



## IEEE NEWS FOR FEBRUARY 2010

Jacob Z. Schanker, P.E., Newsletter Chair  
Rochester IEEE home page at: <http://rochester.r1.ieee.org>

(Always check the web PDF edition for late changes and additions)

### **Rochester Section Meeting - Tuesday, February 2, 2010**

The next Rochester Section business meeting is on Tuesday, February 2, 2010 at Noon, at the Shanghai Restaurant, 2920 West Henrietta Road, just south of the intersection with Brighton-Henrietta Town Line Road.

Any IEEE member is welcome to attend and to participate, or just to observe. Lunch is only \$3 for IEEE members. No reservations or RSVP is needed, just show up.

### **Message from 2010 Section Chair Alex Loui**

Dear Members of the Rochester Section: As we enter the new decade, I would like to wish everyone a rewarding and productive new year. It is my honor to serve as Chair of the Rochester Section for 2010. I intend to work closely with the new section officers to better serve the IEEE members in our area.

The Rochester Section is one of the larger sections within IEEE Region 1 (Northeast US) and has a long history as an engineering society in the greater Rochester area. Currently we have about 15 active chapters, societies, affinity groups, and student branches within our section. In 2010, I plan to encourage more technical activities for the various chapters and societies, which are the main venues for our members to interact with their colleagues and industry leaders, as well as to learn about new technology and development. In addition, we hope to engage our student branches to foster better communication and interactions with the section and members in general. We have also begun our planning for the annual Joint Chapters Meeting to be held in late March this year. More details will be forthcoming.

We truly appreciate all Excom members and volunteers, as well as Dr. Paul Lee for his leadership in the past year.

For more information about our section please visit our website at <http://www.r1.ieee.org/~roch/>, which we will be updating regularly. Lastly, I hope you would help our section to grow by inviting your colleagues and co-workers to consider joining the IEEE in 2010. — Alexander Loui, Ph.D., Chair, IEEE Rochester Section

## **IEEE GRSS Chapter Seminar - February 23**

The Western New York chapter of the IEEE Geoscience and Remote Sensing Society and the Central New York Region of the American Society for Photogrammetry and Remote Sensing will jointly present a technical seminar.

**Title:** Monitoring Forests with Hyperspectral and Polarimetric Radar Sensors

**Speaker:** Dr. David Goodenough, Department of Computer Science, University of Victoria, Victoria, BC.

**Date:** Tuesday, February 23, 2010

**Time:** 4 PM, Refreshments served at 3:30 pm

**Location:** 408 Baker Laboratory, SUNY College of Environmental Science and Forestry, 1 Forestry Drive, Syracuse, New York

**Abstract :** Monitoring Canada's forest from space is essential to ensure their sustainable development. Hyperspectral sensing can provide valuable information on forest species and forest health. Airborne hyperspectral sensing with its higher spatial and spectral resolutions provides a basis for algorithm development to create forest information products. Complementary to the HSI data, polarimetric radar has the advantage of being all weather. It can provide accurate mapping of clearcuts and historical fire scars. Fire scars from current to 80 years old can be detected. This new tool will be used to assess fire frequency and area trends. Large data holdings require sophisticated data management systems. We have created the SAFORAH system ([www.saforah.org](http://www.saforah.org)) which connects to the international GEOSS program. This permits the computation of remote sensing products on-demand, based on the data holdings, such as aboveground carbon mapping.

**Speaker Biography:** Dr. David G. Goodenough is a Senior Research Scientist at Pacific Forestry Centre in Victoria, BC, of the Canadian Forest Service, Natural Resources Canada. He is also an Adjunct Professor of Computer Science at the University of Victoria. He is a Fellow of the IEEE and a recipient of the IEEE Third Millennium Medal. Dr. Goodenough is an IEEE Distinguished Lecturer. He was President of the IEEE Geoscience and Remote Sensing Society (1992-1993). He is a member of a USAF/DND hyperspectral team for a new hyperspectral sensor, ARTEMIS. Dr. Goodenough's current research interests focus on methods and algorithms for forest information from hyperspectral and polarimetric radar systems in order to create geospatial products for forest species, forest health, and forest carbon.

## **Engineering in Medicine & Biology Society Chapter News**

The Rochester EMB Society will be sponsoring the Upstate New York Biomedical Engineering Career Conference on Friday, April 16, 2010.

### **UNYBECC 2010: Showcasing the future of biomedical engineering**

Location: University of Rochester Medical Center

The Upstate New York Biomedical Engineering Career Conference (UNYBECC) 2010 is designed to bring together students and practitioners of Biomedical Engineering and

the Life Sciences for panel discussions, technical sessions, and informal extended exchange of ideas important to the future of Biomedical Engineering in the Northeast. Some conference highlights include:

- Assisting participants in planning their academic and industrial careers
- Introducing companies to the wealth of intellectual prowess rooted in Upstate New York
- Exposing participants to innovative research in biomedical engineering and allied areas
- Promoting potential employees through a Career Networking Session

The event is open to the public. Companies and individuals interested in participating in this event are encouraged to go to the web site below for sponsorship and registration information.

