



# Wavelengths

**Volume 56 – Issue 3  
March 2016**

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*Wavelengths Newsletter is produced by IEEE volunteers for SEM Members.  
Archive: <http://sites.ieee.org/sem/>  
Select: "Wavelengths"*



## Chair's Message:

How are you doing on your News Year's Resolutions? For many of us it is harder to follow through than it is to come up with the idea.

## Elected Officers Meeting:

Your elected officers met in February as a small group to discuss section strategy and issues. On the table for discussion were member involvement, appointed officer engagement, establishing priority goals and developing a Strategic Plan process. This group plans to work on these initiatives and meet quarterly to review our progress. These plans will not happen overnight but it's a great start.

## Spring Conference:

The Spring Conference organizing team has built a dynamic program around our Keynote Speaker Robert Moskowitz. You can learn more about the conference at [www.ieee-sem.org](http://www.ieee-sem.org) and click on the "SEM Spring Conference" tab at the upper left of the web page.

Please register early so the committee can plan on your attendance.

## Other Events:

Many other events are planned within our Section. In the very near future are events described on the following pages of this newsletter. Also check out our "SEM Calendar" tab at the top of the web page.

## Volunteering:

Last month, in this column, I spoke of volunteering at the Section, Chapter, Affinity Group and Student Branch levels. The need for volunteers has not diminished. There are many spots where your talents can be utilized.

The benefits of volunteering include, but are not limited to, building your network, growing your social skills, building your leadership skills and mentoring others with your knowledge. To volunteer, please contact leaders in the areas of your interests ([www.ieee-sem.org](http://www.ieee-sem.org) and click on "About SEM" tab) or contact Kimball Williams our Chair of Nominations and Appointments at [k.williams@ieee.org](mailto:k.williams@ieee.org).

Please volunteer, you will find the experience interesting and rewarding.

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](mailto:RLNeff1@gmail.com)

**'On-Line Newsletter!'****Notices & Timing:**

One of constant struggles being waged in this digital age is the need to keep everyone in large, diverse organizations informed of time sensitive and/or critical events. This shows up in our monthly newsletter when we learn of events of interest to our members only a few days before the event or after the monthly publication date has passed and the current issue already released into your hands.

Following the lead of the successful "e-grid" on-line publication used by the IEEE San Francisco Bay Area Council, we are currently nearing the final planning stages of converting our monthly 'published' PDF newsletter into a 'Live' on-line version that will present as 'up to the minute' information on local activities as possible.

However, we don't want to lose the monthly 'summary' publication. The plan is to 'capture' those elements that record what happened during the last 30 day period and 'lock' it in a PDF format that can continue to be our 'monthly newsletter' and social record of what has happened, while still giving everyone the most current new information possible.

If you are interested in being part of this evolution of SEM please see page 12 for our 'call' for an **e-Wavelengths** Coordinator.

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**Science Fair Judging****IEEE-SEM MEMBERS  
NEEDED AS SCIENCE FAIR  
JUDGES**

By Don C. Bramlett, PE, SMIEEE

Please volunteer to serve on the elite panel of judges for the professional awards being sponsored by the Southeastern Michigan Section of the Institute of Electrical and Electronics Engineer, Inc. (IEEE-SEM) at the 58th Annual Science and Engineering Fair of Metropolitan Detroit (SEFMD). This is the twentieth straight year that IEEE-SEM has provided judges and sponsored professional awards for projects associated with electrical, electronics and computer engineering.

Judging will be on **Wednesday March 9, 2016** at the Science Fair, located at Cobo Hall in downtown Detroit. **The Science Fair will be in the Michigan Hall this year on the Lower Level or Level (0).** Please plan your arrival at the Science Fair between **7:45 and 8:30 AM** to enjoy free coffee and muffins. We will be near the Professional Awards Judging Desk (front of hall near the muffins and coffee). The judge check-in may be bypassed upon entering the front of Michigan Hall.

As was done last year, IEEE-SEM plans to provide judging for both the Junior (5<sup>th</sup> – 7<sup>th</sup> grade) Division and the Senior (High School) Division. It is anticipated that the IEEE-SEM awards judging will start at **8:45 AM and completed by 11:30 AM**. IEEE-SEM will tentatively present two Grand Awards that include framed certificates and cash prizes, and several Honorable Mention Recognition Awards, consisting of framed certificates.

The planned routine is to separate into small groups at first and quickly roam assigned sections of the project displays to identify projects related to electrical, electronics and computer engineering that are worthy of further review by the panel of IEEE-SEM judges. It is anticipated that the

number of relevant projects will be rather small. One team of judges will be formed to evaluate in greater depth the selected projects. Based on the number and quality of the selected project displays, the judges may choose to use the supplied Project Evaluation and Judging Forms to grade the projects in each division or use a less formalized process, as deemed appropriate.

