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THE

SUNCOAST

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Calendar



Happy Fourth of July!



This Month's Meetings

***July 1st: 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

Future Events and Meetings

Yuengling Beer Company Brewery Tour

August 29, 2008

The tour begins at 1PM and expected to last around 45 minutes

Yuengling Beer Co. of Tampa, Inc.

11111 North 30th Street

Tampa, FL 33612

Adjacent to Busch Gardens

More on Page 4

This Month... (Editor's Column)

We have made it to the summer and it is apparently a slow time for meetings. It is an opportunity to fill the Signal with articles that will be useful to the members. I have a few articles of interest from IEEE and one from me about an organization I have found helpful in my personal development. That organization is Toastmasters International. I have been a member for about four years now and it has helped me improve my speaking skills and allowed me to meet a diverse and interesting group of people. There is an article on IEEE memberNet Networking and news from AAES.

The PACE/GOLD event was a success and I, along with Tim Doolittle will be planning more in the future. One possible speaker was suggested to me by Russell Harrison and I will be following up with that later in the year.

I attended the Tampa Bay Technology Forum last month and I saw a few West Coast Section Members there also. There were about 500 other attendees and a large number of exhibitors. The keynote speaker was Russell Romanella, Director of the International Space Station at Kennedy Space Center. His presentation was more than an hour long to a captivated audience. The event was a big success in its first year and will be held annually.

As always, I invite anyone that wants to submit an article or make a contribution of some kind to do so. Have a safe and happy Fourth of July holiday!

Richard Sanchez, Editor

2008 IEEE EXECUTIVE COMMITTEE

FLORIDA WEST COAST SECTION

CHAIR: Jim Anderson 813-425-2467
jim.anderson@ieee.org

VICE CHAIR: Serge Beauzile, Progress Energy ,
727-344-4123 or 727-409-1242 sbeauzil@yahoo.com

SECRETARY: Serge Beauzile, Progress Energy ,
727-344-4123 or 727-409-1242 sbeauzil@yahoo.com

TREASURER: Dr. Paul Schnitzler (813)-974-5584
pauls@eng.usf.edu

SIGNAL EDITOR: Richard A. Sanchez,
Phone (813)239-3849 richard.sanchez@ieee.org

AWARDS & BYLAWS : Richard Beatie, PE, Lightning Master
(727) 580-3598 r.beatie@ieee.org

EDUCATION: Dr. Rudolf E. Henning and Zhen Tong
(813) 974-4782 or (727) 328-8777 (Ext: 333)
henning@eng.usf.edu or tong@ieee.org

MEMBERSHIP: Tom Blair, TECO Energy,
813-228-4407 tom_blair@ieee.org

TEACHER IN-SERVICE: Sean Denny, Venner20@aol.com

PES/IAS CHAPTER: Tom Blair, TECO Energy,
813-228-4407 tom_blair@ieee.org

MTT/AP/ED CHAPTER: Ken A. O' Connor
kenoconnor@ieee.org

COMP/AESS CHAPTER: James S. Lumia (813) 832-3501,
jlumia@ieee.org

EMBS: Engineering in Medicine & Biology: Dr. Ravi Sankar:
813-974-4769 sankar@eng.usf.edu

SP/COMM CHAPTER: Hector Martinez, HNTB Corporation,
813-477-5401, hmartinez@hntb.com

WIE: Women in Engineering: Suzette Presas (813) 974-4851
spresas@mail.usf.edu

LIFE MEMBER AFFINITY GROUP: TBD

GOLD: Tim Doolittle, tdoolittle@tmdvault.fastmail.fm

PACE: Scott Haynes, Honeywell (727)-539-3358,
scott.haynes@ieee.org

Richard Sanchez (813)239-3849 rsanzc@verizon.net

STUDENT BRANCH CO-ADVISORS:

Dr. Paul Schnitzler, USF PS&A (813)-974-5584
pauls@eng.usf.edu

Dr. Chris Ferekides, USF, (813) 974-4818
ferekide@eng.usf.edu

Dr. Srinivas Katkooori, USF, (813)-974-5737
katkooori@ieee.org

STUDENT BRANCH MENTOR: Jim Howard, Lakeland Electric
(863) 834-6506 jhoward@ieee.org (H) (813) 876-1748

STUDENT BRANCHES:

Manuel Bravo IEEE, mbravo@mail.usf.edu

Upavan Gupta, IEEECS (813)-974-1348, ugupta@csee.usf.edu

CONFERENCES: Jim Beall, j.beall@ieee.org

WEB PAGE: <http://www.ieee.org/fwcs>

WEB MASTER: Michelle Chang, michelle.chang@ieee.org

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Address all correspondence to:

