Wavelengths

Volume 63 – Issue 09

Contents

Upcoming Events

We have several events coming up this month, all are listed below, FYI.
Note: All times are EST/EDT. If any events are missed do kindly bring them to the attention of wavelengths@ieee-sem.org. Enjoy!
You can also use this bookmark to view All of the links at a single glance
http://bit.ly/sem-upcoming

Event	Date	Time
Distinguished Lecture: Solving Global Grand Challenges with High Performance Data Analytics	05 Sep 2023	1800 Hrs.
IEEE PES Distinguished Lecture: "The Energy Transition in Canada and Ontario"	08 Sep 2023	1200 Hrs.
Documentary Night: A Year After JWST	08 Sep 2023	1650 Hrs.
Cybersecurity Challenges and Future Research Opportunities	12 Sep 2023	1800 Hrs.
Ch8: AdCom Teleconference	14 Sep 2023	1100 Hrs.
Section ExCom Monthly Meeting (HYBRID) For SEPTEMBER 2023	14 Sep 2023	1830 Hrs.
Stop Killing Accountability	14 Sep 2023	1730 Hrs.
Distinguished Lecture: Signal Processing for Vehicular Joint Radar-Communications	15 Sep 2023	1155 Hrs.
MBSE with/out Simulation: State of the Art and Way Forward	19 Sep 2023	1800 Hrs.
Efficient and Robust AI Circuits and System (AI-CAS) through Cross-Layer Optimization	21 Sep 2023	1930 Hrs.
Distinguished Speaker Talk: Toward a Discipline of Cyber Security: Some Parallels with the Development of Software Engineering Education	26 Sep 2023	1800 Hrs.

Chair's Column

The month of September –
We have a ton of activities.
To start off we have 4 **Distinguished speakers** – all are virtual and a great opportunity for undergraduate, graduate and researchers to make themselves up to date with state-of-the-art stuff. Posters are in this Wavelengths as well as on the vtools. You can find all the upcoming events using the short URL link: **https://bit.ly/sem-upcoming**

Also, the Computer Society Technical Chapter is doing the 21st edition of their **Embedded Systems Workshop (ESW2023).** This year it will be in person and scheduled for October 28th. Look for their event on the section website or try https://events.vtools.ieee.org/m/371793

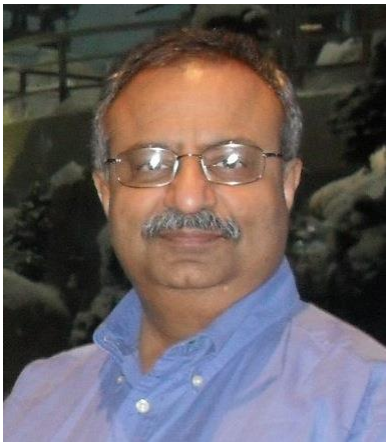
The major event coming up soon is the **Section's 60th Anniversary**. Yes, it has been that long, but distinguished. The event will be held on November 4th and we have a very well laid program for you and your spouse and family members to join us. Look for the flyer on **page 28** and announcements in all the media we have access to, as well as this newsletter, website, Collabratec, social media channels and vtools.

We continue to celebrate all our members who recently got elevated to senior status. Look for their brief profiles elsewhere in this edition as well as all online forums we participate in.

Lest I forget – the Sections Fall Conference is coming up and will take place in person at the Kellogg Center hotel in Lansing near MSU. A 'save the date' was published last month and more details are forthcoming.

Remember – every little bit helps, and the Section is here to help!

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



Sharan Kalwani
Via email: chair@ieee-sem.org
Section members are encouraged to engage using <u>any</u> of these online platforms:

Technical Activities Report

2023 IEEE SE Michigan Section Geo-unit Status (Till Aug 28th)

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	0	0	0	0	4	0	Consultants Network	0	4
LIFE	0	0	0	0	5	0	Life Members	3	5
WIE	25	15	1	6	2	0	Women In Engineering	1	9
YP	0	0	0	2	0	0	Young Professionals	0	2
1	0	0	0	2	0	0	Circuits & Systems, Signal Proc., Info Th.	0	2
2	24	7	4	0	0	0	Vehicular Technology	0	4
3	12	0	1	0	0	0	Aerospace & Elec. Sys., Communications	0	1
4	40	27	3	0	0	0	Trident (Ant, Elect Dev., uWave, Photo)	0	3
5	29	8	16	7	1	0	Computers	0	24
6	107	45	3	0	0	0	Geoscience & Remote Sensing	0	3
7	170	56	4	4	0	0	Power Engineering, Industrial App.	0	8
8	55	27	10	7	4	0	Electromagnetic Compatibility (EMC)	1	21
9	99	43	1	0	0	0	Power Electronics, Industrial Electronics	0	1
10	5	0	2	2	0	0	Engineering Management	0	4
11	0	0	0	1	0	0	Eng. in Medicine & Biology	0	1
12	17	1	2	1	0	0	Control Systems	0	3
13	18	1	28	8	0	0	Education	0	36
14	34	30	2	0	1	1	Robotics & Automation	0	4
15	40	27	3	0	0	0	Nuclear Plasma Science Society	0	3
16	0	0	0	1	0	0	Computational Intelligence / Sys.Man.Cyber.	0	1
17	24	3	2	0	0	0	Nano Technology Council	0	2
SEM	57	20	5	37	2	0	SEM (Section)	6	44
	754	309	87	78	19	1	NOTE: Highlight Green = Active	11	185
		41%					NOTE: Highlight clear = Concern		

Chapter and Affinity group leaders please reach out to the TAcom for any assistance. Chapter and Affinity group members if you have suggestions or requests to host or co-host technical meetings, please contact me via the email below. Your TAcom plans to conduct a survey of Geo-unit and committee leaders to elicit needs and desires to better engage our SEM membership. The TAcom also plans to offer career focused webinars and talks to equip our membership for seeking and or changing employment. These events are to be open to the entire SEM membership.

Your TAcom plans to continue contacting chapters and groups needing assistance in meeting IEEE and SEM Section goals for encouraging member participation and discussions related to the vast amounts of technical and engineering challenges facing our world.

V/r

Jeffery V. Mosley
TAcom Chairman
jvmosley@ieee.org

This Month in September

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

Ernst Weber; Born 6 Sep 1901; Died 15 Feb 1996 at age 94.
Austrian-American electrical engineer who contributed to the development of microwave technology, applied in radar and communications systems. During WW 2, he led researchers solving the problems of accurately measuring very high frequency microwaves, essential for the calibration of radar. (This involved learning how to coat glass tubes with a very thin layer of conducting metal, which Weber derived from the ancient skill of decorating chinaware with gold and silver, followed by success using a mixture of platinum and palladium.). The team created other designs and production techniques that helped the overall development of radar during the war. His expertise later guided the growth of the Polytechnic Institute in New York City.

David Packard; Born 7 Sep 1912; Died 26 Mar 1996 at age 83.
American entrepreneur and electrical engineer who co-founded the Hewlett-Packard Co., a leading manufacturer of computers, computer printers, and analytic and measuring equipment. In 1939, he formed a partnership known as Hewlett-Packard Company with William R. Hewlett, a friend and Stanford classmate. HP's first product was a resistance-capacitance audio oscillator based on a design developed by Hewlett when he was in graduate school. The company began with $538 in initial capital, and its first production facility was a small garage in Palo Alto.

