

Wavelengths



Volume 63 – Issue 03

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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
Advanced Vtools & other Features Training	04 Mar 2023	09:00 AM
Ch8: AdCom Teleconference	09 Mar 2023	11:00 AM
SEM Section ExCom Monthly Meeting (virtual) For MARCH	09 Mar 2023	06:30 PM
Micro Tutorial: Introduction to Agile Methodology	11 Mar 2023	12:00 PM
The many different laws of Computing	14 Mar 2023	06:00 PM
Digital Smart Substation (DSS) Practices	16 Mar 2023	12:00 PM
EMC Society Monthly tech Meeting	16 Mar 2023	05:30 PM
Professional Development Workshop: Critical Thinking Skills	18 Mar 2023	12:00 PM
Managing your Time	21 Mar 2023	12:01 PM
Managing your Time	22 Mar 2023	07:00 PM
Managing your Time	23 Mar 2023	12:01 PM
Subsynchronous Oscillation Events in Power Grids with High Penetrations of Inverter-Based Resources	24 Mar 2023	12:00 PM
Managing your Time	24 Mar 2023	07:00 PM
Managing your Time	25 Mar 2023	09:00 AM
SEM Section Spring Conference	28 Mar 2023	04:00 PM
DREAMING BIG & CONQUERING UNCERTAINTY	30 Mar 2023	05:30 PM
Henry Ford Estate – Thomas Edison Hydroplant Tour 2023	31 Mar 2023	11:55 AM
EMC Fest 2023	25 May 2023	08:00 AM

Chair's Column**Spring Conference:**

The Spring Conference web site and registration site are open. The Conference is on Tuesday, March 28th. A lot more details and links to the web pages, including registration, the call for student posters is on page 3. Also, we are featuring as we have traditionally done so many times in the past, profiles of new leaders – specifically the new Section Student Representative and the Chair of the Section Conference Committee.

Not only do we do tons of technical events (more than any section in the entire IEEE Region 4), but we also boost the 'soft skills' of our community via PACE (Professional Activities Committee for Engineers) events. This month we have 2 being scheduled. If there are other areas, you would like to see – let us know!

Training:

In January and February, we ran several officer training sessions, and the last one is on the IEEE Code of Ethics. As a serious engineer, student of engineering principles OR PE certified engineer, this should be of interest. A recording has been made of all the training sessions + slides, so do feel free to request for the links in case you are interested.

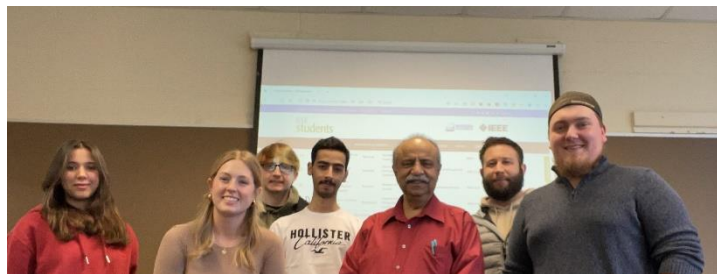
Many of you have often asked how to do fancy things with the vtools (volunteer tools) and/or search for IEEE resources. A special advanced IEEE features has been scheduled precisely for this purpose. We do listen and hear you!

The Section website is undergoing subtle changes, but chief amongst them are: restricted access to the roster (ask us for the password), refresh of the training materials, better organization, e.g. listing resources alphabetically, etc.

Thanks to Michael Anthony we have a website QR code – I plan to add it on ALL of our IEEE Collabratec and social media (Facebook, LinkedIn and Twitter) posts as well as my personal email signature.



On February 28, I got a chance to visit the rejuvenated Student Branch at LTU. They are all eager to participate! Give them your support.

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

CFP: Section Conference



IEEE Southeastern Michigan Spring 2023 Conference

Conference Registration Open

IEEE Southeastern Michigan Spring Conference 2023



Submit Abstract



Event Registration

The Southeastern Michigan Section Conference Committee is pleased to announce the Spring March 2023 section conference which will be held at Lawrence Technological University, first time after the covid pandemic. The aim is to bring together leading experts in the field of engineering to discuss the latest advancements and developments in the industry.

The conference will feature keynote presentations, student research poster competitions and presentations, recruitment opportunities, social networking, section activity, dinner, awards, and technical chapter collaboration. The conference will cover topics such as electrification, alternative energy, batteries, chargers and inverters, electric vehicles, connected vehicles, and areas of Electrical/Electronics/Computer Engineering & Science, etc.

Research Poster

Abstract Submission Opens:
20 January 2023

Abstract Submission Extended End:
10 March 2023

Abstract Acceptance Notification:
12 March 2023

Poster Registration Opens:
20 February 2023

Poster Registration Ends:
20 March 2023

Topics:

- Power Electronics and Motor Drives
- Electric Machines and Actuators
- Powertrain: Design, Thermal Management, Packaging, and Optimization
- Battery, Fuel Cell and, Energy Storage Systems
- Electric, Hybrid Electric, Plug-in Hybrid Electric Vehicle System Architectures, and Control
- Connected and Autonomous Vehicles, Smart Mobility, Control, and Vehicle Functional Security
- Machine Learning, Smart Sensors, Artificial Intelligent, Smart Networks, Robotics, Cloud Computing
- Smart and Micro Grids, EV-Interacting Smart Grid, and Electrical Infrastructure
- Electrification of Heavy-Duty and Off-Road Vehicles
- Computing Systems, and Nanoelectronics
- And much more

Venue: Lawrence Technological University



Keynote Speakers



Dr. Tarek Sobh, LTU



Kelsey Peterson, DTE



Santhosh Jogi, ONE

IEEE Southeastern Michigan Spring 2023 Conference

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

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

conference@ieee-sem.org

<https://sites.google.com/view/isemsc2023/>

<https://events.vtools.ieee.org/m/328899>

Technical Activities Report

2023 IEEE SE Michigan Section Geo-unit Status (Till Feb 27th)									
Ch's & AG's	Ave Tech Mtg. Attend	Ave Tech Mtg Guest	#L31 - Technical	#L31 -Admin	#L31 Professional	#L31 -Other	Geo-Unit Name	# Unreported	Total Mtgs
Cnslt	0	0	0	0	0	0	Consultants Network	0	0
LIFE	0	0	0	0	0	0	Life Members	1	0
WIE	0	0	0	2	0	0	Women In Engineering	0	2
YP	0	0	0	0	0	0	Young Professionals	0	0
1	0	0	0	0	0	0	Circuits & Systems, Signal Proc., Info Th.	0	0
2	26	12	2	0	0	0	Vehicular Technology	0	2
3	0	0	0	0	0	0	Aerospace & Elec. Sys., Communications	0	0
4	39	36	1	0	0	0	Trident (Ant, Elect Dev., uWave, Photo)	0	1
5	31	7	5	0	0	0	Computers	0	5
6	0	0	0	0	0	0	Geoscience & Remote Sensing	0	0
7	200	74	2	0	0	0	Power Engineering, Industrial App.	0	2
8	40	19	3	2	0	0	Electromagnetic Compatibility (EMC)	0	5
9	0	0	0	0	0	0	Power Electronics, Industrial Electronics	0	0
10	0	0	0	0	0	0	Engineering Management	0	0
11	0	0	0	0	0	0	Eng. in Medicine & Biology	0	0
12	24	0	1	0	0	0	Control Systems	0	1
13	17	0	8	1	0	0	Education	1	9
14	0	0	0	0	0	0	Robotics & Automation	0	0
15	39	36	1	0	0	0	Nuclear Plasma Science Society	1	1
16	0	0	0	0	0	0	Computational Intelligence / Sys.Man.Cyber.	0	0
17	27	0	1	0	0	0	Nano Technology Council	0	1
SEM	24	0	1	14	0	0	SEM (Section)	1	15
	466	183	25	19	0	0	NOTE: Highlight Green = Active	4	44
		39%					NOTE: Highlight clear = Concern		

Per the associated Section Health report, Life Members, Chapters 13 and 15 have unreported meetings that need attention. Chapter and Affinity group members if you have suggestions or requests for technical meetings please contact me via the email below. Your TAcOm plans to continue contacting chapters and groups needing assistance in meeting IEEE and SEM Section goals for encouraging member participation and discussions related to the vast amounts of technical and engineering challenges facing our world. We plan to survey the SEM membership as to what subjects and speakers might be most relevant. Please plan to respond whether you are a student, practicing professional, or retired as this is an urgent matter.

