Wavelengths

Volume 64 – Issue 4

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
Technology Predictions: Art, Science?	2024-04-02	1800 Hours
Rise of Computing inside Automotive DNA	2024-04-02	1900 Hours
Satellite Constellations – Why So Many?	2024-04-04	1700 Hours
Handling Research Paper Reviews	2024-04-05	0800 Hours
Documentary: Charles "Proteus" Steinmetz – Divine Discontent	2024-04-05	1600 Hours
Senior Member Elévation (Virtual)	2024-04-06	1000 Hours
Life Members AG Admin April meeting	2024-04-08	1200 noon
TEMS Chapter ExCom April meeting	2024-04-08	1830 Hours
Computer Society Chapter Admin meeting	2024-04-08	1930 Hours
Chapter 1 Admin meeting	2024-04-09	1900 Hours
Chapter 8 Admin teleconference	2024-04-11	1100 Hours
Section ExCom meeting (Virtual)	2024-04-11	1830 Hours
Documentary: Forgotten Genius	2024-04-12	1900 Hours
Documentary: Trial of J Robert Oppenheimer	2024-04-19	1800 Hours
Documentary: The Man Who Loved Numbers	2024-04-26	1800 Hours
Documentary: Claude Shannon, The Bit Player	2024-04-29	1800 Hours
SSIT Lecture - Self Driving Cars: The good, The Bad & The Ugly	2024-04-30	1800 Hours

Chair's Column

Officially Spring is here!

- ✓ We survived this rather mild winter – of course there may be the occasional snow flurry, but overall, when we look back at the month of march, it was immensely satisfying! We had a total of 24 reported events, out of which 13 were technical in nature. What stood out – is how our events are attracting the keen interests of other sections and regions! One recent March virtual event generated 118 attendees and another two in the last week of February generated a 188 and a 170 respectively! I think all of our Southeastern Michigan community should be proud of this and step forward to continue raising the profile of the section and its various chapters. See the graphic charts on our YTD performance and in the TACom report.

- ✓ The IEEE was recognized by all of our sister technical/professional society peers at the recent Engineering Society of Detroit (ESD) GOLD awards ceremony. The Anne O. Fletcher award was given in honor of IEEE's service in reaching out to the societies in many a collaborative and c-operative ventures.

- ✓ ***The IEEE is now 140 years old!*** I will be issuing a call for volunteers to serve on a planning task force. Similar to what we did back in late October/early November 2023 when we held for the 60th anniversary of our Section. Ideas for a venue, type of celebration, theme, etc are all invited. We will have at least a distinguished talk by an IEEE leader, member awards and recognition, a sumptuous dinner, museum/art tour and memorable eclectic entertainment. Send your suggestions/ideas/emails to sharan.kalwani@ieee.org or chair@ieee-sem.org

- ✓ A budget process was started at our February Section ***ExCom*** meeting. Officers and volunteers are expected to run their portions of our organization according to this approved budget. Officers – look for a final reminder email in your Inbox later by April 5th.

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.

What to look forward to:

- ✓ We have a ton of activities planned in April. Look for the flyers int his issue, but to list a few:
- ✓ How to handle when your paper is sent back to you by a journal
- ✓ 2nd Distinguished speaker on the art of technology prediction
- ✓ Several highly acclaimed documentaries (with a few new ones too!)
  - Charles "Proteus" Steinmetz
  - Julian Percy
  - J Robert Oppenheimer (no, that the recent movie, rather a more engrossing documentary)
  - Srinivas Ramanujan
  - Claude Shannon, native Michigander and the Father of the Information Age!

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

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. The 2nd senior member elevation event is taking place soon. See the flyer in this issue. Note we will be timing those 3 weeks before each A&A panel meeting.

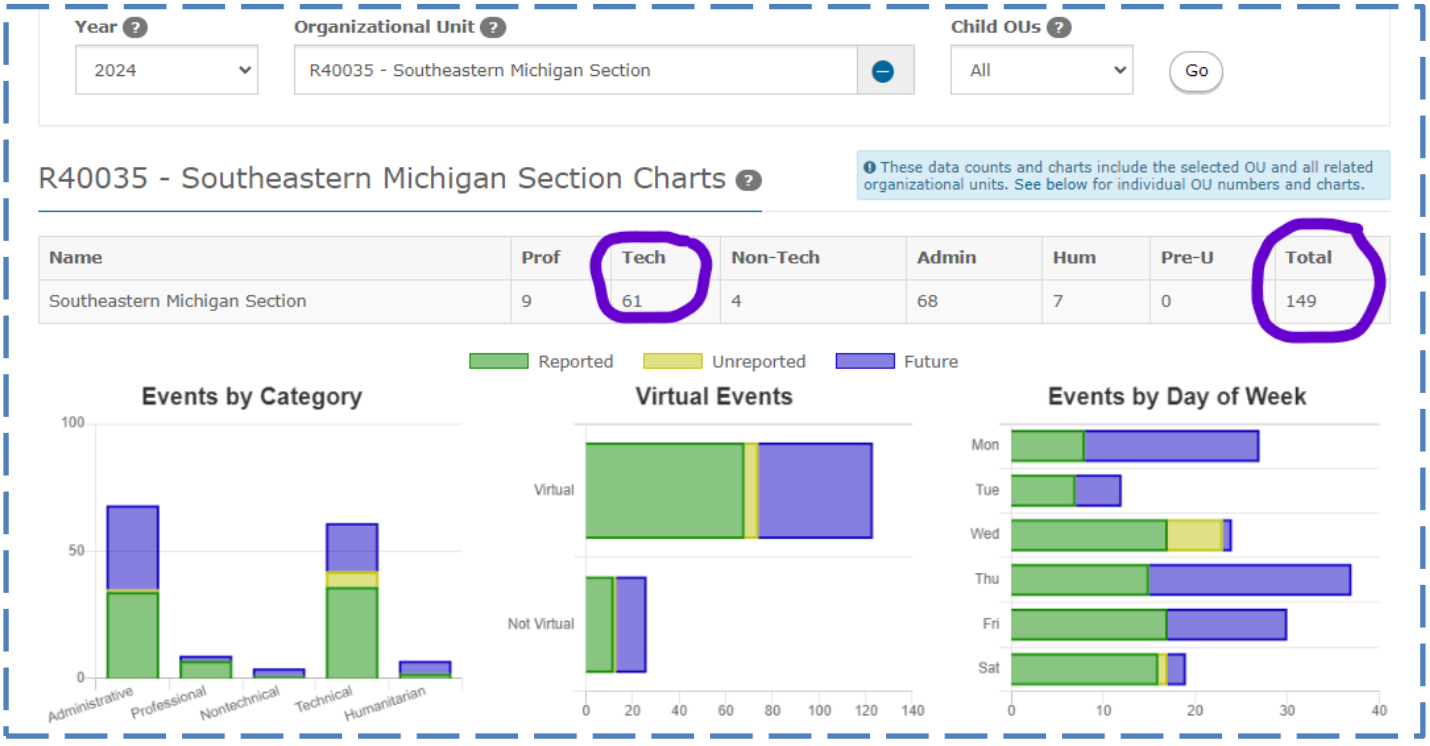
I look forward to hearing from you and seeing you at our events. As always, your ideas and suggestions are encouraged and welcome.

