Wavelengths

IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

Volume 63 – Issue 12

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
Integrating Sustainability Concepts into Robotics Curriculum @UM-Dearborn	01 Dec 2023	10:00 AM
Charge-Recycling based Design Paradigm for Efficient and Secure RF-Powered IoT Devices	06 Dec 2023	06:30 PM
Nature Guided Design Optimization in Continuous Space	12 Dec 2023	06:00 PM
Chapter 8 Officers ExCom Lunch Meeting	14 Dec 2023	11:30 AM
SEM Section ExCom Monthly Meeting & Dinner Celebration Event	14 Dec 2023	06:30 PM

Chair's Column

The month of December

November is now past, and it was equally busy as each month of 2023 has been. Not surprisingly, December by the look of things will now be a bit more sedate and relatively less hectic. We have only 3 ~ 4 major technical events taking place and 1 major social event. That is of course the December 14th ExCom monthly meeting, which will be in person and we are planning a dinner. We will also celebrate the achievements of 2023 and announce/share the results of the elections. This is a good time to meet in person your chapter officers and build connections. We expect that this will help increase more interactions, and lead to a sustaining level of activity – so as many participants will feel good value in their IEEE memberships.

Of note, we have taken the liberty of inviting sister professional technical societies located in the Metro Detroit area (all of them being fellow ESD Affiliate Council members), to send their key officer representatives as well. Not sure how many will make it, but this will be a fantastic opportunity to explore potential synergies, as EE is now every more pervasive and all walks of technical life require the knowledge & skills of the EE discipline, in one way or the other. But if you plan to attend, you must register at: https://events.vtools.ieee.org/m/337247 - as there is a head count limit of 40 persons.

The Section's 60th Anniversary at the Flint Institute of Art, took place and went very well. You can find a report on it later in this issue. Also of note, the Section was one of the supporters (in more ways than one) of the recent WiE leadership Summit held in Detroit on November 3rd. We were very pleased that the State of Michigan issued a proclamation, signed by Governor Gretchen Witmer and recognizing the IEEE and its efforts in this arena.

Also in this issue, several openings at the University of Michigan-Dearborn. We are always happy to support our colleagues in academia and this is yet another example of how we are getting the word out to nearly 3000 IEEE members.

Now to focus on the future.
1) We have a ton of training opportunities – both for newly elected and veteran volunteers. PLUS professional skills, such as Agile Methods, Critical Thinking and Root Cause Analysis – scheduled as in person events in January and February.
2) The popular documentary video screenings return in 2024. You can see the list here.
3) We had several distinguished speakers share their perspectives, via online sessions. Now we will schedule some of them to visit us in person, so you can directly interact with them.

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.

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

Technical Activities REPORT

2023 IEEE SE Michigan Section Geo-unit Status (Till Nov 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	4	0	Consultants Network	0	4
LIFE	7	2	3	0	5	0	Life Members	3	8
WIE	25	15	1	10	4	0	Women In Engineering	0	15
YP	36	0	1	6	1	0	Young Professionals	0	8
1	9	1	2	2	0	0	Circuits & Systems, Signal Proc., Info Th.	0	4
2	25	10	9	0	0	0	Vehicular Technology	0	9
3	21	4	4	0	0	0	Aerospace & Elec. Sys., Communications	0	4
4	28	9	10	0	0	0	Trident (Ant, Elect Dev., uWave, Photo)	0	10
5	28	8	30	7	2	0	Computers	0	39
6	107	45	3	0	0	0	Geoscience & Remote Sensing	0	3
7	122	33	7	5	1	0	Power Engineering, Industrial App.	0	13
8	49	25	13	11	4	0	Electromagnetic Compatibility (EMC)	0	28
9	62	16	3	0	0	0	Power Electronics, Industrial Electronics	0	3
10	8	1	3	4	0	0	Engineering Management	0	7
11	26	19	1	1	0	0	Eng. in Medicine & Biology	0	2
12	18	2	4	1	0	0	Control Systems	0	5
13	20	3	42	8	0	0	Education	0	50
14	22	19	5	0	1	1	Robotics & Automation	0	7
15	26	8	10	0	0	0	Nuclear Plasma Science Society	0	10
16	33	1	1	1	0	0	Computational Intelligence / Sys.Man.Cyber.	0	2
17	24	3	2	0	0	0	Nano Technology Council	0	2
SEM	50	17	6	53	2	0	SEM (Section)	0	61
	745	239	160	109	24	1	NOTE: Highlight Green = Active	3	294
		32%					NOTE: Highlight clear = Concern		

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

V/r Jeffery V. Mosley

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

This Month in December

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

December 2, 1942 - Physicists led by Enrico Fermi carried out the world's first successful nuclear chain reaction at the University of Chicago.

December 2, 1982 - The first permanent artificial heart was implanted in 61-year-old Barney C. Clark by Dr. William De Vries at the University of Utah Medical Center in Salt Lake City. Clark, who was near death at the time of the operation, survived 112 days after the implantation.

December 6, 1877 - At his laboratory in West Orange, New Jersey, Thomas Edison spoke the children's verse "Mary had a Little Lamb..." while demonstrating his newly invented phonograph which utilized a revolving cylinder wrapped in tinfoil to record sounds.

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

December 9, 1993 - A five-day repair job in space on the $3 billion Hubble Space Telescope was finished by U.S. astronauts.

December 10, 1896 - Swedish chemist Alfred Nobel died at San Remo, Italy. His will stipulated that income from his $9 million estate be used for awards recognizing persons who have made valuable contributions to humanity. Nobel recipients are chosen by a committee of the Norwegian parliament. Prizes for Peace, Physics, Chemistry, Medicine, Literature and Economics are presented annually in a ceremony in Stockholm, Sweden, on the anniversary of his death.

