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N e w s l e t t e r

IEEE – As Good As It Gets!

Mary Ellen Randall
Chair IEEE Eastern NC Section

Have you ever wondered if you were getting all you could from your IEEE membership? Does IEEE seem like a huge organization? Have you ever felt “lost” in our vast membership? Here are some tips for making the most of IEEE.



Mary Ellen Randall
 Chair, Eastern NC Section
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IEEE provides a wealth of optional services for its members. There are insurance discounts, including health insurance, through IEEE Financial Advantage, an IEEE Job site containing open positions, and Travel Services with member discounts, to name just a few. Be sure to visit www.ieee.org to refresh your knowledge of what's available to help us.

Your “local” IEEE organization is the **Eastern North Carolina Section (ENCS)** www.ewh.ieee.org/r3/enc. This encompasses the greater Raleigh area, east to the coast. There is a Subsection Organization for the Lower Cape Fear area. In ENCS, we have approximately 3000 members. This makes us the 2nd largest Section in the South East United States. With all those members, it would seem a daunting task to provide something of value to each, but the IEEE organization helps us with that.

Besides the geographic areas, IEEE has subject area societies, organized in a matrix management-type structure. If you look at all the societies in IEEE, you will see that ENCS contains a large number of active chapters, which also report to the societies. This gives us breadth and depth to deliver targeted programs to you, our members. Here are the active chapters in ENCS:

- Computer Society
- Engineering in Medicine and Biology (EMBS)
- ElectroMagnetic Compatibility
- Power Engineering / Industrial Applications
- Geoscience & Remote Sensing
- Communications Signal Processing Information Technology
- Engineering Management Society
- Robotics & Automation
- “ACME” (Antennas and Propagation, Components, Packaging, and Manufacturing Technology, Microwave Theory and Techniques, and Electron Devices)
- Neural Networks

In addition to the above, we have committees and special interest groups for:

Awards & Recognition, Student Activities, Educational Activities, Member Develop-

Inside this Issue

IEEE – As Good As It Gets!	1
Merit Badge College (Boy Scout) at Duke University November 13	2
ACME Chapter News	3
Engineering in Medicine and Biology Society Chapter News	3
IEEE ENCS Pharma Job Hunt Collaboration	4
Membership Development:	4
IEEE Eastern North Carolina Embedded Systems Interest Group	5
Computer Society Meetings	5
Extraordinary Women Engineers Project	6
Power Engineering and Industrial Applications	6
Job Hunt Collaborations	7
Robotics and Automation Chapter	7
Pedal-Powered Generator: k-12 Project	8
Communications Society Chapter News	8
Annual IEEE Picnic	9
Events for Girls	9
IEEE Industrial Electronics Society Annual Conference (IECon'05) is coming to town	9
Awards for special contributions in 2003	10
Calendar	11
Who's Who in the IEEE Eastern N.C. Section	11

ment, Newsletter, Professional Development, Women In Engineering, Employment Committee, Biotech Job Hunt Collaboration, K-12 Outreach, and Embedded Systems Special Interest Group.

(continued on page 2)

Here are 10 ways you can increase the value of your IEEE Membership:

1. Go to a meeting. Check the calendar at www.federal-systems.com/ieee/calendar/htdocs/cal.html
2. Make a connection – meet at least one new person at the meeting.
3. Help another member find a job.
4. Support another member's promotion to Senior or Fellow.
5. Point out members who have made outstanding contributions for awards, which are available at the Section, Region, and IEEE USA levels.
6. Get involved. Help out with set up at a meeting. Any way you get involved, you will get to know more people and enrich your membership.
7. Outreach and promote the profession. This includes outreach to young people, as well as adults. Get your Professional Engineer hours through IEEE ENCS.
8. Bring a friend or co-worker to a meeting.
9. Volunteer to find a speaker.
10. Stay in touch – Keep your e-mail and address up to date, so we can reach you!

We are fortunate to have a wonderful group of active volunteers in ENCS, but we always want to expand our service to our members. It has been said that the more you give, the more you get. There are many, many wonderful opportunities for participation in ENCS. IEEE ENCS is as good as it gets! ♦

Merit Badge College (Boy Scout) at Duke University November 13

Chris Siegl, siegl@ieee.org

Duke University will again be hosting a Merit Badge College on campus. Last year we had a number of IEEE members as Merit Badge Councilors for the Computer, Atomic Energy, Electronics, Electricity and Radio merit badges. This year we are planning to expand the merit badges to include Engineering, Space Exploration, and Energy.

