Wavelengths

Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

Volume 65 – Issue 01

Contents

Section Chair's Message

A look back on 2024:
As I write this column, I cannot but help look back on the many successes we as a section and all of our 18 chapters, 4 affinity groups and 8 student branches have achieved in the past year. Overall, we managed:

- 163 technical events – all of a very diverse nature
- 33 professional development sessions
- 7 events of a humanitarian classification

In addition, we held 6 senior elevation events, to benefit our members who have put in several years of professional practice, to be recognized (many of them are featured in many past Wavelengths and this edition, lists over 12 of them in a single issue!)

One of the innovative features of our section has been screening many informative documentaries – illustrating many of the giants who shoulders we stand on. We did around 25 such online screenings, something which is appreciated but many IEEE members globally (they attended the online viewings and frankly admitted they loved the idea and enjoyed even more the post event discussions, in which we discovered many a "hidden gem"!).

Also – our other global gem: RoboFest – check out their report (page 26) and see the progress they have achieved over the past two decades. Together they have put Southeastern Michigan on the map!

In 2024 we celebrated the 140th anniversary of the IEEE (going back to the days of AIEE and IRE) with two luminaries from the IEEE History Center and IEEE-USA. We will doing a few more landmark events such as this one and the 2023 60th Section celebration in 2025 – the occasion will of course be one of the parent societies and/or chapter milestones!

So in 2025 we will endeavor to continue all of our past successes – as well as reach out to a few OUs, who for a variety of reasons, could not fully participate in serving our community and reaching out.

What to look forward to this month of January:
- ➢ We have at least two documentaries:
  - ○ Grace Hopper - Computer Pioneer and
  - ○ Douglas Englebart – Engineer and early internet evangelist
- ➢ 4th annual memorial lecture on Homi Bhabha
- ➢ Kick off for our Section wide ExCom meeting on January 9th, all new members and re-elected and newly elected chapter officers are invited to attend.
- ➢ Several point online events with other chapters nationwide, wo of them on "Careers in Technology", aimed at many of our young/new members.
- ➢ Our annual Embedded Systems Workshop on January 18th (online)
- ➢ Call for participation as a Future City judge – and remembering Don Bramlett (RIP) with an IEEE SEM Award named in his honor.

➢ Kicking off vtools training for all of our volunteers, look for announcements coming soon!

Volunteering:

✓ We, IEEE Southeastern Michigan Section, function based on the work of our volunteers. If someone has important obligations that reduce their ability to volunteer, other volunteers need to step in and carry the load. The more volunteers we have, the easier the workload on everyone. Please volunteer, you will find the experience interesting and rewarding. There is a dedicated article on volunteering elsewhere in past newsletters.

You can find ALL the other upcoming events using the short URL link: **https://bit.ly/sem-upcoming**

Our YTD performance (from Vtools) or https://events.vtools.ieee.org/tego_/events/activity:
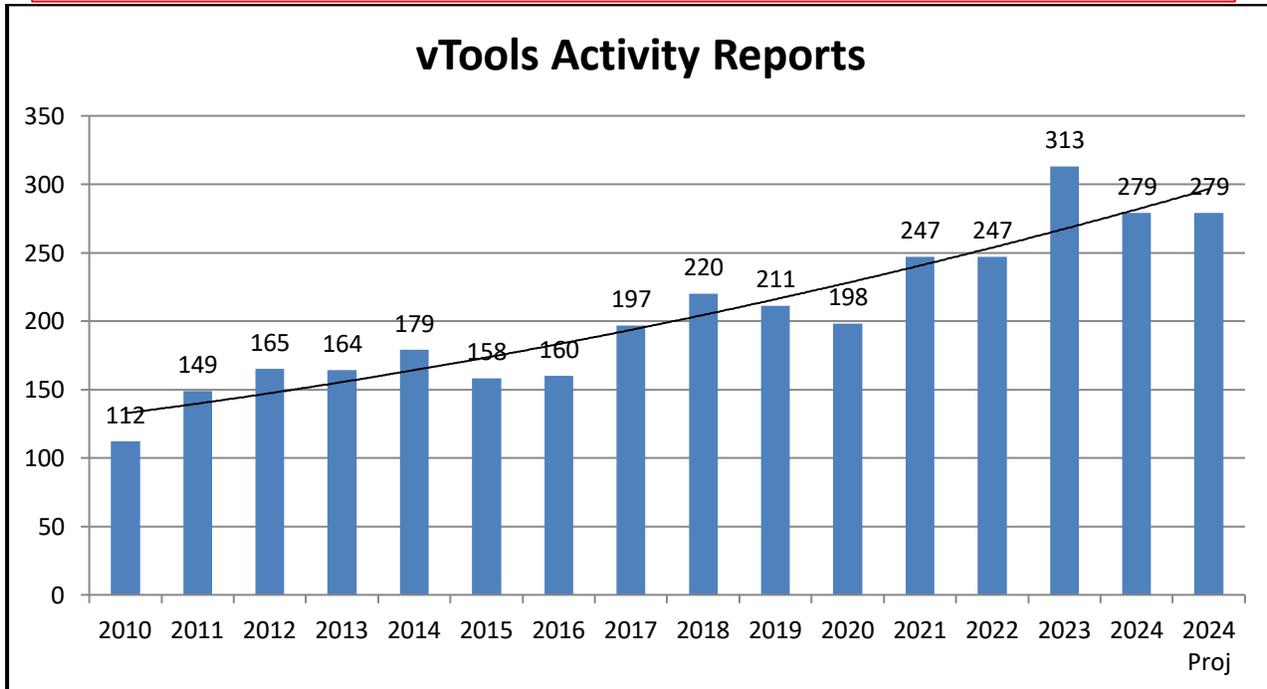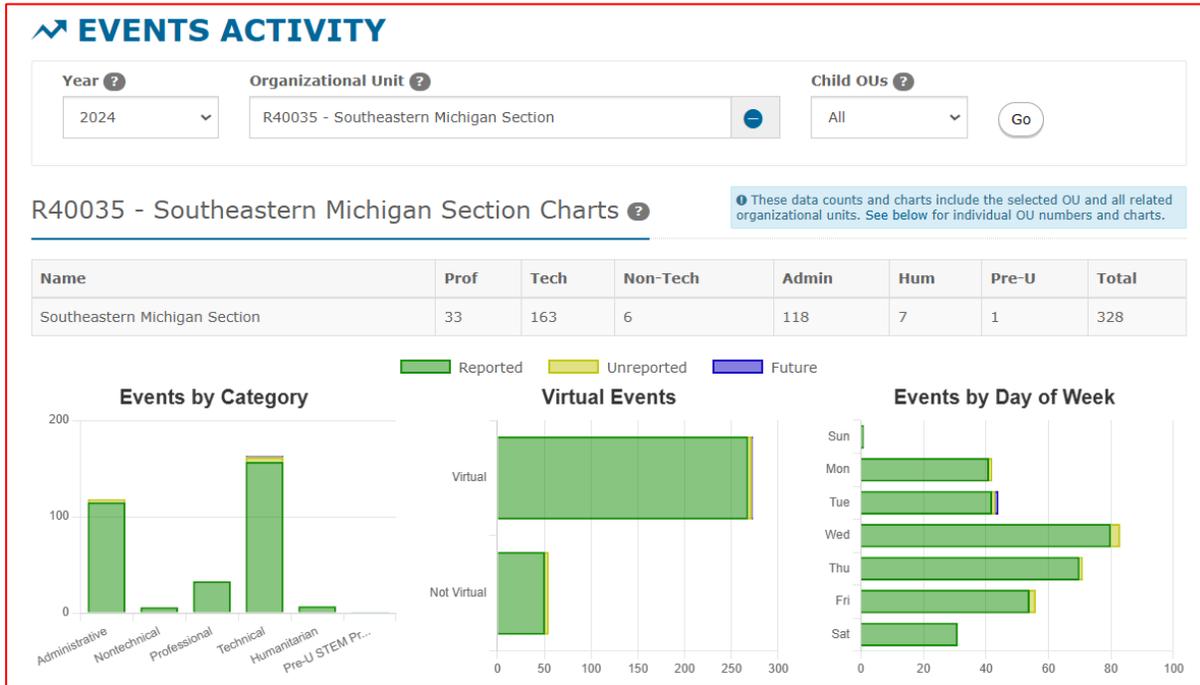
Remember – every little bit helps, and the Section is here to help! If you have not taken the opportunity, do reach out to any of the Section officers (lifelong email contacts listed below). Who knows what unknown but immense value you may discover, by simply connecting with us. A possible membership 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.

Also of note – we take a great deal of interest in our members welfare. We are already planning 2025 events for senior elevation PLUS membership development.

I look forward to hearing from you and seeing you at our events. As always, your ideas and suggestions are encouraged and welcome. If I don't hear back (good or bad) I will assume all is well 😊

Sharan Kalwani
Via email: chair@ieee-sem.org
Section members are encouraged to engage using <u>any</u> 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
- Advisor is   advisor@ieee-sem.org

Election Results

IEEE SEM Officers and Members:

Thank you for participating in our election ballot process this 'unusual' year.
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The chart below shows the overall status of what we know of the results of the election, though we

Ch #s	SEM Geo-units: All	Voting Open	voting Closed	Rsults	vTools Updated	SEM Roste Updated
0	R40035 - SEM Executive Committee	12/2	12/10		12/17	12/17
1	CH04049 - SEM Jt.Chap,SP01/CAS04/IT12					
2	CH04051 - SEM Chapter, VT06	29-Nov	10-Dec		12/17	12/17
3	CH04053 - SEM AES10/COM19					
4	CH04050 - SEM Chap, AP03/ED15/MTT17/PHO36					
5	CH04055 - SEM Chapter, C16	29-Nov	6-Dec		12/17	12/17
6	CH04056 - SEM Chapter, GRS29	28-Nov	10-Dec		12/17	12/17
7	CH04057 - SEM Chapter, PE31/IA34	30-Nov	10-Dec		12/17	12/17
8	CH04088 - SEM Chapter, EMC27	18-Nov	11-Dec		12/17	12/17
9	CH04087 - SEM Chapter, IE13/PEL35					
10	CH04142 - SEM, Chapter TEM14	24-Nov	7-Dec		12/13	12/17
11	CH04099 - SEM Chapter, EMB18					
12	CH04103 - SEM (Chap 12),CS23					
13	CH04113 - SEM Chapter, E25					
14	CH04115 - SEM Chapter, RA24					
15	CH04144 - SEM Chapter, NPS05					
16	CH04125 - SEM Chapter, CIS11/SMC28	5-Aug	5-Sep		12/17	12/17
17	CH04128 - SEM Chapter, NANO42					
18	CH04162 - SEM Chapter Magnetics, MAG33	22-Nov	8-Dec		12/20	12/20
AG-Consult	CN40035 - SEM Consultants Network	8-Nov	22-Nov		12/9	12/17
AG-Life	LM40035 - SEM Life Members	8-Nov	22-Nov		12/9	12/17
AG-WIE	WE40035 - SEM Women in Engineering (WIE}	26-Nov	6-Dec		***	
AG-YP	YP40035 - SEM Young Professionals	22-Nov	6-Dec		12/20	12/20

understand that some elections have taken place but no one from the Geo-unit has told us the results.

