

# the Beacon

Enjoy the Maine  
Fall!

The Monthly Publication of the Maine Section, IEEE [www.ieee.org/maine](http://www.ieee.org/maine)

## Chairman's Message

Let's Give 'Em a Hand

by Brian Conroy, Chair

October '01  
Volume 11  
Number 2

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Do you know an engineer who's always performed above par and deserves a bit of recognition for it? Is there a student in your chapter that always goes the extra mile? Well, there are ways to show that person you recognize and appreciate that extra effort.

IEEE has a whole bunch of awards available. Below is a list of awards available and the accomplishment they're intended to recognize:

- **Innovation Award:** To recognize the accomplishment judged to be the most innovative and effective in fulfilling one or more of the goals and objectives of the Regional Activities Board (RAB).
- **Larry K. Wilson Regional Student Activities Award:** To honor a student in each region for an extraordinary accomplishment in student activities.
- **William W. Middleton Distinguished Service Award:** To recognize an individual who has given distinguished service over an extended period of time to the RAB.
- **Outstanding Student Branch Counselor/Advisor Award:** To recognize the outstanding faculty counselor or advisor to a student branch for contributions to the IEEE.
- **IEEE Bendix Award of Allied-Signal Inc.:** Presented to fund student branch engineering projects.

- **Student Paper Competition Certificate:** To recognize the top papers in the Student Paper Contest.
- **Outstanding Student Certificate:** Presented in recognition of outstanding contributions to student branch activities.
- **Meritorious Achievement Award in Continuing Educational Activities:** To recognize IEEE members who have distinguished themselves by their contributions and accomplishments to the design, delivery or management of continuing education activities that are available to IEEE.
- **Major Educational Innovation Award:** To recognize IEEE members who have distinguished themselves by outstanding innovation that has demonstrated a major impact in the educational field that is appropriate to the mission of the IEEE.
- **IEEE Maine Section Electrical Engineer-of-the Year Award:** To recognize a Maine Section IEEE member for significant achievements in the field of electrical engineering.

Please let me know if any student or engineer came to mind when you read about these awards. I will work with you to submit a nomination and track its status. I know we have members out there quietly supporting the section and its chapters. It's time they got the recognition they deserve.

[brian.conroy@cmpco.com](mailto:brian.conroy@cmpco.com)



**Maine IEEE Chapter of  
Electron Devices & Computer Societies**



*Presents*  
**A Hands-on Introduction to Mathematica and Its  
Applications in Digital Signal and Image Processing**

University of Southern Maine, Gorham\*, Maine  
Friday, 9:00 AM to 4:00 PM November 16, 2001

This one-day tutorial will introduce you to perhaps the most versatile and powerful mathematical tool on the market. Mathematica is a truly unique fully integrated technical computing system, combining interactive calculation (both numeric and symbolic), visualization tools, and a complete programming environment.

“Hands-on Introduction to Mathematica and Its Applications” will familiarize you with the environment, the language, its strengths and weaknesses, and problem solution fundamentals using Mathematica. Following a brief introduction to Mathematica basics, the course will include topics such as programming, performance of large scale computations, interfacing with C, Java, development of large scale applications and digital image processing with Mathematica.

Attendees will run Mathematica and applications on the computers available in the classroom. The course is divided into two sessions:

- (1) Morning: Introduction, Hands-on Problem Solving and Programming with Mathematica,
- (2) Afternoon: Hands-on Digital Signal and Image Processing with Mathematica.

**INSTRUCTOR**

Dr. Mariusz Jankowski received the Ph.D. in Electrical Engineering from the City University of New York in 1989. He is currently Associate Professor of Electrical Engineering at the University of Southern Maine. His primary research interests are in the development of novel image processing algorithms for image enhancement, segmentation, shape description, and recognition with application to biomedical imaging and computer vision. Dr. Jankowski is the developer and the author of the "Digital Image Processing Application Package for Mathematica" which was released in 2000.

Lunch and coffee breaks are included in the price. Each attendee will be provided with a printed copy of course materials. These will also be available for downloading and self study after the conclusion of the course.

**REGISTRATION**

Mail checks to Maine IEEE CS/EDS: to:

Prof. Mustafa G. Guvench  
Chair, CS/EDS Chapter of IEEE Maine  
University of Southern Maine  
108 John Mitchell Center  
Gorham, ME 04038 Ph. (207) 780-5581

Name:	
Street:	
City:	
State:	ZIP:
E-mail:	
Phone/Fax:	

Seating is limited and will be on first come first served basis. Early registration will be acknowledged by mail and will include a USM parking permit and directions.

**CONTACT**

For more information:  
See <http://www.ewh.ieee.org/r1/maine/>, or  
send e-mail to: [guvench@maine.edu](mailto:guvench@maine.edu)

\* Gorham is a suburb of Portland, Maine about 7 miles west of I-95

<b>TUITION:</b>	Early Registration	After Nov 9th
Lunch included		
IEEE Members	\$100	\$125
IEEE Students	\$50	\$65
Others	\$125	\$150

## Learn the Latest about Carbon Nanotubes from an IBM Researcher

The Maine CS/EDS chapter is pleased to announce that Joerg Appenzeller from IBM's Watson Research Center, Nanometer Scale Science and Technology will present a talk entitled "Beyond Silicon Technology: Electron Transport in Carbon Nanotubes" on November 1, 2001. The talk will take place at National Semiconductor's Moosehead Conference Room (Bldg 3), South Portland, ME at 5:30 after a 5:00 social. Buffet dinner will follow (\$20). Contact Chan Sinnett ([chan.sinnett@nsc.com](mailto:chan.sinnett@nsc.com)) for reservation and security details by **October 23, 2001**. -- And YES, this talk relates to the recent news about IBM's breakthrough in using Carbon Nanotubes as logic circuits!

