



Wavelengths

Volume 55 - Issue 6
June 2015

Contents

Section Chair's Message	1
WIE Conference:	2
HKN @ U/D-Mercy:	4
An IEEE Proposal:	5
Amateur Radio 'Field Day':	6
Humanitarian Technology Conference:	7
Fall Section Conference:	11
Join IEEE:	12
Appointments & Elections:	13
Other' Coming Events	14
Refer a Colleague:	15
Executive Committee	16
Section Mission & Goals	17
SEM Monthly Meetings	17
Editors Corner	18
Section Officers	19
Web & Social Sites	19
Leadership Meetings	20
Advertising Rates	20

Wavelengths Newsletter is produced by IEEE volunteers and published by Southeastern Michigan (SEM) Section for the members. Newsletter Archive: <http://sites.ieee.org/sem/>

Section Chair's Message



"May you live in interesting times" is reported to be as a Chinese expression. Regardless of the origin, we do live in interesting and exciting times. Technology advances are happening faster than most people can keep up with, so are organizations, jobs and how we communicate as humans. IEEE and IEEE SEM are part of the wave of technology, human communion and leadership experience. Consider volunteering.

All Chapters and Affinity Groups are encouraged to have monthly meetings and educational events as often as possible. You can use your budgeted allowance without seeking permission from the Section. If you wish to apply for funds beyond your budget you need to contact our Financial Committee and supply a plan for what you want to do.

We wish to welcome Joy Shanklin as our new Section Assistant Secretary. Joy comes from the IEEE Cleveland Ohio Section and has relocated to our area. Joy will work with David Mindham, our elected Section Secretary, to assist with the many duties and meetings that occur in our section.

July 17, at Burton Manor in Livonia, is the Date of our Humanitarian Conference lead by Dr. Harpreet Singh. More details are available on the Section web site and starting on page #9 of this newsletter.

November 10 is the date of our Section Fall Conference at University of Michigan Dearborn. A meeting announcement is on page #11 of this newsletter and more information is available at www.ieee-sem.org/fall.

Many other events may be viewed at the section web site (www.ieee-sem.org) and by clicking on the calendar tab at the web site. See also page #14 of this newsletter for ancillary items that may be of interest to you.

As a reminder, all Southeastern Michigan Section Chapter and Affinity Groups elected and appointed officers are requested to begin the Virtual Officers Training so you are better able to understand your position and to make you aware of available IEEE's support. The virtual format allows you to proceed through the training modules as you have time. They are available on our SEM web site www.ieee-sem.org under the "SEM Tools/Links" column on the left side of the home page by clicking on "Training Materials" or at <http://sites.ieee.org/sem/about-sem/training/>. I look forward to hearing from you and seeing you at our events. As always, your ideas and suggestions are encouraged and welcome.

Robert Neff
IEEE SEM Section Chair
RLNeff1@gmail.com

WIE Conference:

IEEE Women in Engineering (WIE) 2015 International Leadership Conference (ILC) took place between April 24 and April 27 in San Jose, California.

Thanks to the gracious support from WIE ILC conference committee and Region 4, I was able to attend this event for the first time.

WIE ILC attracted over 750 attendees this year, more than twice the number of attendees compared to last year. Strong speakers, informative discussions, interesting panels, well organized exhibits, as well as the networking opportunities made the conference a huge success.

As the Chair for the Southeastern Michigan WIE chapter, I came home energized, feeling appreciated and ready to "change the world", starting locally in Michigan, to Region 4 and expanding globally.

Female leaders from Xerox, Cisco, Intel, VMware, AMD, and etc. shared their personal stories on their career advancement journey. They ran the extra mile, had to make difficult trade-offs, took the risk, overcame obstacles they encountered, obtained valuable insights and encouragement from their mentors, to get from where they were, as engineers, technical specialists, or individual contributors, to leading roles as CIO, CTO, VPs and CEO of great companies.

Rebecca Jacoby, CIO & VP of Cisco, spoke about the importance of mentors on her career path. One of such valuable mentor is her mother. Her mother's common sense wit has helped her in difficult situations. Rebecca sees GIVE, GET and AVOID as three words they wanted to leave to WIE members.

To GIVE, she meant one must be motivated to contribute and transform the company/community of which one is a member;

To GET, one must learn and be open to acquire knowledge so to influence a change;

To AVOID, as she explained, we need either help others with their issues, or to avoid it, we must not build up blocks in our own heads.

Dr. Lisa Su, an IEEE Fellow, spoke about how her family's toughness on her academic development toughed her up as a CEO today to lead AMD's technical and business future.

Yanbing Li, the VP & GM of VMware's Storage and Availability division, shared her career advancement experience. She had a choice to take an engineering manager job to manager over 1000 engineers, expanding from managing a technical team of 300 individuals.

It was not the bigger the better. She chose to lead a team of 200 instead, as this responsibility gave her exposure to business issues that VMware faced. She went on to get her MBA to become more business savvy. One needs to pursue one's passion. She never regretted her decision.



Photo: IEEE WIE ILC 2015 "Innovation in Cybersecurity Panel" on4/25/15

A panel made up of distinguished engineers, architect, product manager, technical marketing engineer, program manager and software development manager from Cisco discussed the hot issue of cybersecurity. All aspects of cybersecurity were vetted such as the

origin of cybersecurity, vulnerability and the build-up of defense mechanism, as well as the future of cybersecurity challenges.



Not only the authentication methods become an on-going challenge as cyber-crimes become more sophisticated but also the shortage of skill base to support this industry.

A break-out session on "Innovation In Cybersecurity" further elaborated the issue of cybersecurity from a slightly different angle. Dr. Deb Frincke from National Security Agency is one of the panelists. She used her personal example to illustrate where privacy and security cross roads. Based on often competing criteria, sometimes we give up privacy for a perceived benefit but other times we hold privacy a more important factor than others. Cybersecurity is truly a multi-discipline domain, while technology alone cannot stop evil, it can be designed to reduce the risk we face in today's complex world.

Cybersecurity needs to be taken holistically across the discipline of computer science, behavioral and social science, psychology, political science and law. The good news is IEEE is responding to the needs of Cybersecurity concerns, IEEE Center for Secure Design is launched as part of the IEEE Cybersecurity Initiative, to accelerate innovation in security and privacy technology. <http://cybersecurity.ieee.org/center-for-secure-design.html>

As women working in the technical fields, often we are faced with the challenges to balance between work and home. Not only we are employees, some of us are also wives and mothers.