December 11, 1901 - The first transatlantic radio signal was transmitted by Guglielmo Marconi from Cornwall, England, to St. John's, Newfoundland.

December 14, 1962 - The Mariner II space probe sent back information from the planet Venus, the first information ever received from another planet.

December 17, 1903 - After three years of experimentation, Orville and Wilbur Wright achieved the first powered, controlled airplane flights. They made four flights near Kitty Hawk, North Carolina, the longest lasting about a minute.

December 23, 1947 - The transistor was invented at Bell Laboratories by John Bardeen, Walter Brattain and William Shockley, who shared the Nobel Prize for their invention which sparked a worldwide revolution in electronics.

December 23, 1642 - Birthday - Isaac Newton (1642-1727) was born in Woolsthorpe, Lincolnshire, England. He was a mathematician, scientist and author, best known for his work *Philosophiae Naturalis Principia Mathematica* on the theory of gravitation. He died in London and was the first scientist to be honored with a burial in Westminster Abbey.

December 27, 1571 -Birthday - German astronomer Johannes Kepler (1571-1630) was born in Wurttemberg, Germany. Considered the father of modern astronomy, he discovered the elliptical (oval) shape of the orbits in which the earth and other planets travel around the sun at a speed that varies according to each planet's distance from the sun.

December 27, 1822 - Birthday - French chemist-bacteriologist Louis Pasteur (1822-1895) was born in Dole, France. He developed the pasteurization process to kill harmful bacteria with heat and found ways of preventing silkworm disease, anthrax, chicken cholera, and rabies.

December 31, 1879 - Thomas Edison provided the first public demonstration of his electric incandescent lamp at his laboratory in Menlo Park, New Jersey.

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

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

Here is a link which lists all of the 2024 scheduled documentaries featuring several of the folks mentioned in the past year of "This month…." Series. Enjoy!

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

Election News

I want to thank everyone who voted in the SEM Officer election this year. Running any large organization that tries to understand the needs and wishes of its members requires sufficient opportunities for 'feedback' to help keep the leadership 'on track'. Elections of officers is only one of several feedback tools at the disposal of IEEE leadership but it is seen as critical to understanding what the membership wants.

Part of that process is the nomination of candidates for election. Typically, we have seen only a few nominations for officer positions at any level in the Section, Affinity Groups or Chapters. Either this indicates satisfaction among the membership with the job everyone currently in the office is doing, or nobody cares (*except perhaps the current office holders*).

The final indication of member interest in the governing process is the final number of ballots cast for the office. We are not going to evaluate each office in the Section; (ExCom – 4 / AG's – 16 / Chapters – 72 : Total 92).

What we can do is to look at each Geo-unit and note the number of members, compare with the number of ballots cast for all the officers in that Geo-unit, and determine the percentage of members who actually participated in the election.

Of course, that is the chart shown at the right of this page. This is the actual count by the electronic voting system and there are some Geo-units here that need to take a step back and ask why the only member voting for an officer is the officer themselves.

The complete detailed election results will be available at the ExCom meeting in December, as well as on the SEM Webpage. The individual officers elected have already been notified of their status. Virtual officer training sessions are already scheduled I the vTools system in January and February to bring anyone who wants to learn what this is all about.

NOTE: All the training, and all the governance meetings are open to all IEEE Members at all grades. All you need to do to participate if register and show up. That includes the December ExCom Face to Face meeting on 12/14/2023.

Join us and help make a difference. Register at:
https://events.vtools.ieee.org/m/337247

30

Seq	Geo-Units	# Voted	Members	%
0	ExCom	115	2578	4.5%
A1	CN	9	53	17.0%
A2	LM	30	356	8.4%
A3	WIE	6	62	9.7%
A4	YP	15	890	1.7%
C01	1	9	137	6.6%
C02	2	9	119	7.6%
C03	3	2	115	1.7%
C04	4	12	175	6.9%
C05	5	27	250	10.8%
C06	6	2	35	5.7%
C07	7	19	260	7.3%
C08	8	13	88	14.8%
C09	9	9	133	6.8%
C10	10	4	12	33.3%
C11	11	2	68	2.9%
C12	12	7	156	4.5%
C13	13	4	31	12.9%
C14	14	9	158	5.7%
C15	15	2	53	3.8%
C16	16	5	63	7.9%
C17	17	7	47	14.9%
C18	18	5	23	21.7%

60th Anniversary Report

IEEE Section 60th Anniversary:

It was indeed very gratifying to celebrate the Section's 60th anniversary of its founding. In previous editions we traced the history of the section (and it also appears on the website as well). The event was held at the Flint Institute of Art and we had over 40 people attend. Our keynote speaker was Professor John Verboncoeur, currently he is the Associate Dean for Research and Graduate Studies and Professor in the Department of Electrical & Computer Engineering; specializing in both Plasma Physics and Computational Mathematics in Science and Engineering. He gave a talk on the Challenges facing the IEEE and gave numerous examples and background into what we should all be looking at for the future of the IEEE.

Here are some pictures from the event. Hopefully we can hold many more such events in the future and meet many more of you. More are available at this link.

Sharan Kalwani, email: chair@ieee-sem.org
Chair, IEEE Southeastern Michigan Section
Enthusiastic IEEE Section & Chapter & Committee Volunteer since 2011

Nature Guide Optimization

IEEE Southeastern Michigan
Presents a Distinguished Speaker Technical Talk on
Nature Guided Design Optimization in Continuous Space

This presentation will put forth four straightforward, but successful implementations of natural systems inspired optimization for the design of complex systems in continuous (or real) valued spaces. These nature-based paradigms range in fidelity with their natural systems origins but seek to leverage the structures and operations of nature doing what it does best –system optimization, adaptability to dynamic environments, robustness, and flexibility.

