

# Wavelengths



Volume 60 – Issue 04

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## Upcoming Events

We have may have events coming up this month. All will be 'virtual', so be sure to check out the Section Website

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

As well as the vTools site

[IEEE Region 4 - SE Michigan Section Upcoming](#)

It is unlikely that anyone on planet Earth at this time is unaware of the current conditions and the threat to the health, and possible survival, of humanity.

All the organizations of which I am aware are involved in adjusting to this new reality and finding new ways to cope and remain as true to their overall mission, goals and objectives.

Our IEEE Southeastern Michigan Section (SEM) is going through this same process of evolving alternatives to our more usual ways of operating. In this, we are gifted with a strong technological base and a membership used to using that technology for communication, coordination and cooperation.

While our technology alone is not a complete solution to our common concerns, it presents us with opportunities to grow and evolve more efficient and productive methods of working together. Over the past weeks, officers at many levels in our organization have been actively building new operating elements. We discuss some of these in this April issue of Wavelengths.

The most evident change in operating procedures will be the termination of our usual face-to-face meetings and the increasing number of "Virtual" (i.e. On-Line Streaming) technical presentations using the internet to bring the meeting presenters directly to your personal screen, wherever you may be. See the article on page 3 reviewing the first of these by our own Chapter 4, and its proactive team of officers.

It will take time for all of us to adjustment to this new meeting environment and completely integrate it into how SEM conducts our meetings. Bear with us as we grow and learn along with everyone else on this 'little sphere' we currently call home. *(I know I will miss the networking and the pizza!)*

kw



### Chair's Message

Wow, what a difference a month makes. As I wrote the Chair's message last month, I was planning a personal trip to Scotland, several work trips, and paying for my attendance at various IEEE conferences. All of that was canceled within two weeks. Those were all small sacrifices compared to what we all are facing. Still, I am impressed with how quickly and collaboratively we have come together to fight the current outbreak.

Since many IEEE events have been cancelled, I thought I would use this column to discuss ways that individuals can keep in touch with their IEEE colleagues. Several ideas are listed below.

I'd like to thank Southeast Michigan's Chapter 4 for quickly responding to outbreak and holding a very successful "virtual" event when their in-person event needed to be canceled. I was impressed with how quickly the group came together.

- Our section has access to resources to assist creating virtual events. Our section secretary, Christopher Johnson can schedule a WebEx to hold Chapter events. Reach out to him directly with any questions.
  - The IEEE Learning Network is offering up to 70% discounts on courses from IEEE Educational Activities. This is a good way to get a few Professional Development Hours for your Professional Engineering license. If you don't have your PE, now is a great time to start studying!
  - The Engineering Society of Detroit is moving several of their programs online. Visit [www.esd.org](http://www.esd.org) for more information.
  - Several of the IEEE Societies have Resource Centers. These contain taped presentations and trainings that can be utilized by members. Check out your societies to see what they offer.
  - Now is a good time to consider joining Collabratec, a networking tool specific to IEEE. They offer topic specific communities and workspaces. <https://ieee-collabratec.ieee.org/>
- Hopefully our members can still find value in IEEE during these tough times. Stay safe everyone and I look forward to seeing everyone in the future.

David Mindham: [dmindham -At- ieee.org](mailto:dmindham-At-ieee.org)

### Virtually Yours:

If there is someone in the civilized world not aware of the current concerns and restrictive measures forced upon all of us by the Covid-19 flu virus, they must have been living in another dimension since December.

With the necessary enforced restrictions on gatherings, the closing of almost all institutions and the instructions from the medical community, reinforced by orders from the government to close any public gathering place of business or entertainment, some have begun to understand what we who live in 'snow country' call "Cabin Fever".

However, engineers usually don't wait long before they begin to develop 'work arounds', and in Southeastern Michigan Section this was amply demonstrated by the quick action of **Becky Peterson** and her administrative team at **Chapter 04**, our joint Chapter of the:

- Antennas and Propagation Society,
- Electron Devices Society,
- Microwave Theory and Techniques Society and the
- Photonics Society.

A membership meeting for Chapter 4 was planned to host a presentation by a Distinguished Lecturer, Doctor **Jeremy Everard**, Professor of Electronics, at the University of York, Canada.

When the Covid-19 restrictions took place Becky and her team wasted no time in reconfiguring the meeting into a 'virtual' on-line broadcast, updating the vTools 'Event' notification and letting all her Chapter members know of the change in 'venue'.

I was lucky enough to be able to attend that presentation and, although I am far from being knowledgeable in Microwave circuit design, I was entertained, educated (a bit more) and delighted by the event.

We send Kudos to Becky, and all the officers of Chapter 4 for their quick action, and a successful event.

**Way to go Chapter 4 team!**

### Virtual Meetings:

Several of the IEEE SEM Standing Committees and Geo-units (Chapters, Affinity Groups, Student Branches and HKN Chapters) have already begun to hold their officer 'Administrative' meetings using any one of the various on-line or telephone conferencing utilities available 'Free' to conduct their normal business.

It is a natural extension to convert as many of the planned speaker hosted membership meetings to on-line events as long as the world needs to stay in 'lock down'.

We may be in this mode a while!

We are not the only group taking action to keep the information going, and ensure that progress on significant programs continues to evolve.

See the example of the HamSCI Workshop on the next page.