Please direct questions to me at my office, (313) 235-7549 during normal weekday business hours or my home in the evenings, (734) 591-1452 I may be contacted on my cell phone, 313-608-6223, most any time as well. I may be contacted via e-mail either [d.bramlett@ieee.org](mailto:d.bramlett@ieee.org) or [bramlett@dteenergy.com](mailto:bramlett@dteenergy.com).

I look forward to seeing you **Wednesday, March 9th at the Science Fair located at Cobo Hall.** Parking is available at the Cobo Hall Roof Parking site. Free coffee and muffins are available in the morning.

**Toyota Seminar @ LTU****Friday****Engineering Seminar****Sponsored by Eaton****Toyota's Approach to Driving Automation Technologies****Derek Caveney, Ph.D.****Manager, Integrated Vehicle Systems department****Toyota Technical Center (TTC), Ann Arbor****Friday, March 4, 2015****12 PM-1 PM EST, Engineering Building, E211****Lawrence Technological University**

Automated, connected, and fully-autonomous driving are hot topics in today's ground transportation community; an interest that is shared by members in this community from academia, industry, and government. Light vehicle manufacturers and suppliers are racing to lead the introduction of these technologies to their customers. Media reports and press releases are appearing daily that highlight technologies such as collision avoidance, automated parking, automated highway driving, vehicle platooning, and autonomous city driving.

This talk will include recent developments in automation and connectivity from Toyota and other OEMs, and details about Toyota's Mobility Teammate Concept. Particular focus will be given to Toyota's automated highway driving technologies, and other technologies being developed by the Toyota Technical Center, in Ann Arbor, Michigan.

**About the Presenter:** Derek Caveney is a Manager within the Integrated Vehicle Systems department at the Toyota Technical Center (TTC), in Ann Arbor, Michigan. TTC is Toyota's North American R&D center, a division of Toyota Motor Engineering & Manufacturing North America, Inc. (TEMA). Dr. Caveney's team is supporting the global development of automated driving technologies for safety, comfort, and fuel-efficiency applications.

Dr. Caveney joined TTC in 2005 as a Senior Research Scientist. Prior to his current assignment as Manager, Dr. Caveney's research included automated, connected, and cooperative systems for safety and mobility.



## GM Lecture @ OU

OAKLAND  
UNIVERSITYSchool of Engineering and  
Computer Science**Lecture Series****12 p.m. | March 11, 2016 | 279 EC****GM Electrification Overview - Vehicles,  
Propulsion Systems, and Key Components**

A wide variety of Hybrid and Electric Vehicles are now in mass production. These electrified powertrains reduce or displace petroleum consumption by innovatively combining conventional IC engine, mechanical transmission, energy storage, utilizing electro-mechanical energy conversion, and vehicle-to-grid energy interfaces.

The lecture will provide an overview of these electrified vehicle topologies including: Mild Hybrid, Full Hybrid, Plug-In Hybrid, Extended Range Electric, and Battery Electric Vehicles.

The talk will continue with discussing propulsion solutions for the 2016 Chevrolet Volt and 2017 Chevrolet Bolt. Next, key component design features within the powertrain, such as the Transaxle, Traction Inverter, and Motors will be presented. Time will be available for discussion about work at General Motors.

*Open to the OU community  
A Jets Pizza lunch will be served*

**Seminar: EMC Test Setup**

**NORTH AMERICAN  
AUTOMOTIVE WORKSHOP 2016**

**KEYNOTE TALKS**

**MAGNA ELECTRONICS**

**"Automotive EMC Test Setup Grounding  
Dissimilarities"**

Andrew R. Macko  
*Electromagnetic Compatibility Technical Specialist,  
Chief Engineering Group*