Our added responsibilities can create additional stress if priorities are not managed well. However there is no one size fits all formula to this common issue. Patty Hatter, Vp & GM of Intel Security Group, had to make a personal sacrifice to leave the comfort of her home to take on an international assignment for 3 years to lead her group's mission oversea.

Alternatively, Yanbing Li, a mother of three, shares a joint responsibility with her husband at home and the couple is able to enjoy their career individually as well. When to do what and how is up to the individual to prioritize based on her life stage situation.

More and more women are educated in STEM and taking on jobs in the technology fields, this is a general trend. Brian Krazanich, CEO of Intel summarized it well, "Like likes like, if you have a brain, you are biased. The only way to overcome this natural bias is to have opposing ideas in your team". He further presented the evidence that "Firms with females in the C-Suite generated \$44 Million more in revenue on average".

To accelerate the promotions of females in leading roles, many ideas were gathered during the "Appreciate Inquiry Session" at the close out of the conference. One idea was to put "Promoting Women in Leadership Roles" on CEO's agenda. Another idea was to engage public survey (Gallup survey) and publish survey data such as percentage of females in the technical field and percentage of females in leadership roles, for Fortune 1000.

The conference was full of networking fun. WIE ILC was fortunate to engage Microsoft's Yammer team to host the Thursday night Opening Reception at

the Yammer building in downtown San Francisco. The Yammer office offers a contemporary high tech office view. Several hundred women showed up.

I was delighted to meet professional women from India, Brazil, Turkey, Lebanon, Russia, Pakistan, Japan, China, Mexico, Finland, Switzerland, Canada, in addition to women from other US states, and more. "The Speed Introduction" was a wonderful idea to allow participants to introduce one another to as many people as possible, to break the ice, to learn from one another by networking in a relaxed and friendly environment



Photo: IEEE WIE ILC 2015: Yammer Reception on 4/24/15

Overall WIE ILC 2015 was a great success. First, I attribute the success to a great WIE ILC leadership team led by WIE chairman Nita Patel.

It takes much time and effort to even coordinate a local society meeting with a couple of dozen attendees. One can imagine the effort required to put together a conference the scale of WIE ILC 2015 with over 750 attendees.



Photo: Liang Downey and Nita Patel at WIE ILC 2015

I believe the conference location is the second success factor. San Jose is the heart of Silicon Valley. Its environmental, cultural and

technological significance naturally draws more crowd. With many high tech companies based in Silicon Valley, the conference committee is able to recruit great keynote speakers including the CEO from Cisco and AMD, in part due to the location advantage. Great keynotes attract a bigger crowd.

Thirdly, because WIE ILC conference committee is able to identify companies with a strong belief in STEM education, diversity and gender equality, it was able to obtain very senior level executive support from these firms to fund the vendor exhibit booths and fund some attendees' travel grant, as well as fund the receptions. These in turn resulted in higher conference quality and attendees experience.

Lastly, the agenda, paced between keynotes and breakout sessions, supplemented with career fairs and hackathon, provided attendees with a pleasant learning experience. The theme on leadership, entrepreneurship and innovation offers a wide coverage for a diversified audience, one can be sure to find something of interest to one's focus area, regardless if one is seasoned women professional, a young engineer or a student.

In conclusion, I will be able to take what I learned from WIE ILC 2015, to help adopt the learning to our Southeastern Michigan and Region 4 environment, with the hope we will be able to "harness our local brainpower to build on the positive potential of women in technology, to collaboratively develop ideas, solutions and prototypes that help women develop sustainable support networks that encourage growth and success".

Let me close by quoting what Robert Noyce once said "Don't be encumbered by history; Go off and Do Something Wonderful". I believe this perfectly reflect the spirit of IEEE WIE.

Liang Downey:
SEM WIE Chair

-30-

HKN @ U/D-Mercy:

On the evening of April 19, 2015 at the University of Detroit – Mercy, a very special event took place. New members of IEEE-Eta Kappa Nu (IEEE-HKN) were inducted into this prestigious honor society.

IEEE-Eta Kappa Nu (IEEE-HKN) is the honor society of IEEE and is dedicated to encouraging and

recognizing individual excellence in education and meritorious work in professional practice in any of the areas within the IEEE-designated fields of interest.

Along with the student members inducted into HKN, were our Section Adviser, Don Bramlett. Don was inducted into HKN as a ‘Professional

Member’, along with the other seven new members shown in the photograph below.

Observing the proceedings was Evelyn Hirt, the IEEE MGA lead for HKN who was returning to her ‘home’ HKN Chapter at U/M-D where she was originally inducted as a student.



Evelyn Hirt:

At the conclusion of the ceremony at U/M-D, Evelyn encouraged SEM officers to consider the establishment of an HKN Alumni Chapter in our Section. Alumni Chapters are fairly rare in Eta Kappa Nu, and it would give an additional focal point of membership activity for the Section.

IEEE-Eta Kappa Nu is a lifetime designation. Once inducted into IEEE-HKN, you carry all of the rights and privileges of IEEE-HKN and can identify yourself as IEEE-HKN forever. Alumni are strongly encouraged to add IEEE-HKN (~HKN) to their CV, bio, author notes and/or social media profiles.

Members and alumni may use the IEEE Web site to update their membership data. At a minimum, always include a current e-mail address in the data, as IEEE-HKN members will receive communication primarily through this channel.

Note: If you are an IEEE member, your HKN/IEEE-HKN status should be noted on your IEEE membership card. However, the IEEE-HKN designation cannot be added online. Please e-mail IEEE-HKN Headquarters and include your chapter, approximate induction date, the name under which you were inducted, and your IEEE number. IEEE-HKN Headquarters will confirm your membership and update your record.

As an alternative, you can complete the Alumni Reconnect form and IEEE-HKN Headquarters will confirm your membership and update your record. If you have lost your membership certificate, you can order a replacement online.

At the IEEE SEM Spring Conference we solicited HKN Alumni members to initiate a petition by signing a document indicating their interest and future support of a Southeastern

Michigan Section Alumni Chapter of HKN.

