Wavelengths

Volume 62 – Issue 11

Contents

Upcoming Events

We have several events coming up this month, all are listed below, FYI.

Event	Date	Time
SEM SECTION CONFERENCE BIWEEKLY MEETING	03 Nov 2022	12:00 PM
SEM Section ExCom Monthly Meeting (TELECONFERENCE)	03 Nov 2022	06:30 PM
VDL - Connecting Space Assets to the Internet: Challenges and Solutions	03 Nov 2022	06:30 PM
The Drake Equation: Documentary Night	04 Nov 2022	05:30 PM
The Ultimate Space Telescope: Documentary Night	08 Nov 2022	05:30 PM
SEM Chapter 1 EXCOM	09 Nov 2022	07:00 PM
Ch8: AdCom Teleconference	10 Nov 2022	11:00 AM
Engineering Pioneer - Frank Sprague: Documentary Night	11 Nov 2022	05:31 PM
SEM SECTION CONFERENCE BIWEEKLY MEETING	17 Nov 2022	12:00 PM
The Superconducting Super Collider *Note early start time*	17 Nov 2022	05:15 PM
SEM Chapter 1 Technical Presentation	29 Nov 2022	07:00 PM

Note: All times are EST/EDT. If any events are missed do kindly bring them to the attention of wavelengths@ieee-sem.org. Thank you!

Chair's Column

Welcome to the November edition of the Wavelengths.

Spring 2023 Section Conference:
March 28, 2023 (Tuesday) is the rebirth/rejuvenation of our Sections conference. Please see "save the Date" flyer in this issue of Wavelengths. The conference is now in its early planning stages, we recommend you get int ouch with our Sections Conference chair: Keyur Patel (conference@ieee-sem.org) for information.

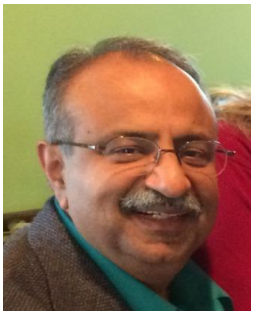
Elections:
Elections for 2022 are now over. The Elections and Nominations Committee are examining the results and verifying that all elected and write-in candidates are indeed eligible and willing to serve. Please let me take a moment to thank all officer volunteers who served over this past year. We will need your assistance over the upcoming year even if you no longer hold that office. Your experience is valuable and needs to be shared.

2023 Budget:
The ExCom will begin reviewing the 2023 budget the first week of November. Our Finance Committee chair will be issuing a call for budget input this week. An updated version, based on inputs from the ExCom, will be considered at the December ExCom meeting. A Final Budget will be presented and approved shortly thereafter.

Clarion Call:
Issuing one final call. All those chapters who need a little assistance in getting their tech activities fulfilled for the year, do get in touch with us ASAP!

And, our editors threw in their monthly interesting history of technology & science stuff. I would like you to join me in wishing a happy birthday to one of our members – Jacob Beningo. If you know of others who are celebrating any sort of anniversary – do let me know.

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



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

Technical Activities Report

2022 IEEE SE Michigan Section Geo-unit Status (Till Oct 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	11	3	1	0	1	0	Consultants Network	0	2
LIFE	0	0	0	0	2	0	Life Members	0	2
WIE	14	1	2	10	0	1	Women In Engineering	1	13
YP	0	0	0	0	0	0	Young Professionals	0	0
1	42	2	2	1	0	0	Circuits & Systems, Signal Proc., Info Th.	0	3
2	32	4	6	1	0	0	Vehicular Technology	0	7
3	0	0	0	0	0	0	Aerospace & Elec. Sys., Communications	0	0
4	0	0	0	0	0	0	Trident (Ant, Elect Dev., uWave, Photo)	0	0
5	25	6	40	8	6	1	Computers	4	55
6	59	32	1	0	0	0	Geoscience & Remote Sensing	0	1
7	27	6	3	6	0	0	Power Engineering, Industrial App.	0	9
8	52	34	10	10	0	1	Electromagnetic Compatibility (EMC)	1	21
9	24	4	3	1	0	0	Power Electronics, Industrial Electronics	0	4
10	6	2	2	0	0	0	Engineering Management	0	2
11	55	37	1	2	0	0	Eng. in Medicine & Biology	0	3
12	0	0	0	0	0	0	Control Systems	0	0
13	22	6	15	4	1	1	Education	0	21
14	7	4	2	0	0	0	Robotics & Automation	0	2
15	41	26	6	0	0	0	Nuclear Plasma Science Society	1	6
16	78	0	1	0	0	0	Computational Intelligence / Sys.Man.Cyber.	0	1
17	0	0	0	0	0	0	Nano Technology Council	0	0
SEM	38	10	5	23	3	0	SEM (Section)	1	31
	532	175	100	66	13	4	NOTE: Highlight Green = Active	8	183
		33%					NOTE: Highlight clear = Concern		