**GM**

**"Using Electromagnetic Simulation for  
Developing Automotive EMC Design Guidelines"**

Scott Piper  
*EMC Engineer*

**TEXAS INSTRUMENTS INCORPORATED**

**"Power Switch Technology in EMC"**

John Rice  
*Power Systems Engineer, Senior Member Technical Staff*

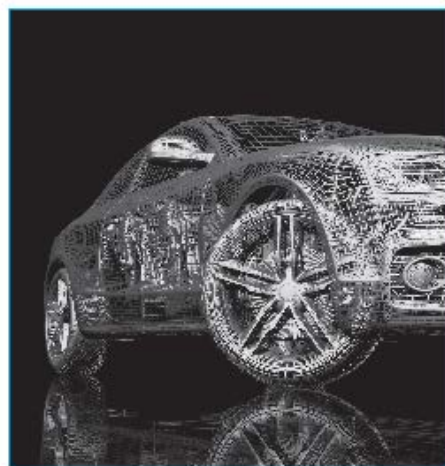
**FORD MOTOR COMPANY**

**"Automotive Radar Application"**

John F. Locke  
*Technical Specialist, RF & Antenna Subsystems*



**CST ANNOUNCES  
NORTH AMERICAN  
AUTOMOTIVE  
WORKSHOP 2016**



4th May, 2016  
Dearborn, Michigan  
United States



**EMI Seminar:**

1/15/2016

Troubleshooting EMI Seminar with Lee Hill

**Troubleshooting EMI Seminar with Lee Hill**  
Identify, Characterize, and Prevent Interference Problems**Hosted by Rohde & Schwarz and Interference Technology**

Join this highly focused one-day seminar and learn how to uncover, characterize, and solve the most elusive EMI problems. Troubleshooting and localizing intermittent signals or multiple layers of broadband and narrowband signals can be frustrating even for the most seasoned EMC troubleshooter and RF engineer. We will discuss and demonstrate a number of test setups that can help identify hidden or emerging EMC failures and then demonstrate how real-time analysis can literally make previously-hidden signals leap into plain view.

This seminar is intended for engineers and technicians involved in the development, pre-compliance, testing and certification of electronic products, systems and assemblies.

**Agenda:**

8:30 AM - 9:00 AM  
Welcome/Registration

9:00 AM - 12:00 PM  
Practical RF measurement techniques &  
probing tools for EMC troubleshooting

12:00 PM - 1:00 PM  
Lunch, Provided by Rohde & Schwarz

1:00 PM - 4:00 PM  
Using real-time spectral analysis to  
visualize, measure, and troubleshoot EMI  
signals

[> View course descriptions](#)**Can't attend the seminar?**[Schedule a one-on-one demo](#) with an industry expert.**Available Dates and Locations:**

Thursday, March 10 - Austin, TX  
Tuesday, March 15 - Los Angeles, CA  
Thursday, March 17 - Santa Clara, CA  
Tuesday, March 22 - Detroit, MI  
Thursday, March 24 - Boston, MA

**About the Speaker**

Lee Hill is an industry expert in electromagnetic compatibility. He provides EMC troubleshooting services, design reviews, and training to a wide variety of industries nationally and around the world.

Rohde & Schwarz USA, Inc. | 6821 Benjamin Franklin Dr, Columbia, MD 21046 | 888-837-8772

**EMCFest 2016**

The Southeastern Michigan EMC Chapter  
Proudly Presents:  
**EMCFest '2016**

**“The Bruce-Lee Show”**

**A Tutorial and Exhibition**  
With Honored Guest Speakers

**Bruce Archambeault  
&  
Lee Hill**

**Thursday, May 5, 2016**

**At**

**Embassy Suites** 19525 Victor Parkway,  
Livonia, MI 48152 Ph.734-462-6000

*IEEE Electromagnetic Compatibility (EMC) Society.*

EMCFest'2016 Home Page:

<http://www.emcfest.org>

**Register On-Line!**

Bruce Archambeault and Lee Hill are both well known to the EMC community as experts in the areas of EMC modeling and EMC Field problem resolution. Both also lecture and teach EMC classes in the industrial and academic environment.

**Program Outline -- Thursday May 5, 2016**

6:00	Vendor Table Setup (till 8:30)
7:30	REGISTRATION & EXHIBITS CONTINENTAL BREAKFAST
8:30	Bruce: The Ground Myth: The term "ground" is probably the most misused and misunderstood term in EMC engineering, and in fact, in all of circuit design.
10:00	Break & Exhibits
10:30	Lee - Mastering the 4 Noise Paths for Fast, Efficient EMC Troubleshooting
12:00	LUNCH
1:00	Bruce: Decoupling PCB's for EMC and Functionality in the Real-World
2:30	Break 7 Exhibits
3:00	Lee – EMC Troubleshooting tools and techniques for emissions and immunity
4:30	Ice Cream Reception
5:00	Close of EMCFest



**Bruce Archambeault**, is an IEEE Fellow, an IBM Distinguished Engineer Emeritus and an Adjunct Professor at Missouri University of Science and Technology. He has taught numerous seminars on EMC and Signal Integrity including Oxford University. He is the author of “PCB Design for Real-World EMI Control” and lead author of “EMI/EMC Computational Modeling Handbook” and published numerous papers.

