Wavelengths

Volume 63 – Issue 02

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!

Event	Date	Time
Hot Chips 2022 conference report	02 Feb 2023	06:00 PM
SECTION CONFERENCE BIWEEKLY Planning Meeting	03 Feb 2023	12:00 PM
Transform EV Design and Development	03 Feb 2023	12:30 PM
Officer Training 2023 (part 4 of 7)	04 Feb 2023	09:00 AM
A technical history of Video Conferencing	07 Feb 2023	05:30 PM
Ch8: AdCom Teleconference	09 Feb 2023	11:00 AM
SEM Section ExCom Monthly Meeting (virtual)	09 Feb 2023	06:30 PM
Officer Training 2023 (part 5 of 7)	11 Feb 2023	09:00 AM
Substation Connectors – Types, Uses, & More	15 Feb 2023	11:00 AM
DEMYSTIFYING IMPEDANCE CALCULATIONS (Lunch & Learn)	16 Feb 2023	11:45 AM
SECTION CONFERENCE BIWEEKLY Planning Meeting	17 Feb 2023	12:00 PM
Officer Training 2023 (part 6 of 7)	18 Feb 2023	09:00 AM
EMC Society Monthly tech Meeting	23 Feb 2023	05:30 PM
Officer Training 2023 (part 7 of 7)	25 Feb 2023	09:00 AM

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

Chair's Column

Welcome to the February 2023 edition of the Wavelengths. It's been a very busy month and much has happened.

2023 Section Budget:
A budget process that started last October is near completion. Officers and volunteers are expected to run their portions of our organization according to this approved budget.

Spring Conference:
Keyur Patel is leading our Spring Conference Organizing Committee. The committee is having weekly meetings. If you wish to volunteer, you can always contact via conference@ieee-sem.org

Volunteering:
The Spring Conference situation brings up an important point about volunteering. We, IEEE-SEM, 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.

Policies and Procedures:
Most Policies and Procedures that we, IEEE Southeastern Michigan, follow are spelled out in the IEEE MGA manual. We have shared the latest MGA manual with folks who recently attended the Focus Chair new officer training. We will also share with all other training attendees, e.g., Vice Chair, Secretary and Treasurer as well. Additional information will be added as needed. A document with links to the MGA Manual will also be located in the website and Collabratec folder.

Good news:
IEEE Region 4 shared via their twitter account the recent winners of the OUTSTANDING SECTION and SECTION MEMBER RETENTION AWARDS – in which we featured very prominently (we won both in the Large Section category). See the twitter.com pictures below.

I look forward to both ***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:

Technical Activities Report

2023 IEEE SE Michigan Section Geo-unit Status (Till Jan 30th)

Ch's & AG's	Ave Tech Mtg. Attend	Ave Tech Mtg Guest	#L31 - Technical	#L31 -Admin	#L31 Professional	#L31 -Other	Geo-Unit Name	# Unreported	Total Mtgs
CnsIt	0	0	0	0	0	0	Consultants Network	0	0
LIFE	0	0	0	0	0	0	Life Members	1	0
WIE	0	0	0	1	0	0	Women In Engineering	0	1
YP	0	0	0	0	0	0	Young Professionals	0	0
1	0	0	0	0	0	0	Circuits & Systems, Signal Proc., Info Th.	0	0
2	0	0	0	0	0	0	Vehicular Technology	0	0
3	0	0	0	0	0	0	Aerospace & Elec. Sys., Communications	0	0
4	39	36	1	0	0	0	Trident (Ant, Elect Dev., uWave, Photo)	0	1
5	25	0	3	0	0	0	Computers	0	3
6	0	0	0	0	0	0	Geoscience & Remote Sensing	0	0
7	75	15	1	0	0	0	Power Engineering, Industrial App.	0	1
8	44	21	2	1	0	0	Electromagnetic Compatibility (EMC)	0	3
9	0	0	0	0	0	0	Power Electronics, Industrial Electronics	0	0
10	0	0	0	0	0	0	Engineering Management	0	0
11	0	0	0	0	0	0	Eng. in Medicine & Biology	0	0
12	0	0	0	0	0	0	Control Systems	0	0
13	19	0	5	0	0	0	Education	0	5
14	0	0	0	0	0	0	Robotics & Automation	0	0
15	39	36	1	0	0	0	Nuclear Plasma Science Society	0	1
16	0	0	0	0	0	0	Computational Intelligence / Sys.Man.Cyber.	0	0
17	27	0	1	0	0	0	Nano Technology Council	0	1
SEM	0	0	0	7	0	0	SEM (Section)	0	7
	267	108	14	9	0	0	NOTE: Highlight Green = Active	1	23
		40%					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 for technical meetings, please contact me via the email below.

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

Officer Training

We have been conducting various new and old officer training for 2023 in our Southeastern Michigan Section. It is open to all our members, and especially our newly elected officers, with a series of virtual training classes to be held on Saturday mornings from 9 AM ~ 11:30 AM. The first class took place on Saturday 2023/01/07.

The classes will focus on the tools needed to guide an IEEE Geo-unit (Affinity Group, Technical Chapter, Student Branch or HKN Chapter) to a successful year with lots of interesting activities for all your members.

The listing of the focus of each class is shown below:

vTools	Theme: Communications	*-done!*
Collabratec	Theme: Communications	*-done!*
Leadership	Focus: Chair	*-done!*
Leadership	Focus: V-Chair	- scheduled on 2023/02/04
Leadership	Focus: Secretary	- scheduled on 2023/02/11
Leadership	Focus: Treasurer	- scheduled on 2023/02/18
Leadership	Extended Team Focus: Ethics	- scheduled on 2023/02/25
Coordination	Extended Team Focus: Advanced features and other vTools (to be announced)	

We have been recording the training sessions, and *plan* to place them in the SEM Website / About SEM / Training and likely replace some of the older, outmoded earlier topics in that location. **https://r4.ieee.org/sem/about-sem/training/**

The link to the site where we will conduct training, along with the calendar invitation has been sent to the entire membership. Our hope is that members interested in leadership training and/or learning some of the 'Soft Skills' we often talk about, as being critical to a successful engineering career.

Sharan Kalwani
Via email: chair@ieee-sem.org
Kimball Williams
Via email: k.williams@ieee.org

This Month in February

Or: I Did Not Know This! ☺

February 5th, 1840 – John Boyd Dunlop is born. Dunlop was a Scottish inventor and veterinary surgeon who spent most of his career in Ireland. Familiar with making rubber devices, he re-invented pneumatic tires for his child's tricycle and developed them for use in cycle racing. He sold his rights to the pneumatic tires to a company he formed with the president of the Irish Cyclists' Association, Harvey Du Cross, for a small cash sum and a small shareholding in their pneumatic tire business. Dunlop withdrew in 1896. The company that bore his name, Dunlop Pneumatic Tyre Company, was not incorporated until later using the name well known to the public, but it was Du Cros's creation

February 11th, 1847 – Thomas Edison is born. He was an American inventor and businessman, who has been described as America's greatest inventor. He developed many devices that greatly influenced life around the world, including the phonograph, the motion picture camera, and the long-lasting, practical electric light bulb. Dubbed "The Wizard of Menlo Park", Edison was a prolific inventor, holding 1,093 US patents in his name, as well as many patents in the United Kingdom, France, and Germany. More significant than the number of Edison's patents was the widespread impact of his inventions: electric light and power utilities, sound recording, and motion pictures all established major new industries worldwide. These included a stock ticker, a mechanical vote recorder, a battery for an electric car, electrical power, recorded music and motion pictures. Edison developed a system of electric-power generation and distribution to homes, businesses, and factories – a crucial development in the modern industrialized world.

February 13th, 1910 – Birthday of William Shockley, an American physicist and inventor. Shockley was the manager of a research group at Bell Labs that included John Bardeen and Walter Brattain. The three scientists were jointly awarded the 1956 Nobel Prize in Physics for "their researches on semiconductors and their discovery of the transistor effect." Shockley's attempts to commercialize a new transistor design in the 1950s and 1960s led to California's "Silicon Valley" becoming a hotbed of electronics innovation. In his later life, Shockley was a professor of electrical engineering at Stanford University and became a proponent of eugenics.

February 15th, 1564 – Galileo is born. An Italian polymath, Galileo is a central figure in the transition from natural philosophy to modern science and in the transformation of the scientific Renaissance into a scientific revolution. Known for his work as astronomer, physicist, engineer, philosopher, and mathematician, Galileo has been called the "father of observational astronomy", the "father of modern physics", the "father of the scientific method", and even the "father of science"!

February 18th, 1836 – Ernst Mach is born. Mach was an Austrian physicist and philosopher, noted for his contributions to physics such as study of shock waves. The ratio of one's speed to that of sound is named the Mach number in his honor.

