

pIEEEdmont Potential

A publication of the IEEE Piedmont Section - January 2006 Section Web page: <http://ewh.ieee.org/r3/piedmont/> Council Web page: http://www.ieee.org/sc_council Today's Engineer: <http://www.todaysengineer.org>

A MESSAGE FROM THE CHAIRMAN

Rob Scruggs

Happy New Year! It is hard to believe that 2006 is here already. I would like to thank all of you who gave me your vote of confidence last November to return for another term as your 2006 IEEE Piedmont Section Chairman. Also, please support Jerry Clark in his new role as Vice Chair and our new Secretary/Treasurer, Louis Hapeshis. I look forward to working with them this year, and we will be making an effort to hold more frequent, interesting, and informative meetings throughout 2006.

This year, we would like to have our members become more involved with mentoring activities. In this effort, we will be continuing our support of local First Robotics teams. On January 26th we will hold our annual student paper competition, which offers a great opportunity for student-mentor type interaction.

Next month, we will have a joint meeting with Clemson University engineering students to allow them the opportunity to meet and talk with practicing engineers about work after college. Please try to attend. Who knows, you may discover a talented future employee.

Also, on the horizon, we have an Arc Flash presentation, as well as, a presentation on Seismic Principles entitled "What does Electrical Engineering and Earthquake Engineering Have in Common?" both of which should be of interest to many of our members.

If you have any topics that you would like to know more about, or if you would like to make a presentation at a future meeting, please don't hesitate to contact me at r.scruggs@ieee.org, or one of the other officers.

Next Meeting

Annual Student Competition

Mark Stokes

Thursday, January 26, 2006

As usual, we're starting off our New Year with our annual Student Paper Competition. Each year our section sponsors a competition between the students in our section. Usually, the students come from Clemson; however, this is not part of the rules. It can be any student member of the Piedmont Section of the IEEE in an EE type of undergraduate program (i.e. Computer Engineering is ok also). We devote one of our meetings to this competition where the students are to present their paper to the people present. There will be a few members who will volunteer as judges, which will make the final call on placement. There are cash prizes awarded to the first, second, and third placeholders. The students are judged on more than technical content. The categories (weight) are:

1. Speaking Techniques (25)
2. Style (15)
3. Intro and Conclusion (20)
4. Technical Presentation (30)
5. Discussion (10)

The top placeholder is invited to take their presentation to the next level of competition where they will compete against others from around the region.

This is a great chance for the students to get a feel for speaking about their profession in front of a group of their peers without the pressure of a job loss or other pressure and for members of the section to get the scoop on new and emerging technologies. We encourage discussion on how the speaker has done and can potentially improve on his/her speaking skills. Please make a point to come out to support our young IEEE professionals.

Continued on back of newsletter.

Engineers Week 2006 Leaders

The Society of Women Engineers and Northrop Grumman Corporation will chair Engineers Week 2006, February 19-25. You'll hear more about plans for 2006 very soon. Request a free planning kit through the Product Catalog at www.eweek.org.

Do You Know a New Face of Engineering?

In an effort to honor the most outstanding among its youngest members, the engineering community has announced an international call for nominees for New Faces of Engineering 2006. Now in its fourth year, the recognition program is a centerpiece of Engineers Week.

Each year, more than a dozen women and men 30 years of age and younger are selected as New Faces from hundreds of nominees, each submitted to the Engineers Week Committee by one of its sponsoring societies or government agencies. Each organization will have its own nomination deadline. Find the list of organizations that will nominate individuals, and the appropriate staff contacts, on <http://eweek.org>. The top nominees will be featured in a full-page ad in USA Today, but there's more to being named one the year's New Faces than just the honor. Each engineer will also serve as an ambassador, literally representing the very face of this dynamic, essential profession to the media, the general public, and their peers of all ages.

They will also be part of the Engineers Week goal to reach out to young people, including college engineering students and high school students considering career choices. Profiles of each New Face of 2006 will be posted at the National Engineers Week web site, the Engineers Week web site for middle school students, and in publications and web sites of the nominating societies and organizations.

By highlighting the accomplishments of these young engineers, the program's organizers hope to shine a light on what is sometimes called the "stealth profession."

Any engineer, from any discipline, 30 years of age or younger with a degree in engineering from a recognized U.S. college or university or equivalent international educational institution, is eligible.

Nominees must be members of a sponsoring Engineers Week partner. See nomination form for complete details at <http://eweek.org>.

Future Cities in the Works

As common as crabgrass but not nearly so easy to eradicate, small abandoned strip malls are a vexing social problem for engineers and city planners. For tens of thousands of middle school students, however, it's just another challenge to conquer in the 2006 National Engineers Week Future City Competition. Students and engineers are

already working on their projects. Future City competitions will be held in 37 regions in January 2006.

Introduce a Girl to Engineering

Get ready for Introduce a Girl to Engineering Day 2006, February 23. Visit the "Girl Day" section of <http://eweek.org> for planning ideas. Request a free planning kit through the Product Catalog. Girl Day planning kits will be available in late October but may be ordered online at any time.

Ask an Engineer

Produced by the Sciencenter in Ithaca, New York, this fast-paced introduction to the wonders of modern engineering follows several youngsters as they explore subway systems, electric power plants, and even an aquarium. The visits include a diverse selection of engineers explaining how things work. Recommended for middle school students. Seven minutes, DVD only, available from the E-week online Product Catalog

Even the Busiest Engineers Find Time To Mentor Future City Students
Like most engineers, Kate Hamilton is plenty busy. But, when asked to mentor middle school students in the National Engineers Week Future City Competition, Hamilton, a mechanical engineer with her own firm in East Longmeadow, Massachusetts, who also runs a farm, works as a computer consultant, is an avid rock climber, and a single mother with an eight-year-old daughter, was only too happy to volunteer.