Edward Johnson; Died 9 Sep 1917 at age 71 (born 4 Jan 1846).
Edward Hibberd Johnson was an American electrical engineer and inventor who spent many years in various business projects with Thomas Edison, including as vice-president of the Edison Electric Light Company. They met when Johnson, as manager of the Automatic Telegraph Company, hired the 24-year-old Thomas Edison. As Edison's talent as an inventor propelled him into developing his invention laboratory and commercial enterprises, Johnson became his business executive and eventually president of Edison Electric Illuminating Co. of New York (organized 17 Dec 1880) which later became today's Con Edison. Johnson created the first electric lights on a Christmas tree on 22 Dec 1882, which he displayed in the window of his New York home. The hand-wired string of bulbs had been made for him, with 80 walnut-sized lamps glowing in equal numbers of red, white and blue light.

Harvey Fletcher; Born 11 Sep 1884; Died 23 Jul 1981 at age 96.
American acoustical engineer who was the first to demonstrate stereophonic sound (1934). He was a trail blazing investigator of the nature of speech and hearing, noted for his contributions in acoustics, electrical engineering, speech, medicine, music, atomic physics, sound pictures, and education. He guided the development of the Western Electric Hearing Aid, the first such device to use vacuum tubes. He developed a group survey method using recorded sound of decreasing volume which has wide acceptance in schools throughout the nation.

Alexander Meissner; Born 14 Sep 1883; Died 3 Jan 1958 at age 74.
Austrian engineer whose work in antenna design, amplification, and detection advanced the development of radio telegraphy. In 1907 he joined the Telefunken Company of Berlin, where he conducted research on radio problems. He improved the design of antennas for transmitting at long wavelengths, devised new vacuum-tube circuits and amplification systems, and developed the heterodyne principle for radio reception. In 1911 Meissner designed the first rotary radio beacon to aid in the navigation of the Zeppelin airships. In 1913 he was the first to amplify high-frequency radio signals by using feedback in a vacuum triode; this principle made it possible to build radio receivers more sensitive than any earlier type.

Sir Arthur Percy Morris Fleming; Died 14 Sep 1960 at age 79 (born 16 Jan 1881).
English engineer who was a major figure in developing techniques for manufacturing radar components. During WW 1, Fleming made important advances in submarine-detection gear. In 1920, as a pioneer in the development of radio, he established in Manchester the second British transmitting station to broadcast programs on a daily basis. His work on demountable, high-power thermionic tubes made it possible to establish radar stations in Great Britain by the time WW 2 began in 1939.

Georges Leclanche; Died 14 Sep 1882 (born 1839).
French engineer who invented the wet cell Leclanché battery (1866), ancestor of the familiar carbon-zinc dry cell batteries used to power portable electric lights and electronic devices. His wet cell, provided an e.m.f. of about 1.5 volts. A porous pot containing manganese dioxide and a carbon rod as current collector was immersed in an electrolyte of ammonium chloride solution with a negative terminal of zinc metal. From 1867, Leclanché gave full-time attention to his invention, which was adopted the following year by the Belgian telegraph service. He opened a factory to manufacture the battery. In

1881, J.A. Thiebaut had the idea of packing the chemicals in a zinc cup. Carl Gassner made the first commercially successful “dry” cell.

Oswald Garrison Villard; Born 17 Sep 1916; died 7 Jan 2004 at age 87.
American electronics engineer who developed over-the-horizon radar (a way to detect objects out of direct sight by bouncing radar off the ionosphere, an electrically charged layer in the upper atmosphere) so radar could peer around the Earth's curvature to detect aircraft and missiles thousands of miles away. His interest in electricity began with a copy of Harper's Electricity Book for Boys. At age 12, he put together a radio from a kit. During WW 2, he researched countermeasures to protect Allied forces against enemy radio and radar devices. He made pioneering studies of radar jamming. In 1947, he designed a simplified voice transmitter permitting two-way communication on a single radio channel, such as a telephone conversation.

William Playfair; Born 22 Sep 1759; died 11 Feb 1823 at age 63.
Scottish engineer and economist who pioneered the graphical representation of statistics, creating the line graph, bar graph and pie chart, though his name is little known. His inventions and patents included metal-working machines, the mass-production of silver-plated spoons, improvements to agricultural implements, and modification of the bows to ships to improve speed. He had gained experience as apprentice to Andrew Meikle (inventor of the threshing machine) and working with James Watt and Matthew Boulton (manufacturers of steam engines). Playfair’s book Commercial and Political Atlas (1786), which introduced his graphical display methods, was the first major work to use statistical graphs.

Robert Bosch; Born 23 Sep 1861; died 9 Mar 1942 at age 80.
German engineer and industrialist who was responsible for the invention of the spark plug and magneto for automobiles and whose firm produced a wide range of precision machines and electrical equipment in plants throughout the world.

Seymour R. Cray; Born 28 Sep 1925; died 5 Oct 1996 at age 71.
American electronics engineer who pioneered the use of transistors in computers and later developed massive supercomputers to run business and government information networks. He was the preeminent designer of the large, high-speed computers known as supercomputers. { Editor’s Note:” I actually met him on the second day of getting hired job at Cray Research Inc in Minnesota – 1988 }

Nils Bohlin; Died 26 Sep 2002 at age 82 (born 17 Jul 1920).
Swedish engineer who invented the familiar three-point lap and shoulder seatbelt which is considered one of the most important innovations in automobile safety. Bohlin left the aircraft industry, where he worked on jet ejector seats, including restraints, and joined AB Volvo in 1958 as safety engineer, where he invented and patented this device. In Aug 1959, Volvo was the first car manufacturer to introduce the three-point seat belt in their cars. They made this design freely available to other car manufacturers to save more lives. Bohlin holds several patents related to automotive and aviation design. After retiring from Volvo in 1985, he continued to give lectures and present papers relating to automotive restraint issues.

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.

Sharan Kalwani
Vice-Chair, Chapter 5 (Computer Society), Chair, Chapter 13 (Education Society) and PACE
2021-2023 Chair, Southeastern Michigan Section
Passionate Engineering History Buff/Aficionado

Elections Again!

Yes, I know it seems like we just had an election at the end of 2022, and we did. However, we will begin the next phase of the election cycle with Nominations for ballot for officers in September. You know that we will need your recommendations of who you want see on the ballots for your Section, Chapter or Affinity Group.

At the end of August we launched the 'survey' form to request your input about who you would like to see running your Geo-unit (Chapter, Affinity Group), and the Section executive committee.

Which is 'my' Geo-unit?
If you are a member of a technical society, check the latest Wavelengths newsletter and look for Sharan's "ORG UNITS cheat sheet", which in this issue is on page **20**. That page lists all our Chapters along with which technical society sponsors each. In a few, there is more than one sponsor. We call these Joint Chapters. Be sure to read all the listing to see just which Chapter matches up with your membership in the technical side of the IEEE 'house'. For the Affinity Groups, that should be self-evident from your membership. If not, see below for a more detailed description.

Can anyone play?
Well, yes, and no. There are some conditions:
For Section office, the candidate need only be a member in good standing, and resident in the Section.

