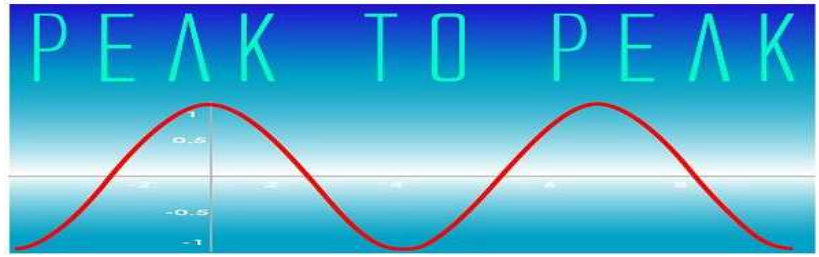




NOVEMBER 2006

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THE IEEE NEW HAMPSHIRE SECTION

Chairman's Thoughts

By Tom Perkins

Are You a Dreamer?

When I was in my sophomore year of high school the Sputnik satellite was launched by the USSR. It went beep, beep, beep as it circled the globe. We listened to it's 20 MHz signal with an old World War II receiver in amazement or amusement, fearing what could happen if we (the United States) didn't get our act together. We watched this man-made object pass through the clear October sky, somehow knowing that this was a big deal. I must admit that it did not occur to me at that time that 40 years later we would be able to receive 100's of TV and audio channels (with digitized signals) from satellites with a small dish barely longer than two footballs (no, not football fields).

We would converse on the internet via satellite, sometimes using a wireless hub with a laptop computer (what's a laptop computer?). We would be able to know the precise coordinates of where we are, almost anywhere on our planet, using a small accessory built into a cell phone or other handheld device. We would be able to find an address, anywhere, and zoom in on photographs of distant or nearby places. A good deal of this is now possible because of you, the electrical engineer.

Continued on Page 2

From the Editor

GET INVOLVED NOW!

By Jim Anderson

Last month we talked about getting involved in Pre-University Education and this month I would like to talk briefly about becoming involved in the political process. At the October 12th ExCom meeting a motion was made and approved to host a series of events with Presidential candidates between November 2006 and November 2007. This will give IEEE members access to Presidential candidates and to raise awareness of our concerns and our profession with the individual who ultimately becomes President. Jim Isaak has volunteered to spearhead this activity.

Jim Isaak's article "Why Doesn't Congress Listen to Us?" appears on Page 4.

The bottom line is, GET INVOLVED NOW!

New Guest Columnist

This month we are introducing a new column "Brain Teaser Challenge" by Butch Shadwell. Below is a brief introduction to our new columnist. His column appears on Page 5.

Continued on Page 9

Chairman's Thoughts (Cont'd)

With the emergence of nanotechnology and the coalescing of complimentary scientific advances, I guess (or dream) that well before the middle of this new century it will be possible to download physical objects that can be manufactured right before our eyes in the comfort of our living room or home office.

I guess that the first stuff will be of a polymer shape or string nature, but repair parts and even electronic parts might quickly follow. Of course you will have to have the correct cartridges available for your 3-D computer accessory.

Back to reality; I hope to see many of you at our November 8th Annual Banquet at the Yard restaurant. We have several very exciting new endeavors in the works for NH IEEE members. You'll hear more in this edition of PEAK TO PEAK as well as at the dinner.

Remember to vote on the 7th. Remember our veterans and their huge sacrifices for our great nation on the 11th. Finally, I wish you all a great and joyous Thanksgiving.

If you have any topics that you think should be discussed at this month's ExCom meeting on November 9, or if you want to discuss any other topic, please feel free to contact me at tomperkins@ieee.org, I would enjoy hearing from you.

Call for Nominations 2007 Section Officers

Nominations for the following 2007 Section Officers are being sought:

- ✂ Chair
- ✂ Vice-Chair
- ✂ Treasurer
- ✂ Secretary

If you are a full member, or graduate student member, of the section and are willing to be considered for one of the above positions please contact the Chair of the Nominating Committee, Jim Isaak, at ieee2006@jimisaak.com as soon as possible.

