

## Newsletter

### IEEE-SECTION CHAIR COLUMN

**Roger Lawrence**

2006 IEEE Eastern NC Section Chair.  
[rogerlawrence\(at\)rglsolutions.com](mailto:rogerlawrence(at)rglsolutions.com)

Seasons Greetings to you all for A Happy Christmas and A Healthy Prosperous New Year and thank you for your support during 2006.



As we wind up 2006 the most important task remaining is your vote for officers for 2007.

You can vote on line or by mail, so please take the opportunity to use your vote. Details are set out below and at our website.

In October IEEE ENCS formed a new chapter ... the Industrial Electronics Society (IES) This new chapter is synergistic with the efforts of PES, IAS, RAS, and CIS and is a welcome addition to the Section activities. We hope you will take time to attend the meetings and help

make this new venture a success. Our thanks to Professor Mo-Yuen Chow for facilitating this.

We have held two technical meetings that allowed attending members to earn professional development hours. Next year, the plan is to offer more. As always we try to respond to your needs and we welcome your input at and for all meetings.

Our senior membership is growing and we encourage you to become a senior member if you have the desire and satisfy the requirements. Details can be found on-line.

The Stargazing event held 15 December was well received. Our thanks to WCPE for their gracious hospitality and to Chapel Hill Astronomers, members of CHAOS, who brought along telescopes and the benefit of their knowledge and expertise. There was a seasonable nip in the air as the group enjoyed mulled cider and cookies in the spirit and camaraderie of the season. Some meteors were sighted.

Best wishes for a safe and happy holiday season,

Roger

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An electronic version of this and previous Newsletters can be found at:

[ewh.ieee.org/r3/enc/nl.htm](http://ewh.ieee.org/r3/enc/nl.htm)

## EASTERN NC SECTION OFFICER ELECTION

**Dave Ruden**  
**IEEE ENCS Past-Chair 2006**

Holiday greetings to all our members - and vote! We've had a great year in the Section and our leadership is on track to continue this trend for next

year. Roger Lawrence and Thomas Jepsen are running for Section Chair and Vice-Chair, respectively, for 2007, and Jai Arun and Dev Palmer are following on for Treasurer and Secretary.

Please show us your support by placing your vote online ([ewh.ieee.org/r3/enc/vote](http://ewh.ieee.org/r3/enc/vote)).

Write-in candidates are always welcomed, but we remind you that it's much easier for write-ins if brought to our attention 3 or 4 months prior to our election season (end of year). Best to all!

(ballots accepted through January 1, 2007) ♦

### 2006 IEEE Eastern North Carolina Section – Election Ballot for 2007 Section Officers

Position	Vote Here	Candidate	Vote Here	Write-In Candidate
Chair		Roger Lawrence		
Vice Chair		Tom Jepsen		
Treasurer		Jai Singh Arun		
Secretary		Dev Palmer		

IEEE Member # \_\_\_\_\_ (Required for voting by mail)

**Mailing address for ballots: Dev Palmer, 146 Pinecrest Rd, Durham, NC 27705-5813**

Web address for online voting: [ewh.ieee.org/r3/enc/vote](http://ewh.ieee.org/r3/enc/vote)

## Eastern North Carolina Section

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### Web Ballot for 2007 Section Officers

**Ballots will be accepted through January 1, 2007.**

Instructions:

Enter your IEEE membership number in the field provided. This information will be kept separately from the election tally.

The person nominated by the Nomination Committee is pre-entered in the fields below. To write in another candidate, simply replace that name with the name of your preferred candidate.

*If you wish to vote for the nominated candidates, you only need to enter your membership and click on "Submit".*

**Your membership number:**  ←Required to validate your ballot

For Chair:	<input type="text" value="Roger Lawrence"/>	**
For Vice-Chair:	<input type="text" value="Thomas Jepsen"/>	**
For Treasurer:	<input type="text" value="Jai Singh Arun"/>	**
For Secretary:	<input type="text" value="Dev Palmer"/>	**

\*\* you may replace with a write-in candidate

**Click to send your ballot:**

Your ballot information will be sent to both the Section Secretary and the Section Past Chair.

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## "IMPLEMENTATION OF A POLAR SCIENCE TERAGRID GATEWAY FOR SAR AND OTHER CRESIS DATA SETS

Linda Hayden

On October 19, 2006, the Center of Excellence in Remote Sensing Education and Research (CERSER) continued the Distinguished Lecture Series with Dr. Geoffrey Fox of Indiana University as the guest speaker. Dr. Willie Gilchrist, Chancellor, ECSU, opened the meeting with a greeting to guests and a welcome from the University. Dr. Gilchrist is currently serving as Interim Chancellor at ECSU and threw his full support behind the IEEE-GRSS and CERSER programs.



Dr. Fox

Dr. Fox is the Director of Community Grids Laboratory; Pervasive Technology Laboratories at Indiana University. Dr. Fox is currently working with the Minority Serving Institutions in the development of a cyber-infrastructure. A major part of this development is the use of Grid technologies to build collaboration systems and their application in distance education. This technology includes a Web based structure for audio-video conferencing. His presentation was titled "Implementation of a Polar Science TeraGrid Gateway for SAR and other CReSIS Data Sets".