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

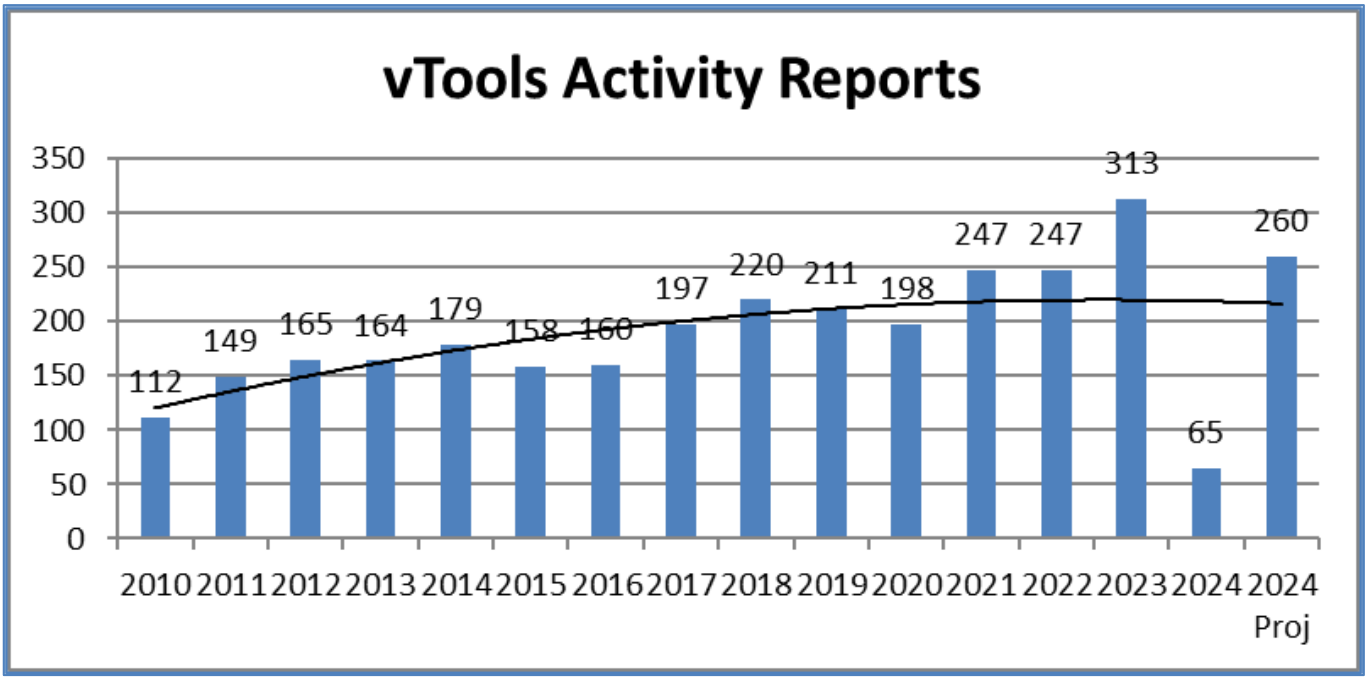
To reach any of our SECTION officers, for any help/assistance you seek you may try these easy to remember email addresses. The objective is to ensure business continuity, so one need not try to remember or hunt for the contact information! They can help you find your chapter officers or point you in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

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

Events tracking (YTD)



Tech Activities REPORT



SEM Section Chapter and Affinity group leaders who are not showing any technical or administrative meetings are encouraged to reach out to the TAcom for assistance. We are in a new year within the Section where we plan to exceed our projections for technical meetings hosted for our membership. Thanks to all GAs working to engage their membership.

V/r Jeffery V. Mosley

Chair, Technical Activties Committee (TAcom)
jvmosley@ieee.org
Southeastern Michigan Section, IEEE Region 4

This Month in April

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

April 1st, 1932 - Birth of **Norman Abramson**, ***died 1 December 2020***.
American computer scientist who created ALOHANET, the first modern data network, which formed the basis of the protocols essential in Ethernet now in wide use. It opened in 1970, operating at 9600 bits per second, using radio to provide a wireless packet-switched data network between several Hawaii islands. Its innovations included the first packet radio sensors, the first packet radio repeaters, the first satellite packet network and the first radio access to the Internet. Abramson's U.S. patents include the first patent for CRC redundancy checks to provide data error control technique (No. 3,114,130), and the first patent issued for the design of burst errors in digital systems (No. 3,163,84)

April 4th 1826 - Birth of **Zénobe-Théophile Gramme*, died 20 Jan 1901 at age 74.***
Belgian-born French electrical engineer and inventor (1869) of the Gramme dynamo, a continuous-current electrical generator that gave principal impetus to the development of electric power. In 1870 he invented a continuous-current dynamo with a ring armature (a ring of soft iron around which were placed insulated copper coils). This produced much higher voltages than other dynamos of the time and was the first high-voltage direct-current generator practical for mass production and distribution. Driven by steam-engines, they were immediately successful and were used for a variety of purposes, including factory lighting, electroplating, and lighthouses. With these dynamos, the era of large-scale electrical engineering began.

April 4th, 1823; date of birth of **Carl Wilhelm Siemens**, died ***November 19, 1883***.
German-British inventor and electrical engineer, who revolutionized the steel-making and glass-making industries, is best remembered for using the Siemens-Martin process to create the regenerative furnace. His achievements earned him accolades such as the Albert Medal. He was a Fellow of The Royal Society and was knighted shortly before his death.

April 5th, 1949; Date of birth of **Judith Resnick**, died ***January 28, 1986***.
Judith Resnik was an American software engineer, electrical engineer, pilot, biomedical engineer, and NASA astronaut. She was the fourth woman and the first Jewish woman in space, logging 145 hours in orbit. Resnik, who died during the Space Shuttle Challenger disaster in 1986, received several posthumous honors. Judith Resnik's life and career inspired the 1990 TV movie Challenger.

April 6th 1903 - Birth of **Harold E. Edgerton*, died 4 Jan 1990 at age 86.***
Harold Eugene Edgerton was an American engineer and ultra-high-speed photographer who, as a graduate at the Massachusetts Institute of Technology (1926), used a strobe light in his studies, which by 1931, he applied the strobe to ultra-high-speed photography. He formed a company (1947) to specialize in electronic technology, which led to inventing the Rapatronic camera, capable of photographing US nuclear bomb test explosions from a distance of 7 miles. Throughout his career he applied high-speed photography as a tool in various scientific applications. He also developed sonar to study the ocean floor. Using side-scan sonar, in 1973, he helped locate the sunken Civil War battleship USS Monitor, lost since 1862, off Cape Hatteras, NC.

April 9th, 1865; Date of birth of **Charles Proteus Steinmetz**, died ***October 26, 1923***.
Though German-born American mathematician and engineer Charles Proteus Steinmetz suffered from a deformed back since childhood, he excelled in math, physics, and classical literature. His ideas on alternating current (AC) systems initiated the electrical era in the US. By the time he died, he had over 200 patents under his name. *{{Register for the documentary screening at https://events.vtools.ieee.org/m/384550 }}*

April 9th,1919; Birth of **J. Presper Eckert Jr*. died 3 Jun 1995 at age 76.***
American engineer and inventor of the first general-purpose electronic computer, a digital machine that was the prototype for most computers in use today. In 1946, Eckert with John W. Mauchly fulfilled a government contract to build a digital computer to be used by the U.S. Army for military calculations. They named it ENIAC for Electronic Numerical Integrator and Computer. By 1949, they had started a manufacturing company for their BINAC computer. This was followed by a business oriented computer, UNIVAC (1951), which was put to many uses and spurred the growth of the computer industry. By 1966 Eckert held 85 patents, mostly for electronic inventions.

April 13th, 1892; date of birth of **Robert Watson-Watt**, died ***December 5, 1973***.
Robert Watson-Watt, often called the father of radar was a British physicist who did pioneering work in radio direction finding (RDF) and radar technology. He developed high-frequency direction finding (huff-duff) as a system for locating

lightning. It was later introduced during the Second World War and played an instrumental role in intelligence, mainly in catching enemy radios while they transmitted.

April 14th,1898; Date of birth of **Harold Stephen Black,** ***died 11 Dec 1983 at age 85.***
American electrical engineer who discovered and developed the negative-feedback principle, in which amplification output is fed back into the input, thus producing nearly distortion less and steady amplification. In 1921, Black joined the forerunner of Bell Labs, in New York City, working on elimination of distortion. After six years of persistence, Black conceived his negative feedback amplifier in a flash while commuting to work aboard a ferry. Basically, the concept involved feeding systems output back to the input as a method of system control. The principle has found widespread applications in electronics, including industrial, military, and consumer electronics, weaponry, analog computers, and such biomechanical devices as pacemakers.

April 22nd, 1904; Date of birth of **J Robert Oppenheimer**, died ***February 18, 1967***.
Julius Oppenheimer was an American theoretical physicist. He was director of the Manhattan Project's Los Alamos Laboratory during World War II and is often called the "father of the atomic bomb".. *{{Register for the documentary screening at https://events.vtools.ieee.org/m/410968 }}*

April 28th, 1854; date of birth of **Hertha Ayrton**, died ***August 26, 1923***.
Hertha Ayrton was a British engineer, physicist, mathematician, and inventor. She is remembered for her work on electric arcs and ripple marks in sand and water, for which she was awarded the Hughes Medal by the Royal Society. As a woman in the 19th century, she had to face innumerable struggles in her career. She was also a passionate suffragist.