For a Technical Chapter, the person must also be a member of at least one of the technical societies sponsoring the Chapter. In a Joint Chapter (more than one technical Society sponsors a 'joint' Chapter) the potential officer need only be a member of one of the sponsoring Societies.
For an Affinity Group, some other conditions may apply:
For Consultants Network for example, the person must have joined the Consultants.
This is very much like the Chapter requirement.

The Women in Engineering (WIE) also only requires membership in the WIE.
(…But, doesn't the WIE require a member to be a woman?)
No! Anyone can join the Women in Engineering. For example, I have been a member of the WIE since I joined the IEEE over 40 years ago. I also spent one year as Chair of the WIE Affinity Group in our Section. The only requirement is an awareness of just how important women are in our profession, how much they bring to mixed development groups, and a willingness to help advance their cause.

Young professionals is another matter entirely. To be an officer in the YP requires that the candidate be within 15 years of the date of his or her first degree. After that, they are no longer eligible to serve in a YP officer position.

Life Members is also limited by a temporal factor. To become a Life Member requires that your years as a member of IEEE plus your chronological age total to 100 or more. Then you automatically become a Life Member. That automatically makes you eligible to serve as an officer in a LM group.

Nominations:
Take a look at the Geo-unit Health report from the Technical Activities Committee on page **3**. How are the current officers running your Chapter or Affinity Group? Are they meeting regularly to discuss the status and direction of operation of your Geo-unit? Are they holding technically relevant meetings for the general Chapter members?
Do they regularly let their members know what is going on in their Chapter, with eNotices, emails, copies of minutes of administrative meetings, articles in the newsletter? If they hold virtual or face to face meetings so you have a chance to get to know them?

If not, perhaps someone else might be able to do a better job. Remember, officers are supposed to be running the organization for the 'Benefit of the Members', not for the benefit of the officers or to be able to list an IEEE officer position on their resume' or CV. Consider that when you nominate someone for election.

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Say Anything

When I led leadership development training for a large mutual fund company we offered a lot of training focused on helping people have hard conversations. Over time I realized that despite that I'd bought and offered the best training programs I could find, the training wasn't helping. Managers didn't give enough feedback, and when they did give feedback, employees were often left confused, wondering what they needed to do differently.

I decided that what was missing was the conversation before the crucial conversation. It wasn't that managers didn't know what they wanted to say; many managers felt they couldn't say what they wanted to say. There wasn't sufficient safety or permission for giving feedback, so managers said little or delivered messages that were so vague, employees were left wondering if there was a problem.

If you're struggling with giving feedback, I doubt it's the message that's the challenge. The distinction between being able to tell the truth (as you see it) and saying nothing, is the quality of your relationship.

Think about the people – personal and professional – who can say anything to you. These are the people who can tell you the person you're dating is wrong for you, that a piece of clothing is not flattering, or that you dropped the ball. You may not enjoy getting the feedback, but you're able to hear what they have to say and take it in, because you know they care about you and have your best interests at heart. You trust their motives. When you trust people's motives, they can say anything to you. When you don't trust people's motives, there is little they can say.

If you're struggling to give feedback, evaluate your relationship by asking these questions:

1. Does this person trust me?
2. Does this person know that I have their back under any circumstances?

If the answer to either of the questions is no, it's not giving feedback you're struggling with, it's the quality of your relationship. Work on building trust with this person and you'll be able to say whatever you feel you need to say.

Here are four steps to building trusting relationships:

1. Ask questions to get to know people better than you know them now.
2. Tell people you want them to succeed and demonstrate that by being supportive of their efforts.
3. Set the expectation that you will give both positive and upgrade feedback as events happen, because you want the person to be successful.
4. When you deliver feedback, be extremely specific. Feedback that is specific will be received much better than vague feedback, which is typically judgmental.

When people know that you respect and support them, you have a great deal of freedom to speak up. When people don't trust your motives, giving feedback is almost impossible. The recipient will become defensive and dismiss whatever you say, rationalizing that you don't like them.

Worry less about giving feedback – for now. Instead, build trust. Get to know people better, then work on giving feedback.

***Shari Harley** is the founder and President of Candid Culture, a Denver-based training firm that is bringing candor back to the workplace, making it easier to give feedback at work. Shari is the author of the business communication book How to Say Anything to Anyone: A Guide to Building Business Relationships that Really Work. She is a keynote speaker at conferences and does training throughout the U.S. Learn more about Shari Harley and Candid Culture's training programs at www.candidculture.com.*

Grand Challenges Distinguished Speaker Talk

IEEE Southeastern Michigan

Presents a Distinguished Speaker Talk on

Solving Global Grand Challenges with High Performance Data Analytics

IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

Data science aims to solve grand global challenges such as: detecting and preventing disease in human populations; revealing community structure in large social networks; protecting our elections from cyber-threats and improving the resilience of the electric power grid. In this talk, the speaker will discuss the opportunities and challenges in massive data science for applications in social sciences, physical sciences, and engineering.

Speaker Bio:
David A. Bader is a Distinguished Professor and founder of the Department of Data Science and inaugural Director of the Institute for Data Science at New Jersey Institute of Technology. Prior to this, he served as founding Professor and Chair of the School of Computational Science and Engineering, College of Computing, at Georgia Institute of Technology. Dr. Bader is a Fellow of the IEEE, ACM, AAAS, and SIAM; a recipient of the IEEE Sidney Fernbach Award; and the 2022 Innovation Hall of Fame inductee of the University of Maryland's A. James Clark School of Engineering

Quick Summary

- **When:**
  Date: Sep 5, 2023
  Time: 06:00 – 7:00 PM (EST/EDT)
- **Where:**
  ONLINE/Virtual via WEBEX
- **Audience: OPEN to ALL**

Sponsored by IEEE Southeastern Michigan Education Society & Computer Society Technical Chapters

***Pre-Registration Required!**

https://events.vtools.ieee.org/m/368258

IEEE Education Society

IEEE COMPUTER SOCIETY

IEEE Southeastern Michigan Section

IEEE Advancing Technology for Humanity

Member News

This month we continue to feature several of our colleagues who have achieved senior member status.

CONGRATULATIONS to all (Okay let me name them: Prabhjot Kaur, Tejas Kumar Patil, Manish Ramaswamy, Ravindran Ratheesh and Laura Wojcik!

Ms Prabhjot Kaur:

Prabhjot Kaur is currently working as an Automated Driving Lead Software Platform Engineer at General Motors (GM). She has over 10 years of experience working in the automotive industry, specializing in the design and validation of the Advanced Driver Assistance Systems (ADAS). She holds 2 patents and has 6 patents pending, with 4 peer reviewed papers. Prabhjot is also a final year PhD candidate in Computer Science at Wayne State University. Her research spans audio machine learning, signal processing, Natural Language Processing (NLP) and robotics.

