

Wavelengths



Volume 64 – Issue 1

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Upcoming Events

We have several events coming up this month, all are listed below, FYI.
 Note: All times are EST/EDT. If any events are missed do kindly bring them to the attention of wavelengths@ieee-sem.org. Enjoy!

You can also use this bookmark to view All of the links at a single glance
<http://bit.ly/sem-upcoming>

Event	Date	Time
Senior Member Elevation (a Virtual Event)	05 Jan 2024	04:00 PM
Ch8: AdCom Teleconference	11 Jan 2024	11:00 AM
SEM Section ExCom Monthly Meeting	11 Jan 2024	06:30 PM
Documentary Night: Computer Pioneer Grace Hopper	12 Jan 2024	05:00 PM
Officer Training (part 1 of 7)	13 Jan 2024	09:00 AM
PACE: Introduction to Agile Methodology	13 Jan 2024	01:00 PM
Officer Training (part 2 of 7)	20 Jan 2024	09:00 AM
PACE: Introduction to Root Cause Analysis	20 Jan 2024	01:00 PM
Homi J Bhabha: His Life & Legacy	24 Jan 2024	07:00 PM
TEMS ExCom Meeting	24 Jan 2024	06:30 PM
Documentary Night: Computer Pioneer – Doug Engelbart	26 Jan 2024	05:30 PM
Officer Training (part 3 of 7)	27 Jan 2024	09:00 AM
PACE: Critical Thinking Skills	27 Jan 2024	01:00 PM

Chair's Column***Happy New Year and what to look forward to in 2024***

2023 is now done and dusted, but it was still an equally busy December! We had only 4 major technical events which took place and 1 major social event. That was of course the December 14th ExCom monthly meeting, which was in person, and we had an excellent dinner too! We also celebrated the achievements of 2023. For those who attended, this was a good time to meet in person your chapter officers and build connections. We also invited several officers of sister technical professional organizations to also attend and help make connections. These were:

- ✓ National Society of Black Engineers (NSBE) – Detroit chapter
- ✓ American Society for Quality (ASQ) – Metro Detroit Chapter
- ✓ American Society of Engineers from India (ASEI) – Michigan Chapter
- ✓ American Society of Mechanical Engineers (ASME) – Michigan Chapter and of course
- ✓ Engineering Society of Detroit!



We expect that this will help increase more interactions, and lead to a sustaining level of activity – so as many participants will feel good value in their IEEE memberships.

Now to focus on the future.

- 1) We have a ton of training opportunities – both for newly elected and veteran volunteers. PLUS professional skills, such as Agile Methods, Critical Thinking and Root Cause Analysis – scheduled as in person events in January and February. The latter are part of our PACE (Professional Activities Committee for Engineers) events. We seek to boost the non-technical and soft skills of our members, in order to give them an edge in their careers. Just one of the many benefits of the IEEE! (Folks often forget to mention this to potential new members).
- 2) The popular documentary video screenings return in 2024. You can see the list [here](#).
- 3) We plan on inviting (in person) several distinguished speakers share their perspectives, via online sessions. In 2023 we had over 8 of them, so we are looking to double this number. Since this time, they will be in person, I hope you will take this opportunity in 2024 to attend, that way you can directly interact with them.

You can find all the other upcoming events using the short URL link: <https://bit.ly/sem-upcoming>

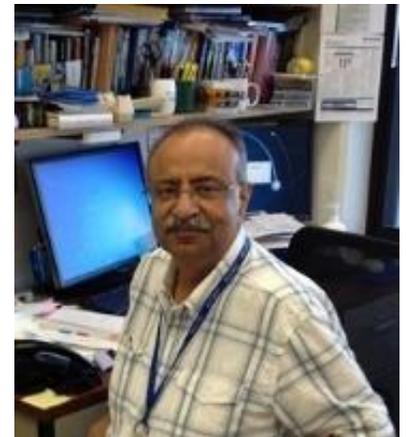
I will make specific mention of our newest chapter – the Magnetics Society – who are also organizing a global event – see their flyer listed just after page 16 elsewhere in this issue. In February we will share more about their officers.

I am also to report that we hit the highest number of events for our members – more than ANY section in our region (which is Region 4 by the way. We are just 1 of 10 global regions and largely centered around the Midwest). A separate SECTION activity report can be found elsewhere in this issue.

The Section was also part sponsor of the recent WiE Leadership Summit in early November (you may have seen the Governor of Michigan's proclamation in the past issue). Attached is the report.

Remember – every little bit helps, and the Section is here to help! If you have not taken the opportunity, do reach out to any of the Section officers (lifelong email contacts listed below). Who knows what unknown but immense value you may discover, by simply connecting with us. A possible membership annual rate discount, OR an upcoming soft skills event OR need of a professional member for a technical person resource OR opportunity to participate in a standards making process OR a chance to mentor a young graduate student in a domain badly needed in our section of the world OR network with a book publisher OR....the possibilities are limited only by your enthusiasm.

Finally, I ask you to help share news about our IEEE Section to fellow engineers. This will help us fulfill the mission and goals, which is to use technology to help society. Do help us gain more visibility – word of mouth, invitations to our tech events, skills, join as members, post our events to your social media feeds, etc.



Sharan Kalwani

Via email: chair@ieee-sem.org

Section members are encouraged to engage using any of these online platforms:



To reach any of our SECTION officers, for any help/assistance you seek you may try these easy to remember email addresses. The objective is to ensure business continuity, so one need not try to remember or hunt for the contact information! They can help you find your chapter officers or point you in the right direction for any query. They are:

- 📧 Chair is chair@ieee-sem.org
- 📧 Vice Chair is vicechair@ieee-sem.org
- 📧 Treasurer is treasurer@ieee-sem.org
- 📧 Secretary is secretary@ieee-sem.org

Tech Activities REPORT

2023 IEEE SE Michigan Section Geo-unit Status (Till Dec 21st)

Ch's & AG's	Ave Tech Mtg. Attend	Ave Tech Mtg Guest	#L31 -Technical	#L31 -Admin	#L31 Professional	#L31 -Other	Geo-Unit Name	# Unreported	Total Mtgs
CnsIt	0	0	0	0	4	0	Consultants Network	0	4
LIFE	7	2	3	0	8	0	Life Members	0	11
WIE	25	15	1	11	4	0	Women In Engineering	0	16
YP	36	0	1	7	1	0	Young Professionals	0	9
1	8	1	3	2	0	0	Circuits & Systems, Signal Proc., Info Th.	0	5
2	25	10	9	0	0	0	Vehicular Technology	0	9
3	18	3	5	0	0	0	Aerospace & Elec. Sys., Communications	0	5
4	25	7	12	0	0	0	Trident (Ant, Elect Dev., uWave, Photo)	0	12
5	27	7	31	7	2	0	Computers	0	40
6	107	45	3	0	0	0	Geoscience & Remote Sensing	0	3
7	122	33	7	5	1	0	Power Engineering, Industrial App.	0	13
8	46	24	14	12	4	0	Electromagnetic Compatibility (EMC)	0	30
9	52	15	4	0	0	0	Power Electronics, Industrial Electronics	0	4
10	8	1	3	4	0	0	Engineering Management	0	7
11	30	13	3	1	0	0	Eng. in Medicine & Biology	0	4
12	18	2	4	1	0	0	Control Systems	0	5
13	20	3	43	8	0	0	Education	0	51
14	22	19	5	0	1	1	Robotics & Automation	0	7
15	26	8	10	0	0	0	Nuclear Plasma Science Society	0	10
16	24	1	2	1	0	0	Computational Intelligence / Sys.Man.Cyber.	0	3
17	24	3	2	0	0	0	Nano Technology Council	0	2
SEM	50	17	6	55	2	0	SEM (Section)	0	63
	719	227	171	114	27	1	NOTE: Highlight Green = Active	0	313
		32%					NOTE: Highlight clear = Concern		

SEM Section Chapter and Affinity group leaders who are not showing any technical or administrative meetings are encouraged to reach out to the TAcOm for assistance. We are coming to the end of another successful year within the Section where we have exceeded our projections for technical meetings hosted for our membership. There is still some room for improvement. I challenge those groups that are doing over and above your required level of meetings to reach out to those which are not. Let's all strive to lift every technical chapter and affinity group above the minimum level of activity. Happy Holidays to you and your families.

V/r Jeffery V. Mosley

Chair, Technical Activities Committee (TAcOm)

jvmosley@ieee.org

Southeastern Michigan Section, IEEE Region 4

This Month in January

Or: Notable Events in Engineering & Science History, which I Did Not Know! ☺

- January 1, 1983** – The ARPANET officially changes to using the Internet Protocol, creating the Internet.
- January 1, 1984** – The original American Telephone & Telegraph Company is divested of its 22 Bell System companies as a result of the settlement of the 1974 United States Department of Justice antitrust suit against AT&T.
- January 1, 1878** – Birth of Agner Krarup Erlang, Danish mathematician, statistician, and engineer (d. 1929)
- January 1, 1951** – Radia Perlman, American software designer and network engineer, is born.
- January 1, 1992** – Grace (nee Brewster) Hopper, aged 85 dies. an American computer scientist, mathematician, and United States Navy rear admiral. One of the first programmers of the Harvard Mark I computer, she was a pioneer of computer programming.
- January 2, 1938** – Date of Birth for Lynn Conway, American computer scientist and electrical engineer
- January 2, 1920** – Birthday of Isaac Asimov, Russian-American chemist, author, and academic (d. 1992)
- January 6, 1931** – Thomas Edison signs his last patent application.
- January 7, 1827** – Sandford Fleming, Scottish-Canadian engineer, created Universal Standard Time (d. 1915)
- January 7, 1943** – Nikola Tesla, Serbian American physicist and engineer passes away (b. 1856)
- January 11, 1923** – Carroll Shelby, American race car driver, engineer, and businessman, founded Carroll Shelby International (d. 2012)
- January 11, 1954** – Kailash Satyarthi, Indian engineer, academic, and activist, Nobel Prize laureate is born.
- January 12, 1822** – Étienne Lenoir, Belgian engineer, designed the internal combustion engine (d. 1900)
- January 12, 2001** – Death of William Redington Hewlett, American engineer and businessman, who co-founded Hewlett-Packard (b. 1913)
- January 18, 1933** – Ray Dolby, American engineer and businessman, founded Dolby Laboratories (d. 2013)
- January 19, 1736** – Date of birth of James Watt, Scottish-English chemist and engineer (d. 1819)
- January 19, 1813** – Born on this day was Henry Bessemer, English engineer and businessman (d. 1898)
- January 21, 1901** – Elisha Gray, American engineer, who co-founded Western Electric passes away (b. 1835)
- January 24, 1966** – Homi Jehangir Bhabha, father of the Indian Nuclear industry, dies in a plane crash.
- January 26, 1885** – Birth of Harry Ricardo, English engineer and academic (d. 1974)
- January 26, 1891** – Nikolaus Otto, German engineer, invented the Internal combustion engine passes away (b. 1833)
- January 30, 1948** – Orville Wright, American pilot, and engineer, co-founded the Wright Company dies (b. 1871)
- January 30, 1951** – Death of Ferdinand Porsche, Austrian-German engineer, and businessman, founded Porsche (b. 1875)
- January 30, 1991** – John Bardeen, American physicist and engineer, Nobel Prize laureate passes away (b. 1908)
- January 30, 1925** – Date of birth of Douglas Carl Engelbart, an American engineer and inventor, and an early computer and Internet pioneer. Credited with the concept of the computer mouse, hypertext, networked computer and precursor to the Graphical User Interface (GUI), and the mother of all Demos. Engelbart's Law, an observation that the intrinsic rate of human performance is exponential is named after him.
- January 31, 1954** – Edwin Howard Armstrong, American engineer, who invented FM radio passes away (b. 1890)

This continues the yearlong feature of interesting **engineering** events or milestones that occurred in a specific month. Readers are invited to share their views and opinions (or suggestions) at the accompanying link. Submissions can also be made using direct email to the editors at: wavelengths@ieee-sem.org.