Kudos to our GA's meeting or exceeding our Section technical and administrative goals. Our Section has 5 out of 17 Technical Chapters showing 1 or no technical meetings being held. This is an improvement from last month. There is still a need to plan and conduct meetings before the end of this calendar year. GA leaders please reach out to the TAcom for any assistance. GA 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

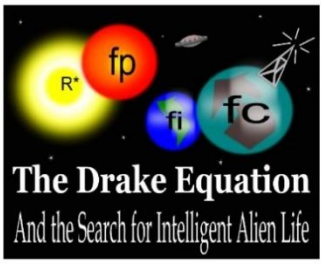
Jeffery V. Mosley
TAcom Chairman
jvmosley@ieee.org

Drake Equation: Documentary

IEEE Southeastern Michigan

Presents:

The Drake Equation: A Documentary



IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

Recently, as part of an innovative and fresh approach, i.e. a non-traditional meeting event: we presented video documentaries. This was very warmly received. So we decided to continue the good work. We proudly present the Documentary: *The Search for Life: The Drake Equation*

Summary: A look at the Drake equation, developed by Dr. Frank Drake as a way to think about the number of extraterrestrial civilizations in our galaxy that could exist and communicate with us

The Drake equation is

$$N = R_* \cdot f_p \cdot n_e \cdot f_l \cdot f_i \cdot f_c \cdot L$$

where

N = the number of civilizations in the Milky Way galaxy with which communication might be possible (i.e. which are on the current past light cone);

and

R_* = the average rate of star formation in our Galaxy

f_p = the fraction of those stars that have planets

n_e = the average number of planets that can potentially support life per star that has planets

f_l = the fraction of planets that could support life that actually develop life at some point

f_i = the fraction of planets with life that actually go on to develop intelligent life (civilizations)

f_c = the fraction of civilizations that develop a technology that releases detectable signs of their existence into space

L = the length of time for which such civilizations release detectable signals into space[5][6]

At Glance

- **When:**
  Date: Nov 4, 2022
  Time: 05:30 – 7:00 PM (EST/EDT)
- **Where:**
  Online via Webex (to be shared only after you have a confirmed registration)
- **Audience: OPEN to ALL***

Sponsored by IEEE SE Michigan Computer Society & Education Society Chapters

***Pre-Registration Required!**

https://events.vtools.ieee.org/m/329879

IEEE COMPUTER SOCIETY

IEEE Education Society

IEEE Advancing Technology for Humanity

IEEE Southeastern Michigan Section

Election

This column usually gives everyone an overview of the SEM yearly process and some initial results. Unfortunately this year personal difficulties and scheduling SNAFUs have put us far behind schedule, and we must apologize to the membership for what will be a late delivery. Current expectations are that we should have results available by mid November and be ready to 'verify' all the elected officers are willing and able to 'hold' the office and carry out their duties.

What we can share with you at this time is the voting 'record' of how many members actually voted in each Geo-unit and how many members were eligible to cast a ballot in that particular ballot.

The chart at the right of this page shows the Executive Committee at the top, with the Affinity Groups (Consultants, Life Members, Women in Engineering and Young Professionals) followed by each of the Technical Chapters. Sorted by Chapter number.

I must admit that voting for a local officer who will directly run the organization in your back yard does not carry the aura of a national election but, it is still part of our democratic process, and reflects on just how we all feel about who is our leader in any particular venue.
Voting for a candidate in any office reflects on how we value the vote in general.

Upon exiting Constitution Hall after signing the governing document for our government, Benjamin Franklin was stopped by a women who asked; "Mr. Franklin, what kind of government have you given us. Franklin replied; "A Republic madam. If you can keep it."