February 20th, 1844 – The day celebrated as the birthday of Ludwig Boltzmann. Ludwig Eduard Boltzmann was an Austrian physicist and philosopher whose greatest achievement was in the development of statistical mechanics, which explains and predicts how the properties of atoms (such as mass, charge, and structure) determine the physical properties of matter (such as viscosity, thermal conductivity, and diffusion).

February 22nd, 1857 –A Day all engineers must be able to remember, for it is the birthday of Heinrich Hertz, a German physicist who first conclusively proved the existence of the electromagnetic waves theorized by James Clerk Maxwell's electromagnetic theory of light. The unit of frequency — cycle per second — was named the "hertz" in his honor

February 29th, 1860 – Herman Hollerith is born. An American inventor who developed an electromechanical punched card tabulator to assist in summarizing information and, later, accounting. He was the founder of the Tabulating Machine Company that was amalgamated (via stock acquisition) in 1911 later renamed IBM.

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
Just one of the Editors, Wavelengths,
2022-2023 Chair, Southeastern Michigan Section
Passionate Engineering History Buff/Aficionado

ARDC: Making an Impact

ARDC: Making an Impact in Amateur Radio
By Dan Romanchik, KB6NU, Communications Manager, Amateur Radio Digital Communications

"A real game changer." That's how some hams are characterizing Amateur Radio Digital Communications (ARDC), a private foundation whose mission is to "support, promote, and enhance amateur radio and communication technology." Over the past three years, ARDC has awarded grants to amateur radio clubs that have helped them improve their repeater systems, their emergency communications capabilities, and their educational and outreach activities.

A little history

Nearly forty years ago, a group of visionary hams saw the future possibilities of what was to become the internet and requested an address allocation from the Internet Assigned Numbers Authority (IANA). That allocation included more than sixteen million IPv4 addresses, 44.0.0.0 through 44.255.255.255. These addresses have been used exclusively for amateur radio applications and experimentation with digital communications techniques ever since. In 2011, the informal group of hams administering these addresses incorporated as a nonprofit corporation, Amateur Radio Digital Communications (ARDC). ARDC is recognized by IANA, ARIN, and the other Internet Registries as the sole owner of these addresses, which are also known as AMPRNet.

Over the years, ARDC has assigned addresses to thousands of hams on a long-term loan (essentially a zero-cost lease), allowing them to experiment with internet-related amateur radio digital communications. Some very interesting and worthwhile research and practical applications have been carried out by hams using these addresses, including TCP/IP connectivity via radio links, digital voice, telemetry, and repeater linking.

Even so, the amateur radio community never used much more than half the available addresses, and today, less than one third of the address space is assigned and in use. This is one of the reasons that ARDC, in 2019, decided to sell one quarter of the address space (or approximately 4 million IP addresses) and establish an endowment. This endowment now funds ARDC's program of scholarships and grants to qualified organizations that promote and support amateur radio or are working on communications and networking research and development projects.

Initially, ARDC was restricted to awarding grants to organizations in the U.S., but is now able to give money to organizations around the world. They have, for example, awarded €95.000 to the Deutscher Amateur Radio Club (DARC) to enable them to more quickly develop OpenWebRX, a multi-user SDR receiver that can be operated from any web browser without the need for any additional software.

Now, let's look at a couple of examples as to how ARDC is making an impact in amateur radio.

BARC uses grant to engage youth

The Bridgerland Amateur Radio Club (BARC) consists of roughly 200 radio operators from Northern Utah. The club is service-oriented and provides communications and other support for several large-scale events in the valley including the 206-mile LOTOJA bicycle race and the 100-mile Bear 100 foot race. The club has also been involved in offering hands-on activities for youth to introduce them to amateur radio. BARC offers free membership to all students, including primary school, high school, and university students.

To aid in their efforts to introduce youth to amateur radio, ARDC awarded the club $18,000. This award will fund hands-on activities with a space science and technology theme. Part of the funds, for example, will go towards setting up and maintaining a portable ground station that will allow local schools to make International Space Station (ISS) contacts. Working with teachers, a local makerspace, and other youth groups, the club will also be able to offer events where students can learn how to find, track, and communicate through amateur radio satellites.

In addition, BARC plans to host two six-week hands-on workshops for youth ages 11 to 17. In the workshop, students will assemble an amateur radio payload and launch it on a high altitude balloon that will take it up to 100,000 feet. The students will use APRS to track the balloon in flight and recover it once it returns to earth.

The space station contacts and the workshops are planned to take place over the next 18 months, but the club will continue to use the station to introduce satellite communications to youth and amateur radio operators in Utah beyond 2022. "This grant and our Bridgerland Amateur Radio Club demonstrate the important role amateur radio can play in furthering STEM education, which is critical to continuing Utah's high-tech economy," said ARRL Utah Section Manager Pat Malan, N7PAT.

Club station educates the community in Eugene, OR

The Valley Radio Club of Oregon (VRC), located in Eugene, Oregon, was chartered in 1929, and is one of the oldest, continuously operated clubs in the United States. In June 2014, VRC volunteers set up amateur radio station W7PXL at the Eugene Science Center and operated it every Saturday until the Covid pandemic forced the museum to close. The station has educated thousands of visitors (many of them children) about amateur radio, and has provided the first hands-on experience with two-way radio for many visitors.

According to Scott Rosenfeld, N7JI, one of the station managers, the station was largely assembled from equipment that was begged, borrowed, and donated (not stolen) from club members. Since much of it is now 20-30 years old, they were starting to see equipment failures. In October 2021, ARDC awarded VRC a $16,525 ARDC grant to upgrade the equipment and to keep the station operating. The grant allowed them to build a modern station to provide a better, more reliable, more effective hands-on teaching experience at the museum.

Equipment they purchased with the grant included:

- Icom IC-7610 HF + 6m transceiver
- Kenwood TM-D710GA 2m/70cm FM transceiver
- 2 laptop computers
- 65-inch computer monitor to make it easier for museum visitors to observe station operation
- 50 amp, 12 VDC switching power supply, and a DC power distribution system using Anderson Powerpoles
- Station accessories, including Morse Code keys, speakers, and headphones
- New antennas, including a multi-band parallel wire dipole, and a 2m/70cm vertical antenna

Rosenfeld also noted that the grant allowed them to purchase a custom-built, lockable enclosure with windows. The enclosure matches the room's color scheme, prevents access to the station equipment when not in use, and permits visitors to see the equipment when no operator is present. The cabinet can also allow museum personnel to move the equipment should they need the space for another purpose. *The Valley Radio Club's station at the Eugene Science Center features a 65-inch monitor that attracts visitors to the station and helps them observe station operation*.

The real star of the show, though, is the station's 65-in. monitor (shown above). According to Nelson Farrier, NF7Z, one of W7PXL's station managers, the monitor attracts visitors, and once they wander over, station operators can tell them about amateur radio. When there are no operators at the station, a video is shown that educates visitors about ham radio.

Farrier says that the ARDC grant has re-energized the station. The new equipment is much nicer to use and provides a better experience for both volunteers and visitors.

If you know of a project that could use financial support, ARDC wants to hear from you. ARDC makes grants that fall into one of three categories:

- Support and growth of amateur radio,
- Education, and
- Technical Innovation.

It's easiest for ARDC to give you a grant if your organization is a 501(c)(3) public charity (US), government entity (US), international charity/nonprofit (outside the U.S.), or a school or university (U.S./outside the U.S.).

To apply for a grant, you need to submit a proposal. You can see the kinds of questions we ask by looking at the application form. In general, the proposal should tell us:

- What is your project, and why do you want to make it happen?
- How does your project align with ARDC's mission and goals?
- Who will carry out your project, and what experience do they have?

ARDC grants can be a real game-changer for clubs, which play an important role in amateur radio. If your club project needs financial support, please get in touch with us. We can even help answer questions as you prepare your proposal, you can email ARDC at giving@ardc.net to set up a time to talk about your project before you apply. The ARDC staff can tell you up front whether or not your project is likely to be successful before you begin your written application. For more information on applying for a grant, go to https://www.ampr.org/giving/ or email me at cwgeek@kb6nu.com .

Components of IEEE

Components of the IEEE

You already know that the IEEE is the 'Largest Professional Technical Society' on this planet. However, you may not be aware of the granular structure of our organization, and how it affects us all in many ways. Upon opening the IEEE main website, you should be presented with a top set of 'TABs' with the first being "About". Clicking on that TAB opens a drop down listing of multiple topics all relating to the structure of various elements of IEEE. Each one of these seems to lead to another long list of topics. (It seems like the matryoshka or nesting Russian dolls where there is always another doll inside of each.) Fear not! This does not go on forever!

Yes, there is a LOT to read about the IEEE, and I encourage you to set up a schedule or program for yourself and read all that material over time to gain a wider understanding of just what IEEE is, and where your place within the organization fits now, and where you might aspire to grow into as your career progresses. However, at this time I want to offer you a simplified view of IEEE "from the 10,000 foot level' and focus on those elements of the organization that relate directly to most members of our Section.