Past readers have asked to feature one or more of these events in more detail. So, starting in 2024, we will have documentaries that will help shed more light on these luminaries and also explore the hidden side of their life stories. We will also endeavor to republish an article from various publications in the same month of Wavelengths.

Here is a [link](#) which lists all of the documentaries featuring several of the folks mentioned in the past 12 months of “This month....” Series. Enjoy!

Sharan Kalwani

2022-2023 Chair, Southeastern Michigan Section,
Passionate Engineering History Buff/Aficionado

Election-Results

Southeastern Michigan Section Executive Committee [R40035]:	Officers Name
Chair	Sharan Kalwani
Secretary	Christopher Johnson
Asst Secretary	Andrew HARRIS
Secretary-Elect	Ian Hutt
V-Ch	ANEESH MATHAI
Treasurer	S Ramesh
Asst Treasurer	
Treasurer-Elect	S Ramesh
Section Adviser	Mohamad Berri
Student Representative *	
Past-Ch	David Mindham

Consultants Network: [CN]	
Chair	Sharan Kalwani
V-Ch	
Secretary	Kimball Williams
Treasurer	
Life Member Affinity Group: [LM]	
Chair	Arun Hundiwal
V-Ch	Raymond Sasinowski
Secretary	Kimball Williams
Treasurer	Harpreet Singh
Women in Engineering: [WIE]	
Chair	Bige Unluturk
V-Ch	Ashfiqua Connie
Secretary	Sara Masoud
Webmaster	
Treasurer	Alycen Wiacek
Young Professionals: [YP]	
Chair	Amar Dabaja
V-Ch	Jonathon Wolf
Secretary	
Treasurer	Abdelhamid Nasr

Individual officers elected have already been notified of their status. **Virtual officer training sessions** are already scheduled - see the vTools system in January and February to bring anyone who wants to learn what this is all about.

NOTE: All the training, and all the governance meetings are open to all IEEE Members at all grades. All you need to do to participate is **register for each session** and show up.

Technical Chapters	
Signal Processing, Circuits and Systems and Info Theory: Ch1	Officers Name
Chair	Jeffrey Dulzo
V-Ch	Sharan Kalwani
Secretary	
Treasurer	
Vehicular Technology Soc: Ch2	Officers Name
Chair	Mohamad Berri
V-Ch	Sharan Kalwani
Secretary	Eugene Saltzberg
Treasurer	Eugene Saltzberg
Aerospace and Electronic Systems and Communications: Ch3	Officers Name
Chair	Patrick Seeling
V-Ch	
Secretary	
Treasurer	
Antennas and Propagation, Electron Devices, Microwave Theory & Technology and Photonics: Ch4	Officers Name
Chair	Robert Hipple
V-Ch	Jeffrey Nanzer
Secretary	
Treasurer	Abdelhamid Nasr
Computers: Ch5	Officers Name
Chair	Sharan Kalwani
V-Ch	S Ramesh
Secretary	George Pappas
Treasurer	Subramanian Ganesan
Geosciences and Remote Sensing: Ch6	Officers Name
Chair	Michael Benson
V-Ch	Leland Pierce
Secretary	Adam Roberts
Treasurer	Adib Nashashibi
Power & Energy and Industrial Applications: Ch7	Officers Name
Chair	Looja Tuladhar
V-Ch	Sharan Kalwani
Secretary	Binaya Joshi
Treasurer	Chris Nelson

Electromagnetic Compatibility: Ch8	Officers Name
Chair	Steve Tomba
V-Ch	Candace Suriano
Secretary	Scott Lytle
Treasurer	James Woodyard
Industrial Electronics and Power Electronics Societies: Ch9	Officers Name
Chair	Van Wagner
V-Ch	Sharan Kalwani
Secretary	Agasthya Ayachit
Treasurer	
Technology & Engineering Management: Ch10	Officers Name
Chair	Raymond Sasinowski
V-Ch	Mark Robinson
Secretary	David Mindham
Treasurer	Kellee Christensen
Engineering in Medicine and Biology: Ch11	Officers Name
Chair	Maurice Snyder
V-Ch	Durga Chavali
Secretary	Yan Yan
Treasurer	James Hamilton
Control Systems: Ch12	Officers Name
Chair	Mohamad Berri
V-Ch	ALI EYDGAHI
Secretary	Karthikeyan Rajagopal
Treasurer	
Education: Ch13	Officers Name
Chair	ALI EYDGAHI
V-Ch	Sharan Kalwani
Secretary	Amar Basu
Treasurer	Sharan Kalwani
Robotics And Automation: Ch14	Officers Name
Chair	ALI EYDGAHI
V-Ch	Victor Manske
Secretary	Jonathan Berent
Treasurer	Chan-Jin Chung
Nuclear Plasma Sciences: Ch15	Officers Name
Chair	Robert Hipple
V-Ch	

Secretary	
Treasurer	
Computational Intelligence & Systems, Man & Cybernetics: Ch16	Officers Name
Chair	Jeffery Mosley
V-Ch	Jeffrey Dulzo
Secretary	
Treasurer	
Nanotechnology Council: Ch17	Officers Name
Chair	Sharan Kalwani
V-Ch	Gordon Burkhead II
Secretary	

Treasurer	
Magnetics Society: Ch18	Officers Name
Chair	Cody Trevillian
V-Ch	Vasyl Tyberkevych
Secretary	Hannah Bradley
Treasurer	Steven Louis

Kimball Williams

An Election Wrinkle

As the IEEE Southeastern Michigan (SEM) Information Management (IMC) team approached the end of our annual election period we discovered something that stopped us short.

“A bit of background first!”

The IEEE Member Geographic Association (MGA) has for many years advised officers to hold an office for no more than three years, and in extreme cases, 6 years, and then only with the consent of the regional director.

The reasons for this are many but at least a few stand out:

- Part of our functions as officers is to train new members in the skills we have learned and to step aside so that a new candidate for the office can ‘learn the ropes’ with real ‘hands on’ experience. (*The previous officer becomes the coach to guide and teach - the ropes.*)
- Most who have been in any position for more than a few years notice that they can become ‘stale’ and less effective if they don’t do something drastic to change their operational situation.
- Members who see the same officers in a position year after year, give up even considering ‘running for office’ against the incumbent and look elsewhere to get the ‘on the job training’ IEEE is supposed to provide. (See my article elsewhere in the 2024 January Wavelengths titled; “We Train Leaders”.

For some time, the MGA has been considering setting up the Officer Reporting tool in the ‘vTools’ suite of electronic tools used to manage MGA Geo-units (Affinity Groups / Technical Chapters / Student Branches and HKN Chapters) to ‘catch’ situations where members stay in office beyond the recommended period. This year when the SEM IMC team began entering the election results for several of our more venerated (long term) officers, we received this notice:

1 ERROR PROHIBITED THIS REPORT FROM BEING SAVED

There were problems with the following fields:

- **^Term length cannot exceed 72 months**
- *(that's 6 yrs. kw)*

Historically we have been very happy with our Chapter Chairs who stay in the office and lend ‘stability’ to the operation of a successful Geo-unit. In fact, we have recently presented awards to Chairs with 20+ successful years in office!

I am reminded of discussions I have had about members of congress who make politics a full-time job and forget that their ‘office’ is supposed to be a ‘temp’ assignment. (George Washington refused more terms in office stating that he had a farm to run, and a life to live.) In our joy at a successful long term run in a Geo-unit office we forgot why we hold elections, and that we expect successful officers to coach and help the ‘new guy’ to get a good feel for how to turn the crank.

Some have found a way around the limitation of ‘term limits’ by swapping Chair / Vice Chair or other rolls on a regular basis. In a very small Geo-unit (with very few members) this may be needed while the organization builds momentum and gathers members. However, with Geo-units with 50+ members there is something wrong if no one wants to run for office except the incumbents. Swapping office roles is just another way to ensure that only the ‘in crowd’ gets a seat at the table.

Remember one of our roles is supposed to be training new officers. Ideally, some of the current officers should be reaching up to become elected or appointed officers of the Region, or at the international level, for the Society or Affinity Group that sponsors the local Geo-unit.

Even now I can look at the Region roster of committee leads and spot several names of former SEM officers who continued to grow and step up.

I also see familiar names in the international Society boards of directors of members that live here in our Section. If you are an officer in one of our local Geo-units, consider what you could or should be doing to train someone to take your place so that you may take an opportunity to advance when it presents itself.

An Election Wrinkle Continued:

Officer Reporting tool:

Since the vTools Officer Reporting tool would not immediately let me enter the ID of the elected officer, I did what any good programmer would do, I sought a 'work around'. My immediate (*will this work?*) solution was to tell the Officer Report tool that a long-term officer, left office in 2020. Immediately the system 'forgot' that officer in the context of the current year and allowed me to input that officer as a 'new' officer in that position.

It was only after I had done this that I realized what I had done and regretted it!

My simple 'work around' in essence, falsified the official records of the IEEE MGA!

With a chill I also realized what the long-term results could be!

I immediately sent an email to the two 'leads' within MGA that I know and trust telling them what I had done and asking for advice on how to correct the records.

Ethically, this was a 'falsification of records' and I will not be surprised to be censured for it.

Meanwhile the final (final) election results are going to see a bit of 'musical chairs' among officers as we bring this state of affairs to the attention of the MGA, and to the SEM ExCom, and confess my 'sins'.

Long Range:

On the home front, we need to hold a serious discussion among our officers about why we are here, and how we got into this situation in the first place. No matter what, going forward will not be 'business as usual' and our next election in 2024/2025 should be much more lively and 'interesting'.