Speaker Bio:
ALICE E. SMITH is the Joe W. Forehand, Jr. Distinguished Professor of the Industrial and Systems Engineering Department at Auburn University, where she served as Department Chair from 1999-2011. She also has a joint appointment with the Department of Computer Science and Software Engineering. Previously, she was on the faculty of the Department of Industrial Engineering at the University of Pittsburgh from 1991-99, which she joined after industrial experience with Southwestern Bell Corporation. Dr. Smith has degrees from Rice University, Saint Louis University, and Missouri University of Science and Technology

Pre-Registration Required

https://events.vtools.ieee.org/m/382031

Quick Summary

- **When:**
  Date: Dec 12, 2023
  Time: 06:00 – 7:00 PM (EST/EDT)

- **Where:**
  ONLINE/Virtual via WEBEX

- **Audience: OPEN to ALL**

Sponsored by IEEE Southeastern Michigan Computational Intelligence & Computer Society Technical Chapters

Shoes to Fill

For as long as I have known Don Bramlett, he has been deeply involved in community activities, supporting Scouting, the Detroit Science Fair and the ESD Future Cities competition each year. Don was the 'Face of Southeastern Michigan IEEE' and always taking time to give presentations to Student Branches and help train new officers after each Section wide election. Don has also been a frequent contributor to the Wavelengths newsletter.

My last meeting with Don was on the evening of the ESD Gold Award Banquet. Don was unable to drive so I picked him up at his home and we both hobbled around the event, Don with a cane and me with a crutch.

It was exciting to meet all the new students from many different universities and countries. We must have made quite a contrast among that young crowd, and I know we both enjoyed every minute.

Don's wife Ann was kind enough to send me a message today letting me know that Don was admitted to the ICU at St. Mary's hospital in Livonia MI. It is expected that he will be released into hospice care.

- -

Two of the IEEE related efforts that Don championed each year now must rely on new volunteers:
Detroit Science Fair and
ESD Future Cities competition

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

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

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

If you hear that call, contact Mohamad Berri, Chair of our Membership Committee and Jerry Song, Chair of the Awards Committee so they can help you find others and Subra Ganesan, Chair of Finance to identify funds for the awards to be presented to the worthy students or student teams involved in each of the activities.

Some of the past judges at one Future Cities competition are shown above at the right.

Contact Mohamad, Jerry and Subra,…and me, for that matter, through the SEM Officer Roster on the SEM website **https://r4.ieee.org/sem/** if you need help getting started.

kw   k.williams@ieee.org

UM-D Open Position 1

COLLEGE OF
ENGINEERING & COMPUTER SCIENCE
UNIVERSITY OF MICHIGAN-DEARBORN

Post-Doc Position: Control of Digital Additive Manufacturing Systems

Position Description

The Sustainability Research Group at the University of Michigan-Dearborn invites applications for multiple postdoc research fellow and Ph.D. positions. The postdoc/Ph.D. student will work with a multi-disciplinary research team within the College of Engineering and Computer Science on projects related to digital engineering in additive manufacturing.

For the postdoc position on **control of additive manufacturing systems**, the initial appointment is 12 months and is immediately available. The position may be renewable based on performance. We offer a competitive salary plus benefits, and the salary will be commensurate with the prior research experience of the applicant.

Qualifications
Applicants should have a Ph.D. in a closely related engineering discipline (e.g. mechanical, electrical, manufacturing, robotics, controls, systems engineering, or computer science), and a strong programming and analytical background. Permanent resident or citizen of the United States is preferred, but not required. Prior research experience in one of the following areas is preferred:

- Experience operating CNC manufacturing systems
- Modeling and simulation of dynamical systems
- Internet of Things sensor integration
- Computational fluid dynamics and heat transfer modeling
- Experience designing additive manufacturing systems

Responsibilities

The postdoc research fellow will work on the digital twinning of additive manufacturing processes through in-situ sensing. The research will involve primarily modeling, simulation, and analysis with experimental implementation. The postdoc will publish their research findings in premier journals, present their research in high-impact conferences, and mentor graduate students.

To Apply
Interested applicants should submit their CV, cover letter, and names of three references to Prof. Christopher Pannier (pannier@umich.edu) and Prof. Pravansu Mohanty (pmohanty@umich.edu). Applications will be reviewed on a rolling basis until the position is filled.

RoboFest REPORT

(1) State of Michigan 99h Robotics Competition Grant Deadline Correction
(2) 2024 Season Game and Exhibition Rules Update
(3) LTU Visit Day on December 9th
(4) Intro to Robofest Coaching Workshop at MISD
(5) 2024 Final Kickoff Meeting on January 13th
(6) Warmup Competition/Judge Training on February 10th
(7) Pre-season Technical Workshop Schedule
(8) Vision Centric Challenge Returns for 2024 Season
(9) MCWT Grants for All-Girl Robofest Teams
(10) Seeking Site Hosts for 2024 Competitions

Note: All times are listed in Eastern Time unless noted

(1) State of Michigan 99h Robotics Competition Deadline Correction
The deadline to apply register teams and apply for the Michigan Department of Education 99H grant is noon on Dec 1, 2023.