Congratulations To Senior Member Yang Li

We have been notified by IEEE Headquarters that Yang Li (S'00, M'03, SM'06) has been elevated to a Senior Member. He was born Jiamusi, China. He received the B.S and Ph.D degrees in electronic engineering from Tsinghua University, Beijing, in 1996 and 2001, respectively.

He is on the design staff at Peregrine Semiconductor Corp, Nashua, NH, where he has worked on RF/Analog design for wireless applications. Before joining Peregrine, he was Principal RF Engineer with Millennial Net, Burlington, MA, where he was involved with low power wireless sensor network development. He has authored or coauthored over 20 papers and holds 5 patents. His interests include advanced RF architecture, RF CMOS front end design, planar antenna co-design, RFID and emerging short-range wireless communication technologies.

Chapter News Computer Society

By Jim Isaak

For the 2006 - 2007 academic year, the chapter is scheduling its IT Seminar Series on Thursdays from 7:00 to 9:00 PM in the Walker Auditorium of Robert Frost Hall at SNHU. On November 9th Gary Couture VP of Fidelity eBusiness will discuss eBusiness. See: <http://www.snhu.edu/209.asp> for directions.

For access to previous presentations go to: http://acadweb.snhu.edu/Isaak_James/ITseminars/index.htm . If you have particular topics you would like to see covered, or speakers to suggest, please send a note to: ITSeminar2007@JimIsaak.com

Engineering in Medicine and Biology Society

If you have any suggestions for meeting topics or speakers; or if you would like to become active in the Chapter please contact me at: wjsmith@cisunix.unh.edu

Microwave Theory and Techniques Society

If you have any suggestions for meeting topics or speakers; or if you would like to become more active in the Chapter, please feel free to contact me, Tom Perkins, at tomperkins@ieee.org. I would enjoy hearing from you.

Power Electronics Society

If you have any suggestions for meeting topics or speakers; or if you would like to become active in the Chapter please contact Chuck Button at chuckbutton@ieee.org

Power Engineering Society

By Paul Krell

Introduction to IEEE C57.13.6 Standard for High Accuracy Instrument Transformers

Speaker: Christopher W. Ten Haagen

Founding Chair, IEEE PES WG on Instrument Transformers for use with Electronic Meters and Relays

Date: Tuesday, November 14, 2006

Time: 6:30 pm - 8:00 pm

Location: Unitil Service Corporation

Abstract: Electronic meters and relays offer much greater accuracy and dynamic range than the induction type instruments they replace, as well as much lower burdens to the instrument transformers that drive them. As a result, more accurate instrument transformers are needed to complement improved meter accuracy. Mr. Ten Haagen, the founding chair of the *IEEE Working Group on Instrument Transformers for use with Electronic Meters and Relays*, will provide a background on electric power metering circuits, the consideration of instrument transformer burdens, and the importance of transformer-rated accuracy on high billing accounts. He will introduce the newly approved IEEE C57.13.6 *Standard for High Accuracy Instrument Transformers*, explain the new test procedures created to assure reliable revenue billing, and review the opportunities of improved dynamic range as it applies to specifying and sizing current transformers for common applications.

Speaker: Mr. Ten Haagen is a veteran of more than 20 years in metering and instrument transformer product development, transformer-rated metering applications, and most recently the Product Manager

in the Optical Instrument Transformer group at GE Energy in Somersworth, NH.

Agenda:

6:30 PM Social

7:00 PM Presentation (approx. one hour)

A light dinner fare of assorted sandwiches, beverages and desserts will be provided.

RSVP Requested: This program is open to all interested parties, and there is no attendance fee. However, RSVPs are requested. Please contact Rose Vaccaro at Unitil Service Corp. at Vaccaro@unitil.com or (603) 773-6404 by Monday, Nov. 13 if you plan to attend. Include your name and the names of your guests, contact information, and if you have IEEE membership. Please don't delay, as seating is limited.