In order to establish a new HKN Chapter, 6 signatures are required. That evening, we easily garnered 10 signatures, and the initial documentation has been forwarded to IEEE HQ for action, and further instructions. We expect to hear word on what our next organizational steps should be early this fall.

Other interested HKN alumni are encouraged to forward their names and indications of interest to Don Bramlett at: d.bramlett@ieee.org

We will be collecting names and contact information in order to keep everyone interested in further developments.

-30-

An IEEE Proposal:

Nevrus Kaja is our IEEE Section Student Activities Chair.

He is also a graduate student at University of Michigan Dearborn, (UMD) pursuing a Master for Computer Engineering with a focus on Intelligent Systems and Robotics and soon to start a PhD program in the same area.

He currently work as a Research Engineer at Ford Motor Company and teaches Embedded Systems at UMD.

Anisa Bici is a senior for Pre-Pharmacy at University of Michigan Dearborn and she is an IEEE Member, and Secretary of Student Activities for IEEE-SEM.

Currently she works at Henry Ford Health System, and she is also a Research Assistant at Wayne State University, Pharmaceutical Research lab. As an excellent student she continues to be involved with the community and pursue academic achievements one after the other.

Anisa and Nevrus met about 3 years ago in a community organization at



University of Michigan Dearborn and discovered a surprising number of things in common.

- They are both from Albania,
- had moved to the US at approximately the same time,
- lived in US in the same neighborhood and in the same city.
- in Albania they lived in the same city and neighborhood although they didn't know each other there.
- Attending the same school.

They first became close friends in the USA and at last formed a more complete relation.

When both Anisa and Nevrus attended the IEEE USA Annual meeting in Milwaukee in May of 2015, Nevrus arranged to surprise Anisa.

And, what a surprise it was! At the plenary session, in front of about 250 IEEE officers and volunteers the President of IEEE USA, James A. Jefferies, asked Nevrus to come up on stage to the podium. When he arrived, Nevrus asked Anisa to join him.

At that point, on bended knee, Nevrus proposed marriage, and presented Anisa with an engagement ring.

Good news...**She said "Yes!"**.

Their followed a standing ovation from all the attendees for the couple, and everyone wished them long life and a happy marriage.

Although belonging in a young generation they both hand-write letters to each other work to keep family oriented values. Before taking this step, both had made sure that each other had met their respective families, and that everyone in both families 'approved' of the couple.

We wish both a long, happy and successful life together!

Good news...**She said "Yes!"**.



Amateur Radio 'Field Day':

Field Day (June 25-26-27, 2015) is an annual amateur radio exercise, widely sponsored by IARU regions and member organizations, encouraging emergency communications preparedness among amateur radio operators.



In the United States, it is typically the largest single emergency preparedness exercise in the country, with over 30,000 operators participating each year. Field Day is always the fourth full weekend of June, beginning at 1800 UTC Saturday and running through 2059 UTC Sunday. Amateurs in Canada and Mexico also cooperate in the operations and add an international component to the exercise.



Since the first American Radio Relay League (ARRL) Field Day in 1933, radio amateurs throughout North America have practiced the rapid deployment of radio communications equipment in environments ranging from operations under tents in remote areas to operations inside Emergency Operations Centers (EOCs). Operations using emergency and alternative power sources are highly encouraged, since electricity and other public infrastructures are often among the first to fail during a natural disaster or severe weather.

To determine the effectiveness of the exercise and of each participant's operations, there is an integrated contesting component, and many clubs also engage in concurrent leisure activities (camping out, cookouts, etc.).

Operations typically last a continuous twenty-four hours, requiring scheduled relief operators to keep stations on the air.

Additional contest points are awarded for experimenting with unusual modes, making contacts via satellite, and involving youth in the activity.

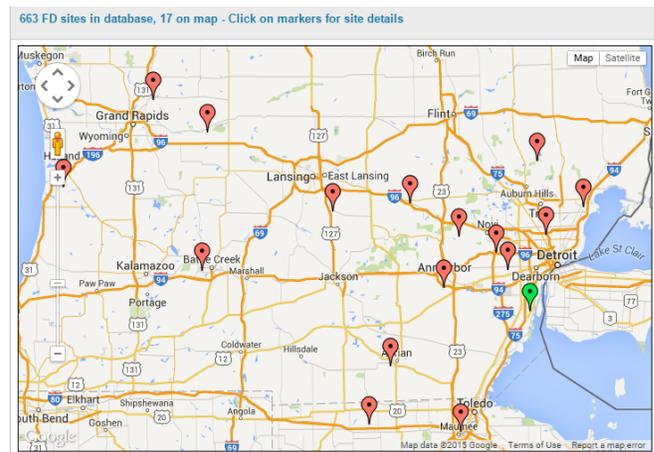
Local Field Day Sites:

Most amateur radio club sponsored field day sites encourage visitors to come and see what amateur radio is all about, and many also have "Get On The Air" (GOTA) stations set up for non-amateurs to operate under the control of a licensed amateur radio operator.

Local locations of field day sites may be found by using the ARRL 'field day locator' interactive map on-line at:

<http://www.arrl.org/field-day-locator>

See below:



As you can see above, there are 17 field day sites in Southern Michigan and northern Ohio open to the 'public' to visit during the event. Use the map link above to locate the site nearest you and contact the club representative to find the exact location of the outdoor exercise.

Courtesy [Wikimedia Foundation, Inc.](http://www.wikimediafoundation.org/) and ARRL, the national association for Amateur Radio hq@arrl.org

Humanitarian Technology Conference:

IEEE SEM HUMANITARIAN TECHNOLOGY CONFERENCE

Date: 17-July-2015

Time: 05:00PM to 10:00PM (5.00 hours)

Burton Manor

27777 Schoolcraft Rd
Livonia, Michigan
United States 48150



Governor R. Snyder (Video Address)

Mark H. Schauer (Chief Guest)



Keynote Speaker: Yvette Pearson Weatherton, Program Director, NSF

Dr. Yvette Pearson Weatherton has 20 years of experience in engineering education. After serving as a faculty member at Southern University for 12 years, she joined the faculty of The University of Texas at Arlington in September 2007, where she is Associate Chair of the Department of Civil Engineering. Originally from Baton Rouge, Louisiana, Dr. Pearson Weatherton holds a B.S. in Civil Engineering and an M.S. in Environmental Chemistry from Southern University, a Ph.D. in Engineering and Applied Sciences from The University of New Orleans, and is a registered Professional Engineer in the State of Louisiana.