To begin at the 'big picture' level, note the world map at the left. This shows how IEEE divides the world map into 10 'Regions'. In typical US centralized thinking, Regions 1-6 encompass the USA. The rest of the world is given only 4 regions: (Canada / Africa, Europe, Middle East / Latin America / Asia and Pacific)

This Regional view relates to where each of our members live. The Regions are so large that effective management is all but impossible and so each region is sub-divided into more local 'Sections' which generally hold no more than a few thousand members. This arrangement is the view of the 'Member and Geographic Activities' (MGA) assembly, and of its committees.

Southeastern Michigan Section is part of region 4 (The red area on the US map above) and within the region are 23 Sections. Region 4 includes the states of Illinois, Indiana, Iowa, Michigan, Minnesota, Nebraska, North and South Dakota, Ohio, and Wisconsin.

Each Region is managed by a committee of elected and/or appointed volunteers and supported by a comprehensive network of sub-committees dedicated to specific goals and objectives. For a detailed look at the Region 4 organization, go to: **https://www.ewh.ieee.org/reg/4/index.php**.

Astute readers will have noticed that I have only mentioned the 'Geographic' elements of the IEEE and not mentioned the technical organization. The Technical Activities Board and its associate committees oversee the operation and coordination of the technical elements of the IEEE. At this time, we will pass by this aspect of the IEEE in silence, and devote a column in next month's Wavelengths magazine to exploring the technical side in some detail.

Challenge of Student Recruitment

Addressing the Challenge of IEEE Student Recruitment Directly – a Case Study

Many student organizations have lost momentum over the past several years, and the IEEE student branch at Michigan State University is no exception. Although we do have a reasonable number of student members, there is definitely room for improvement. Another issue is that there was no organization to speak of. Student members are simply individual engineering students that happen to be IEEE members as there was no IEEE student body to attract additional students. Reaching out to past leadership was unsuccessful as most of the group had already graduated. It soon became clear that these circumstances called for aggressive action, and we would like to share with you the strategy we are following here at MSU.

MSU is fortunate to be the home for the Facility for Rare Isotope Beams (FRIB), an "atom-smasher" that reaches energies higher than those ever attained previously. FRIB enables scientists from around the world to make discoveries about the fundamental properties of matter to an extent which heretofore could only be dreamed about. FRIB also has an excellent public outreach program, headed by Dr. Zach Constan, which easily permits groups up to 50 in number to tour the facility. The idea was to attract engineering students by inviting them to an "IEEE-sponsored" tour of FRIB, and take advantage of this to tout the many benefits that IEEE provides for engineering students of all disciplines.

The challenge was in gaining the attention of students to deliver the invitation! Mass email was out of the question – students are bombarded with email on a daily basis and there is no way to break through the "noise", let alone avoid ending up in the spam folder. Furthermore, there are understandably restrictions on the dissemination of mass email to the student body. We concluded that a different approach was required - what about a more personal, face to face approach? There is a certain time when we can have the students undivided attention – while they are in class! Our newly-elected IEEE SECTION Student Representative, Arifuzzaman Faisal (Faisal for short), painstakingly compiled a list of every EE course taught at MSU in the Spring 2023 semester. From this list, we sent a polite email to each instructor requesting no more than 5 minutes at the beginning or end of a class period of their choice, whereby we could speak to the students as a group and invite them to the IEEE FRIB tour. Since most EE instructors are IEEE members themselves, we received an overwhelming number of positive responses.

Five minutes is not very much time to thoroughly extol the virtues of IEEE membership to a class of sleepy students, so we had to condense the messaging as much as possible. We boiled it down to two pieces information that we needed to convey:

1. IEEE is not for Electrical Engineers only! If your chosen field works with electronics even tangentially, there is a place for you in IEEE.
2. Engineers are <u>assumed</u> to be IEEE members. People do not ask if you are an IEEE member, they ask what chapters you belong to! Membership is a foregone conclusion.

After these two bullet points are communicated, the upcoming tour is mentioned. A flyer with a QR code is left on a table at the front of the classroom which students can easily scan on their way out. That registers them for the tour and adds them to our mailing list. So far we have had two tours, and both were filled to capacity. Comparing the number of IEEE student members at MSU prior to the tour with the number of students sometime after the tour clearly shows the success of this approach. Interesting fact – our student representative, Faisal, came to us through such a tour!

In conclusion, in this modern era of hyper communication, it becomes increasingly challenging to attract the attention of students – there is just too much competition. But with a little effort and planning, you can reach them at that one time when they are certain to be paying attention – during class!

Robert Hipple, PhD

EIT 2023: Research CFP

CALL FOR PAPERS
2023 IEEE INTERNATIONAL CONFERENCE on
ELECTRO/INFORMATION TECHNOLOGY
May 18 - 20, 2023
Lewis University, Romeoville, IL
Paper Submission Deadline: March 7, 2023*

The IEEE 2023 International Electro/Information Technology Conference, sponsored by the IEEE Region 4 (R4), in collaboration with Lewis University, and the IEEE Chicago Section., 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 and Engineering Management**

Important dates:

- **Submission of full papers: March 7, 2023**
- **Notification of acceptance: April 7, 2023**
- **Final manuscript (PDF) due: April 21, 2023**
- **Early registration: April 15, 2023**

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

*" ***International participants who need visa to enter the US are encouraged to submit their papers by Feb. 15, 2023. This will allow us to review their papers and send them the invitation letters earlier.***"

EIT 2023: Industry CFP

CALL FOR INDUSTRY APPLICATION PAPERS
2023 IEEE INTERNATIONAL CONFERENCE on
ELECTRO/INFORMATION TECHNOLOGY
May 18 - 20, 2023,
Lewis University, Romeoville, Illinois, USA
https://eit-conference.org/eit2023
Sponsored by IEEE Region 4 (R4), in cooperation with Lewis University and the IEEE Chicago Section.

Submissions of quality industry papers/presentations describing ideas or implementations in all areas of information technology and engineering solutions relevant to industrial applications and of interest to practicing and professional engineers are requested.

Please provide a 300 word summary of your industrial application paper or presentation to the website. The Conference also encourages exhibits by the industry presenters and Conference Sponsors to promote their industry. Please visit the website for more information on being a Conference Sponsor.

NOTE: The industry papers will be published in the conference proceedings but not in IEEE XPLORE unless they are submitted as regular conference papers. Identify your industry paper/presentation as "INDUSTRIAL" when submitting

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**
- **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 and Engineering Management**
- **Electric Vehicles**

Important dates:

- **Submission of 300-word summary: March 15, 2023**
- **Submission of final paper: March 30, 2023**
- **Notification of acceptance: April 15, 2023**
- **Early registration: April 15, 2023**

For more information, please contact:

Dr. Hamid Vakilzadian
Jim Riess

Computer Chapter Report

IEEE SEM Computer Chapter's 2022 annual report.

IEEE Southeastern Michigan Computer Society Technical Chapter (also known as Chapter 5) was very active during 2022. We had a total of 64 technical activities (on an average more than 1 per week!). Of these - 44 were single events technical presentations including some technical movies, and 20 were joint events with other chapters.

We were also recognized by our parent Society on their web site as the most outstanding chapter for the year 2021 (announced/awarded in 2022). You can see it at this link:

Outstanding Chapter Award Winners | IEEE Computer Society

Being recognized is always an immense honor. To add icing on top of this cake, we were also declared the winner for the "Professional Chapter Industry Engagement Award" as well! We consider it as a big recognition for our Chapter. It shows the hard work of the Chapter's officers throughout the year.