### **Extra time?**

If you find yourself with an abundance of time on your hands and looking for something you can do to feel productive, take a look at the SEM [Officer Roster](https://r4.ieee.org/sem/about-sem/) at: <https://r4.ieee.org/sem/about-sem/>

We still have a number of 'vacant' positions within our standing committees and Geo-units (Chapters, Affinity Groups and Student Branches) where part time help will be welcome.

If a position on a committee or Geo-unit looks interesting and you want to know more about it, do a search in the '[Volunteer Portal](#)' on that same 'About SEM' web subpage. Most positions have Job Descriptions located there.

Contact the 'Chair' of a group you would be interested in learning more about, and discuss opportunities to help. There is always more work to go around.

Keep busy, stay safe and stay positive!

kw

### HamSCI Workshop:

**HamSCI 2020 Workshop** was designed to be a two-day, in person, workshop by professors at the University of the Scranton, and its Department of Physics and Electrical Engineering to bring together members of the **'Citizen-Science' community** working on the 'Space Weather Project'.

Ham Radio Science Citizen Investigation is a platform for the publicity and promotion of projects that are consistent with the following objectives:

- Advance scientific research and understanding through amateur radio activities.
- Encourage the development of new technologies to support this research.
- Provide educational opportunities for the amateur community and the general public.

The organizers of the HamSCI Workshop had arranged an impressive list of presenters that would cover a full two-day event. When they faced the restrictions imposed by the Covid-19 epidemic, they quickly re-organized the event as a 'virtual' workshop on-line.

(See below:)

## 2020 HamSCI Workshop Moving to Virtual Workshop

Sunday, March 15, 2020 - 16:54

Submitted 6 days 18 hours ago by w2naf.

The 2020 HamSCI Workshop will go on! We are moving to an all-digital workshop using **Zoom Webinar Services**. Registration and participation is free and open to all. Exact details on how to register and participate will be posted to [hamsci.org/hamsci2020](https://hamsci.org/hamsci2020) no later than Wednesday, March 18th. To prepare and make sure you are ready to participate in the 2020 HamSCI Workshop, please visit the **Zoom Website** and create free account.



## In Person HamSCI Workshop Cancelled Due to Coronavirus Response

### Attending the HamSCI Workshop:

While most of what I heard while attending the two day HamSCI Workshop on line Friday and Saturday was new to me, the excitement, dedication and determination of the citizen scientists and engineers attending and presenting was very familiar.



Most of the presenters were long time Amateur Radio Operators (Hams).

*As I explained in my column on Amateur Radio in last months 'Wavelengths', Hams carry no illusions as to the reasons for the existence of their "Service organization", as defined in the Federal Code of Regulations. While Emergency Communications is listed as (a) on that list, "(b) Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art." is second, and near and dear to the practice of Amateur Radio.*

Indeed, the speakers all appeared to be moving the 'radio art' to new levels and extending the reach well beyond what I had envisioned.

## HamSCI Workshop - Continued

### Space Weather Project:

This was my first introduction to the “Space Weather Project” but its need, and foundation in understanding radio propagation and more recently, the safety and security of our astronauts in space, satellite and terrestrial communications and the safety of life on earth was something of which most Hams are well aware.

The lineup of speakers was impressive. Even more impressive were the number of prestigious organizations that have dedicated their time and manpower to achieve some remarkable results.

“Space Weather Project” hosted presenters from

- Green Bank Observatory,
- MIT Haystack Observatory,
- TAPR
- New Jersey Institute of Technology
- University of Alabama
- Case Western Reserve University,
- Dartmouth College,
- University of New Brunswick,
- NASA Goddard Space Flight Center
- Utah State University,
- UCLA
- Essex County College
- World Wide Radio Operators Foundation
- Penn State University
- NASA New Mexico Consortium
- Aurorasaurus Community,
- Live Aurora Network
- University of Florida
- West Point
- Amateur Radio Club of Augusta

### A Personal Space Weather Station:

The ability of the HamSCI community members to develop, build, program and operate the beginnings of a worldwide network of radio observation stations dedicated to gathering, collating and analyzing the conditions of the earth’s ionosphere and surrounding space through multiple avenues of investigation is astounding.

Indeed, the level of technical acumen demonstrated by the participants in the Workshop along with the diversity of approaches that combine to help begin to paint a detailed picture of the earth’s magnetic field, nearby space, the sun and its magnetic field and the solar wind and the complex interactions between all of these is humbling to see.

It is also exciting to realize that anyone with the technical ability to build electronic circuits, program a simple Raspberry Pi microcomputer and put their personal computer on line with data can participate and contribute to the overalls effort.

For anyone who wants to dig deeper into the Space Weather Project and learn more, please use the links below.

[Personal Space Weather Station project.](#)

[TangerineSDR](#) high performance SDR  
(SDR== Software Defined Radio)

### Reprise the Workshop:

Use the links below:

[Google Drive with Links to Presentation Files](#)  
[Google Doc With for Questions](#)  
[HamSCI Glossary](#)

Find the [agenda](#) for the HamSCI Workshop is at:  
<https://hamsci.org/hamsci-2020-program>



## Robofest 2020

**IMPORTANT INFORMATION March 12, 2020** Due to the COVID-19 Coronavirus situation, the 2020 Robofest World Championship scheduled for May has been canceled. A decision to possibly reschedule the event for the fall will be made and announced in April. Individual Site Hosts have the final decision to host or cancel their events and teams will be notified as changes occur.



