

The Current Source

Newsletter of the Schenectady Section of the IEEE

Chairperson's Message

Greetings IEEE Schenectady
Section Members,

I hope you had a great summer and have started an even better fall. This year our section has already held 12 fantastic professional and technical events. Thanks to our organizers and volunteers. I would like to encourage you to attend these exciting events, not only to sharpen professional/technical skills but also to network with our fellow IEEE Schenectady members.

We have nine new senior members this year. Congratulations to Sikdar Biplab, Prabhakar Neti, Wei Ren, Alexander Ross, Oktyabrsky Serge, Jian Sun, Zongqi Sun, Venkataraman Sundar, and Anping Zhang! If you

have been in a professional practice for at least ten years (post-graduate education counts for five years), I urge you to consider applying for senior membership grade. The qualification and application information can be found at <http://www.ieee.org/web/membership/senior-members>

WIE (women in engineering) chapter is being formed in our section. WIE aims to inspire, engage, encourage and empower women members by creating professional and social activities. As always, we try to respond to your needs and we welcome your involvement and input. Please contact Haleh Najafzadeh at NajafzHa@pssch.ps.ge.com if you like to join the planning team or share your ideas.

IEEE Region One summer meeting was held in Springfield MA in August. The two themes were "Smart grid: new industry challenge" and "A practitioner's guide to leadership". Details on the meeting and presentation materials could be found online at <http://ewh.ieee.org/reg/1/0809TrainingPresentations>

In the next two months, we'll have at least three or four events. I encourage you to attend. Please visit our section website at <http://www.ewh.ieee.org/r1/schenectady/events> to keep up to date on incoming events.

Best wishes

Zongqi "Sonnie" Sun



Caption: Prof. Malcolm with Section Chair Zongqi "Sonnie" Sun

A Winning Resume

By Jingjia Chen (PACE Chair)

In order to help students and professionals alike in the present job market, PACE (Professional Activities Committees for Engineers) sponsored a noontime seminar on April 14 on the subject of the "Winning Resume". Prof. Andrew Malcolm was the consultant that gave the seminar. Prof. Malcolm is retired from Rochester Institute of Technology, where he taught technical English for 30 years. Prof. Malcolm's talk was lively and informational. He firstly summarized the "4 Ps" to get employed: Prepare, Pursue, Present and Persuade. He then elaborated on each "P". The attendees also benefited from several very useful tips for job hunting. On behalf of IEEE Schenectady Section, Section chair, Zongqi Sun, presented Prof. Malcolm an award for his support of IEEE. Those members who missed the talk can find the slides of the talk on the IEEE Schenectady Section website.

2010 Section & Chapter Officer Nominations

Please see <http://www.ewh.ieee.org/r1/schenectady/whoweare.html> for 2009 officers

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Why do we publish nominations?

After years of mailing paper ballots for elections, using Section funds and volunteer time, the Section adopted "election by acclimation" and added it to the bylaws. In election by acclimation, nominations are made and published in advance of the election. The membership has time to see and comment on the nominations. Election is completed by acclimation, or announcement, at the December meeting for the following calendar year. Please talk to Shadrack Orero or Zongqi (Sonnie) Sun with comments on the nominations.

Election by acclimation concerns all officers listed except appointed positions, which are printed for information only.

Open Position

Life Member Chapter Chair – Represent the interests of the Life Members in the Section. This will include attending Executive Committee meetings (held monthly) and possibly setting up a program or event of special interest to older members. Contact Shadrack Orero (left) to volunteer.

IEEE Schenectady Section Tours GE Energy Munnsville Wind Park

by Peter Sutherland Industry Applications Society, Schenectady Chapter Chair, photos by Janis Sutherland



The Schenectady IAS Chapter sponsored a tour of the GE Energy Munnsville Wind Park near Verona, New York, on Friday, June 19, 2009. The Munnsville project features 27 turbines, rated 1.5 MW each, totaling over 40 MW. Here, ~35 members of the Schenectady Section gather in front of a view of several wind turbines.

The tour drove up to the base of a wind turbine. We can't take a tour group any closer than that (below left).