--- Ancient Chinese curse:

'May you live in interesting times.' ---

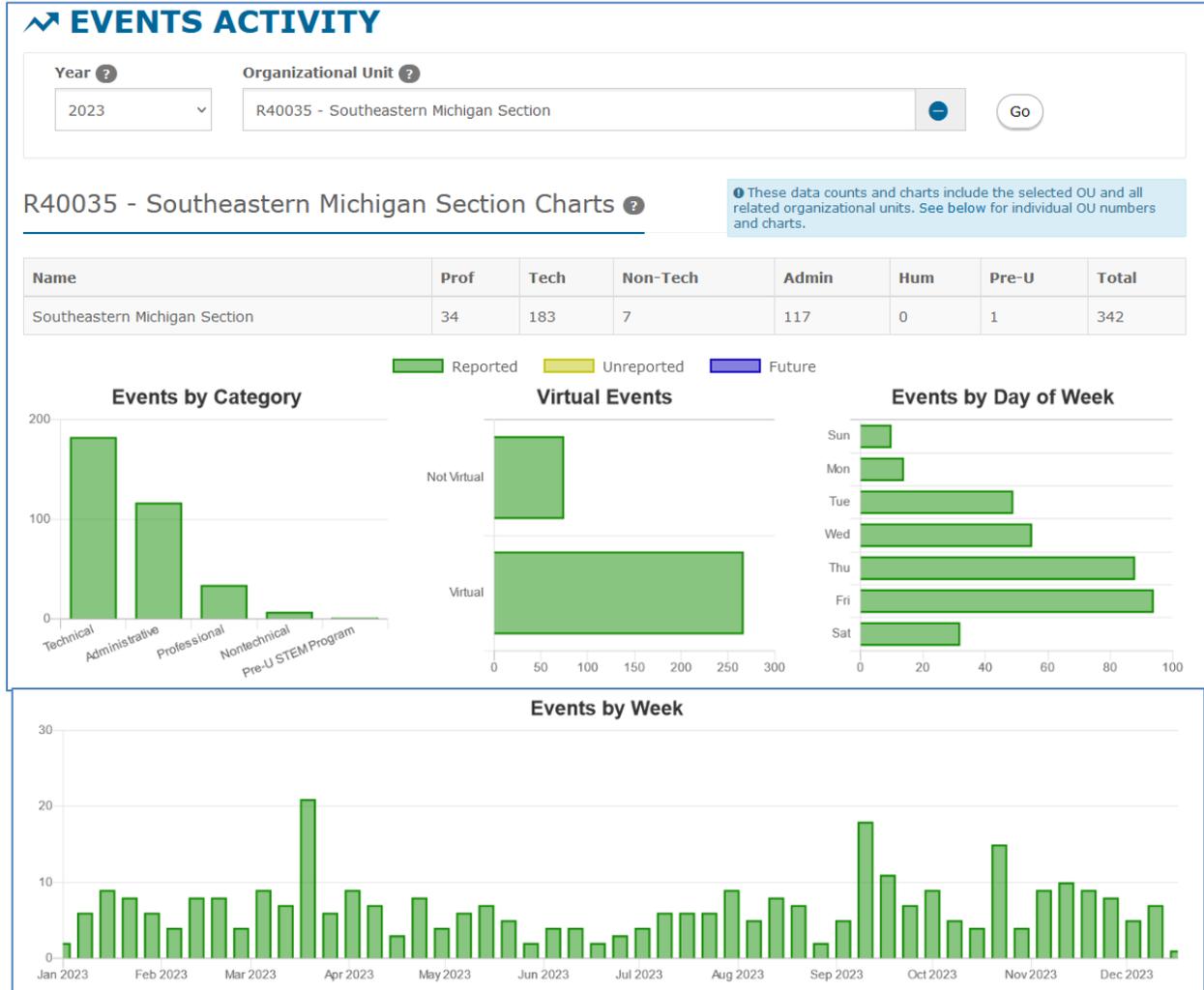
Kimball Williams

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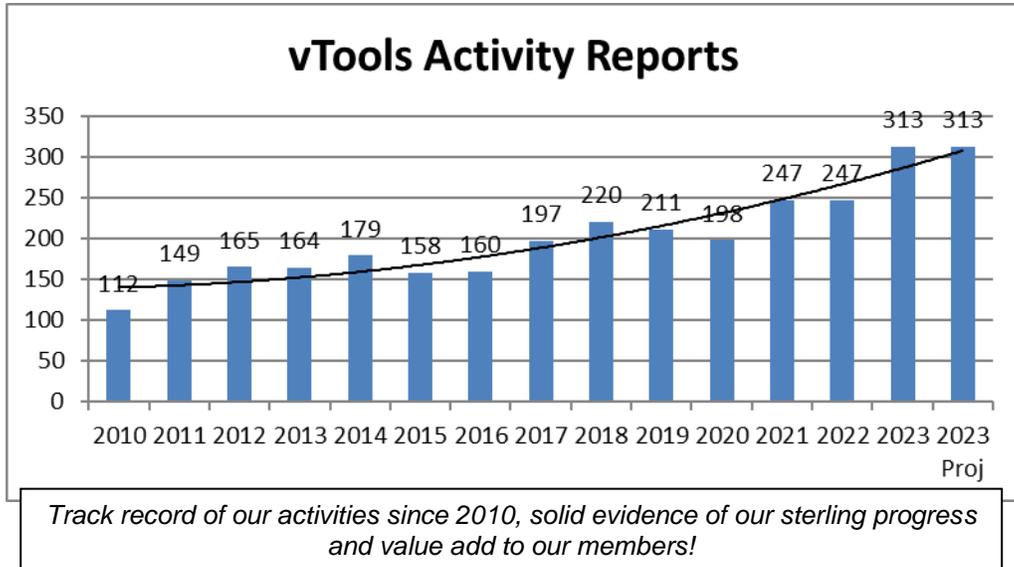
2023 in Review

IEEE Southeastern Michigan Section 2023 YTD Update

It has been yet again a banner year for our Section. We exceeded our 2022 achievements by a whopping 50 total events (out of which 37 were technical). Presented below is the vtools graph for the section and it may look difficult to beat in 2024!



Reflecting upon 2023, we continued our series of technical and historical documentaries. We were delighted that they received positive reviews all around. Inevitably, like every virtual event, we often encountered technical internet glitches, but we repeated a few of them, so those who missed out – could enjoy them. As always, we invite suggestions from those who attended to let us know of other tech documentaries they may like to see.



We continued our good working relationships with industry and plan to try to increase it a bit. Some of the successes in 2023 were the Embedded Systems Workshop 2023 (the 21st edition), the Embedded Systems hands-on session (3rd edition). Attached in this article are two pictures (one from each event).



Participants in the Embedded systems Workshop 2023



*Participants in the Hands-On Embedded Systems Workshop 2023
Theme: Brushless DC Motor Control*

The EMC chapter in Southeastern Michigan is one of the most active globally and they conducted several hands on workshops as well as a superbly attended EMC Fest. See their website for more details, but we are sharing a few pictures here.



Besides that, they were 100% key to the recent EMC 2023 Global Symposium.

Southeastern Michigan Section does not do pure technical events, we held a summer picnic as well and had folks join us from the furthest corners of the geographic area. Members joined with their families and a good time was had by all.

Another major effort put in by the Section in cooperation with several WiE groups and Region 4 was the WiE leadership Summit, which you can read about elsewhere in this issue.



Coming back to technical events, upon review we hosted almost a *dozen distinguished speakers* and did a good number of joint events with other chapters - both within the Section, with other Sections and with both chapters/sections in other IEEE regions.

Another very active chapter is our Robotics Society chapter. Every year (in cooperation with several local organizations including Lawrence technological University – LTU) they hold a global [Robofest](#).



For the support we have been doing locally towards Robofest, the Section was recognized by the LTU. Attached is the plaque (given in the following year). So, for 2023 we will be getting another one in 2024. I forget how many years we have been supporting Robofest, but letting folks know is long overdue! See the picture below to get an idea of the popularity.



Global Participants: RoboFest 2023

Another event which members enjoyed was the 60th Anniversary celebration of our Section. It was held at the Flint Institute of Art (a hidden gem I might add!). We plan on holding regular events there – due to its vast collections as well as geographically it is centrally located to all our members. Speaking of which we honored several of our section members for their service to the community. Our keynote speaker was John Verboncoeur, Vice President of IEEE TAB (Technical Activities Board), pictured below. Members recognized were Subra Ganesan, Mohamad Berri and Mike Anthony. John spoke the coming challenges facing IEEE in the years beyond and how IEEE is adapting, plus the various Initiatives in flight.

Of course, there were many more events that one could write about, but we may run out of room here, so looking forward to an equally fruitful 2024!



John Verboncoeur – Our Chief Guest



The Flint Institute of Art



Subra Ganesan



Mohamad Berri



Mike Anthony



International Conference on Microwave Magnetism

8th International Conference on Microwave Magnetism

We would like to invite you to attend the 8th International Conference on Microwave Magnetism, which will be held from Sunday, June 16 until Wednesday, June 19, 2024, at Oakland University in Rochester, Michigan, in the United States.



Abstract submission:

Please submit your abstracts electronically using the following template: <https://tinyurl.com/ICMM2024-template>
The link to the submission form can be found here: www.icmm2024.org/registrationsubmissions
Further information can be found at the conference website: www.icmm2024.org

The abstract submission period begins **January 1, 2024**, and the deadline is **February 8, 2024**.

Scope of the conference:

This is the eighth ICMM conference after the success of Fort Collins (USA, 2008), Boston (USA, 2010), Kaiserslautern (Germany, 2012), Sendai (Japan, 2014), Tuscaloosa (USA, 2016), Exeter (UK, 2018), and Beijing (China, 2022). The conference will focus on new developments in all branches of fundamental and applied microwave magnetism. The technical areas covered are as follows:

- Magnetization and relaxation dynamics
- Applications in communication, sensing, and energy harvesting
- Cavity and hybrid magnonics
- Spin waves, spintronics, and nonlinear magnetic phenomena
- Microwave and millimeter wave magnetic materials and devices
- High-frequency magnetic materials and characterization
- Integrated RF and microwave magnetic devices

Features:

- Four days
- Single Session: Keynote, Invited, and Contributed talks
- Poster Session
- Social Outing at Henry Ford Museum
- Banquet Dinner at Meadowbrook Mansion

Special Notice!

If you plan to submit an abstract and/or attend the 8th ICMM 2024, please make an appointment NOW to apply for your visa to visit the U.S. This application process can take some time, so we urge you to submit your application as soon as you read this.

