



#### Volume 65 – Issue 10

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# Section Chair's Message

Welcome to Shocktober! Despite the onset of Fall - we continue to have a ton of events: Two events celebrating IEEE day, the 10th anniversary of TEMS and many more. So there is plenty to look forward to this month by way of activities. Also, the school year is in full swing – so we hope to see and visit our student branches to ensure they remain active and healthy. Of concern are a few student branch technical chapters – who do not have any faculty counselors or student members. We will move to trim those soon.

Two important alerts: elections are underway for Section, chapter and affinity group officer/volunteers. Please check announcements and Enotices for voting soon! This is your chance to make the IEEE work for you locally.

We also congratulate recent IEEE Senior Members. Our next round of helping eligible members achieve senior status occurs on 1st November. This is the final round for the year and we will schedule a whole series well in advance for 2026. Too often members wake up after the deadlines and expect to be immediately promoted to senior status. So eligible members – please watch out for frequent sessions where we guide and inform you!

You can find ALL the other upcoming events using the short URL link: https://bit.ly/sem-upcoming. To register, find the "Upcoming Events" tables and follow the vtools links.

#### SAVE THE DATE!

We are organizing a celebration of the youngest society's founding anniversary, namely: the Technology Engineering Management Society (TEMS). The date is October 18th and as always, we will be rotating the venue location, this time we are focusing on doing this in East Lansing, Michigan. Stay tuned for details!

Starting this month we will report all the activities of the Student Branches and other Affinity Groups including HKN. It is sad to see so many Student Branches report "zero" (0) events or activities. We want them to be once again active and feel free to reach out to the Section – we are always ready to help! I look forward to hearing from you and seeing you at our events. As always, your ideas and suggestions are encouraged and welcome. If I don't hear back, I will assume all is well.



#### Sharan Kalwani

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





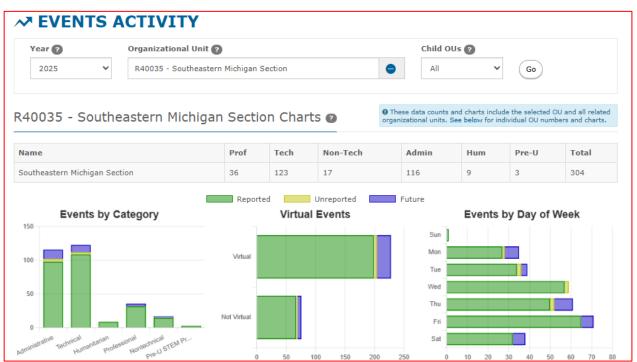


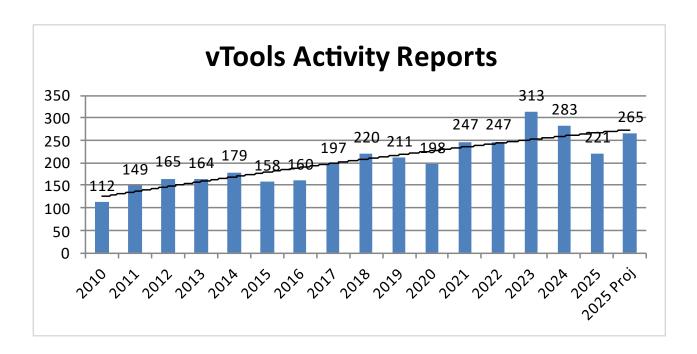




To reach any of our SECTION officers, for any help/assistance you seek you may try these easy to remember email addresses. The objective is to ensure business continuity, so one need not try to remember or hunt for the contact information! They can help you find your chapter officers or point you in the right direction for any query. They are:

☐ Chair is
 ☐ Vice Chair is
 ☐ Treasurer is
 ☐ Secretary is
 ☐ Advisor is
 Chair@ieee-sem.org
 vicechair@ieee-sem.org
 treasurer@ieee-sem.org
 advisor@ieee-sem.org
 advisor@ieee-sem.org