April 30th, 1916; Date of birth of **Claude Elwood Shannon**, died ***February 24, 2001***.
Claude Shannon was an electrical engineer, mathematician, and cryptographer. He is credited with publishing the article A Mathematical Theory of Communication which gave rise to the field of information theory. Hence, Shannon is considered the father of information theory. He is also credited with founding digital circuit design theory. During World War II, he contributed to the field of cryptanalysis. Rodney Brooks declared that Shannon was the 20th century engineer who contributed the most to 21st century technologies. His achievements are said to be on par with those of Albert Einstein and Sir Isaac Newton in their fields. *{{Register for the documentary screening at https://events.vtools.ieee.org/m/384628}}*

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

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

Here is a link which lists all of the documentaries featuring several of the folks mentioned in *"This month…."* series. Enjoy!

Sharan Kalwani
2022-2024 Chair, Southeastern Michigan Section,
Passionate Engineering History Buff/Aficionado

Documentary: Steinmetz

IEEE Southeastern Michigan

Presents:

Charles "Proteus" Steinmetz: Divine Discontent

IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

This documentary/movie will look at the life and contributions of one of the most celebrated Engineers and inventors, Charles Proteus Steinmetz. Dr. Steinmetz was a legendary figure in his time inside and outside of GE. He was a Chief Consulting Engineer, a Professor at Union College, a Community Activist, and a family man. We will relive his path from a small town in Prussia to New York and his great accomplishments in Science, Engineering, Education, and contributions to Society. Running time is approximately 55 minutes. This documentary is brought to you by the IEEE Foundation who partially funded this. The trailer can be viewed at: https://vimeo.com/57064748

At Glance

- **When:**
  Date: April 5th, 2024
  Time: 04:00 – 5:30 PM (EST/EDT)
- **Where:**
  Online via Webex (to be shared only after you have a confirmed registration)
- **Audience: OPEN to ALL***

Sponsored by
IEEE
SE Michigan
Computer Society
Technical Chapter

***Pre-Registration Required!**
https://events.vtools.ieee.org/m/384550

IEEE Advancing Technology for Humanity 140 YEARS

IEEE COMPUTER SOCIETY

IEEE Southeastern Michigan Section

Senior Elevation Event

IEEE Southeastern Michigan Section
Presents
"Senior Membership Elevation 2nd Round Up"

IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

IEEE Southeastern Michigan Section will reprise its Senior Member Round up event, on April 5th 2024 between 10 AM and 11:30 AM. Senior Member Reviewers will assist interested member candidates with significant years of experience in their profession.

The way it works is:

- At least 10 years of significant experience with bachelor's degree needs be established to initiate the senior membership elevation.
- If you have a Master's, that is equivalent to 2 years of significant experience. So, you will need 8 additional years to qualify.
- If you have a PhD degree - that is 5 years of significant experience, so you need 5 additional years of experience beyond that.

There is no cost to becoming a Senior Member, and this step is a necessary prelude to seeking the IEEE 'Fellow' level. For a complete description of the Senior Member process and its benefits, see the link: https://www.ieee.org/membership_services/membership/grade_elevation.html

Potential senior members, please register on this site for the event and be ready with digital copies of your resume, and relevant supporting materials, to share with reviewers.

Existing Senior Members are requested to also register and assist potential new members with their application processing.

Pre-Registration Required!

https://events.vtools.ieee.org/m/405729

At A Glance

- **When:**
  Date: April 6th, 2024
  Time: 10 to 11:30 AM (EST/EDT)
- **Where:**
  Online using WEBEX breakout rooms
- **Audience:** All Eligible/Potential Members and Senior Members (references)

Sponsored by
IEEE
Southeastern Michigan Section
Membership Development
https://r4.ieee.org/sem/

IEEE Southeastern Michigan Section

IEEE Advancing Technology for Humanity

140 YEARS

Volunteer/Officer Training

If you missed any sessions – contact us and we can share the slides and video recording links. **NOTE**: All the training, and all the governance meetings are open to all IEEE Members at all grades.

EIT 2024 CFP

ANNOUNCEMENT and CALL FOR PAPERS (version June, 2023)

2024 IEEE INTERNATIONAL CONFERENCE
on ELECTRO/INFORMATION TECHNOLOGY

May 30, 31, June 1, 2024

University of Wisconsin-Eau Claire, Eau Claire, Wisconsin 54702-4004

http://www.eit-conference.org/eit2024

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Awards Committee
Sat Basu, satbasu@ieee.org, Hossein Mousavinezhad, Subra Ganesan

The IEEE 2024 International Electro/Information Technology Conference, sponsored by the IEEE Region 4 (R4), in collaboration with University of Wisconsin-Eau Claire, is focused on basic/applied research results in the fields of electrical and computer engineering as they relate to Electrical and Computer Engineering, Information Technology, and related applications. The purpose of the conference is to provide a forum for **researchers and industrial investigators** to exchange ideas and discuss developments in these growing fields. There will also be exhibits where the latest electro/information technology tools and products will be showcased. This is also an opportunity for professional activities development, workshops and tutorials.

Topics of interest include but are not limited to:

- **Robotics and Mechatronics**
- **Intelligent Systems and Multi-agent Systems**
- **Control Systems and System Identification**
- **Reconfigurable and Embedded Systems**
- **Power Systems and Power Electronics**
- **Solid State, Consumer and Automotive Electronics**
- **Electronic Design Automation**
- **Biomedical Applications, Telemedicine**
- **Biometrics and Bioinformatics**
- **Nanotechnology**
- **Micro Electromechanical Systems**
- **Electric Vehicles**
- **Wireless communications and Networking**
- **Ad Hoc and Sensor Networks**
- **Internet of Things**
- **Artificial Intelligence and Machine Learning**
- **Cybersecurity**
- **Computer Vision**
- **Signal/Image and Video Processing**
- **Distributed Data Fusion and Mining**
- **Cloud, Mobile, and Distributed Computing**
- **Software Engineering and Middleware Architecture**
- **Engineering Education**

Important dates:

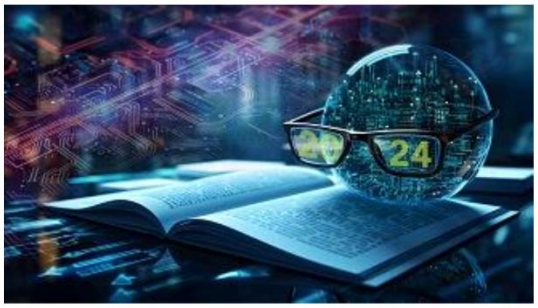
- Submission of full papers: February 16, 2024
- Notification of acceptance: March 15, 2024
- Final manuscript (PDF) due: April 26, 2024
- Early registration: May 10, 2024

For more information, ideas for organizing/chairing sessions, industry participation, tutorials, professional activities sessions, please contact: **Drs. Gomes or Mousavinezhad.**

IEEE eit2024 International Conference Announcement and CFP

Technology Predictions

IEEE Southeastern Michigan
Presents a Distinguished Speaker Talk on
Technology Predictions: Art, Science, and Fashion



IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

Predicting the future is never easy, it always entails a degree of uncertainty, if not luck. IEEE Computer Society started its technology predictions informally in early 2010 and formally via annual press releases in 2014, followed by their respective scorecards in 2016. We realized that our audience appreciates self-evaluation, hence we introduced scorecards at the end of the period of prediction. Our predictions reached substantial audience, e.g., in 2018, it was picked up by 300 media outlets (84.6M audience), which is entirely different from classical publishing.

Speaker Bio:
Dejan S. Milojicic is an established researcher with a full career in industry, and a long-term IEEE Computer Society volunteer. He is the founding editor in chief of Computing Now and an IEEE Internet Computing editorial board member. Milojicic is an IEEE Fellow, Computer Society Golden Core Member, and ACM Distinguished Engineer. He received a PhD from Kaiserslautern University, Germany. He has served on six thesis committees and guided 40 interns. He has published two books, more than 120 papers, and been awarded 11 patents and 22 patent applications.

