

# the Beacon

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



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On occasion, I am asked what I do for a career. When I tell them I am an electrical engineer, I inevitably get one of two reactions. The first reaction is that they are impressed that I am in such a challenging career. The other reaction is they ask if I have trouble relating to society. I guess the so-called nerd association will not go away. Either of these two reactions allows me to explain what an electrical engineer does. So that brings me to the topic of this article. Why is it that TV programs and society in general tend to focus on lawyers and doctors? Are those careers more interesting, fun, or desirable than a career as an engineer? Is there some sense from society that lawyers and doctors are more important to society? I've thought about those and I'll try to give you my opinions.

Without medical professionals, our life spans would not be what they are today. Many medical professionals are compassionate, hard working folks who provide care to those who are needy. I ask myself how I would respond to a career that regularly exposes me to those who have some condition that makes them feel less than 100%. How can these medical professionals maintain such a caring attitude after working with patients all day? It is a gift that I am thankful they have.

Lawyers are responsible for reviewing laws and ensuring that they are being followed. They help to write some of the laws that serve to protect us. They will defend us against legal actions and advise us as to the best course of action. They also will prosecute those who cause harm to the public. In general, they assist societies to maintain order. Imagine a society in which

there were no laws. Who would feel safe in such a society?

Before you go and consider a change in career, let's consider how electrical engineers assist these other professions. How could a medical professional complete a diagnosis without the MRI or CAT scan? What if there were no X-ray machines? Medical professionals could perform rudimentary diagnoses but they would not have nearly the accuracy they do today. How could the Lawyer review all of the laws and judgments without the computers and the databases to search? How could some evidence be obtained? It's easy to see how either profession would not have advanced without electrical engineers working behind the scenes.

So, I've accepted the fact that electrical engineers work behind the scenes. I take satisfaction when I read an article about a new medical discovery that could not be made without the latest electron microscope. I appreciate my field when a criminal has been captured thanks to a comprehensive database that has matched fingerprints or DNA. Thanks to electrical engineering, our lives are immensely better. According to the National Academy of Engineering, electrification is the greatest invention of the 20<sup>th</sup> century. With energy demand, pollution, and greenhouse gas becoming more significant, intelligent and efficient electrification might well be the 21<sup>st</sup> century's greatest invention. As a member of IEEE and an electrical engineer, I am excited to be a part of the solution to the future issues. I'm also fine with the fact that maybe I won't have a car named after me but I'll help get that car on the road.

## Chair's Column

by *Paul Villeneuve*, Section Chairman

# **Annual IEEE Holiday Gathering planned for Saturday, December 12**

Please join your fellow Maine Section IEEE members for our annual Holiday Gathering. This year, as last year, the event will include a social gathering and dinner followed by attendance at the Portland Symphony Orchestra's Magic of Christmas concert performed in the Merrill Auditorium located in the Portland City Hall. The dinner, preceded by a social hour, is set up for Grace restaurant which is located on Chestnut Street, only a block or two from City Hall. This means that after dinner everyone should be able to walk to the concert.

Please plan on attending what should be a great evening of socializing and entertainment with your IEEE colleagues. The details you need to know about the Holiday Gathering are listed below.

## **Dinner/Social**

**Location:** Grace Restaurant, 15 Chestnut St., Portland

**Social time:** 4:30 - 5:15 PM  
(Passed hors d'oeuvres and cash bar will be available)

**Dinner:** 5:15 - 6:15 PM

**Coffee and Dessert:** 6:15 - 7:00 PM

The following dinner entrée selections are available:  
(Each entrée includes a salad course)

1. Wild Mushroom Risotto  
*Roasted Pumpkin/Truffled Goat Cheese*
2. Beef Rib Roast  
*Horseradish Sauce/Fried Green Beans/Fingerling Potatoes*
3. Herb Roasted Turkey  
*Cranberry Chutney/Potato Gratin*
4. Applewood Smoked Ham  
*Sweet Potatoes/Braised Red Cabbage/Mustard Sauce*

Please select, by number, one of the above menu choices for each attendee when you register.

## **Magic of Christmas Concert**

The concert begins at 7:30. The Maine Section has reserved two blocks of seats (40 total) in Merrill Hall at

group discount prices. Seats in the larger block of 27 are \$32 while those in the smaller block of 13 go for \$23. Because of the limited number of seats available at the group rate, people who plan to attend the MOC concert should register early. The Maine Section could arrange for the purchase of seats if the original 40 are spoken for, but the price may be higher and there is no guarantee that the seats will abut one of the original blocks of seats.

## **Cost and Registration**

The cost of the dinner is \$30 per person. As stated, the concert tickets are \$32 and \$23 each, with the \$32 purchasing a slightly better seat.

You can register for the event at the Section web site [www.ieee.org/maine](http://www.ieee.org/maine). The event will be listed under Upcoming Events and there will be a link to a registration site that allows you to register online.

The deadline for registration for the concert at the discount prices is November 14. People can register as late as December 9 for the dinner, but keep in mind that the number of seats for dinner is limited to 42.

Please contact George Elliott at [gelliott@eece.maine.edu](mailto:gelliott@eece.maine.edu) or 207.990.23250 if you have any questions or need help with concert tickets.

## **Directions and Parking**

Directions to the restaurant can be found on the restaurant's web site: [www.restaurantgrace.com](http://www.restaurantgrace.com). Click on "contact/directions" at the bottom of the homepage.

