I would like to acknowledge our contributors this month. We have Sean Denny, Butch Shadwell, Randy Dotson, Tim Doolittle Jim Howard and Jim Anderson. RAS





GOLD/WIE Meeting Update

We didn't have such a great turn-out for the November 12 Graduates of the Last Decade and Women in Engineering Social. We did, however, manage to get in some great planning for events over the next six months. GOLD plans on having speakers dealing with effectively communicating your strengths and desires to others, recruiting events for USF students (where we'll be roping in some of the IEEE vets), financial planning advice and some more networking socials. We also came up with some ideas to help us get the word out to a wider audience. In the meantime, thanks for your support and we hope to see you at the December 3 Networking event.

Tim Doolittle, GOLD Chair for IEEE FWCS

IEEE.tv

2008 IEEE Medal of Honor recipient - In this segment IEEE.tv interviews Dr. Gordon Moore the Co founder and Chairman Emeritus for the Intel Corporation. Dr. Moore has played many high profile roles during his illustrious career including innovator, entrepreneur, philanthropist, and environmentalist. At Sections Congress 2008, Dr. Moore was presented with the 2008 IEEE Medal of Honor for "pioneering technical roles in integrated-circuit processing, and leadership in the development of MOS memory, the microprocessor computer and the semiconductor industry."

Careers in Information Technology - This program provides an overview of career possibilities in IT. IT professionals and engineers from large and small companies discuss the nature of their work.

Care Innovations: Responsibility For Being Green -

This program takes a look at the challenge of minimizing the environmental and health impacts of electronics manufacturing. Discussions focus on the responsibility of industry, government, academia, and the general public to foster the development of public policy and the enforcement of laws to safeguard health and the environment.



Jim Beall Receives 2009 Haraden Pratt Award!

The Florida West Coast Section's own Jim Beall received this award "For a lifetime of continued leadership and service to the IEEE at all levels". There will be a detailed report on this prestigious award in next months Signal Newsletter. Congratulations, Jim!



Life Members

Meeting (heading) – The life members will hold a planning meeting at the Village Inn in Tampa on Dale Mabry on Tuesday, December 23rd, 2008 from 7am-8am. Please plan to join us to help plan for the 2009 meeting of your Life Members Affinity Group. Contact Jim Beall (j.beall@ieee.org) for more information





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GOLD and WIE Networking Social

Come join us for appetizers at
Bahama Breeze
3045 North Rocky Point Drive E in Tampa
With the Graduates of the Last Decade and Women in
Engineering Societies
Wednesday, December 3, 2008
6pm to 7pm

For more information, email Tim Doolittle at ieee@tmdvault.fastmail.fm



IEEE-USA Annual Banquet

"Engineering the Alternative Energy Debate" in Salt Lake City, UT February 26-March 1, 2009

www.ieeeusa.org/calendar/conferences/2009annualmeeting



Take Your Pick: Task Or Time?

As we reach the end of the first decade of the new millennium, the Engineering workplace is once again starting to change. For at least the next few years we're going to be seeing three distinct generations working together side-by-side: boomers (born before 1965), Gen-X'ers (1965-1979), and Gen-Y'ers (1980-1999). This arrangement causes conflicts and friction in all parts of a company; however, the engineering department feels it the most because of the rapid changes that have happened in engineering.

In order to keep an entire engineering department staffed and motivated, things are going to have to change. One key change is going to be how we all think about engineering jobs. In the immediate past, engineering jobs were simply 40-hour-a-week commitments that pretty much started and ended at the same time each day. We might work different shifts; however, the company was fairly insistent that we show up and put our time in. All sorts of tools were created around this structure: time clocks, time sheets, overtime, comp-time, etc. Things are changing now and it's because Gen-Y has arrived in the work place.

The Gen-Y crowd clearly prefers jobs that are defined by their task, not the amount of time that they take. This of course means that they want to be compensated for what they produce. In a way this is sort of a step backwards. Back when everyone worked on a farm or in the early days of factories, people were paid based on their personal output. This had its pluses and minuses and after the Great Depression when manufacturing got more complicated and unions arrived, the shift to paying by the hour started.