Unitil Service Corporation
6 Liberty Lane West
Hampton, NH 03842
603-772-0775

From Rte. 95

Take New Hampshire Exit 2. Immediately after the toll both (50 cents) bear left onto Rte. 101 East. Cross back over Rte. 95, then take the first right (Exit 13), following signs for Rte. 27/Liberty Lane. Take the first left to the Liberty Lane entrance. Stay right on the access road until it crosses under Rte. 95, then turn left. Continue straight 1/2 mile to Unitil on the right.

From Rte. 101 East

Cross over Rte. 95, then take the first right (Exit 13), following the signs for Rte. 27/Liberty Lane. Take the first left to the Liberty Lane entrance. Stay right on the access road until it crosses under Rte. 95, then turn left. Continue straight 1/2 mile to Unitil on the right.

From Rte. 1 South (North of Hampton, NH)

Turn right at Lamie's Inn in Hampton, and follow Rte. 27 West, 1.5 miles. Turn left at the sign for Liberty Lane/Rte. 101 East. Proceed 2/10 mile to the Liberty Lane Entrance. Take the first left to the Liberty Lane entrance. Stay right on the access road until it crosses under Rte. 95, then turn left. Continue straight 1/2 mile to Unitil on the right.

From Rte. 1 North (south of Hampton, NH)

Take Rte. 101, West, 1.8 miles to the exit for Rte. 27 (Exit 13). At the end of the off ramp, turn left onto Rte. 27 West. Proceed 2/10 mile and turn left at the sign for Liberty Lane entrance. Stay right on the ac-

cess road until it crosses under Rte. 95, then turn left. Continue straight 1/2 mile to Unitil on the right.

If you have any suggestions for meeting topics or speakers; or if you would like to become active in the Chapter please contact Paul Krell at krell@unitil.com

Product Safety Engineering Society (CNEC)

By Steve Brody

The November meeting of the joint CNEC PSES and Northeast Product Safety Society will be devoted to the latter's Annual Vendor Night. Instead of a speaker Vendor's Night provides an opportunity for our members to talk to representatives and see products and services from 3rd party test and approval agencies, test labs, consultants and suppliers of approved components, materials and test equipment. There will be as many as 50 Booths featuring the latest in EMC and Safety Compliance Equipment and Services.

Previous year participants have included Amplifier Research, ARA Technologies, Associated Research, Boston IEEE-EMC Society, Boston IEEE Product Safety Tech Society, CSA International, Compliance Management Group, Conformity, Connors, Conti-Younger/Corcom, Curtis Industries, Curtis-Straus, Db Instruments, Earthtek, ETS-Lindgren, Fair-Rite, FM Approvals, Greenlaw, Hazard Communication, Hubbel Haefely EMC, HV Technologies, IFI, Intertek ETL Entela Testing Services, Keytek, Mantec, National Technical Systems, Parker Chomerics, Panashield, Quadtech, Retlif Testing Labs, Rohde & Schwarz, San O, Scientific Devices, Schaffner EMC, Schlegel, Spectro, Sypris, TUV Rheinland of NA, Underwriters Laboratories, Wurth Electronics, and more.

There will be door prizes and appetizers.

Vendors Night will be held on Wednesday, November 15, at the Marlborough Holiday Inn, Marlborough, MA (Exit 24A off I-495) and will be open from 5 PM to 9:30 PM. There is no charge for admission. For additional information go to www.nepss.org or email Bill Graham (Bill@GrahamWeb.com) or Dave Wheeler (Intersel@aol.com).

If you have any suggestions for meeting topics or speakers please contact Paul Smith, our meeting scheduler, at paulsmith1@cs.com

Why Doesn't Congress Listen to Us?

By Jim Isaak

To many engineers (and in fact, to many Americans) the idea of contacting an elected official is similar to the idea of cleaning their gutters. In theory they know it is a good idea, but in practice we would prefer not to do it. This is unfortunate because engineers have a unique perspective and approach to problem solving that politicians lack.