EMCFest'2016 Home Page:

<http://www.emcfest.org>

**Register On-Line!**



**Lee Hill, MSEE MS&T**, is Founding Partner, SILENT Solutions LLC since 1992. Lee and business partner, Randal Vaughn, provide EMC troubleshooting services, design reviews, and EMC courses worldwide. Lee teaches EMC at University of Oxford and also a graduate EMC course at Worcester Polytechnic Institute (WPI) in Worcester, MA

**FEE SCHEDULE**

IEEE Members, Registered before April 24	<b>\$50</b>
Non IEEE Members, Registered before 24	<b>\$75</b>
Full –time Students with copy of valid Student I.D.	<b>\$25</b>
Unemployed / Retired IEEE Member	<b>\$25</b>
CEU Certificate Only	<b>\$25</b>
All Registrations after April 24 <sup>th</sup>	<b>\$100</b>

## H-1B Visa Petition:

From: **Russell Harrison** <[r.t.harrison@ieee.org](mailto:r.t.harrison@ieee.org)>

Date: Sun, Jan 24, 2016 at 2:37 PM

Subject: IEEE-USA Petition Needs Support

To: Russell Harrison <[r.t.harrison@ieee.org](mailto:r.t.harrison@ieee.org)>

### IEEE Leaders:

Many of you have seen the article in Insight about IEEE-USA's new attack on the H-1B visa program.

(<http://insight.ieeeusa.org/insight/content/policy/255071>)

In brief, we believe that the use of H-1B visa to replace American workers represents intentional discrimination against Americans because of their citizenship - which is illegal under the law.

As part of this effort, we have created an online petition asking the U.S. Attorney General to launch an investigation into H-1B outsourcing. We already have 200 signatures on the petition, but we need more.

The petition can be found here: [https://www.change.org/p/attorney-general-of-the-united-states-stop-h-1b-discrimination-against-americans?recruiter=460476742&utm\\_source=share\\_petition&utm\\_medium=copylink](https://www.change.org/p/attorney-general-of-the-united-states-stop-h-1b-discrimination-against-americans?recruiter=460476742&utm_source=share_petition&utm_medium=copylink)

Please take a moment to add your name to the petition. In politics, numbers matter. The more names on the petition, the more likely it will generate a response. We believe that the law is on our side, but the U.S. Department of Justice is a busy place. It will take many voices to get their attention.

After you have signed, please send this e-mail to anyone else you think might be willing to help.

Thank you for your help. This should only take you a minute or two to do, but could have a profound impact on the H-1B visa program.

Russ

--

Russell Harrison  
Director, Government Relations

IEEE-USA  
2001 L St, NW: Suite 700  
Washington, DC 20036  
(202) 530-8326



Amp Up Your Career:



**SAVE THE DATE!!**

COMPES Professional Development Conference  
*Coalition of Minority Professional Engineering Societies*

*Where:*



1 Energy Plaza, Detroit, MI 48226

*When:* **Saturday April 23, 2016**

Registration @ 7:30am

Conference @ 8am – 4pm

Catered lunch

*Theme:* **“Amp Up Your Career”**

Including: Exciting Technical Topics, Soft Skill Development, and How to Take Risks in Your Career.

Benefits to All:

- Network with our target attendance of 200+ professionals
- Opportunity to attend breakout sessions on technical topics
- Access to resources to aid in career planning and development

Benefits to Volunteers and Corporate Sponsors:

➤ *Volunteers:*

- Network with a diverse core planning team
- Gain experience planning a large scale event

➤ *Corporate Sponsors:*

- Opportunity to further train and support diverse workforce
- Support minority engineering societies through COMPES PDC

**Nuclear Energy Today**

## **TOPIC: *Nuclear Energy Today – What in the World is Going On?***



David Vaglia, a 2015-2016 Industrial Applications Distinguished Lecturer, presents an overview of the status of electricity generating nuclear power plants around the world. It discusses the current status and probable future of nuclear power in those countries. This talk also covers the different nuclear power plant designs in relation to recent nuclear incidents and the impacts those incidents have had on the industry. The presentation also looks at the problems and opportunities created by the aging nuclear workforce, the safety of nuclear facilities, the drive to extend the life of current plants, and the challenges of building new

David Vaglia has his roots in the energy engineering. He began his career in the coal mining industry, working as an applications engineer in power distribution, and electric train haulage systems, both above and below ground. He has also worked in the renewable energy sector, investigating new concept wind generation applications and solar thermal systems. Mr. Vaglia transitioned to instrumentation and control working with supervisory control and data acquisition systems, and then to the man-machine interface design of nuclear power plant control rooms. Mr. Vaglia is presently a Principal Engineer in the Control Room Design Group, Operating Plants Business, at the Westinghouse Electric Company. In Westinghouse, he has held positions in management, marketing, and engineering.

