



## IEEE NEWS FOR DECEMBER 2008

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

### **Rochester Section Meeting and Elections - Tuesday, December 2, 2008**

The next Rochester Section business meeting is on Tuesday, December 2, 2008 at Noon, at the Shanghai Restaurant, 2920 West Henrietta Road, just south of the intersection with Brighton-Henrietta Town Line Road. The election of Section officers will take place at this meeting. All IEEE members are welcome to attend this meeting, meet your officers and have lunch for just \$3.00.

This meeting is less than 30 minutes from most locations in Monroe and surrounding counties. See the map at <http://www.r1.ieee.org/~roch/map/shanghai30.htm> and see where you are. What's your excuse for not attending?

### **EMC and Product Safety Engineering Chapter Meeting on Dec. 4**

**Date:** Thursday, December 4, 2008

**Time:** 6:00 to 6:30 PM-Networking and refreshments (Food & Beverages)  
6:30 to 7:30 PM - Tour and Presentation:

**Topic:** 10 Meter Semi-Anechoic EMC Chamber Tour and Facilities Capabilities

**Speaker:** Gary Myers, Xerox EMC Manager

The Xerox EMC Test Service uses state-of-the-art equipment and facilities ensure accurate and reliable results. The facility has full test capabilities for products up to 33' long and weighing up to 20,000 lbs. The facility is registered with both FCC and VCCI, and is an A2LA accredited laboratory.

RSVP by December 1, 2008 to ensure proper supply of beverages and food. The names of attendees are also needed for secured access to the building. RSVP to Chapter Chair Gene Saltzberg at: [gene.saltzberg@alum.rit.edu](mailto:gene.saltzberg@alum.rit.edu)

### **IEEE Engineering in Medicine and Biology Chapter News**

#### **A message from your chapter officers.**

**Transition in Leadership.** The beginning of this academic year marked a transition in leadership of the Rochester Chapter of the EMB Society. The board is now comprised of Greg Gdowski (Univ. Rochester; Chair), Maria Helguera (RIT; Vice-Chair), Kathleen Lamkin-Kennard (RIT; Treasurer) and Vivek Khandwala (Univ. Rochester; graduate student representative). We thank Dan Phillips, Maria Helguera, Diane Dalecki, and those before them for their past leadership contributions in the Rochester EMB Society.

**Goals for the EMB Chapter.** In the last ten years, the University of Rochester and RIT have made great strides in expanding their biomedical engineering training programs. However, two areas require our joint efforts for continuing growth. The first is to develop a streamlined path of training from secondary school systems into the Universities. The second is to foster more interaction between industry and academic institutions to optimize the correspondence between engineering training program outcomes and the needs of the local biotechnology sector. The goal of our society during the next year is to foster activities that directly impact each of these target areas.

**The First Annual Social and Strategic Summit of the Rochester Chapter of the EMB Society.**

This exciting event will feature two invited guests. Our first guest will discuss secondary education programming that promotes active learning strategies for acquiring skills essential for engineering disciplines. The second will raise awareness of the spectrum of potential employment opportunities in the health care technology sector of Upstate NY. Please join us for what promises to be an informative and exciting event

**Topic:** Bridging Gaps Between Education and Employment in the Biotechnology Sector of Upstate NY.

A poster session highlighting regional research and technology will be followed by speaker presentations and a social hour. If you are interested in presenting a poster, please contact us at by email at: [rochester\\_embs@ieee.org](mailto:rochester_embs@ieee.org)

**Date & Time:** Friday, December 12, 2008 4:00 to 7:00 PM. This is a free event requiring no registration.

**Location:** Goergen Hall -- The new Biomedical Engineering and Optics building at the University of Rochester.

**Speakers:**

Diana Jensen-Dooling; New York State Director --- Project Lead the Way

Project Lead The Way® is a not-for-profit organization that promotes pre-engineering courses for middle and high school students. Learn about the new exciting program in Biomedical Sciences. Find out why New York State is falling behind in preparing young individuals for careers in biotechnology.