Dr. Fox has worked in a variety of applied computer science fields with his work on computa-



Dr. Gilchrist

tional physics evolving into contributions to parallel computing initially involving the hypercube architecture. Publications 9) and 10) represent significant broad contributions to parallel computing. He has led activities to develop prototype high performance Java and Fortran compilers and their runtime support. He helped set up the Java Grande forum to encourage use of Java in large-scale computations. He has worked on the computing issues in several application areas ? currently focusing on Chemical Informatics, DoD Information systems (3) and Earthquake Science (4). Fox is working with the Minority Serving Institutions in systemic deployment of Cyber-infrastructure. This builds on a long standing interest in parallel computing and other applied computer science interdisciplinary curriculum (5). A major activity has been the use

### Editor's Note:

#### E-mail addressing notation

Due to concerns about spam, all email addresses are ciphered by replacing the at-sign with (at) and the dot-org/com ending with a bullet. In case you wondered, we did not invent a new protocol, but just a "different" way to present the information

of Grid technologies to build collaboration systems and!

their application in an integrated approach to synchronous and asynchronous distance education. This includes a Web service framework for audio-video conferencing (6). The Gateway computational portal was one of the earliest computing environments to integrate object and grid technologies. Fox co-chairs both the Semantic Grid and Grid Computing Environment (GCE) research groups of the Grid Forum (GGF) and is a member of the GGF Steering Group

The Lectures Series was followed by a meeting of the Northeastern North Carolina Chapter of the IEEE Geoscience and Remote Sensing Society (GRSS). Dr. Linda Hayden, Assistant Dean of the School of Mathematics, Science and Technology and President of the NE NC Chapter of IEEE-GRSS greeted the guests.



In conjunction with the CERSER Distinguished Lecture Series, a group of individuals from throughout the U.S. met in a strategy session to map out a new project entitled The CI-TEAM

Implementation Project Cyber-Infrastructure for Remote Sensing of Ice Sheets. This project is being supported by the National Science Foundation. The vision for this project is to prepare the current and next generation of traditionally underrepresented minority scientists, engineers and educators with the knowledge and skills necessary to conduct interdisciplinary research in areas including cyber-infrastructure, remote sensing, engineering and modeling related to glaciers and ice sheets.



Highlights from the November 2006 Distinguished Lecture by Dr. Fox can be viewed at [http://cerser.ecsu.edu/06events/061019dls/dls\\_lecture.html](http://cerser.ecsu.edu/06events/061019dls/dls_lecture.html). The next Distinguished Lecture and GRSS Society meeting will be held at 2:30pm in 229 Dixon Hall, ECSU on March 20, 2007. Dr. Robert Bindschadler, scientist with NASA's Goddard Space Flight Center will be the speaker. The topic will be "Understanding the West Antarctic Ice Sheet from Space: Beyond dogsleds and frozen toes. ♦

## EMBEDDED SYSTEMS GROUP

### Bob Michael

On Monday January 22, 2007 David Simmons will present Project Sun SPOT (Sun; Small Programmable Object Technology). This is a snapshot of ongoing research in Sun Microsystems Laboratories. Based on Sun's experience with Java and the KVM and its use in cell phones, they thought that applying Java to an embedded Sensor Networks Platform would be an intriguing area for further work. In November of 2004, Sun Labs started project Sun SPOT to build sensor hardware and to adapt a small, flexible Java Virtual Machine to that platform.

Sun created a platform that greatly simplifies development and experimentation with small wireless devices by basing the Sun SPOT platform on Java technology-top to bottom, hardware and software. This has made it easier to write code for small wireless transducers, sensors, and other consumer electronics devices. Developers can write a program in Java, load it on a device, run it, and debug it with standard Java IDEs. Unlike other embedded systems, SunSPOT developers are able to use industry standard Java development tools such as Netbeans or Eclipse. The SunSPOT team is also introducing SPOTWorld, which is a single tool for programming, configuring, managing and monitoring SPOT devices. SPOTWorld addresses

the issues of programming and managing hundreds of devices spread out over a large area.

The Sun SPOT team has also made it possible to add strong security without compromising the limited memory and processing capabilities of small devices. Sun Labs' ECC implementations power a small-footprint, secure Web server stack (including HTTP and SSL), so you can monitor and control them securely via a Web browser.

David's talk will address ALL of these issues in more detail. He will also show demos of a wide array of sensors adapted to the Sun SPOT platform, and demonstrate the actual development and deployment of a Sun SPOT application using Java, NetBeans and the Sun SPOT SDK.

### Speaker Bio:

David Simmons has been employed by Sun Microsystems for over 10 years, working on the development and market acceptance of advanced products like Sun SPOT, Project Honeycomb (archival storage), Sun Ray, etc. and has been a researcher in Sun Labs for 3 years. Prior to joining Sun he was a Network Applications developer for secure network applications at Los Alamos National Laboratory. ♦

## CONTACT INFORMATION FOR IEEE EASTERN N.C. SECTION

### 2006 Officers and Volunteers

#### Section Officers

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#### Committee Chairs

Awards & Recognition

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### Chapter Chairs

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State Educational Society

**Steve Walsh**

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### Special Interest / Affinity Chairs

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IEEE-ENCS CARE Representative

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#### Online Links

ENCS Homepage

[www.ieee.org/encs](http://www.ieee.org/encs)

ENCS Calendar

[http://ewh.ieee.org/cgi-bin/cal/  
calendar.pl?month=10&calendar=enc&  
month=9](http://ewh.ieee.org/cgi-bin/cal/calendar.pl?month=10&calendar=enc&month=9)