



Wavelengths

Volume 55 - Issue 8
August 2015

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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



I sincerely hope everyone is enjoying their summer activities. Your officers are working hard these months planning Chapter and Affinity Group meetings. A dedicated committee is planning the Fall Conference (see page # 9). Chapter and Affinity Group meeting schedules can be found via the links in this issue (see pages 13 and 19).

Nominations for upcoming officer positions have opened as of August 3. Please consider nominating yourself or someone you feel is qualified. Nominating another member requires their permission to do so. See details on page #2 of this newsletter.

An important change in Section Officer elected terms was passed at the July ExCom meeting. All four of our Section Officers (Chair, V. Chair, Secretary and Treasurer) will phase into 2 year terms. This change will reduce the new officer learning curve that occurs after every change in personnel following an election. To begin with the Chair and Vice-Chair positions will be

elected this year for two year terms, starting in 2016. Our other two positions will be elected for 1 year terms for 2016. Next year the Secretary and Treasurer positions will be elected for two year terms starting in 2017.

(See the discussions on page 2 and on page 16 for election details. ed.)

There are rewards, (we all like rewards), for referring new members (see page #14).

All of our SEM meetings are open to all members that wish to attend. Links to these meetings are on the SEM calendar (www.ieee-sem.org) and referenced on page #20 of this newsletter.

While at the SEM calendar, please note that there are links to chapter and section events along with other area technical events we thought might be of interest to you. You are also invited to join in on our social media sites (see page #19).

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

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Nominations 2015:

Each year, in the fall, we hold elections for each of the offices in our Section Executive Committee and all Section 'Geo-units'.

The elections include:

- Section Executive Committee (1)
- Affinity Groups (4)
- Chapters (17)

(Note:

Student Branches and HKN Branches hold their own elections at times selected by each.

Standing Committee officers are appointed by the Section Executive Committee and are not elected to their posts.)

The office positions to be elected are Chair, Vice-Chair, Secretary and Treasurer.

Terms:

This year our election for Section level officers is in transition between 1 to 2 year terms. A more detailed discussion may be found on page 17.

Job Descriptions:

Job Descriptions along with 'Quick Start Guides' for each position may be found in the **IEEE Center for Leadership Excellence** located at:

<https://iee-elearning.org/CLE/>

Look in the "Volunteer Position Training" section for each office description.

Nominations:

The nomination process begins with the collection of candidates for each office, (Chair, Vice-Chair, Secretary and Treasurer).

To collect nominations for each office and Geo-unit in our Section, we use a vTools Survey. The nomination form is located at:

[SEM-2015-Election-Nominations](#)

Requirements:

The IEEE requires that elected Section and Geo-unit officers meet the following criteria:

- active member status (i.e. dues paid),
- hold Graduate Student or higher membership grades, namely, Member, Senior Member, Life Member or, Fellow,
- membership in the 'Geo-unit' selected,
(Note: All members residing in Southeastern Michigan are by default members of the 'Section' and therefore may run for a Section Executive Committee office.

However, for each Affinity Group or Chapter, candidates must be members of that particular 'Geo-unit'.)

If you are unsure of your particular Affinity Group or Chapter affiliation, reference the Officer Roster at:

http://sites.ieee.org/sem/files/2015/07/Officers_Roster_IEEE_SEM_7_14.2015.pdf

Each Geo-unit is listed along with its associated Affinity Group or Technical Society(s). Compare these to your current IEEE affiliations to determine the offices in the Geo-units you may 'run' for using the candidate nomination process.

Self Nomination

When you decide to begin the self-nomination process, the information to have on hand to successfully complete the online nomination form includes:

- name as listed with the IEEE,
- IEEE member number,
- e-mail address,
- phone number,
- member grade,
- Geo-unit of your choice,
- position for nomination,

Optional items:

You may also want to prepare the following optional items as part of the candidate package:

- biography or position statement (100 words or less) and

- photo (jpg 50kbytes or less).

Nominating someone else:

If there is someone whom you consider to be an excellent candidate for a particular office, you may nominate that person on their behalf. However, you still must use their IEEE Member number and all the other relevant information required of any candidate. You must also identify yourself as the nominator.

(This is intended to prevent someone being nominated for an office without their knowledge of that action.)