Currently an Intergovernmental Personnel Act (IPA) appointee, Dr. Pearson Weatherton is a Program Director in the Division of Undergraduate Education at the National Science Foundation where she manages a large and diverse portfolio of awards geared toward Science, Technology, Engineering and Mathematics (STEM) education and workforce development. Prior to assuming this role, she provided leadership in acquiring and administering nearly \$3 million in funding for projects focused on improving recruitment, retention, and graduation of STEM majors.

One of her key focus areas is broadening the participation of students from underrepresented groups – minorities, females and persons with disabilities – in STEM education and careers.

Identifying with all three of these groups, Dr. Pearson Weatherton offers a unique perspective shaped by her experiences as an engineering student and professional.

Dr. Pearson Weatherton is a member of the American Society of Civil Engineers (ASCE), where she has served in a number of leadership roles. Most recently, she was appointed as a member of the society's Committee on Sustainability, a Corresponding Member of the Committee on Diversity and Inclusion, and was selected to represent the organization as a Program Evaluator (PEV) for ABET.

Conference Mission:

Organized by IEEE SEM, the technical professional society with over 3000 members, IEEE SEMHTC focuses on advancing technology for the benefit of humanity. This cross-discipline conference provides the perfect venue for those interested in humanitarian projects to join together. The conference attracts an audience of educators, engineers, scientist, practitioners, philanthropists, corporations, foundations, NGO's and others in applying technology to develop effective solutions for the challenges facing the South Eastern Michigan populations.

- Promote science, engineering and technology as a solutions to humanitarian problems
- Foster exchange of information and networking in the humanitarian field
- Focus attention of businesses on emerging market and social entrepreneurship opportunities
- Impact in positive and meaningful ways the lives of residents of South Eastern Michigan

Why Attend?

- Participate in an extensive, vibrant, and innovative technical program
- Learn from world-class knowledgeable practitioners working in the field
- Exchange information, share experiences and network with actively involved attendees
- Gain visibility and recognition for your humanitarian work and projects
- Find new resources, ideas, and potential partners or investors

IEEE SEMHTC will cover a wide range of topics that include, but are not limited to:

- Health, Medical Technology, Telemedicine
- Disaster Warning, Avoidance, and Response
- Water Planning, Availability and Quality
- Sanitation
- Power Infrastructure/Off-grid Power/Renewable and Sustainable Energy
- Connectivity and Communications Technologies (data/voice) for Remote Locations
- Educational Technologies
- Agricultural Technologies
- Applying Science, Engineering and Technology for Environmental Sustainability
- Humanitarian Challenges and Opportunities

Overview

- The IEEE South Eastern Michigan Humanitarian Technology Conference (IEEE SEMHTC) is the platform for presenting, discussing, and developing technological solutions to humanitarian challenges. The technical focus of the Conference is complemented by an integrated understanding of broader contexts—economics, policy, culture, environment—to create and promote sustainable holistic solutions.
- SEMHTC welcomes participation by individuals and organizations from technical and non-technical backgrounds, including engineers, scientists, academics, small-businesses, corporations, philanthropists, foundations, and government and non-government organizations.

The Conference theme of “*Technology for the Benefit of Humanity*” is presented in five tracks:

- **Energy**—infrastructure and off-grid power, renewable, transportation, lighting, cooking & heating
- **Health**—medical technology, telemedicine, mobile care, primary care
- **Disaster, connectivity, and communication**—disaster warning & avoidance, disaster response, disaster management, networks, remote communication, communication technologies
- **Humanitarian challenges and opportunities**—education, housing, supply chain & distribution, business development
- **Water and agriculture**—clean water, sanitation, irrigation, farming practices & agricultural technologies

Agenda:

5:00 PM – 6:00 PM	Registration Display Tables/ Posters/ Networking/ Snacks
6:00 PM – 6:30 PM	Poster Presentations and Poster Judging
6:30 PM – 7:30 PM	Technical Presentations/ Panels
7:30 PM – 8:00 PM	Dinner
8:00 PM – 9:00 PM	Keynote Speakers
9:00 PM – 9:15 PM	Awards and Recognition
9:15 PM – 9:30 PM	Cultural Activity
9:30 PM – 10:00 PM	Dessert/ Coffee/ Closing

Registration ends July 6 2015 at 11:59 PM. No refunds

Students/Retired/Unemployed (Members).....	\$30
IEEE and ESD Members	\$30
Non Members	\$30
Primary Poster Authors.....	\$0
Additional Poster Author.....	\$30
Speakers and VIPs.....	\$0
Spouses of speakers and VIPs.....	\$0
Student/ Faculty/ Company Table (10 persons)	\$250
Gold Sponsorship Registration.....	\$3000
Silver Sponsorship Registration.....	\$2000
Bronze Sponsorship Registration.....	\$1000

COMMITTEE Chair - Harpreet Singh, hsingh@eng.wayne.edu

- | | |
|-------------------------|-----------------------|
| • Arun Hundiwal | • Robert Neff |
| • Bill Moylan | • Rajeev Verma |
| • David Mindham | • Subramanian Ganesan |
| • Chaitanya Kumar Setti | • Shashank Kamthan |
| • Yi Lu Murphey | • Kevin Taylor |
| • Lora Schulwitz | • Raju Brahmndhabheri |
| • Praveen Kumar | • Scott Lytle |
| • Pieter Frick | • Robert Reynolds |
| • Mohamad Berri | • Basil Sherlund |
| • Kimball Williams | • Devinder Kaur |
| • Nevrus Kaja | • Lubna Alazzawi |
| • Ali Eydgahi | • Ravi Nigham |

CALL FOR POSTERS

IEEE SEM HUMANITARIAN TECHNOLOGY CONFERENCE 2015

IEEE South Eastern Michigan will be hosting a poster session at the upcoming IEEE SEM Humanitarian Conference on July 17, 2015 at Burton Manor, 27777 Schoolcraft Rd, Livonia, MI, 48150. This IEEE HTC conference is a technical and social event that highlights the cutting edge research activities and technologies for the benefit of Humanity (i.e., Energy, Health, Disaster, Humanitarian Challenges, Education, and Water & Agriculture). This will be a great opportunity to showcase your research and network with people from Industry/Academia/Government.