IEEE SEM Volunteers at the Robofest World Championship, May 2019

**Science Fair 2020:****IEEE-SEM 2020 Science Fair Awards**

By Don C. Bramlett, PE, LSMIEEE, FMSPE, FESD,  
IEEE-SEM Section Advisor

The 63rd Annual Science and Engineering Fair of Metropolitan Detroit (SEFMD) was held from March 10 through March 14, 2020 in the Michigan Hall of the TCF Center (formerly called Cobo Hall) in downtown Detroit. Judging of student projects was performed on Wednesday, March 11. This year the SEFMD had over 130 schools participate from Wayne, Oakland, Macomb and Washtenaw counties with approximately 1,300 students having projects on display in two Divisions, the Junior Division (6th thru 8th grade students) and the Senior Division (9th thru 12th grade students). Exhibits were classified into 22 general categories for judging; including Embedded Systems, Energy: Physical, Robotics, and System Software.

For the 25th straight year the IEEE Southeastern Michigan (IEEE-SEM) Section has provided a team of volunteer judges to evaluate student projects associated with IEEE fields of interest. Participation of IEEE-HKN Alumni Chapter members was encouraged. The Section would like to express its appreciation to the IEEE-SEM Section members, including those in the IEEE-HKN Alumni Chapter, who volunteered to be members of the

EEE professional organization awards judging team or serve in other roles this year.

The Section wishes to thank the six (6) IEEE-SEM members, and their companies/institutions, for taking the time to volunteer and help to make the Science Fair a more pleasurable and meaningful experience for the middle school and high school students who participated.

The IEEE-SEM judging team was composed of the following five (5) volunteers:

**Don C. Bramlett**, PE, SMIEEE, FESD, FMSPE (HKN)  
DTE Electric (DTE Energy) – retired

**Ralph Mackiewicz** (HKN) SISCO, Inc.

**William Moylan** Moylan Engineering – retired

**Bill Quinlan** AAM

**Kimball Williams** (HKN) DENSO-retired

Other IEEE/SEM Section members served in other capacities at the SEFMD, such as:

**Dave Morris, Ph.D.** (General Category Judge) Mitre



(Judges – Above:: Kim Williams / Don. Bramlett / Bill. Moylan / Dave Morris / Bill Quinlan / Ralph Mackiewicz)

**Science Fair 2020 – Continued:**

The judges had the opportunity to view and evaluate a number of exhibits, especially some interesting projects in areas pertinent to IEEE fields of interest. The judges and the high school students in the Senior Division had the pleasure to interface and discuss in depth some of the principles, scientific techniques, engineering approach, experimental results and applications pertinent to the projects.

The IEEE-SEM Section, based on the evaluations of the panel of judges, awarded three (3) First Place Grand Awards in the Senior Division, consisting of a personalized certificate and a cash award for each awardee. These awards were presented to:

Senior Division:

**Alexander Wan**, a junior at Novi Senior High School in Novi, for his project entitled “Using Environmental Context in Pedestrian Trajectory Prediction.”

**Christine Zeng**, a junior at Troy High School in Troy for her project entitled “Wide Baseline Stereo Object Detection System Using Mask RCNN.”

The team of **Jack Deak, Liam Cooney, and Max Mitchell**, seniors at Northville High School in Northville for their project entitled “On-field Early Concussion Detection Sensor Package.”

The panel of judges also determined that the IEEE-SEM Section would provide a number of Outstanding Achievement Awards to other noteworthy projects in the Junior and Senior Divisions. Each Outstanding Achievement Award consisted of a personalized certificate for each awardee. Some of these awardees include:

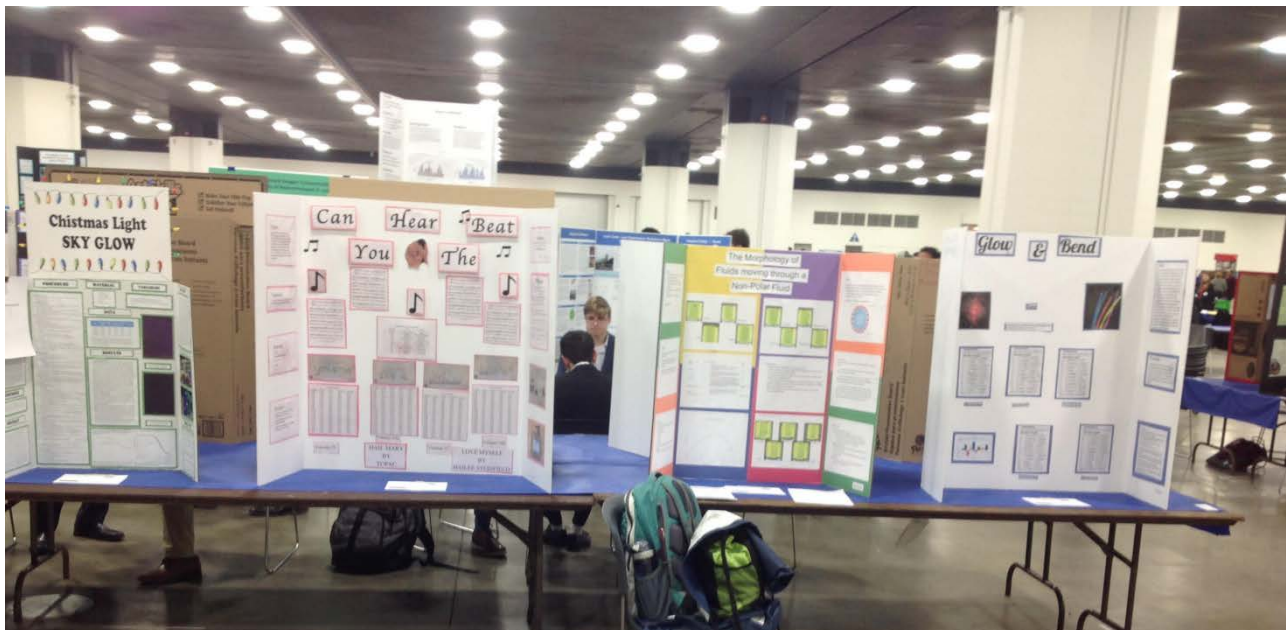
**Brian Zhang**, a seventh grade student at Meads Mill Middle School in Northville, for his project entitled “DTCT (Detect) – Detective Tool or Commodity Transaction.”