There are currently no more than a dozen or so legislators in Washington with any scientific or engineering background and most of these are doctors. The majority of lawmakers are lawyers, although there are fewer of them than there have been in the past. While many of these lawyers are very smart and hard-working, a law degree simply does not prepare a student to solve all of the world's problems. A great many of the policy questions facing Congress today require an understanding of science and engineering or at the very least would benefit from the problem-solving skills engineering teaches.

For example, Congress has spent a good amount of time this year debating innovation. Every member of Congress wants the U.S. to be innovative. Fewer have a good grasp of what "innovation" really means and fewer still have any idea how innovation happens. But engineers do. Engineers are innovators. Our job is to create new things and solve problems that have not been solved before. Engineers don't just think outside the box, our reason for being is to figure out how to get outside boxes.

As Congress debates innovation, wouldn't it be nice if they spoke with people who were actually doing the innovating?

The problem is, being a member of Congress is like standing in the middle of Gillette Stadium on a Sunday in November. All the seats are filled with voters who want you to do something. Many of these people are shouting at you. Some are shouting in unison, some individually. And then way up at the top of the stadium is a bunch of engineers, waiting patiently to be called on. Your job, as a Legislator, is to try to decide what the crowd wants you to do. You don't have time to listen to all the people who are shouting. You certainly don't have time to even notice the few people waiting quietly in the back.

It is about time engineers take the initiative to, politely and thoughtfully, start shouting too. Congress would do a better job if we did.



Brain Teaser Challenge

By Butch Shadwell

Every year my family asks me for a list of suggested Christmas gifts. For some reason they don't feel they can shop for an EE like a regular person. Besides the fact that my hat size might be deceptively large, I think I am easy to shop for.

So I am working on my recommended gift list. I have to think of things in the right price range, and that don't have many variations so that they don't get the wrong thing. Certainly, making this list is harder than just buying the stuff myself. Hey, that gives me an idea. What if I just buy everything I want, and then I can offer shares in the value of the gifts for sale to family and friends. This is perfect. Everyone can look at all of the cool stuff that I am going to get, that they never would have thought of, or would never have spent that much on me, and then simply buy a share of their favorite item. Then they can feel so proud that they picked out the perfect portable digital storage oscilloscope, exactly what I wanted. I wonder if I can patent this process? Finally, for Christmas they can send me a card with the share certificate in it showing the amount they have contributed to my happy Christmas morning (Read: how much they love me).

On Christmas morning I am looking forward to getting a new pen with a roller ball tip that is 1 mm in diameter. I can adjust the thickness of the line it draws by how hard I push down on the tip. Assuming the paper wraps around the tip smoothly as the tip pushes into it, how wide is the line if I press down 0.1 mm? How wide is it at 0.2 mm depth? I hope the paper doesn't tear.

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 answer will appear in next month's newsletter and the names of correct respondents may be mentioned in the solution column.

FIRST LEGO League Nano Quest

By Bob Lee

On September 15th FIRST officially released the 2006 [FIRST LEGO League](#) (FLL) International Challenge, starting the clock ticking for the New Hampshire qualifying tournaments on the second or third Saturday in November. This year's challenge is [Nano Quest](#). The robot challenge and research project all revolve around nanotechnology.

The robotic competition is the big draw of FLL. Each team builds a [LEGO Mindstorm](#) robot and programs it to leave base and autonomously accomplish various missions. The [missions](#) this year are: Individual Atom Manipulation, Smell, Stain-Resistant Fabric, Atomic Force Microscope, Self-Assembly, Smart Medicine, Nanotube Strength, Molecular Motor and Space Elevator. Teams have 2:30 minutes to complete as many missions as they can. The score is calculated on the state of the field at the end of the round.

The second major component of an FLL competition is the [research project](#). Teams are encouraged to interview scientists involved with nanotechnology and find out what they are researching and why. After they have studied nanotechnology they pick a current or potential application of nanotechnology and design a solution or improvement. To get full credit for their research they are required to present their solution to others. At the competition they will have 5-minutes to present their findings in an interesting format.