The poster (Professionals and Students) awards will be given to the **three top presented posters in each of the category**, as judged by the review committee. Poster topics related to any of Humanitarian Technologies such as Energy, Health, Disaster, Humanitarian Challenges, Education, and Water & Agriculture are encouraged. More information is available at:

https://meetings.vtools.ieee.org/meeting_view/list_meeting/33421

Authors wishing to participate in the poster session must submit a poster title and abstract (less than 150 words) at <https://ieee.fluidsurveys.com/s/posters/> no later than **July 6, 2015**. The suggested poster size is **4 feet by 3 feet** or smaller should contain large text to be read from a distance. Poster authors should attend and present their posters during the Poster Session and Competition on the day of the conference.

There is **No registration fee for each poster and its one presenter**. All the additional authors for a particular poster need to be registered at registration link

https://meetings.vtools.ieee.org/meeting_registration/register/33421 with a Fee of \$30. Every participant will receive a **Certificate of Participation**.

VENUE: BURTON MANOR, 27777 SCHOOLCRAFT RD, LIVONIA MI 48150

For any further poster questions please do not hesitate to contact:

- **Shashank Kamthan**, (IEEE SEM Young Professionals – Chair)
- Email: s.kamthan.us@ieee.org

Fall Section Conference:

Autonomous Vehicles, Their Legacy and Future

Date: November 10, 2015

Location:

U/M Dearborn – Fairlane Conference Center
(North Building)

Keynote Speaker:

Bob Neff – SEM Section Chair

Topic:

“Autonomous Vehicles, Their Legacy and Future”



What will our life be like with autonomous vehicles?

Will it be the anticipated utopia or will there are new concerns that have to be considered?

Autonomous vehicles are not a new idea. In 1925, the Houdina Radio Control Company demonstrated a driverless radio controlled called the "linrrican Wonder" at New York City. General Motors Futurama Exhibit at the 1939 World's Fair depicted radio-controlled electric cars that were propelled with electromagnetic fields embedded in the roadway. Interest and research has continued thorough out the years up to the present time. Only since the 1990s has the development focus shifted to autonomous vehicles that have to operate in the current traffic patterns.

The presentation provides a brief history of Automated Vehicles and Highways and highlights the National Automated Highway Demonstration in 1997. Many automated features have evolved since the Demonstration driven by many forces as shown by this presentation. The presentation will discuss the challenges facing the usage of these features including adoption and education and show how vehicle to vehicle communication can facilitate the future of autonomous vehicles. Finally, the presentation will offer a vision of what life will be like with autonomous vehicles.

Registration: Registration Website:

https://meetings.vtools.ieee.org/meeting_registration/register/34367



Our **Fall Conference Chair, Basil Sherlund**, has 40 years of experience in Computer Design and Information Technology. As a professional he received a BS in Electrical Engineering, with honors, and a MS in Computer Science. He is a life member of Eta Kappa Nu, the electrical engineering honor society.

He is a former member of the executive board of the IEEE Software Engineering Standards Committee, the Technical Committee on Software Engineering and has held two offices and three chapter positions in Region 4, SEM and he is a member of the Educational Activities Committee for R4. The Conference Committee, in support of Basil and the 2015 Fall Section Conference also need

volunteers to help this event achieve its full potential as an educational and networking opportunity for all our Section members. Anyone who wishes to help out with the planning and preparation for the Conference is encouraged to contact basil and discuss the positions on the planning Gantt Chart that he will be filling in the next few weeks.

If your interest is to be of help at the actual event, you are encouraged to contact Basil (bsherlund@ieee.org) and let him know that you wish to assist on the day of the conference. **-30-**

Join IEEE:

ACHIEVE
PROFESSIONAL GOALS
ACCELERATE
YOUR CAREER
Find Your Reason to Join



www.ieee.org/join

13-MEM-0154



Appointments & Elections:

Appointments:

With a large and diverse Section like ours, we experience what is referred to as a 'churn' among our officer ranks.

'Churn' implies that we have an officer body that is in constant evolution and growth. Because the experience of serving as an IEEE officer tends to prepare someone for greater responsibilities, many of our officers find themselves being handed job advancements that take them into more demanding positions.

When that happens, they often need to 'cut back' on their direct involvement in IEEE in order to address the new challenges of their new position. Since IEEE is a totally volunteer organization, we expect to have officers focus on other of their life demands. When that happens we look for replacements.

One of the most productive training grounds for increased job responsibilities is that of an IEEE Secretary. Because it is so successful at training new people for increased responsibilities, it is also one of the most often positions that needs to be filled.

Right now we have the following positions requiring a Secretary, and this may be just the opportunity you need to improve many of your administrative and communications skills. Please consider the following opportunities:

Secretary Positions Open:

- **Section Assistant Secretary**
- **Section Finance Committee**
- **Communications Committee**
- **Membership Committee**
- **Nominations Committee**
- **Professional Activities**

While the above positions with our Section Standing Committees only requires as sincere interest and willingness to learn, the positions below also require membership in the individual Affinity Group or Technical Society that forms the base of the Geo-unit.

These are:

- **Women In Engineering**
- **Chapter 3 (Vehicle Technology)**
- **Chapter 10(Management)**
- **Chapter 12(Control Systems)**
- **Chapter 13(Education)**

Training:

It is possible that volunteering for a Secretarial position may be your first experience engaging in an IEEE committee or Geo-unit. While previous experience is always helpful, if you are just starting in a new position it is helpful to quickly review your past training, and go over any available training for the new position.

For an IEEE Secretary (Administrative Assistant) we have posted several training modules on the IEEE SEM Website in the form of PowerPoint and Voice over Power Point (VoPPT) modules. These may all be found on the SEM Website at:

<http://sites.ieee.org/sem/about-sem/training/>

I recommend at a minimum reviewing:

- #32: [Secretary Controller of Operations](#), and
- #42: [Suggestions for Leading a Committee](#)

If you are interested in exploring your options for participation through one of these positions, please contact me:

Kimball Williams
k.williams@ieee.org
 313-355-4396

Nomination for Election:

Now that our Spring Conference has concluded, we have time to turn our attention to nomination for officer elections for 2016.