**Mahbuba Sumiya**, a junior at Benjamin Carson School for Science /Medicine in Detroit, for her project entitled “Robot for the Blind.”

**Maaz Ali**, a seventh grade student at Larson Middle School in Troy, for his project entitled “Wheely Safe.”

For further information on the Science Fair judging, awards and project abstracts go to [www.sefmd.org](http://www.sefmd.org).

The IEEE/SEM Section and IEEE-HKN Alumni Chapter plan to continue to staff other panels of special awards judges at both the Michigan Regional Future City Competition and the SEFMD in 2021, and in subsequent years. These are just a couple of the pre-university education programs promoted by the IEEE-SEM Section and the IEEE-HKN Alumni Chapter.



**Small View of Exhibits**



## Amateur Radio 2:

### The 2<sup>nd</sup> FCC Defined Purpose for Hams:

Last month in this column, we looked at the first of the 5 basic reasons why the US Federal Government established the Amateur Radio Service.

This month, I want to focus on the 2<sup>nd</sup> purpose in CFR part 97.1...

#### **(b) Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art.**

Why is it that Amateur Radio Operators keep coming up with innovative ideas and ways to better communicate and more efficiently use the radio spectrum? Why didn't a company, with all its resources and research laboratories develop that first? Such as....

- Short Wave communication
- Relay stations
- Quad Antennas
- Continuous Wave Oscillators (CW)
- Single Side Band
- Repeater Stations (leading to cell phones)
- Packet Radio
- Digital Modes
- Low cost satellites
- Signals below the noise floor
- Moon Bounce
- Meteor Scatter

Why go on?....

One answer to the previous question is straightforward when we consider how most publicly traded companies usually approach determining how to spend their product development dollars. Usually one of the first questions will be; "What is the likely return on the investment."

When an idea is only a gleam in a Ham's eye, and he wonders 'what would happen if I tried that?' The Ham has no stock holders or board of directors with their eyes on the bottom line for next month's balance sheet to report to or beg permission. i.e. there is no one he has to answer to except for Mother Nature. If the laws of physics will allow it, and he is clever enough to find out a way around pre-conceived limitations, he may succeed ... and often does.

So, why doesn't a university research lab come up with the significant breakthrough? Someone once said; "An Amateur may often be the one to do it because he does not know it is impossible."

Hams are well versed in the practical "how do I make this work" aspects of communications, and less tied to 'well established theory'. Often it is that 'established theory' that is incorrect, or at least incomplete. Because he doesn't know it can't be done, the Ham goes ahead and does it anyway.

If you read the history of Michael Faraday, you might notice that his approach to electro magnetics was always a 'hands on' attempt to answer the question; "How can I make this work?" I suspect that if Michael were alive today, he would be a Ham.

We do see innovative concepts coming out of university labs, usually from the students, or very young professors who have not yet begun to believe that 'we know it all already'.

\*\*\*\*\*

*Shown below, is a part, excerpted from the United States Code of Federal Regulations (CFR),  
CFR Title 47: Telecommunication*

"The rules and regulations in this part are designed to provide an amateur radio service having a fundamental purpose as expressed in the following principles:"

\*\*\*\*\*

### **PART 97—AMATEUR RADIO SERVICE**

#### **§97.1 Basis and purpose.**

(a) Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications.

(b) Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art.

(c) Encouragement and improvement of the amateur service through rules which provide for advancing skills in both the communication and technical phases of the art.

(d) Expansion of the existing reservoir within the amateur radio service of trained operators, technicians, and electronics experts.

(e) Continuation and extension of the amateur's unique ability to enhance international goodwill."

(The underlines above are my addition to the text.

## Hamvention Bus(ted):

## COMMITTEE CANCELS HAMVENTION 2020

By [W8HJR, Media Chairman](#) 03/15/2020 [Event Information](#)

The Hamvention Executive Committee has been monitoring the COVID19 pandemic. We have worked very closely with our local and state health Departments.

It is with a very heavy heart the Hamvention Executive Committee has decided to cancel Hamvention for this year.