V/r

Jeffery V. Mosley
 TAcOm Chairman
 jvmosley@ieee.org

We Train Leaders:**Why are we here?**

So, you joined the IEEE (fill in any professional organization) and just what are you getting out of it?
If your answer is 'Nothing', you are not alone.

Many people join societies, sit back and wait for the benefits to arrive. They wait...and wait...and nothing happens. So where are all of these benefits we were told about?

In case you missed the first day of "Philosophy of Life 101" in your freshman year, there is a simple maxim that aptly covers this situation:

"You get out of anything exactly what you put into it."

...Ok,...so just what does that mean?

Remember that guy down the hall in the dorm who studied all the time? The one who had little if any social life, and got great grades? Do you suppose there was some connection between his study and his knowledge about his course material which was reflected in his grades?

Or how about the one who joined the 'Toastmasters Club' and gave speeches every week in front of a bunch of his friends who finally became one of the best speakers in the class? Do you think it might have been due, in part, to his constant practice?

What about his friend who also joined the 'Toastmasters Club' but refused to give any speeches at all? Is it strange that he never got over stage fright, and to this day can't give a convincing presentation to his supervisor at work? Is that strange, or just inevitable?

We Train Leaders:

In professional society, a volunteer can be given a task, and... what happens if he fails? No products are late to market. No jobs are lost. No companies go bankrupt. Indeed, when the failure becomes obvious, the volunteer is counseled, given guidance and assistance, and usually the next time, perhaps with a lot of help, he is able to succeed.

The next job he tackles is likely to be a success because he brings his new understanding of what it takes to 'get the job done'. In effect, the professional society has become a non-threatening environment in which members can gain the experience of both failure and success without the inevitable penalty that would accompany such a failure in a commercial or industrial environment.

The assignments can be varied, but the lesson will always be the same.

How to succeed!

This is not a course of training that has a fixed semester length. Nor is it something that can be learned without the accompanying conditions and experience of actually doing the job. This is also something that the University system is neither chartered nor able to provide within its normal operational limitations. (Neither is the normal work environment.)

However, a Professional Society can, and does, provide this every day.

We Train Leaders (continued)

There are a number of ancillary skills that accompany participation in many of these professional society activities:

- Meeting planning & Logistics
- Article writing
- Publications
- Communications
- Public speaking
- Crowd control
- Project planning
- Meal planning
- Entertainment
- *Etc.*

The list can be as long as we want. But, the common characteristic is that these are generally not subjects found in the engineering Baccalaureate curricula and they all must be learned 'by doing'. Universities are not structured, nor are they chartered for the development of leadership and leadership skills. The industrial, or academic, workplace is definitely not structured to teach, accept or tolerate a significant training period to allow development of these skills.

This one area where professional societies can (and do) fill a definite need.

Executive Skills Training

As an engineer, with time and experience, you will be expected to take responsibility for a project and eventually for a project team. This will require organizational, administrative, leadership and team building skills. While training in these skills is not a part of the traditional scholastic environment, a professional society is the ideal training ground for each.

Gaining experience in these skills in an industrial environment allows no errors or mistakes. An error there could cost your company a product, market share, or your job. In a professional society, a failure with an assignment usually results in gaining assistance in making it a success the next time. Your company doesn't fail to introduce a product, or lose market share. No one loses his or her job. You learn valuable skills in the process.

The IEEE has a clear statement of our Vision and our Mission:

Vision: To advance global prosperity by fostering technological innovation, enabling members' careers and promoting community worldwide.

Mission: The IEEE promotes the engineering process of creating, developing, integrating, sharing, and applying knowledge about electro and information technologies and sciences for the benefit of humanity and the profession.

We train leaders to get that job done!

This Month in March**Or: I Did Not Know This!** 😊

March 1st, 1880 – date of birth for Sir Isaac Shoenberg. Russian-Born British electrical engineer and principal inventor of the first high-definition television system, as used by the British Broadcasting Corporation (BBC) for the world's first public high-definition telecast (from London, 1936). He had installed the first radio stations in Russia before moving to England in 1914. He was head of a research group for Electrical and Musical Industries (EMI) that developed (1931-35) an advanced kind of camera tube (the Emitron) and a relatively efficient hard-vacuum cathode-ray tube for the television receiver. Until 1964 the BBC used his technical standard proposal - 405 scanning lines and 25 pictures a second. He was director of EMI from 1955. His youngest son, David Shoenberg, became a noted physicist.

March 7th, 1958 – Alan Hale is born. He is an American astronomer and writer who co-discovered the Comet Hale-Bopp (1995). After service in the navy, he worked at the Jet Propulsion Laboratory (1983-86) as an engineering contractor on several projects, including Voyager II. After earning a Ph.D. in astronomy, he founded the Southwest Institute for Space Research (now named the Earthrise Institute). His interests include near-Earth objects and their possible impact on Earth, and the search for planets outside our solar system. He advocates for improved science literacy in society, and better career opportunities for graduating scientists. Hale is also active in developing international collaboration for observational projects.

March 11th, 1890 – Vannevar Bush is born. American electrical engineer who oversaw the massive government mobilization of scientific research during World War II. At the age of 35, in 1925, he developed the differential analyzer, the world's first analog computer. It was capable of solving differential equations. The modern day NSF was direct result of the lineage established by him. During the war, numerous history changing projects were championed and guided by him such as the proximity fuse and the Manhattan project.

March 25th, 1883 – (Henry Charles) later Fleeming Jenkin is born. He was a British engineer noted for his work in establishing units of electrical measurement. After earning an M.A. (1851), he worked for the next 10 years with engineering firms engaged in the design and manufacture of submarine telegraph cables and equipment for laying them. In 1861 his friend William Thomson (later Lord Kelvin) procured Jenkin's appointment as reporter for the Committee of Electrical Standards of the British Association for the Advancement of Science. He helped compile and publish reports that established the ohm as the absolute unit of electrical resistance and described methods for precise resistance measurements.

March 27th, 1855 – Sir Alfred Ewing's official date of birth. He was a Scottish physicist who discovered and named hysteresis (1881), the resistance of magnetic materials to change in magnetic force. Ewing was born and educated in Dundee and studied engineering on a scholarship at Edinburgh University. He helped Sir William Thomson, later Lord Kelvin in a cable laying project. In 1878 he became professor of Mechanical Engineering and Physics at Tokyo University, where he devised instruments for measuring earthquakes. In 1903 he moved to the Admiralty as head of education and training, where during WW I, he and his staff took on the task of deciphering coded messages.