(***Geo-unit elections Conducted using the vTools system remain 'secret' to all but the election 'manager' until entered in the vTools Officer Report.)***

The two right side columns in this chart indicate that the results of the election that have been reported into the vTools Officer Report tool thus entering the results into the IEEE database.

It also tells us that the SEM Officer Roster Excel spreadsheet has been updated. Lines with no dates indicate that the election for that Geo-unit is incomplete, unknown and/or unreported at this time.

The period for elections has concluded, and now we need your assistance:
 We need our **Current and New 'Chairs' together** to address these follow on tasks:

1. Confirm that all the officers newly elected to your Geo-unit (Chapter or Affinity Group) and those who were not replaced in the election, remain underline willing to serve,

2. If 'write in' candidates were elected, confirm their interest, and suitability:
   a. Member grade of Grad Student or higher, &
   b. Society affiliation corresponds to the AG or Society for your Geo-unit.
   (With write-in candidates we don't know if they volunteered, or someone else wrote them in, so a 'check' with them is necessary.)
   NOTE: Mickey Mouse and Donald Duck are not IEEE members!

3. Offer an appointed place in the governing body of your Geo-unit for any who volunteered, or were written-in but, did not receive the majority of the votes.

4. *For any who were replaced by the election, ask if they are willing to accept another function within your group for them to continue to work*

with your team. *(We don't want to lose a volunteer!)*

5. Be sure all officers read and understand the requirements of their office and are willing and able to fulfil those requirements.

6. *If you are a member of a Geo-unit for which no election was reported and you want to see your group continue to function, please contact Mohamad Berri at* **mberri@ieee.org** *to discuss ways to bring life back into your group.*

Once you have verified the members of your Geo-unit's leadership team for 2025, be sure they are entered into the vTools Officer Report tool and contact e-mail '**k.williams@ieee.org**' to confirm each officer and their position.

As you resolve any 'issues' with the election for your Geo-unit, please keep me informed so that I can complete the January 2025 version of the SEM Officer Roster.

What we understand about the election status at this time follows below:
If the officer block is greyed out, that election result is unknown to us.

If the officer block is highlighted in yellow, those officers were unable or unwilling to conduct an election for the 2025 year.

Executive Committee	
Chair	Sharan Kalwani
Secretary	Christopher Johnson
Asst Secretary	Andrew HARRIS
V-Ch	ANEESH MATHAI
Treasurer	S Ramesh
Section Adviser	Mohamad Berri
Past-Ch	David Mindham

Affinity Groups	
Consultants Network: [CN]	
Chair	Sharan Kalwani
V-Ch	
Secretary	
Treasurer	
Life Member Affinity Group: [LM]	
Chair	Harpreet Singh
V-Ch	Subramanian Ganesan
Secretary	Arun Hundiwal
Treasurer	Thomas Meitzler
Women in Engineering: [WIE]	
Chair	Bige Unluturk
V-Ch	ashfiqua connie
Secretary	
Treasurer	Alycen Wiacek
Young Professionals: [YP]	
Chair	Amar Dabaja
V-Ch	SNEHA SUDHIR SHETIYA
Secretary	Durvijay Sharma
Treasurer	Tauheed Khan Mohd

Technical Chapters	
Signal Processing, Circuits and Systems and Info Theory: Ch1	
Chair	Jeffrey Dulzo
V-Ch	Sharan Kalwani
Director(SP Soc)	
Director(C&S Soc)	
Director(IT Soc)	
Secretary	
Treasurer	
Vehicular Technology Soc: Ch2	
Chair	Sharan Kalwani
V-Ch	SNEHA SUDHIR SHETIYA
Secretary	SUBHADIP GHOSH
Treasurer	Mohamad Berri
Aerospace and Electronic Systems and Communications: Ch3	
Chair	Patrick Seeling
V-Ch	
Secretary	
Treasurer	
Antennas and Propagation, Electron Devices, Microwave Theory & Technology and Photonics: Ch4	
Chair	Robert Hipple
V-Ch	Jeffrey Nanzer
Secretary	
Treasurer	
Computers: Ch5	
Chair	Sharan Kalwani
V-Ch	S Ramesh
Secretary	George Pappas
Treasurer	Subramanian Ganesan
Geosciences and Remote Sensing: Ch6	
Chair	Leland Pierce
V-Ch	
Secretary	Adib Nashashibi
Treasurer	
Power & Energy and Industrial Applications: Ch7	
Chair	Looja Tuladhar
V-Ch	Sharan Kalwani
Secretary	Binaya Joshi
Treasurer	Chris Nelson
Electromagnetic Compatibility: Ch8	
Chair	Steve Tomba
V-Ch	Candace Suriano
Secretary	Scott Lytle
Treasurer	James Woodyard

Treasurer	James Woodyard
Industrial Electronics and Power Electronics Societies: Ch9	
Chair	Van Wagner
V-Ch	Sharan Kalwani
Secretary	Agasthya Ayachit
Treasurer	
Technology & Engineering Management: Ch10	
Chair	SUBHADIP GHOSH
V-Ch	NAVEEN KUMAR BONAGII
Secretary	
Treasurer	
Engineering in Medicine and Biology: Ch11	
Chair	Maurice Snyder
V-Ch	Durga chavali
Secretary	
Treasurer	James Hamilton
Control Systems: Ch12	
Chair	Mohamad Berri
V-Ch	ALI EYDGAHI
Secretary	Karthikeyan Rajagopal
Treasurer	
Education: Ch13	
Chair	ALI EYDGAHI
V-Ch	Sharan Kalwani
Secretary	Amar Basu
Treasurer	Sharan Kalwani
Robotics And Automation: Ch14	
Chair	ALI EYDGAHI
V-Ch	Victor Manske
Secretary	Jonathan Berent
Treasurer	Chan-Jin Chung
Nuclear Plasma Sciences: Ch15	
Chair	Robert Hipple
V-Ch	
Secretary	
Treasurer	
Computational Intelligence & Systems, Man & Cybernetics: Ch16	
Chair	Jeffery Mosley
V-Ch	Benancio Gonzalez
Secretary	
Treasurer	
Nanotechnology Council: Ch17	
Chair	Sharan Kalwani
V-Ch	Gordon Burkhead II
Secretary	
Treasurer	
Magnetics Society: Ch18	
Chair	Cody Trevillian
V-Ch	Steven Louis
Secretary	Nicholas Homrocky
Treasurer	Thomas Meitzler

Section Focus

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

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

Section Mission

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

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

Section Goals

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

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

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 **https://bit.ly/sem-upcoming**

Event	Date	Time
Documentary Night: Computer Pioneer - Grace Hopper : Southeastern Michigan Section Chapter, C16	2024-01-03	1730 Hours
Ch8: AdCom Teleconference : Southeastern Michigan Section Chapter, EMC27	2024-01-09	1100 Hours
SEM Section ExCom Monthly Meeting (virtual) For JANUARY 2025 : Southeastern Michigan Section	2024-01-09	1830 Hours
Rapid nearfield pressure calculations with FOCUS, the 'Fast Object-oriented C++ Ultrasound Simulator' : Southeastern Michigan Section Chapter, EMB18	2024-01-14	1800 Hours
Embedded Systems Workshop 2024 : Southeastern Michigan Section Chapter, C16	2024-01-18	0900 Hours
Dr Martin Luther King Day of Volunteering IEEE MOVE Theresa Brunasso/Careers in Technology CS SIGHT COPE WIE SA ComSoc Future Networks : New Jersey Coast Section Jt. Chapter,IM09/C16	2024-01-21	2000 Hours
Careers in Technology Spring Series 2025 - Yuhong Liu, PhD - 21 January 8pm EST / 7 pm CST : Northwest Florida Section Chap,C16/COM19	2024-01-22	2000 Hours
Homi J Bhabha: His Life & Legacy : Southeastern Michigan Section Chapter, C16	2024-01-24	1730 Hours
Careers in Technology Spring Series 2025 - Baek-Young Choi, PhD - 28 January 8pm EST / 7 pm CST : Northwest Florida Section Chap,C16/COM19	2024-01-29	2000 Hours
Documentary Night: Computer Pioneer - Douglas Engelbart : Southeastern Michigan Section Chapter, C16	2024-01-31	1730 Hours

Tech Activities Report

As of December 29, 2024

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
Cnslt	43	20	1	1	9	0	Consultants Network	0	11
LIFE	0	0	0	12	2	0	Life Members	1	14
WIE	29	21	2	11	2	0	Women In Engineering	0	15
YP	14	0	3	13	1	0	Young Professionals	0	17
1	10	1	1	5	0	0	Circuits & Systems, Signal Proc., Info Th.	0	6
2	100	18	5	3	0	0	Vehicular Technology	1	8
3	35	2	2	0	1	0	Aerospace & Elec. Sys., Communications	0	3
4	22	2	9	0	0	0	Trident (Ant, Elect Dev., uWave, Photo)	0	9
5	43	6	49	9	6	4	Computers	0	68
6	30	4	4	0	0	0	Geoscience & Remote Sensing	0	4
7	31	3	11	7	0	1	Power Engineering, Industrial App.	0	19
8	67	31	11	10	0	0	Electromagnetic Compatibility (EMC)	0	21
9	177	16	2	6	0	0	Power Electronics, Industrial Electronics	0	8
10	8	2	2	6	0	0	Engineering Management	0	8
11	0	0	0	2	0	0	Eng. in Medicine & Biology	0	2
12	16	2	1	1	0	0	Control Systems	0	2
13	0	0	0	0	0	0	Education	0	0
14	23	0	2	1	0	1	Robotics & Automation	0	4
15	22	2	9	0	0	0	Nuclear Plasma Science Society	0	9
16	4	2	1	2	1	0	Computational Intelligence / Sys.Man.Cyber.	0	4
17	16	1	3	0	0	1	Nano Technology Council	0	4
18	21	9	3	1	0	0	Magnetics Society	0	4
									0
SEM	53	26	7	24	7	1	SEM (Section)	3	39
Tot	764	167	128	114	29	8	NOTE: Highlight Green = Active	5	279
		22%					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 in the coming year for assistance. It's the end of the year and our Section continues to exceed our projections for technical meetings hosted for our membership. Thanks to all GAs working to engage their membership.
Jeff Mosley, TAcom Chair
CIS CH 16 Chair (SEM Section, Region 4)

ICAD 2025: CFP

2025 IEEE International Conference on Artificial Intelligence & Data Analytics

June 24, 2025
Greater Boston, MA, USA

CALL FOR PAPERS

Submission Deadline: February 6, 2025
Notification of Acceptance: March 6, 2025
Publication-Ready Submission: March 20, 2025

More information and submissions:
IEEE-ICAD.org

ICAD 2025 invites submissions of original research papers and will include oral and poster sessions, a student paper contest, tutorials given by experts in AI topics and special sessions. This new conference will emphasize the applications of AI and key AI verticals that impact technology applications and innovations. The conference aims to provide an experience that prepares you to learn about new research and breakthroughs in AI, gain valuable insights, grow your network and get inspired by the brightest minds working in the multi-faceted field.