Tejaskumar Patil:

Tejas received his bachelor's degree in electrical engineering from Walchand College of Engineering, Sangli, Maharashtra, India, where he graduated as a Gold Medalist. After completing his undergraduate studies, he embarked on a professional journey at Larsen & Toubro Limited, Mumbai, India, where he served as a Switchgear Design Engineer for 4.5 years. During his time at Larsen & Toubro, he co-invented four patents and received ‘Best Six Sigma project of the month’ award in Dec. 2014. Tejas pursued his Master of Science in Industrial Engineering from Wayne State University in Detroit, Michigan, completing his degree in December 2016. He received the Wayne State University's Graduate Professional Scholarship during the academic year 2015-2016. As a member of Wayne State University's EcoCAR team, he played an integral role in various facets, including Electrical Engineering, Quality Control, and Project Management. During his Masters, he was inducted to Tau Beta Pi, the prestigious Engineering Honor Society.
Since January 2016, Tejas's professional trajectory has been firmly anchored in the automotive industry, where he has held diverse and impactful roles in Design, Development, Quality Assurance, Validation, and Systems Engineering across esteemed entities such as General Motors and leading Tier I suppliers. In recognition of his contributions, Tejas was honored with the International Achievers' Award in July 2023.

Presently, he serves as a Senior Systems Engineer at Qualcomm in Novi, Michigan, where he spearheads crucial initiatives in Functional Safety, Safety of Intended Functionality (SOTIF), and Systems Engineering. He actively participates in automotive standard committees.

Manish Ramaswamy:

Manish Ramaswamy is a technical specialist who currently leads a team of highly skilled engineers specializing in vehicle control system development with American Axle & Manufacturing's Electronics & Control Systems (ECS) department. He holds three master's degrees – one in Control Systems and a dual master's degrees in systems Engineering and Management and Electrical Engineering from UT Dallas, in addition to a bachelor's degree in Electronics and Communication Engineering. Ramaswamy supports ECS and the wider Driveline group in vehicle control systems related to proof of concept development, production control software development, technical reviews, vehicle and dyno calibration, failure analysis and writing certification documentation. He has also authored a book chapter on Laser Plasma Ignition and has presented his research in esteemed conferences and control forums. His master's research on Li-ion battery modeling and control under the guidance of Dr. Steve Yurkovich was presented as an invited paper at the first conference on Control Technology and Applications – 2017 IEEE CCTA. Prior to joining AAM, Ramaswamy held senior engineering positions with General Motors and Ford.

Ratheesh Ravindran, PhD:

Dr. Ratheesh Ravindran is a Sr. System Engineer at Robert Bosch LLC (R&D). His research interests are robotics, Artificial Intelligence (AI), Machine Learning, Deep Neural Network (DNN), sensor signal processing, Sensor fusion, control systems, and systems engineering for automated driving (AD and ADAS) and electric vehicles. He completed his Ph.D. in Electrical and Computer Engineering, specializing in 'perception in automated vehicles using sensor fusion and artificial intelligence (AI)'. His 10+ years in various research and development projects have helped him become an automotive electrical and electronics expert with AI talent. He is lead author for multiple publications and peer reviewed many journals and conference publications.

Laura Wojcik, PhD:

Laura A. Wojcik, Ph.D., P.E., is President and Principal Consultant at L.A. Wojcik & Associates, LLC. Her primary practice area is the engineering analysis of injury-related events. Recent projects have involved passenger vehicles, heavy trucks, railroads, amusement park rides, construction sites, industrial machinery, and a variety of consumer products. Dr. Wojcik has published in both engineering and medical journals and is a licensed professional engineer. She earned her B.S. in mechanical engineering at Michigan State University and her M.S.E. and Ph.D. in mechanical engineering at the University of Michigan. Dr. Wojcik was a faculty member at Virginia Tech and held positions at Exponent, Inc., and Packer Engineering, Inc., before launching her own consulting firm in Ann Arbor, Michigan. She has been an invited participant in programs ranging from the National Academy of Engineering's Frontiers of Engineering Symposium to the American Film Institute's Catalyst Workshop. Dr. Wojcik currently serves as a member of the External Advisory Board for the University of Michigan's Department of Mechanical Engineering

IEEE Day 2023

In most areas outside IEEE-USA, IEEE Day has almost the status of a major holiday. Sections have major activities and there is strong participation in the Photo and Video Contests. Badges are earned and Collaboratec is full of information about the various celebrations of the day when engineers came together to share their technical expertise. But in Regions 1 through 6 activities are few and far between. Some sections in Region 10 have more IEEE Day Ambassadors than entire USA regions!

Our Section has anywhere between 2500 to 3000 members (it varies as folks retire, join, relocated in or out of the area, etc) AND can be as creative and productive as our counterparts anywhere else. We are just as clever as the members of any of these sections. The IEEE Day window is on October 3rd, during that week, which activities qualify as IEEE Day Activities provides an excellent opportunity for recruiting students returning to school and professional members regrouping after summer. It is also a great time to remind our industry partners of the educational opportunities available through ILN (IEEE Learning network) and IEEE.TV (our own streaming service for selected videos only), plus several other societies. The classes, workshops, and lectures available via the various IEEE avenues can be used to provide excellent continuing education to engineers working through out your section.

Once again there will be free presentations by the various societies and other IEEE entities like ILN. There will be free and discounted classes and mini-courses on a wide range of topics. Discounts on some future conferences will be offered when registration is done during IEEE Day window. New members will again be offered a discount to join. Many societies will be offering free or discounted fees for becoming society members. These should be great enticements for new members to join or lapsed members to return. In many cases the discount is extended to both professional and student members.

There will once again be prizes for photos and videos submitted to the contests. Badges will be offered to those who complete a series of tasks associated with IEEE and its long history.

The Region IEEE Day Lead will work with the Section IEEE Day Ambassadors to coordinate activities with the local society chapters, affinity groups and student branches. Publicizing the local activities and the national offerings in local media can attract new members and reinvigorate existing members. Sending information to local media, libraries, companies, and even schools can help to attract attendance from outside the organization.

October 3 – the date of IEEE Day for 2023 – seems like part of a distant future, but given the annual summer slowdown, it is much closer than one might think. This is a great time to start planning both activities and how to publicize them.

There will be additional guidance in the months leading up to IEEE Day to help Sections, Chapters, and Student Branches in the field, for IEEE Day celebrations to rival those in any Region. Now is the time to begin the discussions that will lead to a successful IEEE Day 2023. Let's prove that we can be as successful with its IEEE Day observances as our IEEE colleagues all over the world.

Sharan Kalwani, email: chair@ieee-sem.org
Chair, IEEE Southeastern Michigan Section (2021-2023)
Editor, Wavelengths (*Serving you as an active newsletter contributor since 2018)*
Enthusiastic IEEE Section & Chapter & Committee volunteer since 2011

Cybersecurity Research Challenges: Distinguished Speaker Talk

IEEE Southeastern Michigan
Presents a Distinguished Speaker Talk on
Cybersecurity Challenges and Future Research Opportunities

IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

In this talk, Dr. Zeadally discusses emerging cybersecurity challenges faced by researchers currently and present future research opportunities that can address some of these challenges. Specific application domains that he focuses on during the talk include: transportation, critical infrastructures, Internet of Things, and smart cities.

