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Welcome Back to our Newsletter

Charles J. Lord, P.E., Newsletter Editor

Yes, we have been away for a while, but the Eastern NC Section once again has a regular monthly newsletter. This will be published to the web every month and will be mailed out twice a year. How does this happen? **Volunteers!** If you are interested in helping out, contact me at c.j.lord@ieee.org. Looking for other ways to get involved? We have a bunch! Our section now has over a dozen groups that address special interests or needs. Here is a list of who they are and how to get hold of them:

Chair
Abhinav Aggarwal
abhinav@ieee.org

Vice Chair
David W. Ruden
druden@ieee.org

Secretary
Jana L. Jenkins
jljenkin@juno.com

Treasurer
David W. Ruden
druden@ieee.org

Awards & Recognition
Ben O'Neal
oneal@eos.ncsu.edu

Educational Activities
Open—this can be you!

Membership Development
Shobha Saraiya
shobha@ieee.org

Newsletter Editor
Professional Activities
Charles J. Lord
c.j.lord@ieee.org

Steering Committee
David Schulman
capsalad@gate.net

Student Activities
Lee C. Haas
eelee@ieee.org

Computer Society
Chris Siegl
siegl@ieee.org

Engineering in Medicine and Biology (EMBS)
Thomas Jepsen
tjepsen@mindspring.com

ElectroMagnetic Compatability
Glenn Robb
robb
@compliance-engineering.com

Power Engineering / Industrial Applications
Roger Lawrence
rogerlawrence@rglsolutions.com

Communications / Signal Processing / Information Technology
Thomas Jepsen
tjepsen@mindspring.com

Geoscience and Remote Sensing
Linda Hayden
haydenl@mindspring.com

Engineering Management Society
Subroto Bhattacharya
subroto@us.ibm.com

Women in Engineering Affinity Group
Mary Ellen Randall
merl@ascotttechnologies.com

Robotics and Automation
Grayson Randall
randallg@us.ibm.com

"ACME"
(Antennas and Propagation, Components, Packaging, and Manufacturing Technology, Microwave Theory and Techniques, and Electron Devices)
Dev Palmer
dev.palmer@us.army.mil

Neural Networks
Mo-Yen Chow
chow@eos.ncsu.edu

Software Job Hunt Collaboration
Harold Meder
hwm@ieee.org

Biotech Job Hunt Collaboration
Esther Lumsden
esther_l@ieee.org

Embedded Systems Special Interest Group
Steve Lund
slund-ieee@pobox.com

K-12 Outreach
Chris Siegl
siegl@ieee.org

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Wilmington Area Members Take Note!

The Lower Cape Fear (Wilmington) Subsection is still building momentum. On Monday, August 18, the LCF subsection held its second general meeting. This one was a presentation by William Dumas of Progress Energy describing its award winning Storm Response program--a program developed and improved with each passing hurricane. It was held at the new Progress Energy building on Military Cutoff Rd, near Wrightsville Beach. One of the Vice-Presidents of Progress Energy, Jeff Corbett, was there as well to answer questions and to meet IEEE members of his community. This was a timely meeting as it took place on the heels of the blackout up north. We chose this meeting to introduce our new Student Activities Chair, Judy Porter, to our members.

Judy is eager to develop student membership in IEEE at both UNCW and Cape Fear Community College. She is the lead instructor in the Computer Engineering Technology department at Cape Fear Community College.

In June, the LCF subsection sponsored a presentation to local IEEE members of UNCW's plans for a Masters degree program in information and computer technology. This was a very well attended meeting, bringing Lower Cape Fear IEEE members from out of town in addition to many software engineers employed at several large manufacturing companies in town.

The LCF subsection has chosen to hold general meetings every other month as interest and momentum builds. We continue to get email from members who are very grateful to see this subsection active again.

Women In Engineering Reach Out to Young Ladies

By Mary Ellen Randall, Women in Engineering Chair

The Women In Engineering Affinity Group of IEEE Eastern NC has been busy developing content for proposed Girl Scout Badges. WIE hopes to reach girls of all ages to get them thinking about engineering as a profession.

The badge will contain activities from many areas of engineering and the girl scouts can select a number of these activities to meet badge requirements. In addition, each badge requires that girl scouts meet with an

engineer and learn about her job, specific area of engineering expertise, and why she enjoys her work. We are looking for volunteers who would be willing to meet with a group of girls for that activity. Please contact merandall@ieee.org if you wish to participate.