There was a talk about wind turbine design and operation, by Kevin W. Wigell, Site Manager, followed by a Q&A Session. Below, Peter E. Sutherland, organizer of the tour, is shown thanking Mr. Wigell. The tour was a great success, and it is planned to hold another wind farm tour next year



IEEE Election Results are In...

Moshe Kam - IEEE President-Elect, 2010
Peter Alan Eckstein - IEEE Region Delegate-Elect/Director-Elect, 2010-2011
Ronald G. Jensen - IEEE-USA President-Elect, 2010

Congratulations to J. Keith Nelson from the Schenectady Section
J. Keith Nelson - IEEE Division II Delegate-Elect/Director-Elect, 2010

For more election results check
<http://www.ieee.org/web/aboutus/corporate/election/results.html#pe>

If you have suggestions for speakers or topics that might be of interest to the members, please contact the Section Chair, Zongqi Sun (Sonnie), zqsun@ieee.org or the Membership Chair, Lou Tomaino, l.tomaino@ieee.org

Engineering the Future: IEEE EMBS

By Judy Kilday, EMBS co-chair

"The Schenectady section of the EMBS (Engineering in Medicine and Biology Society) was founded in 2006. Our local society contributes positively to prosperity and quality of our lives, only if we build value by active involvement in the organization."

Let's talk about the future and beyond as we celebrate the 125th anniversary of the IEEE. This year is a good time to examine the past 125 years of technical innovation by honoring the technical professionals who worked to build today's society. IEEE's vision is to recognize technical contributions and their impact on the conditions of our world.

Our group should take time to recognize and value technical information provided by local volunteers. Our focus on future developments in medicine included a presentation by **Dr. Heidi DeBlock, MD FCCM** in January 2008. Dr Heidi DeBlock is both a medical doctor and an astrophysicist, which fuels her keen interest in space flight. She is a Visiting Research Scientist at NASA's Johnson Space Center in the Cardiovascular Physiology Laboratory. She presented **"Does the Path to Mars Lead through the Capital Region?"** on the effects of spaceflight on the cardiovascular system. She was awarded a "Special Spaceflight Achievement Award" by NASA in 2002 for her research.

The EMBS chapter would also like to recognize the forward-thinking work of a team of researchers at the Albany Medical Center and Wadsworth Center. The focused efforts of this interdisciplinary team include developing methods to assist with debilitating paralysis and movement disorders like Parkinson's disease. An electrical engineer named Gerwin Schalk, PhD is conducting research in neuro-engineering. Gerwin Schalk, presented interesting work on brain-computer interfaces (BCIs) in his April 2009 talk on **"Engineering the Future in Biomedicine: Using Brain Signals for Communication and Diagnosis"**. Gerwin convinces us that BCI will allow people to communicate and interact with their environment with the benefit of technology to aid overcoming physical limitations. The presentation sparked our interest in engineering, scientific, and commercial aspects of devices that interface the brain with external devices for the purpose of communication or diagnosis.

Schenectady Section technical meetings provide an exchange among several disciplines and interdisciplinary communities. Many of our speakers provide insight to the far-reaching possibilities of how today's technology will impact the future.

The Other Face of IEEE – Region Activities

Many thanks to these Schenectady Section volunteers for representing the Section at the August 2009 Region 1 meeting in Springfield, MA. The attendees receive information on IEEE resources such as web services and grant money that can be used to provide services for the Section members. Region initiatives include GOLD (Graduates of the Last Decade), PACE (Professional Development) and membership development. In return, attendees also attended a leadership seminar by Dr. Barry Shoop, and an effective presentation seminar. Another benefit for attendees is meeting Region and IEEE leadership. In this case the 2010 IEEE President – Elect Candidates attended a lunch and the IEEE Region 1 Director-Elect Candidates were in attendance for the awards dinner Saturday night.



Saber Azizi, Zongqi Sun, Loken Bam, Jovan Bebic and Milos Todorovic attend the 2009 Region 1 Meeting

FIBER OPTICS DATA COMMUNICATIONS LUNCHEON

by Ralph A. DeSorbo, P.E.