Schedule:

The current schedule for nominations and elections this year is planned as follows:

- August 3, nominations open,
- September 21 nominations close,
- September 27 ballot ratification by the SEM Executive Committee (*To be completed electronically.*),
- September 28 elections open,
- October 26 elections close.
- November 5, election ratification by the SEM Executive Committee,

The Nominations and Appointments Committee will have the final results available for review and final ratification at the November 5th Executive Committee teleconference meeting,

The final two steps in the nomination and election process are notifying each elected candidate and publishing the election results in the December issue of Wavelengths.

The facilities to begin collecting candidates are now open, and fully functional. We ask and invite all qualified Section members to consider placing your names 'in nomination' for the office I you might be of the greatest help to the Section in the coming year.

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Officer Appointments:**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 officers to focus on other life demands as they manifest themselves. When that happens, we need to consider replacements.

One of the most productive training grounds for increased job responsibilities is that of an IEEE Secretary. It requires training in order to carry out for the secretarial responsibilities; it is also one of the most often positions that needs to be filled.

The following positions requiring a secretary are currently open. This may be just the opportunity you need to improve many of your administrative and communications skills. Please consider the following opportunities:

Committee Secretary Positions:

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

While the above section positions with section standing committees only require a sincere interest and willingness to learn, the positions below require membership in the individual affinity group or technical society:

Geo-unit Secretary Positions:

- **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. 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.

Several training modules have been posted on the IEEE SEM Website for an IEEE secretary (administrative assistant). They are PowerPoint and Voice over Power Point (VoPPT) modules. They are located at: <http://sites.ieee.org/sem/about-sem/training/>

It is recommended, at a minimum, the following modules be reviewed:

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

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

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

New Co-Editor:

It gives me great pleasure to announce that Harry Hill, our SEM Treasurer, has accepted an additional post as the Co-Editor of our monthly newsletter, Wavelengths.

Harry Hill has been a member of the IEEE for over 16 years. He has held positions with various companies supporting technologies such as industrial robotics, parallel computing and digital simulation, manufacturing process controls, and network communications, with a specialization in enterprise architecture. He is currently engaged in cyber security for Consumers Energy in Jackson, Michigan.

Harry also serves as the SEM Section Assistant Treasurer.

A photo of Harry was not available at publication time.

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EMCFest 2015:

On May 7, 2015 SEM members gathered for EMCFest 2015. EMCFest is an annual event scheduled and conducted by SEM Chapter 8 (Electromagnetic Compatibility Society) in which renowned technical experts in the field of EMC present a full day of tutorial lectures and demonstrations in this vital technology.

Of course, a full day of technical topics should begin with a full breakfast, and attendees were greeted with a full spread and, lots of coffee!



In addition to the technical lectures, attendees also were able to visit table top displays of vendors providing equipment and technical services in the EMC field. Vendors covered the range of basic test hardware, equipment control software, EMC analysis software, interconnection equipment, such as RF immune fiber optic links, and full EMC test services.



Scott Lytle, Chair of Chapter 8 welcomed everyone to EMCFest and introduced **Elya Joffe**, the lecturer for the event.

Mr. Joffe has been employed by K.T.M. Project Engineering - an engineering consulting company in Israel, since 1987. He currently holds the position of V.P. of Engineering and works as a senior EMC engineering specialist and consultant. Elya holds a B.Sc.EE in Electrical Engineering from the Ben Gurion University in Israel, and is a Registered Professional Engineer.



Mr. Joffe is an iNARTE (International Association for Radio, Telecommunications and Electromagnetics Engineers), Certified Senior EMC Engineer, ESD Control Engineer and EMC Master Design Engineer. Since the merger of iNARTE with Exemplar Global (RABQSA International), he also serves as member and Chair of the Exemplar Global BoD and as Immediate Past Chairman of the iNARTE Advisory Committee.



Elya has 30 years of experience in government and industry, in EMC/E3 (Electromagnetic Compatibility/Electromagnetic Environmental Effects) for electronic systems and platforms (in particular – aircraft and aerospace). He is actively involved, as an EMC/E3 Specialist, in the EMC design of commercial and defense systems, from circuits to full platforms. His work covers various fields in the discipline of EMC, such as NEMP and Lightning Protection design.