- Teams must be registered in the Robofest system before applying for the grant: https://www.robofest.net/rms/
- District application must be entered in NexSys

More information is available on the Michigan Department of Education website: https://www.techplan.org/edtech-initiatives/rdi/competitive-99h-robotics-competition-grant/

(2) 2024 Season Game and Exhibition Rules Updated
The Robofest 2024 season Game and Exhibition Version 2 rules have been uploaded to the Robofest website. Any questions for clarity in any of the category rules should be sent to robofest@ltu.edu. The final season rules will be posted following the Saturday, January 13, 2024 Kickoff meeting. Meeting location and zoom link are posted on the 2024 Main Page.

(3) LTU Visit Day on December 9th
We encourage Robofest participants to consider LTU as an option for their higher education. To learn more about what the university has to offer (over 100 undergraduate, masters and doctoral degree programs), LTU is hosting a visit day from 9:00am to 1:30pm, on Saturday, December 9th, where prospective students can meet current LTU students and faculty, hear about campus living, and much more. To register for the LTU visit day, visit:
https://apply.ltu.edu/portal/LTUvisitdays?id=aa8515ed-19b3-4ce2-a1c9-c6c434cb6286

(4) Intro to Robofest Coaching Workshop at MISD on December 12th
Macomb Intermediate School District is hosting an Intro to Robofest Workshop for new coaches on Tuesday, December 12th, 4:30pm~6:30pm in Room 104 at the Macomb Intermediate School District ~ 44001 Garfield Rd., Clinton Twp., MI 48038.

The Robofest staff will provide techniques and strategies for a successful Robofest season including basic autonomous robotics with LEGO SPIKE Prime, how to start a team and choose a category, common problems and solutions and MORE!

A light dinner will be served after the workshop and SCECH are available for Macomb County Teachers (registration required). MISD Workshop registration: (Event 5484)
https://events.misd.net/public/Course/browse?courseid=10817&AllowDirectLoad=1

(5) 2024 Final Kickoff Meeting on January 13th
We are hosting the final 2024 Season kickoff meeting on Saturday, January 13th, 2024 10:00am ~ 11:30am in the Computer Science Robotics Lab, Room J234 on the LTU campus and on Zoom. During the presentation, we will cover highlights of the general rules and open categories, and we will present the updated game rules for clarification prior to the final release. Zoom link is posted on the robofest.net home page.

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

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

(7) Pre-season Technical Workshop Schedule
Workshops are available at no cost to registered 2024 Teams. They are held in the Computer Science Robotics Lab, Room J234 on the LTU Campus. Robots and laptops are provided. Workshop materials will be made available on the eAcademy/Workshops page. Registration is open under Available Workshops: on the robofest.net Registration page.

> **VEX IQ with VEXcode** for Game
>> Saturday, January 20th: 9:00am ~ 12:00noon
> **LEGO EV3 with Scratch** for Game
>> Saturday, January 20th: 1:00pm ~ 4:00pm
>> Saturday, January 27th: 9:00am ~ 12:00noon
> **LEGO SPIKE Prime/Robot Inventor with Scratch** for Game
>> Saturday, January 27th: 1:00pm ~ 4:00pm
> **LEGO SPIKE Prime/Robot Inventor with Python** for Game
>> Saturday, February 3rd: 9:00am ~ 12:00noon
> **NEW for 2024! Intro to Exhibition using LEGO EV3 with Scratch**
>> Saturday, February 3rd: 1:00pm ~ 4:00pm

(8) Vision Centric Challenge Returns for 2024 Season
The 2024 Vcc rules *Vision Based Measurement System* are now available on the Robofest website. The objective of this challenge is to use vision-based robots to complete a series of inspections. This challenge will introduce teams to real-world manufacturing inspection processes. The event will be hosted during the Robofest World Championship on May 9th through 11th (exact date TBD). Pre-registration is open for Senior Division teams.

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

(10) Seeking Site Hosts for Competitions
Robofest is seeking site hosts for the 2023-2024 Competition Season for Robofest Game and Exhibition Qualifiers as well as Open events. Interested individuals, organizations, or schools should contact the Robofest office at robofest@ltu.edu or visit https://robofest.net/index.php/for-site-hosts for more information or to download the application.

Lawrence Technological University / Robofest / J-233 / 21000 W. Ten Mile Rd, Southfield, MI 48075
Prof Elmer Santos, Director, esantos@ltu.edu
Shannan Palonis, Assistant Director, spalonis@ltu.edu
Pam Sparks, Coordinator, psparks@ltu.edu
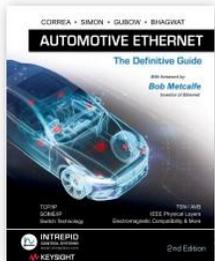Dr. CJ Chung, Founder, Executive Council Chair, cchung@ltu.edu
http://www.robofest.net
http://facebook.com/robofest
https://www.linkedin.com/company/robofest-official

Embedded Systems Workshop 2023

21st IEEE ESW Embedded System Workshop (update)