## Mead-Rumford Plant Tour and Speaker

The Maine PES/IAS Chapter is pleased to announce a meeting at the Mead-Rumford paper plant on November 13, 2001. The meeting will consist of an afternoon plant tour of the Mead-Rumford facility, with dinner and an evening speaker. The registration cost will be \$20 to cover the meal. Reservations can be made by contacting Curt Beveridge: Tel. (207)623-3521 ext. 2118 or by E-mail to [curtis.beveridge@cmpco.com](mailto:curtis.beveridge@cmpco.com). More details will be included in the November *Beacon*, including directions and meal choices. Remember, the November *Beacon* should be available online at the Section website ([www.ieee.org/maine](http://www.ieee.org/maine)) around the 1st of November. The tentative meeting schedule follows:

- 3:00 PM Meet for Plant Tour Orientation
- 3:15 PM Plant Tour Begin
- 5:00 PM End Plant Tour
- 5:30 PM Pre-Dinner Ice Breaker
- 6:00 PM Dinner
- 7:00 PM Program

## Electronic Beacon Delivery and Personal E-mail Aliases

Maine Section members are encouraged to subscribe only to the electronic version of the *Beacon*. Each subscriber will receive an e-mail notification whenever the latest issue of the *Beacon* is posted online. Electronic delivery of the *Beacon* ensures timely notification of all Section activities and reduces Section mailing expenses. Instructions for subscribing to e-mail notification for the *Beacon* can be found on the Section website: [www.ieee.org/maine](http://www.ieee.org/maine) It is very important that subscribers keep the Section informed of their current e-mail address. This process can be greatly simplified if a member obtains an IEEE personal e-mail alias. With a personal e-mail alias, a member only has to notify the IEEE whenever their e-mail address changes. Messages addressed to the [alias@ieee.org](mailto:alias@ieee.org) will automatically be forwarded to the real Internet e-mail address. The IEEE address for obtaining a personal e-mail alias is: <http://elecomm.ieee.org/personal-aliases.shtml>

## Annual Dinner: Magic of Christmas

The 2001 Maine Annual Dinner and Christmas Concert Social will be held on Saturday, December 15. Concert tickets are available at the group rate of \$29/person (\$5 savings). Dinner arrangements being finalized and will be announced in the November *Beacon*. To reserve your tickets, contact Dave Potts at 775-4633 or [potts@ieee.org](mailto:potts@ieee.org).

- 4:00 PM Social
- 5:00 PM Dinner
- 6:30 PM Kotzschmar Organ Concert
- 7:30 PM Magic of Christmas w/ Portland Symphony

## Video Short Course: Sub-100nm CMOS

Join the Maine CS/EDS for a viewing of the 1999 IEDM short course "Sub-100nm CMOS"! This videotape and ~400 page booklet is on loan from the EDS society, with permission for multiple viewings and copies of the book. There are four tapes (1:40, 1:10, 1:30, 1:50) for a total of 6 hours and 10 minutes of instruction. For a description of the course, see the website: <http://shop.ieee.org/store/product.asp?prodno=EV5538> (where the course is available for purchase at \$450) We plan to make the viewing and booklet available for just \$20 each for the whole course. Contact coordinator Chan Sinnett ([chan.sinnett@nsc.com](mailto:chan.sinnett@nsc.com)) to sign-up and make arrangements to join one of our viewing sessions. One of the viewing series is scheduled for Oct 10 (tape 1), Oct 15 (tapes 2 & 3) and Oct 17 (tape 4) at 5:30 at the USM Gorham campus. Non-members are welcome.

## Small Business Innovation Research Program SBIR

The SBIR Program was established in 1982. Each year, ten federal agencies reserve a portion of their extramural R & D funds to award to small businesses with new and innovative ideas that will lead to commercialization. SBIR is a three-phase program, with awards of up to \$100,000 to demonstrate feasibility of the idea and up to \$750,000 in Phase II for prototype development. Phase II is the commercialization phase and is not federally funded.

Nationally, \$1.2 billion is available for awards to small businesses under this program. Last year, Maine companies obtained \$2 million in SBIR awards.

The National Science Foundation will open its solicitation for proposals in the fields of biotechnology and electronics on October 1. In the area of electronics, NSF seeks advanced research proposals in innovative electrical, electronic, microelectronic and photonic technologies. Applications of these technologies can range widely in telecommunications, computational capabilities, detection and sensing systems, instrumentation and control systems, and microelectronic manufacturing to name a few. Other solicitations open during the fall are National Institutes of Health, Department of Defense and Department of Commerce. If you would like to learn about this program for small innovative businesses, please call Pat Rice at 207-942-6389 at the Market Development Center.

# Beacon Publishing

The Beacon is published on a monthly schedule based upon the need to advertise upcoming meetings. All material submitted for the Beacon must be received by the editor no later than the 15th of the month preceding the issue in which it should be included. Sorry, NO EXCEPTIONS!!

**Send articles to:**

George Elliott, Editor  
University of Maine  
5708 Barrows Hall, Rm. 15  
Orono, Maine 04469  
207-581-2350  
gelliott@eece.maine.edu

**Circulation issues? See:**

Stan Koski, Circulation  
Central Maine Power  
Edison Drive  
Augusta, Maine 04336  
207-626-9870  
stanley.koski@cmpco.com



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