Some of the Event details are presented below. (admin meetings were excluded, focus was on technical events, which boost member knowledge and value)

Title	Date
Winter 2022 Kick off with MOVIE NIGHT=>The life of James Clerk Maxwell : Southeastern Michigan Section Chapter, E25	11 Jan 2022 06:00 PM

Supercomputing 2021 conference report : Southeastern Michigan Section Chapter, C16	25 Jan 2022 06:00 PM
Recent Advances in Data Center, Edge Computing Technologies : Southeastern Michigan Section Chapter, C16	01 Feb 2022 06:00 PM
Impact of Covid-19 on the Internet Ecosystem : Southeastern Michigan Section Chapter, C16	03 Feb 2022 07:00 PM
Winter22 Semester Break MOVIE NIGHT=> Celebrating Hedy Lamarr: Icon, Immigrant, Inventor : Southeastern Michigan Section Chapter, E25	28 Feb 2022 06:00 PM
Winter22 Semester Break MOVIE NIGHT=> "The Bit Player" : Southeastern Michigan Section Chapter, E25	02 Mar 2022 06:00 PM
Winter22 Semester Break MOVIE NIGHT=> Coded Bias : Southeastern Michigan Section Chapter, E25	04 Mar 2022 04:00 PM
Winter22 Semester Break MOVIE NIGHT=> Divine Discontent: The Life of Charles Proteus Steinmetz : Southeastern Michigan Section Chapter, E25	08 Mar 2022 06:00 PM
Intelligent Vehicles and Transportation Systems : Southeastern Michigan Section Chapter, C16	09 Mar 2022 04:30 PM
MOVIE NIGHT: TESLA - Visionary or Madman? : Southeastern Michigan Section Chapter, E25	10 Mar 2022 06:00 PM
Sparking A Curious Mind : Southeastern Michigan Section Chapter, C16	15 Mar 2022 06:00 PM
Entreprenurial Spirit at OEMs : Southeastern Michigan Section Chapter, C16	25 Mar 2022 12:00 PM
MOVIE NIGHT: Predictions by the Numbers : Southeastern Michigan Section Chapter, C16	01 Apr 2022 05:00 PM
MOVIE->REVOLUTION OS : Southeastern Michigan	05 Apr 2022 06:00 PM

Section Chapter, C16	
Revenge of the Electric Car: Movie : Southeastern Michigan Section Chapter, C16	08 Apr 2022 05:00 PM
MOVIE - CODE RUSH: Documentary : Southeastern Michigan Section Chapter, C16	14 Apr 2022 06:00 PM
How Can Neuroscience Help AI/ML? : Southeastern Michigan Section Chapter, C16	19 Apr 2022 06:00 PM
Artificial Intelligence (AI) Driven iDERMS Solution for Utility Scale Renewable Power Plants Lunch & Learn : Florida West Coast Section Jt. Chapter,PE31/IA34	12 May 2022 11:45 AM
MOVIE - Silicon Valley: A documentary : Southeastern Michigan Section Chapter, C16	13 May 2022 04:00 PM
MOVIE - Top Secret Rosies: The Female 'Computers' of WWII: documentary : Southeastern Michigan Section Chapter, C16	26 May 2022 06:00 PM
Conference on Recent Trends in Embedded Artificial Intelligence (CREAI'22) - Day 1 : Southeastern Michigan Section Chapter, C16	09 Jun 2022 09:00 AM
Conference on Recent Trends in Embedded Artificial Intelligence (CREAI'22) - Day 2 : Southeastern Michigan Section Chapter, C16	10 Jun 2022 09:00 AM
Growing Role of Machine Learning in Automotive Technology : Southeastern Michigan Section Chapter, VT06	14 Jul 2022 06:00 PM
Micro Tutorial: Introduction to Agile Methodology : Southeastern Michigan Section Chapter, C16	26 Jul 2022 03:30 PM
AI in Health Care : Southeastern Michigan Section Chapter, C16	28 Jul 2022 06:00 PM

Software Engineering Challenges for AI/ML-based Systems : Southeastern Michigan Section Chapter, C16	02 Aug 2022 06:00 PM
Micro Tutorial: Introduction to Root Cause Analysis : Southeastern Michigan Section Chapter, C16	13 Aug 2022 02:00 PM
The Hedy Lamarr Story: A fascinating documentary : Southeastern Michigan Section Chapter, C16	26 Aug 2022 06:00 PM
Professional Development Workshop: Critical Thinking Skills : Southeastern Michigan Section Chapter, C16	27 Aug 2022 09:00 AM
Claude Shannon: documentary : Southeastern Michigan Section Chapter, C16	02 Sep 2022 05:00 PM
How to Write an Effective Research Paper : Southeastern Michigan Section Chapter, E25	06 Sep 2022 07:00 PM
CODE RUSH: documentary Netscape & Open Source : Southeastern Michigan Section Chapter, C16	09 Sep 2022 06:00 PM
Current state of the Great Semiconductor Shortage of 2021-22 : Southeastern Michigan Section Chapter, E25	13 Sep 2022 07:00 PM
Revolution OS: documentary : Southeastern Michigan Section Chapter, C16	16 Sep 2022 06:31 PM
Nikola Tesla: documentary : Southeastern Michigan Section Chapter, C16	23 Sep 2022 06:30 PM
Technical Meeting: Automotive Product Development Accelerated by Cloud Computing : Southeastern Michigan Section Chapter, C16	27 Sep 2022 06:00 PM
Prediction by the Numbers: documentary : Southeastern Michigan Section Chapter, C16	30 Sep 2022 06:00 PM
Charles Proteus Steinmetz: documentary : Southeastern Michigan Section Chapter, C16	07 Oct 2022 06:00 PM

Introduction to Embedded Systems (part 1) : Southeastern Michigan Section Chapter, C16	08 Oct 2022 08:30 AM
The Hedy Lamarr Story: A fascinating documentary : Southeastern Michigan Section Chapter, C16	14 Oct 2022 06:00 PM
Introduction to Embedded Systems (part 2) : Southeastern Michigan Section Chapter, C16	15 Oct 2022 08:30 AM
Challenges in designing a self-driving car to real world : Southeastern Michigan Section Chapter, VT06	18 Oct 2022 06:00 PM
Embedded Systems Workshop 2022 - Day 1 (online) : Southeastern Michigan Section Chapter, C16	22 Oct 2022 08:35 AM
Embedded Systems Workshop 2022 - Day 1 and Day 2 (online) : Southeastern Michigan Section Chapter, C16	29 Oct 2022 08:30 AM
VDL - Connecting Space Assets to the Internet: Challenges and Solutions : Northwest Florida Section Chap,C16/COM19	03 Nov 2022 06:30 PM
The Drake Equation: Documentary Night : Southeastern Michigan Section Chapter, C16	04 Nov 2022 05:30 PM
The Ultimate Space Telescope: Documentary Night : Southeastern Michigan Section Chapter, C16	08 Nov 2022 05:30 PM
Node-RED: A Cross-Platform, Web-Based Visual Programming Environment : Southeastern Michigan (Chap 12),CS23	21 Dec 2022 11:30 AM

****

Special Report 1:

Conference on Recent Trends in Embedded Artificial Intelligence (CREAI'22), June 9-10, 2022

IEEE SEM Computer Chapter (Chapter 5) has been organizing free, full day embedded System workshops for the past 20 years. More than 100 persons typically attend. Since we started streaming, we have attendees from other US states and other countries too. In addition to our 20 years of annual Embedded Systems workshop, we held in June 2022, a **C**onference on **R**ecent trends **E**mbedded **AI** called CREAI. This is the first year we are organizing the Embedded AI conference. Our plan is to make it an annual in-person event.

If you are a member of IEEE Southeastern Michigan Section, you would have received announcements for these events by email. Do consider joining the IEEE Computer Society for all the free local educational events, and networking.

There has been an explosion of research activities in Artificial Intelligence and applications. Such activities require inter-disciplinary collaborations and contributions from scientists, engineers, researchers, academicians and entrepreneurs. For example, AI has applications in Embedded System, Automotive, medical, Internet of Things (IoT) and many others.

CREAI'22 provided an excellent international forum for sharing knowledge and results in theory, methodology and applications of Embedded Systems and Artificial intelligence.

For this first CREAI conference, we had presentations from ten expert international speakers, each presentation duration was nearly an hour. Here is a brief summary of the technical presentations. The conference started with a warm welcome speech by Professor Subra Ganesan, chair of the CREAI conference and Chair of IEEE Southeastern Michigan Computer Society Technical Chapter. The co-ordination of speeches was done by Mr. Sharan Kalwani, Chair of IEEE Southeastern Michigan section.

The first presentation was by Prof. Subra Ganesan on "Introduction to Embedded AI". This presentation was aimed to clarify the role of AI, what is AI, basic concepts of AI, a few software and hardware tools.

The second presentation was by Mr. Jacob Beningo, who runs a consulting firm: Beningo Embedded Group. He is an expert in real time embedded systems, is very much involved in real time system projects for the auto industry. He offers also embedded systems courses since the past ten years. He gave a presentation on "Choosing the right RTOS for Embedded AI systems". He explained how Real-Time operating systems simplify the design and verification process and how to select the best RTOS for an application.

The third presentation was by Dr N Rakesh, an academic from India. He is an expert in data science and software. He presented basic concepts and advanced status with application of Data Science. He presented this emerging field, their applications and the advanced software tools. He described data science life cycle, and applications.

After a two-hour break for lunch and for catching up office work, the afternoon session for two speeches started. The fourth presentation was by Dr. Unnikrishnan, co-founder of E-neuroLearn, a AI/ML company, on "How can neuroscience help Artificial Intelligence". He mentioned that the Next Gen Deep Learning (DL) systems with "Neuroscience Inside" are needed in real-time vision systems for autonomous vehicles, etc. Mammalian visual system actively modifies the input to achieve robust perception. Next Gen DL systems should adopt this computational principle from Mother Nature.