The 21st IEEE ESW (Embedded System Workshop) was held on Saturday, 28th October as in-person event at Oakland University. It was sponsored by IEEE Computer chapter and Education chapter of Southeastern Michigan Section. The event was held from 8:30 am to 2 pm. There were seven speakers from industry and academia. Nearly 70 people attended the event. The ESW was held on three half-day Saturdays. On 14th October, the first event was a tutorial on Embedded Systems by Mr. Sharan Kalwani. There were 15 student attendees. The 2nd ESW event was a hands-on workshop on 21st October on brushless DC motor control using the TLE781 Infineon board. There were 14 attendees. It was held at the Infineon office in Livonia, MI. A separate report appears elsewhere in this edition of Wavelengths. On 28th October we held the 3rd event, with in-person talks by seven speakers. There were nearly 70 attendees. The three events were well organized, and the attendees liked them. All the attendees received certificate of attendance. We had the following topics and speakers:
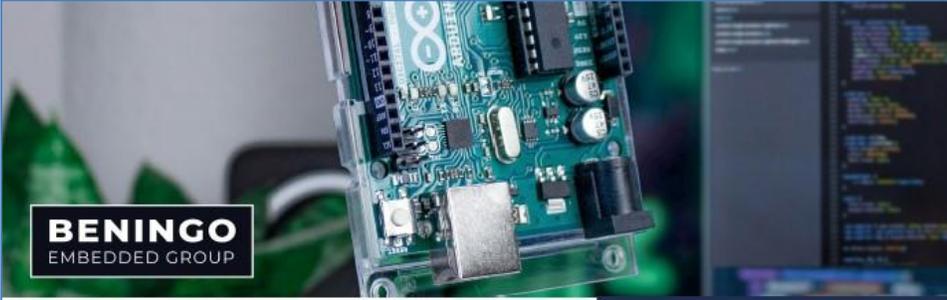

a) Intrepid Control Systems, the Speaker was Colt Correa, currently their COO (Chief Operating Officer), who gave an excellent talk on "10BASE-T1S", which is the new standard in vehicle ethernet based networking technology or the now modern-day CAN replacement.

b) Following Colt was one of our favorite and perennial speakers – Jacob Beningo who shared his direct experiences on approaching Modernizing Embedded Software Architecture Design.

c) Just before the mid-morning coffee break, we had two joint speakers – Ms Abir Bazzi & Atilla Bulmus (also a perennial favorite) talk about Software Defined Vehicle (SDV) Architecture and the impact on the Semiconductor Industry. This again was very well received as in our neck of the woods, automotive industry is a huge hotbed of activity.

d) Right after the break, we had Bill VeenHuis of NVIDIA, give a very detailed talk on the latest innovation of leveraging transformers in support of LLM/NLP, GenAI and Visual transformers. Of course, this generated an awful lot of audience back and forth, since this deals with AI, and that is a smoking hot topic these days.

e) Nowadays, practically every embedded processor has multiple cores available, and the tasks carried out by microprocessors are heavy duty, so parallel processing is inescapable. This was the flavor of Professor Subra Ganesan's talk: "Parallelism in Embedded AI applications".

f) While all the speakers were present in person, which delighted the audience, as they could interact with them directly and engage in many side conversations, we did have 1 remote presenter. Balaji Sankarshanan, IEEE Senior Member and Chair of the Region 4 Industrial Engagement Committee – shared their current work and initiatives.

g) The last talk of the day was by Sharan Kalwani, who (similar to previous years) gave an update on RISC-V, an open-source microprocessor hardware design, which has due to a variety of good reasons, started becoming popular in the embedded systems world. The talk was titled: "Recent Trends in Embedded Systems: Rise of RISC-V choices".

We attempted to also record all the talks but somehow got a setting wrong somewhere (everyone has experienced this I bet) so all of them were w/o audio. But at least we have all the slides available! Attendees should have received a link by now.
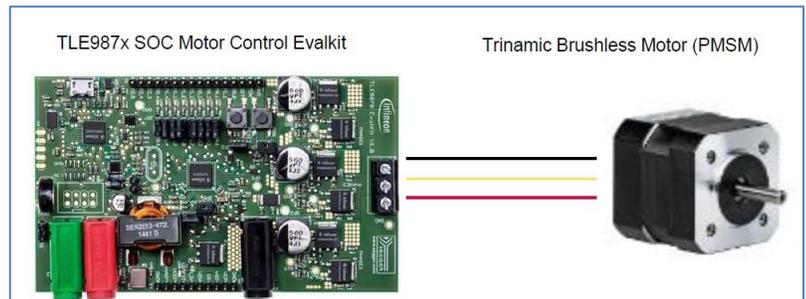
Brushless Motors Workshop

In October, the Computer Society in co-operation with our industry partners – Infineon – held a hands on workshop on how to use Embedded controllers to control brushless DC motors. We had a total of 14 industry participants and it was an intensive workshop, which first grilled attendees with a good dose of motor theory, followed by a 2 hour session of using the TLE987x SoC motor control processor and kit to effortlessly control, spin, stop and subject a bruhless motor through its paces.

The topics covered were:

- ✓ Introduction - Motor Control In Automotive
- ✓ DC & Synchronous AC/PMSM Motor Overview
- ✓ Drive Circuit Overview
- ✓ BLDC motor - creating rotation
- ✓ BLDC sensorless operation
- ✓ FOC (Field Oriented Control)
- ✓ Other application aspects
- ✓ Hands on session

We have to thank the following folks who put in massive efforts towards making this IEEE-industry event a success.

- ❖ Abir Bazzi
- ❖ Frank Aiello &
- ❖ Atilla Bulmus

Pictured above – are all of the particpants, a few had to leave early

UM-D Open Positon 2

COLLEGE OF
ENGINEERING & COMPUTER SCIENCE
UNIVERSITY OF MICHIGAN-DEARBORN

Post-Doc Position: Artificial Intelligence (AI) and Digital Engineering Transformation of IoT-Enabled Additive Manufacturing

Position Description

The Sustainability Research Group at the University of Michigan-Dearborn invites applications for multiple postdoc research fellow and Ph.D. positions. The postdoc/Ph.D. student will work with a multi-disciplinary research team within the College of Engineering and Computer Science on projects related to digital engineering in additive manufacturing.

For the postdoc position on **AI and Digital Engineering Transformation of IoT-Enabled Additive Manufacturing**, the initial appointment is 12 months and is immediately available. The position may be renewable based on performance. We offer a competitive salary plus benefits, and the salary will be commensurate with the prior research experience.