Some of our members have commented in the past about beginning the nomination process "...in May when we don't hold the election until October or November..".

The IEEE Member and Geographic Activity Board through its "Operations Manual" gave us the overall guidelines for holding elections. In the first statement in that document, it states: *"Six months prior to the date of election, the Section Nominating Committee Chair shall issue a "Call for Nominations" for all positions elected at-large to all voting members of the Section through an appropriate medium."* Six months from an October or November election is now.

Nominations for election to posts at the Section and each Geo-unit (Chapter and Affinity Group) will be open in June. Watch for the e-notice and the article that will appear in the June Wavelengths Newsletter.

If you are interested in exploring your options for participation as an officer in the Section, contact the current officer in that position and discuss the duties and functions of the office with them. They will be the people in the Section with the most up-to-date knowledge of the requirements.

For the listing of current officers, see the Officer Roster PDF file on the SEM Website at:

<http://sites.ieee.org/sem/about-sem/current-officers/>

-30-

Other' Coming Events

We try to publish IEEE events in several places to ensure that everyone who may want to attend has all the available relevant information.

SEM Web Calendar:

<http://sites.ieee.org/sem/>

Select "SEM Calendar" button in the top row of the website.

SEM Web Meetings:

<http://sites.ieee.org/sem/>

Select "SEM Meeting List" button in the left-hand column.

vTools Meetings:

<http://sites.ieee.org/vtools/>

Select "Schedule a Meeting" button in the left-hand column of buttons.

Other Happenings:

However, since IEEE members tend to have eclectic interests, we want to give everyone a heads up for some of the non-IEEE events that may be of interest.

Let us know if you have a special interest in a field that encourages technical study and learning, and wish to share opportunities for participation with members of the section.

Send the particulars to k.williams@ieee.org and an announcement may be placed in the newsletter.

Links:

Below are links to local SEM Clubs engaged in technical hobbies as well as links to sites that may be useful for locating clubs in the area.

Amateur Radio Clubs in Southeastern t Michigan

(This is a fairly comprehensive listing of all the 'Ham' clubs in SEM.)

<http://www.wa2hom.org/ham-radio-clubs-in-se-michigan/>

Model RC Aircraft:

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

Model Rocketry:

<http://team1.org/>

Astronomy:

<http://www.go-astronomy.com/astro-clubs-state.php?State=MI>

Experimental Aircraft Association:

<https://www.eaa.org/en/ea/ea-chapters/find-an-eea-chapter>

Robots:

<http://therobotgarage.com/about-us.aspx>

Science Fiction Conventions:**Great Lakes Comic-Expo**

Saturday, July 18, 2015 at
Trinity Lutheran Church.
38900 Harper Ave,
Clinton Twp, MI 48036.

<http://www.greatlakescomicexpo.com/>

Mad Science:

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

ESD PE Review Class:

www.esd.org

Refer a Colleague:

IEEE-USA
Get the Tools of The Trade

IEEE-USA Merchandise, yours **FREE** when you refer a colleague who joins IEEE.

LEARN MORE

IEEE

Refer a Colleague, Get Great Merchandise

In conjunction with IEEE-USA, we are pleased to continue this special offer for US members.

[Refer a colleague to join IEEE](#). They'll get a US\$25 discount off their first year membership, and you'll get a gift. But this discount expires on 28 February - submit your referrals now!

IEEE-USA gift items you can choose from include:

- Cooler backpack
- Computer backpack
- Portable battery charger
- Tablet case
- Portable speaker
- Parker pen and mechanical pencil set
- Parker ballpoint pen
- Travel coffee mug and tumbler set
- Golf balls
- Baseball hat
- Golf umbrella
- Travel umbrella

You will also be eligible to receive incentives through the IEEE Member-Get-a-Member (MGM) program.

How it works:

- Refer your colleague via the [online form](#).
- Your referral will receive an e-mail inviting them to join at a US\$25 discount off their first-year membership dues.
- This discount expires on 28 February.
- Your referral will provide your IEEE member number as they join.
- Within 1-3 weeks after your referral joins, you will receive an e-mail confirming your recruiting success, including a link to select your IEEE-USA merchandise item.
- You will receive a separate e-mail for each new member you recruit.

Please help spread the word and share your IEEE experience - no one knows how beneficial IEEE Membership is for technical and career development better than you, the member. [Refer your friends and colleagues today!](#)

Sincerely,

Elyn Perez
IEEE Member & Geographic Activities

Important to know: There is no limit to the number of merchandise items you can earn; as long as your referrals join as professional members. Student members and Society Affiliates are not eligible for this promotion. You also remain eligible for the [MGM incentive awards](#) given out once per year in September.

IEEE • 445 Hoes Lane, Piscataway, NJ 08854 USA

Executive Committee

The SEM Executive Committee is the primary coordination unit for Southeastern Michigan (SEM) IEEE operations. The basic organization chart below shows the 2015 arrangement of communications links designed to provide inter-unit coordination and collaboration.

The SEM Executive Committee meets in a teleconference each month on either the first Wednesday or first Thursday at noon. The specific meeting days, times, phone or WebEx numbers and log in codes are published on the IEEE SEM Website calendar: <http://sites.ieee.org/sem/> Click on the "Calendar" button in the top banner on the first page of the w.

If you wish to attend, or just monitor the discussions, please contact David Mindham, the section secretary at: dmindham@ieee.org and request to be placed on the distribution list for a monthly copy of the agenda and minutes.

More meeting details are available on the next page of this newsletter.

Other Meetings:

Most of our members maintain memberships in one or more of the IEEE Technical Societies, which automatically makes them members of the local chapter which is affiliated with that society. As a result, they should receive notices of the local chapter meetings each month.