Speaker Bio:
Sherali Zeadally is an Associate Professor in the College of Communication and Information at the University of Kentucky. Dr. Zeadally received his Bachelor degree in Computer Science from University of Cambridge, England in 1991 and his Doctoral degree in Computer Science from the University of Buckingham, England in 1996. Dr. Zeadally is an IEEE Distinguished Lecturer for the IEEE Vehicular Technology Society (2018-2020) and an ACM Distinguished Speaker (2017-2020). He has co-authored more than 350 peer-reviewed publications. He has edited or co-authored 7 books and he is a Fellow of the British Computer Society and a Fellow of the Institution of Engineering Technology, England.

Quick Summary

- **When:**
  Date: Sep 12, 2023
  Time: 06:00 – 7:00 PM (EST/EDT)
- **Where:**
  ONLINE/Virtual via WEBEX
- **Audience: OPEN to ALL**

Sponsored by IEEE Southeastern Michigan Education Society & Computer Society Technical Chapters

***Pre-Registration Required!**

https://events.vtools.ieee.org/m/368259

IEEE Education Society

IEEE COMPUTER SOCIETY

IEEE Southeastern Michigan Section

IEEE Advancing Technology for Humanity

Cybersecurity SE Education: Distinguished Speaker Talk

IEEE Southeastern Michigan
Presents a Distinguished Speaker Talk on
Cyber Security: Some Parallels with the Development of SW Eng Education

IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

Coordinated programs of education are a powerful engine for social change. That is where the parallel between the evolution of software engineering education and the emerging discipline of cybersecurity is so instructive. This article traces the development of a commonly accepted curriculum for cybersecurity in reference to the emergence of software engineering as an academic discipline. Based on the parallels, it is concluded that cybersecurity is presently at an encouraging watershed.

Speaker Bio:
Dr. Dan Shoemaker received a doctorate from the University of Michigan in 1978. He held a joint teaching and Department Chair position at Mercy College of Detroit. When Mercy was consolidated with the University of Detroit in 1990 he moved to the Business School to Chair their Department of Computer Information Systems (CIS). He established as a separate degree program to the MBA within the UDM College of Business Administration.

Quick Summary

- **When:**
  Date: Sep 26, 2023
  Time: 06:00 – 7:00 PM (EST/EDT)
- **Where:**
  ONLINE/Virtual via WEBEX
- **Audience: OPEN to ALL**

Sponsored by IEEE Southeastern Michigan Education Society & Computer Society Technical Chapters

***Pre-Registration Required!**
https://events.vtools.ieee.org/m/368261

IEEE Education Society

IEEE COMPUTER SOCIETY

IEEE Southeastern Michigan Section

IEEE Advancing Technology for Humanity

CYBER ALERT!

CYBER ALERT: Be aware and protect IEEE from business emails scams

There is a sharp increase in the sophistication and frequency of attempts to defraud executives, those with influence, and individuals with authority to approve payments or purchases. Most of these losses are not covered under existing cyber insurance policies. These attempts are known as business email compromise (BEC). The most common ones are requests for a wire transfer for vendor payment, purchase of gift cards, and urgent requests such as processing invoices.

These requests will appear as coming from someone known to the recipient, which could be a legitimate vendor, a bank representative, a staff member, or a volunteer. For IEEE the most targeted recipients of these emails are the CFO and his staff, all treasurers, and other staff or volunteers with approval authority. As a not-for-profit organization, information on our staff and volunteers are readily available online.

Would be scammers use spoofed email addresses and sometimes use compromised email accounts that will appear to the recipient as a legitimate email and the recipient may not doubt the validity of the request.

What to do?

- Protect your email account from phishing – ***see pages 15 and 16***
- Be very suspicious of any request that appears intimidating or requests immediate action.
- Exercise caution when the request is not following the normal IEEE process, or if the request appears unconventional such as requests to buy gift cards.
- Establish a secondary validation process such as a telephone call or email using a different address than the one from which the request came from.
- Become familiar with financial email scams and share the information with other volunteers – ***see Pages 17 and 18***

Please share this information with the volunteers you work with and especially the treasurers.

As always, please contact the IT security team at security@ieee.org if you have any question, concerns or need help with this topic.

The scammers often perform a fair amount of research before executing financial scams over email.

The rely heavily on social engineering tactics to trick unsuspecting employees and executives.

Email Financials Scams

These scams target companies and individuals seeking to gain access to funds or to trick someone into performing a financial transaction.

Corporate or publicly available email accounts of executives or high-level employees are either spoofed or compromise to execute these scams.

One example of this is Executive fraud, wherein the scammers spoof or hack into the email of an organization's executive in order to initiate a fund transfer to their own accounts, request payments or the approval of gift cards.

IT Security

Beware of Financial Email Scams

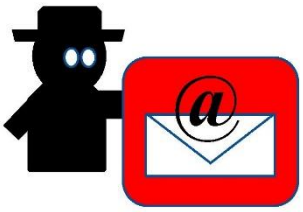
IEEE

The SCAMS

- **The Bogus Invoice**
  - Asks to wire funds for invoice payment to an alternate, fraudulent account via spoofed email or telephone call.
- **Executive Fraud**
  - Impersonate high-level executives or other types representatives requesting the initiation of a wire transfer or invoice payment.
- **Email Account Compromise**
  - An email account of an employee or legal representative is hacked and then used to make requests for invoice payments, wire transfers or gift cards.
- **Attorney Impersonation**
  - Impersonate lawyers or representative of law firms pressuring the contacted party into acting quickly or secretly in handling the transfer of funds.
- **Data Theft**
  - Impersonate role-specific employees to get personal or sensitive information to tailor the scams.

Email Message Red Flags

- **Spoofed sender domain**
  - Scammers usually register a domain similar to its target using slight variations
- **Position or Organizational role of the e-mail sender**
  - Scammer pose as someone influential in an organization
- **Urgent e-mail subject requesting immediate fund transfers, invoice payments or gift cards**
  - Typical subject lines imply urgency regarding these transactions
- **Body of the E-mail**
  - Message is asking for fund or wire transfers to an account that's different from ones normally used for that specific transaction. This may also include requests for purchases of gifts cards.



Always verify!

- ✓ Confirm details with the parties involved, especially when it comes to messages that involve fund transfers, invoice payments and the purchase of gift cards.
- ✓ Do not use any of the information included in the suspicious email to validate the request.
- ✓ Establish secondary verification protocols that include non-email (such as phone or text messaging).

Phishing – Internet Fraud Scam

About the scammer

- Pretends to be a reputable person or organization.
- Sends email messages that appear to be from financial institutions or credit card companies that try to trick recipients into giving personal or financial information.

Other related terms:

- Spear phishing – Targets a selected group of people
- Whaling – Targets executives

Be Careful!

Review email messages

✓ Check the headers
- Someone you know or bogus sender?
- Sent to bogus list?

✓ Check the subject
- Immediate action required?

✓ Check the body of the message
- Generic greeting used?
- Immediate action required?
- Misspellings and grammatical errors?
- Includes links or attachments?

Stop, Think before you Click!

Trust your instincts!

IT Security

How to Spot a Phishing Email

Don't forget, You are the target!

IEEE

Common Phishing Scams

Business Email Compromise (BEC)

- Fake wire transfer requests
- Often targets "Money people" who have authority to make a payment or wire money

IRS Scam

- Request a refund in your name/SS#

Tech Support Scam

- Caller pretends to be from Microsoft or other vendor
- Attempts to have you send them money or let them control your computer

Holiday & Charity Scams

- Often at Christmas or after a disaster – Bogus money requests

What to Watch for?

