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THE

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Inside this Signal...

Page 2

- * Editor's Column
- * LightningMaster
- * Teach-in

Page 3

- * IEEE-USA Managing Health Care Costs
- * FRCC Job Opportunity

Page 4

- * TISP Update
- * Siliconexion

Page 5

- * Brain Teaser
- * AESS Board Meeting



2007 IEEE PES General Meeting

June 24 – 28, 2007

Marriott Waterside Hotel, Tampa, Florida USA



The Power Engineering Society held its 2007 general meeting at the Tampa Convention Center and the Marriott Waterside Hotel in Tampa, Florida, USA. While the data is still coming in we are expecting well over 1500 registrants and many partners, children and volunteers.

Actually at this writing the Meeting is coming up this weekend and there is a flurry of activity with training sessions for the volunteers, filling the bags for the attendees, and all the little details that go to making such an event a success.

The conference, with its theme *Powering the Future, Today*, will provide an international forum to address policy, infrastructure and workforce issues. The technical sessions cover a wide array of topics from power transmission and distribution to the effect of heavy television viewing on the power system. Even superconductivity, a topic that was once esoteric, is being addressed in several sessions. There are both paper sessions as well as poster sessions to provide opportunities for narrow focus topics to get their due. There are committee meeting and meeting for special interests such as Women in Engineering and Student Activities.

It is not just a technical meeting. The attendees will participate in trips, cruises, dinners, receptions and, in general, get to enjoy the Tampa environs. And many will visit our Gulf beaches.

Watch for a full report on the PES General Meeting in the August Signal.



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The Florida West Coast (Editor's Column)

"It's been a quiet week in Lake Wobegon, MN my home town,..." is the way Garrison Keillor starts his monologue each week on The Prairie Home Companion on American Public Media. Well this July is something like that: With the PES General Meeting behind us everyone is taking a well-earned rest. Other than our monthly ExCom meeting, there are no events. So I am succumbing to temptation and will ramble a bit.

We are new to Florida having been here three years and my wife and I thoroughly enjoy it. It's a little bit of heaven. The tourist things have not worn thin. We still visit Tarpon Springs for their very pretty beach at Fred Howard Park and a meal at one of the many good Greek restaurants. While not big on roller-coasters, we take a year pass to Busch Gardens for their entertainment such as bands, dance, and the animal shows. We like them even without our grandchildren!

Even the afternoon monsoons that are a regular occurrence at this time of year give us pleasure; we will sit on our lanai and watch the heavens provide its own 4th of July show.

And the beaches! We have lived in New Jersey and California and have been to beaches in many other places too and the beaches here are wonderful. And they have extras: Treasure Island held a pops orchestra concert on the beach. They played show tunes and popular classics and had skilled soloists. We ate dinner at a beach-side café and were treated to a spectacular fireworks display at the end of the evening.

So get out and enjoy our great area. Life is short, go to the beach today.

—PS



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November Great American Teach-in

Rudy Henning is preparing an objective Plan for the early years in Pinellas County Schools. He is looking for more IEEE members to expand the penetration to reach out to a broader spectrum of students on Math, Technology, Science and application of the basic principles of the topics. Please contact Sean Denny at Venner20@aol.com if you wish to participate.

—Don Hornak



Managing Health Care Costs

Conference to Examine Role Technology Can Play in and Improving Patient Care

WASHINGTON (7 June 2007) -- The role technology can play in helping the United States manage health care costs by advancing the diagnosis, treatment and prevention of disease will be examined in a conference at the National Institute of Standards and Technology (NIST) in Gaithersburg, Md., on 25 September.

Major technological advances have greatly improved patient care since the 1970s, but have come at a steep price. U.S. health care spending is expected to rise from nearly \$2 trillion in 2002 to more than \$4 trillion by 2015.

The goal of Economic Strategy for Health Care through Bio and Information Standards and Technologies is to emphasize the need to develop a long-term economic strategy for implementing bio and health care information technologies into our health care system. By developing breakthrough biomeasurement, bioinformatics, biologically based and health-information technologies, rising health care costs can be reigned in and quality can be improved.

"The outcome of this conference will benefit patients and society by improving the quality and convenience of care, managing health care costs and increasing access to affordable and effective health care throughout the world," Biotechnology Council Chair Dick Doyle said.

The all-day conference will bring together key government, industry, academic and research leaders and patient advocates. This will help policy makers and corporate leaders understand where technology investments should be made to enhance health care quality, wellness and disease prevention, while minimizing cost. Dr. Jerry Grossman, senior Fellow and director of the Harvard/Kennedy School Health Care Delivery Policy Program and chairman emeritus of New England Medical Center, is the honorary chair.