Franklin was not being facetious. He understood how easily a democracy can be 'lost' by the apathy of its voters. We see that in countries around the world when the public decides not to participate in governing their country but leave it to a single strong man.

ExCom, Affinity Groups & Technical Chapters	# Voted	Members
Section Executive Committee	22	2541
Consultants	5	40
Life-Members	26	416
Women in Engineering	4	53
Young Professionals	8	768
CHAPTER 1 (SP01) Signal Processing Soc.,(CAS04) Circuits and Systems Soc.,and (IT12) Information Theory Soc.	9	134
CHAPTER 2 (VT06) Vehicular Technology Soc.	6	108
CHAPTER 3 (AES10) Aerospace and Electronic Systems Soc., and (COM19) Communications Soc.	1	115
CHAPTER 4 "Trident" (AP03) AP03 Antennas and Propagation Soc., (ED15) Electron Devices Soc., (MTT17) Microwave Theory and Techniques Soc., Photonics Soc. (PHO36)	11	177
CHAPTER 5 (C16) Computer Soc.	18	260
CHAPTER 6 (GRS29) Geosciences and Remote Sensing Soc.	6	33
CHAPTER 7 (PE31) Power Engineering Soc., (IA34) Industrial Applications Soc.	16	265
CHAPTER 8 EMC (EMC27) Electromagnetic Compatibility Soc.	13	80
CHAPTER 9 (IE13) Industrial Electronics Soc., (PEL35) Power Electronics Soc.	?	?
CHAPTER 10 (TEM14) Technology and Engineering Management Soc.	2	11
CHAPTER 11 (EMB18) Engineering in Medicine and Biology Soc.	2	64
CHAPTER 12 (CS23) Control Systems Soc.	2	162
CHAPTER 13 (E25) Education Soc.	2	28
CHAPTER 14 (RA24) Robotics And Automation Soc.	7	136
CHAPTER 15 (NPS05) Nuclear Plasma Sciences Society	1	55
CHAPTER 16 (CIS11) Computational Intelligence Soc., (SMC28) Systems, Man and Cybernetics Soc.	5	64
CHAPTER 17 (NANO42) Nanotechnology Council	2	72

If we don't actively participate in governing our organizations, you can be sure that someone will come along and govern it for us whether we want that or not. Whether we want them or not. And when that happens, it becomes very difficult to remove that person from the seat of power.

I hope that this dismal showing of participation in your local IEEE elections is not indicative of what we can expect from our electorate for our country in the next few years.

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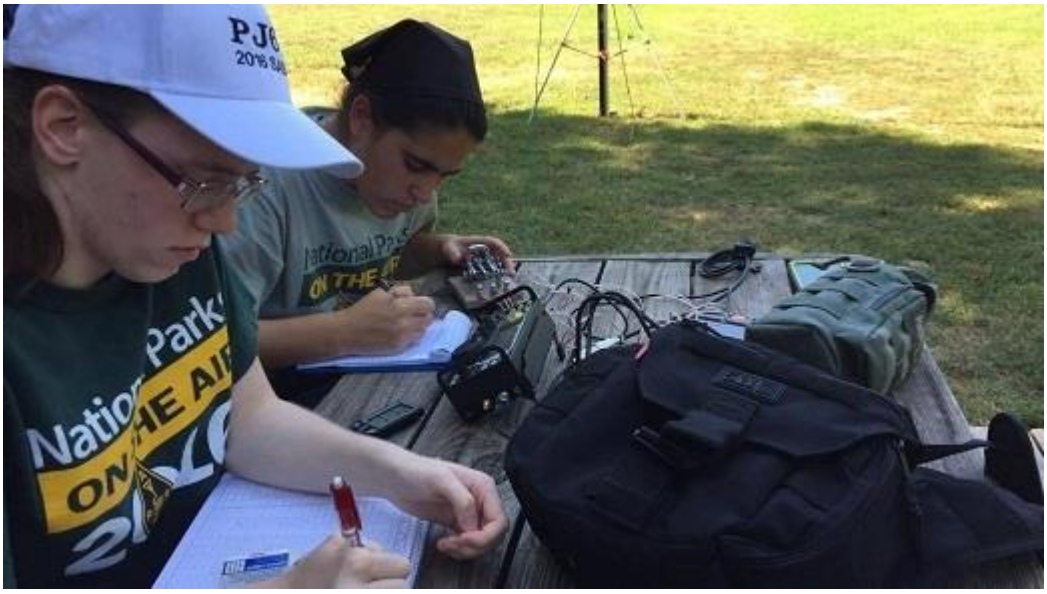
Ham News

I was browsing in the American Radio Relay League website recently and opened the "Licensing, Education & Training" page and found the listing shown below. The listing of sites below the photo an description do not come through as active in this publication but it is easy to log into the site a explore them on your own.