March 29th, 1853 – Elihu Thomson, an English-American engineer and inventor whose discoveries in the field of alternating current phenomena led to the development of successful alternating current motors. Thomson invented electric welding and other important inventions in electric lighting and power among his lifetime total of about 700 patents. Thomson was also a cofounder of the General Electric Company (in 1892, in a merger with the Edison Company) industry.

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

Sharan Kalwani

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

Elections Again?

Yes, I know it seems like we just had an election at the end of 2022, and we did. However, we also intend to begin the final phase of the election cycle with Nominations for ballot for officers in September of this year and MGA rules require notification of elections 6 Month in advance of the actual process, so here we are in March letting you know that we will need your recommendations of who you want see on the ballots for your Section, Chapter or Affinity Group.

In September we will launch the 'survey' form to request your input about to who you would like to see running your Chapter, Affinity Group, or Section officer position.

Which is 'my' Geo-unit?

If you are a member of a technical society, check the latest Wavelengths newsletter and look for Sharan's "ORG UNITS cheat sheet", which in the February issue is on page 32. That page lists all our Chapters along with which technical society sponsors each. In a few, there is more than one sponsor. We call these Joint Chapters. Be sure to read all the listing to see just which Chapter matches up with your membership in the technical side of the IEEE 'house'. For the Affinity Groups, that should be self-evident from your membership. If not, see below for a more detailed description.

Can anyone play?

Well, yes, and no. There are some conditions:

Remember for the Section, the candidate need only be a member in good standing, and resident in the Section.

For a Technical Chapter, the person must also be a member of at least one of the technical societies sponsoring the Chapter. In a Joint Chapter (more than one technical Society sponsors a 'joint' Chapter) the potential officer need only be a member of one of the sponsoring Societies. For an Affinity Group, some other conditions may apply (see below):

For Consultants Network, the person must have joined the Consultants. This is very much like the Chapter requirement.

The Women in Engineering (WIE) also only requires membership in the WIE.

(...But, doesn't the WIE require a member to be a woman?)

No! Anyone can join the Women in Engineering. For example, I have been a member of the WIE since I joined the IEEE over 40 years ago. I also spent one year as Chair of the WIE Affinity Group in our Section. The only requirement is an awareness of just how important women are in our profession, how much they bring to mixed development groups, and a willingness to help advance their cause.

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

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

Nominations:

The section nomination will begin in September, so between now and then, begin watching how the current officers running your Geo-unit perform.

- Are they meeting regularly to discuss the status and direction of operation of your Geo-unit?
- Are they holding technically relevant meeting for the general Chapter's members?
- Do they regularly let their members know what is going on in their Chapter, with eNotices, emails, copies of minutes of administrative meetings, articles in the newsletter?
- If they hold virtual or face to face meetings do you have a chance to get to know them?

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

A Job for Everyone:

In the USA, we once called ourselves ‘the land of opportunity’. That meant that everyone could choose a path in life and with hard work and a bit of good luck, be able to provide a living for their family and eventually retire and spend their ‘golden years’ in relaxing pursuits. With 20:20 hindsight it is clear that those ‘opportunities’ were not as equally available to all as the statement assumed. Many have devoted ‘their lives, their fortunes and sacred honor’ to working to change the ‘status quo’ and truly make this a land of ‘equal opportunity’.

At IEEE, we support this concept, and are actively seeking members who wish to begin training and working to develop the skills and experience that will aid them in not only achieving ever more responsible positions within IEEE but more responsible positions within their ‘normal workplace’. For the past several years, our Section had offered ‘Officer Training’ experiences to all IEEE members designed to focus first on the specific skill sets needed to fulfil IEEE leadership positions at all levels and for all Geo-units. (Chair, Vice-Chair, Secretary, Treasurer) are the typical positions, and the skills taught cover many of the same requirements expected of any engineer in a responsible position in business, industry, or academia.

These specific skills are often referred to as the ‘Soft Skills’ which are not a usual part of the normal engineering curriculum in a university environment. It has been our experience, and the experience of other successful engineers, that the ‘Soft Skills’ are as much a part of a successful engineering career as the technology we all focused on so much when we were going through school.

It is no wonder that most universities do not include the Soft Skills as part of their curriculum since they are more akin to learning something like playing tennis or learning to ice skate. While some aspects can be learned by reading related documents, it should be obvious that any degree of actual mastery of the skill can only be gained by actually engaged in DOING IT!

In order to provide the opportunities for development of your set of soft skills IEEE provides four opportunities for training:

- [Traditional training documents](#) which may be found in the IEEE Learning Network (ILN) and the Center for Leadership Excellence among others.
- [The IEEE vTools Knowledgebase](#) which provides tutorials on all the available on line ‘Volunteer Tools’ under the MGA “Member Geographic Activities” banner.
- [Local volunteer training classes](#) taught by officers in each Section, and often by the Technical Societies and Affinity Group central organizations.
- [On the Job functional experience](#) as part of the leadership team for local Geo-units (Affinity Groups / Technical Chapters / Student Branches & HKN Chapters).

The case of ‘Local’ classes, have been taught by the senior officers in the Southeastern Michigan Section for many years, and 2023 is no exception. These have been conducted as ‘hybrid’ (virtual and Face to Face) for several weeks. All have been ‘advertised’ by as many means as we can access but the level of participation has been less than we had hoped.

At the conclusion of the complete set, the recordings are planned to be made available online via the Section website. While recordings are useful for ‘first exposure’ and for later ‘brush up’ reviews, it is not possible to ask questions or request clarification of a recording. Please keep in mind that when a topic may not be clear, the senior officers of the Section remain available to discuss any of the content and help our members gain a fuller understanding of the material.

Of most importance to any of these training paths is the last on in the list: [On the Job functional experience](#) as part of the leadership team is the functional equivalent of stepping out onto a tennis court with a racket in hand and learning what it actually feels like to feel the ball bounce off the strings, or to set foot in a pair of ice skates on an ice rink and begin to understand just how it feels to be on a surface where the coefficient of friction is reduced to almost zero, and simply standing up can be a challenge!

So, how do we go about becoming part of a Geo-unit leadership team to begin to gain that functional experience that can make a critical difference in an engineering career?

First, ensure you are a paid-up member of the IEEE and have your residence in the Section in which you wish to serve.

As a resident IEEE member you may volunteer to serve on any of the Section Committees, of which there are 11:

- 1) Finance
- 2) Technical Activities
- 3) Education
- 4) Student Activities
- 5) Student Branch Mentors
- 6) Web Communications
- 7) Conference
- 8) Newsletter
- 9) Member Development
- 10) Nominations and Appointments (soon to be Nominations & Awards)
- 11) PACE (Professional Activities Committee for Engineers).

Each of these either has or can accommodate space for new members.

Second, check which Affinity Groups or Technical Societies of which you are a member and note whether there is a corresponding Geo-unit within the Section. To serve on one of these, you are required to be a member of the supporting technical organization. For 'Joint' Chapters, those with more than one Society support them, you only need to be a member of one of the Societies to qualify for potential membership in the leadership team.

Third find at least one of the officers of the Standing Committee or Geo-unit you are interested in working with and discuss possible positions with them. Don't know which Geo-unit is 'yours'? See the latest Wavelengths newsletter and look for Sharan's "ORG UNITS cheat sheet", which in the February issue is on page 32. At this point, contact one of the Section officers and request the access code for the new version of the Organization Roster in order to find the correct lead officer to discuss your interest.