Plenty of parking is available in the vicinity of Merrill Hall. A good web site to find parking facilities is: [www.portlandmaine.com/directions.html](http://www.portlandmaine.com/directions.html)

## **Upcoming Events**

1. *Special Presentation on WiMax*  
Nov 11, 2009 at 2:00PM  
Arthur St. John Hill Auditorium, Barrows Hall,  
UMaine, Orono  
For details, see pdf announcement sent with this Beacon
2. *1<sup>ST</sup> Membership Meeting, Maine Women in Engineering and Science (MWIES)*  
Saturday, November 7<sup>th</sup> at 11 AM  
See announcement on page 4 for details

## **PES/IAS Chapter sponsors very successful Smart Grid Tutorial**

by *Paul Lerley*, Past Section Chairman

On June 30<sup>th</sup>, the PES/IAS Chapter sponsored a 4-hour tutorial on a Smart Grid theme at the USM Abromson Centre in Portland. The combination of topics, presenters, venue, timing and the opportunity to gain Professional Development Hours credits resulted in an unusually successful meeting. A record 72 attendees showed up, 51 of which were IEEE members. Such a turnout brings delight to the volunteer meeting organizers! The tutorial subjects included concepts and applications of GPS based Synchrophasors measurements in power grids, with a demonstration of real time measurements from far points on the Earth via the Internet. Armando Gusman and Venkat Mynam, from Schweitzer Engineering Labs, flew in from Pullman, WA to make an outstanding presentation of the subject. Their biggest challenge was to limit the amount of information to fit into the available time. They are really experts on the synchrophasor theory and applications. Many attendees expressed their satisfaction – and were probably glad to have taken the time to attend the event.

Also on the program was Dr. Mohamad Musavi, Professor and Chair of the Electrical & Computer Engineering Department of UM. His presentation covered aspects of the Smart Grid initiative and the opportunities generated by the federal stimulus grants. It was refreshing to have the UM participating on this tutorial and to see UM faculty actively pursuing advanced power research.

The PES/IAS Chapter is planning more tutorial, to be announced in the near future. Keep supporting us!

## **PES/IAS Chapter welcomes new Secretary**

The PES/IAS Chapter welcomes Michael Rossignol to the Chapter's Excom. Mike will fill the Secretary position that has been vacant for some time. Mike is a recent UM graduate, is employed by Central Maine Power, just joined the IEEE and has now taken a volunteer position. Thanks and congratulations Mike! We look forward to working with you.

## **Women in Engineering (WIE) affinity group now part of Maine Section**

by *Lucie Hutchins*, MWES Chair

We are very pleased to announce the approval of the IEEE Maine Section WIE Affinity Group on July 14, 2009 . Thank you for all your support. We could not have done it without your motivation and hard work. A special thanks to the Maine Section Executive Committee, the University of Maine, and the Jackson Laboratory.

### **Our Mission :**

WIE is dedicated to facilitating the development of programs and activities that promote the entry into and the retention of women in engineering, science and mathematics , to enhance the career advancement of women in the profession, and to promote IEEE membership and retention of IEEE women members.

### **Our Goals:**

1. Promote math and science in Maine elementary schools, junior high and high schools in order to encourage girls to pursue careers in mathematics, science, and engineering.
2. Increase the enrollment of Maine girls in STEM (science, technology, engineering, and mathematics) programs.
3. Plan joint networking programs/events with other women professional societies in Maine and nationwide.
4. Provide women engineers/scientists as speakers and/or as mentors to young women about careers in engineering and science.
5. and more ...

Our group is opened to everyone: students, engineers, scientists, educators, parents, etc. If you are already an IEEE member, please add our WIE affinity group to your membership .

Please visit our web site at:  
[www.mainewomeninspace.org](http://www.mainewomeninspace.org)

Follow us on Twitter at: <http://twitter.com/mwies>

Join us on Facebook at: <http://www.facebook.com/pages/Maine-Women-In-Engineering-And-Science-MWIES/85063954414?v=wall>

Join us on LinkedIn: <http://www.linkedin.com/groupInvitation?groupID=1923138&sharedKey=2C59850A09F2>



# Maine Women in Engineering and Science (MWIES)

## 1<sup>st</sup> Membership Meeting

Do you want to promote excellence in our education system?  
Do you want to help your local school, school district?  
Do you want to help our future Engineers, Scientists, Educators, Mathematicians, ... ? Do you love science, math or engineering? Are you a mathematician, engineer or a scientist? Do you want to encourage engineering, math, and science in young people, especially girls?

If so, please join us for the first Maine Women In Engineering and Science membership meeting where we will discuss possible projects and activities **to promote engineering, science and math to young girls in Maine schools.**

**Saturday, November 7<sup>th</sup> at 11 am**

The Maine Grind  
Downtown Ellsworth, 192 Main Street

**Our Mission:** WIE is dedicated to facilitating the development of programs and activities that promote the entry into and the retention of Maine women in engineering, Mathematics, and Science related programs, enhance the career advancement of women in the profession, and promote IEEE membership and retention of Maine IEEE women members.

Lucie Hutchins, chair of MWES

<http://www.mainewomeninscience.org/>

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Photos from the Maine Section Annual Meeting taken during a tour of  
Independent Energy's Topsham Hydro facility  
on the Androscoggin River,  
June 26, 2009