Qualifications

Applicants should have a Ph.D. in a closely related engineering discipline (e.g. industrial engineering, data science, electrical engineering, or computer science), and a strong programming and analytical background. Permanent resident or citizen of the United States is preferred, but not required. Prior research experience in one of the following areas is preferred:

- Demonstrable expertise in IoT, machine learning, and data-driven models
- Knowledge of cloud-based computing and digital twin concepts
- Application of AI/ML in manufacturing or control
- AI/ML in process monitoring, control, and optimization

Responsibilities

The postdoc research fellow will work on establishing a robust sensor framework that seamlessly integrates with our digital twin setup, providing accurate real-time data and insights. Familiarity with IoT, cloud computing, and multi-physics is a must. The research will leverage AI/ML methodologies to ensure rapid detection and mitigation of uncertainties/errors, thus accelerating the convergence from design to manufacturing. The postdoc will publish their research findings in premier journals, present their research in high-impact conferences, and mentor graduate students.

To Apply

Interested applicants should submit their CV, cover letter, and names of three references to Prof. Abdallah Chehade (achehade@umich.edu) and Prof. Zhen Hu (zhennhu@umich.edu). Applications will be reviewed on a rolling basis until the position is filled.

STEM Meeting REPORT

On Monday, July 24, 2023, Scott and Cathy Lytle assisted with a STEM presentation at the new Superior Township Library near Ypsilanti. The attendees used several SNAP circuits donated by the SEM IEEE EMC Chapter. This was the second time the SNAP kits were utilized.

See attached photos from the event.

UM-D Open Position 3

COLLEGE OF
ENGINEERING & COMPUTER SCIENCE
UNIVERSITY OF MICHIGAN-DEARBORN

Ph.D. student Positions: Multiphysics, Machine Learning, and Advanced Finite Element Modeling (FEM)

Position Description

The Sustainability Research Group at the University of Michigan-Dearborn invites applications for multiple postdoc research fellow and Ph.D. positions. The postdoc/Ph.D. student will work with a multi-disciplinary research team within the College of Engineering and Computer Science on projects related to digital engineering in additive manufacturing.

For the Ph.D. student positions on **multiphysics, machine learning, and advanced Finite Element Modeling (FEM)**, we offer a full financial assistantship. The start date is August 25, 2024. The application deadline is February 01, 2024. The students will be funded by the National Science Foundation and will be actively involved in an extensive experimental campaign.

Qualifications

Applicants must have earned a Master's degree in Mechanical Engineering or a closely related discipline by July 30, 2024. Excellent mathematics, and coding skills are essential for consideration. The following are the specific requirements:

- Minimum cumulative GPA of 3.2 (B.S. degree) or 3.5 (master's degree) on a 4-point scale.
- Foreign applicants must provide TOEFL (minimum score of 84 on IBT) or IELTS (minimum score of 6.5) for English language proficiency.
- Three letters of recommendation, with at least one from former faculty.
- Academic statement of purpose indicating intended fields of research.
- Curriculum vitae or resume, and personal statement detailing background, life experiences, and motivation to pursue a Ph.D. degree at UM-Dearborn.

Responsibilities

The Ph.D. student will focus on polymer materials, environmental aging, multi-physics modeling, machine learning, and mechanics modeling. The project is funded by the National Science Foundation, and the selected Ph.D. student will be actively involved in an extensive experimental campaign. Additionally, the student will be responsible for developing a cutting-edge numerical tool that combines multiphysics, machine learning, and advanced Finite Element Modeling (FEM). More precisely, the research will focus on studying the degradation of polymers, and recycling of thermoplastics and thermosets. The purpose of the study is to design modeling tools to guide engineers in recycling polymers by design.

To Apply

Interested applicants should submit their CV to Prof. Georges Ayoub (gayoub@umich.edu). Formal applications should be submitted through an online Ph.D. application system.

State of Michigan WiE Proclamation

STATE OF MICHIGAN

OFFICE OF THE GOVERNOR

LANSING

GRETCHEN WHITMER
GOVERNOR

GARLIN GILCHRIST II
LT. GOVERNOR

November 3, 2023

Dear Friends,

On behalf of the State of Michigan, I would like to extend my best wishes to everyone attending the 2023 IEEE Women in Engineering Leadership Summit in Detroit.

With the purpose of providing a forum for women students, researchers, educators, and engineers to discuss energy, sustainability, work/life, and the future of engineering and STEM in the era of OpenAI, the IEEE WIE Leadership Summit inspires the leadership and innovation we need for the future of Michigan and our nation.

I appreciate the work that IEEE WIE does to promote women engineers and scientists and inspire girls around the world to follow their academic interests to a career in engineering. I look forward to continuing to work with you to build a bright future in our state.

I send my best wishes for a productive and memorable conference and your continued success in every endeavor.