Sammi and Naomi research nanotechnology

I am coaching two teams this year with the help of several parent volunteers. The boys' team has seven members

from 4th to 7th grade. There are six girls from 4th to 6th grade on the girls' team. The majority of the kids on both teams are in 4th or 5th grade. The teams meet once a week at my house for 2:30 hours. As our tournament approaches, we will add extra practices for that last push to get everything ready for the tournament.

The first part of each meeting the kids meet as a team to go over homework and make team decisions (e.g. team name, t-shirt design, research topic). After that they split up into groups of two or three and rotate through stations to work on their research, run through a programming tutorial, build an attachment for the robot, program a mission, and design a t-shirt. Snack time is an important part of the weekly ritual. When it looks like they need to release some energy, we send them out to run a few laps around the house or play tag for a while.

The teams attended two nanotechnology presentations. Anthony Ku, a researcher at GE's [Global Research Center](#), gave an overview of nanotechnology, GE's nanotechnology research and answered questions via a teleconference. They also attended a live presentation at UNH by associate professor Glen Miller of the [UNH Nano Group](#). After hearing the two presentations and investigating nanotechnology on their own for several weeks, the girls' team is devising a way to dissolve blood clots with few side effects using nanotechnology. The boys are using nanotechnology to design a better, lighter, heat resistant, breathable material for firefighters' suits.



Nick, Ryan and Sam construct an attachment

Each team has built a robot and programmed it to accomplish several missions. For example, the boys have completed the Nanotube Strength mission. They programmed their robot to leave base, push a LEGO dump truck onto a lift frame (20 points), back up, activate the lift by pushing a lever so that the lift frame and truck are completely suspended by a carbon nanotube cable (20 points) and return to base. The girls' team has completed the Smart Medicine mission. The girls load a C60 Buckeyball containing medicine for a bone disease (a.k.a. a small, orange LEGO ball) onto their robot, navigate out to the bone using dead reckoning, drop the Buckyball into a channel on the bone to target the bone disease (50 points) and return to base.

Each week they learn about science and engineering while having fun. How many revolutions of the wheels will it take to reach the truck? How many degrees of rotation will it take to lift the arm above the truck? How can I make the mission more repeatable? What nanomaterials are heat resistant? What medicines do doctors use now to dissolve blood clots? What are the problems with current blood clot treatments? How can nano engineered medicines improve this? How do I design a release mechanism for the Buckeyball with enough friction to keep it in place until the robot reaches the bone, but loose enough to tip when it pushes up against the bone? Each week they tackle

new challenges and find ways to overcome them as a team.



Team 1559: "Genius in Disguise" with their robot at the practice table.



Team 1561: "Robotic Bricks" with their robot at the practice table.

Bob Lee is a firmware engineer for GE Energy in Somersworth, NH, where he designs firmware for electricity meters. Bob graduated cum laude from Dartmouth College in 1982 with a BA in Computer Science. He has been a member of IEEE Computer Society since 1982.

Teacher In Service Program

By Don Sherwood

We had a very positive meeting with Dr. Althea Sheaff, Executive Director of Curriculum and Instruction for the Nashua School System. Tom Perkins and I met with her on Oct. 5th at the Nashua administration building.

Following a brief introduction to the IEEE and the TISP, Dr. Sheaff indicated that their REACH program is an area that seemed to provide a good fit between what we offered and the school's needs. REACH is an accelerated program for gifted students. She was particularly interested in the rotational equilibrium activity. It can be presented using various degrees of mathematical complexity, which she thought would challenge the students.

Dr. Sheaff suggested that we have a follow up meeting with a few of the REACH teachers prior to scheduling a full program. This would allow us to pitch the program directly to them and to get their feedback on how best to customize it to suit their particular



needs. They generally meet on Wednesday morning in one of the high schools. Dr. Sheaff agreed to schedule the meeting and get back to us once a date is set.

At the end of the meeting we provided her with a binder containing a printout of the fifteen activities currently on the TISP website. All looked forward to the next meeting.