Robotics & Automation Society News

Anyone interested in Robotics and Automation, please plan to attend a new society organizational meeting on Thursday, October 16 at 7pm at Ascot Technologies, Inc. 109A Kilmayne Dr. Cary. We will be laying out organizational objectives and planning activities for the upcoming months.

We will be discussing the DARPA Challenge, K-12 Activities for robotics, Speakers, and robotics competitions.

RSVP by October 14 to
acook@ascottechnologies.com

For more information contact:
Grayson Randall
Chair, Robotics & Automation Society
g.randall@ieee.org

Remote Sensing News- Upcoming Events

Congratulations to our newest Chapter—Geoscience and Remote Sensing! Here are some upcoming events:

November 13-14, 2003
CERSER Lecture Series

Sivaprasad Gogineni, Ph.D.
University of Kansas
Electrical Engineering and Computer Science Department
"Microwave Remote Sensing and Applications"

Draft Agenda
232 Dixon Hall, Elizabeth City State University

Thursday, November 13, 2003

11:00am - 12 noon Webcast
Dr. Prasad Gogineni
Understanding Microwave Remote Sensing

2:00pm - 3:30pm Lecture
Dr. Prasad Gogineni
Microwave Remote Sensing and Applications

Friday, November 14, 2004

9:00am - 12noon Microwave Remote Sensing
and Applications Training

12:30pm - 2:00pm Lunch

2:30pm - 5:00pm Microwave Remote Sensing
and Applications Training (Cont)

Spring 2004 Lecture Series

Rm 232 Dixon Hall Elizabeth City State University

Draft Agenda

Wednesday, March 3, 2004

11:00am - 12 noon Webcast
Dr. Keith Raney
"Mapping Sea Bottom Topography with Radar Altimetry from Space"

2:00pm - 3:30pm Lecture
Dr. Keith Raney
"Mapping Sea Bottom Topography with Radar Altimetry from Space"

5:30pm - 7:30pm IEEE-GRSS Chapter Meeting

Thursday, March 4, 2004

9:00am - 12noon Training workshops
Mapping Sea Bottom Topography with Radar
Altimetry from Space
Earth 2.x
Hydrology by Wakefield NWS Office

12:30pm - 2:00pm Lunch

2:30pm - 5:00pm Training workshops Continue

Friday, March 5, 2004

8:30 - 10am Closing Breakfast
10:30 am - 2pm Boat Tour of the Great Dismal
Swamp Canal

Please let me know should you need any further infor-

mation. These agendas are subject to change but the date, place, lecturer and times will remain the same.

Sharon Brown, Project Manager
Center of Excellence in Remote Sensing Education
and Research
Elizabeth City State University
Box 672 1704 Weeksville Road
Elizabeth City, NC 27909
252-335-3992
sbrown@umfort.cs.ecsu.edu

News From K-12 – Chris Siegl Chair

Engineering Explorer Post at Lord Corporation

Explorer Post 350 at Lord Corporation is looking for High School Students interested in Engineering Science and Technology. Lord Corporation has been sponsoring Explorer Post 350 since 1986. The Post meets at 7:00PM the second Monday of each Month at Lord Corporation headquarters in Cary near the intersection of Route 64 and Route 1.

The explorers get hands on experience with a variety of science and engineering experiments. Some recent activities include making nylon, experimenting with lasers, building a trebuchet, experiments with robots, etc. More students are needed for the Post. If you have sons or daughters who are sophomores, juniors or seniors in high school, please pass on the letter with details located at

They are also looking for some parents who would be interested in helping us out. If we get enough help we will make some field trips as well.

Merit Badge College at Duke University Needs Merit Badge Counsellors

The Duke Chapter of the Alpha Phi Omega service fraternity and the IEEE Student Chapter are co-sponsoring a Merit Badge College on November 15th all day at Duke University. We have been asked to help supply Merit Badge Councilors for the following merit badges: Electronics, Electricity, Computer, Radio (also asking for help from RARS), Space Exploration and Engineering. Also would like to do Atomic Energy if we can get Geiger counters and Energy. I currently have much of the equipment needed for electronics and electricity (soldering irons, scopes, PS,

bread boarding strips). I could use a utility electric meter if someone knows where we can borrow one. For computer merit badge we are hoping to borrow some older laptops. If we can find a suitable place to fly the rockets, we will have a rocket building group as well.

If you would like to help, please advise me (siegl@ieee.org). If you have not been a merit badge councilor before, will be planning a short intro class. Merit Badge Councilors need to be registered annually, I will provide the materials. If you have sons involved in scouting, you can bring them to the event, registration will be required. There will be a patch as well as some refreshments.