Find the Organization Roster on the SEM Website at: <https://r4.ieee.org/sem/about-sem/> Note that the full access requires an access code. For that, contact any one of the Section officers through any one of the many eNotices sent every week.

With luck, and a few trials, you should be able to find the Committee or Geo-unit to give you a start on your new learning curve.

30

Senior Elevation

**IEEE Southeastern Michigan Section
Presents
“Senior Membership Elevation: 2023 Kickoff”**



IEEE Southeastern Michigan Section will commence for the 2023 season, its Senior Member Round up event (virtual) on April 8th between 9 AM and 12 noon (EST/EDT). Senior Member Reviewers will assist interested member candidates with significant years of experience in their profession.

The way it works is:

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

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

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

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

At Glance

- **When:**
Date: April 8th, 2023
Time: 9 am to 12 noon
- **Where:**
Online using Webex breakout rooms
- **Audience:** All Eligible Members, Senior members, and *potential* Members

**Sponsored by
IEEE
Southeastern Michigan Section
Membership Development**

Pre-Registration Required!

<https://events.vtools.ieee.org/m/343961>

IEEE Southeastern Michigan Section



EIT 2023: Research CFP

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

The IEEE 2023 International Electro/Information Technology Conference, sponsored by the [IEEE Region 4 \(R4\)](#), in collaboration with [Lewis University](#), and the [IEEE Chicago Section](#), is focused on basic/applied research results in the fields of electrical and computer engineering as they relate to Electrical and Computer Engineering, Information Technology, and related applications. The purpose of the conference is to provide a forum for **researchers and industrial investigators** to exchange ideas and discuss developments in these growing fields. There will also be exhibits where the latest electro/information technology tools and products will be showcased. This is also an opportunity for professional activities development, workshops and tutorials.

Topics of interest include but are not limited to:

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

Important dates:

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

For more information, ideas for organizing/chairing sessions, industry participation, tutorials, professional activities sessions, please contact: [Dr. Martinez](#), or [Dr. Mousavinezhad](#)

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

EIT 2023: Industry CFP

CALL FOR INDUSTRY APPLICATION PAPERS
2023 IEEE INTERNATIONAL CONFERENCE on
ELECTRO/INFORMATION TECHNOLOGY
May 18 - 20, 2023,
Lewis University, Romeoville, Illinois, USA
<https://eit-conference.org/eit2023>

Sponsored by [IEEE Region 4 \(R4\)](#), in cooperation with [Lewis University](#) and the [IEEE Chicago Section](#).

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

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

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

Topics of interest include but are not limited to:

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

Important dates:

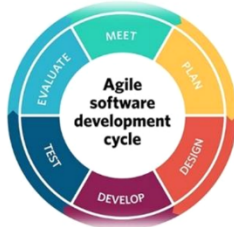
- Submission of 300-word summary: March 15, 2023
- Submission of final paper: March 30, 2023
- Notification of acceptance: April 15, 2023
- Early registration: April 15, 2023

For more information, please contact:

[Dr. Hamid Vakilzadian](#)
[Jim Riess](#)

PACE: Agile Methods

IEEE Southeastern Michigan Presents "An Introduction to Agile Scrum Methodology"



Agile is a software development methodology to build a software incrementally using short iterations, so that the development is aligned with the changing business needs. This simple tutorial uses appropriate examples to help you understand agile development in a general and quick way.

Audience

This tutorial has been prepared for beginners to help them understand the basics of Agile principles and its implementation. After completing this tutorial, you will find yourself at a moderate level of expertise, from where you can advance further.

Prerequisites

Attendees need a basic knowledge of software development concepts such as software requirements, coding, testing, etc.

Speaker: Sharan Kalwani

Biography: With over 30+ years' experience, in various aspects of hardware, software has evolved. You can expect a unique perspective on the whole evolution of development in software creation, testing and deployment. The speaker has presented at numerous conferences and is viewed as an active evangelist in his areas of expertise.

- **When? Where? ...**
- **Date:** March 11th, 2023
- **Time:** 12 noon → 3 PM
- **Audience:** All Students, Members, Professionals and Industry Techs
- **Where:**
EC 254
Engineering Center
115 Library Drive
Oakland University

Sponsored by
**IEEE Southeastern Michigan
Education Society Chapter
&
Computer Society Chapter**

IEEE Southeastern Michigan Section



Pre-Registration Required!

<https://events.vtools.ieee.org/m/347871>



EMCFest 2023

Announcing EMC Fest May 25, 2023

[Click Here to Register](#)



2023 Speakers:

Dr. Todd Hubing is a Professor Emeritus of Electrical and Computer Engineering at Clemson University and President of LearnEMC. Dr. Hubing holds a BSEE degree from MIT, an MSEE degree from Purdue University and a Ph.D. from North Carolina State University. He was an engineer at IBM for 7 years and a faculty member at the University of Missouri-Rolla for 17 years before joining Clemson University in 2006. At the University of Missouri-Rolla (now the Missouri University of Science and Technology), he was a founding faculty member of the UMR Electromagnetic Compatibility Laboratory. As the Michelin Professor of Vehicle Electronics at Clemson, he established the Clemson Vehicular Electronics Laboratory where he supervised research projects and taught classes in vehicle electronics, electromagnetic compatibility and digital signal integrity.

At LearnEMC, he provides EMC instruction, consulting and design assistance to engineers working in the automotive, aerospace and consumer electronics industries.

Dr. Hubing has authored or co-authored over 200 papers and presentations on electromagnetic modeling, electromagnetic compatibility and the design of reliable electronic systems. He is a Fellow of the Institute of Electrical and Electronics Engineers (IEEE), a Fellow of the Applied Computational Electromagnetics Society, and a Past-President of the IEEE Electromagnetic Compatibility Society.



Dr. Eric Bogatin is a Signal Integrity Evangelist with Teledyne LeCroy and the Dean of the Teledyne LeCroy Signal Integrity Academy, at [Be The Signal](#). Additionally, he is an Adjunct Professor at the University of Colorado – Boulder in the ECEE dept, and technical editor of the [Signal Integrity Journal](#).

Dr. Bogatin received his BS in physics from MIT in 1976 and MS and PhD in physics from the University of Arizona in Tucson in 1980. He has held senior engineering and management positions at Bell Labs, Raychem, Sun Microsystems, Ansoft and Interconnect Devices. He has written seven technical books in the field and presents classes and lectures on signal integrity worldwide.

In 2011, his company, Bogatin Enterprises, which he founded with his wife, Susan in 1990, was acquired by Teledyne LeCroy. After concluding his live public classes in 2013, he devoted his efforts into creating the Signal Integrity Academy, a web portal to provide all of his classes and training content online, for individuals and for companies.

For Teledyne LeCroy, he lectures worldwide on Best Measurement Practices using high performance oscilloscopes. At UColorado-Boulder, Eric teaches classes on PCB design, high speed digital design and other electronics classes.

[Important Registration Information – Please read First!](#)

[Click Here to Register](#)

Note: Our sister chapter in Chicago has a similar event on May 23, 2023

<http://www.emcchicago.org/sectfiles/events.htm>

Venue: [Embassy Suites in Livonia](#)

To be added or removed from the Southeastern Michigan IEEE EMC email list - send an email to s.r.lytle@ieee.org with ADD or REMOVE as the subject

EMC SIPI2023

2023 IEEE INTERNATIONAL SYMPOSIUM ON ELECTROMAGNETIC COMPATIBILITY & SIGNAL/POWER INTEGRITY



BENEFITS OF ATTENDING

PARTICIPATE IN 200+ TECHNICAL SESSIONS

Workshops & Tutorials, Hands-on Experiments & Demonstrations, and Special Sessions with the world's leading engineers in EMC and SIPI.