Quick Summary

- **When:**
  Date: April 2nd, 2024
  Time: 06:00 – 7:00 PM (EST/EDT)
- **Where:**
  ONLINE/Virtual via WEBEX
- **Audience: OPEN to ALL**

Sponsored by IEEE Southeastern Michigan Computer Society Technical Chapter

***Pre-Registration Required!**

https://events.vtools.ieee.org/m/406535

IEEE Southeastern Michigan Section

IEEE COMPUTER SOCIETY

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ICCM 2024

ICMM 2024

International Conference on Microwave Magnetics

8th International Conference on Microwave Magnetics

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

Abstract submission:

Please submit your abstracts electronically using the following template: https://tinyurl.com/ICMM2024-template
The link to the submission form can be found here: www.icmm2024.org/registrationsubmissions
Further information can be found at the conference website: www.icmm2024.org
The abstract submission period begins **January 1, 2024**, and the deadline is **February 8, 2024**.

Scope of the conference:

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

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

Features:

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

Special Notice!

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

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

Important Dates:

Abstract submission opens:
January 1, 2024

Abstract submission deadline:
February 8, 2024

Registration opens:
March 1, 2024

Notification of acceptance:
March 15, 2024

End of early bird registration:
May 1, 2024

Conference begins:
June 16, 2024

Conference ends:
June 19, 2024

For more information about the conference, please visit:

icmm2024.org

Senior Member News

IEEE HQ Admission and Advancement (A&A) Review Panel Meeting Schedule

The Admission & Advancement (A&A) Review Panels meet six times annually to review applications and/or nominations for election or elevation to Senior Member (SM) or Life Senior Member (LSM) grade.

- The review panel meetings are held in various locations throughout the world.
- A panel of reviewers is recruited among Senior members, Life Senior members, and Fellows in the section where the meeting is to be held. This full-day session is presided over by the Admission and Advancement Chair and/or Vice Chair, as well as a representative of the Member and Geographic Activities staff.
- **In order for an application to be reviewed at a Review Panel meeting, the application, resume, and required reference forms have to be submitted and received at least Seven days prior to the meeting date. [hence https://events.vtools.ieee.org/m/405729 †]**
- About two weeks following a review panel meeting, an update report with the names of the newly elevated Senior members is published and available for those who hold a volunteer position.

Review panel dates and locations (note: Dates and locations are subject to change without notice.)

Please see Meeting Deadlines (Eastern Standard Time) below for more details.

2024 IEEE HQ Panel Meeting Dates

2024 Meeting Dates	Meeting Deadlines (Eastern Standard Time)
27 January 2024	11:59 p.m. on 20 January 2024 (DONE)
21 April 2024	11:59 p.m. on 13 April 2024
22 June 2024	11:59 p.m. on 15 June 2024
3 August 2024	11:59 p.m. on 27 July 2024
28 September 2024	11:59 p.m. on 21 September 2024
23 November 2024	11:59 p.m. on 16 November 2024

†See our own Section organized event at: https://events.vtools.ieee.org/m/405729 and page 8

2024 SEM Officers

The IEEE SEM Organizational Roster is Located in the IEEE Southeastern Michigan website at:
http://sites.ieee.org/sem/

Under the TAB titled "About SEM" use the button:
"Organization Roster" to download the PDF version of the current Roster.

(Note: It is also a good idea to download the Organization Org Chart as well in order to get the complete 'big picture' of the Section.)

(Note: To protect the members from getting spam email, the roster is password protected. Request access by sending email to our web master – Scott Lytle.)

Years ago, we used to publish the complete Chart and Roster in the Newsletter. But that was when we had only 5 committees and 9 chapters.

Today we have 16 committees and sub-committees, 18 Technical Chapters, 4 Affinity Groups and 8 Student Branches. The total roster divides into 12 pages with 247 identified officer positions.

That seems like a large organization, and it is, but it also presents our members with many volunteer opportunities to grow their capabilities through the experience of working with leaders who can guide and nurture engineering talent and widen the scope of volunteering through 'hands on' training in those 'soft skills' that can only be mastered by 'doing.'

We often refer to learning the non-technical side of an engineering career as similar to learning to play a musical instrument, or a sport, or how to dance. You can read all the books you want but, you only really learn by doing.

Reading the Roster

Once downloaded notice that the roster is divided into five major segments:

- Executive Committee
- Standing Committees
- Affinity Groups
- Technical Chapters
- Student Branches

Within each segment you should find, at a minimum, the e-mail account for each officer, and in many cases, a work phone and a cell phone for quicker contact.

You may note a number of identified officer roles that have a blank cell (highlighted in yellow) where we would expect an officer name. These are vacant officer positions.

If you notice a vacancy where you might be interested in contributing to fill that role, please contact the relevant 'Chair' in that organization and discuss the duties of the office and consider helping out in that element.

As with all others, the road to this learning begins with the first step. That step is inquiring and finding out what skills go with each position. That information is maintained in the IEEE Center for Leadership Excellence at: **https://ieee-elearning.org/CLE/**

Good luck!

Handling Research Paper Reviews

IEEE Southeastern Michigan Computer Society Chapter

Presents:

Handling Research Paper Reviews Effectively

IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

Research paper writing is an important part of conveying the results of one's own research to the technical community and getting the paper accepted in reputed journals is a difficult task. It is both an ***art*** and ***science***. The most important part of the review process is to answer properly the reviewer's questions in the first review as most of the papers generally get into a major revision process.

Based on the speaker's experience in both academia and R&D over 50 years, the speaker will present important ways of handling and writing replies to the reviewer's comments properly in a step-by-step approach. The lecture will be highly interactive, and the participants are expected to share their experiences in writing replies to the reviewers and become enlightened of the right ways of handling the reviewer's comments.

Speaker:
Professor N Sundararajan (retired), IEEE Life Fellow
Nanyang Technological University, Singapore

At A Glance:

- **When:**
  Date: April 5th, 2024
  Time: 8:00 – 9:00 AM (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 Computer Society Chapter

***Pre-Registration Required!**

https://events.vtools.ieee.org/m/412816

IEEE Advancing Technology for Humanity

140 YEARS

IEEE COMPUTER SOCIETY

IEEE Southeastern Michigan Section

Forgotten Genius

IEEE Southeastern Michigan
Presents a Video Documentary:
"Forgotten Genius"

IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

Quick Summary

- **When:**
  Date: April 12th, 2024
  Time: 07:00 – 9:00 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

The grandson of Alabama slaves, Percy Julian met with every possible barrier in a deeply segregated America. He was a man of genius, devotion, and determination. As a black man he was also an outsider, fighting to make a place for himself in a profession and country divided by bigotry—a man who would eventually find freedom in the laboratory.

Running time: 1 hour 50 minutes ()

***Pre-Registration Required!**

https://events.vtools.ieee.org/m/384546

140 YEARS

IEEE Southeastern Michigan Section

RoboFest REPORT

(1) LTU Robofest Scholarship Deadline April 1
(2) Robofest World Championship Registration and Schedule
(3) Michigan Invitational Events to Open Monday, April 1
(4) Video Qualifier and Video Screening for Exhibition Team Deadlines
(5) MDE 99h Grants support 57 Robofest Teams
(6) MCWT $750 Grant awarded to 6 Robofest Coaches
(7) In Search of 5-, 10-, 15- and 20-Year Coach Award Recipients â€“ LAST CALL

(1) LTU Robofest Scholarship Deadline April 1
The deadline to apply for the Robofest Scholarship is Monday, April 1. Any participants who have competed at any time in any category may be eligible for the annual $3,000 LTU Robofest scholarship. More details can be found on the LTU Scholarship page: https://www.ltu.edu/financial-aid/scholarships-freshmen

(2) Robofest World Championship Registration and Schedule
The 25th Robofest World Championship Game and Exhibition Finals and Open Categories will be hosted on Lawrence Technological University's campus on May 9 ~11, 2024 with the following schedule:

May 9: Unknown Mission Challenge and Jr BottleSumo (Group 1)
May 10: Jr BottleSumo (Group 2), RoboParade, RoboMed, Sr BottleSumo Classic and Unlimited
May 11: Jr BottleSumo Final Match, Vision Centric Challenge, RoboArts, Game Finals, Exhibition Finals

Practice times, event start times and campus locations can be found on the schedule: https://www.robofest.net/images/2324/WC2024Schedule022124.pdf

The Open Category Events registration is open for US Teams. Space is limited for some categories. International teams who do not have a Robofest Director in their country may send an email to robofest@ltu.edu requesting registration or register directly.