Mr. Vaglia has a Bachelor of Science in Electrical Engineering and a Bachelor of Arts in General Arts and Sciences, both from the Pennsylvania State University. He also has a Master of Business Administration from the University of Pittsburgh and is a registered Professional Engineer working in the state of Pennsylvania.

Mr. Vaglia has been an active in the IEEE for over 40 years. He is a Senior Member serving the Pittsburgh Section (Region 2) in various capacities. Mr. Vaglia's volunteer positions have included Section Awards Chair, Treasurer, and Section Chair. In the IAS-PES Pittsburgh Joint Chapter, he has served as Secretary, Treasurer, and Chair. He has also served as the General Chair of the 2008 PES Annual Meeting. Mr. Vaglia was nominated and appointed an IAS Distinguished Lecturer for 2015-16. He is presently Chair of the joint chapters of the IAS and PES, Pittsburgh Section, which has won numerous IAS and PES chapter awards.

**Where:** Southfield, MI 48076

**When:** Thursday, March 24<sup>th</sup> 6:00 – 8:00 P.M.

**PDH:** 2 PDHs issued by IEEE Southeastern Michigan

**Price:** Free registration requested for accurate food count

**Register at:** <https://meetings.vtools.ieee.org/m/38112>

2016 Spring Conference



# SPRING CONFERENCE

**Tuesday Evening, April 19, 2016**

## BURTON MANOR

27777 Schoolcraft Road, Livonia, Michigan 48150

### Meeting Agenda:

4:00 PM – 4:30 PM Doors open for poster setup and registration  
4:30 PM - 5:00 PM Registrations / Posters / Networking  
5:00 PM – 5:30 PM Poster Presentations  
5:30 PM – 6:30 PM Breakout Technical Sessions (2 Speakers per session)  
6:30 PM – 6:55 PM Open Forum Q & A (moderated with all speakers)  
7:00 PM – 7:45 PM Dinner  
7:45 PM – 8:30 PM Keynote Speech  
8:30 PM – 8:45 PM Awards and Recognition



### Keynote Presentation: **BUILDING TRUST INTO NETWORKING**

**Robert Moskowitz**

Independent Security Consultant  
Chair IEEE 802.15.9 working on MAC security  
for 802.15.3e and 802.15.15.7

**Technical Tracks on Cyber Security in:**  
**Communications, Networking & Critical Infrastructure (Protection/Terrorism)**  
**Consumer Electronics**  
**Transport & Aerospace**

**Conference Website:** [www.ieee-sem.org/spring](http://www.ieee-sem.org/spring)



Xfmr Design Seminar**TOPIC: Power Transformer Design and Manufacturing****Part 1: Transformer Design and Design Parameters****Abstract:**

The presentation will be on the basics of transformer design. The presentation will explain how a transformer designer interprets parameters such as MVA, lightning impulse, switching impulse, percentage impedance that are supplied by customers. It will touch on power rating [MVA], core rated voltages, insulation coordination, short-circuit impedances, short-circuit forces, loss evaluation, temperature limits, cooling, sound level, Etc. It will also explain overload and life expectancy of a transformer as well as comparing when delta windings and wye windings are needed. The presentation will answer why in North America transformers are regulated from low voltage side where in Europe

**Part 2: Transformer Manufacturing Processes****Abstract:**

The presentation will be on the industry wide manufacturing processes used to build transformers on the shop floor. It will cover core construction, insulation, windings, coil, processing, tanking, testing and shipping. Some of the common trouble points during the manufacturing process will be explained as well what a customer should look into while doing factory inspection. The presentation will also cover reconnection both in LV and HV, LTC Tap changer (both in tank and separate tank), and lead works.

**Speaker:** Ronnie Minhaz, P.E.

Ronnie holds B.Sc. degree in Electrical Engineering from University of Manitoba, Canada. Before founding his own company "Transformer Consulting Services Inc. ([www.tc-servicesinc.com](http://www.tc-servicesinc.com))", Ronnie worked as a Transformer Designer at Pauwels Canada (Manufacturer), as an Equipment Engineer at SNC Lava Lin (EPCM) and at Enmax Power (Utility), as Substation Lead Engineer at McGregor Construction (Substation Construction). Ronnie is a registered professional engineer in the province of Alberta, Canada and an IEEE member. Ronnie held various leadership positions at IEEE Section level and a regular member of IEEE PES society.