Younger workers are used to working in an asynchronous fashion -- something that older workers may do also, but they hid it better. Getting into the office by 8am or staying at the office until 5pm makes little or no sense to younger workers if they have completed their work.

You can call task based work whatever you choose ("virtual work" seems to be winning), but by necessarily it is catching on. At IBM, 40% of their employees have no official offices. So what does all of this change mean for those who are in charge of making sure that a multi-generational engineering department produces results? Here are the three key skills that will need to be mastered:

- 1. Clearly articulate the results that you expect -- leave no room for misunderstanding. Then follow up by tying accountability to getting the job done.
- 2. Make physical attendance at the office / meetings optional. Note that everyone still needs to show up for meetings and communicate with team members.
- 3. Gage worker performance on the quality of the work performed.

What can you expect to gain from making these changes? Best Buy has implemented many of them and they claim to have seen a 35% increase in productivity and voluntary turnover drop by 320 basis points. What's even more remarkable is that when asked, employees were unsure if they were now working more or fewer hours -- they had simply stopped keeping track.

Jim Anderson, FWCS Chair



You are a Member of IEEE's Florida Council

The IEEE is a very large organization that is pretty much made up of volunteers. This type of organization has some unique benefits (low, low costs!) and some real challenges. One of the biggest challenges that the IEEE faces is how to improve how each of the local sections is run: money management, keeping membership up, encouraging the next generation of engineers, etc. By the way, YOU are a member of the Florida West Coast Section. It turns out that Florida is a big state (no surprise there) and there are 12 different IEEE Sections that cover the state. In order to share information among the different IEEE sections in Florida roughly 30 years ago the Florida Council was created in order to provide a forum for representatives of each of the 12 sections to gather and exchange ideas. The most recent Florida Council meeting was held in Orlando on November 1st. There is not enough room here to cover all of the ideas that were discussed; however, key reminders were distributed regarding Florida Council awards for engineer of the year, educator of the year, and IEEE participant of the year. Additionally, the 54th annual Florida State science fair will be held on April 16th in Lakeland and engineers will be needed to judge this contest. If you'd like to see a list of all of the Florida Sections, check out the Florida Council web site which is located on the Internet at: http://www.ewh.ieee.org/r3/fc/





Polaris Electrical Connectors Tour! Thursday, December 4th at 6:00 PM



Polaris Electrical Connectors, Inc 11625 Prosperous Dr Odessa, FL 33556

Polaris Electrical Connectors Inc operates a modern and innovative manufacturing facility located in Odessa, FL. In this facility, they manufacture dual rated (Aluminum and Copper) electrical connectors, neutral bars, box connectors, and insulated block connectors to fit any customer requirement.

Polaris Electrical Connectors, Inc began manufacturing electrical connectors in 1985 with only ten employees. The name "Polaris" was adopted from the Polaris submarine, and is now well known among those in the electrical industry for its unique design and high quality. Since 1985, Polaris has grown from a small company servicing a few customers in and around Florida, to a leading manufacturer of insulated electrical connectors for the entire US market. This lead position has afforded Polaris the opportunity to develop new cutting edge technology in manufacturing uninsulated products. Their Goal is to provide quality products and services to every customer, on every order, every day.

Due to enormous growth during the past five years, Polaris Connectors has moved into a new 50,000 Sq ft Facility located in Odessa, Florida, just outside of Tampa. This new facility brings all of our manufacturing processes under one roof making it easier to go above and beyond the service level you have come to expect from us.

While other connector companies are moving manufacturing across borders and overseas Polaris is investing in new technology to keep manufacturing here in the US and still be priced competitively. This move allows Polaris more space to continue to invest in new ways to service our customers through improved technology, better connector design, and most importantly increased customer SERVICE!

Nick Moraitis, Director of Sales for Polaris Connectors. Since coming to Polaris over three years ago, Nick has helped launch the OEM and Utility product lines for Polaris. Nick holds a Marketing degree from the University of Florida.

Luke Hill, Engineering Manager for Polaris Connectors. Since coming to Polaris seven years ago, Luke has headed and worked on numerous projects aimed at automation and modernization of the connector manufacturing process for Polaris He holds a Mechanical Engineering degree from the University of Florida.