Volunteer registration for all events will be open on Wednesday, April 3.

A few hotels in the local area have set aside rooms and rates for Robofest attendees. Links are posted on the World Championship page on the Robofest.net website. Check back often for other World Championship updates.

(3) Michigan Invitational Events to Open Monday, April 1
Hosted in the LTU Computer Science Robotics Lab, these events offer Game teams who do not advance from a Michigan Qualifier a second chance to compete. The 2024 Michigan Invitational Schedule (updated) for Junior and Senior Divisions is as follows:

April 20, 9:00am ~ 1:00pm Junior and Senior Divisions
April 20, 2pm ~ 6:00pm Junior Division only

(4) Video Qualifier and Video Screening for Exhibition Team Deadlines
Video_Qualifier_USA and Video_Qualifier_International Game and Exhibition teams must upload a link to a video to the Team Registration page and Exhibition teams must upload a Code file to the folder provided to the coach in an email by 11:59 pm Monday, April 15.

Exhibition trophy winners in all US competitions including Michigan must have an uploaded presentation video to the Team Registration page by April 15 to be screened before the World Championship. Teams that did not automatically advance may receive an invitation to the World Championship based on the video. For more information, please see official rules on the 2024 Main page on the Robofest.net website.

(5) MDE 99h Grants support 57 Robofest Teams

Thanks to the Michigan Department of Education 99h Competitive Robotics Competition Grant, 57 Robofest teams have been recommended to receive funding, for a combined total of almost $43,000. We hope that the new coaches that started a Robofest program at their school because of this funding find success this season. We hope to add many more teams to the list next year and in the years to come.

(6) MCWT $750 Grant awarded to 6 Robofest Coaches

Thanks to our Gold Sponsor, the Michigan Council of Women in Technology Foundation, six Michigan coaches received $750 grants for all-girl Robofest teams for the 2024 Robofest competitions.

(7) In Search of 5-, 10-, 15- and 20-Year Coach Award Recipients LAST CALL

We would like to acknowledge our coaches who have coached Robofest teams for 5, 10, and 15 and 20 years! To submit your name, please send an email to robofest@ltu.edu with the subject *Coach Award*. Please include the coach name, coach ID (include all IDs used), and number of years coaching. We will recognize these dedicated coaches at the Robofest World Championship Awards Ceremony on May 11.

Lawrence Technological University / Robofest / J-233 / 21000 W. Ten Mile Rd, Southfield, MI 48075
Prof. Elmer Santos, Director, esantos@ltu.edu
Shannan Palonis, Assistant Director, spalonis@ltu.edu
Pam Sparks, Coordinator, psparks@ltu.edu
Dr. CJ Chung, Robofest Founder, Executive Council Chair, cchung@ltu.edu
Dr. Chris Cartwright, Executive Council Member
Dr. Eric Martinson, Executive Council Member

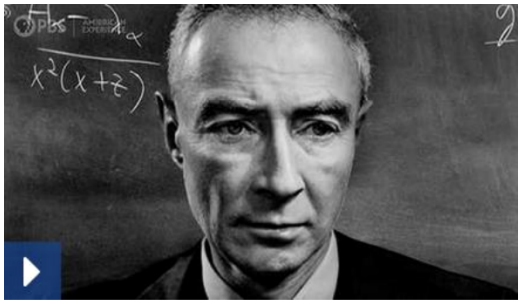
http://www.robofest.net http://facebook.com/robofest https://www.linkedin.com/company/robofest-official

Oppenheimer

IEEE Southeastern Michigan

Presents:

"The Trials of J. Robert Oppenheimer"



IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

J. Robert Oppenheimer was brilliant, arrogant, proud, charismatic — and a national hero. Under his leadership during World War II, the United States succeeded in becoming the first nation to harness the power of nuclear energy to create the ultimate weapon of mass destruction — the atomic bomb. But after the bomb brought the war to an end, in spite of his renown and his enormous achievement, America turned on him, humiliated him, and cast him aside. The question this film asks is, "Why?"

AMERICAN EXPERIENCE presents The Trials of J. Robert Oppenheimer, featuring David Strathairn as Robert Oppenheimer. From producer David Grubin, the movie features interviews with the scientist's former colleagues and eminent scholars to present a complex and revealing portrait of one of the most important and controversial scientists of the twentieth century. The 2-hour film traces the course of Oppenheimer's life: his childhood, his adolescence, his emergence as one of America's leading nuclear physicists, his leadership of the Los Alamos laboratory, and his tragic humiliation.

***Pre-Registration Required!**

https://events.vtools.ieee.org/m/410968

At A Glance

- **When:**
  Date: April 19th, 2024
  Time: 06:00 – 7:45 PM (EST/EDT)
- **Where:**
  Online via Webex (to be shared only after you have a confirmed registration)
- **Audience: OPEN to ALL***

Sponsored by IEEE SE Michigan Computer Society Technical Chapter

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IEEE Southeastern Michigan Section

IEEE COMPUTER SOCIETY

ESD Awards Report

At the recent function, attended by nearly 50+ members of the 40+ engineering & technical professional societies of ESD. The IEEE was recognized by the Anne O. Fletcher Award and given to Sharan Kalwani. In attendance were: Aneesh Mathai - current Vice-chair of the section, Arun Hundiwal - current chair of the Life Members Affinity Group, Ramesh Sethu - current Treasurer of the section, Subra Ganesan and George Pappas (both from the Computer Society chapter). Also joining us at our IEEE table were: Ghassan Kridli, Dean of the School of Engineering, University of Michigan-Dearborn .

April Celebration Days

International Science and Engineering Celebration Days

The more time I spend as an engineer in various roles and with various colleagues all over the globe – the more I discover things I did not know!

a) **National Robotics Week**, April 6 thru April 14, 2024. *The mission of National Robotics Week (RoboWeek) is simple — to inspire students in robotics and STEM-related fields and to share the excitement of robotics with audiences of all ages.*
Official Link: https://www.nationalroboticsweek.org/

There you will find a ton of resources, who is celebrating and an opportunity to submit/publicize your celebration as well. National Robotics Week is celebrated from the first Saturday in April every year and takes place from April 6 to 13. Initially, the holiday was observed for nine days after the second Saturday in April, but this was changed after 2012. The week, also known as RoboWeek, is for inspiring people interested in robotics and sharing excitement about the latest innovations. The celebration cuts across all ages, from little ones to adults. It recognizes robotics technology as a driving force of 21st-century innovation and development. The week features several events aimed at increasing public awareness about robotics.

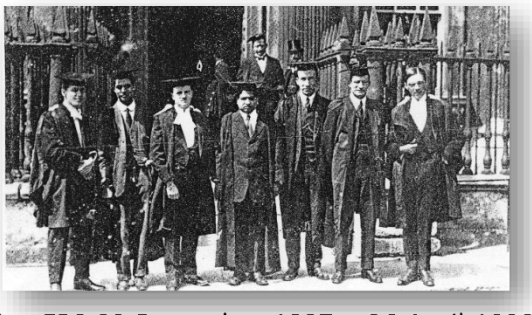
b) **Earth Day**, April 22, 2024. Earth Day is an annual event, celebrated on April 22, that promotes environmental protection. First held on April 22, 1970, Earth Day was attended by 20 million people and led to the creation of the Environmental Protection Agency (EPA). Today, Earth Day is observed by more than 1 billion people in 192 countries. Each year, Earth Day focuses on a different theme related to environmental protection. We can celebrate Earth Day in a variety of ways, including raising awareness about global warming, planting trees, using reusable bags, riding a bike to work, or making more plant-based dinners! Useful link: https://www.earthday.org/earth-day-2024/

The theme for Earthday.org 2024 is Planet vs. Plastics and to mark that Earthday.org has called for a 60% global reduction in plastic production by 2040. In November 2023, to bring public attention to the health threat that microplastics pose, earthday.org released its report Babies vs. Plastics, which collated some of the latest science on the subject. The Guardian newspaper carried an Op Ed about the report highlighting that it is the children of the Global South who are being the most impacted by exposure to microplastics.