Richard A. Sanchez

1018 Berry Avenue

Tampa, FL 33603

Home Phone 813-239-3849

E-MAIL: rsanzc@verizon.net

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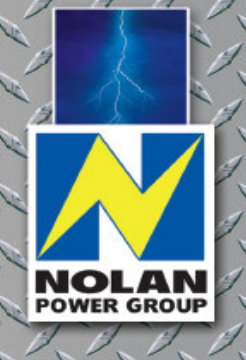


LightningMaster
Corporation

Richard E. Beatie, P.E.
Director Of Engineering
Structural - Bonding/Grounding - Surge

1351 N. Arcturas Ave. (800) 749-6800 Voice
Clearwater, Fl. 33765 (727) 580-3598 Cell
(727) 499-0138 Fax
www.LightningMaster.com RBeatie@LightningMaster.com

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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.

Energy Innovations: The Hydrogen House - The Energy Innovations series profiles fascinating and innovative approaches to meeting our growing energy needs. In this program, Mike Stritzki had a dream. As a tenacious engineer, he was determined to realize it with his own hands. Thus was born the first "hydrogen house" in the United States, designed and built in pastoral Hopewell, New Jersey. An astonishing technical achievement lies in the bucolic setting: a house with all the modern conveniences, but run entirely by the sun

IEEE.tv Member Basic™

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Carl Selinger: Stuff you Don't Learn in Engineering School (Member Access) - In this interview, Carl Selinger discusses his book "Stuff you Don't Learn in Engineering School." This practical book offers young engineers advice on speaking in front of a group, running a meeting effectively, making decisions, setting priorities, working with all sorts of people, learning to negotiate, developing leadership skills, and dealing with stress in the workplace.

Diab and Frazier: Ethernet in the First Mile (Member Access) - In this program, authors Wael Diab and Howard Frazier discuss their book, Ethernet in the First Mile: Access for Everyone. Ethernet in the First Mile: Access for Everyone brings the Ethernet in the First Mile standard (IEEE Std 802.3ah) to life by explaining the principles behind the standard, presenting the technology tradeoffs that led to standardization, and detailing all aspects of the standard necessary for end users, deployers, service providers, IT professionals, and students.



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IEEE FOUNDATION AWARDS OVER US\$170,000 IN GRANTS

Nine initiatives were awarded over \$170,000 in grant funds during the March 2008 IEEE Foundation Board meeting. The grants support pre-university activities, preserving history, using technology to address societal needs, exploring alternate sources of energy, participating in robotics competitions, and improving technological literacy

Through the awarding of these and other project grants, the IEEE Foundation supports a cross-section of programs that seek to foster technological innovation and excellence for the benefit of humanity. To learn more about the IEEE Foundation and its grantmaking program, visit <http://www.ieeefoundation.org>.





Yuengling Beer Company Brewery Tour!

Come see the technical aspects of beer getting brewed! You are invited to meet us at the brewery for a plant tour on August 29, 2008. The tour begins at 1PM and expected to last around 45 minutes. We will end our afternoon at the Hospitality area. There is also an opportunity to sample the beer.

Please reserve with Jeff Basiaga at jeff.basiaga@stantec.com so we can get a preliminary headcount for the plant. We shall see you there!

The tour is sponsored by the PE/IA Society and is courtesy of Yuengling Company.

Plant info: **Yuengling Beer Co. of Tampa, Inc.**

1111 North 30th Street

Tampa, FL 33612

Plant is Adjacent to Busch Gardens.

Parking is across from Village Inn Restaurant on 30th Street at the Beirgarten entrance



Take a Virtual Tour of the National Hurricane Center

Now that we are officially in hurricane season, readers may be interested in this virtual tour of NOAA's National Hurricane Center, which includes panoramic views of different areas of the facility, accompanied by audio and text descriptions. "This is an especially useful tool for students who are learning about tropical cyclones and weather forecasting," said Bill Reed, director of the National Hurricane Center. "It also shows how the different branches of our facility work together for the best possible forecasts."

For more information, see: <http://www.nhc.noaa.gov/nhctour.shtml>



PACE/GOLD Event a Success!