The ARRL website is at: **https://www.arrl.org/licensing-education-training**



Want to get an Amateur Radio license or upgrade? Want to help others get licensed or teach using ham radio? Looking for public service training or serving as part of ARRL's ARES field training team? You can even arrange an Amateur Radio contact for your students with the International Space Station! Click on the links below or on the left to learn more about ARRL's licensing and education resources:

- ARRL Learning Center
- What is Ham Radio?
- Getting Your Amateur Radio License
- Online or In-person Testing
- Emergency Communications Training
- Learning Programs
- Webinars
- Amateur Radio in the Classroom

Take a serious look at amateur radio and find our why so many of the 2.5 Million + amateurs world wide consider this the best investment they can make in their 'leisure' time.

Kim N8FNC

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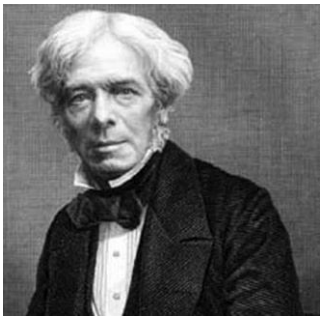
Three Amigos

In the last two months we took a look back at two of the 'unsung heroes' of early electrical communications, Alfred Vail and Friedrich Gerke. Both men contributed significant advances to electrical / electronic communications by developing and improving the 'tools' that gave us effective and rapid communications, desperately needed in a rapidly evolving technologically based culture.

This month I want to highlight the fundamental 'foundation' work performed by three 'friends' working on the leading edge of what we now call electricity and magnetism. I say 'friends' although they did not 'ride' together as the actors - Steve Martin, Martin Short and Chevy Chase did in the movie 'Three Amigos'. They all knew of each other, read each other's publications and, in some cases, visited each other and worked in each other's laboratories. These were three kindred spirits working in technical areas without directions, maps or guideposts to understand what some of their colleagues referred to as mystic mumbo-jumbo.

The first of these was the French 'polymath' **Andre-Marie Ampere**, a self-taught genius who became fluent in many languages and became intrigued by the work of the Danish physicist Hans Christian Ørsted who found that a magnetic needle is deflected by a nearby electric current. Ampère evolved a theory to understand the relationship between electricity and magnetism.



The second is the English scientific investigator **Michael Faraday,** who was also self-taught, and built on the work of Ampere. Through constant experimentation and deduction Faraday was able to expand the infant science of electromagnetism into a series of demonstrations supported by clear and simple explanations that conveyed his understanding to the phenomenon to his contemporaries.

Self-taught as Faraday was, his verbal explanations of electromagnetism, while clear and concise and easy to follow logically lacked the 'rigor' of a mathematical structure that would allow others to not only to understand the phenomenon but allow them to extrapolate beyond the explanation and follow where the mathematics would direct further inquiry.

Enter our final third 'amigo' is the Scottish mathematical genius, **James Clerk Maxwell**. Of the three, only maxwell was highly educated. Early on he attended the prestigious Edinburgh Academy and published his first scientific paper at age 14.
Later in life, while it is certain that Maxwell and Faraday knew each other and discussed Faraday's work, Maxwell's contribution was not in extending the concepts developed by Faraday but rather in developing a coherent set of equations and the accompanying explanations that provided a logical and consistent mathematical foundation upon which others could stand and build.

Together, these three men gave us the basis for the development of all we see today in the fields of electronics, communication, power production and transmission, as well as the electrodynamic interactions between the energies produced by the sun and its effect on the magnetic field of the earth. Now, along with an appreciation of the beauty and majesty of the Aurora borealis, (Northern Lights) we can visualize the effect of the solar wind energizing the earth's magnetic field to give us that wonderful display in the night sky and understand its origin. Understand the electromagnetic fields that we are finding around other planets and their moons would not have been possible with out the work of these 'Three Amigos'. The results of their gifts to humanity keep growing and so far we do not see an end.