The last speaker on day 1 of the conference was Dr. George Pappas from Lawrence Technological University. He presented a talk on AI in Manufacturing Industry. The talk was well received by the audience who are in the Southeastern Michigan that is heavily manufacturing oriented. He described applications in predictive maintenance, production planning, material movement, etc. The first day events closed with a closing summary remarks by Mr. Sharan Kalwani.

The second day presentations started with the welcome remarks by Professor Subra Ganesan and Mr. Sharan Kalwani. The first speaker was by Professor Dr. Suresh Sundaram from the Indian Institute of Science. His presentation was on AI driven autonomous vehicles. He described how Autonomous Vehicles are a very good application for AI.

The next presentations were by two experts from MathWorks. They presented how to integrate AI-based virtual sensors into Model based design. This created a lot of interest among the local auto engineers who work on MBSE design of automotive control systems.

The next presentation was by our high-performance computing expert, Mr. Sharan Kalwani. He presented a talk on "Thoughts on ML in Edge computing". He explained the basic to advanced ML applications with Edge Computing. He described TinyML, different types of Embedded AI computing and sample projects.

After the lunch break, we had two more presentations showing AI applications in the medical field. The first of the two presentations was a joint research type paper by Dr George Pappas and Paul Ilovan, from LTU on "Improving prediction accuracy and classification of bones using ML with a Hounsfield unit". He described the use of HU to model and do bone classification, predict osteoporosis etc.

The last biomedical AI application presentation was by Dr. Manimurugan from University of Tabuk, Saudi Arabia on "AI in Medical Applications". The presentation described classification of AI, benefits of AI and showed the limitless applications

of AI in health care and clinical applications. The conference came to an end by closing remarks by Professor Ganesan and Mr. Sharan Kalwani, inviting audience to send in their comments on this conference.

The details of the conference video presentations are posted at the following links.

Day 1 (June 9, 2022)

1. Welcome to CREAI'22 (6 minutes): https://vimeo.com/718916528
2. Introduction to Embedded AI (Subra Ganesan, 47 minutes): https://vimeo.com/718916855
3. Best Practices for RTOS applications (Jacob Beningo, 31 minutes): https://vimeo.com/718925130
4. Introduction to Data Science (Rakesh, 51 minutes): https://vimeo.com/723038089
5. How can NeuroScience help AI? (KP Unnikrishnan, 43 minutes): https://vimeo.com/721151922
6. AI in Manufacturing Industry (George Pappas, 45 minutes): https://vimeo.com/721152915

Day 2 (June 10, 2022)

1. Welcome to 2nd day of CREAI'22 (7 minutes): https://vimeo.com/719361768
2. AI-driven Autonomous Vehicle (S. Suresh, 34 minutes): https://vimeo.com/722942041
3. Integrating AI-based virtual sensors (Mathworks, total is 46 minutes):
    a. Introductions: https://vimeo.com/723769096
    b. Main presentation: https://vimeo.com/723769562
    c. Q&A, discussion: https://vimeo.com/723774383
4. Thoughts on AI using Edge Computing (Sharan Kalwani, 48 minutes): https://vimeo.com/723012140
5. Improving the Accuracy Prediction ML using HU (Paul Ilovan, 36 minutes): https://vimeo.com/723015730
6. AI in healthcare (Manimurugan S, 50 minutes): https://vimeo.com/722865016

Special Report 2:

20th Annual IEEE Southeastern Michigan Computer Society & Education Society Technical Chapter Embedded System Workshop (ESW). October 22 and 29 on-line

Saturday, October 22nd, 2022 (All times are in EST/EDT Time zone)

09:00 AM - Workshop Begins; Welcome by Dr. Subra Ganesan, Chair ESW 2022 & Sharan Kalwani, Vice-Chair ESW 2022

09:15 - 09:55 AM, **Jacob Beningo, Beningo Embedded Group:** "Achieving Embedded Software Design Success"

09:55 AM to 10:40 AM - **Bill Veenhuis, NVIDIA: "**Embedding NVIDIA Jetson at your Edge**"**

10:40 to 10:55 AM - Coffee Break, Networking and 1st Raffle Prizes/Drawings

10:55 AM to 11:40 AM - **Prof Subra Ganesan, Oakland University: "**Best Practices for Embedded AI for Industrial Applications**"**

11:40 AM to 11:45 AM - Break

11:45 AM to 12:30 PM - **Javier Gazzari, MathWorks: "**Integrating AI-Based Virtual Sensors into Model-Based Design**"**

12:30 PM to 12:45 PM – Industrial Engagement committee presentation – Jim Riess

12:45 to 12: 50 pm 2nd Raffle Prizes/Drawings; Preview of 2nd session events

12:50 PM - VIRTUAL GROUP PICTURE (everyone enables their on webcams/video streams)

12:50 PM - Workshop for the Day 1 ends

Saturday, October 29th, 2022 (All times are in EST/EDT Time zone!)

09:00 AM - Workshop Begins; Welcome by Dr. Subra Ganesan, Chair ESW 2022 & Sharan Kalwani, Vice-Chair ESW 2022

09:05 - 09:50 AM, **Prof Phil Koopman, Carnegie Mellon University: "**How safe is safe enough for autonomous vehicles?**"**

09:50 to 09:55 AM - Break

09:55 AM to 10:40 AM - **Atilla Bulmus & Dr Abir Bazzi, INFINEON: "**AI utilization in Automotive beyond ADAS**"**

10:40 to 10:55 AM - Coffee Break, Networking and 1st Raffle Prizes/Drawings

10:55 AM to 11:40 AM - **Intrepid Control Systems, "**Overview of SerDes and Lidar data in Automotive AI**"**

11:40 AM to 11:45 AM - Break

11:45 AM to 12:30 PM - **Sharan Kalwani, DataSwing: "**Rapid Tutorial on TinyML: Machine Learning for Embedded Devices**"**

12:30 PM to 12:45 PM - 2nd Raffle Prizes/Drawings; Preview of 2nd session events

12:45 PM - VIRTUAL GROUP PICTURE (everyone enables their on webcams/video streams)

12:50 PM - Workshop for the Day 2 ends

Presentation slides of Day 1 are available at L
https://drive.google.com/drive/folders/1D-4XC9Od1xOPjKxqWdyBw1-_q9ZUa1Jw?usp=sharing

Presentation slides of Day 2 are available at
https://drive.google.com/drive/folders/1kxjOPHX5E-GaU_RYtpAsV6MZndaxJAi_?usp=share_link

All the videos have been uploaded to vimeo (no plugin required OR login creation is needed)
Welcome message Day 1 - Overview by Sharan Kalwani, https://vimeo.com/764183590

Welcome message Day 2 by Subra Ganesan, https://vimeo.com/764187023

Jacob Beningo video: https://vimeo.com/763481838

Bill Veenhuis, NVIDIA: https://vimeo.com/763472721

Subra Ganesan (Best Practices for Embedded AI) video: https://vimeo.com/763469037

MathWorks (Model based Sensors) video: https://vimeo.com/723769562

JIm Riess (IEEE Region 4 Industrial Engagement) video: https://vimeo.com/764189825

Welcome message Day 2, https://vimeo.com/765463885

Dr Phillip Koopman Main Keynote Presentation (How Safe is Safe Enough for Autonomous Vehicles?) video:
https://vimeo.com/765505305

Dr Phillip Koopman Question & Answer Session (How Safe is Safe Enough for Autonomous Vehicles?) video: https://vimeo.com/765622978

Infineon presentation, Atilla Bulmus & Abir Bazzi, "AI utilization in Automotive ", video recording: https://vimeo.com/765461619

Intrepid Control Systems, Jeff Warra, "Overview of SerDes and Lidar data in Automotive AI " video recording: https://vimeo.com/764738013

dataSwing, Sharan Kalwani "Quick Overview of tinyML", video recording: https://vimeo.com/765515961

We are now planning for more events in 2023, which are on advanced topics, Industry themed and on educational topics. We do need more volunteers. If interested to volunteer please contact: Professor Subramaniam Ganesan (ganesan@oakland.edu) and SEM Section Chair Mr Sharan Kalwani (sharan.kalwani@ieee.org)

Roberts Rules

IEEE Governance and Roberts' Rules of Order:

Within IEEE, actions that result in decisions at the Committee level are governed by Robert's Rules of Order. For a complete introduction to this topic, I recommend the book:
"21st Century Robert's Rules of Order" by Henry Martyn Robert
For a quick review of why Robert's Rules are relevant to IEEE meetings, take a look at the brief article by James Slaughter on 'Parliamentary Procedure' at:
http://www.jimslaughter.com/Parliamentary-Procedure-in-the-21st-Century.cfm.