Watch out for misspellings or unknown senders

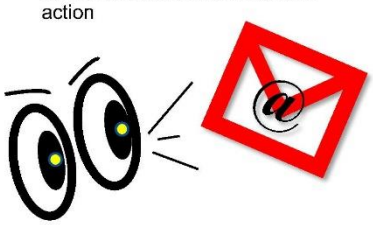
- Legitimate business names are missing or the name of the business is misspelled
- Unexpected email from an address you have never communicated with before

Watch out for email sent to an unknown email address and pay attention to subject lines

- Example: To: payroll@companyxyz.com
- Careful with "too good to be true" offers or threatening statements (meant to elicit emotional reaction)

Watch for generically addressed message (Dear Customer) and its content

- Especially the ones regarding a personal account, financial information or threatening legal action



Watch out for links or attachments included in the message

Hover over the the link to see where the URL would actually take you, if clicked

Scammers will try to implant real business names in the URL

In all circumstances unexpected attachments should not be opened.

These points do not represent all the ways in which scammers will attempt to phish you.

You are the one who has the best understanding of what sort of email messages you usually get at home and at work.

If an email just feels 'off' for any reason, that's enough to be wary of it.

ESW 2023

21st Annual Embedded Systems Workshop

October 28th, 2023, 8:30 AM to 1:30 PM EST/EDT Time Zone

IEEE Computer Society and IEEE Education Society (Southeastern Michigan Technical Chapters) are offering a workshop on Embedded Systems on Saturday, October 28th, 2023. This workshop is open to all industry professionals, both experienced and newly minted engineers, as well as students. This is the 21st 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 24th October, 2023 9 AM

Speakers in the past: Beningo Embedded Group, Infineon, TeKnowledge, 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/371793

For Technical questions, contact the Program Committee **at:** esw2023@ieee-sem.org

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

ESW 2023 Organizing Committee: Subra Ganesan (Chair), Sharan Kalwani (Vice Chair), Ramesh Sethu and Ben Sweet

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 ‘Code’ for faster access in the vTools system applications.

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

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

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

/*
NOTE: we have updated this part with the newly formed Magnetic Society Chapter
*/

Curated & Maintained By
Sharan Kalwani,
Chair, IEEE Southeastern Michigan Section (2021-2023)
Editor, Wavelengths (*Serving you as an active newsletter contributor since 2018)*
Enthusiastic IEEE volunteer since 2011

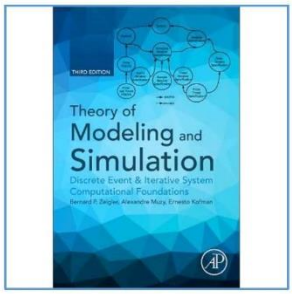
Use the Geo-unit ‘Code’ for faster access in the vTools system applications.

MBSE: Distinguished Speaker Lecture

IEEE Southeastern Michigan

Presents a Distinguished Speaker Talk on

MBSE with/out Simulation: State of the Art and Way Forward



IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

The limitations of model-based support for engineering complex systems include limited capability to develop multifaceted models, as well as their analysis with robust reliable simulation engines. In response, an initiative is underway to bring Model-Based Systems Engineering (MBSE) closer together with model-based simulation developments. M&S represents a core capability and is needed to address today's complex, adaptive, systems of systems engineering challenges. This talk will consider the problems raised by MBSE taken as a modeling activity without the support of full strength integrated simulation capability and the potential for, and possible forms of, closer integration between the two streams.

Speaker Bio:

Bernard P. Zeigler is Professor Emeritus of Electrical and Computer Engineering at the University of Arizona. He received a Ph.D. in Computer/Communication Sciences from the University of Michigan (1968). He is currently affiliated with the Center of Excellence in Command, Control, Communications, Computing and Intelligence (C4I Center) at George Mason University and is also the Chief Scientist at RTSync Corp.

Quick Summary

- **When:**
  Date: Sep 19, 2023
  Time: 06:00 – 7:00 PM (EST/EDT)
- **Where:**
  ONLINE/Virtual via WEBEX
- **Audience: OPEN to ALL**

Sponsored by IEEE Southeastern Michigan Education Society & Computer Society Technical Chapters

***Pre-Registration Required!**

https://events.vtools.ieee.org/m/368260

IEEE Education Society

IEEE COMPUTER SOCIETY

IEEE Southeastern Michigan Section

IEEE Advancing Technology for Humanity

Activities & Events

We try to publish IEEE events in several places to ensure that everyone who may want to attend has all the available relevant information. **NOTE: The IEEE SE Michigan section website is located at http://r4.ieee.org/sem/**

SEM Wavelengths:
https://r4.ieee.org/sem/about-sem/sem-history/wavelengths-magazine-archive/

SEM Calendar of events:
https://r4.ieee.org/sem/sem-calendar/
Select "SEM Calendar" button in the top row of the website. This is our 'Active' event listing site where everyone should look first to see what events are scheduled for our Section in the near future.

SEM Collabratec Workspace:
https://ieee-collabratec.ieee.org/app/workspaces/5979/IEEE-Southeastern-Michigan-Section/activities
An IEEE supported space for online chat, discussions, connecting with other global IEEE entities, besides our local Michigan folks.

vTools Meetings:
http://sites.ieee.org/vtools/
Select "Schedule a Meeting" button in the left-hand column of buttons.

Other Happenings

Here are some of the non-IEEE functions that may be of interest to you or someone you know. Let us know if you have a special interest in a field that encourages technical study and learning, and wish to share opportunities for participation with members of the section. NOTE: Copy the URL and paste it into your browser address bar.
These websites were checked in June 2022 and found viable.
Send details to: wavelengths@ieee-sem.org OR letters@ieee-sem.org

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 2023 arrangement of communications links designed to provide inter-unit coordination and collaboration.

The SEM Executive Committee meets in a teleconference each month on usually on a Thursday at 6:30 pm. The specific meeting days, times, phone or WebEx numbers and log in codes are published on the IEEE SEM Website calendar: **http://r4.ieee.org/sem/** Click on the "Calendar" button in the top banner on the first page of the web site.

If you wish to attend, or just monitor the discussions, please contact **Christopher Johnson**, the section secretary at secretary@ieee-sem.org and request to be placed on the distribution list for a monthly copy of the agenda and minutes. More meeting details are available on the next page of this newsletter.

Other Meetings:
About half of our members maintain memberships in one or more of the IEEE technical societies, which automatically makes them members of the local chapter which is affiliated with that society. As a result, they should receive notices of the local chapter meetings each month.