However, members of the section may have multiple technical interest and would like to have meeting information of other

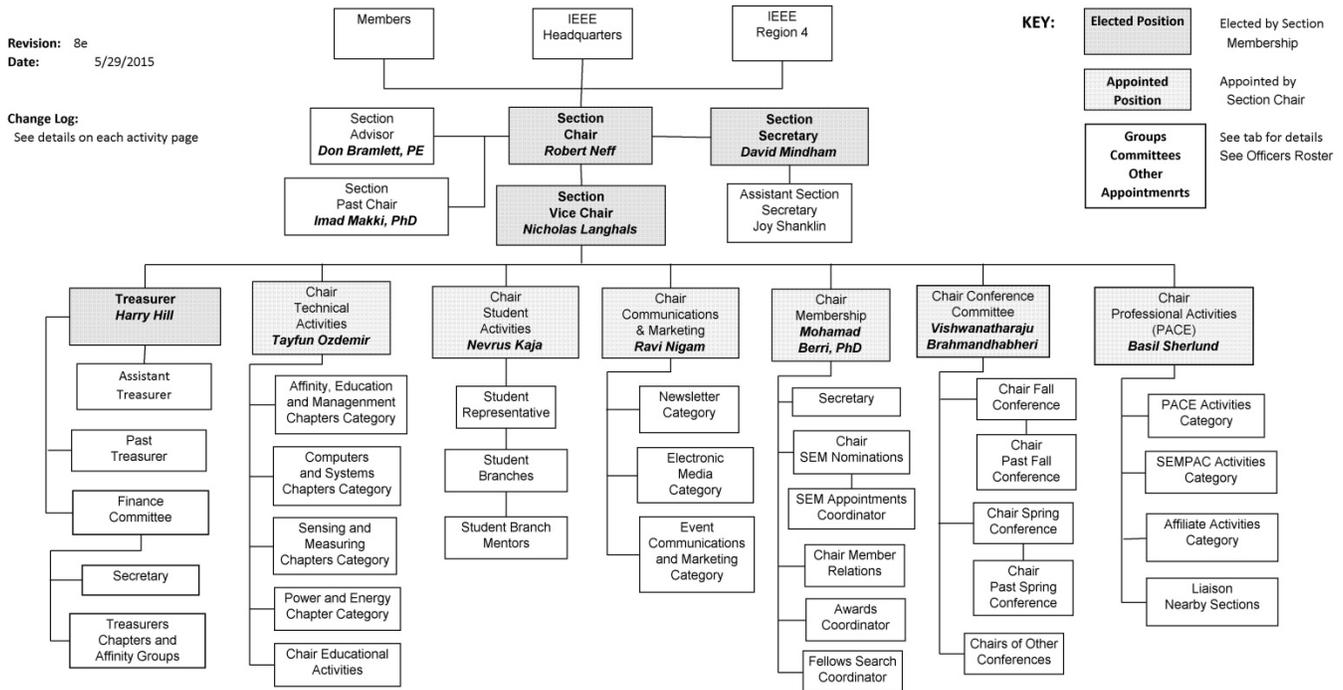
chapters. In order to communicate the meetings dates of all the chapters, affinity groups etc., to our members to facilitate their attendance, ur leaders of the groups are requested to send meeting information to our webmasters for posting on section's calendar.

More detailed information on meetings may be found by using the IEEE meetings site. This may be found through the IEEE SEM Website: <http://sites.ieee.org/sem/> and clicking on the **SEM meetings list** button near the bottom of the left hand banner.

Automatic e-mail notification of web updates may be received using the "Email Notifications" button at the top of the **SEM Tools/Links** side banner.

David Mindham - SEM Secretary

Current Organization - IEEE Southeastern Michigan Section (SEM)



Download the complete SEM Organization Chart, in PDF format, from the SEM Website at: www.ieee-sem.com Then, click on "About SEM" Tab, followed by, click on "Current Officers"

Section Mission & Goals**Section Focus:**

The IEEE SEM Senior Officers of the Section have reaffirmed the overall Mission and Goals of the Section, which align with the overall objectives of IEEE worldwide and with the guidance provided by our leadership in Region 4.

You have probably seen the Mission and Goals before. However, it is important to keep these clearly in mind and remind ourselves often that this is what we are about and what we are trying to accomplish.

Section Mission

Inspire – Enable – Empower and Engage Members of IEEE at the local level.

For the purpose of:

- Fulfilling the mission of IEEE (...**foster technological innovation and excellence for the benefit of humanity.**)
- Enhancing the members' growth and development throughout their life cycle
- Providing a professional home

Section Goals

- Increase member engagement,
- Improve relationships with and among members,
- Increase operational efficiency and effectiveness, within the section and its interfaces,
- Enhance collaboration – serve as the local face of IEEE to the community,
- Increase membership,
- Ensure the collection of appropriate information necessary to assist the IEEE to become a data driven organization.

It is now the task of the Section leadership to guide and coach all Section officers and elements to focus their activities on achieving those goals.

SEM Monthly Meetings**Scheduled Meetings:**

The regular meetings of the SEM 'Leadership' (Executive Committee) are scheduled well in advance to allow everyone to place them in their personal planning calendars, and then defend those dates against encroachment. (*Not always possible.*)

Two types of Monthly meetings are normally scheduled:

Monthly Teleconference / WebEx as well as:

Quarterly Face-to-Face. (See Below)

Note: All IEEE meetings are '**Open**' for all members to attend.

The only caveat is that you please register using the specific meeting form on found on the vTools site at:

<https://meetings.vtools.ieee.org/main>

This will ensure we have sufficient space, refreshments and support for everyone who joins the meetings.

Teleconference Schedule

(held from 12-1 PM):

- June 4, 2015
- August 5, 2015
- September 3, 2015
- November 5, 2015
- December 2, 2015

F2F Meeting Schedule:

- July 9, 2015
- October 7, 2015
- January 7, 2016

More information for the f2f meetings will be sent out as the dates are approached.

Keep in touch via the SEM Web site (<http://sites.ieee.org/sem/>) or use the links to the SEM Facebook or LinkedIn pages on the SEM Web page.

All the normally scheduled meetings of each of the other section chapters, affinity groups etc. are listed each month in the vTools area of our SEM website at:

http://ewh.ieee.org/r4/se_michigan/calendar1.php

These announcements refer to:

Standing Committee Meetings:

Affinity Group Meetings:

Technical Chapter Meetings:

University Student Branch

Meetings:

Calendar Schedule:

Meetings are also announced on the SEM Web page Calendar

<http://sites.ieee.org/sem/>

(Select the "SEM Calendar" button in the top row.)

Note: Often meetings of the 'Executive Committees' of Chapters and Affinity Groups (and standing committees, of course) are listed only in the 'SEM Calendar' page, since it is felt that most members would not wish to sit through the 'administrative' meetings.