Sincerely,

Gretchen Whitmer
Governor of Michigan

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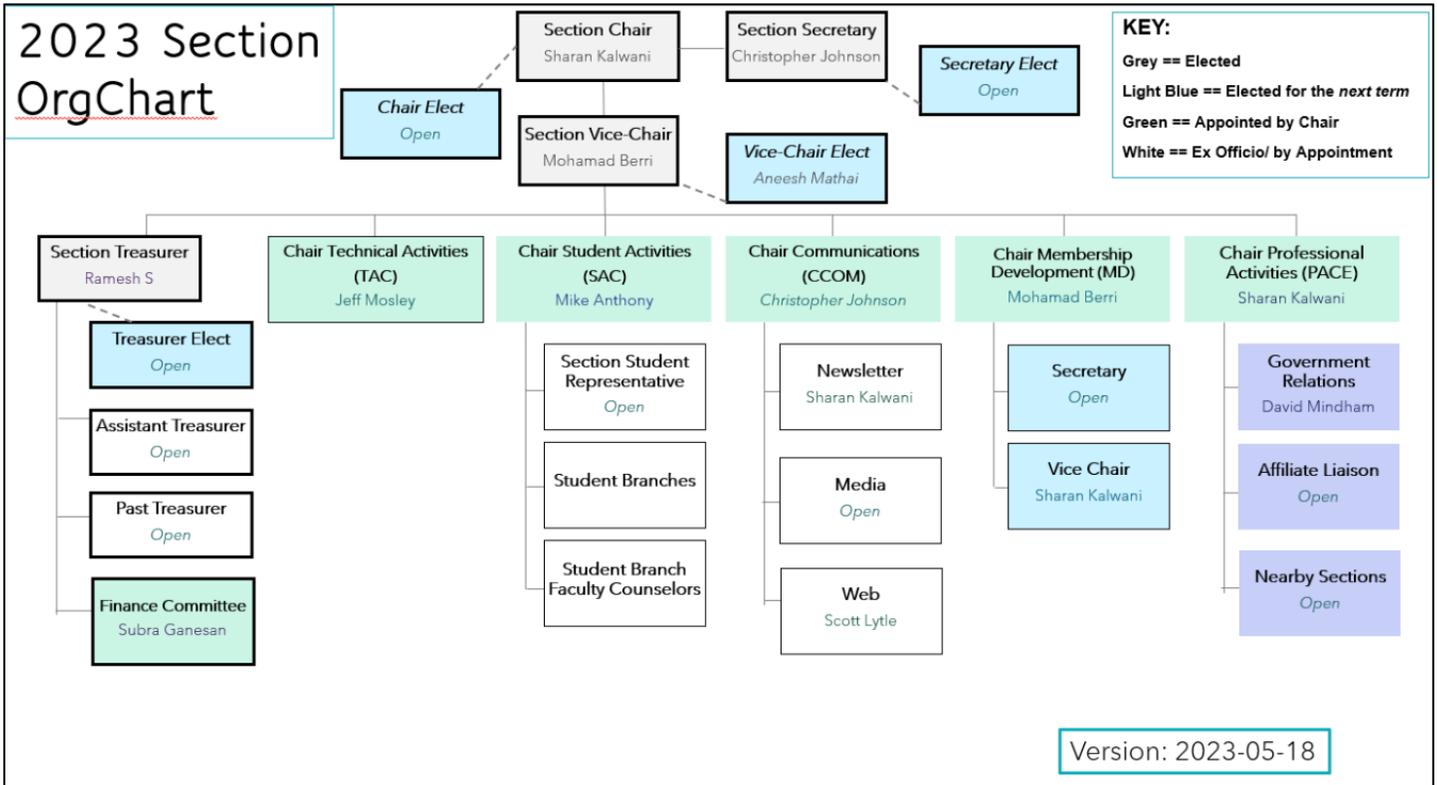
More detailed information on meetings may be found through the IEEE SEM Website: **http://r4.ieee.org/sem/** and clicking on the **SEM meetings list** button near the bottom of the left-hand banner.

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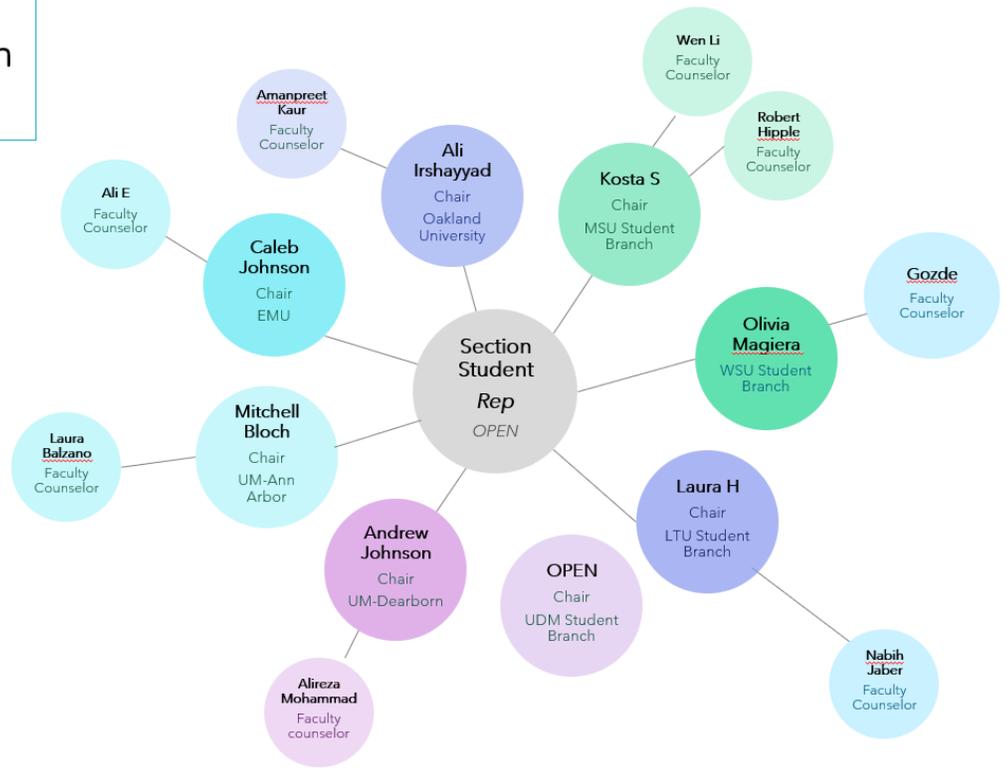
Christopher Johnson (Secretary)
Email: secretary@ieee-sem.org