The IEEE, in the MGA Operations Manual mandates that the proper conduct of meetings***: "Robert's Rules of Order ... shall be used to conduct business at meeting of the Committee."***

In addition to establishing a universally understood 'bench mark', parliamentary procedure, which is known and understood by anyone engaging in formal social activities, the use of Robert's Rules is particularly germane to teleconference meetings, when normal 'face-to-face' eye contact precludes the use of a 'raised hand' to indicate when the members wishes to 'have the floor'. If the principles of Robert's Rules are ignored in a teleconference setting, chaos quickly takes over, and effectively stalls meeting progress.

Working 'Off-Line':
The effective use of Robert's Rules does not preclude alternative approaches actions and activities that can result in decisions reached 'outside' the committee meeting. We normally refer to these as discussions conducted "off-line" between two, or more, members, in order to clarify each person's understanding and position on a particular point. Often these "off-line" meetings can result in effective problem solutions, or decisions that satisfy everyone's requirements.

Once a decision is made "off-line" it needs to be brought to the full Committee, and given a complete "airing" to acquaint all the Committee members with the results of the "off-line" deliberations. This normally happens when a Committee member brings the topic to the agenda, and presents the proposal, along with its supporting data, to the entire committee for discussion and a vote.

The sequence of actions that result in this are:

- [Member]: Making the Motion: "Mr. Chairman, I move that (fill in the appropriate words)
- [Chair]: "We have a motion on the floor to (restates the motion to ensure it is understood correctly, and to affirm the Secretary has recorded it accurately)
- [Chair]: "Is there a Second to the motion?"
- NOTE: A motion must receive a "Second" indicating support from another member. If not, the motion fails. (With "off-line) discussion, support is almost guaranteed from one of the members of the "off-line" group that achieved consensus in their discussions.)
- [Chair]: (assuming a Second is received) "We have a motion and a second. Is there any discussion?
- This action opens the "Floor" for questions from attendees who may not have been privy to the "off-line" discussion and would like to understand its full implications. Responses to questions should come from the member who made the motion, or he/she can yield the floor to another to support, or speak against the motion.
- Expect to hear discussion both "For" and "Against" any motion if it is sufficiently new or different than normal practice.
- [Chair]: (Once it is clear that either a consensus among the members has been achieved, or that it is obvious that will not happen, the Chair will announce) "I Call for the Vote".
- After the count is completed, the [Chair] will announce, either "The motion passes." or "The motion fails."

The results of the vote reflect the majority of thinking of the committee, and each member should abide by the results of that decision.

Note: When the results of a vote go against the belief of the member, it is within the member's power to develop more supporting data, hold additional "off-line" meetings, attempt to convince other members of the virtues of the motion, and finally return to the Committee, and request to once again place the topic on the next agenda.
However, simply placing the item on the agenda, and returning with no additional data or supporting documents, will likely result in another failed motion.

That wastes everyone's time, and should be avoided.

If it is clear that in a particular meeting, your motion does not have sufficient support, continuing to argue its case will only gain ill will among the members, and likely make it more difficult to gain support for the motion in the future.
This also should be avoided.

"Off-Line Meetings"
The Japanese refer to this type of action as "nemawashi", which roughly translates as holding a conversation on the back porch, or over the back fence. In the US, we call this 'lobbying'. Due to its use by some in Washington who attempt to 'sway' our leadership to positions favorable to a small group, instead of the best course for everyone, it has gotten a bad name. However in Japan, it is an accepted practice to ensure smooth meetings, quick decisions, and consensus on mutually agreed courses of action.

I recommend reading the on-line 'Blog' on the topic:
http://www.japanintercultural.com/en/blogs/default.aspx?blogid=90

Virtual Meetings:
The dominance of virtual meeting where the Chair and members are connected by phone, or ZOOM or some other long distance communication method, it has become standard practice to accept committee decisions based on the principle that if no one objects, then everyone must be in agreement. This follows from English Common Law and from the Roman Law that ‘silence indicates consent’.

Using this shortened form, when discussions wind up, the Chair asks of there are any objections to the motion. Hearing nothing, the motion passes. This is approval by acclimation. It is also recommended to inquire as to whether there are any abstentions, i.e. that member wishes to be recorded as not voting on the question.

30

EMC2023


2023 IEEE INTERNATIONAL SYMPOSIUM ON ELECTROMAGNETIC COMPATIBILITY & SIGNAL/POWER INTEGRITY
EMC+SIPI 2023
GRAND RAPIDS, MICHIGAN
JULY 31-AUGUST 4
BENEFITS OF ATTENDING
PARTICIPATE IN 200+ TECHNICAL SESSIONS
Workshops & Tutorials, Hands-on Experiments & Demonstrations, and Special Sessions with the world's leading engineers in EMC and SIPI.
ATTEND THE "ASK THE EXPERTS" PANELS
Bring your questions or simply listen and learn from the experts!
PARTICIPATE IN LIVE DEMONSTRATIONS
Presented by industry experts to learn how to solve real-world problems.
LEARN ABOUT THE LATEST GLOBAL STANDARDS
in EMC and SIPI, hear updates, ask questions, and attend Working Group Meetings as part of the "Standards Week" special track.
NETWORK WITH FRIENDS AND COLLEAGUES
During the Welcome Reception, the Gala Dinner, Young Professionals, and Women in Engineering events.
BRING THE FAMILY
And Experience this unique and vibrant city of Grand Rapids, Michigan. Companions are invited to join the Social Events and interesting area tours.
#IEEE_ESP23
www.emc2023.org
IEEE
EMC SOCIETY

Need Science Fair Judges

IEEE-SEM MEMBERS NEEDED AS 2023 SCIENCE FAIR JUDGES
By Don C. Bramlett,, LSMIEEE, FMSPE, FESD

Please volunteer to serve on the elite panel of judges for the **professional awards** being sponsored by the Southeastern Michigan Section of the Institute of Electrical and Electronics Engineer, Inc. (IEEE-SEM) at the 66th Annual Science and Engineering Fair of Metropolitan Detroit (SEFMD). This is the 28th straight year that the IEEE-SEM Section has provided judges and sponsored **professional awards** for projects associated with electrical, electronics, computer engineering and IEEE related fields.

The Science Fair and judging will be conducted in a hybrid manner, both virtual and in-person. The Science Fair and I will communicate further details to those that will be IEEE judges. **The IEEE teams of judges will primarily use the in-person format. In-person judging will be on Wednesday, March 15, 2023 at the Science Fair, located at the Huntington Place (formerly called Cobo Hall) in downtown Detroit. The Science Fair will be on the Lower Level near** the **river. Please plan to arrive between 7:45 and 8:30 am at the Science Fair to enjoy some free coffee and muffins. We should be near the Professional Awards** Judging Booth and **coffee.**

It is necessary that if you are already registered as a Science Fair judge or a new judge, to go to the Science Fair website:

http://www sefmd.org

Judging . *Identify you will be judging as part of the IEEE* ***professional awards*** *judging team during Round 1. Provide also the information for a background check with the Michigan State Police. Inform me if you are registered to be an IEEE* **professional awards** *judge,* d.bramlett@ieee.org .

As last year, IEEE-SEM plans to provide judging for both the Junior (6th – 8th grade) Division and the Senior (High School) Division. IEEE-SEM will tentatively make three Grand Awards, including personalized certificates and cash prizes, and several Outstanding Achievement Awards, consisting of personalized certificates.

This year, like last year, some projects in the IEEE related fields may be found in the categories of Systems Software, Robotics & Intelligent Machines, Physics & Astronomy, Environmental Engineering, Engineering Mechanics, Energy: Physical, Energy: Chemical, Embedded Systems, etc. Students in Wayne, Oakland, Macomb, Lenawee, Livingston, Monroe and Washtenaw counties will participate in the Science Fair. So this year again will be a real interesting experience judging the Junior Division and Senior Division projects.

Based on the number and quality of the selected project displays, the judges may choose to use the supplied Project Evaluation and Judging Forms to grade the projects in each Division or to use a less formalized process, as deemed appropriate.

Please direct any questions you may have to me on my cell phone at 313-608-6223; or you may contact me at my e-mail address d.bramlett@ieee.org .

Looking forward to working with you on this event

Hydro Powerplant Visit

IEEE SE Michigan Education Society Chapter

Presents

Historical Tour of the Henry Ford-Thomas Edison Hydroplant

IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

The Southeastern Section of IEEE will host for the 3rd time, a tour of the Fairlane Estate -- Home of Clara and Henry Ford -- where Henry and Thomas Edison built a hydropower plant on the Rouge River across the street from the University of Michigan Dearborn. This is an historical landmark that presents insight into the evolution of engineering theory and practice in several disciplines (civil, mechanical and electrical). We will be guided by several electrical engineers, who led the recommissioning of the generation system as a historical landmark in the early 1990's.