Contact Randy Dotson LAKELAND ELECTRIC Phone: 863-834-6494

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e-mail randall.dotson@lakelandelectric.com

Web Site Highlights IEEE's Anniversary Celebrations

Planning is now in full swing worldwide for IEEE's 125th anniversary celebrations next year. Information about these activities can be found on the new 125th Anniversary Web site, which has message boards, a series of video greetings from members and some well-known technology leaders, and other interactive features. For more information, visit http://bmsmail3.ieee.org:80/u/13037/04215844

USF Electrical Engineering Senior Banquet

On Friday December 5th the IEEE student branch at USF will hold the senior banquet for the fall 2008 and spring 2009 electrical engineering graduates. The event will be held in the Plaza Room of the new Marshal Center (Room 2708) from 6pm to 10pm. Mr. Jim Anderson will be our special guest speaker. Go to the official website for the latest information.

http://ieee-ee.eng.usf.edu/banquet

S-PAC

On November 12 the IEEE student branch at USF held a Student Professional Awareness Conference (S-PAC). The event was very successful. There were four speakers and about forty attendees. The speakers included Diane Russell: USF Career Center Services Overview, Dr. Kenneth Buckle: USF EE Graduate School Program Opportunities Dr. Richard Gitlin: Life as an Engineer Art Nordlinger: The Importance of Professional Licensure. The event was sponsored by Tampa Armature Works, CAE USA, Harris Corporation, and the IEEE Florida West Coast,

Brain Teaser Challenge Solution - September 2008 Butch Shadwell

I was just testing your chemistry vocabulary in the last column. I suspect many of you found the question far too simple: "Your chemistry question today is: what does it mean if some of these molecules are isomers?"

Of course isomers are chemical compounds that have the same empirical formula but differ in bonding configuration. A few common isomers would be glucose, fructose, and galactose. These are all monosaccharides (simple sugars) whose empirical formula is C6H12O6, but in fact have different chemical properties including taste.

The result is that any given band in the electrophoresis gel may contain more than one chemical, as long as they all have the same mass.

Brain Teaser Challenge - October 2008

Once upon a time there lived a great green ogre in the woods at the end of the dale. From birth the children of the village were told stories of this horrible creature and what happens to those who venture too close. Because everyone in the village had been so indoctrinated from birth, no one still living in the village had been into the woods to see if the ogre was still there. The stories that had been passed down made such a journey unthinkable.

One day the people of the village were threatened with destruction as the sun was getting cooler and the winter was colder than any they could recall in over a hundred years. To get fuel to heat their homes folks had to chop trees closer and closer to the dreaded ogre's lair. One day the inevitable confrontation occurred. As one woodcutter ventured further into the woods than anyone had before he came upon a small house. The woodcutter screwed up his courage and knocked on the door. To his relief, it was not an ogre who answered, but an average built older man with circular spectacles. Upon entering the home the woodcutter was amazed how comfortable the temperature felt, and at the array of unusual gadgets about the room.

It turns out that this wood was home to an engineer. The rumors of an ogre were started over the fact that many of the village people were afraid of math and science. It was difficult and better kept at a distance. After hearing of the village's problems with the weather, the engineer decided to help. He told them about insulation and how to store heat in water during the day so they could use it at night. If a villager was able to heat 10000 liters of water during the day using his solar panels to a temperature of 60 degrees C, how many BTUs would be released as heat as the water cooled to 20 degrees C? It's funny sometimes how things we fear can be worth getting to know better.



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 column.



IEEE RFID 2009 Conference Seeks Technical Papers Conference to be Held in Orlando, FL April 27-28, 2009

WASHINGTON (17 September 2008)-- Organizers of the 2009 International IEEE Conference on RFID (IEEE RFID 2009) are seeking technical papers from authors presenting the latest research, innovations and implementations related to the theory and practice of RF-based identification and communication systems.

Accepted papers will be published by the IEEE and presented at IEEE RFID

2009 (www.ieee-rfid.org/2009/), which is co-located with RFID Journal Live!

executive conference and exhibition

Topics of interest include antennas & propagation; circuits, devices and sensors; communication protocols; security & privacy; system tools; RF-based localization; RFID system architecture; policy & regulatory issues; deployment issues and concerns; and applications.