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

### **Technical Presentation Series**

The Rochester EMB Society has initiated a Technical Presentation Series that is focused on bringing individuals from industry together with students in Biomedical Engineering. The series will be open to all individuals of the EMB Society. The location will alternate on a monthly basis between the University of Rochester and the Rochester Institute of Technology. We are looking for 30-45 minute night-time presentations (~6PM) for the current semester. Refreshments will be provided by the Rochester EMB Society. If you are interested in giving a presentation, please contact the chapter at [Rochester\\_EMBS@ieee.org](mailto:Rochester_EMBS@ieee.org)

## **IEEE Technology Management Council**

**Topic:** Innovation as a Business Design Challenge

**Speaker:** Robert Wolcott, Kellogg School of Management, Northwestern University

**Date:** Thursday, March 4, 2010

**Time:** 5:30-7:30PM

**Place:** RIT Thomas Gosnell Bldg (08) Room A300

**Cost:** \$15 IEEE/PDMA members, \$20 non-members, \$5 students

**Deadline:** Register by 3/1/2010

**Registration:** <http://www.wnypdma.org/events>

**Further info:** [tr.pian@ieee.org](mailto:tr.pian@ieee.org) or [george.gibson@xerox.com](mailto:george.gibson@xerox.com)

Dr. Robert C. Wolcott, founder and executive director of the Kellogg Innovation Network ([www.kinglobal.org](http://www.kinglobal.org)), a faculty member of the Kellogg School of Management, Northwestern University, will present a model developed in collaboration with his colleagues at the Kellogg School known as the Innovation Radar.

Featured in one of MIT Sloan Management Review's most popular articles of the past decade, the Radar is used by corporations and governments worldwide to measure the level of innovation performance across all of the ways companies do business. It also provides a powerful bridge between a company's strategy and its innovation portfolio of investments. The Innovation Radar features in Dr. Wolcott's recently released book from McGraw-Hill, "Grow From Within: Mastering Corporate Entrepreneurship and Innovation".

## **2010 Rochester Section Joint Chapters Meeting Wed., March 31**

The Rochester Section of the IEEE will be hosting a joint meeting for all IEEE society chapters on March 31, 2010. The meeting is open to the general public as well as IEEE members. The meeting will feature several technical presentations from different chapters. Don't miss this great opportunity to meet and network with people from all engineering disciplines and to learn more about the activities of the different IEEE society chapters in the Rochester area.

The meeting will be held at the RIT Inn & Conference Center located at 5257 W. Henrietta Road, Henrietta, NY. The technical sessions are free to attend. Reservations are required to attend the dinner and feature presentation (\$25 for IEEE members, \$20 for nonmembers, and \$10 for student members).

Further details and on-line registration can be found at: <http://www.r1.ieee.org/~roch/>

## **Meeting on Conducted Emissions, Power Supplies, and LISNs for May**

The Electromagnetic Compatibility (EMC) Society and Product Safety Engineering Society Joint Chapter, and the Power Engineering Society and Industry Applications Society Joint Chapter are planning a joint meeting in May. The date of the meeting will be announced next month. The location will be on the RIT campus.

The presentation will feature IEEE EMC Society Distinguished Lecturer Mark Steffka, EMC Technical Specialist - GM Powertrain, Milford, Michigan

**Abstract Conducted Emissions, Power Supplies, and LISNs:** With the proliferation of digital methods from data communication to machine and equipment control, as well as the increasing use of switched mode power supplies (SMPS), conducted emissions are becoming more of a concern. This topic discusses the physics involved in conducted emissions, how to measure those emissions, the trade-offs in power supply issues versus EMC, and effective filtering methods. Diagnostic methods to identify the nature and source of conducted emissions are presented; corrective actions to solve those problems are identified.

## **IEEE Photonics Society Chapter Activities**

The IEEE Photonics Society Rochester Chapter had a significant presence at the 2009 Twin Tiers Lego Robotics Challenge. The event was a FIRST Lego League sanctioned qualifying competition and was held at the Wings of Eagles Discovery Center in Horseheads, NY on November 15. The Photonics Society members who volunteered countless hours to the success of the event included Dr. B. Roe Hemenway –event organizer and coordinator, Dr. A. Boh Ruffin – referee, and Dr. Robert Boudreau – judge.

The Lego Robotics competition also featured the Photonics Society sponsored Best Use of Light Award. Most contestants embraced the use of light sensors to control their robots. The challenge faced by the users was determining the appropriate distance of the light source and imager from a black line used to track the position of the robot, as well as executing a software routine that enables the robot to track the line without going into unending oscillations. Contestants that were creative in fine tuning the light sensor system for reliability without relying on it exclusively for positioning were given higher marks. As a judge, Dr. Boudreau commented “It was particularly impressive to see a robot incorporating the use of non-light and light sensors as needed.”

The winner of the Best Use of Light Award was “NLTSB Team # 5846” coached by Paul Schelling. The team also won the rising star award and was one of several teams that advanced to the Regional Championship that took place at the University Of Rochester on December 6.

# Innovation as a Business Design Challenge

Robert Wolcott, Kellogg School of Management, Northwestern University



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