To participate, merit badge councilors need to be registered at least two weeks before the event. Questions? please contact Chris Siegl. If you have not been a merit badge councilor before, it is not difficult when the subject is in your area of expertise, the program has very clear documentation (merit badge

book for each subject} and clear requirements. Books are available for each merit badge councilor, I can loan one to you to help you decide to join us. I promise you a very rewarding experience. If anyone has Girl Scout experience and can help us incorporate and qualify to offer their badges as well, we should be able to convince Duke to include these in the program as well. This was discussed last year but deferred on because we did not have the experience base to offer this. ♦

Exploring Science and Engineering

Article by: David, Explorer Post 350 Participant

At Lord Corporation's Science and Engineering Explorer Post 350, shooting potatoes, building Laser light shows, programming robots and taking apart supermarket scanners are regular occurrences. Does this sound like something from a science club? That's because it is a Science and Engineering Post.

Demonstrations of technology and engineering are mainstays at Explorer Post 350. Some of last year's programs included a Laser light show, Nylon making, amateur robotics, and building projectile launchers including a mini Roman trebuchet that was constructed using a Lord Corporation urethane adhesive. The Post also participated in the IEEE SoutheastCon 2004 Pre-College Walking Robot Competition. The object of the competition was to design and build a remote-controlled robot walker that had to travel through a course within a time limit. The Post received 1st place of the oral presentation portion.

Attending extracurricular activities or clubs, such as Explorer Post 350, is a great way to meet new people and have fun. You are also learning facts that you wouldn't ordinarily learn in school. At this time, almost all of the members are seniors in high schools and are graduating to college. We need new Explorers to continue on Explorer Post 350's legacy for the fall.

For over 20 years Post 350 has been stimulating the curiosity of its members in science. The post meets once a month at Lord Corporation's World Headquarters Campus in Cary, NC. This exploring program is part of the Boy Scouts of America and is for young men and women who are 14 to 21 years of age. The Post will launch this year's program with the September 27 meeting. Meetings are from 7:00 to 8:30pm Please email Chris Siegl siegl@ieee.org to register and for directions. ♦

ACME Chapter News

Dev Palmer

The ACME Chapter Spring Meeting was held on 30 March 2004 at the Harris Microwave facility in Research Triangle Park. The meeting featured the talk "Wide Bandgap Semiconductors - Basic Materials, Devices, and Circuits" given by Todd Nichols, RF Development Scientist at Harris. Nineteen IEEE members and three guests attended.

The Summer Meeting will be held on August 24th at 6:00 PM in Room 246 of the Engineering Graduate Research Center on the NCSU Centennial Campus. The meeting will feature two talks on "Technologies for Multifunctional Communication Systems" given by Dr. Art Morris, CTO and VP Engineering for wiSpry, Inc., and Jayesh Nath, Ph.D. candidate at NCSU. We plan to hold the meeting jointly with the NCSU Student chapter to attract undergraduate members returning to campus for the fall semester. The presentations will be followed by an opportunity to network over sandwiches and drinks. We welcome the participation of all interested IEEE members and guests from government, industry, and academia.

Chapter Chair Dev Palmer has participated in a number of volunteer educational activities over the last several months. During Engineer's Week in February, he appeared on the in-house television station for Forest View Elementary School in Durham to talk about what engineers do and how to become one. He also spoke on engineering as a career at the Forest View Elementary School Career Day and the Durham Public Schools System-Wide Career Day. The system-wide event was sponsored by the Durham Public Education Network to expose middle school eighth graders to a variety of careers to help guide their high school course choices. In March, he served as a Virtual Judge for eCYBERMISSION, an Army-sponsored web-based science, math, and technology competition for teams of 6th through 9th grade students. More information about eCYBERMISSION can be found at <http://www.ecybermission.com>. In June, he attended the Chapter Chair meetings at the MTT International Microwave Symposium in Ft. Worth TX and the AP/URSI Symposium in Monterey CA.

The ACME Fall Meeting will take advantage of a \$500 chapter subsidy awarded by the Electron Devices Society to host a meeting and reception on the Duke campus in conjunction with the Duke Student Chap-

ter. We are currently working to schedule a national-level speaker from a large government funding agency. Watch for details! ♦

Engineering in Medicine and Biology Society Chapter News

Tom Jepsen, tjepsen@ieee.org

Tech4Life: NC Symposium on Biotechnology and Bioinformatics, October 13-15.

Please go to the web site for more information. We also need Laptop Projectors.