ATTEND THE “ASK THE EXPERTS” PANELS

Bring your questions or simply listen and learn from the experts!

PARTICIPATE IN LIVE DEMONSTRATIONS

Presented by industry experts to learn how to solve real-world problems.

LEARN ABOUT THE LATEST GLOBAL STANDARDS

in EMC and SIPI, hear updates, ask questions, and attend Working Group Meetings as part of the “Standards Week” special track.

NETWORK WITH FRIENDS AND COLLEAGUES

During the Welcome Reception, the Gala Dinner, Young Professionals, and Women in Engineering events.

BRING THE FAMILY

And Experience this unique and vibrant city of Grand Rapids, Michigan. Companions are invited to join the Social Events and interesting area tours.

#IEEE_ESP23



www.emc2023.org



IEEE



Need Science Fair Judges

IEEE-SEM MEMBERS NEEDED AS 2023 SCIENCE FAIR JUDGES

By Don C. Bramlett,, LSMIEEE, FMSPE, FESD

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

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

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

<http://www.sefmd.org>

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

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

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

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

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

Looking forward to working with you on this event

Hydro Powerplant Visit

IEEE SE Michigan Education Society Chapter
Presents
Historical Tour of the Henry Ford-Thomas Edison Hydroplant



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



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

***Pre-Registration Required!**

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

IEEE Southeastern Michigan Section

At Glance

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

Sponsored by
IEEE
Southeastern
Michigan
Section



PACE: Critical Thinking

IEEE Southeastern Michigan Presents "Critical Thinking Skills"



More organizations today, than ever before, look for employees who complement domain knowledge with good thinking and communication skills. The World Economic Forum lists "Critical Thinking" among the top three skills required for executive success at work. Good critical thinking skills results in better problem solving and superior decision making. Employees who learn quickly and can solve problems, think critically, gather and analyze information meaningfully are critical to every organization. These Critical Thinking skills can be acquired by everyone. Students, young professionals, aspiring managers, and leaders can all benefit from understanding critical thinking. >> Part of the PACE activities (Professional Activities Committee for Engineers). <<

Audience

This tutorial has been prepared for beginners to help them understand the basics from where you can advance further.

Speaker: Sharan Kalwani

Biography: With over 30+ years' experience. The speaker has presented at numerous conferences and is viewed as an active evangelist in his areas of expertise.

- **When? Where? ...**
- **Date:** March 18th, 2023
- **Time:** 12 noon → 3 PM
- **Audience:** All Students, Members, Professionals and Industry Techs
- **Where:**
EC 254
Engineering Center
115 Library Drive
Oakland University

Sponsored by
IEEE Southeastern Michigan
Education Society Chapter
&
Computer Society Chapter

IEEE Southeastern Michigan Section



Pre-Registration Required!

<https://events.vtools.ieee.org/m/348196>



Profile: Keyur Patel



Software Supervisor, Advance Software Engineering, Nexteer Automotive Corporation

Mr. Keyur Patel is leading an R&D advanced software engineers' group for close to 5 plus years at Nexteer Automotive Corporation in Auburn Hills, Michigan, where he is responsible for providing Automotive Steering Software solutions to meet next-generation software-defined vehicle needs.

he has more than 18 plus years of embedded software development experience and close to 10 plus years working actively on Automotive ASIL D software solutions with 15 plus innovation patents, publications, conference papers, poster presentations, and expert industry panelists in the field.

He holds a Master of Science in Embedded Software Engineering from Gannon University, Pennsylvania with many certifications including ISO 26262 safety certification.

Mr. Keyur Patel is currently the IEEE Southeastern Section Conference Committee Chair (conference@ieee-sem.org) and member of IEEE HKN. He is also currently responsible for organizing an autonomous panel discussion at ITEC 2023.

ESD GOLD Award '23



52ND GOLD AWARD

RECEPTION & RECOGNITION 2023



Robert F. Bordley, PhD

2023 Gold Award Honoree:

Robert F. Bordley, PhD *(nominated by INCOSE)*

2023 Ann O. Fletcher Award for Distinguished Service:

Jack A. Stein

and Featuring Individual Affiliate Society Awards

March 15, 2023

ESD, 20700 Civic Center Drive, Suite 450, Southfield, MI 48076
5:30 p.m. Strolling Reception
6:45 p.m. Awards Program

Join the ESD Affiliated Technical Societies as we come together to honor and recognize our leaders – engineers, scientists and technical professionals who have distinguished themselves through outstanding achievement and service within their respective societies.

Hosted by The Engineering Society of Detroit and its Affiliate Council, the event will feature a presentation by this year's Gold Award winner. This award is given annually to an individual who is collectively upheld by the council for his or her outstanding contributions to the fields of science and engineering.

Please register by March 3, 2023; late registrations will only be accepted if space is available.

COST

\$60 per person (5+ groups \$55 each) through 3/3/2023.
\$75 per person (5+ groups \$70 each) 3/4–3/11/2023.

Cost includes a variety of hors d'oeuvres, beer and wine.

REGISTER AT ESD.ORG. To register groups of 5 or more or to register by phone, contact Elana Shelef at 248-353-0735, ext. 119, or eshelef@esd.org.

SPONSORED IN PART BY:



RoboFest News



Note: All times are listed in EST unless noted

(1) Robofest World Championship Schedule Announced

The Robofest World Championship Game and Exhibition Finals and Open Categories will be hosted on Lawrence Technological University's campus on May 11~13, 2023 with the following schedule.

- May 11: Jr BottleSumo (Group 1)
- May 12: Jr BottleSumo (Group 2), RoboParade, RoboMed, Unknown Mission Challenge, Sr BottleSumo Classic and Sr BottleSumo Unlimited
- May 13: Jr BottleSumo Final Match, RoboArts, Game Finals, Exhibition Finals

More details including start times and campus locations can be found on the schedule: <https://www.robofest.net/images/2223/WC2023Schedule012723.pdf>

Registration will open at 3:00pm Monday, March 13, 2023 for US Teams wishing to participate in the Open Category Events. International teams who do not have a Robofest Director in their country may send an email to robofest@ltu.edu requesting registration.

Additional information regarding travel, nearby hotels and other important announcements will be posted on the World Championship page on the Robofest.net website, so check back often.

(2) Michigan Invitational Events are scheduled to open Monday April 1

These events, hosted in the LTU Robofest Lab, offers Game teams who do not advance from a Michigan Qualifier a second chance to compete. The 2023 Michigan Invitational Schedule is as follows.

- Junior Game at LTU:
 - o April 21, 5:00pm ~ 9:00pm
 - o April 22, 9:00am ~ 1:00pm
- Senior Game at LTU
 - o April 22, 4pm ~ 8:00pm

(3) Video Qualifier and Video Screening for Exhibition Team Deadlines

- Video_Qualifier_USA and Video_Qualifier_International Game and Exhibition teams must upload a link to a video to the Team Registration page to be screened and scored by April 17.
- Exhibition trophy winners in all US competitions including Michigan must upload a link to a presentation video to the Team Registration page by April 17 to be screened before the World Championship. Teams that did not automatically advance may receive an invitation to the World Championship based on the video.

For more information, please see official rules on the Get Involved "2023 Main page on the Robofest.net website.