This decision is extremely difficult for us but with around two months until the Great Gathering we felt this action necessary. More specific details regarding the closure will soon be posted here. Thank you for your understanding in this time of International Crisis.  
Jack Gerbs General Chairman HV2020

[JackWB8SCT@gmail.com](mailto:JackWB8SCT@gmail.com)

**Dear ARROW Hamvention Bus Riders,**

As you have probably heard Hamvention has been canceled due to the Coronavirus outbreak. Hence, the ARROW bus trip is canceled and we have issued a refund to your PayPal account.

If you have paid via a check we will mail you once in the next few days. Please reach out to us if you have not received a refund.

**Dinesh Cyanam, [AB3DC@arri.net](mailto:AB3DC@arri.net) via [cyanam.net](http://cyanam.net)**

## TEMS Conference:



## Call for Papers

2020 International Conference  
IEEE Technology and Engineering Management Society (TEMS)



**TEMSCON 2020**  
The Embassy Suites by Hilton Detroit  
Livonia Novi, Michigan (USA)  
19525 Victor Parkway  
Livonia, MI 48152  
[2020.temscon.org](http://2020.temscon.org)



June 3-6, 2020

### ***Managing the Development of Connected Systems***

The greater Detroit area has a long history as a hub for engineering and manufacturing automobiles. With the ever-accelerating progress on innovation and a push for market-ready automated, connected and electrified vehicles, Detroit remains the heart of the automotive industry. Southeast Michigan has also diversified its economic base in emerging technology areas including information technology, health care and biomedical, power and energy, advanced manufacturing, and higher education and research. We invite contributions from engineering leaders, researchers, educators, innovators, entrepreneurs, and students to help advance the understanding and the state of practice related to successful technology and engineering management. Contributions may be research or practical. Research papers may be conceptual, empirical, or theoretical, but they must discuss how the results could be applied in practice. Practice-focused papers may consist of case studies, description of best practices, or application experiences, but they should also shed light on new challenges and unresolved future issues, which could be addressed by the research community. We thus provide a venue where different points of view interact to yield new understanding and ideas on leading innovation as well as the future of technology and engineering management.

- Paper Submissions Due: 29 Feb 2020
- Notification of Acceptance: 28 Mar 2020
- Revisions Due (For Papers Requiring Revisions): 18 Apr 2020
- Final Papers Due: 2 May 2020

Selected papers will be invited to submit to the *IEEE Engineering Management Review* or *IEEE Transactions on Engineering Management*.

Topic areas include, but are not limited to, the following:

- *Innovating in rapidly changing markets and sectors, e.g., biotech and health systems, manufacturing, etc.*
- *Leading and managing innovation and transformation*
- *Adopting new technologies: challenges and risk mitigation*
- *Management of software versions and their interoperability among different vehicle ages and makers*
- *Understanding trends and applicability of new technologies*
- *Leveraging enterprise data, e.g., successful use of AI, analytics, blockchain, IoT*
- *Leading societal change, e.g., mobility, intelligent transportation, health care, public policy*
- *Enhancing industry, university, and/or government collaboration*
- *Developing personal skills for leading innovation initiatives*

In addition, we invite proposals for half-day workshops, including special sessions from other technical societies, related to the conference theme.

Industry perspectives will be featured throughout the meeting via panels and plenary talks.

Conference attendees will have the opportunity to visit nearby Detroit area landmarks including the Henry Ford Museum, Greenfield Village, Detroit Institute of Arts, Motown Museum, and Automotive Hall of Fame.

#### **Organizing Committee:**

Conference Chair – Liang Downey, [lxdowney@ieee.org](mailto:lxdowney@ieee.org)

Program Co-Chairs – Jason Hui, [jason.k.hui@ieee.org](mailto:jason.k.hui@ieee.org), Tugrul Daim, [t2td@uodt.edu](mailto:t2td@uodt.edu)

Publications Chair – Ed Perkins, [e.perkins@ieee.org](mailto:e.perkins@ieee.org)

**S.E. Michigan TEMS Society Chapter 10 Challenge:**

I had the privilege of meeting and talking with some of the TEMS Society EXCOM members during the event and the reoccurring topic was the support by the local chapter for TEMSCON2020. I strongly believe that for our chapter members to grow and stay well-informed with changes in managing people and technology you need to take an active role & support this event. You will have the opportunity to network, hear great paper presentations, and speakers. Your role in support of this event can be limited to a small block of time helping the day to day running of the event. I encourage you to contact Mark Robinson or myself to help with the conference. Our contact Information can be found in an issue of Wavelengths.

**Ray Sasinowski**

**TEMSCON 2020**

**TEMSCON 2020** will bring together 200+ engineering leaders, researchers, educators, innovators, entrepreneurs, and students to gather at the conference to help advance the understanding and the state of practice related to successful technology and engineering management from around the world and focuses on the art and science of management and leadership driving innovation and change.

TEMSCON 2020's theme is *Managing the Development of Connected Systems*. The greater Detroit area has a long history as a hub for engineering and manufacturing automobiles. With the ever-accelerating progress on innovation and a push for market-ready automated, connected and electrified vehicles, Detroit remains the heart of the automotive industry. Southeast Michigan has also diversified its economic base in emerging technology areas including information technology, health care and biomedical, power and energy, advanced manufacturing, and higher education and research.

The conference provides a venue where different points of view interact to yield new understanding and ideas on leading innovation as well as the future of technology and engineering management.