The ENCS of IEEE is sponsoring a conference, "Technology For Life: North Carolina Symposium on Biotechnology and Bioinformatics (NCSBB 2004)," to be held in RTP.

We are co-sponsored by North Carolina State University, Duke University Medical Center, the University of North Carolina, IEEE Region 3, the North Carolina Council, the IEEE Engineering in Medicine and Biology Society, and the IEEE Communications Society. The conference will include presentations in the areas of bioinformatics, health care informatics, technology transfer in the biotechnology industry, and social implications of biotechnology. You can view our webpage at <http://ewh.ieee.org/cmte/tech4life>.

The IEEE-ENCS is a strong supporter of biotechnology research and biomedical engineering. We believe that success in biotechnology research requires a strong bioinformatics infrastructure; bioinformatics can be defined as the discipline which applies the tools of computer science and information technology to the study of biological data. We further believe that development of a strong bioinformatics base will lead to expanded economic development, more technology-oriented jobs, and greater opportunities for professional development for IEEE members in North Carolina.

The conference will be held at the North Carolina Biotechnology Center in Research Triangle Park, NC. We are currently asking local corporations and other participating organizations to consider donating the use of a laptop projector for the duration of the conference (October 13-15, 2004). All donors will receive a mention on the conference website, and will be listed in the conference documentation. For more information, contact Tom Jepsen at 919-933-0377. ♦

IEEE ENCS Pharma Job Hunt Collaboration

Esther Lumsdon, Chair

The Biotech/Health/Pharma Job Hunt Collaboration Group has been on hiatus this summer. Our next meeting will be Sept. 27th. I hope that some of you enrolled in the RAC Study Group sponsored by NCRAF, which will be a very valuable experience.

The May 24th joint meeting of EMBS and BHP-JHC was quite enjoyable. Dr. Caroline Seay from UNC gave a presentation and demo of the Multimedia Genomics Project. This is a nifty, web-based tool for teaching about genomics, developed by the Instructional Media Group of the Institute for Science Learning at UNC Chapel Hill. The underlying framework can be used for many sorts of instruction material.

The Technology for Life Symposium in October looks very promising. The confirmed speakers for the conference sound very appealing! Look forward to learn about HL7, grid computing, bioethics, clinical genomics standards, and telemedicine.

Let me echo Harold Meder's statement that networking is the cornerstone of hunting for jobs. This is particularly true for folks like I, who try to make a transition into biotech/health/pharma. I have joined a few local chapters of professional groups for the pharma industry, and have found the members to be welcoming and helpful. I maintain a list of the upcoming meetings of these groups, who are happy to have potential members attend meetings. I actually landed a job interview through one of them, after volunteering for the Triangle PEERS group!

The promised Training Initiative for careers in the FDA-regulated industry is on hold. I apologize for the snafus – one of the main volunteer instructors took consulting assignments out of state. To revive this idea, I am working to find instructor volunteers for the same topics. If you have contacts who are experts in these fields (GMP, SOPs, Part 11, computer validation, or Data Management), I would be very interested in asking them to teach.

Please visit our website at

www.rtpnet.org/ieee/bhphjc/, and sign up for the mailing list at rtpnet.org/mailman/listinfo/ieee-bhphjobs. The mailing list is archived, and archived messages are open to the public.

Planned Meetings

BHP-JHC has scheduled the following meetings:

- Monday, Sep. 27, 6:30pm: Michael Janas, HR Director of INCresearch will speak about jobs that exist in clinical research, and what skills are transferable from telecom/IT to those jobs.
- Monday, Oct., 25, 6:30pm, speaker TBA
- Monday, Nov. 15, 6:30pm, speaker TBA

For all meetings, location and speaker are TBD. ♦

Membership Development:

Shobha Saraiya

Shobha@ieee.org

IEEE: Serving Members and the Profession for 120 Years. Through its members the IEEE vision is to advance global prosperity by fostering technological innovation, enabling members' careers, and promoting community worldwide.

Efforts are underway to improve the membership for our Eastern North Carolina section. Currently I am in the process of reminding individuals (students, member, and senior member) who have not renewed their Membership for the year 2004 from the list.

The Region 3 Senior Member Upgrade Campaign is about to start. Start identifying potential new Senior Members in our Section. Please let Shobha know.