If you are interested in the TISP and would like to volunteer, please contact Don Sherwood at donsherwood@ieee.org

GOLD MEMBERS - We Want You!

By Jennifer Ng



GOLD (Graduates Of the Last Decade) members are IEEE Full Members or Graduate Student Members who have earned their first professional degree in the past ten years.

What is GOLD?

The GOLD program was introduced in 1996 to facilitate the transition from Student Member to Full Member. The program was designed to provide recent graduates with professional and personal development opportunities as well as networking with their peers and with other professionals in their field. More information can be found on the [GOLD website](#).

How much does it cost?

Nothing. The GOLD program is free and you are automatically a member since you graduated within the last ten years.

How can you get involved?

Become a GOLD volunteer and participate in or organize GOLD events!! The GOLD program has available funding for activities.

When can you hear more about this?

The Boston GOLD Chair, May Wan, the Boston GOLD Vice-Chair, Kheng Swee Goh, and the Region 1 GOLD Coordinator, Gim Soon Wan will attend our Annual Banquet on November 8th, so you will have ample opportunities to ask them about typical GOLD activities and goals. Please email NHIEEE@aol.com to register.

Wanted - Articles on "How I became an engineer."

Was it because you were always interested in taking things apart and putting them back together (with "extra pieces")? Was it by chance? Was it because you come from generations of engineers and this was your destiny? What was it? Please send me, Jennifer Ng, (jng@ieee.org) your story on how you became interested in Engineering and chose this profession. Every month, we will try to feature an article in the newsletter.

Wanted - Fellow and Senior Members

If you are an IEEE Fellow or a Senior Grade Member, and you are willing to act as a reference for members aspiring to be upgraded to Senior Member status, please contact Chuck Button at chuckbutton@ieee.org

Call for Nominations for NH Engineering Societies Awards

We are pleased to announce the call for nominations for the New Hampshire Engineering Societies' annual Engineer of the Year and Young Engineer of the Year Awards, to be presented at the 2007 Engineers' Week Awards Banquet (February 22, 2007).

The Engineer of the Year and Young Engineer of the Year Awards are the highest awards given to individuals by the New Hampshire Engineering societies. Each award is presented to an engineer who has made outstanding contributions to the engineering profession, the public welfare, and humankind.

These awards provide the New Hampshire engineering community the opportunity to recognize outstanding individuals worthy of these honors.

Dean Bacon will represent the IEEE New Hampshire Section on the selection jury. If you know of someone worthy of one of these awards, please contact Dean at: bacondl@nu.com no later than December 8, 2006.

GIRL TALK

2006 IEEE MPAC-WIE Conference (Region 2)

By Carole Carey

IEEE Region 2 (Baltimore, Philadelphia, and Southern New Jersey Sections) and WIE (Women in Engineering) affinity groups jointly held a member professional awareness conference (MPAC) on October 14 and 15, 2006 in Baltimore, Maryland.

IEEE-USA sponsored MPACs are a forum for communication of members of IEEE, students and friends to discuss and share views on their professional needs and interests. IEEE WIE affinity groups are IEEE men and women members dedicated to important issues for women engineers.

The conference theme, "Meeting the Challenges of the 21st Century Engineer" addressed interesting topics such as, diversity, starting a small business and a workshop on innovative and practical steps to completing your master's thesis or dissertation. The first keynote speaker, IEEE VP Technical Activities Board, Celia Desmond from Canada informed the audience about the necessity of developing skills in today's competitive telecommunication industry. National WIE Committee Chair, Mary Ellen Randall from North Carolina, reported the results of a recent study on gender influences in engineering. Second keynote speaker, Dr. Ruth David, an advisor on Homeland Security, discussed the need for a systems approach in securing the nation during the Saturday night banquet.



Carole Carey (left) and Jennifer Ng at the WIE R2 Conference

The two-day conference is the first-of-a-kind collaborative IEEE MPAC-WIE regional event. It was well attended by many who have come from other areas

outside the Washington-Baltimore corridor, like Pennsylvania, New Jersey, New York and Ohio. It also attracted members from regions outside of Region 2 such as New Hampshire, Tennessee, and as far as California. Over 30 percent of the attendees were students. The event has also inspired other members and students to form new WIE affinity groups in their areas.