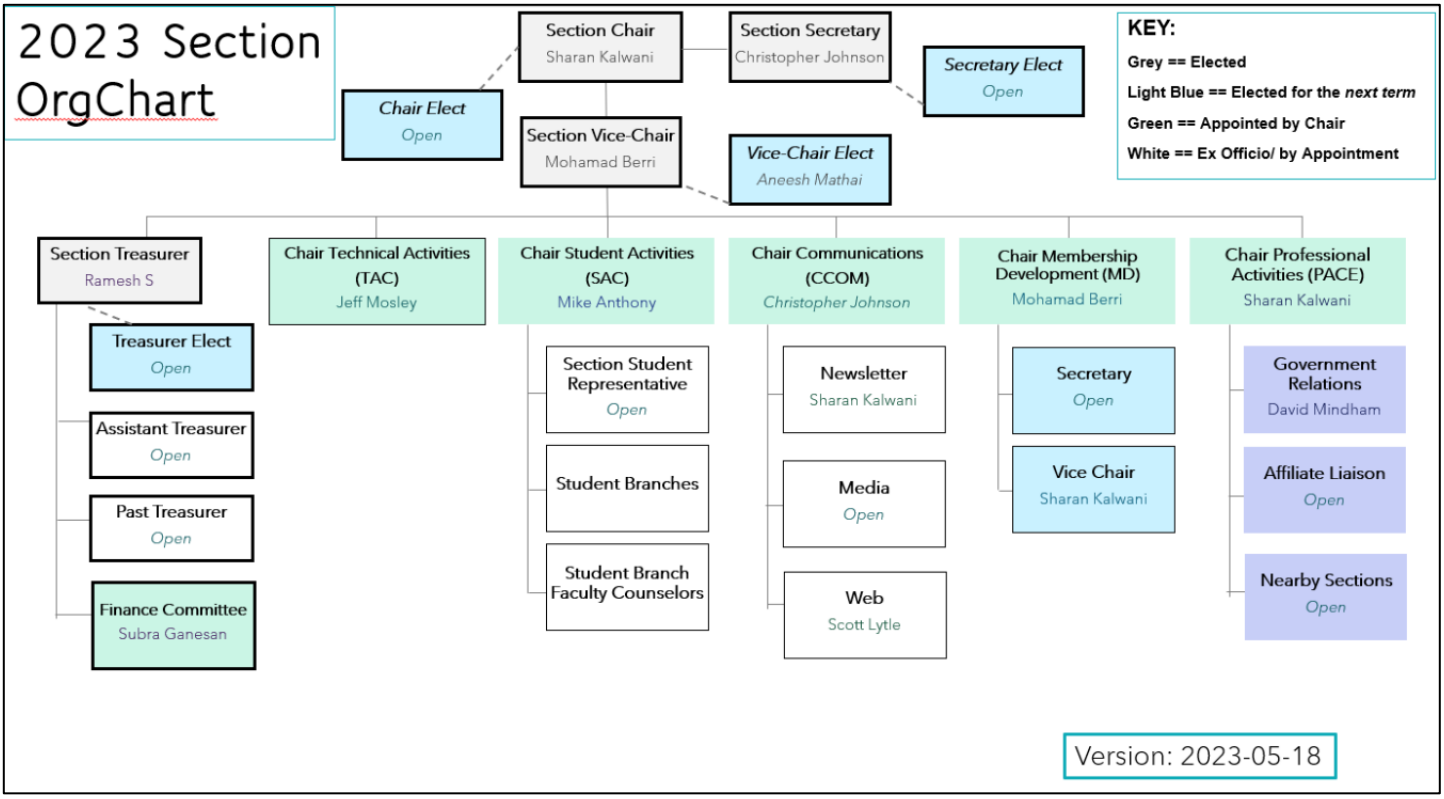
However, members of the section may have multiple technical interests and would like to have meeting information of other chapters. In order to communicate the meeting dates of all the chapters, affinity groups etc., to our members to facilitate their attendance, leaders of the groups are requested to send meeting information to our webmasters for posting on section's calendar.

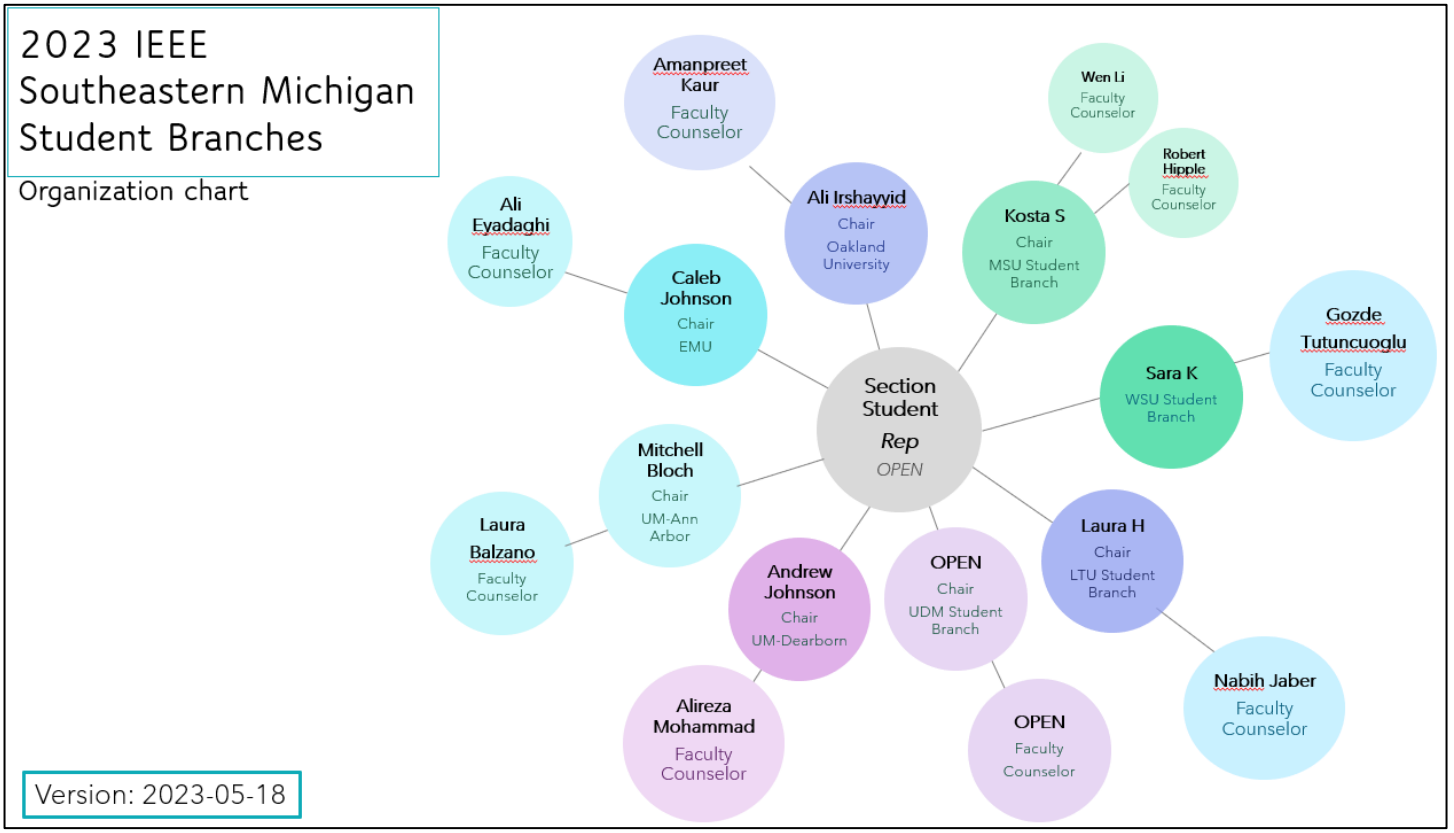
More detailed information on meetings may be found through the IEEE SEM Website: **http://r4.ieee.org/sem/** and clicking on the **SEM meetings list** button near the bottom of the left-hand banner.