About [IEEE TEMS](#)

**TEMSCON 2020 topics include**

- Innovating in rapidly changing markets (e.g. biotech and health care, manufacturing)
- Leading and managing innovation and transformation
- Adopting new technologies: challenges and risk mitigation
- Management of in-vehicle software versions and interoperability among different vehicle ages & brands
- Understanding trends and applicability of new technologies
- Leveraging enterprise data, e.g., successful use of AI, analytics, blockchain, IoT
- Leading societal change, e.g., mobility, intelligent transportation, health care, public policy
- Enhancing industry, university, and/or government collaboration
- Developing personal skills for leading innovation initiatives

**Call for papers TEMSCON 2020!!**

On the TEMSCON 2020 website you find information on paper topics and submission dates.

- Paper Submissions Due: 29 Feb 2020
- Notification of Acceptance: 28 Mar 2020
- Revisions Due (For Papers Requiring Revisions): 18 Apr 2020
- Final Papers Due: 2 May 2020

<http://www.ieee-tems.org/>



ZF Employment Ad



# WHAT'S NEXT?

JOIN ZF

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AUTOMOTIVE INNOVATION WITH ZF,  
ONE OF THE WORLD'S LEADING  
AUTOMOTIVE SUPPLIERS.

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**Section Matters****Joint Chapter Meetings: A Painless Way to Keep Current**

Engineering, as are most disciplines in the world, is evolving. Electrical engineering is evolving very rapidly. How many of today's EEs know the function of a suppressor grid or the task of a 6SN7? Software was the domain of mathematicians and the occasional scientist. Solid state was the domain of physicists and chemists. The challenge for today's engineer is to stay apace with rapid technological advancements.

IEEE has Sections that focus on EEs staying current in their field and exploring other areas through a variety of ways, including conferences, meetings and courses. IEEE SEM has all of these available. Since there is a finite amount of time to attend meetings, conferences and take courses, the challenge is to become more efficient in staying current and expanding one's networks of contacts and interests. Holding joint meetings with other Chapters is an easy solution. Joint Chapter meetings lighten the administrative burden while reducing the cost for each Chapter. A joint meeting can allow exploration of an area that is a complimentary field of interest, or is one you always wanted to know about. What better way to do this than by having a joint meeting?

Chapter officers should contact one (or more) of their fellow Chapter officers to explore scheduling a joint meeting. Chapter members should let their officers know which Chapters they would like to join with for a meeting. Joint meetings are easy, reduce administrative burden and expenses, and can even be fun. Joint meetings are a painless way to expand everyone's horizon.

*Joe Giachino*

**Section Focus**

The IEEE SEM Section Officers have reaffirmed the Mission and Goals of the section with the guidance of the Region 4 leadership. The Mission and Goals conform to those of IEEE worldwide.

You have probably seen the Mission and Goals before. However, it is important to keep these clearly in mind and remind ourselves often that this is what we are about and what we are trying to accomplish.

**Section Mission**

Inspire – Enable – Empower and Engage Members of IEEE at the local level.

For the purpose of:

- Fulfilling the mission of IEEE to foster technological innovation and excellence for the benefit of humanity,
- Enhancing the members' growth and development throughout their life cycle, and
- Providing a professional home,

**Section Goals**

- Increase member engagement,
- Improve relationships with and among members,
- Increase operational efficiency and effectiveness, within the section and its interfaces,
- Enhance collaboration – serve as the local face of IEEE to the community,
- Increase membership, and
- Ensure the collection of appropriate information necessary to assist the IEEE to become a data driven organization.

It is now the task of the section leadership to guide and coach all section officers and elements to focus their activities on achieving those goals

**ORG UNITS crib sheet****Section Unit Name or Affinity Group or Chapter Name (Organizational Unit is in parentheses)****Consultants** Network Affinity Group: (CN40035)**Life Members:****Young Professionals:****Women in Engineering:**

Chapter: 01 (SP01) Signal Processing Society,  
 (CAS04) Circuits and Systems Society and  
 (IT12) Information Theory Society

Chapter: 02 (VT06) Vehicular Technology Society

Chapter: 03 (AES10) Aerospace and Electronic Systems Society and  
 (COM19) Communications Society

Chapter: 04 "Trident" (AP03) Antennas and Propagation Society,  
 (ED15) Electron Devices Society,  
 (MTT17) Microwave Theory and Techniques Society,

Chapter: 05 "Computer" (C16) Computer Society

Chapter: 06 (GRS29) Geosciences and Remote Sensing Society

Chapter: 07 (PE31) Power Engineering Society,  
 (IA34) Industrial Applications Society

Chapter: 08 "EMC" (EMC27) Electromagnetic Compatibility Society

Chapter: 09 (IE13) Industrial Electronics Society,  
 (PEL35) Power Electronics Society

Chapter: 10 (TEM14) Technology and Engineering Management Society

Chapter: 11 (EMB18) Engineering in Medicine & Biology

Chapter: 12 (CS23) Control Systems Society

Chapter: 13 (E25) Education Society

Chapter: 14 (RA24) Robotics And Automation Society

Chapter: 15 (NPS05) Nuclear Plasma Sciences Society

Chapter: 16 (CIS11) Computational Intelligence Society,  
 (SMC28) Systems, Man and Cybernetics Society

Chapter: 17 (NANO42) Nanotechnology Council

**IEEE Student Branches in Southeastern Michigan Section (Organizational Unit 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)

**Curated & Formatted By**

**Sharan Kalwani,**  
**Wavelengths,**  
**2017 ~ 2020**

## Non-IEEE 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 changing to its new home, kindly make a note of it! The new home is located at <http://r4.ieee.org/sem/>.** The old links will continue to work for some time, but will be changing permanently in the near future.