NOTE: Carole C. Carey is the WIE Region 2 Coordinator and has recently been appointed to be the IEEE-USA liaison to the WIE Committee. She can be reached at c.carey@ieee.org

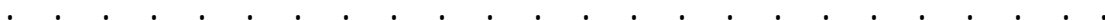


WIE NH Affinity Group - Updates

By Jennifer Ng

Recent updates on forming the New Hampshire WIE (Women In Engineering) Affinity Group:

- ✂ A website for WIE NH is now available at http://www.ewh.ieee.org/r1/new_hampshire/wie/ or <http://www.ieee.org/go/wie> (re-directed link)
- ✂ There is an nhwie-excom@ieee.org mailing list setup to email all the IEEE NH WIE Officers eventually and where you can send your comments/ideas.
- ✂ The following IEEE members met over the past weeks to sign the WIE NH Affinity group petition:
 - Jim Anderson
 - Celine Bilodeau
 - Liberty Gunter
 - Kari Karwedsky
 - Jennifer Ng
 - Jennifer Schelly
- ✂ The petition was sent to IEEE HQ on November 1, 2006. For more details about Affinity Groups, go to http://www.ieee.org/geo_activities/rab/scs



From the Editor (Cont'd)

Continued from Page 1

Next Steps:

- ✎ Appoint WIE NH Officers (Chair, Vice-Chair, etc.)
- ✎ Apply for startup funding from HQ
- ✎ Plan activities for next year

IEEE Women in Engineering (WIE) is dedicated to important issues for Women Engineers. Affinity groups provide the opportunity for members to network at a local level. All members are encouraged to join and participate in their local group activities to promote growth within the WIE.

Below are some activities that WIE NH intends to support:

- ✎ Meetings featuring a variety of technical and/or professional development speakers at area corporations to enhance the career advancement of women in the profession.
- ✎ Networking events and receptions
- ✎ Regional and National Professional Development Conferences.
- ✎ Workshops to teach young women about engineering as Facilitate the development of programs and activities that promote the entry into and retention of women in engineering programs.
- ✎ Mentoring about careers in engineering.

If you are interested in supporting WIE activities (or joining WIE), please contact me, Jennifer Ng, at jng@ieee.org or nhwie-excom@ieee.org

Butch Shadwell is a senior member of the IEEE and as an active volunteer he has spoken to many sections and student branches around Region 3 and Jamaica. For the last fifteen years he has been authoring the Brain Teaser Challenge, a monthly humorous column with a technical challenge inside. It is published in a number of IEEE newsletters and magazines worldwide. Readers are encouraged to send in their answers.

Butch Shadwell has been working in electronics since he was 12 years old. Starting with vacuum tube technology, he has designed systems through the evolution of transistors, SSI, MSI, and LSI. In his extraordinary career he has worked with almost every kind of technology in the electronics industry. Including applied R&D in nuclear medicine, opto-electronics, electronic warfare, robotics, industrial automation, machine vision, artificial intelligence, digital television, special sensors and embedded microcontrollers.

He has conducted sponsored research at Carnegie-Mellon Robotics Institute and received over \$1.5 million in grants for his work in machine vision. For the past ten years he has had a successful consulting practice developing new technologies for over a dozen companies. His clients include multi-billion dollar companies; more data is available at <http://www.shadtechserv.com/>

Other Meetings of Interest

Please let me know if you are aware of other meetings that might be of interest to our members. We each belong to different societies, read different publications, work in different industries, and surf different web sites. So if you see any interesting meetings or conferences please send me the notice or the URL. To keep the list manageable I have limited it to the next six months.