This tour was last conducted in 2021. Back then, the event was approximately 4 hours -- including transportation from and to pick-up and drop-off points (TBD). Lunch will be provided at 12 noon, the actual tour will take 2 hours, then return to campus starting at 2 PM; arriving at the original pick up points no later than 3 PM.

At Glance

- **When:**
  Date: March 31st, 2023
  Time: 12:00 PM– 3:00 PM (EST/EDT)
- **Where:**
  Assembly at University of Michigan-Dearborn
- **Audience: OPEN to ALL***

Sponsored by IEEE Southeastern Michigan Section

***Pre-Registration Required!**

https://events.vtools.ieee.org/m/346320

IEEE Southeastern Michigan Section

IEEE
Advancing Technology for Humanity

Future City Report

IEEE Judging for the Michigan Regional Future City Competition 2023
By Don C. Bramlett, SMIEEE, FESD, FMSPE

This is the 23rd year that the IEEE-SEM Section has provided a dedicated team of judges and a special professional organization award for the project having the most innovative application of electrotechnology in the design of the city in the future. The IEEE-SEM Section judging team members were Don Bramlett (retired – DTE Energy), Jim Rofe (JR Consulting), Bill Quinlan (AAM) and Kimball Williams (retired – DENSO).

This is one of the premier pre-university STEM programs for energized middle school students. The Future City Competition in 2023 had the theme of "Climate Change." The competition and judging reverted back to an in-person format this year. The competition judging was completed on Monday, January 23 at the Suburban Collection Showplace on Grand River Avenue in Novi. A total of 19 projects from middle schools around Michigan were judged.

The IEEE-SEM Section sponsored "Electrotechnology Award" was presented to the Tappan Middle School (Ann Arbor) Future City team for their project entitled "Superior Point." This project addressed a number of IEEE-related features, including a diversity of energy sources such as solar power, wind energy, wave energy and hydroelectric energy; and a maglev rapid transit system. This project took third place in the overall Michigan Regional Competition

The St. John Lutheran School team project, entitled "Second Page" took first place in the overall Michigan Regional Future City Competition and will represent Michigan in the national competition in Washington DC in February.

Section Spring Conference

RoboFest News

(1) 2023 Robofest Game Rules Finalized and Registration Open
(2) Pre-season Workshop Schedule
(3) Warmup Competition/Judge Training February 11
(4) 2023 Sponsor Form Available
(5) In Search of 5, 10, 15 and 20 Year Coach Award Recipients
(6) MCWT $750 Grants for All-Girl Robofest Teams in Michigan
(7) Robofest Pen Pal Opportunity
(8) LTU Scholarship Opportunity for all Robofest Participants
(9) Seeking Site Hosts for 2023 Competitions â€“ Final Call

Note: All times are listed in EST unless noted

(1) 2023 Robofest Game Rules Finalized and Registration Open

The 2023 General and Category rules have been modified slightly to add clarifications and FAQs. The updated versions have posted to the Robofest.net website. Game Judge training presentation slides and video recordings will be uploaded in early February. Click on the **Get Involved** tab and select either the **2023 Main Page** or specific category.

US and International Sites are still being finalized, but many of the sites are now open for team registration.

(2) Pre-season Workshop Schedule

Robofest Workshops are available at no cost to registered 2023 Teams. Workshops are held in the Robofest Lab on LTU's Campus. Robots and laptops are provided. We have several Robofest workshops coming up with capacity available.

Saturday, 1/28/23:
- LEGO EV3 with Scratch (Game) 9:00 am ~ 12:00 noon
- LEGO Spike Prime/Robot Inventor with Scratch (Game) 1:00 pm ~ 4:00 pm

Saturday, 2/4/23:
- **NEW!** AI/Machine Learning LEGO Spike Prime /Robot Inventor (Exhibition) 2:00 om ~ 4:00 pm

Saturday, 2/25/23:
- LEGO Spike Prime/Robot Inventor with Python (Game) - 9:00 am ~ 12:00 noon
- VEX IQ with VEX Code (Game) 1:00 ~ 4:00 pm

If you have new teams that are interested in participating in the Game or Exhibition qualifier categories, you can pre-register for a qualifier, even if you haven't decided which qualifier you want to attend.

(or pre-registration is open if you are undecided about a qualifier date), then sign up for a workshop:
https://www.robofest.net/rms/SharedPagesServlet?cmd=getWorkshopsTable

(3) Warmup Competition/Judge Training February 11

This event will be held on Saturday, Feb 11, 2023 from 1:00pm ~ 4:30pm in Room J234 in the Taubman Complex. We encourage all Michigan Site Hosts and Volunteer Game Judges to attend. Please register as a Judge in the Volunteer Registration System: https://www.robofest.net/rms/appPages/volunteerPages/index.jsp?siteID=1399

We still have room for 1 Junior and 1 Senior Game team, so if you would like to participate, please send an email to spalonis@ltu.edu with the team ID from your qualifier registration. Check-in for registered teams begins at 1:00 pm and Judge training will start at 1:15 pm.

(4) 2023 Sponsor Form Available
Robofest would not be possible without the support from our generous sponsors. Thank you to all of our sponsors, past and present! If you would like to sponsor Robofest and have your name/organization included on all the Robofest marketing materials, please submit the Sponsorship Form: https://www.robofest.net/images/SponsorshipForm2023.pdf

(5) In Search of 5, 10, 15 and 20 Year Coach Award Recipients
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 13.

(6) MCWT $750 Grants for All-Girl Robofest Teams in Michigan
The Michigan Council of Women in Technology Foundation, 19-year sponsor of Robofest, has increased their grant funding for the 2023 Robofest season, providing $750 grants for up to ten Michigan all-girl Robofest Game and Exhibition teams. The application is open now and the deadline to apply is March 15, 2023.
More information and the 2023 season application are posted on the MCWT webpage: https://mcwt.org/programs/list/K-12-Initiatives/ROBOTICS-GRANTS

(7) Robofest Pen Pal Opportunity
To enhance the Spirit of Robofest for all participants, we are facilitating a new Pen Pal program. Robofest will pair up interested individuals or teams with one another so they may collaborate and build international network opportunities. Registration is open through the form: https://docs.google.com/forms/d/e/1FAIpQLSdsEMe5QZER0foK-VJs1rTWbDNMAYuVyTvrpemibQT01RpTeQ/viewform?usp=sharing

(8) LTU Scholarship Opportunity for all Robofest Participants
High School students who have participated in Robofest at any time and who are planning to attend LTU in any program, can apply for a $3,000 renewable scholarship (Total of $12,000). Submit a 400-word essay describing your Robofest experience and your career goals, a letter of recommendation from one of your Robofest adult coaches or mentors, and the Scholarship Application by **April 1, 2023.** To find more information visit: https://www.ltu.edu/financial_aid/scholarships-freshmen.asp

(9) Seeking Site Hosts for 2023 Competitions Final Call
Robofest will be accepting site host applications for the 2023 Competition Season for Robofest Game Qualifiers, Exhibition Qualifiers, BottleSumo (open event) and RoboParade (open event) for the 2023 season until January 31, 2023. Interested individuals, organizations, or schools should contact the Robofest office at spalonis@ltu.edu or visit https://robofest.net/index.php/for-site-hosts

---

Lawrence Technological University / Robofest / J-233 / 21000 W. Ten Mile Rd, Southfield, MI 48075
Dr. Christopher Cartwright, Director, ccartwrig@ltu.edu
Elmer Santos, Assistant Director, esantos@ltu.edu
Shannan Palonis, Coordinator, spalonis@ltu.edu
Pam Sparks, Coordinator, psparks@ltu.edu
Dr. CJ Chung, Advisory Board Chairperson (Volunteer), cchung@ltu.edu

CFP: Section Conference

IEEE Southeastern Michigan Spring 2023 Conference

CALL FOR RESEARCH POSTER

Important Deadlines

Abstract Submission Opens:
20 January 2023

Abstract Submission Ends:
20 February 2023

Abstract Acceptance Notification:
28 February 2023

Registration Opens:
20 February 2023

Registration Ends:
20 March 2023

Submit your Abstract http://bit.ly/3R00lwk

Event Registration http://bit.ly/3kFcRKT

The IEEE Southeastern Michigan Section Conference Committees are pleased to announce the Spring March 2023 section conference which will be held at Lawrence Technology University. The conference will feature keynote presentations, student research poster competitions and presentations, recruitment opportunities, social networking, section activity, dinner, awards, and chapter collaboration.

The IEEE Southeastern Michigan Section Conference 2023 hereby invites prospective researchers to submit their proposals for the poster competition at the conference.