Authors are invited to submit full 8-page papers in the IEEE conference format (http://www.ieee.org/portal/cms_docs/pubs/confpubcenter/pdfs/samplems.pdf).

Submissions must describe original work not previously published or currently under review for publication in another conference or journal.

Abstract submissions are due 1 December 2008 and paper submissions 5 December. Acceptance notification is 13 February, 2009 and publication-ready papers are due 13 March, 2009.

Questions can be directed to 2009info@ieee.org

IEEE Transactions on Learning Technologies

The IEEE Transactions on Learning Technologies seeks original manuscripts for a Special Issue on Real-World Applications of Intelligent Tutoring Systems scheduled to appear in the April-June issue of 2009.

Important dates:

- 28 Dec. 2009: Deadline to submit a full paper.
- 15 Feb. 2009: Notification of acceptance, rejection, or needed revisions.
- 1 Mar. 2009: Revisions due.
- 15 Mar. 2009: Notification of final acceptance.
- 22 Mar. 2009: Final versions due.

If you have any questions, please contact the editors of this special

issue: Carlos Ramos csr@dei.isep.ipp.pt or Claude Frasson sowmya@stottlerhenke.com

The Call for Papers is attached to this document. It is also available at the bottom of this Web page: http://www.computer.org/tlt

The IEEE Transactions on Learning Technologies seeks original manuscripts for a Special Issue on Real-World Applications of Intelligent Tutoring Systems scheduled to appear in the April-June issue of 2009. Intelligent Tutoring Systems (ITS) appeared during the 70's, most driven by the success of Knowledge-based Systems and Expert Systems. ITS are able to instruct and train students and professionals without the intervention of human beings. ITS introduces a set of ideas like the domain knowledge representation, most of times derived from a previous Expert System project, allowing the possibility to reason and explain automatically on domain problems. Developments were made in trainees' models, instructional and pedagogical planning, and user interface. In the 90's, with the web boom, some ITS ideas were incorporated in new computer aided instruction paradigms, like e-learning, distributed learning, and more recently in learning objects. However there is a clear difference since these learning concepts are more centered in the interaction with the instructor. -Rob
reilly@media.mit.edu

Sean Denny venner20@ieee.org, Phone 813-410-6982



FWCS Lignell Award Outstanding Teacher Recognition Program

For some years now the Florida West Coast Section (FWCS) has participated in the Lignell Award. Outstanding Teacher Recognition Program to recognize and honor outstanding contributions by High School teachers to pre-college education in Mathematics and Science in Hillsborough, Pinellas and Pasco Counties.

This program is open to all individuals teaching classes in Mathematics or Science in the public schools during the current school year. We are currently seeking nominations for this year's awards that will be presented at the Celebrate Engineering 2009 Awards Banquet at the Grand Hyatt Tampa Bay Hotel (2900 Bayport Drive, Tampa, FL 33607) on Friday February 20th, 2009.

There will be one recipient of this award from each of the three counties and the winners will be invited to attend the banquet, with a guest, to be presented with the award and an honorarium.

If there is a teacher at your school who you think should be considered for this prestigious award, please complete the enclosed nomination form and return it to the above address no later than December 19th, 2008. It is encouraged to submit your nomination form and any supporting materials in digital format through your email account (in lieu of a signature). An electronic version of the form can be downloaded from the soon to be announced Lignell Award website and returned to me via e-mail to venner20@ieee.org. We also encourage an additional narrative along with the nomination form that justifies the individual receiving this honor as the "Outstanding Teacher of Math and Science" in the entire county where they teach. We would like to receive a number of nominations of "deserving and qualified" candidates throughout the county. Please do not have a narrow screening process before the nominations are forwarded to me.

Sean Denny, IEEE FWCS TISP Chairman <u>venner20@ieee.org</u> 813-410-6982



December 2008 Calendar of Events (For more information see P. 1) inside this Signal...

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30	1	2 EXCOM Meeting at TECO Plaza Page 1	3 Gold/WIE Networking Social, Page 3	4 Polaris Plant Tour, Page 5	5 USF Senior Banquet Page5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24 Christmas Eve	25 Christmas Day	26	27
28	29	30	31 New Year's Eve	1	2	3

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