Kim N8FNC

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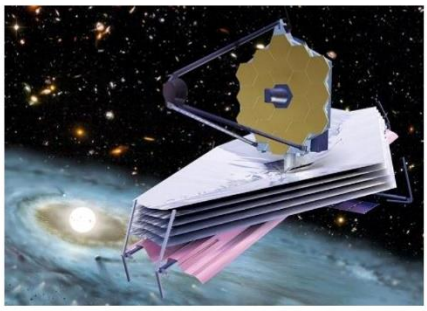
JWST movie

IEEE Southeastern Michigan
Presents:

The Ultimate Space Telescope: A Documentary



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Electrical and Electronic Engineers Creating Our Future

Recently, as part of an innovative and fresh approach, i.e. a non-traditional meeting event: we presented video documentaries. This was very warmly received. So, we decided to continue the good work. We proudly present the documentary: The Ultimate Space Telescope.

Summary:
Follow the dramatic story of NASA's James Webb Space Telescope (affectionally known as JWST) – the most complex machine ever launched into space – in hopes of peering deeper back in time than ever before and answering some of astronomy's biggest questions. For more details about the JWST – read the article published in IEEE Southeastern Michigan's monthly newsletter – Wavelengths, July 2022 edition. (the URL of which can be found below)
https://r4.ieee.org/sem/wp-content/uploads/sites/6/2022/07/07_2022_WL_Rev1.0.pdf

At Glance

- **When:**
  Date: Nov 8, 2022
  Time: 05:30 – 7:00 PM (EST/EDT)
- **Where:**
  Online via Webex (to be shared only after you have a confirmed registration)
- **Audience: OPEN to ALL***

Sponsored by
IEEE
SE Michigan
Computer Society
&
Education Society
Chapters

***Pre-Registration Required!**

https://events.vtools.ieee.org/m/329880

IEEE COMPUTER SOCIETY
IEEE Education Society
IEEE Advancing Technology for Humanity
IEEE Southeastern Michigan Section

This Month in November

Or: Did You Know This?

NOVEMBER 2, 1947 - The first and only flight of Howard Hughes' "Spruce Goose" flying boat occurred in Long Beach Harbor, California. It flew about a mile at an altitude of 70 feet. Costing $25 million, the 200-ton plywood eight-engine Hercules was the world's largest airplane, designed, built and flown by Hughes. It later became a tourist attraction alongside the Queen Mary ship at Long Beach and has since been moved to Oregon.

NOVEMBER 3, 1957 - Soviet Russia launched the world's first inhabited space capsule, Sputnik II, which carried a dog named "Laika."

NOVEMBER 4, 1890 - The first electrified underground railway system was officially opened in London.

NOVEMBER 8, 1895 - X-rays (electromagnetic rays) were discovered by Wilhelm Roentgen at the University of Wurzburg in Germany.

NOVEMBER 8, 1656 - Birthday - Astronomer and mathematician Edmund Halley (1656-1742) was born in London. He sighted the Great Comet of 1682 (now named Halley's Comet) and foretold its reappearance in 1758. Halley's Comet appears once each generation with the average time between appearances being 76 years. It is expected to be visible again in 2061.

NOVEMBER 9, 1965 - At 5:16 p.m., the Great Blackout of the Northeast began as a tripped circuit breaker at a power plant on the Niagara River caused a chain reaction sending power surges knocking out interconnected power companies down the East Coast. The blackout affected over 30 million persons, one-sixth of the entire U.S. population. Electricity also failed in Ontario and Quebec.

NOVEMBER 9, 1790 - Birthday - German mathematician August Mobius (1790-1868) was born in *Schulpforte*, Germany. He worked in the area of analytic geometry and was a pioneer in topology, the study of geometric figures that remain constant even when twisted or distorted.

NOVEMBER 18, 1883 - A Connecticut school teacher, Charles F. Dowd, proposed a uniform time zone plan for the U.S. consisting of four zones.

NOVEMBER 18, 1789 - Birthday - Photography inventor Louis Daguerre (1789-1851) was born in *Cormeilles*, near Paris. In 1839, at a meeting of the French Academy of Sciences, he announced his daguerreotype process, the first practical photographic process that produced lasting pictures.