We invite authors to submit original papers on topics including, but not limited to:

Track 1: Foundations of AI & Data Analytics	Track 2: AI in Industry & Enterprise Applications	Track 3: Advanced AI Techniques & Emerging Trends	Track 4: Responsible AI & Ethics
• Machine Learning Fundamentals • Deep Learning Techniques • Natural Language Processing • Computer Vision • Reinforcement Learning • Unsupervised Learning • Time Series Analysis • Predictive Modeling	• AI for Business Intelligence and Analytics • AI in Finance and FinTech • AI for Supply Chain and Logistics • AI in Customer Service and Experience • AI in Manufacturing and Industry 4.0 • AI for Climate Change and Environmental Sciences • AI in Materials • Science and Engineering	• Explainable AI (XAI) and Interpretable Machine Learning • Generative AI and Creative Applications • Quantum AI and Quantum Machine Learning • Neuromorphic Computing and Brain-inspired AI • Edge AI and Federated Learning • AI Security and Privacy • Adversarial Machine Learning • LLM and AI Agents	• AI Governance and Regulation • Ethical AI and Fairness in Machine Learning • Privacy-Preserving AI • AI for Cybersecurity • Human-Robot Interaction and Collaboration • AI in Healthcare • Robotics and Assistive Technologies • AI Bias and Mitigation Strategies

Submission Guidelines

All paper submissions must be in IEEE dual-column format and must be 6 pages (minimum) to 8 pages (maximum) in length including figures, tables & references and must be submitted in PDF format via the Conference Management Tool. The paper must comply with the specifications at ieee-icad.org.

Technical Program Chair: Rhiddiben Shah, shahriddhi717@gmail.com
Conference Chair: Shankar Krishnan, shanky.krish06@gmail.com

2025 ICAD

IEEE Boston Section

ESW Flyer

OAKLAND UNIVERSITY | IEEE Southeastern Michigan — Electrical and Electronic Engineers Creating Our Future | IEEE computer society

22nd Annual Embedded Systems Workshop

January 18th 2025, 8:30 AM to 1:30 PM

IEEE Computer Society and IEEE Education Society (Southeastern Michigan Technical Chapters) are offering a workshop on Embedded Systems on Saturday, January 18th, 2025. This workshop is open to all industry professionals, both experienced and newly minted engineers, as well as students. This is the **22nd year** that the event is being held. The theme for this year is: *"Diverse/Novel Applications of Embedded Systems".*

The aim is to disseminate knowledge, directly benefiting the IEEE members, at the same time **improve the technology skills pool, indirectly boosting the economy.** Speakers and experts from the embedded systems industry will be making presentations and will also be available for discussions and networking during the event. In addition to the technical presentations, there will be industry interaction and potential recruitment sessions. Use this opportunity for virtual networking with engineers, industry experts and embedded enthusiasts.

Please confirm your participation by registering on the IEEE events web site
Deadline is 15th JANUARY 2025 4:00 AM

Speakers in the past: Beningo Embedded Group, Infineon, NVIDIA, Intrepid CS and others...

Attendees: There is a small one-time cost of $5 (IEEE members and students) to attend, this will help cover door prizes, video recording, storage, presentations, a dedicated website and other logistics. Several random raffles representing the embedded systems industry will also take place. All are welcome. Do post this flyer in your workplaces, share/inform your peers & colleagues about this event. It is a great way to learn not only what is going on, but also network (virtually) with other professionals as well.

Brought to you by the IEEE SE Michigan Computer & Education Society chapters. Do seriously consider joining the IEEE, boost your technical skills, broaden your awareness of compute-based engineering in the region, support numerous similar initiatives & learn other benefits this brings.

Open to all, Pre-registration *is necessary for attending!*

https://events.vtools.ieee.org/m/443658

For Technical questions, contact the Program Committee **at:** esw2024@ieee-sem.org

A CEU/PDH Certificate will be made available for participants who Pre-register and attend

ESW 2024 Organizing Committee: Subra Ganesan (Chair), Sharan Kalwani (Vice Chair), Ramesh Sethu, George Pappas, Ben Sweet

ESW Announcement

The 22nd Annual IEEE Embedded System Workshop is planned on January 18th, 2025, 8:30 AM to 4:30 PM (Saturday), online

IEEE Southeastern Michigan Computer Society (aka Chapter 5), and Oakland University are offering a one-day workshop on Embedded Systems from 8:30 am to 1:30 pm, Saturday January 18th , 2024. This is a **free** workshop open to all engineers, students and this is the 23rd year of this annual workshop. Many of the attendees have gained valuable insights after attending the workshop.

The aim of this workshop is to disseminate knowledge, which will directly benefit the IEEE members and indirectly **improve the technology expertise and the Michigan economy**. Speakers and experts from a number of areas within the embedded systems industry will be making presentations; the speakers and experts will also be available for discussions and networking throughout the day.

Please be sure to share as much as possible about this event in your organization for maximum participation in this workshop. In addition to the presentations, there will be vendor display tables and recruitment tables. We encourage all IEEE members to use this opportunity to interact & network with fellow professionals & engineers.

Please confirm your participation by *registering* on the IEEE vTools site
https://events.vtools.ieee.org/m/443658

Lunch will be provided courtesy of several workshop sponsors, supporters, and conference well-wishers. When responding, please indicate *your lunch preference: turkey, chicken, or vegetarian sandwich.* Coffee/tea, water, juice, and snacks will be provided during the breaks.

For Technical Questions, feel free to contact:

Prof. Subra Ganesan at: ganesan@oakland.edu; or by phone: (248) 370 2206
 or
Sharan Kalwani at: sharan.kalwani@ieee.org; or by phone: (248) 980-UNIX

Register and attend for a chance to win multiple door prizes, including books, boards, T-shirts, and several tech gizmos.

A Certificate of Attendance will be available for participants who preregistration and attend the full event.

SusTech 2025: CFP

IEEE SusTech 2025

DEADLINE 16-JANUARY 2025

https://ieee-sustech.org   **Call For Late Papers**   **April 20th-23rd, 2025**

The **12th IEEE Conference on Technologies for Sustainability** (SusTech 2025) is designed to explore technical development that meets the needs of the present without compromising the future generations. The conference brings together scientists, engineers, technologists, and scholars from disparate disciplines to conduct a dialogue on environmental issues and collaborate on ideas to develop and utilize innovative tools and intelligent systems to address them. Attendees will explore emerging relevant technologies, latest tools, and proactive solutions to take their sustainability programs to the next level.

- **SusTech 2025** is a hybrid event and will feature technical papers & presentations, posters, and workshops.
- Prominent experts will be giving keynotes, plenary presentations, and invited talks.
- Full papers will be considered for publication in the **IEEE SusTech 2025** Proceedings.

Conference content that meets IEEE quality review standards and format will be submitted for inclusion into IEEE Xplore as well as other Abstracting & Indexing (A&I) databases.

IEEESusTech

Papers are solicited for presentations from industry, government, and academia (including students) covering relevant research, technologies, methodologies, tools, case studies and public policy.

Conference Fields of Interest (see web site for full details)

Inspiring Technology Solutions for Climate Sustainability

Energy Efficiency	**Renewable/Alternative Energy**	**Intelligent Transportation Systems**
Applications of AI/ML	**Sustainable Electronics**	**Water & Oceans Resource Mgmt**
Societal Implications/Quality of Life	**Sustainability Management**	**Smart and Micro Grids**
Internet of Things (IoT) & Sensors	**Public Policy**	**eWaste & Circular Economy**

The Conference will also consider submissions representing technology applied to: Agriculture & Food Technology, Ecological Sustainability & Conservation, and Smart Cities.

Instructions to Authors: Submit in **PDF** form, a full submission of the paper for oral presentation via the SusTech website. For information for authors, please visit the conference website at **https://ieee-sustech.org** and select the **Details for Authors** menu item (**https://ieee-sustech.org/authors/**) and follow the instructions.

There will be a separate Student Poster Competition.

Important Dates	*January 16th, 2025*	Submission Deadline for Late Papers
	February 10th, 2025	Notification of Acceptance
	March 9th, 2025	**FINAL manuscript submission deadline**

For more information or questions, please contact: sustech@ieee.org

IEEE SusTech 2025 Leadership

General Chair:	Sevada Isayan	isayan@ieee.org
Technical Program Chair:	Ed Perkins	e.perkins@ieee.org
Technical Program co-Chair:	Adil Usman	adilusman@ieee.org

Sponsors for SusTech 2025 are the IEEE Oregon, San Fernando Valley, Foothill, and Orange County Sections; IEEE Region 6; IEEE-USA; IEEE SSIT; and co-sponsored by the IEEE Standards Association, and the IEEE IAS, OES, PES, and TEMS Societies and supported by the IEEE SusTech Initiative.

Future City: Save the Date!