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

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

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





ExCom Meeting Schedule

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

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

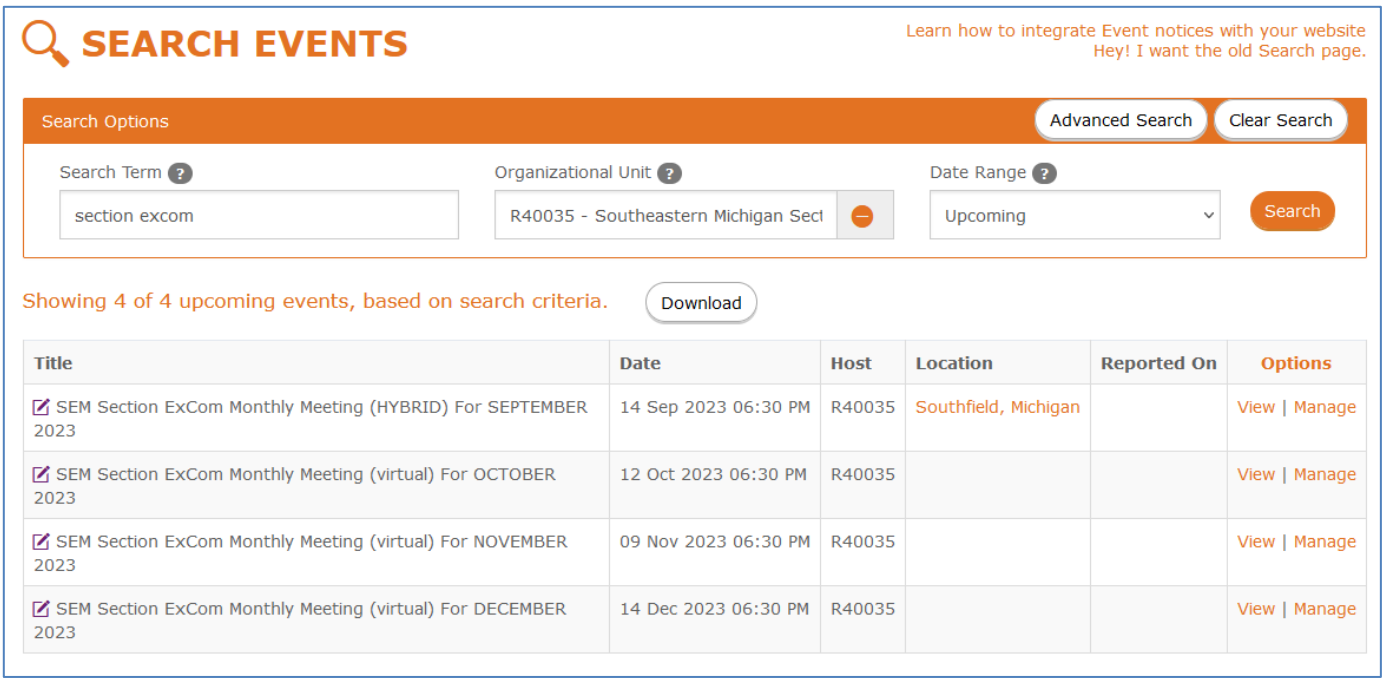
Section Administrative Committee (ExCom) Meeting Schedule for 2023: (clickable links)

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

ExCom Meeting (all clickable links)	*Date & Time*
SEM Section ExCom Monthly Meeting (IN PERSON) For SEPTEMBER 2023	14 Sep 6:30 PM
SEM Section ExCom Monthly Meeting (virtual) For OCTOBER 2023	12 Oct 6:30 PM
SEM Section ExCom Monthly Meeting (virtual) For NOVEMBER 2023	9 Nov 6:30 PM
SEM Section ExCom Monthly Meeting (virtual) For DECEMBER 2023	14 Dec 6:30 PM

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

Section Administrative Committee (ExCom) Meeting Schedule for 2023: (screen snapshot)



Editorial Corner

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

Comments and suggestions may be sent to the editorial team at wavelengths@ieee-sem.org
OR
sharan.kalwani@ieee.org
d.romanchik@ieee.org
nilesh.dudhaia@ieee.org
k.williams@ieee.org
cgjohnson@ieee.org
lunnmalcolm@me.com
akio@emcsociety.org

We rely on our officers and members to provide the 'copy' that we finally present to readers of the newsletter.
The **Wavelengths Focus Plan and Personal Profiles** plan shown in the matrix below is presented to ensure coverage of section activities and events.

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

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

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

Quote:
"If a tree falls in a forest and no one hears it, how do you know it actually fell??"

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

Editors:

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

Join the Team:

If you feel you might like to join the team, or would like to train with us, please contact one of us at:
wavelengths@ieee-sem.org

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

Section 60th Celebration

Once in a lifetime!

Section 60th Anniversary

Saturday Afternoon Tour, Light Show with an evening dinner: 3 to 8 pm
November 4, 2023

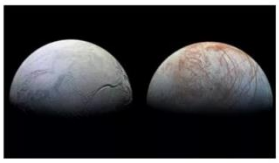
Sloan Planetarium & Flint Institute of Art
Flint, Michigan

IEEE
Southeastern Michigan

Electrical and Electronic Engineers Creating Our Future

Documentary: 1 Year After JWST

IEEE Southeastern Michigan
Presents a Video Documentary on
1 year after the James Webb Space Telescope (JWST)



IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

Join scientists as they use NASA's brand new James Webb Space Telescope to peer deep in time to hunt for the first stars and galaxies in our universe, and try to detect the fingerprints of life in the atmospheres of distant exoplanets
Running time: 50 minutes ()

Quick Summary

- **When:**
  Date: Sep 8, 2023
  Time: 04:45 – 5:45 PM (EST/EDT)
- **Where:**
  Online via Webex (to be shared only after you have a confirmed registration)
- **Audience: OPEN to ALL***

Sponsored by IEEE Southeastern Michigan Education Society Technical Chapter

***Pre-Registration Required!**
https://events.vtools.ieee.org/m/365816

IEEE Education Society

IEEE Southeastern Michigan Section

Wavelengths Annual Publication Plan for Articles

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

Wavelengths Annual Publication Plan for Personal Profiles

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

IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

Web & Social Sites

Southeastern Michigan Section Website
http://r4.ieee.org/sem/

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

Section Website Event Calendar
(Select the "SEM Calendar" button - top row)

SEM Facebook Page
(Select the "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 "t" button under the top row)
https://www.twitter.com/ieeesemich

SEM Collabratec Workspace (new)
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 Officers, see the SEM Officers Roster on the web page (top banner)

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Electrical and Electronic Engineers Creating Our Future

IEEE Southeastern Michigan

Visit Us on the Web at:
http://r4.ieee.org/sem

Leadership Meetings

SEM Executive Committee Monthly Teleconferences:

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

OR

SEM Executive Committee Meetings:

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

SEM Standing Committee Meetings:
SEM Affinity Group Meetings:
SEM Technical Society/Chapter Meetings:
SEM University Student Branch Meetings:

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

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