Mr. Joffe is also well known in Israel and abroad for his activities in EMC training and education, and has authored, developed and presents many courses on Electromagnetic Compatibility and related topics. He has authored and co-authored over 30 papers in EMC and EMC-related topics, both in the IEEE Transactions on EMC and Broadcasting, as well as in the proceedings of the International EMC and

Product Safety Engineering Symposia. Elya is also the main Author of the Book: **"Grounds for Grounding: A Circuit to System Handbook"**, published by John E. Wiley & Sons, 2009.

Mr. Joffe is Senior Member of IEEE, and has served as a member of the IEEE EMC Society of the Board of Directors since the year 2000 and is the Past President of the IEEE EMC Society. He is the Immediate Past President of the IEEE Product Safety Engineering Society. He is also a Past Chairman of the Israel IEEE EMC Chapter. He is also a member of the Board of Governors and VP for Conferences of the Society for Social Implications of Technology (SSIT).

Mr. Joffe is a past member of the IEEE Education Activities Board (EAB) and Chaired the IEEE Continuing Education Committee (CEC). Mr. Joffe also served as a "Distinguished Lecturer" of the IEEE EMC Society, and the Consumer Electronics Society.

Mr. Joffe has received several awards from the IEEE and EMC Society for his activities.

Of particular note - he is a recipient of the IEEE EMC Society "Laurence G. Cumming Award for Outstanding Service" and the "Honorary Life Member Award" of the IEEE EMC Society for "outstanding service to the EMC Society."



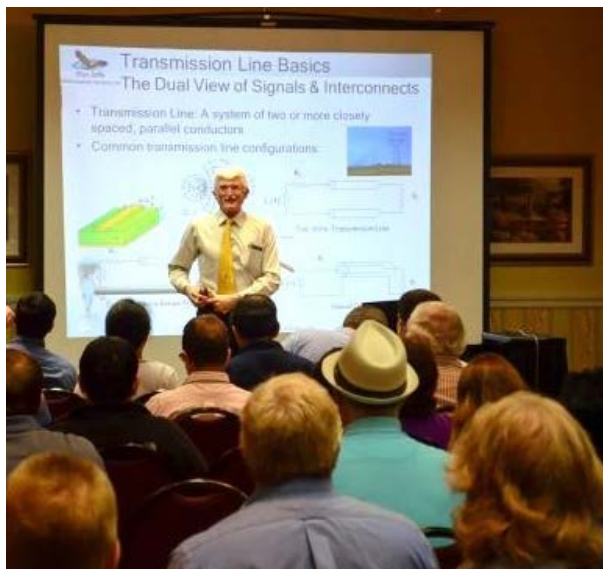
Attending EMCFest were 200 paid attendees and 66 paid vendor representatives manning 30 vendor tables.

Revenues from each year's EMCFest are used to fund the Chapter activities which have averaged over 25 'L31' reported events each year since the records began in 2010. Over half of these are technical, professional or social events for Chapter members each month. None of these activities use Section funds. Indeed, Chapter 8 has donated all of its yearly IEEE Chapter 'Rebate' funds since FY 2000 to furthering Student Activities in the Section, in addition to directly supporting several SEM Education Committee related activities each year.



As we all know, listening to technical lectures can be hungry work, so in addition to 'Coffee Breaks' in the morning and afternoon, attendees were treated to a full lunch, with plenty of dining space available in the bright and open atrium area.

After lunch and another run through the vendor exhibit areas, (and the inevitable networking among members who may not have had a chance to visit with each other for several weeks), the technical lectures continued.



EMCFest Topics:

Fundamental concepts (Paths of Current Return, Parasitic Paths, etc.) and Grounds for Grounding (why grounding)

Fundamental Grounding Schemes and the "Grounding Tree"

Ground loops and their mitigation (Who's afraid of the big bad (Ground) loops?), Power Distribution vs. Grounding Schemes Interrelationship

Equipment and System Grounding Schemes, Cable signals and shields' grounding, Grounding-Related Case Studies, Summary and Wrap Up

At the conclusion of the day's technical lectures, Scott Lytle informed Elya that the Chapter would be giving a donation to the EMC Society's President's Memorial Scholarship Fund in his name.

It has become tradition that the Chapter makes such a donation on behalf of each Chapter speaker, at each Chapter event. This is one way the Chapter can both honor the speaker for their contribution and help support EMC education on an international level.