Future City: Call for Judges

Judges Wanted

30 YEARS
Inspiring the Next Generation of Engineers

fuTuRe CiTy COMPETITION

ESD THE ENGINEERING SOCIETY OF DETROIT® FOUNDED IN 1895

This fall, middle school students began work on the Future City Competition; a project-based learning program where students imagine, research, design, and build cities of the future. The students spend approximately four months creating cities that could exist at least 100 years in the future. Each city must incorporate a solution to a design challenge that changes each year. This year, teams will design a floating city and provide two innovative examples of how their floating city works and keeps its citizens healthy and safe. The Engineering Society of Detroit (ESD) coordinates the Michigan Regional Competition and is looking for engineers and technical professionals to act as judges. The role of the judge is to draw on their expertise and resources to fairly evaluate the team's efforts.

Judges are needed for each of the four stages of the competition. The essay will be judged remotely and the model, presentation & question and answer session will be judged live and in person during the competition on Tuesday, January 21, 2025 at the Suburban Collection Showplace in Novi.

- **City Essay** — By December 13, students write a 1,500-word essay that describes the unique attributes of their city and provides a solution to this year's challenge: Above the Current.
- **City Presentation** — Three student team members give a 7-minute presentation about their future city and their solutions to the challenge.
- **City Model** — Students build a scale model of their city using recycled materials. The model showcases the team's city of the future, their solution to this year's challenge, and has at least one moving part.
- **City Q&A** — Teams have a live 8-minute question and answer session, conducted with a panel of judges from the engineering, city, and technical communities.

To volunteer as a judge, please enroll no later than Friday, December 13, 2024 at the following website (please be sure to select the Regional judging category and choose Michigan as your region in order to be a part of our competition): **https://dashboard.futurecity.org/register**

If you have questions please contact Leslie A. Smith, CMP, at 248-353-0735, ext. 152 or lsmith@esd.org

This Month in January

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

January 1, 1983 – The ARPANET was established by the Advanced Research Projects Agency (now DARPA) of the United States Department of Defense. ARPANET officially changes to using the Internet Protocol, replacing the earlier Network Control Protocol (NCP) and thus creating the foundation of what later became known as the Internet. The Advanced Research Projects Agency Network (ARPANET) was the first wide-area packet-switched network with distributed control and one of the first computer networks to implement the TCP/IP protocol suite. Both technologies became the technical foundation of 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. Under the settlement, AT&T ("Ma Bell") agreed to divest its local exchange service operating companies, in return for a chance to go into the computer business (see AT&T Computer Systems). AT&T's local operations were split into seven independent Regional Bell operating companies, commonly known as "Baby Bells".

With the American consumer's new ability to purchase phones outright, AT&T and the Bell System lost the considerable revenues earned from phone leasing by local Bell companies. Forced to compete with other manufacturers for new phone sales, the aging Western Electric phone designs still marketed through AT&T failed to sell, and Western Electric eventually closed all of its U.S. phone manufacturing plants. AT&T, reduced in value by about 70%, continued to run all its long-distance services through AT&T Communications (the new name of AT&T Long Lines), although it lost some market share in the ensuing years to competitors MCI and Sprint.A sign that hung in many Bell facilities in 1983 read:

> *There are two giant entities at work in our country, and they both have an amazing influence on our daily lives ... one has given us radar, sonar, stereo, teletype, the transistor, hearing aids, artificial larynxes, talking movies, and the telephone. The other has given us the Civil War, the Spanish–American War, the First World War, the Second World War, the Korean War, the Vietnam War, double-digit inflation, double-digit unemployment, the Great Depression, the gasoline crisis, and the Watergate fiasco. Guess which one is now trying to tell the other one how to run its business?*

January 1, 1878 – Birth of Agner Krarup Erlang, Danish mathematician, statistician, and engineer (died 3 February, 1929). who invented the fields of traffic engineering and queueing theory. Erlang's 1909 paper, and subsequent papers over the decades, are regarded as containing some of most important concepts and techniques for queueing theory.

By the time of his relatively early death at the age of 51, Erlang had created the field of telephone networks analysis. His early work in scrutinizing the use of local, exchange and trunk telephone line usage in a small community to understand the theoretical requirements of an efficient network led to the creation of the Erlang formula, which became a foundational element of modern telecommunications network studies.

January 1,1992 – Grace Brewster (nee Murray) Hopper, aged 85 dies. An American computer scientist, mathematician, and United States Navy rear admiral. She was a pioneer of computer programming. Hopper was the first to devise the theory of machine-independent programming languages and used this theory to develop the FLOW-MATIC programming language and COBOL, an early high-level programming language still in use today. She was also one of the first programmers on the Harvard Mark I computer. She is credited with writing the first computer manual, "A Manual of Operation for the Automatic Sequence Controlled Calculator."

Before joining the Navy, Hopper earned a Ph.D. in both mathematics and mathematical physics from Yale University and was a professor of mathematics at Vassar College. She left her position at Vassar to join the United States Navy Reserve during World War II. Hopper began her computing career in 1944 as a member of the Harvard Mark I team, led by Howard H. Aiken. In 1949, she joined the Eckert–Mauchly Computer Corporation and was part of the team that developed the UNIVAC I computer. At Eckert–Mauchly she managed the development of one of the first COBOL compilers.

January 2, 1938 – Date of Birth for Lynn Conway, American computer scientist and electrical engineer. Lynn Conway was a pioneering American computer scientist and electrical engineer celebrated for her revolutionary work in computer processor design and VLSI chip design. She developed generalized dynamic instruction handling while working at IBM in the 1960s but faced termination when she expressed her intention to undergo a gender transition. Subsequently, in 1973, Conway resumed her career at Xerox PARC, where she spearheaded the "LSI Systems" group and played a vital role in the Mead–Conway VLSI chip design revolution. As she continued her professional journey, Conway also emerged as a prominent transgender activist, ultimately receiving an apology from IBM in 2020.

January 2, 1920 – Birthday of Isaac Asimov, Russian-American chemist, author, and academic (died, April 6,1992). During his lifetime, Asimov was considered one of the "Big Three" science fiction writers, along with Robert A. Heinlein and Arthur C. Clarke. A prolific writer, he wrote or edited more than 500 books. He also wrote an estimated 90,000 letters and postcards. Best known for his hard science fiction, Asimov also wrote mysteries and fantasy, as well as popular science and other non-fiction.

Asimov's most famous work is the Foundation series, the first three books of which won the one-time Hugo Award for "Best All-Time Series" in 1966. His other major series are the Galactic Empire series and the Robot series. The Galactic Empire novels are set in the much earlier history of the same fictional universe as the Foundation series. Later, with Foundation and Earth, he linked this distant future to the Robot series, creating a unified "future history" for his works. He also wrote more than 380 short stories, including the social science fiction novelette "Nightfall", which in 1964 was voted the best short science fiction story of all time by the Science Fiction Writers of America. Asimov wrote the Lucky Starr series of juvenile science-fiction novels using the pen name Paul French.

Most of his popular science books explain concepts in a historical way, going as far back as possible to a time when the science in question was at its simplest stage. Examples include Guide to Science, the three-volume Understanding Physics, and Asimov's Chronology of Science and Discovery. He wrote on numerous other scientific and non-scientific topics, such as chemistry, astronomy, mathematics, history, biblical exegesis, and literary criticism.

He was the president of the American Humanist Association. Several entities have been named in his honor, including the asteroid (5020) Asimov, a crater on Mars, a Brooklyn elementary school, Honda's humanoid robot ASIMO, and four literary awards.

January 7, 1827 – Sandford Fleming, Scottish-Canadian engineer, created Universal Standard Time (died July 22, 1915). Born and raised in Scotland, he immigrated to colonial Canada at the age of 18. He promoted worldwide standard time zones, a prime meridian, and use of the 24-hour clock as key elements to communicating the accurate time, all of which influenced the creation of Coordinated Universal Time. He designed Canada's first postage stamp, produced a great deal of work in the fields of land surveying and map making, engineered much of the Intercolonial Railway and the first several hundred kilometers of the Canadian Pacific Railway, and was a founding member of the Royal Society of Canada and founder of the Canadian Institute (a science organization in Toronto).
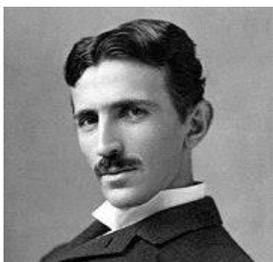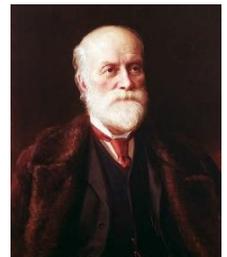
January 7, 1943 – Nikola Tesla, Serbian American physicist, inventor, futurist and engineer passes away (b. 1856). He is known for his contributions to the design of the modern alternating current (AC) electricity supply system.Born and raised in the Austrian Empire, Tesla first studied engineering and physics in the 1870s without receiving a degree. He then gained practical experience in the early 1880s working in telephony and at Continental Edison in the new electric power industry. In 1884 he immigrated to the United States, where he became a naturalized citizen. He worked for a short time at the Edison Machine Works in New York City before he struck out on his own. With the help of partners to finance and market his ideas, Tesla set up laboratories and companies in New York to develop a range of electrical and mechanical devices. His AC induction motor and related polyphase AC patents, licensed by Westinghouse Electric in 1888, earned him a considerable amount of money and became the cornerstone of the polyphase system which that company eventually marketed.

January 11, 1954 – Kailash Satyarthi, Indian engineer, academic, and activist, Nobel Prize laureate is born. In 2014, he was the co-recipient of the Nobel Peace Prize, along with Malala Yousafzai, "for their struggle against the suppression of children and young people and for the right of all children to education." He is the founder of multiple social activist organizations, including Bachpan Bachao Andolan, Global March Against Child Labour, Global Campaign for Education, Kailash Satyarthi Children's Foundation, and Bal Ashram Trust.

January 12, 2001 – Death of William Redington Hewlett, American engineer and businessman, who co-founded Hewlett-Packard (b. 1913). Hewlett was born in Ann Arbor, Michigan, where his father taught at the University of Michigan Medical School. In 1916 the family moved to San Francisco after his father, Albion Walter Hewlett, took a similar position at Stanford Medical School, located at the time in San Francisco. He attended Lowell High School and was the 1929-1930 Battalion Commander of the school's Army JROTC program. He was accepted at Stanford University as a favor to his late father who died of a brain tumor in 1925.

Hewlett received his bachelor's degree from Stanford in 1934, a Master of Science degree in electrical engineering from MIT in 1936, and a post-masters engineering degree in electrical engineering from Stanford in 1939. He joined the Kappa Sigma fraternity during his time at Stanford. Hewlett attended undergraduate classes taught by Fred Terman at Stanford and became acquainted with David Packard. Packard and he began discussing forming a company in August 1937, and founded Hewlett-Packard Company as a partnership on January 1, 1939. A flip of a coin decided the ordering of their names. Their first big breakthrough came when Disney purchased eight audio oscillators designed by Hewlett which were used for the production of the film Fantasia.