Heather Erickson; President, MedTech, MedTech is a not-for-profit regional association comprised of Upstate New York technology manufacturers, research institutions, allied professional services and economic development organizations with interests in collaboratively developing technologies, products and services for the global medical products marketplace. Learn how MedTech is trying to accelerate the achievement of individual company and institutional goals while building employment and skills within the region.

**IEEE Members Doing Their Part by Jim Ziobro**

You probably joined the IEEE to enhance your own career with advanced information and networking opportunities. Your dues go farther than that just that goal. The IEEE directly supports engineering education and enhances the image on the engineer in the community. In Rochester, our members have requested direct financial support to the following projects:

- \$4500: Scholarships to Junior level college students who best exemplify the values of the IEEE.
- \$1500: Support of the E-cubed fair that introduces high school students to careers in science and engineering.
- \$1000: RCSS (Rochester Council of Scientific Societies) direct grants for supplementary support of elementary science and mathematics educators.
- \$1000: High Tech U., a three-day program that gave 28 students from three local high schools a hands-on experience in microelectronics and alternative energy industry.

We have about 750 full-dues paying members in the Rochester Section. That works out to about \$10 per member to help develop the next Thomas Edison, Jimmy Carter, or Neil Armstrong. When you renew your IEEE membership, you are not asking what your country can do for you.

**SEMINAR SERIES**  
**CENTER FOR GEOHAZARDS STUDIES**  
 University at Buffalo  
 The State University of New York

Co-Sponsor by:  
 IEEE Geoscience and Remote Sensing Society Western New York Chapter  
 Present

**Dr. Alexander Braun**

Department of Geomatics Engineering, University of Calgary

**"Observing Geohazards with Space Geodesy: Tsunamis, Sand  
 Dunes and Sea Ice"**

**Date: Friday December 5, 2008**

**Time: 12:00 Refreshments, 12:30 Lecture**

**Place: 435 Cooke Hall, North Campus**

**Abstract:** Recent advances in space geodetic satellite technology have enabled geodesists to not only measure, but also monitor and interpret Earth system dynamics from space. Satellite missions such as CHAMP, GRACE, ICESAT, and the radar altimeters TOPEX, ENVISAT, JASON are able to monitor mass transfers within Earth systems as well as deformation and elevation changes of diverse Earth surface types. Many of these dynamic processes can pose geohazards to society, infrastructure or ecosystems. This presentation will feature three different geohazards, i) tsunamis, ii) migrating sand dunes, and iii) melting Arctic sea ice, and will demonstrate how space geodesy can assist in monitoring and assessing the impact and dynamics of such hazards. Specifically, the detection of the Sumatra-Andaman Island earthquake and the subsequent Indian Ocean tsunami of 2004 with radar altimetry and GRACE will be discussed. Sand dune migration in Saudi Arabia is a primary issue for infrastructure planning and construction which hinders access roads and has caused fatalities in the past. ICESat laser altimetry in combination with SRTM Digital Elevation Models are used to determine sand dune migration vectors. Melting Arctic sea ice is a hot topic in the public media. In this presentation, the contribution of ICESat and GRACE on the determination of sea ice freeboard height and thickness will be demonstrated.



**Biography:** Alexander Braun is a geophysicist by training and currently holds the position of Associate Professor of Geodesy in the Department of Geomatics Engineering at the University of Calgary. His research interests cover global geophysics, space geodesy and its application in Earth systems observation, and solid Earth deformation processes. He was a PI and member of the cal/val team for many satellite missions mostly related to satellite altimetry, space gravimetry and SAR. Before he took a position at the University of Calgary in 2004, he was a research scientist with the German Geoscience Research Center (GFZ) and a Byrd Fellow with the Byrd Polar Research Center at the Ohio State University. Recently, he started the spin-off company DynaDEM which provides expertise and consulting in dynamic Digital Elevation Modeling.