The final event of the day was the traditional 'Ice Cream Social' gathering where the Chapter invites the attendees to avoid the evening traffic rush hours traffic and enjoy each other's company, a sweet treat, and take part in the raffle of gifts presented by our event vendors, and by the Chapter.

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STEM Library Classes:

Put a bunch of bright kids together with some electronic parts and components, give them the basics of electricity and you are bound to have a lot of fun, and a lot of enthusiastic class participants.

The "Fundamentals of Electricity" series of classes at the Dearborn Heights – Caroline Kennedy Library did just that between January and May of 2014. Twenty-four young students and a group of dedicated amateur educators came to gether to introduce the students to the fascinating world of electricity.

Beginning in January, when the air is dry and static electricity would hang onto balloons, we learned about the fundamental theory of the Bohr atomic structure (with a causal nod to contemporary quantum mechanics and probability) and how electrons cause electric fields and how they move in the presence of electric fields.



We progressed through electric potential (volts) and atomic valences by building simple batteries using a lemon and two different metallic wires.



Jim Moir and students build 'Lemon' battery and light a LED!

Electron flow producing currents (amperes) and Kirchoff's two laws were illustrated using simple 'snap circuits' to quickly try different circuit configurations.



Jaye Yang shows students how to create different circuits.

We went on to magnetism, magnets and magnetic fields. Then jumped electromagnetics, moving a compass needle with current in a wire, winding an electromagnet and building a simple DC motor, and then AC current. What fun!

Along the way experimenting with magnets falling slower through a copper tube, and compared it with falling in air and discovering eddy currents and back EMF!

Then turning the corner from the time domain with the speed of light and its wavelength, and finally into the frequency domain with transverse and longitudinal waves, wave propagation and resonances. (We also learned how to calculate wavelengths in free space.)

Students learned about different electrical and electronic components, the importance of electrical safety. *(In fact, electrical safety was stressed, in one way or another, in almost every class. We wanted the students to understand and enjoy electricity and all they can do with it but, with a degree of respect to help ensure their continuing to enjoy that understanding for a long time.)*

The final project was for each student to build their own 'Diode Radio' out of component parts, and then to modify it to become a 'tunable' radio. Eventually everyone was able to 'hear' a radio station in their own 'ear piece'.



Success! Radio sounds in earpieces.



Jim and a student demonstrate tuning a radio with a home build variable capacitor. (Mailing tube, tin foil, paper and tape.)



Final assembly and testing of all the radios was a group effort.

Radio Astronomy:

In the final week, we were joined by amateur radio astronomers from the Lake Angelus McMath Hulbert Observatory to learn about Radio Astronomy.

By now, the students had sufficient grasp of the basics of electricity, electromagnetic fields and radio to follow an introduction to the basics of "Seeing" with radio waves!



Radio Astronomers Tom Hagen and Ed Hendry demonstrate an IBT (Itty Bitty "radio" Telescope)

The Team:

Maintaining some semblance of order while encouraging experimentation and a sense of wonder requires a dedicated and encouraging team of instructors. In this case we were very lucky to have several of the best.

The library team was led by Jim Moir, the lead Children's Activities coordinator for the library.



Jim and Ed discuss education methods.

Jim Moir was joined by a group of dedicated IEEE members from Industry:

- Jaye Yang – Carlson Gasky & Olds
- Malcolm Lunn – Ford



Malcolm Lunn takes a short break

And Students from University of Michigan Dearborn Campus:

- Bora Ago
- Bowo Latoye
- Emil Golshan
- Maoxu Liu

Even the parents got pulled into the action...



Jaye, Maoxu and Emil.



Radio Astronomer – Tom Hagen

Below is the great team that made this all possible:

Jaye Yang, Maoxu Liu, Emil Golshan, Bora Ago, Jim Moir and Malcolm Lunn.



Thank you all!

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Fall Section Conference:

Autonomous Vehicles, Their Legacy and Future

Date: November 17, 2015

Location:

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

Keynote Speaker:

Bob Neff – SEM Section Chair

Topic:

“Autonomous Vehicles, Their Legacy and Future”



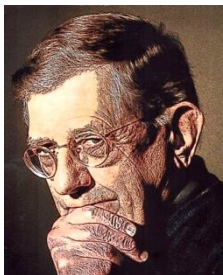
What will our life be like with autonomous vehicles?