I have prepared tracking sheets for each merit badge that outline the requirements and a first pass as to how we will support. This will be a lot of fun, come for two hours or for all day.

Recycling Ink Cartridges, Toner Cartridges, and Cell Phones

With the space in landfills at a premium and the concern about toxic substances originating from discarded electronics and the willingness of recyclers to pay for the collection of these discarded items, we have an opportunity to fund more activities in support of K-12. We are presently collecting all ink cartridges (except Epson) and toner cartridges, these are sorted, boxed up and shipped to a recycler who cleans them up and resells to the manufacturers. Cell phones work the same way with the recycled phones being shipped over seas. We are collecting at section meetings and I am asking all the Chapter Chairs to also collect at all their meetings. We hope to get schools and businesses to collect for us as well, we will put the funds back into the local schools and other local activities. This can be quite lucrative, in some other cities groups are collecting in thousands of dollars a year. If you would like to help in the collection, packing and shipping process, please advise me. Also be on the look out for worthwhile projects we should fund or undertake as our collections increase.

Engineer Mentors Sought for Future City Competition

We have been asked to help with the Future Cities competition as well. PENC, ASCE, and ASHE all helped to kick off the Future City Competition

last year. The region would like to expand both the number of schools as well as the professional involvement in the Triangle. Help is needed on the coordinating committee, MENTORS for the teams, judges for the finals, and computer support for the Sim City portion of the contest. See the invitation letter below.

Future Cities Gene Allen, Co-Regional Coordinator, presented a short overview of their program at the September Section meeting.

An Invitation to participate in the 2004 Future Cities Competition

You are receiving this because you have expressed an interest in The Future Cities Competition.

Last Year was the beginning of the Future City Competition in North Carolina and the Ligon Middle School of Raleigh was the first winner. Of 32 schools that registered, twelve persevered to the finals in January at the North Carolina History Museum. The NC Regional winner goes on to the National Finals in Washington D.C. during Engineer's Week. The attached News & Observer article describes the event and the process, as well as the perspective of those who participated.

The competition is aimed at getting students interested in engineering as a career path. There are four parts:

- *the computer design of a city using Sim City software;
- *building an ideal city model using recycled materials;
- *an essay and abstract; and finally,
- *an oral presentation at the finals.

These tasks form a multi-disciplined project requiring a wide range of skills and teamwork. There is good correlation between the standards of learning and this program. The professional engineers in North Carolina assign an engineer mentor to work with the teams to serve as a guide and role model.

Several schools used this as a classroom module, others made it available as an extra curricular club activity. Whichever way you choose, planning now for next year will allow you to start working on your city in September. While the competition does not need large amounts of time, starting Early will give you and the students a much easier task.

This is not expensive. The Sim City software is provided with the registration fee of \$25.00. The cost of the model is limited and the emphasis is on using valueless items for its construction.

The web site, www.futurecity.org has great video clips and detailed rules, as well as on-line registration.

If you are interested, it is not necessary to make a commitment now (registration actually closes in October). We do ask that you chose a representative from your school who we can communicate with as the school year begins. Please have that individual e-mail David Simpson our Co-regional Coordinator at simpsondb@c-b.com or Amy Kurtz at amy.kurtz@earthtech.com. We will put you on our mailing list and keep the school up-to-date with information about participating in the upcoming school year.

It is so important that we start developing the next generation of engineers, architects, and planners to keep our cities and counties running in the future. This competition is a step in that direction. Please participate.

Live for Embedded Systems? Come Join Us!

Embedded Systems Special Interest Group Off to Good Start

The IEEE-ENC Embedded Systems Group held its first organizational meeting on September 4th. Seventeen embedded systems professionals both from within the IEEE membership and the local community were present to help lay the foundation for this new group.

A discussion was held to get input on what would add value for group members and what the group should look like "when we grow up" and came up with these goals and objectives.

- Provide education / workshops.
- Act as a resource base for professionals working with embedded systems.
- Function as a community (connected network).
- Give something back to the community at large. ex. K-12 education.
- Promote awareness of embedded systems outside the group.
- Group will focus on both hardware and software issues.
- IEEE member recruitment.