The company incorporated in 1947 and tendered an initial public offering in 1957. Bill Hewlett and Dave Packard were proud of their company culture which came to be known as the HP Way. The HP Way is a corporate culture that claimed to be centered not only on making money but also on respecting and nurturing its employees. Hewlett was president of the Institute of Radio Engineers in 1954.

He was president of HP from 1964 to 1977 and CEO from 1968 to 1978, after which he was succeeded by John A. Young. He remained chairman of the executive committee until 1983, and then was vice chairman of the board until 1987.

A young Steve Jobs, then age 12, called Hewlett (whose number was in the phone book) and requested any available parts for a frequency counter he was building. Hewlett, impressed with Jobs' initiative, offered him a summer job assembling frequency counters. Jobs then considered HP one of the companies that he admired, regarding it among the handful of companies (Disney and Intel were the others) that were built "to last, not just to make money". Steve Wozniak, co-founder of Apple along with Jobs, unsuccessfully attempted five times to sell the Apple I computer to HP while working there. The early Apple computers were built with HP parts, under a legal release from HP. Of the missed opportunity, Hewlett reportedly said, "You win some, you lose some."

January 18, 1933 – Date of birth of Ray Dolby, American engineer and businessman (died. 2013). He is recognized for inventing the noise reduction system Dolby NR. He made valuable contributions to audio technology, especially in the advancement of the video tape recorder. Dolby's work at Ampex played a crucial role in developing recording technology. He went on to establish Dolby Laboratories, a company known for its advancements in audio processing and noise reduction. Dolby's professional legacy is characterized by his groundbreaking efforts to enhance sound quality in various audiovisual technologies.

January 21, 1901 – Elisha Gray, American electrical engineer, passes away (born August 2. 1835). He co-founded the Western Electric Manufacturing Company. Gray is best known for his development of a telephone prototype in 1876 in Highland Park, Illinois. Some recent authors have argued that Gray should be considered the true inventor of the telephone because Alexander Graham Bell allegedly stole the idea of the liquid transmitter from him. Although Gray had been using liquid transmitters in his telephone experiments for more than two years previously, Bell's telephone patent was upheld in numerous court decisions. Gray is also considered to be the father of the modern music synthesizer and was granted over 70 patents for his inventions. He was one of the founders of Graybar, purchasing a controlling interest in the company shortly after its inception.

January 24, 1966 – Homi Jehangir Bhabha FASc, FRS, dies in a plane crash. (Born: 30 October 1909) He was an Indian nuclear physicist who is widely credited as the "father of the Indian nuclear program". He was the founding director and professor of physics at the Tata Institute of Fundamental Research (TIFR), as well as the founding director of the Atomic Energy Establishment, Trombay (AEET) which was renamed the Bhabha Atomic Research Centre in his honor. TIFR and AEET served as the cornerstone to the Indian nuclear energy and weapons program. He was the first chairman of the Indian Atomic Energy Commission and secretary of the Department of Atomic Energy. By supporting space science projects which initially derived their funding from the AEC, he played an important role in the birth of the Indian space program. Bhabha was awarded the Adams Prize (1942) and Padma Bhushan (1954) and nominated for the Nobel Prize for Physics in 1951 and 1953–1956.

He died in the crash of Air India Flight 101 in 1966, at the age of 56. The mysterious circumstances of his death have led to the rise of several conspiracy theories claiming he was assassinated.

January 30, 1991 – John Bardeen, American physicist and engineer, Nobel Prize laureate passes away (born May 23, 1908). He is the only person to be awarded the Nobel Prize in Physics twice: first in 1956 with William Shockley and Walter Brattain for the invention of the transistor; and again in 1972 with Leon N. Cooper and John Robert Schrieffer for a fundamental theory of conventional superconductivity known as the BCS theory.

Born and raised in Wisconsin, Bardeen received a Ph.D. in physics from Princeton University. After serving in World War II, he was a researcher at Bell Labs and a professor at the University of Illinois. In 1990, Bardeen appeared on Life magazine's list of "100 Most Influential Americans of the Century."

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). Engelbart's Law, an observation that the intrinsic rate of human performance is exponential is named after him. . His pioneering work at the Augmentation Research Center culminated in the groundbreaking 1968 demonstrations known as "The Mother of All Demos." Despite encountering obstacles with funding and waning interest in his concepts later on, Engelbart persistently championed his vision through the Bootstrap Institute. Sadly, he passed away on 2nd July 2013.
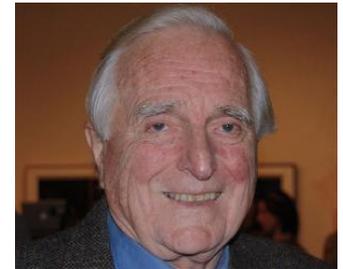
January 29, 1901 – Date of birth of Allen B. DuMont was an American electronics engineer, scientist, and inventor celebrated for his groundbreaking work in television technology. He enhanced the cathode ray tube for television receivers in 1931 and introduced the first commercially viable television set to the public in 1938. DuMont established the DuMont Television Network in 1946, the inaugural licensed television network, and was instrumental in the progress of television picture tubes, TV sets, and components. His contributions firmly positioned him as a trailblazer in the television industry. He passed away on 14th November 1965.

January 18, 1912 – Date of birth of Ivan Getting. He was a distinguished American physicist and electrical engineer recognized for his substantial achievements in the advancement of the Global Positioning System (GPS) in collaboration with Roger L. Easton and Bradford Parkinson. He held prominent leadership roles in research and development at esteemed institutions such as Harvard University, MIT Radiation Laboratory, Raytheon Corporation, and The Aerospace Corporation. Getting also made significant contributions to military technology by serving on various advisory boards and committees, leaving a lasting legacy in radar technology and national security.

January 25, 1878. Date of Birth of Ernst Alexanderson, a Swedish-American electrical engineer, made significant contributions to radio and television technology. He developed the Alexanderson alternator, a groundbreaking innovation in radio transmission in the early 20th century. Additionally, his creation of the amplidyne, a DC amplifier, was crucial for controlling anti-aircraft guns during World War II. Alexanderson's pioneering work in these areas established him as a key figure in advancing communication and military technology.

January 31, 1956. Date of Birth of Guido van Rossum. A well-known Dutch programmer, is famous for creating the Python programming language. He served as the "benevolent dictator for life" (BDFL) within the Python community until he voluntarily resigned in July 2018. Following his departure, he remained an active member of the Python Steering Council until 2019. Van Rossum's contributions to the programming world through Python continue to be highly influential.

January 7, 1970 – Birth of Krishna Bharat, a respected research scientist recognized for his significant contributions at Google Inc. He was instrumental in the creation of Google News, a platform that compiles news articles from a wide array of sources globally. Bharat has also been active in launching and offering guidance to startups focused on visual search and interest-based search engines that leverage Machine Learning technologies. Furthermore, he played a key role in setting up Google's Research and Development center in India and serving on the boards of esteemed journalism programs.

January 2, 1964. Date of Birth of David Braben, a well-known British video game developer and designer who founded Frontier Developments and serves as its President. He is celebrated for co-creating the popular Elite series of space trading video games in 1984. Braben is also a co-founder and trustee of the Raspberry Pi Foundation, a non-profit organization that launched an affordable computer for educational use in 2012. His career is marked by significant contributions to the gaming industry and a dedication to advancing technology in education.

January 10, 1938 – Date of Birth for Donald Knuth. An American computer scientist and mathematician. He is a professor emeritus at Stanford University. He is the 1974 recipient of the ACM Turing Award, informally considered the Nobel Prize of computer science. Knuth has been called the "father of the analysis of algorithms". Knuth is the author of the multi-volume work *"The Art of Computer Programming"*. He contributed to the development of the rigorous analysis of the computational complexity of algorithms and systematized formal mathematical techniques for it. In the process, he also popularized the asymptotic notation. In addition to fundamental contributions in several branches of theoretical computer science, Knuth is the creator of the TeX computer typesetting system, the related METAFONT font definition language and rendering system, and the Computer Modern family of typefaces.

As a writer and scholar, Knuth created the WEB and CWEB computer programming systems designed to encourage and facilitate literate programming and designed the MIX/MMIX instruction set architectures. He strongly opposes the granting of software patents and has expressed his opinion to the United States Patent and Trademark Office and European Patent Organization.

January 11, 1934: Birthdate of Tony Hoare, a distinguished British computer scientist recognized for his influential contributions in programming languages, algorithms, operating systems, formal verification, and concurrent computing. He was honored with the prestigious Turing Award in 1980 for his groundbreaking work in the field. Hoare is acknowledged for creating the quicksort algorithm and Hoare logic for verifying program correctness. Additionally, he introduced communicating sequential processes (CSP) for concurrency semantics and collaborated with Edsger Dijkstra on the dining philosophers problem. Hoare has held positions at the University of Oxford and Microsoft Research in Cambridge since 1977.

January 3, 1935: Date of birth of Richard Manning Karp, a highly regarded American computer scientist and computational theorist affiliated with the University of California, Berkeley. His significant contributions are centered around algorithm theory, with a focus on NP-completeness, combinatorial algorithms, and the utilization of probabilistic techniques in computer science. Karp has been honored with prestigious accolades including the Turing Award, The Benjamin Franklin Medal, and the Kyoto Prize for his impactful work in advancing the field through research and academic endeavors.

January 31, 1994: Birth of Vitalik Buterin, a Canadian computer programmer and co-founder of Ethereum. He has been involved in cryptocurrency since its early days, co-founding Bitcoin Magazine in 2011. In 2015, Buterin played a key role in deploying the Ethereum blockchain alongside other notable figures in the industry. With his expertise and contributions, Buterin has become a prominent figure in the world of decentralized finance and blockchain technology.
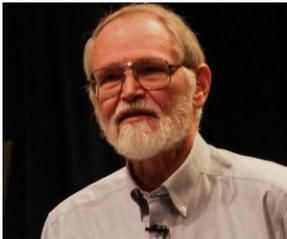
January 30, 1942: Birthday of Brian Kernighan, a prominent Canadian computer scientist known for his significant contributions in computer programming and software development. He played a key role in the creation of Unix alongside Ken Thompson and Dennis Ritchie while working at Bell Labs. Kernighan co-authored the influential book "The C Programming Language" with Ritchie and is also known for his work on Unix programs like ditroff, as well as co-authoring the AWK and AMPL programming languages. He has also made notable contributions to algorithm design, particularly in optimization problems like graph partitioning and the traveling salesman problem. Currently, Kernighan serves as a professor of computer science at Princeton University and has authored books on programming languages including "The Go Programming Language."