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. The 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 in 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. The registration website is https://meetings.vtools.ieee.org/meeting_registration/register/34367

IEEESEM Fall Conference



The **Fall Conference Chair is Basil Sherlund who** 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.

Basil 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 IEEE Region 4 and SEM; he is also a member of the Region 4 Educational Activities Committee. 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 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.

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Michigan Shakespeare Festival Ticket Discounts:

Advertisement:


www.MichiganShakespeareFestival.com

As the Official Shakespeare Festival of the State of Michigan, the Michigan Shakespeare Festival is a professional Equity theatre company (LOA/LORT) dedicated to producing world-class classical plays. Now in its 21st year, they perform in Jackson's lovely Baughman Theatre, and are expanding to a second location in Canton's beautiful Village Theatre of Cherry Hill.

Come share the joy, adventure, tension, misadventure and humor for the presentation of Shakespeare's classic comedy

A Midsummer Night's Dream,

and his violent and heart-wrenching history ***Henry IV***,

as well as Richard Brinsley Sheridan's

breezy romantic comedy ***The Rivals***.

These shows will perform in Canton from July 29th through August 16.



A special ticket code good for \$5 off any ticket is available for IEEE members. Please be sure to use **IEEE2015** when ordering your tickets.



For tickets at the Village Theater in Canton please follow this link:

<http://www.michiganshakespearefestival.com/#!blank/c1xy8>

Click on the red ribbon for tickets in Canton and enter **IEEE2015** in the coupon code box in the upper right hand corner of the page.

A limited number of sale price tickets are listed on the web site. If you do not see available seating for the date you need, please call their office at 517-998-3673 and someone would be happy to help you arrange seating.

If you have any questions at all about the shows or about The Michigan Shakespeare Festival, please call our office at 517-998-3673. We would love to talk with you.

Advertisement:

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AMT 2015 Technology Fair: Collaborative Robotics Applied:*Advertisement:***AMT 2015 Technology Fair: Collaborative Robotics Applied****Thursday, August 13, 2015****8:00 AM-4:30 PM**

People collaborating with robots is changing how automation is applied in the manufacturing environment and broadening the horizon of applications. **AMT's 2015 Technology Fair** features the use of robots in collaborative applications. The event includes Industry experts speaking on this hot topic and demonstrations of the latest innovations.

Featured Speakers

- Mark Handelsman-ABB
- Claude Dinsmoor-FANUC America
- Corey Ryan-KUKA Robotics
- Ben Sagan – Mitsubishi Electronics
- Scott Eckert-Rethink Robotics
- Scott Mabie-Universal Robotics

Featured Demonstrations

- ABB
- FANUC
- KUKA
- Mitsubishi
- Staubli
- ReThink
- Universal
- And more

This event is free and lunch is provided. Click the image below for further information and registration.



Applied Manufacturing Technologies, 219 Kay Industrial Drive, Orion, MI 48359

*Advertisement:***-30-**

Advice at 90:

By Regina Brett,
90 years old, of the 'Plain Dealer',
Cleveland, Ohio.

"To celebrate growing older, I once wrote the 45 lessons life taught me. It is the most requested column I've ever written. My odometer rolled over to 90 in August, so here is the column once more:

1. Life isn't fair, but it's still good.
2. When in doubt, just take the next small step.
3. Life is too short, enjoy it.
4. Your job won't take care of you when you are sick. Your friends and family will.
5. Pay off your credit cards every month.
6. You don't have to win every argument. Stay true to yourself.
7. Cry with someone. It's more healing than crying alone.
8. It's OK to get angry with God. He can take it.
9. Save for retirement starting with your first paycheck.
10. When it comes to chocolate, resistance is futile.
11. Make peace with your past so it won't screw up the present.
12. It's OK to let your children see you cry.
13. Don't compare your life to others. You have no idea what their journey is all about.
14. If a relationship has to be a secret, you shouldn't be in it.
15. Everything can change in the blink of an eye, but don't worry, God never blinks.
16. Take a deep breath. It calms the mind.
17. Get rid of anything that isn't useful. Clutter weighs you down in many ways.
18. Whatever doesn't kill you really does make you stronger.
19. It's never too late to be happy. But it's all up to you and no one else.
20. When it comes to going after what you love in life, don't take no for an answer.
21. Burn the candles, use the nice sheets, and wear the fancy lingerie. Don't save it for a special occasion. Today is special.
22. Over prepare, then go with the flow.
23. Be eccentric now. Don't wait for old age to wear purple.
24. The most important sex organ is the brain.
25. No one is in charge of your happiness but you.
26. Frame every so-called disaster with these words 'In five years, will this matter?'
27. Always choose life.
28. Forgive
29. What other people think of you is none of your business.
30. Time heals almost everything. Give time time.
31. However good or bad a situation is, it will change.
32. Don't take yourself so seriously. No one else does.
33. Believe in miracles.
34. God loves you because of who God is, not because of anything you did or didn't do.
35. Don't audit life. Show up and make the most of it now.
36. Growing old beats the alternative of dying young.
37. Your children get only one childhood.
38. All that truly matters in the end is that you loved.
39. Get outside every day. Miracles are waiting everywhere.
40. If we all threw our problems in a pile and saw everyone else's, we'd grab ours back.
41. Envy is a waste of time. Accept what you already have, not what you need
42. The best is yet to come...
43. No matter how you feel, get up, dress up and show up.
44. Yield.
45. Life isn't tied with a bow, but it's still a gift."

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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
h.s.hill@ieee.org

An announcement may be placed in the newsletter.

Links:

Below are links to local SEM Clubs and other organizations engaged in technical hobbies as well as links to sites that may be useful for locating clubs and related events 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:

ConClave October 9-11, 2015
Dearborn, MI

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

Mad Science:

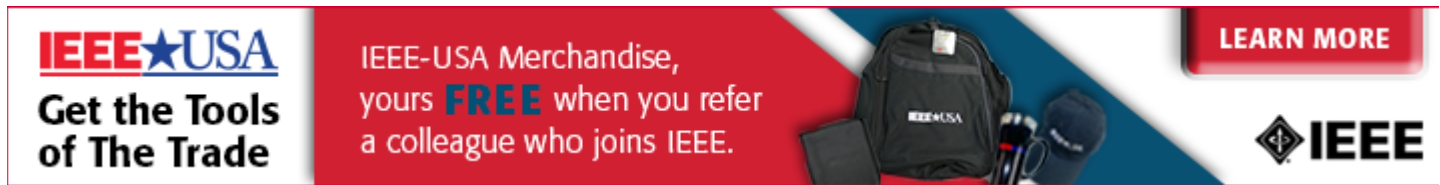
<http://www.madscience.org/>

ESD PE Review Class:

www.esd.org

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Refer a Colleague:



IEEE★USA
Get the Tools of The Trade

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

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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 web site.

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 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.

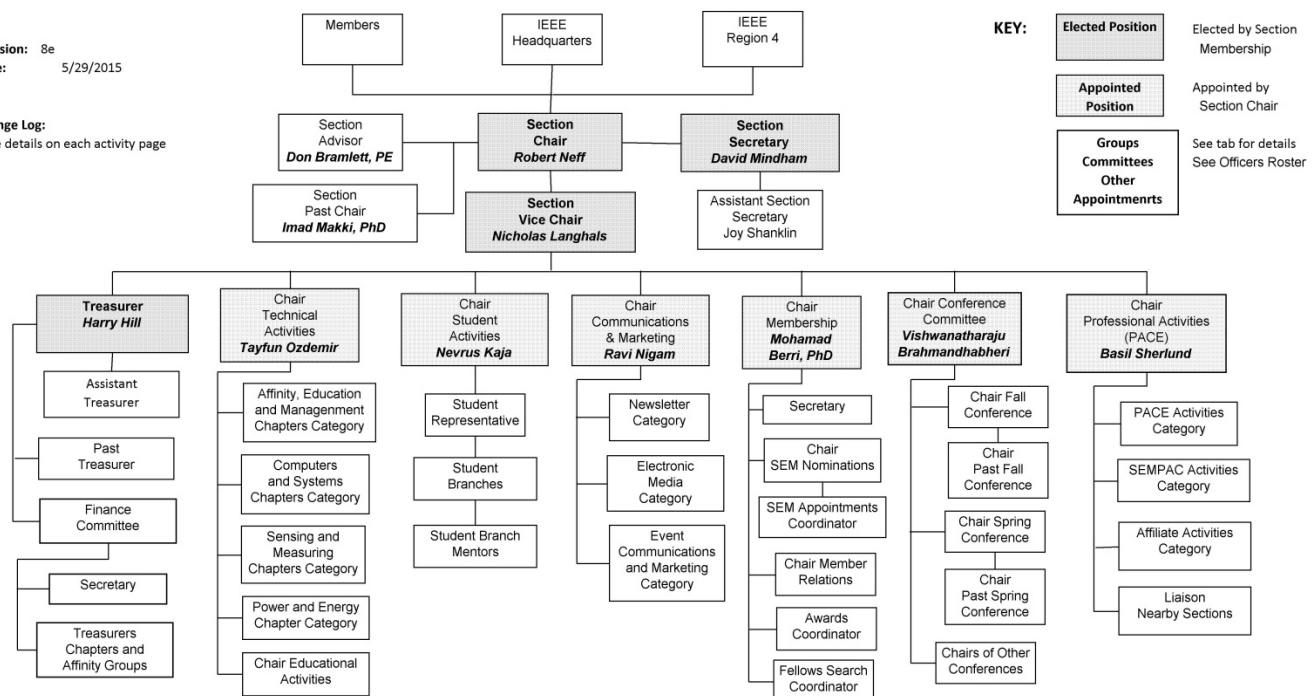
Automatic e-mail notification of web updates may be received using the "Email Notifications" button at the top of the **SEM Tools/Links** side banner.