(4) 2023 Robofest Final Rules and Game Judge Training available

The 2023 Game rules have been modified slightly to add clarifications and FAQs. The updated version has been posted to the Game page on Robofest.net website. A recording of the Game Judging Session and slides are also posted. All site hosts and volunteer judges should review the training.

(5) Team Registration is Still Open for Many Qualifiers

Please be sure to register your team for Qualifying and Open Competitions at local sites. Teams who do not have a local competition can also compete through the US and International Video Qualifier options for a chance to advance to the Robofest World Championship at LTU in May.

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

We would like to acknowledge our coaches who have coached Robofest teams for 5, 10, and 15 and 20 years!

To submit your name, please send an email to robofest@ltu.edu with the subject *Coach Award*. Please include the coach name, coach ID (include all IDs used), and number of years coaching. We will recognize these dedicated coaches at the Robofest World Championship Awards Ceremony on May 13.

(7) MCWT \$750 Grants for All-Girl Robofest Teams in Michigan - LAST CALL

The Michigan Council of Women in Technology Foundation, 19-year sponsor of Robofest, has increased their grant funding for the 2023 Robofest season, providing \$750 grants for up to ten Michigan all-girl Robofest Game and Exhibition teams. The application is open now and the deadline to apply is March 15, 2023.

More information and the 2023 season application are posted on the MCWT webpage: <https://mcwt.org/programs/list/K-12-Initiatives/ROBOTICS-GRANTS>

(8) Robofest Pen Pal Opportunity

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

Lawrence Technological University / Robofest / J-233 / 21000 W. Ten Mile Rd, Southfield, MI 48075

Dr. Christopher Cartwright, Director, ccartwrig@ltu.edu

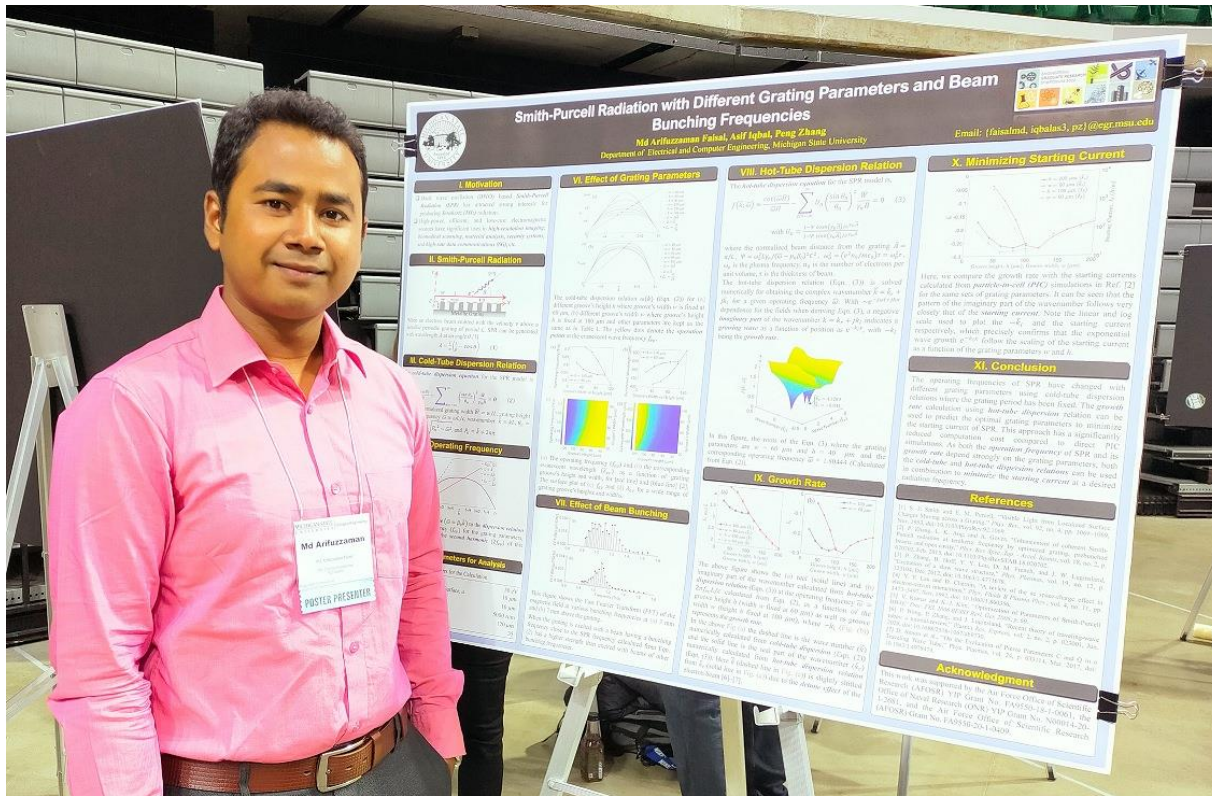
Elmer Santos, Assistant Director, esantos@ltu.edu

Shannan Palonis, Coordinator, spalonis@ltu.edu

Pam Sparks, Coordinator, psparks@ltu.edu

Dr. CJ Chung, Advisory Board Chairperson (Volunteer), cchung@ltu.edu

Profile: Md Arifuzzaman Faisal



Md (Mohammed) Arifuzzaman Faisal is a young and highly motivated electrical engineer, with a passion for exploring the cutting-edge of nanoelectronics, vacuum electronics, computational electromagnetics, plasma physics, and other fields. He is currently pursuing a graduate degree (PhD) in Electrical and Computer Engineering at Michigan State University, where he is supervised by the renowned Dr. Peng Zhang. Faisal's educational background, work experience, and academic accomplishments have paved the way for his promising future as an emerging expert in the field of Computational Plasma Physics and Nanoelectronics.

Faisal's journey to become a top-notch electrical engineer started with his undergraduate studies at the Bangladesh University of Engineering and Technology (BUET) in Dhaka. He graduated with a B.Sc. in Electrical and Electronic Engineering, and soon after, he gained valuable industry experience by working as an Assistant Engineer at the Dhaka Electric Supply Company Ltd and Bangladesh Power Development Board. His experience and passion for the field led him to join Energypac Engineering Ltd., where he worked as a Senior Engineer in their Research and Development section. There, he was responsible for numerical analysis of various design parameters and played an important role in designing transformers.

Faisal is also making a name for himself in the academic world, having authored several journal articles and conference papers. His work on optimizing and minimizing the starting current of Smith-Purcell Radiation by Grating Optimization has been well received in the community and published in IEEE Transactions on Electron Devices. This approach eliminates the need for computationally expensive PIC simulations and has the potential to make a significant impact on the accelerator technologies. In addition, he has authored two Bengali language books on C Programming and MATLAB, aimed at making these complex subjects more accessible to students.

Faisal is an active member of the IEEE community and holds several leadership positions that demonstrate his dedication to advancing the field of electrical engineering. He is the interim Chair of the Michigan State University Student Branch and the Section Student Representative for the IEEE's Southeastern Michigan Section (SEM). His involvement with the IEEE community is a testament to his passion for learning, collaborating, and sharing knowledge with others. In his free time, Faisal enjoys travelling, painting, and cycling, which are not only great ways to relax, but also opportunities for him to expand his horizons and gain new perspectives.