Key URLs for membership information and renewal process:

www.ieee.org/organizations/rab/md/keyurls.html

Senior Membership:

www.ieee.org/organizations/rab/md/smprogram.html

Membership Forms:

www.ieee.org/organizations/rab/md/membershipforms.html

Renewal:

www.ieee.org/portal/index.jsp?pageID=corp_level1&path=membership/renewal&file=index.xml&xsl=generic.xsl

NOTE: IEEE provides a 50% reduction in membership dues if you are unemployed. Check the following web link for more info. services1.ieee.org/membersvc/member/mem_intro.htm

Please go to:

www.ieee.org/organizations/rab/md/mgm.html and learn about the opportunity to earn awards for developing new IEEE Members. ♦

IEEE Eastern North Carolina Embedded Systems Interest Group

**Dave Ruden, Program-Chair,
IEEE ENCS Embedded Systems SIG**

Embedded Systems Group Looking Forward to an Exciting Fall

I hope that everyone is enjoying their summer so far. I know that I am. Your Embedded Systems Group executive committee has been hard at work looking for and arranging programs for the upcoming fall. I think you'll agree that we have put together some good ones.

Please join us on Wednesday, September 15 for our fall kickoff meeting where Professor Beymer Bevill, EE-Technology department chair, Fayetteville Tech Community College will be our guest to discuss their Microprocessors curricula. This is an opportunity to both learn about course work at FTCC, and to contribute to their curricula. Beymer will be eager to learn from our field experience, what classes would serve the professional community best.

On Wednesday, Oct. 20th Lori Harwood. will provide a discussion on LINT - it's benefits, how to use it best, and some of its more esoteric features. Lint is a valuable software preprocessor tool that does extra, rigorous code checking that often helps avoid costly and time consuming runtime debugging. Regardless of where your opinion of LINT lies, come and join the conversation.

We have also tossed around some ideas for future programs but need some help locating the technical resources to put them together. We would like to find someone who has implemented an open-source embedded project and would be willing to share their successes, trials and tribulations with the group. Another topic that we are looking into is secure embedded systems. By secure we aren't necessarily referring to data security but to securing the system itself and any intellectual property it contains from being knocked-off by a competitor. This has become a big problem as the global economy continues to evolve. If you would like to volunteer or know of anyone with expertise in either of these areas please contact our program chair, Dave Ruden.

We are still continuing our efforts to reach out to the local embedded systems community. If you would like

to be a point of contact for your company to help spread the word or if you would like more information on the Embedded Systems Group please contact Steve Lund. You can also find more information at our static web page located at www.ieee-embedded.org or join us in our virtual community at www.ieee-embedded.org. ♦

Wednesday, September 15

Balancing against our previous kickoff where we learned of Alex Dean's NCSU initiatives; this kickoff, Professor Beymer Bevill, EE-Technology department chair, Fayetteville Tech Community College will be our guest to discuss their Microprocessors curricula. This is an opportunity to both learn about course work at FTCC, and to contribute to their curricula. Beymer will be eager to learn from our field experience, what classes would serve the professional community best.

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For more information regarding these meetings, please refer to the IEEE ENCS calendar pages. ♦

Computer Society Meetings

Chris Siegl

Computer Society has scheduled these meetings:

Friday August 27, Lunch meeting 11:30 Ryans Steak House Crossroads Shopping Center **Computer Society organizational meeting** – members only. Get your inputs in and help shape next year's program.

Tuesday September 21, **Computer Recycling, the disposal problem**. Shortening of the life cycle of consumer electronics puts a much greater burden of the waste disposal system. This presentation will cover current status of regulations and efforts by the industry to mitigate the disposal problem. Location tbd.

Wednesday, December 15 at MCNC, **Grid Computing** what is it, how does it work, what is some of the current research. ♦

Extraordinary Women Engineers Project

Jana Jenkin

The IEEE was invited to participate in an ambitious educational initiative to inspire more young women to choose - and remain in - engineering. The project titled *Extraordinary Women Engineers Project*, is an effort led by a coalition of engineering societies with support from engineering-related organizations, corporations, universities and educational organizations, and has various components including plans for a PBS documentary. At this time, the IEEE Women in Engineering (WIE) and the IEEE Educational Activities will represent the IEEE and participate in the project. To find out more about all the components of the project, please visit www.engineeringwomen.org/index.cfm.

As envisioned, the *Extraordinary Women Engineers Project* will be launched in October 2005 with the publication celebrating the achievements of women in engineering. The outreach program and companion PBS documentary will roll out in February 2006. They will support the EWeek *Introduce a Girl to Engineering* initiative with the Society of Women Engineers as the lead sponsor of EWeek 2006.