Guidelines:

- ✓ There will be two parts of submissions: 1) Research Poster Proposal and 2) Poster Presentation at the event.
- ✓ The research poster proposal abstract includes 200 words with enough detail explaining the work of the research poster.
- ✓ Poster sessions will be held on during the event. During this time, attendees will be browsing the posters and will stop to ask questions and discuss the content.
- ✓ Presenting authors must remain near their poster to address questions and present their work for the duration of the poster session.
- ✓ All posters must contain figures and graphics from the submitted paper to illustrate and support their work.
- ✓ The usable space on each poster board for the poster sessions is approximately 48 inches (122 cm) wide by 36 inches (92 cm) high. (Recommended to use standard IEEE templates)
- ✓ The posters must be created, transported to the conference, and presented by an author or their representative.
- ✓ The posters must be posted at least thirty minutes prior to the respective poster session.

Research Poster Topics:

- Power Electronics and Motor Drives
- Electric Machines and Actuators
- Powertrain: Design, Thermal Management, Packaging, and Optimization
- Battery, Fuel Cell and, Energy Storage Systems
- Electric, Hybrid Electric, Plug-in Hybrid Electric Vehicle System Architectures, and Control
- Connected and Autonomous Vehicles, Smart Mobility, and Vehicle Functional Security
- Smart and Micro Grids, EV-Interacting Smart Grid, and Electrical Infrastructure
- Electrification of Heavy-Duty and Off-Road Vehicles
- Electrical Systems and Components for Sea, Undersea, Air, and Space Vehicles
- Rapid Prototyping, Real-Time Simulation, HIL, and SIL for Transportation Electrification
- Software Coding, Standards, and Safety
- Battery Chargers: Onboard, Wireless, Fast, and Ultra-Fast
- Codes, Standards, Policies, and Regulations for Transportation Electrification

Keynote Speakers


Dr. Tarek Sobh, LTU


Kelsey Peterson, DTE


Santhosh Jogi, ONE

IEEE Southeastern Michigan Spring 2023 Conference

March 28th, 2023, Tuesday, 4:00 PM

Venue: T210, UTLC Gallery, Lawrence Tech University, Southfield, Michigan, USA

conference@ieee-sem.org https://sites.google.com/view/isemsc2023/ https://events.vtools.ieee.org/m/328899

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

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 SEM Executive Committee is the primary coordination unit for Southeastern Michigan (SEM) IEEE operations. The basic organization chart below shows the 2019/2020/2021/2022 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.

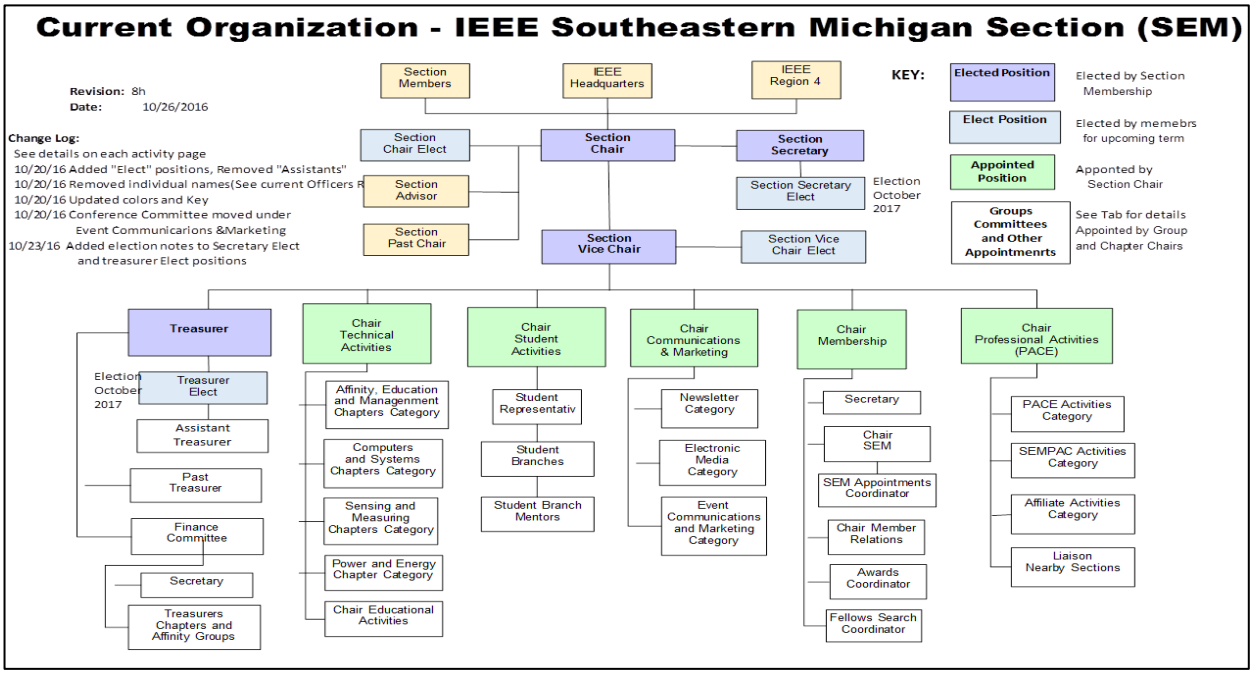
However, members of the section may have multiple technical interests and would like to have meeting information of other chapters. In order to communicate the meeting dates of all the chapters, affinity groups etc., to our members to facilitate their attendance, leaders of the groups are requested to 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 (soon to be 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:

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 (virtual) For FEBRUARY 2023	9 Feb 2023 6:30 PM
SEM Section ExCom Monthly Meeting (virtual) For MARCH 2023	9 Mar 2023 6:30 PM
SEM Section ExCom Monthly Meeting (virtual) For APRIL 2023	13 Apr 6:30 PM
SEM Section ExCom Monthly Meeting (virtual) For MAY 2023	11 May 6:30 PM
SEM Section ExCom Monthly Meeting (virtual) For JUNE 2023	8 Jun 6:30 PM
SEM Section ExCom Monthly Meeting (virtual) For JULY 2023	13 Jul 6:30 PM
SEM Section ExCom Monthly Meeting (virtual) For AUGUST 2023	10 Aug 6:30 PM
SEM Section ExCom Monthly Meeting (virtual) 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

Title	Date
SEM Section ExCom Monthly Meeting (virtual) For JA...	12 Jan 202...
SEM Section ExCom Monthly Meeting (virtual) For FE...	09 Feb 202...
SEM Section ExCom Monthly Meeting (virtual) For MA...	09 Mar 202...
SEM Section ExCom Monthly Meeting (virtual) For AP...	13 Apr 202...
SEM Section ExCom Monthly Meeting (virtual) For MA...	11 May 202...
SEM Section ExCom Monthly Meeting (virtual) For JU...	08 Jun 202...
SEM Section ExCom Monthly Meeting (virtual) For JUL...	13 Jul 2023...
SEM Section ExCom Monthly Meeting (virtual) For AU...	10 Aug 202...
SEM Section ExCom Monthly Meeting (virtual) For SE...	14 Sep 202...
SEM Section ExCom Monthly Meeting (virtual) For OC...	12 Oct 202...
SEM Section ExCom Monthly Meeting (virtual) For NO...	09 Nov 202...
SEM Section ExCom Monthly Meeting (virtual) For DE...	14 Dec 202...

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

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

SEM Website
http://r4.ieee.org/sem/

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

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

SEM Facebook Page
(Select the "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 Officers:
For a complete listing of all - Section - Standing Committee - Affinity Group - Chapter and Student Branch Officers, see the SEM Officers Roster on the SEM web pAdvertising Ratesout SEM" button and select "Organization Roster"

Section Officers

Section Chair
Sharan Kalwani

Section Vice-Chair
Mohammad Berri

Section Secretary
Chris Johnson

Section Treasurer
Ramesh Sethu

Standing Committees:

Section Adviser
Don Bramlett

Wavelengths Editor
Sharan Kalwani

Chair Educational
Christopher Guirlanda

Chair Finance Committee
Subra Ganesan

Chair Membership Development
Mohamad Berri

Chair Nominations & Appointments
Kimball Williams

Chair PACE
Sharan Kalwani

Chair Student Activities
Mel Chi

Student Communications Coordinator
Michael Anthony

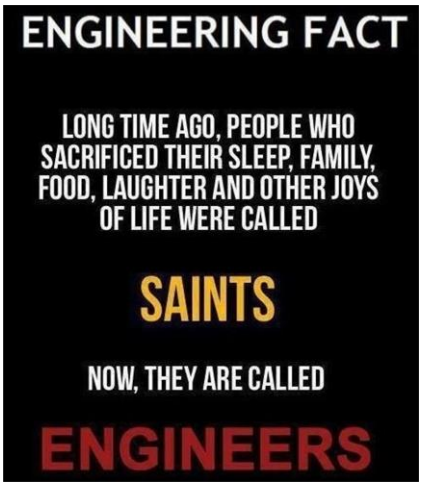
Student R Web & Social Sites*d Faisal*

Chair Technical Activities
Jeffery Mosley

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