### SEM e-Wavelengths:

[www.e-wavelengths.org](http://www.e-wavelengths.org)

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 Web Calendar:

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

Select "SEM Calendar" button in the top row of the website.

### SEM Web Meetings:

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

Select "SEM Meeting List" button in the left-hand column.

### vTools Meetings:

<http://sites.ieee.org/vtools/>

Select "Schedule a Meeting" button in the left-hand column of buttons.

### Other IEEE Local Meetings:

<http://www.e-wavelengths.org/>

## Other Happenings

Here are some of the non-IEEE events 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.

Send details to: [wavelengths@ieee-sem.org](mailto:wavelengths@ieee-sem.org)

**Michigan Institute for Plasma Science and Engineering:** Seminars for the 2018-2019 academic year: <http://mipse.umich.edu/seminars.php>

**Model RC Aircraft**  
<http://www.skymasters.org/>

**Model Rocketry**  
<http://team1.org/>

**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**  
<http://www.therobotgarage.com/about-us.html>

**Science Fiction Conventions**  
<https://2019.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/>



## 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 arrangement of communications links designed to provide inter-unit coordination and collaboration.

The SEM Executive Committee meets in a teleconference each month on either the first Wednesday or first Thursday at noon. 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 Eric George, the section secretary at: [eric.george.us@ieee.org](mailto:eric.george.us@ieee.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.

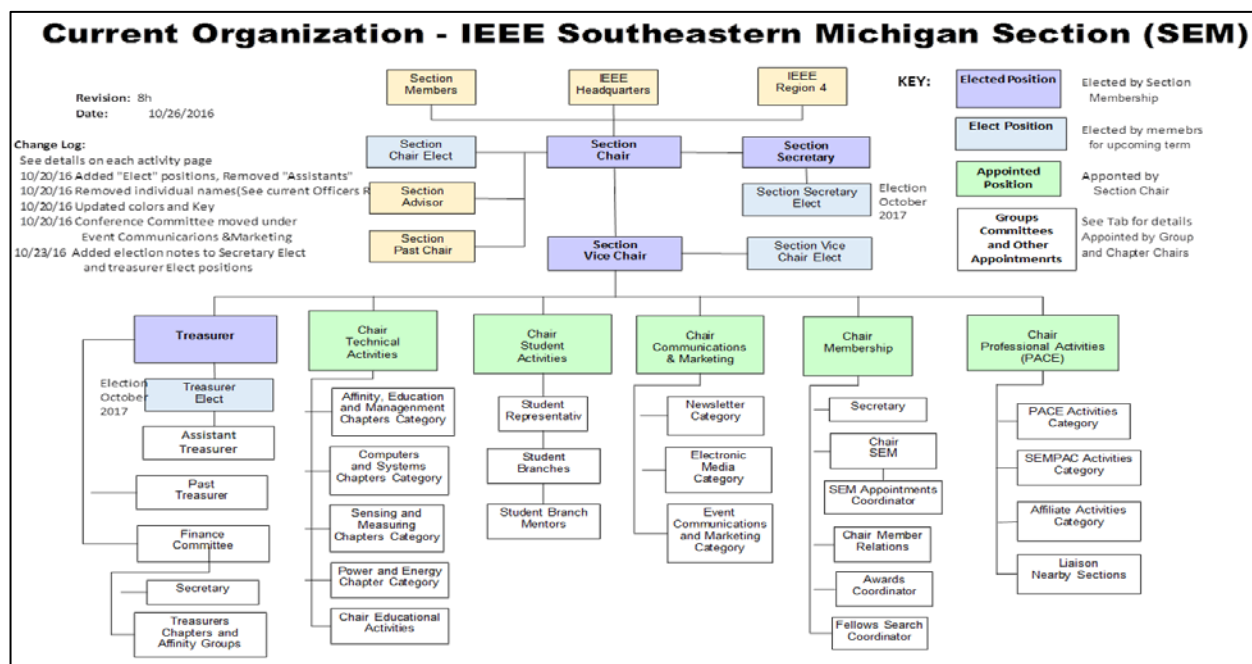
However, members of the section may have multiple technical interests and would like to have meeting information of other chapters. In order to communicate the meeting dates of all the chapters, affinity groups etc., to our members to facilitate their attendance, leaders of the groups are requested to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

**Eric George** - SEM 2019 Asst. Secretary

Download the **complete SEM Organization Chart**, in PDF format, from our Website at: <http://r4.ieee.org/sem/> Click on "About SEM" Tab and "Current Officers" (NOTE: this is now password protected)



## ExCom Meeting Schedule

Below is the 2020 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.  
~~Information on each Face-to-Face (in-person) Meeting will be sent out once the venue is confirmed.~~

Contact our Section Secretary, Christopher Johnson for a copy of the meeting Agenda and details of the on-line meeting arrangements. [cjohnson@ieee.org](mailto:cjohnson@ieee.org)

Please mark your calendars for the 2020 meetings. Or,,, link your personal calendar to the SEM Web calendar.