Send your request for a letter of invitation to: icmm2024@gmail.com

Important Dates:

Abstract submission opens:
January 1, 2024

Abstract submission deadline:
February 8, 2024

Registration opens:
March 1, 2024

Notification of acceptance:
March 15, 2024

End of early bird registration:
May 1, 2024

Conference begins:
June 16, 2024

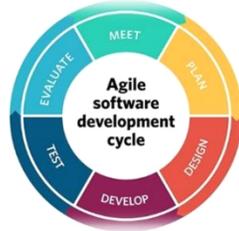
Conference ends:
June 19, 2024

For more information about the conference, please visit:

icmm2024.org

PACE: Intro to Agile

IEEE Southeastern Michigan Presents "An Introduction to Agile Scrum Methodology"



Agile is a software development methodology to build a software incrementally using short iterations, so that the development is aligned with the changing business needs. This simple tutorial uses appropriate examples to help you understand agile development in a general and quick way.

Audience

This tutorial has been prepared for beginners to help them understand the basics of Agile principles and its implementation. After completing this tutorial, you will find yourself at a moderate level of expertise, from where you can advance further.

Prerequisites

Attendees need a basic knowledge of software development concepts such as software requirements, coding, testing, etc.

Speaker: Sharan Kalwani

Biography: With over 30+ years' experience, in various aspects of hardware, software has evolved. You can expect a unique perspective on the whole evolution of development in software creation, testing and deployment. The speaker has presented at numerous conferences and is viewed as an active evangelist in his areas of expertise.

IEEE Southeastern Michigan Section



Pre-Registration Required!

<https://events.vtools.ieee.org/m/384023>

• When? Where? ...

• **Date:** Jan 13th, 2024

• **Time:** 1 PM → 3 PM

• **Audience:** All Students, Members, Professionals and Industry Techs

• Where:

EC 281
Engineering Center
115 Library Drive
Oakland University

**Sponsored by
IEEE Southeastern Michigan
Computer Society Chapter**



In memory: Don Bramlett

Dear Members of the IEEE Southeastern Michigan Section:



It is with a heavy heart and great sadness that we are sharing news about the sad demise of one of our longest serving IEEE members - Don Bramlett. Many of you knew Don from all these years of service to our Section, as well as his keenness for the Future City & Science Fair Competition.

Don passed away peacefully on Saturday, December 2, 2023 at 9:06 PM

Don was the 'Face of Southeastern Michigan IEEE' and always taking time to give presentations to Student Branches and help train new officers after each Section wide election. Don has also been a frequent contributor to the Wavelengths newsletter.

Don Bramlett received his BSEE and MBA from the University of Detroit. He was a registered Professional Engineer. Don spent his entire 40-year professional engineering career in the energy industry, 6 years in the natural gas industry, and then 34 years in the power generation segment of the electric utility industry. He retired as a Senior Project Engineer from DTE Electric, a major subsidiary of DTE Energy, where he had overall engineering responsibility for large capital projects at various power plants.

AWARDS:

IEEE Southeastern Michigan Section Outstanding Leadership Award, 2013.

IEEE-USA Regional Professional Leadership Award, 2000.

IEEE Third Millennium Medal Recipient, 2000.

IEEE Southeastern Michigan Section Outstanding Section Involvement Award, 1998.

IEEE Region 4 Outstanding Engineer Award, 1992.

Don was a Fellow of the Engineering Society of Detroit and the past Chair of the ESD Affiliate council. Being elected a 'Fellow' is quite an honor not given lightly. Don was our Section Chair 1991 – 1992 and served as our Section Advisor from 1992 to the end. Don was an active volunteer with IEEE, at the Region and Section levels, the Engineering Society of Detroit (ESD), and the Michigan Society of Professional Engineers (MSPE). He was a Fellow of ESD and MSPE. He was also involved as a leader at the troop and district level with the Boy Scouts of America, and a member of the Board of Trustees of his church. Tributes to Don may be done at his [obituary link](#).

In lieu of flowers, the Section will be making a donation to the Parkinson Foundation, as Don wished.

Two of the IEEE related efforts that Don championed each year now must rely on new volunteers:

**Detroit Science Fair and
ESD Future Cities competition**

Each year Don would post articles in Wavelengths calling for IEEE professionals to spend a few hours helping to judge the student entries and encourage them to look to engineering and science as part of their future.

Now we need volunteers to step up and organize the 2024 teams of IEEE engineers to carry on in that spirit of giving back that has typified Don's life.

If you hear this call to action, you only need to look up the Detroit Science Fair or the ESD Future Cities to quickly locate contacts where you can begin the work of calling and organizing the teams.

If you hear that call, contact Elana Shelef (eshelef@esd.org).

Sharan Kalwani



Root Cause Analysis

IEEE Southeastern Michigan Presents "Root Cause Analysis Skills"



These days practically all engineering work requires one to address issues or troubleshoot events post facto. Many work environments then employ RCA (root cause analysis) to deal with this. RCA seeks to identify the origin of a problem. It uses a specific set of steps, with tools such as the 5 Whys and Cause & Effect Diagram, to find the primary cause of the problem, so that you can determine what happened, why it happened and figure out what to do to prevent its recurrence.

Young engineers or folks who have moved from a different environment will benefit from picking up this skill.

Audience

This tutorial has been prepared for beginners to help them understand the basics of root cause analysis. After completing this tutorial, you will find yourself at a moderate level of expertise, from where you can advance further.

Prerequisites

A fee of \$45 (IEEE members) is required to cover materials postage/handling, printing, etc. CEU/PDH certificates will be awarded to those who complete the entire session.

Instructor: Sharan Kalwani

Biography: With over 30+ years' experience, in various aspects of hardware, software. The speaker has presented at numerous conferences and is viewed as an active evangelist in his areas of expertise.

- **When? Where? ...**
- **Date:** January 20th, 2024
- **Time:** 1 PM → 3 PM
- **Audience:** All Students, Engineers, Professionals and Industry Techs
- **Where:**
281 Engineering Center,
Oakland University

Sponsored by
**Southeastern Michigan
Sections
Computer Society Chapter**

Pre-Registration Required!

<https://events.vtools.ieee.org/m/384022>



RoboFest REPORT

**LAWRENCE TECHNOLOGICAL UNIVERSITY**
ROBOFEST

- (1) Updates to the LTU Robofest Scholarship Opportunity**
- (2) 2024 Final Kickoff Meeting on January 13th**
- (3) New US Site Hosts and International Organizers**
- (4) MCWT Grants for All-Girl Robofest Teams**
- (5) Pre-season Technical Workshop Schedule**
- (6) Warmup Competition/Judge Training on February 10th**

Note: All times are listed in Eastern Time unless noted

(1) Updates to the LTU Robofest Scholarship Opportunity

In order to truly recognize the effort and exceptional talent of the Robofest competitors, Lawrence Technological University has updated the Robofest Champion LTU Scholarship Award Offer for 2024. Each team member of the top 3 Senior Division Game, Exhibition, RoboArts, RoboMed, UMC and Vcc teams at the World Championship events will receive a scholarship certificate to attend LTU:

- 1st Place: \$20,000 annual scholarship (\$80,000 for 4 years)
- 2nd Place: \$16,000 annual scholarship. (\$64,000 for 4 years)
- 3rd Place: \$14,000 annual scholarship. (\$56,000 for 4 years)

Robofest participants who have competed at any time in any category may still apply for the annual \$3,000 LTU Robofest scholarship. More details can be found on the Scholarship page: <https://www.robofest.net/index.php/about/scholarship>

(2) 2024 Final Kickoff Meeting on January 13th

The final 2024 Season kickoff meeting will be held on Saturday, January 13th, 2024 10:00am ~ 11:30am in the Computer Science Robotics Lab, Room J234 on the LTU campus and on Zoom. During the presentation, we will cover highlights of the general rules and open categories, and we will present the updated game rules for clarification prior to the final release on January 15th. The Zoom link is posted on the [robofest.net](https://www.robofest.net) home page.

(3) New US Site Hosts and International Organizers

Robofest is pleased to announce the following new organizers that will be hosting Robofest events this season: Jefferson State Community College in Alabama, Belleview Middle School in Florida, Burnett Middle School in Florida, Bernalillo High School in New Mexico, Robot Educatif Algeria in Algeria, Abugida Robotics & STEAM Center in Ethiopia, Hellenic Educational Robotics Organization in Greece, STEMTRIX in Kenya, Scienceworld Senior Secondary School in Sierra Leone, and The Mind Explorer in Pakistan, Thank you to everyone who shares the Robofest mission with young people.

(4) MCWT Grants for All-Girl Robofest Teams

The Michigan Council of Women in Technology Foundation, a Gold Sponsor of Robofest, is once again providing \$750 grants for up to ten Michigan all-girl Robofest teams for the 2024 Robofest Game and Exhibition competitions. More information and the 2024 season application are now available on the MCWT webpage: <https://mcwt.org/programs/list/K-12-Initiatives/ROBOTICS-GRANTS>

(5) Pre-season Technical Workshop Schedule

Workshops are held in the Computer Science Robotics Lab, Room J234 on the LTU Campus in Southfield, Michigan. Robots and laptops are provided. Workshop materials will be made available on the eAcademy/Workshops page. Registration is open under [Available Workshops](#) There is no cost for registered 2024 teams.

VEX IQ with VEXcode for GameSaturday, January 20th: 9:00am ~ 12:00noon**LEGO EV3 with Scratch for Game**Saturday, January 20th: 1:00pm ~ 4:00pmSaturday, January 27th: 9:00am ~ 12:00noon**LEGO SPIKE Prime/Robot Inventor with Scratch for Game**Saturday, January 27th: 1:00pm ~ 4:00pm**LEGO SPIKE Prime/Robot Inventor with Python for Game**Saturday, February 3rd: 9:00am ~ 12:00noon**Intro to Exhibition using LEGO EV3 with Scratch**Saturday, February 3rd: 1:00pm ~ 4:00pm**(6) Warmup Competition/Judge Training on February 10th**

We are hosting a Warmup competition and Game Judge Training on Saturday, Feb 10th, 1:00pm ~ 4:30pm in the Computer Science Robotics Lab, Room J234 on the LTU Campus in Southfield, Michigan. Teams who would like to participate should send an email to spalonis@ltu.edu. There is no registration fee for this event, but teams must be registered AND PAID at a local competition (or Pre-Registration) in order to participate. Please limit to one team per coach. Check-in for registered teams begins at 12:45pm

We encourage Michigan Site Hosts and Volunteer Game Judges to register and attend. Judge training will start at 1:45pm. Judge Registration: <https://www.robofest.net/rms/appPages/volunteerPages/index.jsp?siteID=1484>



Happy New Year from the Robofest Staff!

Lawrence Technological University / Robofest / J-233 / 21000 W. Ten Mile Rd, Southfield, MI 48075

Prof Elmer Santos, Director, esantos@ltu.edu

Shannan Palonis, Assistant Director, spalonis@ltu.edu

Pam Sparks, Coordinator, psparks@ltu.edu

Dr. CJ Chung, Founder, Executive Council Chair, cchung@ltu.edu

<http://www.robofest.net>

<http://facebook.com/robofest>

<https://www.linkedin.com/company/robofest-official>

Training Leaders

Why are we here?