The next organizational meeting will be held Tuesday, October 7th. The main topic will be a discussion of how to best to implement item 3 above, functioning as a connected community. We will have a presentation on how the IEEE virtual community web tools could be used to accomplish this goal. If you are interested in joining us or would just like more information please contact Steve Lund at slund-ieee@pobox.com

Professional Development Institute Going Gangbusters

Due to circumstances beyond our control, the microMBA classes planned for this year have been postponed until further notice. However, we have brought back the Professional Development Institute (PDI), now co-hosted by our Engineering Management Society chapter. Great topics and more great speakers! Early in 2004, we will start an Entrepreneurship series for you budding Capitalists! Go to <http://www.southeastcon.com/pdi> for more details.

Neural Network Chapter Started



Think Neural Our new Neural Network Society chapter was kicked off on August 19, 2003.

ACME a Meeting of Minds

No roadrunners here! The term "ACME" may mean the best to you, or it may bring up visions of Wyle E Coyote, but it is our newest chapter! Made up of the Antennas and Propagation, Components, Packaging, and Manufacturing Technology, Microwave Theory and Techniques, and Electron Devices societies, it is headed up by Dev Palmer and is already going gangbusters.

Farewell John!



John Gibson our 2003 Section Chair, has bid adieu to take on a new position in California. At the July meeting of the section Executive Committee (excom), the excom

appointed Dr. Abhinav Aggarwal, our 2003 Vice Chair, Section Chair for the remainder of the 2003 term. Dave Ruden, our Treasurer, was given the additional duty of interim Vice Chair. Congratulations Abhinav and Dave, and best of luck John!

Calendar

As always, the latest calendar information can be found on our website. <http://www.ieee.org/encs>, select "Calendar"

Tuesday, October 7, 2003

Embedded System organization meeting #2
6:00 pm - 8:30 pm (EST)
Location: ISA, 67 T W Alexander Dr, RTP
Embedded Systems - 2nd Organizational meeting
- Embedded Systems engineering, hardware, software.
Its not too late to join us in developing the direction of this
new and exciting affiliation group!

MEETING DETAILS:

Time: 6:00 P.M. for sandwiches
6:30 P.M. meeting begins

Location: ISA Training Center
67 T W Alexander Dr
Research Triangle Park, NC 27709

RSVP: By Monday October 6th. so we know how many sandwiches to order.

Tuesday, October 14, 2003

Professional Development Institute:
"Management Skills for New Supervisors"
5:30 PM—9:00 PM
ISA, 67 Alexander Dr, RTP
See <http://www.southeastcon.com/pdi> to register

EMC Society Meeting
5:30 pm - 8:30 pm (EST)
Location: Sanmina-SCI
Tuesday October 14th at Sanmina-SCI: Nicholas Binno, Sanmina-SCI
Stop by for pizza and drinks around 5:30PM, and the presentation will begin at 6:00PM.
Presentation title: Embedded Passives Technologies and Buried Capacitance
Nicholas' presentation will cover newly developed (less than 2 mil thick) BC laminates that shall allow circuit designers to make significant advances in electronic systems speed, performance and reduce overall product cost. An abstract and Nicholas' bio are attached.
After the presentation, Rajesh Sutariya of Sanmina-

SCI would be pleased to conduct a tour of the facility to all who are interested.

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Web: www.compliance-engineering.com
Email: robb@compliance-engineering.com

Thursday, October 16, 2003

Robotics and Automation Society Organizational Mtg
See article on page 2 for more information

Thursday, October 23, 2003

Introduction to CMMI
10:30 am - 12:00 pm (EST)
Location: EMC at 62 TW Alexander Dr. in RTP
CMMI is the integrated CMM covering Software, etc.
Presenters: Eric Buchholtz and Andrew Cordes of ABB
The Software Process Improvement Network welcomes IEEE to its meetings.
Note: The meeting actually starts at 10:20.

Tuesday, November 4, 2003

EMS & PDI present: Risk Management Workshop
6:30 pm - 8:00 pm (EST)
Location: ISA at Alexander Dr. in RTP
Abstract: According to the Standish Group three out of four software projects fail or did not meet their original goals. This presentation will cover ways to identify typical risks that can derail software projects such as requirements risk, integration risk, business risk, political risk and so on. Mr. Murthi will discuss ways to integrate more proactive risk identification and management into the software development process. The focus will be on hands on ways of managing risk and less on theoretical aspects. He will compare and contrast this with traditional methods of risk identification and management. The presentation will use many real life examples and anecdotes from Mr. Murthi's varied experience. We will end with an informal workshop in which audience members will get a chance to try out the risk evaluation process for themselves.
Speaker: Mr. Sanjay Murthi