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

ExCom Meeting Schedule

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

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

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

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

ExCom Meeting (all clickable links)	*Date & Start Time, Duration*
SEM Section ExCom Monthly Meeting (In person) For DECEMBER 2023	14 Dec 6:30 PM, 2 hours
Section ExCom Monthly Meeting (virtual) For JANUARY	11 Jan 6:30 PM, 1 hour
Section ExCom Monthly Meeting (virtual) For FEBRUARY	08 Feb 6:30 PM, 1 hour
Section ExCom Monthly Meeting (Hybrid) For MARCH	14 Mar 6;30 PM, 2 hours
Section ExCom Monthly Meeting (virtual) For APRIL	11 Apr 6:30 PM, 1 hour
Section ExCom Monthly Meeting (virtual) For MAY	09 May 6:30 PM, 1 hour
Section ExCom Monthly Meeting (Hybrid) For JUNE	13 Jun 6:30 PM, 2 hours
Section ExCom Monthly Meeting (virtual) For JULY	11 Jul 6:30 PM, 1 hour
Section ExCom Monthly Meeting (virtual) For AUGUST	08 Aug 6:30 PM, 1 hour
Section ExCom Monthly Meeting (Hybrid) For SEPTEMBER	12 Sep 6:30 PM, 2 hours
Section ExCom Monthly Meeting (virtual) For OCTOBER	10 Oct 6:30 PM, 1 hour
Section ExCom Monthly Meeting (virtual) For NOVEMBER	14 Nov 6:30 PM, 1 hour
Section ExCom Monthly Meeting (In Person) For DECEMBER	12 Dec 6:30 PM, 2 hours

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

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

IEEE vTools **EVENTS**   ◆IEEE

VTOOLS ⌄   SEARCH   MY EVENTS   MANAGE EVENTS   API   ABOUT   CONTACT

🔍 **SEARCH EVENTS**

Learn how to integrate Event notices with your website
Hey! I want the old Search page.

| Search Options | Advanced Search | Clear Search |

| Search Term ❓ | Organizational Unit ❓ | Date Range ❓ |
| section excom | R40035 - Southeastern Michigan Sect ⊖ | 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
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		

Web & Social Sites

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

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

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

SEM Facebook Page
(Select the " f " button under the top row)
https://www.facebook.com/groups/ieeesemich

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

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

SEM Collabratec Workspace (new)
https://ieee-collabratec.ieee.org/app/workspaces/5979/IEEE-Southeastern-Michigan-Section/activities

SEM Instagram (new)
https://www.instagram.com/ieeesemich/

SEM Officers:
For a complete listing of all - Section - Standing Committee - Affinity Group - Chapter and Student Branch Officers, see the SEM Officers Roster on the web page (top banner)

Section Officers

Section Chair
Sharan Kalwani

Section Vice-Chair
Mohammad Berri

Section Secretary
Christopher Johnson

Section Treasurer
Ramesh Sethu

Standing Committees:

Section Adviser
Don Bramlett

Wavelengths Editor
Sharan Kalwani

Chair Educational
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

Chair Mentors
Don Price

SECTION Student Rep
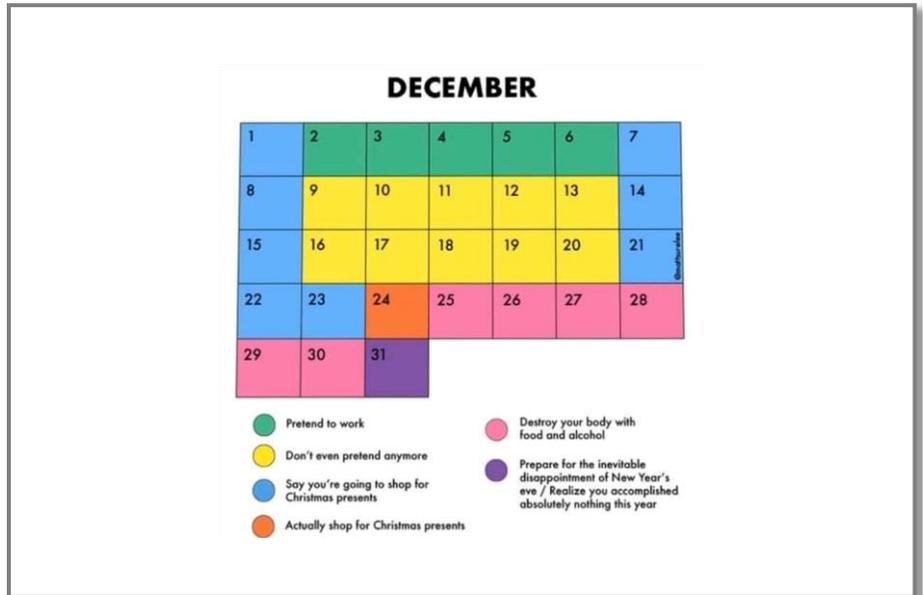OPEN

Chair Technical Activities
Jeffery Mosley

Information Management
Kimball Williams

IEEE Southeastern Michigan

Electrical and Electronic Engineers Creating Our Future

IEEE Southeastern Michigan

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

DECEMBER

- Pretend to work
- Don't even pretend anymore
- Say you're going to shop for Christmas presents
- Actually shop for Christmas presents
- Destroy your body with food and alcohol
- Prepare for the inevitable disappointment of New Year's eve / Realize you accomplished absolutely nothing this year

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