So, you joined the IEEE (fill in any professional organization) and just what are you getting out of it? If your answer is 'Nothing', you are not alone.

Many people join societies, sit back, and wait for the benefits to arrive. They wait...and wait...and nothing happens. So where are all these benefits we were told about?

In case you missed the first day of "Philosophy of Life 101" in your freshman year, there is a simple maxim that aptly covers this situation:

"You get out of anything exactly what you put into it."

...Ok,...so just what does that mean?

Remember that guy down the hall in the dorm who studied all the time? The one who had little if any social life, and got great grades? Do you suppose there was some connection between his study and his knowledge about his course material that was reflected in his grades?

Or how about the one who joined the 'Toastmasters Club' and gave speeches every week in front of a bunch of his friends who finally became one of the best speakers in the class? Do you think it might have been due, in part, to his constant practice?

What about his friend who also joined the 'Toastmasters Club' but refused to give any speeches at all? Is it strange that he never got over stage fright, and to this day can't give a convincing presentation to his supervisor at work? Is it strange, or just inevitable?

We Train Leaders:

In professional society, a volunteer can be given a task, and... what happens if he fails? No products are late to market. No jobs are lost. No companies go bankrupt. Indeed, when the failure becomes obvious, the volunteer is counseled, he is given guidance and assistance, and usually the next time, perhaps with help, he can succeed. The next job he tackles is likely to be a success because he brings his new understanding of what it takes to 'get the job done'. In effect, the professional society becomes a non-threatening environment in which the member can gain the experience of both failure and success without the inevitable penalty that would accompany such failure in a working environment.

The assignments can be varied, but the lesson will always be the same. How to succeed! This is a course of training that is not one semester long, nor is it something that can be learned without the accompanying conditions and the experience of actually doing the job. This is also something that the University system is completely unable to provide within its normal operational limitations. However, the Professional Society can, and does provide this every day.

Indeed, there are a number of ancillary skills to be learned that accompany participation in professional society activities:

- Meeting planning & Logistics
- Publications
- Communications
- Public speaking & Crowd control
- Project planning
- Meal planning & Entertainment

The list can be as long as we want. But, the common characteristic is that these are generally not subjects found in University Baccalaureate curricula. These are lessons that are also best learned 'by doing'. Universities are not structured, nor are they chartered with the development of leadership and leadership skills. It is in this area where professional societies fill a definite need.

Executive Skills Training

As an engineer, with time and experience, you will be expected to take responsibility for a project and eventually for a project team. This will require organizational, administrative, leadership and team building skills. While training in these skills is not possible in the traditional scholastic environment, a professional society is the ideal training ground for each.

Gaining experience in these skills in an industrial environment allows no errors or mistakes, since an error could cost your company a product, market share, or your job. In a professional society, a failure with an assignment usually results in

gaining assistance in making it a success the next time. Your company doesn't fail to introduce a product or lose market share. No one loses his or her job. You learn valuable skills in the process.

At the level of IEEE "International" we have a clear statement of our Vision and our Mission:

Vision: To advance global prosperity by fostering technological innovation, enabling members' careers and promoting community worldwide.

Mission: The IEEE promotes the engineering process of creating, developing, integrating, sharing, and applying knowledge about electro and information technologies and sciences for the benefit of humanity and the profession.

POGO:

Some years ago, Walter Kelly in his classic comic strip "POGO" did a typical Kelly intentional miss-quote that hit the mark he was aiming for when one of his characters said:

"We have met the enemy, and he is us!"

If we are losing potential members from Chapters and Student Branches, we should be asking ourselves: "Where have we missed the boat?" The problem (as I see it) is not in the members or students, or in the Student Branches, the problem is that we (at the Section level) have not given the students a valid reason to go beyond a twice a month pizza party. Until we do, we will likely face the same problem, and the same questions, and the same loss in potential membership.

IEEE Student Retention (possible causes for lost members):

Below is a partial list of reasons why student branches may not be the clear path for new full members that we had hoped they might be.

- No strong link to the Section, its goals, its activities
- No real exposure to the 'real' benefits of participation
- No comprehension of the larger organization (IEEE) and its real mission
- No feeling of "belonging" to anything beyond the University
- View IEEE as only a local University "social" club
- No sense of direction or purpose to the IEEE student experience

We train leaders:

One possible approach to a 'direction' for Student Branches is to give them a clear, overall purpose for their activities at the student level. Allow me to digress a bit.

Universities have become the prime training ground for the fundamentals of engineering and scientific basis for our society. They provide an environment where academic skills can be developed and polished to a high degree.

Student Branch Mentors:

In Southeastern Michigan we host seven universities within the boundaries of the section. We have had only limited success realizing the concept of "Industry Mentors" to Student Branches.

'Student Branch Mentors' are intended to act as communication links between the Branches and the Section and its Chapters.

At this time, we are taking another look at reorganizing the "Student Branch Mentors" and ensuring a meaningful role for the Mentor's to play.

We are looking for someone with sufficient time to establish contact with each of the Student Branches and to enlist the assistance of other SEM non-student members and organize a functional Student Branch Mentors Committee.

Ideally, Student Branch **Mentors** should be:

- Member grade or higher
- Live or work near the university for easy access
- Involved in Society, Region, Section, Chapter or Affinity Group activities
- Ideally – A graduate of the University where they serve as mentor
- Employed in (or retired from) a non-academic career.

Why non-academic? In the university environment it is relatively easy to find someone on the faculty who can 'mentor' a student who wishes to pursue a scholarship career. It is more difficult to find someone with industrial or commercial experience. **Hint:** If the university hosts evening classes, many employ working engineers as evening instructors who teach because they love it. I have found them to be excellent career mentors.

What follows is a possible set of goals for Student Branch mentors to work with the Student Branches:

- At least once each school year, instruct the Student Branch on the structure of IEEE, its primary goals and objectives, and the place they can play in achieving those goals and objectives as Student members, and later as Regular and Senior members and as Officers in either the MGA, the TAB, or both.
- Attend as many of the Student Branch meetings as they are able.
- Provide information on Section activities of interest to the students,
- Inform the Branch officers of possible member educational activities (S-PAC's, Workshops, Training opportunities) in the Section and Region.
- Help the Branch officers with IEEE procedural issues, reports, contacts, funding options, etc.
- Suggest possible speakers for Student Branch meetings such as the Distinguished Lecturers programs from the Societies and Councils, local Section speakers of interest, etc.
- Invite the Student Branch officers to attend the Section Executive Committee meetings and voice their concerns and interests.
- Encourage all the Student Branch members to attend the Section Conferences each spring and fall.
- Assist the Student Branch to establish and maintain a Branch website and e-mail membership list.
- Assist the Student Branch officers to write articles for the Section newsletter on Branch activities.
- Help the Student Branch officers to file the appropriate reports to keep in touch with the Section and with IEEE HQ.

If we can encourage our Student Branch mentors to do at least a few of the items on this list, we may go far in helping our student members prepare for a larger role in IEEE, Industry, and Society as a whole.

If we do not, then we might do well to consider the bumper sticker that read:

"Where are we going, and why am I in this hand basket?"

Kimball Williams

Critical Thinking Skills

IEEE Southeastern Michigan Presents "Critical Thinking Skills"



More organizations today, than ever before, look for employees who complement domain knowledge with good thinking and communication skills. The World Economic Forum lists "Critical Thinking" among the top three skills required for executive success at work. Good critical thinking skills results in better problem solving and superior decision making. Employees who learn quickly and can solve problems, think critically, gather and analyze information meaningfully are critical to every organization. These Critical Thinking skills can be acquired by everyone. Students, young professionals, aspiring managers, and leaders can all benefit from understanding critical thinking. >> Part of the PACE activities (Professional Activities Committee for Engineers). <<

Audience

This tutorial has been prepared for beginners to help them understand the basics from where you can advance further.

Speaker: Sharan Kalwani

Biography: With over 30+ years' experience. The speaker has presented at numerous conferences and is viewed as an active evangelist in his areas of expertise.

IEEE Southeastern Michigan Section



Pre-Registration Required!

<https://events.vtools.ieee.org/m/384021>

- **When? Where? ...**
- **Date:** Jan 27th, 2024
- **Time:** 1 PM → 3 PM
- **Audience:** All Students, Members, Professionals and Industry Techs
- **Where:**
EC 281
Engineering Center
115 Library Drive
Oakland University

Sponsored by
**IEEE Southeastern Michigan
Computer Society Chapter**



Homi J Bhabha

IEEE SE Michigan
Presents

“Homi J Bhabha: Engineer, Mathematician & Physicist”



This talk is about the life of Dr. Homi J Bhabha, also known as the Father of the Indian Nuclear Industry. A contemporary of many of the great scientists of the 1930s, unfortunately very little is known about him, especially in the USA. We will attempt to cover a very broad sweep of his life, contributions, philosophy and legacy – PBS documentary style. We will leave plenty of room for attendee discussions and Q&A.

Speaker Bio: Sharan Kalwani is an industry technology specialist with 25+ years of experience. Sharan has degrees in both Engineering and Computer Science. He has worked in many diverse areas. Sharan is a senior member of IEEE, member of Association for Computing Machinery (ACM) and also leads the SIG-Linux section of SEMCO. He enjoys teaching, holds an Adjunct Faculty position at local educational sites. He has published one book and is now working on his second.

He is a recipient of the IEEE MGA Achievement award for his contributions to IEEE activities in 2018. Region 4 Jack Sherman award in 2021 and Bob Neff Section award in 2022.

At Glance

- **When:**
Date: Jan 24th, 2024
Time: 7:00– 8:00 PM
- **Where:**
Online via Webex (to be shared only after you have a confirmed registration)
- **Audience:** All eligible members and potential members (only if slots available)

*

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Pre-Registration Required!

<https://events.vtools.ieee.org/m/368906>

IEEE Southeastern Michigan Section



Grace Hopper

IEEE Southeastern Michigan
Presents a Triple Video Collection of Documentaries on
Computer Pioneer: Grace Hopper



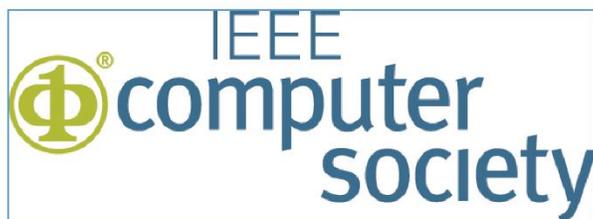
Grace Brewster Hopper (née Murray; December 9, 1906 – January 1, 1992) was an American computer scientist, mathematician, and United States Navy rear admiral. One of the first programmers of the Harvard Mark I computer, she was a pioneer of computer programming who invented one of the first linkers. Hopper was the first to devise the theory of machine-independent programming languages, and the FLOW-MATIC programming language she created using this theory was later extended to create COBOL, an early high-level programming language still in use today.