We need your help with the first phase of the project *Engineering Women: Extraordinary Stories of How They Changed Our World*, a book about remarkable women engineers ranging from Emily Roebling to the Ford Windstar Moms. The large-format, hardcover book with full-color photos will profile approximately 150 women engineers, who have made significant contributions to the profession, past and present.

WIE will be looking into how to make the book and the documentary available to Regions 7-10.

HELP WANTED

If you know a woman engineer whose story should be considered for inclusion in the project, or you have a story to share about one of these remarkable women, we would like to hear from you.

The purpose of the publication is to show diversity and provide inspiring stories of potential role models. Those featured may not necessarily include every "best ever" woman engineer. Publication space is limited and selection for inclusion will be based on a variety of factors.

A distinguished advisory committee from government, industry, and academia will review those nominated.

DEADLINE

We need your nominations by Friday 20 August 2004. Please send them to Carrie Loh at c.loh@ieee.org. If you have questions about the project, you can contact Carrie Loh at c.loh@ieee.org or Doug Gorham at d.g.gorham@ieee.org. ♦

Power Engineering and Industrial Applications

Roger Lawrence, Senior Member IEEE

The Power Engineering and Industrial Applications Chapter has a series of meetings planned through 2005 that looks at renewable energy resources for commerce and industry. The first meeting date is set for Thursday 12 August 2004 and is entitled Power System Reliability. Future meetings will consider solar power, wind power, hydro power, and fuel cells. The recent power grid failure in the north of the US and similar events in Europe have highlighted the need to understand the causes for power system vulnerability and find methods to improve security and reliability. There is a focused interest in overcoming the risks associated with reliability of power and there is interest in more intense use of both technology and renewable energy.

There is a joint meeting planned between The Power Engineering and Industrial Applications Chapter and The Neural Networks Chapter for Tuesday 24 August 2004 that will address Neural Network Technology for Power Systems.

Details of all meetings will be posted on the Calendar of the IEEE-NC website that can be accessed at www.ewh.ieee.org/r3/enc where there is link to the Calendar and also an email link to rogerlawrence@rglsolutions.com Registration for meetings is strongly encouraged in order that firm plans can be made for refreshments and favorable meeting room size.

We welcome and encourage an interchange of ideas to further our purpose which is to serve the membership by meeting its needs. All constructive suggestions for future meetings will be gladly received. ♦

Job Hunt Collaborations

Harold Meder, hwm@ieee.org

The economy is turning around and most in the Job Hunt Collaborators are now gainfully employed. Your help is needed to extend this success to all of our fellow members. If you know of opportunities to help your peers develop their careers, please contact Harold Meder. We could use some opportunities in the areas of Electrical Engineering and Software Development, including Embedded Systems.

Networking Newsletter

rtpnet.org/mailman/listinfo/ieee-jhc

Networking is the corner stone strategy for advancing your career. Therefore, it is important to keep an eye on local networking opportunities such as IEEE meetings. To keep up with what is happening in the Research Triangle Area, sign up for the weekly email newsletter by visiting rtpnet.org/mailman/listinfo/ieee-jhc.

Job Board

www.federal-systems.com/scrubs/discus/show.cgi?9/9

Please let your peers know if you are aware of job opportunities within your organization. The Jobs we receive are posted on the ENCS IEEE Job Posting Forum. They are few, but of high quality. I.E., they represent real opportunities where someone will be brought in from outside the hiring organization.

Help is needed here to communicate with the hiring organizations to ensure that they have a positive experience.

Java Software Development Workshop

www.federal-systems.com/scrubs/discus/show.cgi?8/472

The Software Developers JHC is running a workshop to help its members gain new skills and experience to add to their resume.

Currently, the group studies towards SCJP, Sun Certified Java Programmers. Future opportunities include

- Repeat the SCJP study program,
- Study for J2EE Certification,
- Develop skills with Struts and Java Server Faces
- Practice proficiency in WebSphere Studio Application Developer and Application Server. ♦

Robotics and Automation Chapter

Grayson W. Randall, Chair

This fall we have two programs scheduled. In October, we have invited the local FIRST robotics teams (www.usfirst.org) to speak about their programs. Last season Southeast Raleigh High School won the National title and other local teams made it to the national event in Atlanta Georgia. FIRST is a highly creative program where high school students work with engineers from industry and Universities to create a 130 pound robot that competes in regional and national competitions. The rules are different every year.

Every team is always looking for many aspects of support from the community. The teams need help with mechanical, electrical, software engineers as well as graphic designers, animation engineers, and project managers. Join us this evening to see the teams and their amazing robot designs.