NOVEMBER 18, 1889 - Birthday - American astronomer Edwin Hubble (1889-1953) was born in Marshfield, Missouri. He pioneered the concept of an expanding universe. The Hubble Space Telescope was named in his honor. It was deployed from the Space Shuttle Discovery in 1990, allowing astronomers to see farther into space than they had ever seen from telescopes on Earth.

NOVEMBER 27, 1701 - Anders Celsius (1701-1744) was born in Sweden. He invented the centigrade (Celsius) temperature scale commonly used in Europe and most of the world follows the metric system.

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 Chair, Southeastern Michigan Section
Passionate Engineering History Buff/Aficionado

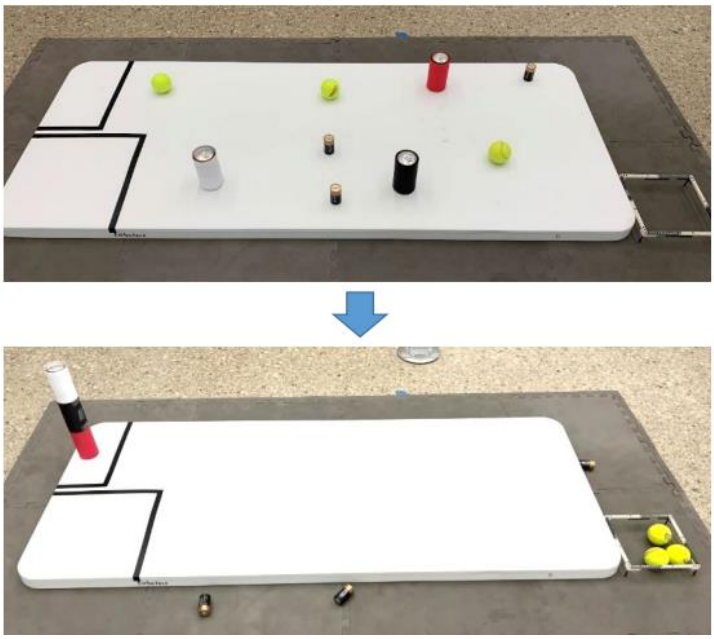
RoboFest News

The 24th season of IEEE SEM sponsored Robofest competition will be kicked off with a season-opening information meeting on Thursday, Nov. 3. The meeting runs from 7 to 8:30 p.m. in LTU's Robofest Lab, Room J234 of the Taubman Complex (building 8 at www.ltu.edu/map). Free parking is nearby in Lots D or E. The meeting will also be webcast as a Zoom meeting for those unable to attend in person.

To join, visit https://ltu.zoom.us/j/92854544370?pwd=NjIvMlFFTHhZbUw1cUlKc0RvR3I4dz09.

Robofest differs from other robotics competitions in that all robots competing are completely autonomous, controlled only by programs developed by team members.

The 2023 Game competition is ripped from the headlines: the Supply Chain Challenge. The supply chain is broken, the ports are jammed up, and the stores are empty! Robots are programmed to clear obstacles, bring order to a port, and restock a store. Representing these challenges, robots must be programmed to move colored cans to a "port" area and stack them, move tennis balls to a "store" area, and remove obstacles—represented by flashlight batteries—from a competition table.



Other Robofest competitions include Exhibition, in which teams are free to develop any task and then build a robot to accomplish it; RoboArts, in which robots are created and programmed to perform in areas such as music and visual arts; RoboMed, in which teams create robots that perform tasks in healthcare and the life sciences; the Unknown Mission Challenge, in which mission tasks are totally unknown to teams until the day of competition; RoboParade, a parade of autonomous robot "floats;" and BottleSumo, in which robots re programmed to be the first to push a bottle or the other robot off a competition table.

Teams compete in the junior (grades 5-8), and senior (grades 9-12) divisions. For RoboMed only, there is also a college division.

For RoboParade, competitors may be as young as fourth grade.

Qualifying events for the Robofest World Championships are scheduled to be held around the world from February through April 2023. There will be invitational qualifying events at LTU April 21 and 22, 2023. And the Robofest World Championships are scheduled to return to LTU for the first time since 2019 on May 11, 12, and 13, 2023.

Section Conference

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

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 2021-2022 academic year:
https://mipse.umich.edu/seminars_2122.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://2021.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.