We are screening these short documentaries together in the month of her passing away.

Running time: 55 minutes (All 3 documentaries combined)

***Pre-Registration Required!**

<https://events.vtools.ieee.org/m/390379>



IEEE Southeastern Michigan Section

Quick Summary

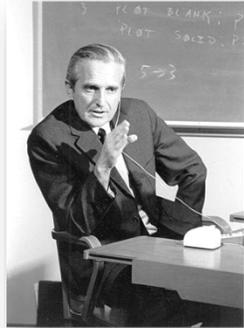
- **When:**
Date: January 12th, 2024
Time: 05:00 – 6:30 PM
(EST/EDT)
- **Where:**
Online (Link to be shared only after you have a confirmed registration)
- **Audience:** OPEN to ALL*

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IEEE
Southeastern
Michigan
Computer Society
Technical Chapter



Doug Engelbart

IEEE SE Michigan
Presents
"Douglas Engelbart: Computer Pioneer"



Douglas Carl Engelbart (January 30, 1925 – July 2, 2013) was an American engineer and inventor, and an early computer and Internet pioneer. He is best known for his work on founding the field of human-computer interaction, particularly while at his Augmentation Research Center Lab in SRI International, which resulted in creation of the computer mouse, and the development of hypertext, networked computers, and precursors to graphical user interfaces. These were demonstrated at The Mother of All Demos in 1968. Engelbart's law, the observation that the intrinsic rate of human performance is exponential, is named after him. We will leave plenty of room for attendee discussions and Q&A.



At Glance

- **When:**
Date: Jan 26th, 2024
Time: 5:30– 7:00 PM
- **Where:**
Online via Webex (to be shared only after you have a confirmed registration)
- **Audience:** All eligible members and potential members (only if slots available)

*

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Southeastern
Michigan*

Pre-Registration Required!

<https://events.vtools.ieee.org/m/396520>

IEEE Southeastern Michigan Section



WiE Leadership Summit



[Region 4 Women in Engineering Leadership Summit](#) (R4 WIELS) took place on Nov 3rd, 2023, in downtown Detroit at the Microsoft Technology Center. The event was attended by over 90 people including engineers, managers and local students. Main topics are professional development, energy and sustainability, AI and leadership. Volunteers from [IEEE USA](#), [IEEE Humanitarian Technology Board](#) (HTB), [Region 4](#) and [WIE](#) worked together with our local [Southeastern Michigan Section](#) to make it a fun and memorable day for all.

IEEE USA President [Ed Palacio](#) kicked off the event and welcomed everyone. He stressed the value of engaging industry leaders for IEEE to do more. Steve Annear, the first keynote speaker, took the audience's breath away by sharing his captivating life story, growing up in Australia and lost one of his leg before he was 10, and how he overcome life's setback to achieve personal growth and professional success as a CEO for over 25 years, all driven by his ability to set personal standards and value-based approach, instead of letting society define that for him. Annear stressed the importance of developing a clear sense of purpose during one's career and how that not only steers his career direction but also personal life. It is refreshing for the audience to learn to re-orient oneself. Every organization today defines a North Star, the purpose for the company, the North Star drives company strategy, roadmap, and daily operations. It is essential for individuals to have personal North Star. Steve nailed this topic.



Picture 1: Steve Annear

Along the professional development theme, Microsoft's [Muge Wood](#) shared her story on how to survive the big tech layoffs. 2023 has been a historic year of layoffs that have cost tens of thousands of tech workers their jobs. It is likely that many IEEE members may have been impacted. Her practical coping strategies is a great recipe where folks can follow by embracing the power of 'refirement' to make the next play the best play. She defines "refirement" as the act of living a life with even greater purpose and joy on one's own terms. Re-inventing one's purpose, investing in one's identity outside of work and leveraging the period of job change as a catalyst for growth. IEEE can be such a community outside one's work for one to find the refirement.

Ford's [Carlene Bills](#) spoke about the difficulty getting to the top floor in her career. She didn't have the opportunity to get to the top floor by riding the elevator, instead, she climbed the stairs to arrive at the top. This metaphor is extremely motivational, all paths lead to Rome as long as one is willing to try even if it is not an easy path. In her giving back phase of her life, she goes out of her way to encourage others who might have self-doubts, she wants to be the one who holds the elevator door open for others to ride on. Bills is a fun lady, as she spoke, she began dancing in the room. Audience laughed. We can sense her energy in the room, given that lady Bills just returned from a long trip out of town at another event. [Amy Courter](#) elaborated on ways to [Move-Up-In-Your-Ability-To-Be-Your-Very-Best](#).

Professional development track included a talk where IEEE member [Gina Aquilano](#), Senior Director at Analog Devices Inc. presented on technology advancement in electrification. Gina started as an electrical engineer; she worked her way up as a director today. She spoke about how she blends her technical skills with leadership to reach her career today. Gina is in the process of becoming a senior IEEE member. She is well on her path to become an IEEE Fellow in the future.

On the energy and environment track, we have [Adrienne Pierce](#), a start-up CEO from New Sun Road, walked us through her firm's award winning Microgrid Controller innovation. She presented the technical merit of the cloud-based controller and how it is a solution for climate change. She shared case studies of current systems in the Sierra foothills, Puerto Rico, downtown San Jose, CA and Guatemala. In Guatemala, the system is empowering women entrepreneurs to enrich their lives and work. [Kim Getgen](#), Founder and CEO of InnovationForce, spoke about their innovation framework to help power and utilities companies manage and measure outcome from innovation holistically and centrally via a common

innovation framework inspired by *Dr. Linda Hill from Harvard*. Her framework is built on having an innovative culture since Innovation is a human-team sport. Creating cultures that support innovation is as necessary as having the technical answers.



Picture 2: HTB

[Simay Akar](#) (photo on the left) represented IEEE HTB to present electric vehicles and renewable energy system development as part of the HTB initiatives.

ChatGPT overtook the world in less than a year, Microsoft's chief engineer [Jennifer Marsman](#) demystified the various AI models, how they work and their limitations. CEO [Hala Ballouz](#) from Electric Power Engineers LLC highlighted the various AI use cases for power utility sector, especially how AI might optimize power system distribution bringing more renewables online at the right time and right location. [Dr. Shi-Guang Li](#) shared his start-up's achievement developing AI models used to predict and prevent underground water contamination from agriculture run-offs and industrial discharges.

The Summit wrapped up with a panel of a very diverse set of women leaders, a classical music station radio host, a director from Westinghouse Nuclear Energy, a student from University of Michigan, a chemist from LTU, and a mother of four. (See photo on the right.) Liang Downey, the WIELS Summit Chair, facilitated the panel discussion. [Dr. Sibrina Collins](#)'s powerful tool is to engage students through story telling. It is such an effective way to get your points through and bring everyone on board across multi culture and multi-discipline environment. This is a super tool for engineers to practice, try and leverage. Each panelist walked their unique path, but they have arrived at a common point today to embrace their success as overcomers, motivators and contributors.



Picture 3: R4 WIELS Panel

Alexandra Enders is a college student in computer engineering at the University of Michigan. She joined her mother to attend an IEEE Region 4 WIE AI Summit in Chicago in 2019 when she just started high school. Her mother - Kim Enders is a well-loved sponsor of the summit. She attended many AI sessions during the summit, and it was that early exposure to AI motivated her to pursue computer engineering degree today. At the Summit in Detroit, she got connected with [Hala Ballouz](#) and there is an opportunity for her to intern at [Hala Ballouz's](#) firm in Austin.

Some attendees drove several hours from different parts of [Region 4](#) to attend the summit in Detroit. They shared that the drive is more than worth the travel time and they thanked IEEE for putting together such a high caliber summit. During [Ed Palacio's](#) closing remarks, he said as the IEEE USA President 2023, he had attended many conferences and this one is one of his best. This Summit would not have been successful without the support from [IEEE USA](#), [Region 4](#), [WIE](#), [HTB](#) and [Southeastern Michigan Section](#). IEEE can engage members and non-members by engaging volunteers and leverage industry connections to increase our eminence in our community, connect students with mentors.

Additional photos below



Picture 5: Summit Attendees



Picture 4: IEEE Volunteers (from L to R): Ed Palacio, Kanika Saini, Bige Unluturk, Nevzat Bircan Bugdayci, Gozde Tutuncuoglu, Sharan Kalwani, Ashfiqua Connie, Alycen Wiacek, Vickie Ozburn, Jonathon Choe

*Article contributed by Liang Downey, IEEE R4 WIELS Chair
Editing by Sharan Kalwani*

ORG UNITS cheat sheet

Section Unit Name or Affinity Group or Chapter Name (Organizational Unit code is in parentheses)

Consultants Network Affinity Group: (CN40035)

Life Members: (LM40035)

Young Professionals: (YP40035)

Women in Engineering: (WE40035)

Chapter: 01 (CH04049) (SP01) Signal Processing Society,
(CAS04) Circuits and Systems Society and
(IT12) Information Theory Society

Chapter: 02 (CH04051) (VT06) Vehicular Technology Society

Chapter: 03 (CH04053) (AES10) Aerospace and Electronic Systems Society and
(COM19) Communications SocietyChapter: 04 (CH04050) (AP03) Antennas and Propagation Society,
(ED15) Electron Devices Society,
(MTT17) Microwave Theory and Techniques Society,

Chapter: 05 (CH04055) (C16) Computer Society

Chapter: 06 (CH04056) (GRS29) Geosciences and Remote Sensing Society

Chapter: 07 (CH04057) (PE31) Power Engineering Society,
(IA34) Industrial Applications Society

Chapter: 08 (CH04088) (EMC27) Electromagnetic Compatibility Society

Chapter: 09 (CH04087) (IE13) Industrial Electronics Society,
(PEL35) Power Electronics Society

Chapter: 10 (CH04142) (TEM14) Technology and Engineering Management Society

Chapter: 11 (CH04099) (EMB18) Engineering in Medicine & Biology

Chapter: 12 (CH04103) (CS23) Control Systems Society

Chapter: 13 (CH04113) (E25) Education Society

Chapter: 14 (CH04115) (RA24) Robotics And Automation Society

Chapter: 15 (CH04144) (NPS05) Nuclear Plasma Sciences Society

Chapter: 16 (CH04125) (CIS11) Computational Intelligence Society,
(SMC28) Systems, Man and Cybernetics Society

Chapter: 17 (CH04128) (NANO42) Nanotechnology Council

Chapter: 18 (CH04162) (MAG33) Magnetics Society

Section Unit Name or Affinity Group or Chapter Name (Organizational Unit code is in parentheses)

University Of Detroit-Mercy: (STB00531)

Michigan State University: (STB01111)

University Of Michigan-Ann Arbor: (STB01121)

Wayne State University: (STB02251)

Lawrence Technological University: (STB03921)

Oakland University: (STB06741)

Eastern Michigan University: (STB11091)

University of Michigan-Dearborn: (STB94911)

Use the Geo-unit 'Code' for faster access in the vTools system applications.