In November, we have the honor to have Jose M. Carmena, Ph.D. from the Center for Neuroengineering at Duke University. Dr. Carmena will talk to us on the Brain-machine Interface. Duke is doing research on driving robotics using an interface to a live brain. Monkeys are able to control mechanical devices to accomplish tasks. Imagine, you can interact with your computer by just thinking certain thoughts... Stop by for an interesting evening with Dr. Carmena.

Speaker Bio:

Jose M. Carmena (member, IEEE) received the M.Sc. degree in artificial intelligence (intelligent robotics) and the Ph.D. degree both from the University of Edinburgh (Scotland, UK) in 1998 and 2002 respectively. Since the spring of 2002 he has been a Postdoctoral Fellow at Miguel Nicolelis' Laboratory, Department of Neurobiology and the Center for Neuroengineering at Duke University, Durham, NC.

Dr. Carmena has served at the Program Committee of conferences such as IEEE Engineering in Medicine and Biology, Simulation of Adaptive Behavior, or Brain-Computer Interfaces. His research interests include motor control and motor learning in humans and robots, neural coding, biomimetic robotics, and the development of brain-machine interfaces for restoring neurological motor disorders. ♦

Pedal-Powered Generator: k-12 Project

Abhinav Aggarwal, Ph.D.

IEEE ENCS and Society for Universal Oneness (www.sfu.org), a non-profit organization stepped forward to sponsor a high school student initiative. A group of three students from East Chapel Hill High School: Parv Aggarwal, Adrian Randall and Michael Delong were guided by the past Section Chair Dr. Abhinav Aggarwal to design and develop an environment-friendly pedal powered generator. As part of TSA (Technology Student Association) activities, this model taps the potential of human energy and transforms it to DC power; in a process that has no environmental hazards. The project was awarded 1st place at NC State TSA Competition held at Greensboro, April 4-6, 2004 and participated at National event held in June 20-24, 2004 at Nashville, Tennessee.



The structure of this device resembles a bicycle made stationary, with a belt connecting the wheel to a car alternator. The alternator is connected to an excitation current source and a load. It is fairly easy to operate.

One sits on the bike, and starts pedaling it at a desired gear (front at 2nd, back at 4th), between 90 to 150 rpm. Because the back wheel is connected via a belt to the alternator, the motion of the wheel is transferred to the alternator's rotor. Since the rotor's circumference has a 1: 10.77 ratio with the wheel's circumference, it rotates at a much faster rate than the wheel. The desired gear ratio and speeds are the most efficient for both the peddler and alternator to generate current. Electricity is generated inside the alternator by an electromagnetism property and then rectified to become DC. This 15 Volt DC output can be used for many purposes. However, it is more efficient and useful to store it into a battery first. Therefore, the team designed a pedal-powered 12V battery charger.

The ultimate objective of this project is to explore and set the debate in motion if we can build an environment-friendly powered home: all appliances and gadgets can run off non-conventional electricity produced by solar cells, wind powered mini-turbines and exercise generators. It may mean to replace our current utilities with lower consumption devices. ♦

Communications Society Chapter News

Tom Jepsen

Our August meeting will be held jointly with the ACME Chapter; see the ACME Chapter News for details.

We are still in the planning stages for the Distinguished Lecturer Tours sponsored by the IEEE Communications Society. In the past, our lecturers have included Dr. Jack Winters, who discussed 4th Generation Wireless technology, and Dr. Raj Jain, who shared his thoughts on the future of Ethernet. If you have any suggestions on speakers or topics, please contact Tom Jepsen. Also, be sure to attend "Technology For Life: North Carolina Symposium on Biotechnology and Bioinformatics," to be held October 13-15 at the NC Biotechnology Center; this conference is co-sponsored by the IEEE Communications Society. See the EMBS chapter report for details.

As Chapter Chair and ComSoc member, I am currently receiving duplicate copies of IEEE Communica-

•(continued on page 9)

tions Society magazines and journals, including

- IEEE Communications Magazine
- IEEE Transactions on Communications
- IEEE Journal on Selected Areas in Communications
- IEEE Communications Letters
- IEEE Network Magazine
- IEEE Transactions on Wireless Communications

If you know of a school or other nonprofit organization that has a technical library and could make good use of these valuable technical resources, please let me know - currently, they are just collecting dust in a corner of my office. I will be glad to change the subscription information so that they will be mailed directly to the institution. Contact Tom Jepsen or 919-933-0377. ♦

Annual IEEE Picnic

Matt Horrer

On July 24, we had the opportunity to meet and fellowship with fellow engineers. We had a good time at Falls Lake with BBQ and enjoying the water.