"Because of the complexity and scope of the issue, the conference requires decision makers, researchers, engineers and providers from many traditional disciplines to collaborate and tackle the challenges together," Doyle said.

For more information and to register, see <http://www.itl.nist.gov/Healthcare/conf/index.htm>.

Preceding the conference, selected invitees will participate in a half-day workshop at NIST on 24 September. Robert Cresanti, Commerce Department under secretary for technology, will address the participants. Major findings will be shared with conference attendees.

The Biotechnology Council, NIST and IEEE-USA are cosponsoring the event. The Biotechnology Council is
(continued page 4).

(Advertisement)



Florida
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CAREER OPPORTUNITY - - -

FRCC Compliance Engineer

This position is responsible for the implementation of the FRCC Compliance Program that will monitor and enforce compliance to NERC Reliability Standards and FRCC Regional Reliability Standards.

The FRCC Compliance Monitoring and Enforcement Program is part of the delegated functions that FRCC will perform the North American Electric Reliability Council (NERC) Compliance Program as authorized by the Federal Energy Regulatory Commission (FERC). It will involve working closely with all owners, operators and users of the FRCC Bulk Electric System in the administration of the program.

Essential job functions include, but are not limited to, participation in Compliance Audits, Implementation of the FRCC Compliance Enforcement Program, design of Compliance Program tools and processes, development and maintenance of communication and reporting mechanisms for compliance activities, including database administration.

Required Qualifications:

- Bachelors Degree in Engineering
- Five or more years experience in electric power system operation and/or planning.
- Knowledge and understanding of NERC Reliability Standards
- Excellent organizational, presentation, written and verbal communication skills.
- Proficient with Microsoft Office applications including, Word, Excel, and Power Point

Other:

- This position is located in Tampa, Florida.
- Travel is required.
- Excellent benefits, including medical insurance, life insurance, long-term disability insurance, defined contribution plan, and 401(k) plan.

Please forward resume to the following:

Mr. Barry Pagel, Manager of Compliance
FRCC
1408 North Westshore Blvd., Suite 1002
Tampa FL 33607-4512
(813) 207-7968 – Phone
(813) 289-5646 – Fax
bpagel@frcc.com - Email
www.frcc.com

TISP Update

The Florida Engineering Education Conference was held at the University of Central Florida on May 4, 2007. This year it focused on getting engineering into Pre-College curricula. The chair, Bruce Furino called the conference to order at 9:30AM.

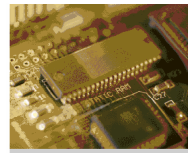
Sean Denny attended and spoke on the IEEE Teach in Service Program. By the reaction of the crowd, his presentation was successful. A number of attendees approached him for more information. One person suggested contacting Tampa's Museum of Science & Industry.

The TISP group was offered the opportunity to present a Probability & Statistics Presentation in Pasco County on August 10th. Sean and Don Hornak will present this program. Teachers are invited to participate. IEEE members and Engineers are also invited to help coach the event. Contact Sean if you have interest.



As an aside, Sean reported visiting the in Hollywood CA. While their Planet Exhibit Hall, has large models of the planets and constellations, the most interesting part was the Samuel Oschin Theater Planetarium Show. Sean said that it was the most impressive such show he had ever experienced. The seating is very comfortable as the Emcee took the audience on a History Tour of Astrology of all things. He then cleverly segued into the modern science of Astronomy. The stars danced across the sky. The room seemed to tilt and rotate as the History of Space Exploration unfolded on the screen.

The Griffith Observatory also has one of the few camerae obscurae in the world; it is a telescope projecting a panorama on a white table in a darkened room. (See Wikipedia http://en.wikipedia.org/wiki/Camera_obscura) Most of the true colors were reflected. Outside, the telescope can be viewed by the public. Check out their website, www.GriffithObservatory.org, for more information.
—Sean Denny (below)



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(Health Care cont.)

composed of many professional societies, including: the Society for Biological Engineering; the Biomedical Engineering Society; the American Society of Mechanical Engineers, the Healthcare Information Management Systems Society; and the Institute of Electrical and Electronics Engineers. These societies have a total membership of nearly 750,000.

Cosponsor URLs:

Biotechnology Council (<http://ewh.ieee.org/tc/biotech/>);

NIST (<http://www.nist.gov/>);

IEEE-USA (www.ieeeusa.org).

* * *

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IEEE-USA is an organizational unit of the Institute of Electrical and Electronics Engineers, Inc. created in 1973 to support the career and public policy interests of IEEE's U.S. members. IEEE-USA's mission as outlined in the IEEE Bylaws is to recommend policies and implement programs specifically intended to serve and benefit the members, the profession, and the public in the United States in appropriate professional areas of economic, ethical, legislative, social and technology policy concern. The vision is to serve the IEEE United States member by being the technical professional's best resource for achieving life long career vitality and by providing an effective voice on policies that promote U.S. prosperity.