January 11, 1984, Birthday of Matt Mullenweg, who is a well-known American entrepreneur and web developer recognized for his creation of WordPress, a widely used content management system worldwide. He is also the founder of Automattic, a company that provides various products and services connected to WordPress. Mullenweg's innovations have transformed website development and management, enabling numerous individuals and businesses to establish an online presence with simplicity and efficiency. His visionary ideas and guidance have established him as a significant figure in the digital realm.

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, in 2024, we have featured many documentaries that helped shed more light on these luminaries and also explored the hidden side of their life stories.

We will also endeavor to republish an article from various publications in the same month of Wavelengths, featuring one or more of these luminaries. I urge any and all faculty of the STEM departments to share this with their students!

Also, like previous months in 2024, where we screened online scheduled documentaries featuring several of the folks mentioned in this column, we will repeat them ALL in 2025, as part of a growing series. Enjoy!

Sharan Kalwani
2022-2025 Chair, Southeastern Michigan Section,
Passionate Engineering History Buff/Aficionado

Member News!

The [IEEE Southeastern Michigan Section](#) is extremely proud and happy to welcome many senior members, who got upgraded (or elevated as we like to call it) to senior status. It is all part of our Membership Development on-going initiative to play a role in the professional lives of our members and support them in every which way possible. Congratulations to all. Do feel free to contact them for follow up.

Mohamad Berri & Sharan Kalwani.
Membership Development Committee

Steve Young:

Steve Young received his B.S. degree in electrical engineering from Stanford University in 2003; the M.S.E.S degree in mechanical engineering from the Naval Postgraduate School in Monterey, CA, USA, in 2006; and the Ph.D. in Applied Physics from the University of Michigan, Ann Arbor in 2016.

From 2003 to 2009, he served as an Instrumentation and Control Systems Engineer in the U.S. Navy Naval Reactors Program, Washington, D.C. Since 2016, he has been the President of Xondas, Inc., an electromagnetics research and consultancy company in Ann Arbor, MI. In 2018, he joined the Department of Electrical Engineering and Computer Science at the University of Michigan, Ann Arbor as a Postdoctoral Fellow and, later, Assistant Research Scientist. His current research interests include electromagnetic metasurfaces, dielectric structures, electrically small antennas, wireless power transfer, time-varying structures, and nonlinear electromagnetics. In 2024, he joined the SEM Chapter 4 (Trident) leadership as Vice Chair for Technical Activities for the Antennas and Propagation Society.

Chaithanya Ravulu:

Chaithanya Ravulu is a seasoned data engineer with a wealth of experience in building scalable, efficient, and innovative data solutions across industries. Having contributed to transformative projects at companies like Rocket Companies, Deloitte, and Citi Group, he has a proven track record of delivering impactful results in real-time analytics, data architecture, and AI-driven systems. Chaithanya is also a dedicated mentor, guiding junior team members and fostering collaboration to achieve long-term success.

In addition to his technical expertise, Chaithanya is deeply passionate about addressing mental health challenges through technology. With a keen interest in psychology, meditation, and analytical psychology, he is focused on developing solutions that empower individuals to overcome barriers like lack of motivation or communication challenges. By integrating AI and human-centered design, Chaithanya aims to create accessible tools that promote mental well-being and positive change.

Chandra Talluri:

Chandra Sekhar Talluri received the B.S. degree in Electrical & Electronics Engineering from GITAM University, Visakhapatnam, India in 2012, the M.S. degree in Telecommunications and Network Engineering from Southern Methodist University, Dallas, TX, USA in 2015 and the MBA from Indiana University, Bloomington, IN, USA in 2025. He is currently a Senior Software Engineer at General Motors, specializing in automotive software systems and data analytics. He has experience as Product Manager for Smart Cities and Smart Mobility initiatives at GM, where he led V2X technology innovation and implementation across vehicle programs. His wireless engineering experience includes roles at BlackBerry and General Motors, where he engineered system workflows for connected vehicles, validated connectivity functionalities for vehicle programs and conducted radio verification for BlackBerry Priv's market launch. His research interests include V2X communications, connected vehicle technologies, automotive data systems and smart mobility solutions, which granted him multiple patents and defensive publications.

Deepak Bhaskaran:

Deepak is currently a Senior Director of Engineering at Cisco, within the Duo Security Business Unit. His responsibilities span multiple critical areas, including market access (FedRAMP/ISMAP compliance and expanding into international markets), Site Reliability Engineering (SRE), and Quality Engineering. The Quality Engineering team at Duo encompasses test automation, performance engineering, PMO, and developer tooling. A core part of his role is mentoring and supporting his team to ensure they grow professionally, remain challenged, and have the resources to succeed. Hiring is a key focus for him, as he firmly believes that with the right people, anything is possible. He joined this team in 2016 as the first member, and it has since grown to a team of approximately 115 people, including 2 Directors, frontline managers, and a dedicated PMO team.

In addition to his role at Cisco, he serves on the board of AquilaTest.ai, an AI-driven codeless test automation and analytics platform. Their mission is to help software teams deliver high-quality products faster by providing actionable diagnostics, predictive intelligence, and prescriptive analytics. This enables engineering teams to deploy software with greater speed, confidence, and reduced manual effort. He lives in Ann Arbor with his wife, two school-age kids, and two dogs. Along with his kids, he trains in Muay Thai and Brazilian Jiu-Jitsu at a local gym. He also enjoys woodworking, specializing in scroll saw work and wood turning. Currently, he is also pursuing an evening MBA at the University of Michigan's Ross School of Business. He can be reached at: https://www.linkedin.com/in/deepakbhaskaran/ and would love to hear from folks.

Tanvi Nagarale:

Tanvi is an Electric Drive Controls Engineer with a proven track record in developing advanced motor control algorithms and power electronics solutions. Currently working at General Motors, she has expertise in designing innovative control systems. Her work has been instrumental in enhancing off-road vehicle performance, reducing costs, and improving reliability. Tanvi holds a Master's in Electrical Engineering and currently pursuing an MBA from Indiana University in strategy and leadership management.

With experience across leading organizations like BorgWarner, John Deere, and Hella India, Tanvi has contributed to various aspects of power electronics and motor control, including algorithm development, hardware calibration, and production-level integration. During graduate studies, she has served as a Graduate Teaching Assistant, mentoring students and enhancing their technical skills. Her achievements, including awards for innovation and patents, underscore her dedication to advancing technology in the automotive and energy sectors.

Aravinda Bommareddy:

As a Principal Materials Engineer at ZF Electronics & ADAS Global Headquarters in Farmington Hills, Aravinda specializes in hardware material selection, design, failure analysis, and testing procedures. His role involves assessing the environmental impact on ADAS (Advanced Driver Assistance System) camera functions. Leading cross-functional teams, he evaluates and validates new materials for electronic cameras, advising management on their applicability, effectiveness, and environmental testing impacts. Given the critical nature of safety cameras, his work ensures enhanced reliability for features like forward collision warning, automatic emergency braking, adaptive cruise control, pedestrian detection, traffic sign recognition, and lane-keeping assist.

With over 12+ years of experience in material processing, physical metallurgy, heat treatment, mechanical metallurgy, and electron microscopy, he possesses extensive expertise in laboratory test technology and material characterization techniques. His skills include guiding and mentoring others in writing lab work instructions for complex product and process investigations. His vision is to advance materials engineering for ADAS technologies, ensuring flawless functionality of autonomous vehicle components and contributing to the development of sustainable materials that reduce carbon footprints. His work is pivotal in shaping the future of autonomous driving, making transportation safer and more sustainable for future generations.

Abdullah Al Hadi:

Dr. Abdullah Al Hadi is a Technical Specialist for Power Electronics and Electric Machine Drives at CNH Industrial. He is the subject matter expert for high-voltage power components selection, requirement specifications, product development, and validation. Previously he was with Enginuity Power System as a Senior R&D Engineer for Power Electronics and Smart Energy Systems. From May 2021 to June 2022, he was with the SPARK Laboratory, Department of Electrical and Computer Engineering, University of Kentucky as a Postdoctoral Research Scholar. Before that, he was with the National Renewable Energy Laboratory (NREL) as a Post Graduate with a main research focus on power electronics-based microgrid control with blockchain technology. His expertise includes power electronics, motor drives, control systems, BEV, distributed energy resources, smart homes, and energy management systems.

Dr. Hadi received his Ph.D. in Sustainable Energy Systems Engineering from Texas A&M University, Kingsville in May 2020. He received his B.Sc. degree in Electrical and Electronic Engineering from the Ahsanullah University of Science and Technology, Dhaka, Bangladesh in 2011, and a dual M.Sc. degree in Renewable Energy Engineering, and Energy Engineering and Management from Universitat Politecnica de Catalunya, Barcelona, Spain and Instituto Superior Tecnico, Lisbon, Portugal respectively in 2012 and 2013. From 2014 to 2015, Dr. Hadi was with the Department of Electrical and Electronic Engineering (EEE), Prime University, Bangladesh as a faculty member where he also served as a program coordinator (EEE), and assistant proctor of the university. He is a senior member of IEEE, IEEE Power Electronics Society, IEEE Power and Energy Society, IET, SPIE, and ASEE. He serves as a guest editor for IMDP electronics and is a reviewer for IEEE journals and conferences.

Damodaran Murthy:

Damodaran Murthy comes with 14 years of extensive experience in embedded software development, specializing in Automotive ECUs and industrial products. He has a strong background in designing, developing, and optimizing embedded solutions for complex systems, including real-time applications, low-level driver development, and system integration. Currently, he serves as the Infotainment BSW Audio Lead at Stellantis (formerly FCA), where he has been instrumental in leading the development of audio software for next-generation infotainment systems.

In addition to his current role, Damodaran has worked with prominent automotive Tier 1 suppliers such as APTIV and Robert Bosch, where he contributed to the development of safety-critical embedded systems. His experience also includes industrial product development for UTC, delivered through L&T Technology Services, focusing on embedded software for control systems. Academically, Damodaran holds a Bachelor's degree in Electronics and Communication Engineering (ECE) and a Master's degree in VLSI Design and Embedded Systems from Visvesvaraya Technological University (VTU), India. His research interests include system-level embedded design, automotive software architectures.