HKN Code	HKN Name (Student IEEE Honor Society)
HKN029	University of Michigan-Ann Arbor, Beta Epsilon
HKN042	University of Detroit-Mercy, Beta Sigma
HKN054	Michigan State University, Gamma Zeta
HKN073	Wayne State University, Delta Alpha
HKN163	University of Michigan-Dearborn, Theta Tau
HKN164	Lawrence Institute of Technology, Theta Upsilon
HKN190	Oakland University, Iota Chi
HKN244	Southeastern Michigan Alumni

Organization Unit IEEE Code	Student Technical Chapter name
SBC00531	University of Detroit-Mercy, Computer Society Chapter
SBC02251	Wayne State University, Computer Society Chapter
SBC03921	Lawrence Tech University, Computer Society Chapter
SBC06741	Oakland University, Engineering in Medicine & Biology

Why do we publish this? Well, this is most useful when searching the vTools page for entering L31s or creating new events or searching for existing events!

Curated & Maintained By

Sharan Kalwani,

Chair, IEEE Southeastern Michigan Section (2022-2023)

Editor, Wavelengths (Serving you as an active newsletter contributor since 2018)

Enthusiastic IEEE volunteer since 2011

Use the Geo-unit 'Code' for faster access in the vTools system applications.

Activities & 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. **NOTE: The IEEE SE Michigan section website is located at <http://r4.ieee.org/sem/>**

SEM Wavelengths:

<https://r4.ieee.org/sem/about-sem/sem-history/wavelengths-magazine-archive/>

SEM Calendar of events:

<https://r4.ieee.org/sem/sem-calendar/>

Select “SEM Calendar” button in the top row of the website. This is our ‘Active’ event listing site where everyone should look first to see what events are scheduled for our Section in the near future.

SEM Collabratec Workspace:

<https://ieee-collabratec.ieee.org/app/workspaces/5979/IEEE-Southeastern-Michigan-Section/activities>

An IEEE supported space for online chat, discussions, connecting with other global IEEE entities, besides our local Michigan folks.

vTools Meetings:

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

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

Other Happenings

Here are some of the non-IEEE functions that may be of interest to you or someone you know. 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. **NOTE: Copy the URL and paste it into your browser address bar.**

These websites were checked in June 2022 and found viable.

Send details to: wavelengths@ieee-sem.org OR letters@ieee-sem.org

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Michigan Institute for Plasma Science and Engineering: Seminars for the academic year:

<https://mipse.umich.edu/seminars.php>

Model RC Aircraft

<http://www.skymasters.org>

Model Rocketry

<https://www.nar.org/find-a-local-club/nar-club-locator/>

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

<https://www.robofest.net/index.php/about/contact-us>

Science Fiction Conventions

<https://2022.penguicon.org/>

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

Mad Science

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

ESD PE Review Class

<https://www.esd.org/programs/pe/>

Maker Faire:

<https://swm.makerfaire.com/>

It appears that the SouthWest Michigan Maker Faire was a casualty of the Global Pandemic, as were many of our friends and several organizations.

However, we retain this link for anyone wishing to make contact and consider pumping life back into what was a wonderful experience.

Executive Committee

The Executive Committee is the primary coordination unit for Southeastern Michigan (SEM) IEEE operations. The basic organization chart below shows the 2023 arrangement of communications links designed to provide inter-unit coordination and collaboration.

The SEM Executive Committee meets in a teleconference each month on usually on a Thursday at 6:30 pm. The specific meeting days, times, phone or WebEx numbers and log in codes are published on the IEEE SEM Website calendar: <http://r4.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 **Christopher Johnson**, the section secretary at secretary@ieee-sem.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.

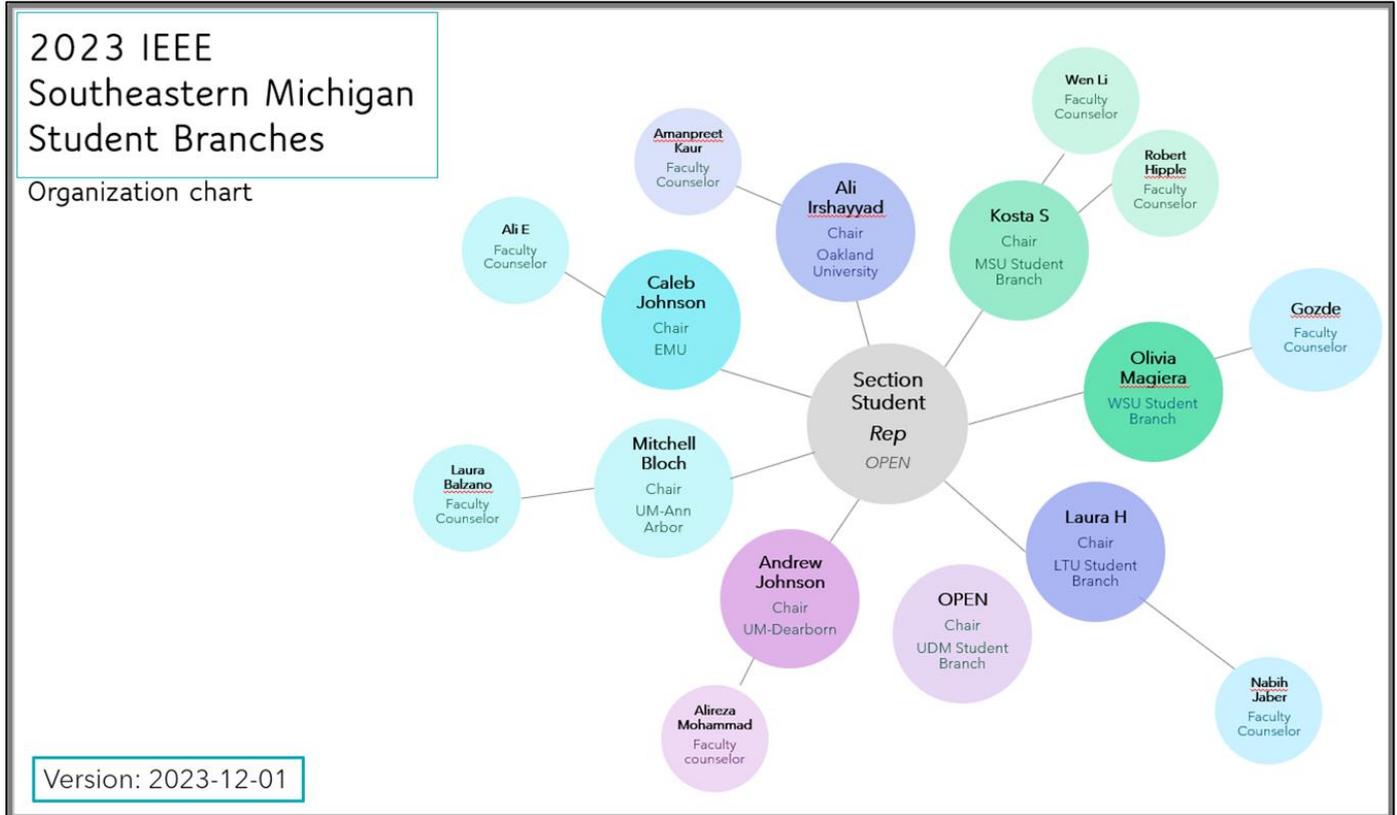
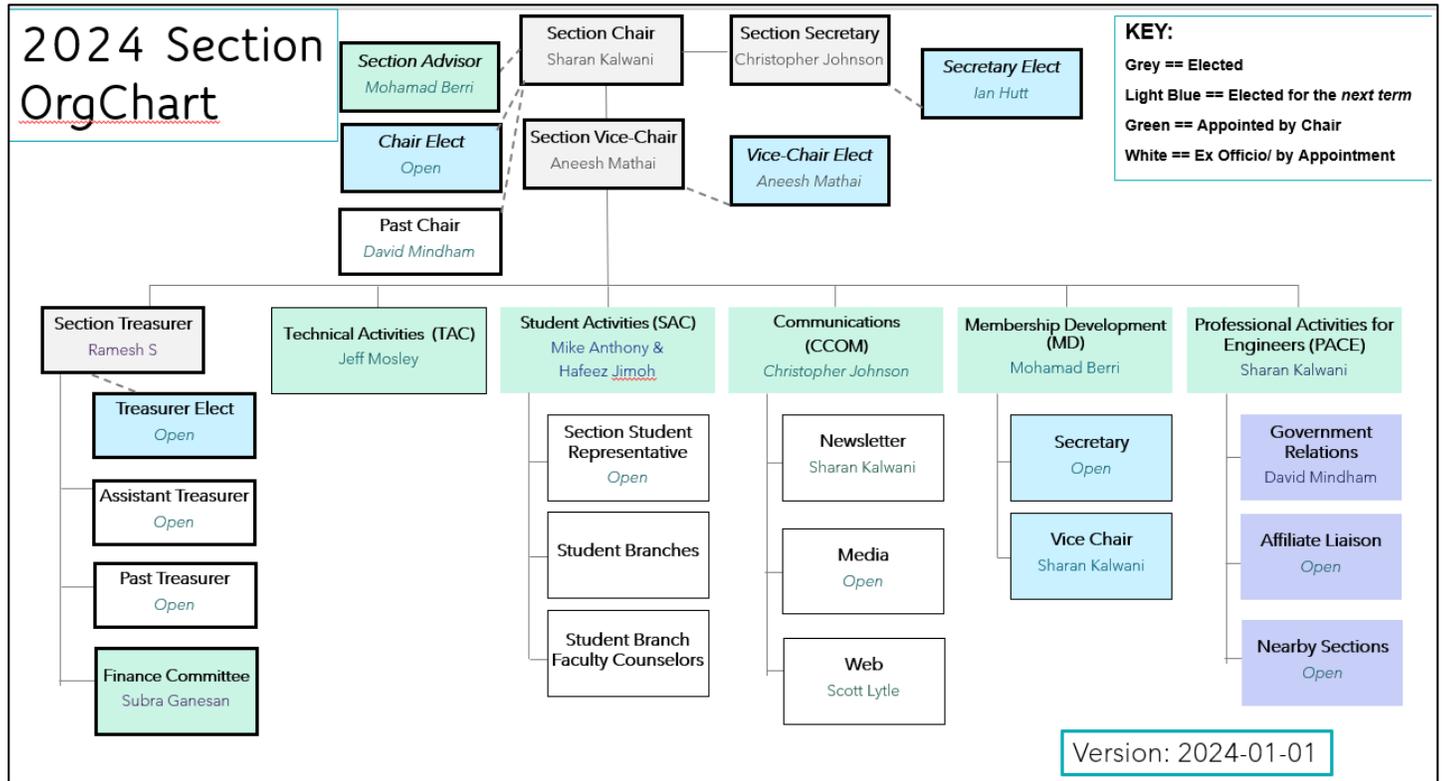
More detailed information on meetings may be found through the IEEE SEM Website: <http://r4.ieee.org/sem/> and clicking on the **SEM meetings list** button near the bottom of the left-hand banner.