Sharan Kalwani *is the current Chair of the IEEE Southeastern Michigan Section as well as the Chair of the Computer Society Technical Chapter. Besides working in the field of High-Performance Computing as his daytime job, he is also Adjunct Faculty and teaches a number of courses such as: Introductory Computer Science, Information Security or Cybersecurity/ Computer Science Research Seminar/ Principles of Programming Languages/etc. He is the author of one book and is working on his second. He is active in the field of Sustainable Tech, having served as the Vice Chair of IEEE Sustech 2021, Sustech 2022 and Sustech 2023. He is also the media person for the 100% virtual 2023 IEEE Online Forum on Climate Change Technologies.*

Ramanujan

IEEE Southeastern Michigan
Presents a Video Documentary on
Srinivas Ramanujan: His Life & Legacy



IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

Srinivasa Ramanujan FRS 22 December 1887 – 26 April 1920) was an Indian mathematician. Though he had almost no formal training in pure mathematics, he made substantial contributions to mathematical analysis, number theory, infinite series, and continued fractions, including solutions to mathematical problems then considered unsolvable. During his short life, Ramanujan independently compiled nearly 3,900 results (mostly identities and equations). Many were completely novel; his original and highly unconventional results, such as the Ramanujan prime, the Ramanujan theta function, partition formulae and mock theta functions, have opened entire new areas of work and inspired a vast amount of further research.

He died in 1920 at the age of 32. His "lost notebook", containing discoveries from the last year of his life, caused great excitement among mathematicians when it was rediscovered in 1976.

Running time: 55 minutes ()

Quick Summary

- **When:**
  Date: April 26th, 2024
  Time: 6 – 7:30 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 Computer Society Technical Chapter

***Pre-Registration Required!**

https://events.vtools.ieee.org/m/368907

IEEE computer society

IEEE Southeastern Michigan Section

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EMC Fest

EMC Fest
May 16, 2024
www.emcfest.org

2024 Speakers: Doug Smith and Ken Wyatt

Doug Smith

Topics:
Resonant Structures in PCBs and Systems (Smith)
Resonances in electronic systems are responsible for both EMC related failures and system operation problems. We will cover resonances both at the system level, such as PCB to enclosure/chassis resonances, as well as cable, heat sink, enclosure, and unwanted resonances in antenna structures such as RFID antennas. We will then cover how to deal with resonant structures both at the last-minute during EMC testing and preemptively, such as adding loss to the structure to damp resonances. Finding and measuring these resonances will be discussed using some innovative techniques I have developed.

ESD issues including, simulators, troubleshooting, and a new potential serious safety issue that can occur after months in the field (Smith)
Have you ever had your product pass ESD in your facility only to have the commercial test lab record a failure? This outcome is very common and a result of the standards we use not specifying parameters of the test that have a large effect on the outcome. The second part of the presentation covers factors that cause unrepeatable test results. Waveform purity and E-field emissions to 5 GHz will be presented for a number of commercially available ESD simulators and similar data will be presented for real human ESD. You will be able to pick the simulator that will make your product pass or fail, or at least have a useful discussion with the test lab. We will also analyze the test standards to see where the problems in testing occur. Then we will move on to troubleshooting ESD issues using techniques I developed that work much faster than normal engineering troubleshooting methods. Then we will move on to unusual forms of ESD that are not covered in standards but have caused a lot of field problems. Finally, we will look at a new form of ESD, not previously described in the literature that is actually very common and can lead to system upset, AND damage to the to the power mains barrier in a system supply that can lead to a safety issue after a few months in the field, long after safety HIPOT testing was done. Hope to see you at my presentations!

Doug Smith held an FCC First Class Radiotelephone license by age 16 and a General Class amateur radio license at age 12. He received a B.E.E.E. degree from Vanderbilt University in 1969 and an M.S.E.E. degree from the California Institute of Technology in 1970. In 1970, he joined AT&T Bell Laboratories as a Member of Technical Staff. He retired in 1996 as a Distinguished Member of Technical Staff. From February 1996 to April 2000 he was Manager of EMC Development and Test at Auspex Systems in Santa Clara, CA. Mr. Smith currently is an independent consultant specializing in high frequency measurements, circuit/system design and verification, switching power supply noise and specifications, EMC, and immunity to transient noise. He is a Senior Member of the IEEE and a former member of the IEEE EMC Society Board of Directors.

His technical interests include high frequency effects in electronic circuits, including topics such as Electromagnetic Compatibility (EMC), Electrostatic Discharge (ESD), Electrical Fast Transients (EFT), and other forms of pulsed electromagnetic interference. He also has been involved with FCC Part 68 testing and design, telephone system analog and digital design, IC design, and computer simulation of circuits. He has been granted over 15 patents, several on measurement apparatus.

Mr. Smith holds the title of University of Oxford Tutor in the Department of Continuing Education at Oxford University in the UK. He has lectured at Oxford University, The University of California Santa Barbara, The University of California Berkeley, Vanderbilt University, AT&T Bell Labs, and internationally at many public and private seminars on high frequency measurements, circuit design, ESD, and EMC. He is author of the book High Frequency Measurements and

Noise in Electronic Circuits. His very popular website, https://emcesd.com , draws many thousands of visitors each month to see over 250 technical articles as well as other features.

He provides training and consulting services in general design, EMC, and transient immunity (such as ESD and EFT), and switching power supply noise. His specialty is solving difficult problems quickly, usually within a couple of days. His work has included digital and analog circuits in everything from large diesel powered machinery to space craft to IC chip level circuits. His large client base includes many well known large electronic and industrial companies as well as medium sized companies and start-up companies.

Kenneth Wyatt of Wyatt Technical Services LLC

Ten Tips for Characterizing & Troubleshooting Board-Level EMI for Products, Including Wireless (Wyatt)

It is fairly common to find multiple on-board sources of energy causing radiated emissions on today's product designs, including board-level EMI for wireless portable, mobile, and IoT devices. The EMI from these energy sources can couple to cables creating radiated emissions, as well as interfere with the receiver performance of cellular, GPS and other wireless modules. This presentation describes methods for identifying, characterizing and reducing the coupling from these energy sources.

Bench Top Troubleshooting ESD and Radiated Immunity Failures (Wyatt)

Electrostatic discharge (ESD) has started to become very common, due to the lower noise margins for digital circuits. While the test is easy to set up in-house, it can become one of the most challenging EMC issues for manufacturers to overcome, because it's difficult to determine the path of ESD current and exactly what circuitry is being affected. In addition, radiated immunity issues have become very common and is nearly impossible to set up in-house without great expense and trained test operators. Often it involves endless cycles back and forth between adding random fixes in-house and then running back to the compliance test lab. The delay for both ESD and radiated immunity issues can negatively affect product introductions. This presentation will describe a simple method for troubleshooting and mitigating both issues right on the lab bench. Several case studies will be described.

Kenneth Wyatt is president and principal consultant of Wyatt Technical Services LLC, as well as the senior technical editor for Interference Technology. He has worked in the field of EMC engineering for over 30 years. His specialty is EMI troubleshooting and pre-compliance testing and is a co-author of the popular *EMC Pocket Guide* and *RFI Radio Frequency Interference Pocket Guide*. He also coauthored the book with Patrick André, *EMI Troubleshooting Cookbook for Product Designers*, with forward by Henry Ott. He is widely published and authored *The EMC Blog* hosted by EDN.com for nearly three years. Kenneth is a senior member of the IEEE and a longtime member of the EMC Society.

SAE J3271 update

SAE J3271: The Megawatt Charging System (MCS) standard

Written by Ted Bohn Chair SAE 3271, Principle Electrical Engineer at Argonne National Labs
Edited for Wavelength Newsletter by Gene Saltzberg VTS SEM Chapter, Faculty at UD Mercy

Commercial electric vehicles have moved from concepts to prototypes and now into production with ever increasing battery capacity. Larger-capacity batteries to support longer-range and load capability up to class 8 vehicles. Commercial vehicles have a short time available for battery recharge, with a goal of charging time equivalent to present liquid refueling. The work-in-progress DC charging standard SAE J3271, which is focused on Megawatt Charging Systems (MCSs), may deliver up to 1500 V/3000 A (4.5 MW).

The first draft of the SAE J3271 Technical Information Report (TIR) circulated for comment in December 2022. An updated version of the draft is expected to be released in spring 2024, and an SAE Recommended Practice draft is targeted for mid-2024. One characteristic of an SAE Recommended Practice is the successful demonstration of the requirements contained in the standard. The working group is presently focused on refining and validating the communication process with pre-production hardware in a system-level context.