Engineers have a lot on their plates, yet hundreds find the time to mentor Future City students each year. In fact, it seems that the busier the engineer, the more likely they'll get involved with the competition.

A good case in point is Hamilton, owner and operator of Busy Bee Industries, a thriving business farm selling honey, hand creams, and other products from the hive. She is also the inventor and marketer of the "Sticky Machine," a standalone unit that cultivates bee populations. An independent businesswoman with a crowded professional and personal schedule, Hamilton says the program offered too many positive paybacks for her not to help out.

Hamilton says that young people are surprisingly receptive to the rigors of engineering. "Kids respond well when you give them something fascinating," she says. "I love the feedback I get."

For more information on how to participate in a Future City program near you browse to: http://www.futurecity.org/contact_region_state.asp.

Introduce a Kid to Engineering

"Engineers are Everywhere" is a new coloring book produced by the Society of Women Engineers-Detroit. The coloring book exposes very young children to engineering in a fun and visible manner. It depicts women and men in a variety of engineering occupations and working together as a team. Order forms can be found on <http://www.swe.org/SWE/RegionH/Detroit/students.htm> in the SWE Merchandise section. Inquiries should be sent to jennifer.morikawa@swe.org.

IEEE-USA President's Column: Priority Issues for Organization Greg Hill, ECM, IEEE-USA As he begins 2006 as IEEE-USA President, Dr. Ralph W. Wyndrum Jr. translates IEEE-USA's mission into four primary areas of focus: ensuring that U.S. technology policy enhances America's future and protects American workers; developing new tools and improving our career resources for members; supporting and publicizing valuable continuous education opportunities for U.S. IEEE members; and promoting fields of interest of the IEEE needed by the next generation of technical professionals. Read the IEEE-USA President's first column at:

<http://www.ieeeusa.org/communications/presidentscolumn/Wyndrum/jan06.html>

2006 IEEE Sarnoff Symposium

The annual IEEE Sarnoff Symposium offers the best tutorial, research, and industry-oriented technical content on wireless networks, communications systems, network security, Ultra-wideband communications, microwave technology and multimedia applications. March 27-28, 2006 Nassau Inn, Princeton, NJ, USA

<http://www.sarnoffsymposium.org> Early registration deadline is February 6, 2006.

What Lies Ahead: Forecast for 2006

Today's Engineer

Now that we're four years past the end of the last recession, what lies ahead in 2006? The latest edition of Today's Engineer Online examines changes and trends in eight categories that are likely to affect all of us in one way or another in the New Year: technology, energy, climate change, workforce, employment benefits, immigration, infrastructure, and the economic outlook.

Read this feature and more at:

<http://boldfish.ieee.org:80/u/1588/010606>

IEEE-USA Meets With Senators to Discuss Challenges to U.S. Science & Technology Leadership Today's Engineer IEEE-USA Vice President for Technology Policy, Dr. Russell Lefevre, and IEEE-USA legislative representatives met on Capitol Hill with the staff of Senators Lamar Alexander (R-Tenn.), Jeff Bingaman (D-N.M.) and Pete Domenici (R-N.M.) to discuss the Senators' plans to introduce comprehensive innovation and workforce legislation. In 2005, Senators Alexander and Bingaman requested a study from the National Academies of Science and Engineering to identify the top 10 actions, in priority order, that federal policy makers can take to enhance the science and technology enterprise so the United States can successfully compete, prosper, and be secure in the Global Community of the 21st Century. The study's other goal is to formulate an implementation strategy with several concrete steps that can be used to implement the study's recommendations.

To read on, visit: <http://boldfish.ieee.org:80/u/1593/010606>

Continued from front page:

Dinner will be served in classic college style with multiple varieties of pizzas. The meeting will be held on the campus of Clemson University in the EIB building. The building is to the back and right

of the ECE department building. Dinner is free for students, \$5 for non-students.

Meeting Details:

6:30pm Dinner served/Social 1/2 Hour

7:00pm Meeting begins

Please email Jerry Clark if you plan to attend and especially if you plan to eat. He will be ordering the pizza's and needs to know how many to buy. Jerry's email address is: jclark89@hotmail.com.
Directions from Anderson or Greenville: turn left on Hy 93 (either from Hy 123 or Hy 76). Come to the second light (from Hy 76) and make a left. Proceed straight through the stop sign and follow the road around a slight left curve. Straight through another stop sign and the ECE building is straight ahead. After making a sharp right turn, take the next left. Down to the end of this road, the EIB building is across the street. It is marked the "Fluor Daniel Building". Parking passes will be provided inside the meeting room #132.
Directions from Seneca: Exit on Hy 76 from Hy 123. Follow the above directions from there

Partial Officer List (full list is online):

CHAIR:

Rob Scruggs

(864)886 1348

r.scruggs@ieee.org

VICE-CHAIR:

Jerry Clark

(864) 918-2535

jclark89@hotmail.com

Secretary/Treasurer:

Louis Hapeshis

louis.hapeshis@us.schneider-electric.com

Newsletter Editor

Mark Stokes

m.stokes@ieee.org