Raghu Gurumurthy

Raghu is an Industrial Engineering and Manufacturing Operations leader based out of the Metro Detroit area, specializing in crisis management for the manufacturing sector. With over a decade of experience across industries such as automotive, medical devices, food & beverage, and building products, Raghu is adept at navigating high-stakes situations, characterizing manufacturing & supply chain risks, and developing strategies to ensure business continuity under pressure. Raghu earned his Bachelor of Science in Chemical Engineering from the University of Pune in 2011 and a Master of Science in Industrial Engineering from the University of Texas at Arlington in 2014. At Industrial Engineering Technologies (IET), Raghu progressed from Industrial Engineer to Vice President of Technical Services between 2015-2023, leading over 70 high-impact consulting projects across North America that delivered measurable outcomes across diverse industries.

In his current role as Director of North America Operations at Crossover Solutions, Raghu leads a team of over 100 associates across North America. His expertise in manufacturing crisis management includes minimizing operational disruptions, addressing systemic inefficiencies, and implementing long-term solutions to ensure stability and growth. Beyond his operational leadership, Raghu drives industry dialogue through his thought leadership as

a Fellow of the Institution of Engineering and Technology (IET) and a member of the Forbes Business Council. He also serves on the Global Supply Chain Advisory Council at the University of Toledo and the Leadership Advisory Council at Seton Hall University.

Additionally, Raghu proudly serves as a SCORE mentor in Southeast Michigan, where he leverages his expertise to guide and empower small business owners in their entrepreneurial journeys. Raghu can be reached at https://www.linkedin.com/in/raghugurumurthy/

Azad Prince Badyal

Azad Prince Badyal is an accomplished professional in data science and engineering, bringing over 13 years of experience across the power, automotive, and healthcare industries. His career is marked by leveraging AI and advanced data science techniques to optimize data engineering and analytics. With expertise in connected vehicle data (telemetry) and ADAS (driving assist technology) at Ford Motor Company, Azad has made impactful contributions to enhancing vehicle performance, safety, and reliability.At General Electric, Azad demonstrated his ability to create innovative energy solutions by designing control systems that improved operational efficiency and safety while delivering actionable, data-driven insights.

In the healthcare sector, Azad has been instrumental in modernizing systems for the Centers for Medicare & Medicaid Services (CMS), with a focus on elevating data quality and operational efficiency.He earned a Master of Science in Data Science from the University of Michigan, USA, and a bachelor's degree from the National Institute of Technology, Jalandhar, India. Azad is deeply committed to utilizing cutting-edge technology to address complex challenges and drive innovation across diverse industries

Asadullah Khalid

Dr. Asadullah Khalid received his M.S. degree in electrical engineering from Illinois Institute of Technology, and his Ph.D. in electrical and computer engineering from Florida International University (FIU). He has been working in the consumer electronics and automotive industries for over nine years in different capacities. He is currently a Lead Battery Controls Engineer at Ford Motor Company. His research interests include battery management systems, microgrids, applied machine learning, and energy storage cybersecurity. He has published over 20 articles in various conferences and journals and has multiple registered U.S. patents.

Josh Siegel:

Josh Siegel is an Assistant Professor of Computer Science and Engineering at Michigan State University, where he leads the interdisciplinary DeepTech Lab. His research focuses on using emerging technologies to address real-world challenges, with applications in vibroacoustic diagnostics, connected and autonomous vehicles, and advanced manufacturing. Before joining MSU, Josh earned S.B., S.M., and Ph.D. degrees in Mechanical Engineering from MIT, where he continues to teach programs on innovation and emerging technology. He has published over 100 articles and received honors such as the Lemelson-MIT Student Prize and the SAE International Ralph Teetor Educator's Award (to be presented in April 2025).

Outside academia, Josh founded three automotive startups, is launching an agricultural diagnostics company, and consults globally with businesses and governments on the adoption of DeepTech. A Detroit-area native, his passion for engineering began in 2001 through Lawrence Technological University's Robofest program. You can connect with Josh at https://www.linkedin.com/in/joshesiegel

Robofest Report

Robofest 2024 Summary

Robofest is a world-wide robotics program for students in 4th - 12th grade, sponsored by IEEE SEM. Student teams design, construct, and program their autonomous robots to compete for trophies in 8 competition categories. A total of **2,460** students in **855** teams from 21 countries participated in 2023-2024 academic year. Participated countries are: Algeria, Canada, China, Egypt, Ethiopia, Ghana, Greece, Hong Kong, India, Jordan, Kenya, Libya, Macau, Mexico, Pakistan, Romania, Sierra Leone, Saudi Arabia, South Korea, Taiwan, and USA. US students represented 8 States: Alabama, California, Florida, Indiana, Minnesota, Michigan, Ohio, and Texas. Figure 2 shows the number of students and teams participating since 2000. The cumulative number of registered students in our RMS since 2000 has reached **36,805**.

(Figure 1) Robofest 2024 World Championship Participants
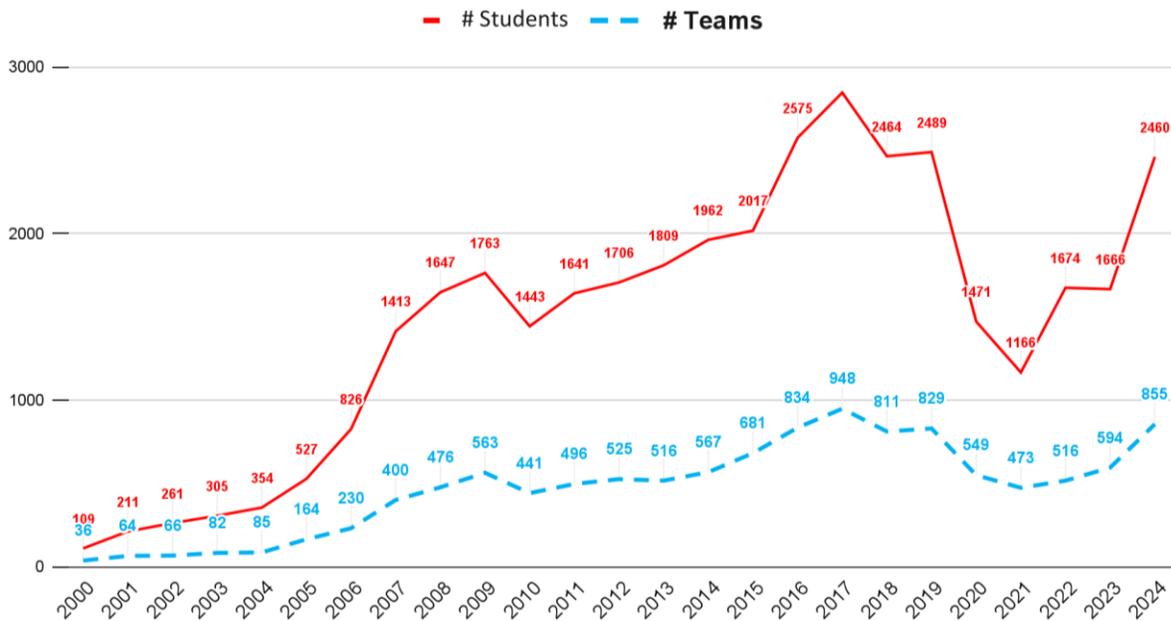
(Figure 2) Number of Robofest student participants and teams since 2000

Robofest offers a variety of categories in which to compete. Figure 3 shows percentages of teams by competition category for 2024. One of the unique features of Robofest is that it is completely open and allows the use of *any* robotics platform. Figure 4 shows the data on robotics kits used by teams. Robofest remains focused on learning STEM through computer programming/coding and testing. Allowing students to use whichever programming language they prefer is one of the unique features of Robofest. Figure 5 shows the data on programming languages used by teams. Robofest provides opportunities to learn professional programming languages and helps prepare our students for future professional career paths. Robofest students continue to show advanced technical skills and improvements in their STEM skills. This is possible because of the many dedicated coaches and technical mentors including IEEE members. Each participant of a Robofest World Championship event received a medal (see Figure 1 and 6) sponsored by IEEE SEM. Several IEEE Members participated in the season as Technical Committee Members, Judges, and/or mentors including: Jonathan Berent, Victor Manske, George Pappas, Ben Gonzales, Kevin Taylor, Sharan Kalwani, Eric Martinson, Hao Jiang, Josh Siegel, and CJ Chung. (See Figure 7)
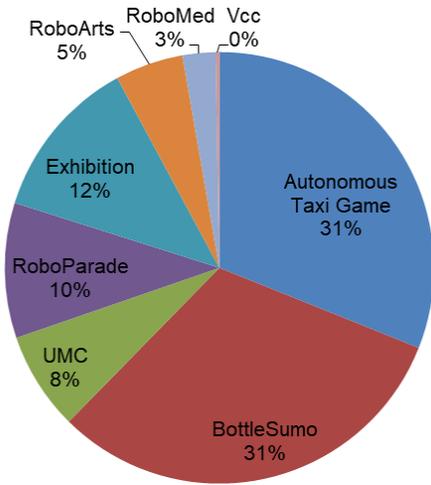
(Figure 3) % of Teams per Competition Category
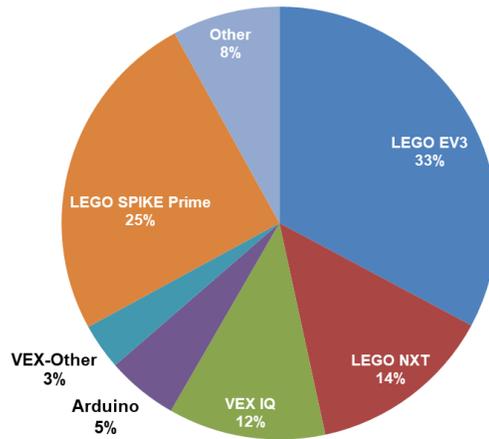
(Figure 4) % of robotics kits used by teams i
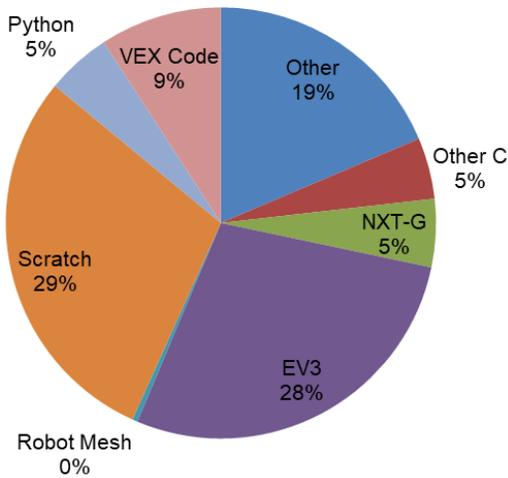
(Figure 5) % of programming languages used

(Figure 6) IEEE Sponsored Medals

(Figure 7) IEEE members who served as Judges/coaches/mentors at the World Championship.