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.

Christopher Johnson (Secretary)

Email: secretary@ieee-sem.org

If you wish to download the complete SEM Organization Chart, in PDF format, it will be made available soon at <http://r4.ieee.org/sem/>. In the meantime, you may use the diagram below (recently refreshed!)



ExCom Meeting Schedule

NOTE: All SEM members are invited to attend ALL ExCom (Executive Committee) meetings:

Below is the 2023 schedule for the Section ExCom meetings with links to add the events to your calendar. It is important that **at least one person** from each Chapter/Affinity Group attends each scheduled ExCom meeting. Please mark your calendars for the 2023 meetings. Or link your personal calendar to the SEM Web calendar.

Section Administrative Committee (ExCom) Meeting Schedule for 2023 & 2024: (clickable links)

Note: All IEEE Members are welcome at any IEEE meeting, at any time but please register so we can be sure to accommodate you. This month's meeting is highlighted in **Bold**.

<i>ExCom Meeting (all clickable links)</i>	<i>Date & Start Time, Duration</i>
Section ExCom Monthly Meeting (virtual) For JANUARY	11 Jan 6:30 PM, 1 hour
Section ExCom Monthly Meeting (virtual) For FEBRUARY	08 Feb 6:30 PM, 1 hour
Section ExCom Monthly Meeting (Hybrid) For MARCH	14 Mar 6:30 PM, 2 hours
Section ExCom Monthly Meeting (virtual) For APRIL	11 Apr 6:30 PM, 1 hour
Section ExCom Monthly Meeting (virtual) For MAY	09 May 6:30 PM, 1 hour
Section ExCom Monthly Meeting (Hybrid) For JUNE	13 Jun 6:30 PM, 2 hours
Section ExCom Monthly Meeting (virtual) For JULY	11 Jul 6:30 PM, 1 hour
Section ExCom Monthly Meeting (virtual) For AUGUST	08 Aug 6:30 PM, 1 hour
Section ExCom Monthly Meeting (Hybrid) For SEPTEMBER	12 Sep 6:30 PM, 2 hours
Section ExCom Monthly Meeting (virtual) For OCTOBER	10 Oct 6:30 PM, 1 hour
Section ExCom Monthly Meeting (virtual) For NOVEMBER	14 Nov 6:30 PM, 1 hour
Section ExCom Monthly Meeting (In Person) For DECEMBER	12 Dec 6:30 PM, 2 hours

Christopher Johnson (Secretary)

Email: secretary@ieee-sem.org

Section Administrative Committee (ExCom) Meeting Schedule for 2024: (screen snapshot)



[VTOLS](#) [SEARCH](#) [MY EVENTS](#) [MANAGE EVENTS](#) [API](#) [ABOUT](#) [CONTACT](#)





SEARCH EVENTS

[Learn how to integrate Event notices with your website](#)
[Hey! I want the old Search page.](#)

Search Options
Advanced Search
Clear Search

Search Term ?

Organizational Unit ?

Date Range ?

Showing 12 of 12 upcoming events, based on search criteria.

Title	Date	Host	Location	Options
<input checked="" type="checkbox"/> SEM Section ExCom Monthly Meeting (virtual) For JANUARY 2024	11 Jan 2024 06:30 PM	R40035		View
<input checked="" type="checkbox"/> SEM Section ExCom Monthly Meeting (virtual) For FEBRUARY 2024	08 Feb 2024 06:30 PM	R40035		View
<input checked="" type="checkbox"/> SEM Section ExCom Monthly Meeting (Hybrid) For MARCH 2024	14 Mar 2024 06:30 PM	R40035	Southfield, Michigan	View
<input checked="" type="checkbox"/> SEM Section ExCom Monthly Meeting (virtual) For APRIL 2024	11 Apr 2024 06:30 PM	R40035		View
<input checked="" type="checkbox"/> SEM Section ExCom Monthly Meeting (virtual) For MAY 2024	09 May 2024 06:30 PM	R40035		View
<input checked="" type="checkbox"/> SEM Section ExCom Monthly Meeting (Hybrid) For JUNE 2024	13 Jun 2024 06:30 PM	R40035	Southfield, Michigan	View
<input checked="" type="checkbox"/> SEM Section ExCom Monthly Meeting (virtual) For JULY 2024	11 Jul 2024 06:30 PM	R40035		View
<input checked="" type="checkbox"/> SEM Section ExCom Monthly Meeting (virtual) For AUGUST 2024	08 Aug 2024 06:30 PM	R40035		View
<input checked="" type="checkbox"/> SEM Section ExCom Monthly Meeting (In Person) For SEPTEMBER 2024	12 Sep 2024 06:30 PM	R40035	Southfield, Michigan	View
<input checked="" type="checkbox"/> SEM Section ExCom Monthly Meeting (virtual) For OCTOBER 2024	10 Oct 2024 06:30 PM	R40035		View
<input checked="" type="checkbox"/> SEM Section ExCom Monthly Meeting (virtual) For NOVEMBER 2024	14 Nov 2024 06:30 PM	R40035		View
<input checked="" type="checkbox"/> SEM Section ExCom Monthly Meeting (In Person) For DECEMBER 2024	12 Dec 2024 06:30 PM	R40035	Southfield, Michigan	View

Editorial Corner

Previous editions in this series may be found on the IEEE SEM website at: <http://r4.ieee.org/sem/>. Click on the “Wavelengths” button in the top row of selections.

Comments and suggestions may be sent to the editorial team at wavelengths@ieee-sem.org

OR

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k.williams@ieee.org

cjohnson@ieee.org

lunnmalcolm@me.com

akio@emcsociety.org

We rely on our officers and members to provide the ‘copy’ that we finally present to readers of 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 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.

We always encourage all chapters and student branches to share news of activities (both past and future) in their arenas. Please feel free to share any and all information so your peers, colleagues can hear about all the good work you do.

Quote:

“If a tree falls in a forest and no one hears it, how do you know it actually fell??”

So, publicize your work, one never knows when it can pay off!

Editors:

We are always looking for members interested in helping to edit the newsletter. The process is always more fun with more people to share the duties. Having more participants and contributors also helps us keep the newsletter interesting.

Join the Team:

If you feel you might like to join the team, or would like to train with us, please contact one of us at:

wavelengths@ieee-sem.org

Sharan Kalwani,
Chair, IEEE SE Michigan Education Society Chapter
Vice-Chair, IEEE SE Michigan Computer Society Chapter
Co-Editor, Wavelengths,
2018~2019~2020~2021~2022-2023

Wavelengths Annual Publication Plan for Articles

Month	AG's	Ch's	Ch's	SB's	Special Notice	Reporting Events	Monthly Focus	Awards
Jan		1		OU	New Year Officers	Officer's Welcome	The Year Ahead	
Feb	Cons	2		MSU	Science Fair Judges	National Engrs Wk.	Surviving Winter	
Mar		3	13	EMU	Elections - Prep			
Apr		4		U/M-D		ESD Gold Awards	Chapter Focus	
May	Life	5	14			Science Fair		
Jun		6					Leadership Skills	
Jul		7	15				Students Issues	
Aug	WIE	8			Nominations Call		Womens Issues	
Sep		9	16	LTU	Ballots	Engineers Day?	Professional Skills	
Oct		10		U/M-AA	Elections!	IEEE Day		
Nov	YP	11	17	WSU	Election Results	New Fellows		
Dec		12		U/D-M	IEEE-Com Apmts.		Happy Holidays	R4 Nom

Wavelengths Annual Publication Plan for Personal Profiles

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



Web & Social Sites

Southeastern Michigan Section Website

<http://r4.ieee.org/sem/>

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

Section Website Event Calendar

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

SEM Facebook Page

(Select the “” button under the top row)

<https://www.facebook.com/groups/ieeesemich>

SEM LinkedIn Page

(Select the “” button under the top row)

<https://www.linkedin.com/groups/1766687/>

SEM Twitter Account (new)

(Select the “” button under the top row)

<https://www.twitter.com/ieeesemich>

SEM Collabratec Workspace (new)

<https://iee-collabratec.ieee.org/app/workspaces/5979/IEEE-Southeastern-Michigan-Section/activities>

SEM Instagram (new)

<https://www.instagram.com/ieeesemich/>

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 web page (top banner)

Section Officers

Section Chair

Sharan Kalwani

Section Vice-Chair

Aneesh Mathai

Section Secretary

Christopher Johnson

Section Treasurer

Ramesh Sethu

Standing Committees:

Section Adviser

Mohamad Berri

Wavelengths Editor

Sharan Kalwani

Educational Committee

Anthony Will (Chair)

Finance Committee

Subra Ganesan (Chair)

Membership Development

Mohamad Berri (Chair)

Awards & Nominations

Jerry Song (Chair)

PACE

Sharan Kalwani (Chair)

Student Activities

Michael Anthony & Hafeez Jimoh (Co-Chairs)

Student Mentors

OPEN

SECTION Student Rep

OPEN

Technical Activities

Jeffrey Mosley (Chair)

Information Management

Karthick Rajagopal, Naveen Bonagiri, Kimball Williams (Co-Chairs)



IEEE Southeastern Michigan

Visit Us on the Web at:

<http://r4.ieee.org/sem>



Sodium Citrate is the secret ingredient to make any cheese into a smooth, creamy nacho cheese sauce. Coincidentally, Sodium Citrate's chemical formula is $\text{Na}_3\text{C}_6\text{H}_5\text{O}_7$ (NaCHO).

Advertising Rates

SEM Website & Newsletter

Leadership Meetings

SEM Executive Committee Monthly Teleconferences:

- 2nd Thursday of Each Month @ 6:30 PM
- Check the Section Web Calendar at:
<http://r4.ieee.org/sem/sem-calendar/>
(Select the "SEM Calendar" button in the top row.)

OR

SEM Executive Committee Meetings:

- Find the location, and Registration at:
<http://bit.ly/sem-ieee>

SEM Standing Committee Meetings:

SEM Affinity Group Meetings:

SEM Technical Society/Chapter Meetings:

SEM University Student Branch Meetings:

- Meeting schedules are announced on SEM Calendar
<http://r4.ieee.org/sem/>
(Select the "SEM Calendar" button in the top row.)

- Registration for all at:

<http://bit.ly/sem-upcoming>