On Friday, September 18, 2009, Mr. Ed Coye gave a very good presentation entitled *"Understanding the Basics of Fiber Optics Data Communications"* to 40 members of the Schenectady Section. The talk included a discussion of hardware – cable, fiber, and connectors. Next a discussion of applications: what fiber to use for certain distances and transmission speeds. Finally the talk discussed proper installation. The speaker, Mr. Edward Coye, RCDD/NTS/OSP/WD, CSI CCPR, LEED AP is presently employed as a Tyco Electronics AMP Sales Engineer. He also lectured at "Engineers Week" this year. His lecture was supported by numerous fiber optic equipment samples.

October 2009

IEEE Region 1 Women in Engineering Professional Development Seminar 25-27 September 2009 Crowne Plaza Hotel, White Plains, NY

Five officers sponsored by the IEEE Schenectady Section attended the WIE professional development conference: Peter Sutherland, Loken Bam, Haleh Najafzadeh, Saber Azizi, & Maja Todorovic. The group met Schenectady Section member, Lisa Edge at the conference. The following synopsis is a collection of their enthusiastic reports.

Dr Karen Panetta, IEEE WIE Committee Chair, of Tufts University illustrated the history of women's involvement in technical fields. Although the percentage of women engineers is still low, their footprint is significant in the technical and social awareness fields. Dr. Panetta believes woman can be brainy in addition to being beautiful. Hence she has established "Nerd Girls" – "they're out to explode the myth that a woman can't be both smart and drop-dead gorgeous." For detail about the project can be found in www.nerdgirls.org

Peter Eckstein talked about IEEE USA and the importance of Volunteerism. IEEE USA works closely with congressional members and government representatives to reflect and communicate many IEEE concerns. Contrary to

rumor, IEEE USA is working towards improving the conditions for H1B visas. Also according to Peter, volunteerism brings many benefits to the individual volunteer as well as to the community where he/she volunteers: networking, professional growth, fulfillment, and enjoyment. However... Do Not Volunteer if you think you can not carry the task out.

Greg Bradley, VP HR, MTA, gave very exciting talk about Developing Leadership Skills. Keeping right attitudes, and wearing right dress displays one's professionalism. He talked about the characteristics of a good leader and suggested that one should not depend on others, or the employer to develop one's professional skills.

Laura Jennings, of the Jennings Group, talked about self-knowledge as a first step to leadership. The bigger questions in life should not be forgotten in the hustle and bustle of engineering details. What do I have a passion for? What are my areas of personal giftedness, of personal disinterest, of personal happiness? What is the most important to me, and how do I use my time? This is very important material to reflect on. To be successful and be able to work with people in efficient ways, you need to understand yourself and others.

Rashmi Jain gave a good talk on Systems Engineering competencies and education. How do we meet the challenge of the completing next generation's engineering skill set in the face of declining numbers of engineers? Systems engineering is important, a project is more than the specifics from each discipline of engineering. Rashmi emphasized importance of a solid basis in the physical sciences.



Schenectady Section Participants at the WIE Conference- Peter S, Saber A, Maja T, Lisa E, Haleh N & Loken B

Lunch events are held on average once per month. Most members are receiving notices electronically for every event. If you are not, please update your profile on the IEEE website. Events are also advertised on the local Section website at <http://www.ewh.ieee.org/r1/schenectady/events.html>. Please check often! Reservations are required due to the cost of the lunch (as paid by the Section). All events are free for IEEE members who RSVP by the deadline, \$10.00 for non-members and all who fail to RSVP by the deadline stated for each event.

FUTURE CITIES UPDATE

The Capital District Future City competition is scheduled for early January 2010. The following schools are still in need of team mentors. Anyone interested in helping please contact Thomas Raber at raber@ge.com ASAP!

School	Location
Goff Middle School	East Greenbush
Gowana M.S -Shenendehowa	Clifton Park
St. Catherine of Siena	Albany
St. Mary's School	Waterford
St Gregory's School for Boys	Loudonville
New Lebanon CSD	New Lebanon

Don't miss the Holiday Lunch! Watch our web site
<http://www.ewh.ieee.org/r1/schenectady/events.html> and your email inbox for details.