# **Student Branches & Student/Technical Society Chapters**

| Name                                    |        | Prof | Tech | Non-Tech | Admin | Hum | Pre-U | Total |
|---|--------|------|------|----------|-------|-----|-------|-------|
| Eastern Michigan University             | .lu 🗠  | 0    | 0    | 0        | 0     | 0   | 0     | 0     |
| Lawrence Technological University       | Ja CŻ  | 0    | 0    | 0        | 0     | 0   | 0     | 0     |
| Michigan State Univ, RA24               | Ja CŻ  | 0    | 0    | 0        | 0     | 0   | 0     | 0     |
| Michigan State University               | Ja CŻ  | 0    | 0    | 0        | 0     | 0   | 0     | 0     |
| Michigan State University,EP21          | Ja CŻ  | 0    | 0    | 0        | 0     | 0   | 0     | 0     |
| Michigan State University,NPS05         | Ja CŻ  | 0    | 0    | 0        | 0     | 0   | 0     | 0     |
| Oakland University                      | Ja CŻ  | 0    | 0    | 1        | 0     | 0   | 0     | 1     |
| Univ Of Michigan-Ann Arbor,NPS05        | Ja CŻ  | 0    | 0    | 0        | 0     | 0   | 0     | 0     |
| University of Detroit-Mercy             | .la CŻ | 0    | 0    | 0        | 0     | 0   | 0     | 0     |
| University of Michigan-Ann Arbor        | .la CŻ | 2    | 6    | 4        | 0     | 0   | 0     | 12    |
| University of Michigan-Ann Arbor,GRS29  | .la CŻ | 0    | 3    | 0        | 0     | 0   | 0     | 3     |
| University of Michigan-Ann Arbor,SSC37  | .la CŻ | 0    | 0    | 0        | 0     | 0   | 0     | 0     |
| University of Michigan-Ann Arbor,UFFC20 | .la CŻ | 0    | 8    | 0        | 0     | 0   | 0     | 8     |
| University of Michigan-Dearborn         | .la CŻ | 3    | 1    | 0        | 3     | 0   | 0     | 7     |
| Wayne State University                  | .la 🗠  | 0    | 2    | 0        | 0     | 0   | 0     | 2     |
| Wayne State University, PE31            | .la 🗠  | 0    | 0    | 0        | 0     | 0   | 0     | 0     |
| Wayne State University,C16              | .la 🗠  | 0    | 0    | 0        | 0     | 0   | 0     | 0     |

# Affinity Groups (AG) + HKN (Honors Society) Organization Units

| Name  |       | Prof | Tech | Non-Tech | Admin | Hum | Pre-U | Total |
|---|-------|------|------|----------|-------|-----|-------|-------|
| IEEE-HKN Southeastern Michigan Alumni Chapter     | .lu 🗠 | 0    | 0    | 0        | 0     | 0   | 0     | 0     |
| Lawrence Technological University, Theta Upsilon  | 0     | 0    | 0    | 0        | 0     | 0   | 0     |       |
| Michigan State University, Gamma Zeta             | 0     | 0    | 0    | 0        | 0     | 0   | 0     |       |
| Dakland University, Iota Chi                      | .la 🗠 | 0    | 0    | 1        | 0     | 0   | 0     | 1     |
| Southeastern Michigan Affinity Group, YP          | .lu 🗠 | 2    | 4    | 0        | 10    | 0   | 0     | 16    |
| Southeastern Michigan Section Affinity Group, LM  | .la 🗠 | 1    | 4    | 1        | 0     | 3   | 0     | 9     |
| Southeastern Michigan Section Affinity Group, WIE | .la 🗠 | 0    | 3    | 1        | 8     | 0   | 0     | 12    |
| Southeastern Michigan Section Affinity Group,CN   | .lu 🗠 | 4    | 2    | 0        | 1     | 0   | 1     | 8     |
| University Of Michigan-Ann Arbor, Beta Epsilon    | .lu 🗠 | 0    | 0    | 0        | 0     | 0   | 0     | 0     |
| University Of Michigan-Dearborn, Theta Tau        | 0     | 0    | 0    | 0        | 0     | 0   | 0     |       |
| University of Detroit-Mercy, Beta Sigma           | .lu 🗠 | 0    | 0    | 0        | 0     | 0   | 0     | 0     |
| Wayne State University, Delta Alpha               | Ju C  | 0    | 0    | 0        | 0     | 0   | 0     | 0     |