ORG UNITS cheat sheet

Section Unit Name or Affinity Group or Chapter Name (Organizational Unit code is in parentheses)

Consultants Network Affinity Group:	(CN40035)
Life Members:	(LM40035)
Young Professionals:	(YP40035)
Women in Engineering:	(WE40035)
Chapter: 01 (CH04049) (SP01)	Signal Processing Society, (CAS04) Circuits and Systems Society and (IT12) Information Theory Society
Chapter: 02 (CH04051) (VT06)	Vehicular Technology Society
Chapter: 03 (CH04053) (AES10)	Aerospace and Electronic Systems Society and (COM19) Communications Society
Chapter: 04 (CH04050) (AP03)	Antennas and Propagation Society, (ED15) Electron Devices Society, (MTT17) Microwave Theory and Techniques Society,
Chapter: 05 (CH04055) (C16)	Computer Society
Chapter: 06 (CH04056) (GRS29)	Geosciences and Remote Sensing Society
Chapter: 07 (CH04057) (PE31)	Power Engineering Society, (IA34) Industrial Applications Society
Chapter: 08 (CH04088) (EMC27)	Electromagnetic Compatibility Society
Chapter: 09 (CH04087) (IE13)	Industrial Electronics Society, (PEL35) Power Electronics Society
Chapter: 10 (CH04142) (TEM14)	Technology and Engineering Management Society
Chapter: 11 (CH04099) (EMB18)	Engineering in Medicine & Biology
Chapter: 12 (CH04103) (CS23)	Control Systems Society
Chapter: 13 (CH04113) (E25)	Education Society
Chapter: 14 (CH04115) (RA24)	Robotics And Automation Society
Chapter: 15 (CH04144) (NPS05)	Nuclear Plasma Sciences Society
Chapter: 16 (CH04125) (CIS11)	Computational Intelligence Society, (SMC28) Systems, Man and Cybernetics Society
Chapter: 17 (CH04128) (NANO42)	Nanotechnology Council

Section Unit Name or Affinity Group or Chapter Name (Organizational Unit code is in parentheses)

University Of Detroit-Mercy:	(STB00531)
Michigan State University:	(STB01111)
University Of Michigan-Ann Arbor:	(STB01121)
Wayne State University:	(STB02251)
Lawrence Technological University:	(STB03921)
Oakland University:	(STB06741)
Eastern Michigan University:	(STB11091)
University of Michigan-Dearborn:	(STB94911)

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

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

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

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

Curated & Maintained By

Sharan Kalwani,

Chair, IEEE Southeastern Michigan Section (2022-2023)

Editor, Wavelengths (Serving you as an active newsletter contributor since 2018)

Enthusiastic IEEE volunteer since 2011

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

It's About Time!**It's About Time:**

Society as a whole is finally realizing just how many of our 'natural resources' are only finite, and that once they are gone, there is no more, and no substitute available. One such 'resource' is time. Time is clearly 'non-renewable' and 'finite'. We each only have so much time available for us to use and understanding how to use what we have wisely is something that is rarely taught.

The IEEE Southeastern Michigan Section is planning to include training on the effective use of our time as part of its 'Officer Training' modules in March. In recognition of the significance of this topic, and to provide multiple opportunities for our members to attend at least one session 'live' where questions may be put forth and answered, five sessions are planned during March.

March 21 & 23 (Tuesday and Thursday) at **Noon**, and
March 22 & 24 (Wednesday and Friday) at **7PM**.
These four presentations will be 'Virtual' held on ZOOM.

A final presentation will be held as a 'Hybrid' event on **Saturday March 25th, at 9 AM** in the Oakland University's Engineering Building - 115 Library Drive, Rochester, Michigan, Room 254. Hybrid events are held both as in-person and with a 'virtual' broadcast component.

Coffee and croissants will be available for those who attend 'in person'.

As always with our training modules, there is no fee to attend. However, we would like you to register for the module you plan to view or attend so we can keep track of interest in the topic.

Register to attend your preferred module using the appropriate link below:

March 21, 2023 Tuesday	Noon	https://events.vtools.ieee.org/m/348951
March 23, 2023 Wednesday	7PM	https://events.vtools.ieee.org/m/348923
March 22, 2023 Thursday	Noon	https://events.vtools.ieee.org/m/348953
March 24, 2023 Friday	7PM	https://events.vtools.ieee.org/m/348948
March 25, 2023 Saturday	9AM	https://events.vtools.ieee.org/m/349710

If you attend, we believe you will come away with some useful techniques for taking charge of your personal time and making the most of what time you have remaining in your life.

We hope to see you in one of the classes.

30

NASA calling All Hams!

Ham Radio Operators, We Need Your Help During Solar Eclipses!



August 21, 2017 Solar Eclipse as seen from the Great Smoky Mountain National Park, near Maryville, TN. (Credit: W.D. Engelke AB4EJ)

Ham Radio operators, we're calling you! Members of the Ham Radio Science Citizen Investigation (HamSCI) will be making radio contacts during the 2023 and 2024 North American eclipses, probing the Earth's ionosphere. It will be a fun, friendly event with a competitive element—and you're invited to participate.

Both amateur and professional broadcasters have been sending and receiving radio signals around the Earth for over a century. Such communication is possible due to interactions between our Sun and the ionosphere, the ionized region of the Earth's atmosphere located roughly 80 to 1000 km overhead. The upcoming eclipses (October 14, 2023, and April 8, 2024) provide unique opportunities to study these interactions. As you and other HamSCI members transmit, receive, and record signals across the radio spectrum during the eclipse, you will create valuable data to test computer models of the ionosphere.

For more information, go to <https://hamsci.org/festivals-eclipse-ionospheric-science>

More about solar eclipses:

<https://solarsystem.nasa.gov/eclipses/home/>

<https://science.nasa.gov/science-news/citizenscience/ham-radio-operators-we-need-your-help-during-solar-eclipses>

Event: Laws of Computing

IEEE Southeastern Michigan

Presents

“Many Laws (or Rules of Thumb Perhaps?) of Computing”



At Glance

• When:

Date: March 14th, 2023
Time: 06:00 – 7:30 PM
(EST/EDT)

• Where:

Online via Webex (to be shared only after you have a confirmed registration)

• Audience: OPEN to ALL*

No, this is not a talk about digital jurisprudence, rather it is a detailed set of seminal observations on the various trends we have experienced in the last 60 years of computing. Of course, the most famous one of them all is the classic Moore's Law, while not an actual law, has had an astounding effect on all of mankind since the invention of the microprocessor. In this 90-minute talk I will point out the different advances in computing, be it networking, storage, connectivity, semiconductors, processing power, energy trends, etc. I will then proceed to list the eponymous persons associated with each specific law, relationship or trend and what implications they have for us all.

To the best of the speaker's knowledge, such a talk has not been conducted anywhere else before and so you will get to enjoy an original as well as a uniquely wholistic perspective on the vast phenomena we call computing.

Speaker Bio:

A well-seasoned scientific, technical and computing professional, Sharan has spent over 25+ years implementing many new and pioneering technologies.

*Sponsored by
IEEE
Southeastern
Michigan
Computer Society,
& Education Society
Chapters*

***Pre-Registration Required!**

<https://events.vtools.ieee.org/m/347937>

IEEE Southeastern Michigan Section



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/ea/ea-chapters/find-an-eaa-chapter>

Robots

<https://www.robofest.net/index.php/about/contact-us>

Science Fiction Conventions

<https://2022.penguicon.org/>

<http://www.confusionsf.org/>

Mad Science

<http://www.madscience.org/>

ESD PE Review Class

<https://www.esd.org/programs/pe/>

Maker Faire:

<https://swm.makerfaire.com/>

It appears that the SouthWest Michigan Maker Faire was a casualty of the Global Pandemic, as were many of our friends and several organizations.