The joint venture between the PACE and GOLD Chapters with Russell Harrison as guest speaker was held at TECO Plaza and was attended by more than twenty people, most of who were IEEE Members. Russell gave a one hour and forty five minute presentation and discussion on a variety of topics including how the political process works, progress on a number of bills before Congress pertaining to immigration and visa reforms regarding technical workers and how we can become involved in the political process to get beneficial legislation passed. Russell encouraged questions from the audience and at times the discussions got to be quite lively. He explained how a legislator can be persuaded to vote on a bill and also the role that lobbyists play in that process. A surprising fact he mentioned was that as few as seven letters/e-mails can cause a legislator to vote for or against a particular bill. Russell is very knowledgeable and passionate about his work Senior Legislative Representative for Grassroots activities for IEEE-USA. He would have liked another 30 minutes to finish his presentation, but we had to end the meeting at 7:30. I would like to thank Ralph Painter for making the arrangements with TECO for use of their conference room and to Tim Doolittle for help in making the event possible.



...Worse Than Death!

Now that I have your attention, do you know the one thing that most people fear more than death itself? Public Speaking! That's right, people fear death less than getting up in front of a group of people and speaking. It doesn't have to be that way since there is an organization dedicated to teaching the art of public speaking in a friendly, supportive and fun environment. That organization is Toastmasters International.

I came to learn about Toastmasters when I was at Verizon a few years ago. I was expecting a career change soon and I thought something like Toastmasters would help in interviewing skills and be a great way to network. I went online to the www.Toastmasters.org site which is searchable by several variables such as location and day of the week for meetings. I did a search and found there was a club that met on Thursday's right in Telecom Park, where I worked. I nervously attended a meeting and was surprised at how a meeting was conducted. It was fast paced but followed a printed agenda that I was given when I arrived. I was too intimidated to speak much at that meeting but agreed to come back in a couple of weeks. It was at this first meeting that I met Jim Anderson, who is an accomplished speaker and Toastmaster of many years. He encouraged me to join and explained the benefits, one of which was that Toastmasters membership looks good on a resume.

So what are the benefits for IEEE members? There are several. It helps you learn to get up in front of people and speak clearly on a topic without fear. You learn impromptu speaking which is handy during a job interview or answering questions during a presentation. You learn how to organize and conduct a meeting and the importance of a meeting agenda. You learn how to research, organize and write a speech on a topic and to present it to an interested audience. You will also learn leadership skills by volunteering for club officer positions and doing projects in the Competent Leadership Manual.

You might be wondering how all this is done at a meeting. After you join a club you will receive a Basic Manual that contains ten speech projects of about five to seven minutes each. Each project focuses on a specific skill and each project builds on the last. For each speech that you give you will be assigned an Evaluator who will listen to your speech at the meeting and afterwards will go before the group and give it as a presentation. This is unique to Toastmasters and will help you to improve and encourage you to continue. After completing the ten projects in the manual you receive a Competent Communicator certificate.

So, if being a better communicator and leader or being able to give better presentations or be confident at job interviews would help in your career, then join a Toastmasters Club near you. You will find that public speaking is not really "worse than death"!



IEEE memberNet Networking

On 14 May, two months into its beta-release, the number of members who have opted-in their memberNet profile surpassed 1,000. Access to IEEE memberNet is an exclusive benefit of IEEE membership, available at no additional cost to IEEE Members.

"We're pleased to have reached the first 1,000," says Joe Lillie, Vice President for the IEEE Member & Geographic Activities Board. "The value of memberNet depends upon member participation, and we're pleased to now offer this new and niche networking platform to our members."

While the basic member profile in memberNet contains every member's name and membership grade, each member can indicate by check mark (opt-in) what additional information they would like to also have appear. These may include technical interests, local Section, or IEEE Society affiliation.

The memberNet directory, and its opt-in management, is accessible from myIEEE. For more information, contact Brian Pratz, Member and Geographic Activities, at b.pratz@ieee.org.

[Log-in to memberNet](#) today to manage your opt-in preferences!



IEEE-USA

Silicon Valley Engineer Testifies before Congress on Need to Retain Talented High-Tech Students and Professionals

WASHINGTON (12 June 2008)-- Congress should make it easier for foreign graduate students and engineers to remain in the United States, Silicon Valley engineer and entrepreneur Lee Colby told a congressional subcommittee at a hearing on Capitol Hill today. Speaking before the House Judiciary Committee's Subcommittee on Immigration, Citizenship, Refugees, Border Security and International Law, Colby testified in support of three permanent immigration reform bills introduced by subcommittee chair, Rep. Zoe Lofgren (D-Calif.). Lofgren's proposals (H.R. 5882, 5921 and 6039), which enjoy bi-partisan support, would:

- 1) Increase the annual number of visas granted to professionals in science, technology, engineering and mathematics (STEM) by exempting from the cap on employment-based (EB) permanent visas foreign students who earn graduate STEM degrees in the United States;
- 2) Eliminate restrictive per-country limits on EB admissions; and
- 3) Authorize the re-issuance of EB visas that went unused because of processing delays.