However, if this type of meeting is just your 'cup of tea', then contact the officers of the unit that is conducting the meeting, and ask to be 'linked' into their teleconference, SKYPE, Google Hangout, or WebEx meeting. They would be happy to have you as a participant.

Many volunteers get interested in Section activities when they get a chance to attend a Monthly meeting and 'peek under the hood' to find out how the machinery of the Section actually runs. It can be a rewarding experience.

David Mindham

SEM Section Secretary.

dmindham@ieee.org

-30-

Editors Corner

Previous editions in this series may be found on the IEEE SEM Web page at: <http://sites.ieee.org/sem/>. Click on the "Wavelengths" button in the top row of selections.

Comments and suggestions may be sent to the editor at k.williams@ieee.org. We also recommend a cc to the Chair of the Communications and Marketing Committee, **Chaitanya Setti** at: chaitanyagini@ieee.org.

The newsletter does not have a staff of reporters to 'investigate' what is going on in the Section and write up informative articles.

We rely on our Officers and Members to provide the 'copy' that we finally present to our readers as the newsletter.

The **Wavelengths Focus Plan and Personal Profiles** plan shown in the matrix below is conceived as a method to ensure a reasonable coverage of normally expected Section activities and events.

We try to finish each issue assembly by the week before the first of each month to allow time for review and corrections. If you have an article or notice, please try to get it to us on time or early if possible.

The plan below relies on the contributions of our members and officers, so please do not be shy. If you have something that should be shared with the rest of the Section, we want to give you that opportunity.

Co-Editors:

I am selfishly looking for members interested in helping to edit the newsletter along with me who can learn the process, share in the duties, and help keep the newsletter alive and lively by providing alternative points of view.

If you feel you might be that person, or would like to train to become that person, please let me know.

k.williams@ieee.org

-30-

Wavelengths Focus Plan:

Month	AG's	Ch's	Ch's	SB's	Specal Notice	Reporting Events	Monthly Focus	Awards
Jan		1		OU	Future Cities Judges	Election Results	Resolutions	
Feb	Cons	2		MSU	Science Fair Judges	Officer's Welcome	Surviving Winter	Future Cities
Mar		3	13	EMU	Spring Conf. Flyer	Spring Conference	Spring Conference	Science Fair
Apr		4			National Engrs Wk.	Future Cities	Chapter Focus	GOLD Award
May	Life	5	14	U/M-D	Outstanding Eng Awd	Science Fair	Elections - Prep	New Fellows
Jun		6			IEEE-USA Apmts.	ESD Banquett	Leadership Skills	SEM Awards
Jul		7	15		Nominations Call	MD-Webcasts	Students Issues	Region 4
Aug	WIE	8			MGA - Apmts.	Tech-Webinars	Womens Issues	
Sep		9	16	LTU	Region 4 Apmts.	Engineers Day	Professional Skills	
Oct		10		U/M-AA	Fall Conf. Flyer		Fall Conference	
Nov	YP	11	17	WSU	ELECTIONS!		Humanatarian	
Dec		12		U/D-M	IEEE-Com Apmts.	Fall Conference	Happy Holidays	

Wavelengths – Personal Profiles:

Month	Profiles	Profiles	Committees
Jan	Chair	New Officers	
Feb	V-Chair	Secretary	Communications
Mar	Treasurer	Sect-Adviser	Conference
Apr	Stud-Rep		Education
May		Sr Officers	Executive
Jun			Finance
Jul			Membership
Aug			Nominations
Sep			PACE Activities
Oct			Student Activities
Nov			Technical Activities
Dec		Editor-WL	



Web & Social Sites

SEM Website

<http://sites.ieee.org/sem/>

Each of the sites below may be accessed through the SEM Website:

Section Website Event Calendar

(Select the “SEM Calendar” button - top row.)

SEM Facebook Page

(Select the “” button under the top row.)

SEM LinkedIn Page

(Select the “” button under the top row.)

SEM Officers:

For a complete listing of all - Section - Standing Committee - Affinity Group - Chapter and Student Branch Officers, see the SEM Officers Roster on the SEM web page under the “About SEM” button and select “Current Officers”.

SEM On Line Community

<http://sem.oc.ieee.org>

Section Officers

Section Chair

Robert Neff

Section Secretary

David Mindham

Section Vice-Chair

Nicholas Langhals

Section Treasurer

Praveen Kumar

Section Adviser

Don Bramlett

Chair Communications & Marketing

Ravi Nigam

Chair Conferences

Raju Brahmandhabheri

Chair Educational Activities

Chaomin Luo

Chair Finance

Basil Sherlund

Chair Membership

Mohamad Berri

Chair Nominations

Kimball Williams

Chair Professional Activities

Basil Sherlund

Chair Student Activities

Nevrus Kaja

Student Representative

Samer Koda

Chair Technical Activities

Ali Eydgahi

Past Section Chair

Imad Makki



IEEE Southeastern Michigan

Visit Us on the Web at:
<http://sites.ieee.org/sem>



Leadership Meetings

All IEEE members are welcome to join us at any regularly scheduled meeting:

Advertising Rates

SEM Website & Newsletter
Advertising Rates / Month:

Our readers specify & purchase a wide range of electronic components, equipment and services.

Our sponsors come from industry, education, and nonprofit organizations.

Full page \$500,

Half page \$250

Quarter page \$125,

Eighth page \$65.

SEM Executive Committee Monthly Teleconferences:

- 1st Wednesday or Thursday of Each Month @ Noon
- Check the Section Web Calendar at:
[http://sites.ieee.org/sem/](http://sites.ieee.org/sem)
(Select the “SEM Calendar” button in the top row.)

SEM Executive Committee Face-to-Face Meetings:

- 1/Qtr. Usually held at U/M-D Fairlane Center
- Registration at:
<https://meetings.vtools.ieee.org/main>

SEM Standing Committee Meetings:

SEM Affinity Group Meetings:

SEM Technical Chapter Meetings:

SEM University Student Branch Meetings:

- Meeting schedules are announced on SEM Web Calendar
<http://sites.ieee.org/sem/>
(Select the “SEM Calendar” button in the top row.)
- Registration for all at:
<https://meetings.vtools.ieee.org/main>