Brain Teaser Challenge Column

—By Butch Shadwell

June BTC Last month I mentioned that I was going to the International Science and Engineering Fair in Albuquerque. It was an amazing experience. 1520 brilliant kids from around the world, it made me feel like there was great hope for the future. As I was short of time I decided to take it easy on you and just ask a few simple questions, “Do you know what a “flux capacitor”, a “boxcar circuit”, and a “warp coil” do?” Two of these items were fictitious and belong to an imaginary future. If you’ve been to any of the “Back to the Future” movies, you will know that the flux capacitor is the invention of Dr. Emmett Brown. Though its function is never made clear, it seems to have been a key component of Dr. Brown’s time travel machine. And of course Star Trek fans will recognize the “warp coil”. More than any other sci-fi entertainment, the Star Trek writers tried to describe an actual theory of operation for their technologic inventions. These warp coils conduct some sort of high energy plasma and cause distortion of spacetime. I don’t know why I never thought of that. The “boxcar circuit” is something from the old days in radar. Sometimes called a boxcar integrator, it was a kind of sample and hold circuit. It would retain the signal strength voltage from the last return pulse, in order to keep the AGC (automatic gain control) in the correct range for the next return pulse. But I bet you already knew that. I received a lot of correct responses to this BTC. When that happens with this sort of question, I’m not sure who to credit, the writer of the email or Google.

July BTC Some of you know that I work as an independent consultant in applied physics and electronics. My clients are mostly companies that have an idea for a new product but aren’t quite sure how to make one. I get to solve the hard problems. I’ve been working on a device that must save all of its operating parameters in EEPROM memory whenever it is powered down. I have an input to the microcontroller that drops immediately when the power supply line is interrupted, in order to signal the beginning of this data transfer. The controller circuitry will continue to operate on the energy stored in the power supply filter capacitors. The system is powered from a 12 vdc supply. I have 100 uF on the input to the voltage regulator and I have 100 uF on the output of the voltage regulator. The microcontroller circuitry normally runs on 5 vdc. If this circuitry pulls a total of 20 mA, and the controller and EEPROM memory stop working at 2.5 vdc, how much time do we have to complete the data transfer to EEPROM? For this problem we will assume that the regulator uses zero current for itself, and has a drop out voltage of zero. This means that the regulator will continue to pass current to the load without resistance, as the input drops below 5 vdc. Also assume that the load current does not change, all the way down to the point where it stops functioning. This could be a little tricky.

AESS Radar 2007 & AESS Board of Governors Meeting

IEEE FWCS AESS Representatives Attend Radar 2007 Conference and AESS Board of Governors Meeting

Doug Chronister IEEE FWCS AESS member represented IEEE Region 3 at the Board of Governors (BOG) meeting April 19 – 20, 2007 in Boston MA. Also in attendance was Florida’s own Jim Howard, a FWCS leader and current Secretary-Treasurer IEEE-USA Board of Directors.

Jim supported the main session while Doug spent time in a working session on the 19th with AESS representatives from other regions to discuss experiences in their respective regions and chapters. The group arrived at a list of recommendations for the AESS BOG to consider. Here are a few of the highlights:

- Promoting Membership
- What is AESS and how can the Society promote more broadly
- Expanding the Distinguished Lecture list
- Promoting chapter participation and volunteering

The working session as well as the main BOG meeting had the chance to view a presentation by AESS VP Education, Robert O’Donnell. The presentation included two major initiatives underway.

- Initiate technical tutorial video program
- Initiate video technical seminar series for EE students

The outcomes are sure to be value-added to current members and students. It is also an attractive tool to help grow IEEE membership as a whole.

Doug thanks Jim Lumia, FWCS Computer Society and AESS chair, Jim Howard along with the rest of the FWCS EXCOM for nominating him to represent Region 3. Look for future articles when Doug shares more about his trip.




IEEE at USF

The Student Branch is pleased to announce its new website: <http://ieee-ee.eng.usf.edu>

Eric Franke, our webmaster, is responsible for the fine work. Contact him at EFranke@mail.usf.edu with suggestions or news of interest to our students.

For the BTC: 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.

July. 2007 Calendar of Events (For more information see P. 1 *Inside this Signal...*)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3		5	6	7
8	9	10 <i>5:30 pm</i> <i>IEEE FWCS</i> <i>ExCom</i> <i>TECO Tampa</i>	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	2	4

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