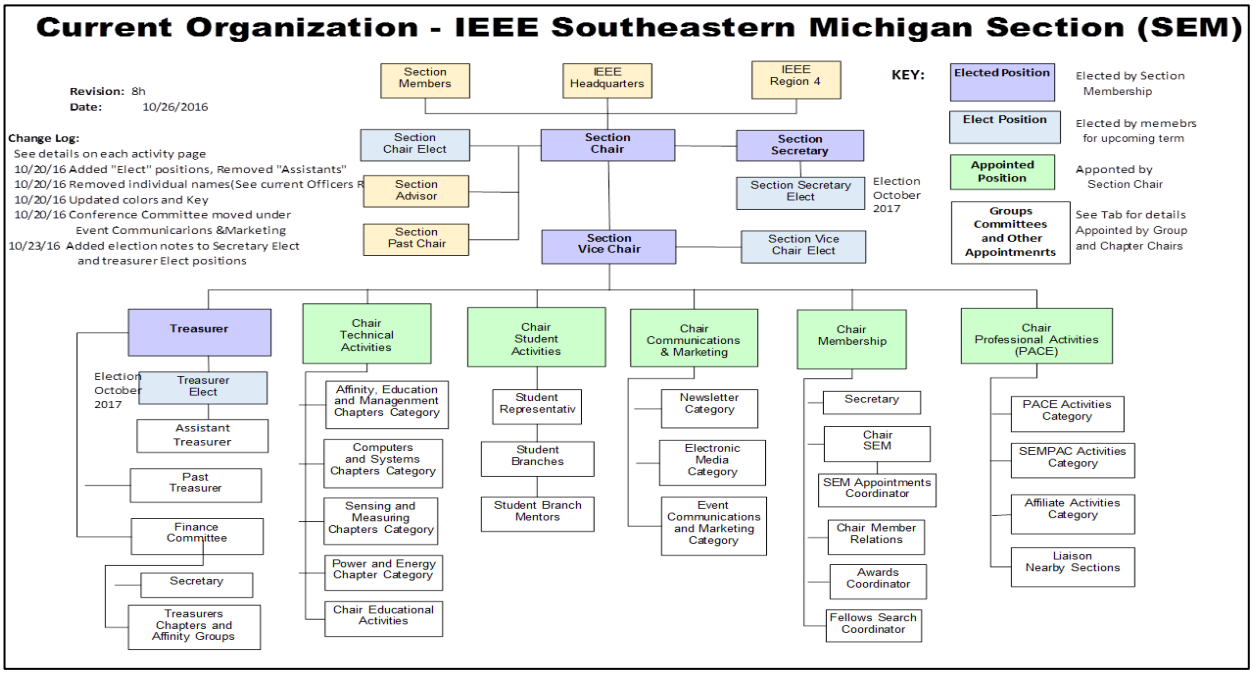
However, members of the section may have multiple technical interests and would like to have meeting information of other chapters. In order to communicate the meeting dates of all the chapters, affinity groups etc., to our members to facilitate their attendance, leaders of the groups are requested to 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 2022 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 2022 meetings. Or, link your personal calendar to the SEM Web calendar.

Section Administrative Committee (ExCom) Meeting Schedule for 2022:

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	*Date & Time*
Nov 03,2022 - SEM Section ExCom Meeting (Teleconference) for November 2022 https://events.vtools.ieee.org/m/289876	**6:30 PM**
Dec 01,2022 - SEM Section ExCom Monthly Meeting (Teleconference) for December 2022 https://events.vtools.ieee.org/m/289877	6:30 PM

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

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

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 page under the "About 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

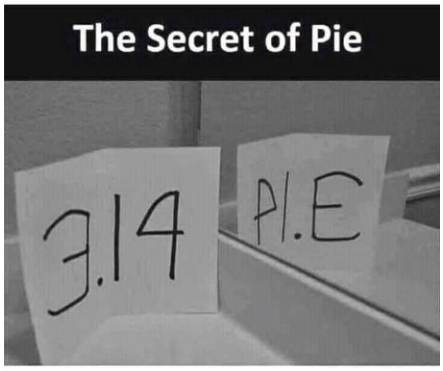
Student Representative
Mohd Faisal

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



Never thought about it until I saw it

Leadership Meetings

SEM Executive Committee Monthly Teleconferences:

- 1st 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.)

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