Exempting U.S.-educated STEM graduate students from permanent EB visa limits would help our nation retain talented individuals who are already here.

Graduates from American schools are among the most sought-after employees in the world," Colby said in written testimony on behalf of IEEE-USA. This is especially true of students who receive master's and Ph.D. degrees in STEM fields. America has already invested in these students' education. The students speak English, have lived here for several years and, to qualify for an employment-based visa, have a job. It is in America's interest and Americans' interest that we allow them to put their talents and education to work here. *"Remember, it is not a question of whether the talented graduates of our schools will get jobs, only of where these jobs will be located. If we force them to leave, the jobs they create will not be in this country, but rather in whatever nation had the foresight to accept them."* Lofgren's bills would give U.S. companies greater access to talented workers from around the world.

"We need to educate more of our own students in these fields, but the United States does not have a monopoly on talent," Colby wrote. *"There are hard working, innovative and smart people all over this planet, many of whom would apply their skills here, if given a chance. Congress needs to give them that chance."*

Colby, who lives in Sunnyvale, Calif., worked for 36 years as an electrical engineer for Hewlett-Packard. Lee Colby and Associates, which he started in 1997, consults on circuit designs for some of the world's leading technology companies. He served as chair of the IEEE's Santa Clara Valley Section in 2005.

"Balanced reforms in the nation's legal permanent and temporary admissions programs are particularly important if U.S. employers and U.S. workers are to compete and succeed in an increasingly knowledge-based, technology-driven global economy," Colby wrote.

Colby's testimony is available at

<http://www.ieeeusa.org/policy/policy/2008/061208.pdf>.



IEEE Energy 2030 Conference

The IEEE Energy 2030 Conference, to be held in Atlanta, Georgia on Nov 17/18 2008, will provide a forum for the exchange of ideas amongst experts on the technology, policy and economic framework required for the creation of a global sustainable energy infrastructure by 2030. The IEEE, as a global technology leader in electrical and related technologies, is positioned to help define what the transformed infrastructure is likely to look like and initiate the discussion on the challenges that need to be overcome to achieve success.

The IEEE Energy 2030 Conference program combines original papers, keynote invited talks from industry leaders, an exhibition for our corporate sponsors, panel sessions that promote open discussion, and media coverage for a highly charged and important topic.

Please review the Call for Papers by visiting:

<http://ewh.ieee.org/conf/energy2030/callforpapers2.pdf>

We hope to see you in Atlanta.

Regards, Prof Deepak Divan

Chair - IEEE Energy 2030 Conference



Brain Teaser Challenge Solution - April 2008

By Butch Shadwell

Last time I discussed a radio telescope talk I did at a local college. In talking about parabolic receiving antennas we asked if "...our dish is 9 feet wide and is one foot deep from the edge to the belly along the center axis, can you calculate the focal length?"

Since we can assume that the apex of this parabola is at the origin, this problem gets very simple. $f = D^2/16x$ where D = diameter of the dish and x = depth of the dish. Making the substitution it is easy to get 5 feet as the distance to the focus. But I bet you already knew that. You might enjoy looking at the general equation for the focus of a parabola and deriving the short version I used above.

Brain Teaser Challenge – May 2008

Star Wars is arguably one of the most important film contributions in the last 50 years. George Lucas' imagination created a whole new lexicon, even a new religion. I am sure that George never imagined the impact his vision of the Force was going to have on the world culture. His spiritual and philosophical language inspired so many people who were looking for meaning in their lives. Folks lost sight of the fact that it was just a movie.

Many sci-fi nerds are always trying to make their favorite movie gadget real. Of course most are impossible but why should that stop them from trying. Of course most futuristic movies show people firing directed energy type weapons at each other. I was once in a discussion among some physicists about a laser weapon. There was some debate about whether it should be a high energy beam or a high power one in order to successfully shoot down a missile in flight. I'd like to hear what you think. This discussion got a little tricky since the participants included EEs.

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.



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

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	1EXCOM Meeting @ TECO Hall	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2

Institute of Electrical and Electronics Engineers, Inc.
 Florida West Coast Section
 3133 W. Paris
 Tampa, Florida 33614



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