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 https://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 WORK space for online chat, discussions, connecting with SECTION specific IEEE activities, besides geared/focused towards our local Southeastern Michigan officers.

vTools Meetings:
https://vtools.ieee.org/
Select "Events" on the right hand side and then "manage Events" and then "Schedule" 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

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/eaa/eaa-chapters/find-an-eaa-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.

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 Society	

Chapter: 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 'Codes' (Shown above between brackets '()' for faster access in the vTools system applications.
Example: Using STB94911 in the vTools search window goes directly to the Student Branch.
Faster than typing 'University of Michigan-Dearborn'. This works for all Affinity Groups, Technical Chapters and Student Branches.

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

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 (2022-2025)
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.

Documentary Grace Hopper

IEEE Southeastern Michigan
Presents a Triple Video Collection of Short 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)

Quick Summary

- **When:**
Date: January 3rd , 2025
Time: 05:30 – 7:00 PM
(EST/EDT)

- **Where:**
Online (Link to be shared only after you have a confirmed registration)

- **Audience: OPEN to ALL***

Sponsored by
IEEE
Southeastern
Michigan
Computer Society
Technical Chapter

*Pre-Registration Required!

https://events.vtools.ieee.org/m/456039

IEEE SOUTHEASTERN MICHIGAN – WAVELENGTHS

Non-IEEE Events

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

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/eaa/eaa-chapters/find-an-eaa-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 current arrangement of communications links designed to provide inter-unit coordination and collaboration.

The SEM Executive Committee meets in a teleconference each month, 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: **https://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: **https://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 <u>complete SEM Organization Chart</u>, in PDF format, it available soon at <u>https://r4.ieee.org/sem/</u> . In the meantime, you may use the diagram below (recently refreshed!)

2025 Section OrgChart

KEY:

Grey == Elected

Light Blue == Elected for the *next term*

Green == Appointed by Chair

White == Ex Officio/ by Appointment

Section Chair — Sharan Kalwani
Section Secretary — Christopher Johnson
Section Advisor — *Mohamad Berri*
Section Vice-Chair — Aneesh Mathai
Past Chair — *David Mindham*

Section Treasurer — Ramesh S
Technical Activities (TAC) — Jeff Mosley
Student Activities (SAC) — Mike Anthony & Hafeez Jimoh
Communications (CCOM) — *Christopher Johnson*
Membership Development (MD) — Mohamad Berri
Professional Activities for Engineers (PACE) — Sharan Kalwani

Past Treasurer — *Kimball williams*
Finance Committee — Subra Ganesan

Section Student Representative — *Open*
Student Branches
Student Branch Faculty Counselors

Newsletter — Sharan Kalwani
SOCIAL Media — *Naresh Ravuri*
Web — Scott Lytle

Secretary — *Open*
Vice Chair — Sharan Kalwani

Government Relations — David Mindham
Affiliate Liaison — *Open*
Nearby Sections — *Open*

Version: 2025-01-01

2025 IEEE Southeastern Michigan Student Branches

Organization chart

Section Student *Rep* OPEN

Subra Ganesan — Faculty Counselor
Ali Irshayyad — Chair Oakland University
Wen Li — Faculty Counselor
Kosta S — Chair MSU Student Branch
Robert Hipple — Faculty Counselor
Ali E — Faculty Counselor
Charles Remesz — Chair EMU
Gozde — Faculty Counselor
Olivia Magiera — WSU Student Branch
Laura Balzano — Faculty Counselor
Mitchell Bloch — Chair UM-Ann Arbor
Ben Tollis — Chair LTU Student Branch
Ali Hassan — Chair UM-Dearborn
OPEN — Chair UDM Student Branch
Nabih Jaber — Faculty Counselor
Alireza Mohammad — Faculty counselor

Version: 2025-01-01

ExCom 2025 Schedule

<u>NOTE</u>: All SEM members are invited to attend ALL ExCom (<u>Ex</u>ecutive <u>C</u>ommittee) meetings:

Below is the 2025 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 2025 meetings. Or link your personal calendar to the SEM Web calendar.

Section Administrative Committee (ExCom) Meeting Schedule for 2025: (clickable links, SO YOU CAN EASILY REGISTER)

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

ExCom Meeting (all clickable links)	*Date & Start Time, Duration*
SEM Section ExCom Monthly Meeting (virtual) For JANUARY 2025	2025-01-09; 6:30 PM; 1 hour
SEM Section ExCom Monthly Meeting (virtual) For FEBRUARY 2025	2025-02-13; 6:30 PM; 1 hour
SEM Section ExCom Monthly Meeting (IN PERSON) For MARCH 2025	**2025-03-13; 6:30 PM; 2 hours**
SEM Section ExCom Monthly Meeting (virtual) For APRIL 2025	2025-04-10; 6:30 PM; 1 hour
SEM Section ExCom Monthly Meeting (virtual) For MAY 2025	2025-05-08; 6:30 PM; 1 hour
SEM Section ExCom Monthly Meeting (IN PERSON) For JUNE 2025	**2025-06-12; 6:30 PM; 2 hours**
SEM Section ExCom Monthly Meeting (virtual) For JULY 2025	2025-07-10; 6:30 PM; 1 hour
SEM Section ExCom Monthly Meeting (virtual) For AUGUST 2025	2025-08-14; 6:30 PM; 1 hour
SEM Section ExCom Monthly Meeting (IN PERSON) For SEPTEMBER 2025	**2025-09-11; 6:30 PM; 2 hours**
SEM Section ExCom Monthly Meeting (virtual) For OCTOBER 2025	2025-10-09; 6:30 PM; 1 hour
SEM Section ExCom Monthly Meeting (virtual) For NOVEMBER 2025	2025-11-13; 6:30 PM; 1 hour

Christopher Johnson (Secretary)
Email: secretary@ieee-sem.org

ExCom 2025 Calendar

Section Administrative Committee (ExCom) Meeting Schedule for 2025 (At a Glance), you can print this page and pin it up anywhere easily visible……

🔍 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 ❓
excom	R40035 - Southeastern Michigan Section	⊖	Upcoming ⌄

Search | Download

Showing 11 of 11 upcoming events, based on search criteria.

Title	Date	Host	Location	Reported On	Options
☑ SEM Section ExCom Monthly Meeting (virtual) For JANUARY 2025	09 Jan 2025 06:30 PM	R40035			View | Manage
☑ SEM Section ExCom Monthly Meeting (virtual) For FEBRUARY 2025	13 Feb 2025 06:30 PM	R40035			View | Manage
☑ SEM Section ExCom Monthly Meeting (IN PERSON) For MARCH 2025	13 Mar 2025 06:30 PM	R40035			View | Manage
☑ SEM Section ExCom Monthly Meeting (virtual) For APRIL 2025	10 Apr 2025 06:30 PM	R40035			View | Manage
☑ SEM Section ExCom Monthly Meeting (virtual) For MAY 2025	08 May 2025 06:30 PM	R40035			View | Manage
☑ SEM Section ExCom Monthly Meeting (IN PERSON) For JUNE 2025	12 Jun 2025 06:30 PM	R40035			View | Manage
☑ SEM Section ExCom Monthly Meeting (virtual) For JULY 2025	10 Jul 2025 06:30 PM	R40035			View | Manage
☑ SEM Section ExCom Monthly Meeting (virtual) For AUGUST 2025	14 Aug 2025 06:30 PM	R40035			View | Manage
☑ SEM Section ExCom Monthly Meeting (IN PERSON) For SEPTEMBER 2025	11 Sep 2025 06:30 PM	R40035			View | Manage
☑ SEM Section ExCom Monthly Meeting (virtual) For OCTOBER 2025	09 Oct 2025 06:30 AM	R40035			View | Manage
☑ SEM Section ExCom Monthly Meeting (virtual) For NOVEMBER 2025	13 Nov 2025 06:30 PM	R40035			View | Manage

Editor's Corner

Previous editions in this series may be found on the IEEE SEM website at: https://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
sharan.kalwani@ieee.org
k.williams@ieee.org
cgjohnson@ieee.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,
2018~2019~2020~2021~2022-2023-2025

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	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	ESD - GOLD
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 Annual Publication Plan for Personal Profiles

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

IEEE Southeastern Michigan

Electrical and Electronic Engineers Creating Our Future

Web & Social Sites

Southeastern Michigan Section Website
https://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 "[f]" button under the top row)
https://www.facebook.com/groups/ieeesemich

SEM LinkedIn Page
(Select the "[in]" button under the top row)
https://www.linkedin.com/groups/1766687/

SEM Twitter Account (new)
(Select the "[twitter]" button under the top row)
https://www.twitter.com/ieeesemich

SEM Collabratec *Community* Page
https://ieee-collabratec.ieee.org/app/section/R40035/IEEE-Southeastern-Michigan-Section

SEM Collabratec *Workspace* Page
https://ieee-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 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
Jeffery Mosley

Information Mgmt. Coordinator
Kimball Williams

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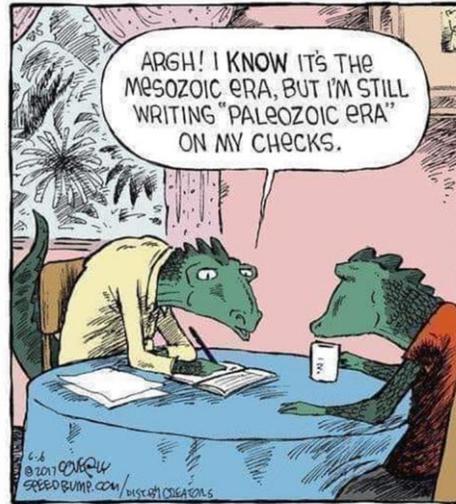
Leadership Meetings

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

SEM Executive Committee Face-to-Face Meetings:
- 1/Qtr. 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
  https://r4.ieee.org/sem/
  (Select the "SEM Calendar" button in the top row.)

- Registration for all at:
  https://bit.ly/sem-upcoming