However, we retain this link for anyone wishing to make contact and consider pumping life back into what was a wonderful experience.

Executive Committee

The SEM Executive Committee is the primary coordination unit for Southeastern Michigan (SEM) IEEE operations. The basic organization chart below shows the 2019/2020/2021/2022 arrangement of communications links designed to provide inter-unit coordination and collaboration.

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

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

Other Meetings:

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

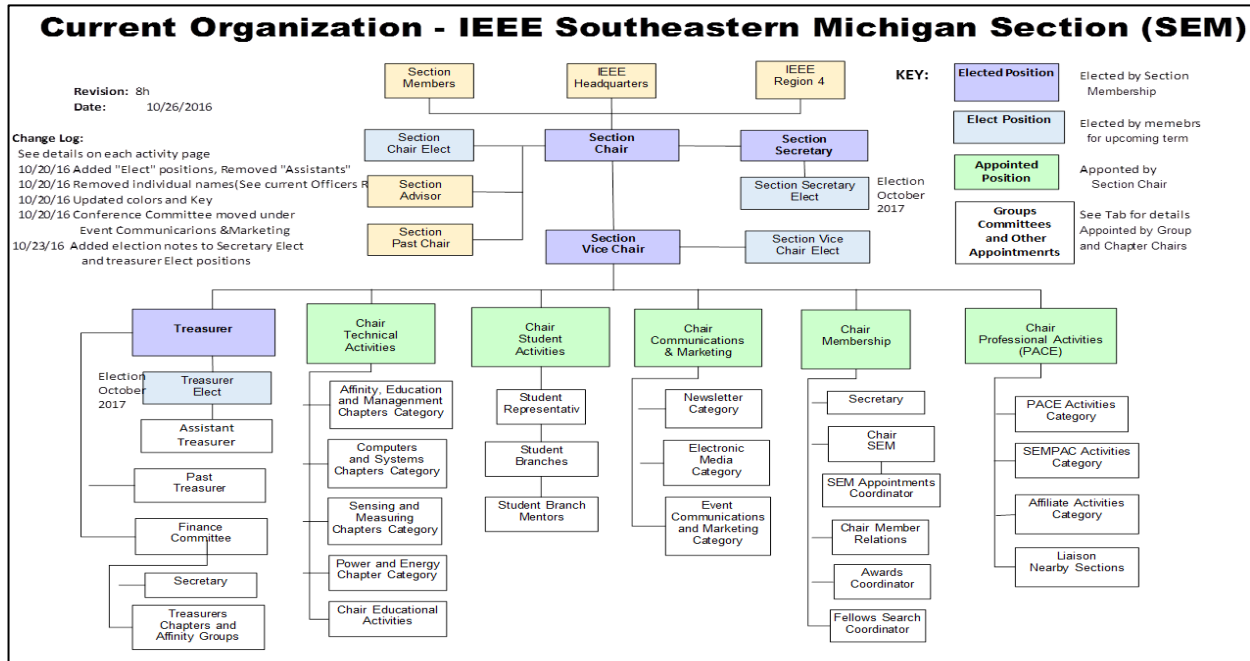
However, members of the section may have multiple technical interests and would like to have meeting information of other chapters. In order to communicate the meeting dates of all the chapters, affinity groups etc., to our members to facilitate their attendance, leaders of the groups are requested to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

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

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

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

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



ExCom Meeting Schedule

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

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

Section Administrative Committee (ExCom) Meeting Schedule for 2023:

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

<i>ExCom Meeting (all clickable links)</i>	<i>Date & Time</i>
SEM Section ExCom Monthly Meeting (virtual) For MARCH 2023	9 Mar 2023 6:30 PM
SEM Section ExCom Monthly Meeting (virtual) For APRIL 2023	13 Apr 6:30 PM
SEM Section ExCom Monthly Meeting (virtual) For MAY 2023	11 May 6:30 PM
SEM Section ExCom Monthly Meeting (virtual) For JUNE 2023	8 Jun 6:30 PM
SEM Section ExCom Monthly Meeting (virtual) For JULY 2023	13 Jul 6:30 PM
SEM Section ExCom Monthly Meeting (virtual) For AUGUST 2023	10 Aug 6:30 PM
SEM Section ExCom Monthly Meeting (virtual) For SEPTEMBER 2023	14 Sep 6:30 PM
SEM Section ExCom Monthly Meeting (virtual) For OCTOBER 2023	12 Oct 6:30 PM
SEM Section ExCom Monthly Meeting (virtual) For NOVEMBER 2023	9 Nov 6:30 PM
SEM Section ExCom Monthly Meeting (virtual) For DECEMBER 2023	14 Dec 6:30 PM

Christopher Johnson (Secretary)

Email: secretary@ieee-sem.org

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

Editorial Corner

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

Comments and suggestions may be sent to the editorial team at wavelengths@ieee-sem.org

OR

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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 “” button under the top row)

<https://www.facebook.com/groups/ieeesemich>

SEM LinkedIn Page

(Select the “” button under the top row)

<https://www.linkedin.com/groups/1766687/>

SEM Twitter Account (new)

(Select the “” button under the top row)

<https://www.twitter.com/ieeesemich>

SEM Collabratec Workspace (new)

<https://iee-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 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 Nominations & Appointments

Kimball Williams

Chair PACE

Sharan Kalwani

Chair Student Activities

Michael Anthony

Student Representative

Md Arifuzzaman Faisal

Chair Technical Activities

Jeffery Mosley



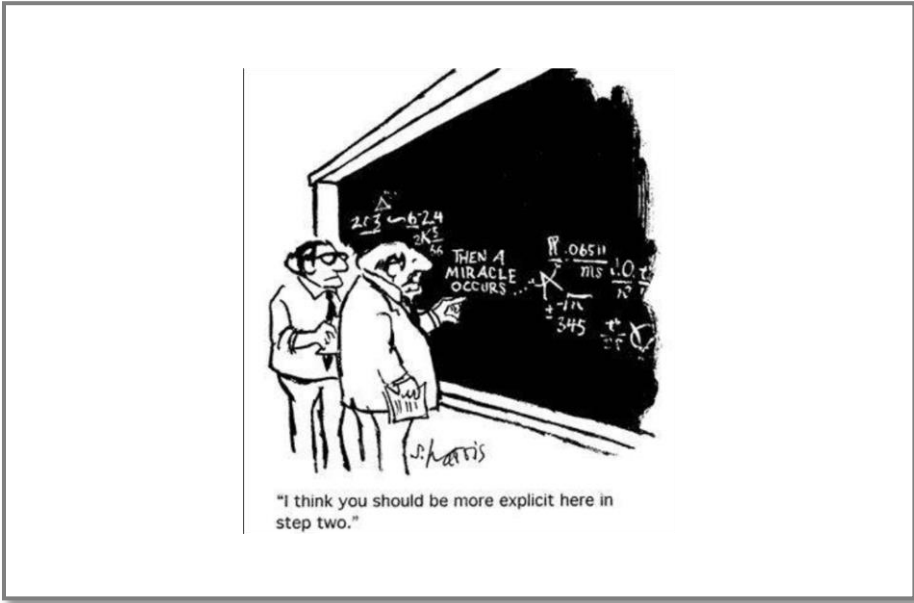
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Southeastern
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Electrical and Electronic Engineers Creating Our Future

IEEE Southeastern Michigan

Visit Us on the Web at:

<http://r4.ieee.org/sem>



Advertising Rates

SEM Website & Newsletter

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>