### Section Administrative Committee (ExCom) Meeting Schedule for 2020:

**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**.

### WebEx Meeting, Thursday, April 2 <https://events.vtools.ieee.org/m/216969>

Teleconference, Wednesday May 6 <https://events.vtools.ieee.org/m/216752>

Teleconference, Thursday June 4 <https://events.vtools.ieee.org/m/216754>

FACE TO FACE, Wednesday July 8 <https://events.vtools.ieee.org/m/216970>

Teleconference, Thursday August 6 <https://events.vtools.ieee.org/m/216755>

Teleconference, Wednesday September 2 <https://events.vtools.ieee.org/m/216756>

FACE TO FACE, Thursday October 7 <https://events.vtools.ieee.org/m/216971>

Teleconference, Wednesday November 4 <https://events.vtools.ieee.org/m/216759>

Teleconference, Thursday December 2 <https://events.vtools.ieee.org/m/216760>

Chris Johson  
SEM Secretary  
[cjohnson@ieee.org](mailto:cjohnson@ieee.org)

## Editor's 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](mailto:wavelengths@ieee-sem.org)

OR

[sharan.kalwani@ieee.org](mailto:sharan.kalwani@ieee.org)

[nilesh.dudhaia@ieee.org](mailto:nilesh.dudhaia@ieee.org)

[k.williams@ieee.org](mailto:k.williams@ieee.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.

### 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.

### Heads Up

We are contemplating making the submissions of articles and events for the Wavelengths, a little easier and a little more inviting. Ideas are of course welcome and to this end, we are toying with setting up a little "newsletter portal". Stay tuned for some news on that end!

### 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](mailto:wavelengths@ieee-sem.org) OR any one of the following:

[sharan.kalwani@ieee.org](mailto:sharan.kalwani@ieee.org)

[nilesh.dudhaia@ieee.org](mailto:nilesh.dudhaia@ieee.org)

[k.williams@ieee.org](mailto:k.williams@ieee.org)

*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	Future Cities Judges	Election Results	Resolutions	
Feb	Cons	2		MSU	Science Fair Judges	Officer's Welcome	Surviving Winter	Future Cities
Mar		3	13	EMU	Spring Conf. Flyer	Spring Conference	Spring Conference	Science Fair
Apr		4		U/M-D	National Engrs Wk.	Future Cities	Chapter Focus	ESD - GOLD
May	Life	5	14		Outstanding Eng Awd	Science Fair	Elections - Prep	New Fellows
Jun		6			IEEE-USA Apmts.	ESD Banquett	Leadership Skills	SEM Awards
Jul		7	15		Nominations Call	MD-Webcasts	Students Issues	Region 4
Aug	WIE	8			MGA - Apmts.	Tech-Webinars	Womens Issues	
Sep		9	16	LTU	Region 4 Apmts.	Engineers Day	Professional Skills	
Oct		10		U/M-AA	Fall Conf. Flyer		Fall Conference	
Nov	YP	11	17	WSU	ELECTIONS!		Humanitarian	
Dec		12		U/D-M	IEEE-Com Apmts.	Fall Conference	Happy Holidays	

*Wavelengths Annual Publication Plan for Personal Profiles*

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





## 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 “” button under the top row.)

### SEM LinkedIn Page

(Select the “” button under the top row.)

### 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 “Current Officers.”

## Section Officers

### Section Chair

David Mindham

### Section Secretary

Chris Johnson

### Section Vice-Chair

Sharan Kalwani

### Section Treasurer

Michael Folian

## Standing Committees:

### Section Adviser

Don Bramlett

### Chair Communications & Marketing

### Chair Educational Activities

Christopher Guirlanda

### Chair Finance

Nevrus Kaja

### Chair Membership Development

Sharan Kalwani

### Chair Nominations & Appointments

Kimball Williams

### Chair Professional Activities (PACE)

Sharan Kalwani

### Chair Student Activities

Mel Chi

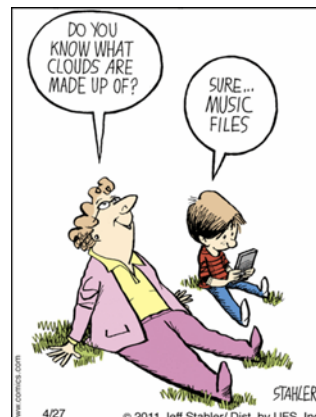
### Student Representative

### Chair Technical Activities

Jeffery Mosley



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



### Advertising Rates

SEM Website & Newsletter  
Advertising is coordinated through  
our e-Wavelengths website at:

[http://www.ieee-sem.org/ewavelengths/?page\\_id=181](http://www.ieee-sem.org/ewavelengths/?page_id=181).

Please see the information listed on  
the site, and contact our web editor  
of e-Wavelengths, Nevruz Kaja, for  
further details.

### Leadership Meetings

#### SEM Executive Committee Monthly Teleconferences:

- 1<sup>st</sup> Wednesday or Thursday of Each Month @ Noon
- 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 Face-to-Face Meetings:

- Once every Qtr. Find the location, and Registration at:  
<https://meetings.vtools.ieee.org/main>

#### 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:  
<https://meetings.vtools.ieee.org/main>