Three iterations of the CharIN MCS task group coupler design (V1, V2, V3) led to the final v3.2 design described in IEC TS63379 and SAE J3271. Three rounds of testing were conducted at the National Renewable Energy Lab (NREL) with prototype and pre-production test articles, up to 3000 A, including elevated ambient test conditions. Anonymized testing results are expected to be published later this year. The coupler rating/labeling process is still a work-in progress as part of the standards process and certification testing processes under UL2251, UL2263, and UL2278. Some prefer current rating labels, while others want temperature limited charging labels, for system-based power rating.

There are three charging configurations indicating charging power capability:
• Configuration 1: Non-cooled connector cable, non-cooled vehicle inlet (~500 A).
• Configuration 2: Cooled connector and non-cooled vehicle inlet (~1500 A).
• Configuration 3: Cooled connector and cooled vehicle inlet/conductors (3000 A).

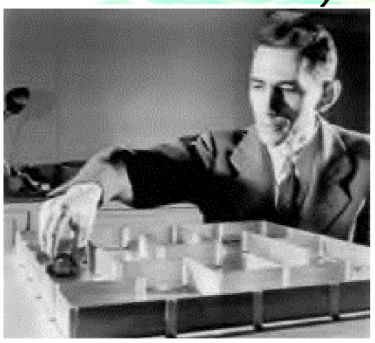
SAE J3271 is intended for any large EV that “rolls, flies, or floats,” including mining, marine, aviation, rail, agriculture, and construction applications. If you would like to know more about this document, or if you are interested in learning more about the work of the Megawatt Charging System Task Force, contact SAE International’s Dante Rahdar, Ground Vehicle Committee Manager, at dante.rahdar@sae.org.

Claude Shannon

IEEE Southeastern Michigan

Presents:

"The Bit Player: Claude Shannon"



We proudly present an IEEE foundation video documentary entitled: "The Bit Player". One of Michigan's famous sons, but not many Michiganders know about him – Indeed few know about Claude Shannon the creator of the "Information Theory". You will learn more about him and at the same time get a refresher on the mankind changing impact Claude Elmwood Shannon made on the world today. This documentary was made in 2018 and brought to you by the IEEE Foundation who partially funded this along with the IEEE Information Theory Society. The trailer for this 90-minute video can be found at https://www.youtube.com/watch?v=E3OldEtfBrE&authuser=0

***Pre-Registration Required!**

https://events.vtools.ieee.org/m/384628

IEEE Southeastern Michigan

Electrical and Electronic Engineers Creating Our Future

At A Glance

- **When:**
  Date: April 29th, 2024
  Time: 06:00 – 7:30 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 Computer Society Chapters

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IEEE Southeastern Michigan Section

IEEE COMPUTER SOCIETY

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!

Curated & Maintained By
Sharan Kalwani,
Chair, IEEE Southeastern Michigan Section (2022-2023)
Editor, Wavelengths (*Serving you as an active newsletter contributor since 2018)*
Enthusiastic IEEE volunteer since 2011

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

Activities & Events

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

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

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

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

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

Other Happenings

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

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.

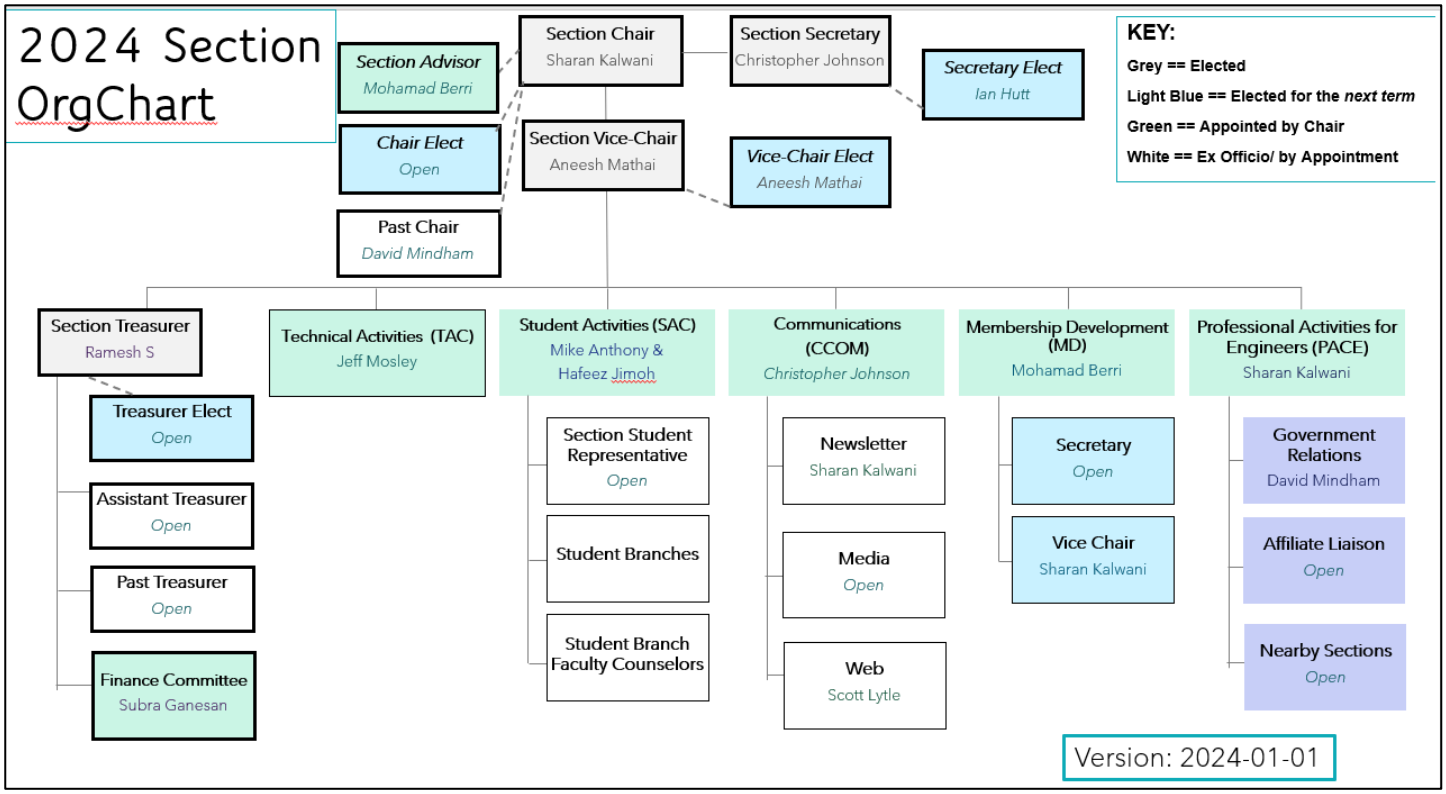
However, members of the section may have multiple technical interests and would like to have meeting information of other chapters. In order to communicate the meeting dates of all the chapters, affinity groups etc., to our members to facilitate their attendance, leaders of the groups are requested to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