**Where:**

**Engineering Society of Detroit**  
20700 Civic Center Drive, Suite 450  
Southfield, MI 48076

**When:** Thursday, March 31<sup>st</sup> 12:00 – 4:00 P.M.

**PDH:** 4 PDHs issued by IEEE Southeastern Michigan

**Price:** \$25 Students, \$30 IEEE Members, \$40 Non-Members

**Register at:** <https://meetings.vtools.ieee.org/m/37895>

## ESD Events

IEEE Southeastern Michigan Section maintains a supporting membership as an Affiliate with the Engineering Society of Detroit (ESD), and supports many of its activities.

We try to publish ESD events that we feel our members may want to attend. Below is a listing of some of the ESD events planned for 2016:

### **The Engineering Society of Detroit's (ESD) Professional Engineer Licensing Review Courses**

Since 1941, The Engineering Society of Detroit has successfully prepared thousands of candidates for the State licensing exam in a variety of disciplines ranging from civil and environmental to mechanical and electrical engineering. You'll learn in a small classroom-like setting from instructors who have first-hand knowledge of the course material. Let ESD's 70-plus years of experience help prepare you to pass the exam on your first try.

#### **FE (Part I) Review Course February 3 – April 9, 2015**

The Fundamentals of Engineering (FE) Part I Review Course provides 84 hours of instruction in engineering fundamentals for candidates planning to take Part I of the Professional Engineers Exam.

The classes are held Tuesdays and Thursdays from 6-9 p.m. and on Saturdays (morning or afternoon depending on discipline) at ESD headquarters in Southfield. The Saturday sessions start on February 14, 2015.

#### **PE (Part II) Review Course February 14 – March 28, 2015**

The Principles & Practice of Engineering (PE) Part II Review Courses consists of 28 hours of

instruction, on seven half-day Saturday sessions, focusing on problem solving techniques needed for the Professional Engineers (Part II) exam.

All classes are held on Saturdays at ESD headquarters in Southfield. The civil engineering course meets 8:30 a.m. – 12:30 p.m. Mechanical, environmental and electrical courses are 1 – 5 p.m. The state exam will be held on April 17, 2016.

#### **For more information or to register:**

Visit [www.esd.org](http://www.esd.org) or contact Fran Mahoney at 248-353-0735, ext. 116, or [fmahoney@esd.org](mailto:fmahoney@esd.org).

## Engineering SMARt Michigan Program

ESD's Engineering SMARt Michigan program is a rigorous, hands-on science, math, architecture and technology (SMARt) project in which high school students design energy-efficient homes.

Through a series of learning modules, students will be introduced to the basics of energy, alternative energies, and the energy grid, in an atmosphere of fun activities and team building. They will apply these concepts to create real-life solutions by working in teams to design a house. The culmination of the program is a presentation of their team-designed house at a competition between all participating schools where they will vie for scholarships and other prizes.

#### **What role do mentors play?**

Volunteer mentors are a critical element to the success of the program and are needed to help teach and coach in the classroom. There are two groups of mentors - Energy Module and Presentation Module.

#### **What is the time commitment for a mentor?**

The 15 week program gets underway in late January and finishes up in late May at the competition. Energy Module mentors are asked to teach a minimum of one class period per week for two weeks. Presentation Module mentors are assigned to a school and asked to teach a minimum of one class period per week for eight weeks. Efforts will be made to schedule multiple Presentation Module mentors at each school in order to ensure at least one mentor is in the classroom each week. Mentors can volunteer for one or more schools.

#### **Interested in mentoring?**

For more information on mentoring or to volunteer, contact Jasmine Sisson, PE, at [sisson@pbworld.com](mailto:sisson@pbworld.com).

## 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 our 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](mailto:k.williams@ieee.org)

An announcement may be placed in the newsletter.

### Links:

#### Michigan Institute for Plasma Science and Engineering:

Seminars for the 2015-2016 academic year:

<http://mipse.umich.edu/about/seminars.htm>.

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/eaa-chapters/find-an-eaa-chapter>

### Robots

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

### Science Fiction Conventions

<http://www.conclavesf.net/>

### Mad Science

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

### ESD PE Review Class

[www.esd.org](http://www.esd.org)

### Makers Faire:

<http://www.thehenryford.org/events/makerFaire.aspx>



**e-Wavelengths LEAD:**

As we mentioned earlier in this issue, the Section newsletter is about to modify its traditional format to become **e-Wavelengths**, an on-line, real time, event notification system. (See Page 2).