The annual picnic is a great way to network in a relaxed atmosphere with special people of diverse backgrounds and from many different industries.

Awards for outstanding contributions by IEEE members were presented at this occasion (See "Awards for special contributions in 2003" on page 10.) ♦

Events for Girls

Esther Lumsdon

The **Sally Ride Science Festival** will be in Raleigh on Sunday, Oct. 10, 2004. This event is for 5th - 8th grade girls and interested adults.

Advance registration costs: \$18 (lunch included). There will be a keynote speech by Sally Ride, Discovery Workshops for girls, a drawing for prizes, and workshops for adults. The street fair is a good place for organizations to set up a table and hand out information about their programs and events. Last year, the Raleigh Astronomy Club had a table and telescopes, and the Triangle Amateur Robotics Society had a replica of Sojourner for girls to control, and the table where girls could mix up slime was very popular! Last year, people came from all over North Carolina! Details at www.sallyridefestivals.com/.

Registration for **ToyChallenge 2005** opens in September. This is a national contest where teams must be at least half girls design a toy or game! This gives children (grades 5 - 8) a great introduction to engineering. Teams are judged on their design process and communication, as well as the actual toy/game. YOU could get involved by coaching a team, or serving as a judge at a regional competition. Details at www.toychallenge.com. I expect that there will be a regional competition in RTP during spring 2005. It was a lot of fun to serve as a judge this year. ♦

IEEE Industrial Electronics Society Annual Conference (IECon'05) is coming to town

Mo-Yuen Chow
IEEE Senior Member

The 31st Annual Conference of the IEEE Industrial Electronics Society (IECon'05) will be held at the Sheraton Capital Center, Raleigh, North Carolina, USA, November 6 - 10, 2005. We are anticipating 350 - 500 conference attendees. IECON'05 is an international conference on industrial applications of electronics, control, robotics, signal processing, computational and artificial intelligence, sensors and actuators, instrumentation electronics, computer networks,

(continued on page 10)

internet, and multimedia technologies. The objectives of the conference are to provide high quality research and professional interactions for the advancement of science, technology, and fellowship.

IECon'05 has five technical tracks:

- Computer and Control Systems
- Power Electronics
- Motors and Drives
- Sensors and Actuators
- Industrial Informatics

We would like to invite volunteers for IECon'05 planning and operations. Special needs are:

- Local transportation coordinator
- Publicity coordinator
- IEEE Member booth coordinator
- Local dining coordinator
- Social Event coordinator
- Golf trip/tournament coordinator
- Hotel AV system coordinator
- Usher coordinator

If you are interested or need more information, please contact Prof. Mo-Yuen Chow at chow@ncsu.edu or (919) 515-7360 before October 15, 2004. We look forward to hearing from you. ♦

Awards for special contributions in 2003

This column recognizes IEEE members who went beyond their line of duty

Subroto Bhattacharya	2003 Outstanding Engineer	For Contributions to the Field of Systems and Concurrent Engineering
John Gibson	Exceptional Service and Leadership Award	In Grateful Appreciation of Years of Personal Effort and Innovative Contributions to the IEEE Eastern North Carolina Section and IEEE Colleagues and Friends July 2004
Yungtaek Jang	2003 Outstanding Engineer	For Contributions to the Development, Analysis, and Design of State-of-the-Art, High Power Density, High Efficiency Power Supplies used in Data Processing and Telecommunication Applications
Thomas Jepsen	2003 Outstanding Engineering Author	For Authoring the Book: "Distributed Storage Networks: Architecture, Protocols and Management"
Mo-Yuen Chow	2003 Outstanding Engineering Educator	For Contributions to Education in the Field of Neural Network Application for Diagnosis and Control
Michael Randall	2003 Outstanding Student Entrepreneur	In Recognition of Successful Leadership and Operation of Two Technological Based Enterprises as an Undergraduate Student
Abhinav Aggarwal	2003 Outstanding Service Award	For Contributing to Our Section by Creating New Chapters, Revitalizing Existing Chapters, and For A Public-Spirited Attack of Global Issues
Esther Lumsdon	2003 Outstanding Service Award	For Selfless Efforts in Helping Others Transition to New Careers in the Biotech, Health, and Pharmaceutical Industries
David Ruden	Outstanding Volunteer	For Years of Contributions to the Development and Growth of Palm Beach and Eastern North Carolina Sections of Region 3 July 2004
Ratan Piplani	Outstanding Engineering Career	For Career Contributions to Satellite and Terrestrial Telecommunication Systems, Computer Operating Systems, and Programming Languages July 2004
Bill Hulette	2003 Outstanding Mentor	For Dedication to Helping Students and Developing a F.I.R.S.T. Team of High School Students which Advanced to the National Competitive Level
Jonathan Bittner	2003 Outstanding Student Leader	For Leadership of the Duke University Student IEEE Branch and For Organizing and Executing a Boy Scout Merit Badge College for Engineering and Computer Technology

The table lists the names, the award and a brief description of what they did. If you know someone who deserves special recognition for 2004, please let the Awards Committee know eeLee@ieee.org.