David Mindham - SEM Secretary

Current Organization - IEEE Southeastern Michigan Section (SEM)

Revision: 8e
Date: 5/29/2015

Change Log:
See details on each activity page



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"

2016 Election & Terms

Please see the 2016 chart below:

2016 & 2017 will be 'transition' years for the Section Executive Committee officers.

IEEE SEM Officer Term					
Governance Level	Chair	Vice-Chair	Secretary	Treasurer	Note:
Section Executive Committee	2	2	1	1	
Chapter	1	1	1	1	
Affinity group	1	1	1	1	
Student Branch	1	1	1	1	
HLN Branch	1	1	1	1	
Standing Committee (Appointed)	2	2	2	n/a	
Note: SEM ExCom Officer Term Transition Plan:					
2016: Chair & V-Chair serve 2 year terms:					
2017: Secretary & Treasurer serve 2 year terms:					
2018 forward: Even years elect Chair & V-Chair,					
2018 forward: Odd years elect Sec. & Treas.					
Term Limits: MGA guidelines suggest that all elected officers					
serve a maximum of 6 years without a 'break' in					
their service in any one position.					
<i>"All officers shall not serve in any one position,</i>					
<i>in any single organizational unit,</i>					
<i>more than six years in total."</i>					

Note that 'staggering' the office election terms is intended to provide an 'overlap' period so that newly elected officers will have an immediately available officer with a retained "corporate memory" in the other officers to help the newly elected 'climb the learning curve'.

It should be understood that this revision to officer terms currently applies to the SEM Executive Committee only. All other Geo-units remain with their current 1 year officer terms.

If SEM Geo-unit officers believe that 2 year terms and staggered elections would be of advantage to their officer corps as well, discussion among your officers and members should be considered and a proposal or motion may be brought before the SEM Executive Committee at a regular meeting for potential action.

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 p.m.):

- **August 5, 2015**
- September 3, 2015
- November 5, 2015
- December 2, 2015

F2F Meeting Schedule:

- October 7, 2015
- January 7, 2016

More information for the f2f meetings will be sent out with the approach of the dates.

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

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 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 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 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

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Editors Corner

Previous editions in this series 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(s) at k.williams@ieee.org & h.s.hill@ieee.org

We also recommend a cc to the chair of the Communications and Marketing Committee, Ravi Nigam at: raviatlaw@gmail.com.

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 presented to ensure coverage of 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 submit it to us before the deadline 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.

Co-Editors:

We are always looking for members interested in helping to edit the newsletter along with Harry me who can learn the process, share 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 us know.

k.williams@ieee.org
h.s.hill@ieee.org

Wavelengths Focus Plan:

Month	AG's	Ch's	Ch's	SB's	Special 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!		Humanitarian	
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/>
 (Select the "SEM Calendar" button in the top row.)

SEM Executive Committee Face-to-Face Meetings:

- 1/Qtr. Usually held Section Universities.
- 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>

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