The intent is to have meeting and event information available 24/7 with the option for immediate updates and RSS feeds to members and respond quickly to changes and put that information into member's hands, as fast as the WWW and WiFi can connect.

On the first of each month, we will 'capture' the current meeting and event status, along with articles on recent events, general section news, and all the information you have been used to seeing in our regular monthly 'Wavelengths' publication. That document will be filed on the SEM Website to become the 'Record' of activities, and the 'Link' sent to all members just as we do now.

**On-Line Lead Editor:**

To make this happen, we need to build a small group of 'coordinators' to work regularly on the 'live' site. The primary person to carry the flag for this effort is described in the official 'Job Description' as our lead coordinator should be in your 'in-box' as part of an eNotice soon. It may also be downloaded from the SEM On-Line Community at:  
[http://oc.ieee.org/usercontent/1/3/34230001/2265/e-Wavelengths\\_Coordinator\\_Job\\_Description\\_02242016.docx](http://oc.ieee.org/usercontent/1/3/34230001/2265/e-Wavelengths_Coordinator_Job_Description_02242016.docx).

We are seeking volunteers to come forward and discuss their skills and willingness to lead this evolution of our Section Communications effort. If that person is you, please contact Nevrus Kaja at [nkaja@umich.edu](mailto:nkaja@umich.edu) to arrange a meeting to discuss your interests.

kw

## Executive Committee

The **SEM Executive Committee** is the primary coordination unit for Southeastern Michigan (SEM) IEEE operations. The basic organization chart below shows the 2016 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 web site.

If you wish to attend, or just monitor the discussions, please contact David Mindham, the section secretary at: [dmindham@ieee.org](mailto: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:

About half 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 interests and would like to have meeting information of

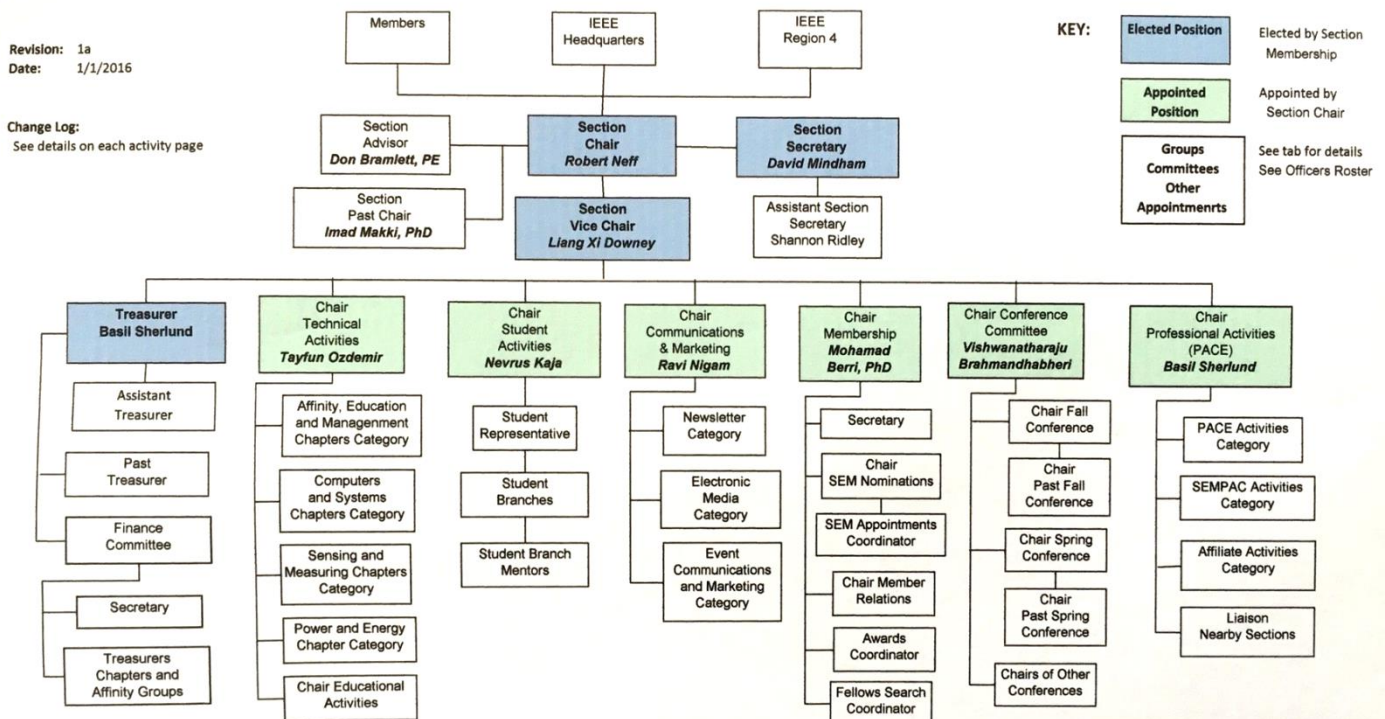
other chapters. In order to communicate the meeting dates of all the chapters, affinity groups etc., to our members to facilitate their attendance, leaders of the groups are requested to send meeting information to our webmasters for posting on section's calendar.