Calendar

For detailed information on the events listed below, please visit www.federal-systems.com/ieee/calendar/htdocs/cal.html

Tuesday, August 10, 2004

PDI - How to Think Creatively
6:00 pm - 9:00 pm at ISA, 67 Alexander Dr., RTP

Thursday, August 12, 2004

Power System Reliability
6:00 pm - 7:30 pm

Friday, August 20, 2004

Excom Meeting
11:30 am - 1 pm at NCSU Partners 1

Tuesday, August 24, 2004

ACME summer meeting, 6:00 pm - 7:30 pm at NCSU Centennial Campus, room 246 of the Engineering Graduate Research Center

Tuesday, August 24, 2004

Neural Network Technology for Power Systems
6:00 - 7:30 pm at NCSU Flex 1403

Thursday, August 26, 2004

Section Meeting: The Changing Face of Employment 6 - 8 pm at MCNC Auditorium, 3021 Cornwallis Rd.

Tuesday, September 14, 2004

PDI - Time Management
6:00 pm - 9:00 pm at ISA, 67 Alexander Dr., RTP

Friday, September 17, 2004

Excom Meeting
11:30 am - 1 pm at NCSU Partners 1

Thursday, September 23, 2004

Section/WIE Meeting - Engineering Entrepreneurial Program
6:00 pm - 8:00 pm at MCNC 3021 Cornwallis Rd., RTP

Tuesday, October 5, 2004

PDI - Dealing With Difficult People
6:00 pm - 9:00 pm at ISA, 67 Alexander Dr.

Wed. - Fri., October 13-15, 2004

Technology For Life: at North Carolina Symposium on Biotechnology and Bioinformatics

Friday, October 15, 2004

Excom Meeting
11:30 am - 1 pm at NCSU Partners 1

October 19, 2004

WIE - Planning Meeting
6pm-8pm at Ascot Technologies, Inc.

Thursday, October 28, 2004

Real Robots!
6:00 pm - 8:00 pm at MCNC 3021 Cornwallis Rd., RTP

November 9, 2004

Women In Engineering - Networking Dinner, 6pm-8pm at Errico's Ristorante 132 Kilmayne Dr., Cary

Thursday, November 18, 2004

Robotics: The Brain Machine Interface
6:00 pm - 8:00 pm at MCNC 3021 Cornwallis Rd., RTP

Thursday, November 18, 2004

Fall Meeting of the Eastern NC Chapter of the IEEE-Geoscience and Remote Sensing Society Dr. Phil Dunston "Remote Sensing of Coral Reefs and Change Detection"
3:30 pm at 229 Dixon Hall Elizabeth City State University

Friday, November 19, 2004

Excom Meeting
11:30 am - 1 pm at NCSU Partners 1

Wed., December 15, 2004

Grid Computing what is it, how does it work, what is some of the current research. 6 - 8 pm at MCNC

Friday, December 17, 2004

Excom Meeting
11:30 am - 1 pm at NCSU Partners 1

March 03, 2005

Meeting of the Eastern NC Chapter of the IEEE Geoscience and Remote Sensing Society (GRSS), "Mapping the World's Topography from Space - The Shuttle Radar Topography Mission" Dr. Scott Hensley, NASA <http://cerser.ecsu.edu/05events/hensley/05grss.htm> 3:30pm at 229 Dixon Hall Elizabeth City State University

Who's Who in the IEEE Eastern N.C. Section

2004 Officers and Volunteers

Section Chair
Mary Ellen Randall
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Section Vice Chair
David W. Ruden
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Section Secretary
Thomas Jepsen
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Section Treasurer
Roger Lawrence
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Women in Engineering Affinity Group
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Robotics and Automation
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Neural Networks
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Biology (EMBS)
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Special Interest / Affinity Chairs

Software Job Hunt Collaboration
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Biotech Job Hunt Collaboration
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Embedded Systems Special Interest Group
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