Jim Anderson james-w-anderson@ieee.org

November 6, 2006
IEEE Upstate NY Workshop on Communications and Networks '06
Golisano Auditorium, RIT, Rochester, NY
<http://www.ecs.syr.edu/research/snw/>

November 8 - 10, 2006
8th International Symposium on System and Information Security
Sao Jose dos Campos, Sao Paulo, Brazil
<http://www.ssi.org.br/english/>

27 November 27 - December 1, 2006
IEEE GLOBECOM 2006 Conference & Communications Expo
San Francisco, California USA
<http://www.ieee-globecom.org/2006>

December 4 - 6, 2006
LITHIUM MOBILE POWER 2006
Miami Beach Resort & Spa
<http://www.knowledgefoundation.com/>

December 4 - 14, 2006
2nd International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering (CISSE 2006)
This international conference will be held entirely online.
<http://www.cisse2006online.org>

December 6 - 8, 2006
2nd Annual Fuel Cells Durability & Performance Conference
Miami Beach, FL
<http://www.knowledgefoundation.com/>

December 18 - 20, 2006
IEEE Conference on Electric and Hybrid Vehicles (2006ICEHV)
Hotel Le Meridien, R.B.M. Road, Pune-411 001, India
e-mail: ypnerkar@yahoo.com

March 7 - 9, 2007
9th Annual International Conference - SMALL FUEL CELLS for Portable Applications
<http://www.knowledgefoundation.com/>

March 13 - 16, 2007
Power Systems Conference
Advanced Metering, Protection, Control, Communication, and Distributed Resources
Madren Center, Clemson, University, South Carolina
<http://www.ces.clemson.edu/powsys2007/>

March 26 - 30, 2007
Fourth High-Performance Grid Computing Workshop in conjunction with International Parallel and Distributed Processing Symposium - IPDPS 2007
Long Beach, California
<http://www.cs.unb.ca/profs/aubanel/hpgc/>

April 4-5, 2007
Magnetics 2007
Chicago, IL - Lincolnshire Marriott Resort
http://www.magneticsmagazine.com/mag_conf_index.htm

April 16 - 20, 2007
IEEE 23rd International Conference on Data Engineering (ICDE 2007)
The Marmara Hotel, Istanbul, Turkey
<http://www.icde2007.org>

April 17 - 20, 2007
2007 IEEE Radar Conference
Westin Hotel, Waltham, MA
<http://www.radar2007.org/>

Questions & Answers

Q: Who are the NH Executive Committee members?

A: The list of all the members and their contact information is found on the section website at http://www.ewh.ieee.org/r1/new_hampshire/Officers.html

Q: Who do I contact about suggestions for the newsletter?

A: The Editor, Jim Anderson can be reached at james-w-anderson@ieee.org or Jennifer Ng, the co-editor, can be reached at jng@ieee.org

Q: How can I be removed from the mailing list or update my email address for section news?

A: Send email to the NH Section Administrator, Donna Davis, at NHIEEE@aol.com

Q: How do I get elevated to IEEE Senior Member Grade?

A: Please visit the IEEE Senior Member website at <http://www.ieee.org/organizations/rab/md/smprogram.html>. The NH IEEE Section can support your application and you will need two additional Senior or Fellow grade members as references. Please contact Chuck Button (NH Section Secretary) at chuckbutton@ieee.org for more details.

Q: How do I start a new society chapter?

A: Please refer to this site for details on eligibility and requirements: <http://www.ieee.org/portals/pages/tab/cha/newchap.html>

Q: Why can't I read the newsletter on my web browser?

A: Try downloading the latest free version of Adobe Reader at http://www.adobe.com/go/gntray_dl_get_reader

Q: Why doesn't the URL

http://www.ieee.org/nh_section work?

A: At the present time the URL is case sensitive and you must use http://www.ieee.org/NH_Section. We hope to have this corrected by IEEE shortly.

Q: Why did the fonts change in the newsletter?

A: One of our Life Members, Jim Macartney, informed us of a problem. It seems that the font we picked previously, Kartika, was very uncommon and Adobe did some real strange things when it tried to pick an alternate font. We think that we have solved the problem by using a new font, Trebuchet MS, which is one of Microsoft's core webpage fonts. We hope that doesn't cause Mac users any problems.