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](http://www.ieee-sem.com)

Then, click on "About SEM" Tab, then, click on "Current Officers"

**SEM Mission & Goals****Section Focus:**

The IEEE SEM Section Officers have reaffirmed the Mission and Goals of the section with the guidance of the Region 4 leadership. The Mission and Goals conform with those of IEEE worldwide.

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, and
- 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, and
- 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 (F2F).** See schedule 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 the vTools site at:

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

Registering will ensure there is sufficient space, refreshments and support for attendees.

**Teleconference Schedule  
(held from 12-1 p.m.):**

Thursday	March	3rd
Thursday	May	5th
Wednesday	June	1st
Wednesday	August	3rd
Thursday	September	1st
Thursday	November	3rd
Wednesday	December	7th

**F2F Meeting Schedule:**

Wednesday	April	6th
Thursday	July	7th
Wednesday	October	5th
Wednesday	January(2017)	4th

More information for F2F meetings will be emailed in a timely manner before the meeting dates.

Contact **David Mindham** the SEM Section Secretary at:  
[dmindham@ieee.org](mailto:dmindham@ieee.org)  
for more information.

Also consider checking for additional information as the meeting dates approach at the SEM website (<http://sites.ieee.org/sem/>). The links to the SEM Facebook or LinkedIn pages on the SEM website may also be checked for updates.

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](http://ewh.ieee.org/r4/se_michigan/calendar1.php)

The information is for:

**Standing Committee Meetings**  
**Affinity Group Meetings**  
**Technical Chapter Meetings**  
**University Student Branch Meetings**

**Calendar Schedule:**

Meetings are also announced on the SEM Calendar web page

<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 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 will be happy to have you as a participant.

Many volunteers become 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](mailto:dmindham@ieee.org)



## Editors Corner

Previous editions of Wavelengths, the monthly newsletter of IEEE-SEM, may be found on the IEEE-SEM website 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](mailto:k.williams@ieee.org). We also recommend a cc to the chair of the Communications and Marketing Committee, Ravi Nigam at: [rnigam154934mi@comcast.net](mailto:rnigam154934mi@comcast.net).

We rely on our officers and members to provide the 'copy' that is presented to our readers.

The **Wavelengths Annual Publication Plans for Articles and Personal Profiles** are shown in the matrix below is presented to

ensure coverage of section activities and events.

We try to complete the newsletter layout a week before the first of the month to allow time for review and corrections. If you have an article or notice, please submit it two weeks before the first of the month or earlier 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.

### Editors:

We are always looking for members interested in helping to

edit the newsletter. The process is always more fun with more members to share the duties, and help keep the newsletter alive and lively by providing alternative points of view.

### Review:

Each month Jim Woodyard reviews the current issue, adding more "formal" English and correcting typos Jim likes to work in the background but, a special thank you is deserved for his continuous efforts and dedication to the quality of the publication. Thank you Jim!

### Join the Team:

If you feel you might like to join the team, or would like to train with us, Contact: [k.williams@ieee.org](mailto:k.williams@ieee.org)

## Annual Publication Plan for general Articles

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		U/M-D	National Engrs Wk.	Future Cities	Chapter Focus	GOLD Award
May	Life	5	14		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	

## Annual Publication Plan for 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

Liang Xi Downey

#### Section Treasurer

Basil Sherlund

#### Standing Committees:

##### Section Adviser

Don Bramlett

##### Chair Communications & Marketing

Ravi Nigam

##### Chair Conferences

Raju Brahmandhabheri

##### Chair Educational Activities

Chaomin Luo

##### Chair Finance

Nevrus Kaja

##### Chair Membership

Mohamad Berri

##### Chair Nominations

Kimball Williams

##### Chair Professional Activities

Basil Sherlund

##### Chair Student Activities

Nevrus Kaja

##### Student Representative

Maoxu Liu

##### Chair Technical Activities

Tayfun Ozdemir

##### 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:**

1<sup>st</sup> Wednesday or Thursday of Each Month @ Noon

Check the Section Web Calendar at:

**<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>**