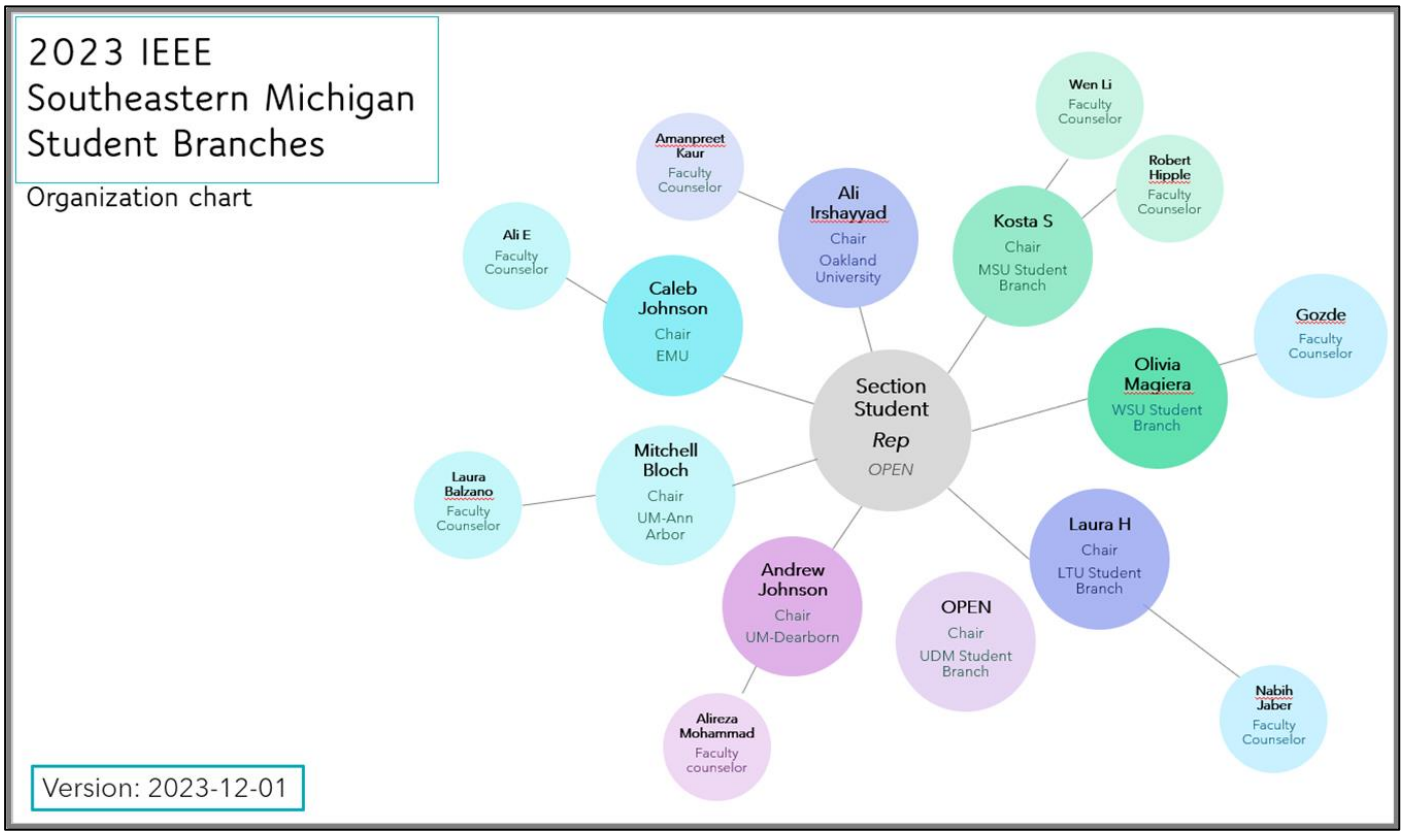
More detailed information on meetings may be found through the IEEE SEM Website: **http://r4.ieee.org/sem/** and clicking on the **SEM meetings list** button near the bottom of the left-hand banner.

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.

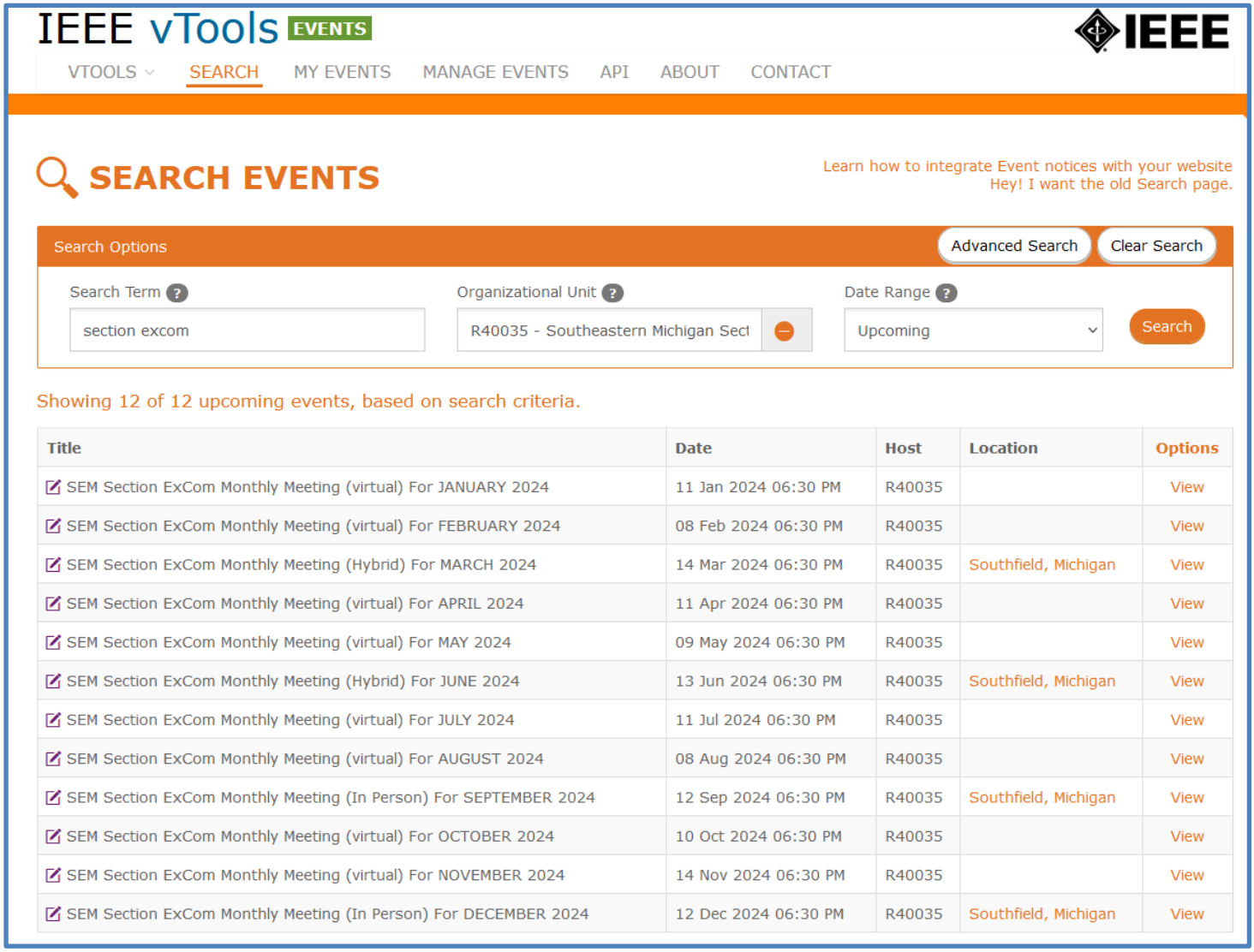
Section Administrative Committee (ExCom) Meeting Schedule for 2024: (clickable links)

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

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

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

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



IEEE vTools EVENTS

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IEEE

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: section excom

Organizational Unit: R40035 - Southeastern Michigan Sect

Date Range: Upcoming

Search

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

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

Editorial Corner

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

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

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

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

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

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

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

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

Editors:

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

Join the Team:

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

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

Wavelengths Annual Publication Plan for Articles

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

Wavelengths Annual Publication Plan for Personal Profiles

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

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 "" button under the top row)
https://www.facebook.com/groups/ieeesemich
SEM LinkedIn Page
(Select the "" button under the top row)
https://www.linkedin.com/groups/1766687/
SEM Twitter Account (new)
(Select the "" button under the top row)
https://www.twitter.com/ieeesemich
SEM Collabratec *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 Officers, see the SEM Officers Roster on the web page (top banner)

Section Officers

Section Chair
Sharan Kalwani

Section Vice-Chair
Aneesh Mathai

Section Secretary
Christopher Johnson

Section Treasurer
Ramesh Sethu

Standing Committees:

Section Adviser
Mohamad Berri

Wavelengths Editor
Sharan Kalwani

Educational Committee
Anthony Will (Chair)

Finance Committee
Subra Ganesan (Chair)

Membership Development
Mohamad Berri (Chair)

Awards & Nominations
Jerry Song (Chair)

PACE
Sharan Kalwani (Chair)

Student Activities
Michael Anthony & Hafeez Jimoh (Co-Chairs)

Student Mentors
OPEN

SECTION Student Rep
OPEN

Technical Activities
Jeffery Mosley

Information Management
Karthick Rajagopal, Naveen Bonagiri

IEEE Southeastern Michigan

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