# **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 <u>wavelengths @ieee-sem.org</u>. Enjoy! You can also use this bookmark to view

All of the links at a single glance <a href="https://bit.ly/sem-upcoming">https://bit.ly/sem-upcoming</a>

| Event   | Date        | Time (US Eastern) |
|---|-------------|-------------------|
| Robotics Admin meeting  | 2025-10-06  | 1830 hours        |
| Computer Chapter Admin meeting  | 2025-10-06  | 2000 hours        |
| Chapter 8 (EMC27) Admin Teleconference                                | 2025-10-09  | 1100 hours        |
| Section ExCom (Virtual session) meeting                               | 2025-10-09  | 1830 hours        |
| IEEE Day Lunch Celebration  | 2025-10-11  | 1130 hours        |
| Real Time and Sparse Reconstructed Radar Imaging                      | 2025-10-13  | 1200 hours        |
| SE Michigan YP (Affinity Group) Admin meeting                         | 2025-10-13  | 1730 hours        |
| Why is Morse Code still Alive?  | 2025-10-16  | 1730 hours        |
| Career Transitions: A Panel Discussion Organized by YP Affinity Group | 2025-10-16  | 1800 hours        |
| Raising Robots  | 2025-10-17  | 1800 hours        |
| 10th Anniversary TEMS Celebration Event at Abrams Planetarium         | 2025-10-18  | 1300 hours        |
| Leading with Purpose in a changing Power Industry                     | 2025-10-22  | 2000 hours        |
| Software Defined Vehicles: Changing Landscape?                        | 2025-10-31  | 1500 hours        |
| Senior Member Elevation (Virtual)                                     | 2025-11-01  | 1100 hours        |
| More events in November   | Stay tuned! |                   |
| Even more events in December (including a Section Dinner)             |             | 1830 hours        |

# **DRIFT Announcement**

The **DRiving Automotive Industry WorkForce Transformation (DRIFT)** initiative offers **free**, flexible training programs (online, hybrid, in-person) with stackable credentials and graduate certificates. Topics span AI for autonomous systems, adversarial machine learning, vehicle network security, and AI+Cybersecurity integration. Programs are designed for a range of audiences including students, engineers, IT professionals, and defense personnel.

More details are available at:

https://www.secs.oakland.edu/ei/drift/

#### **Program Highlights:**

- Full Scholarships: Participants receive scholarships covering all enrollment costs.
- Flexible Online Learning Options:
  - √ Fast Track Tutorial (8 hours each)
  - √ Workshops (16 hours each)
  - ✓ Modules (32 hours each)
- Curriculum Covers:
  - ✓ The fundamental architecture and key components of connected and autonomous vehicle (CAV) systems
  - ✓ The applications of artificial intelligence (AI) in CAV systems and its role in enabling core system functions
  - ✓ Common security challenges facing CAV systems, including those related to AI, and assess their potential impact on safety and performance.
  - √ Widely used security countermeasures and defense strategies in CAV environments.
  - ✓ Practical case studies and real-world scenarios to connect theoretical knowledge with industry applications.
- **Eligibility:** Open to U.S. citizens and permanent residents.

More can be learned by contacting (mention you heard about it here)

Huirong Fu, Ph.D.

University Distinguished Professor

Founding Director of Oakland University Center for Cybersecurity, (Designated NCAE-C by the NSA and DHS)

Founding Program Director of Master's Program of Cybersecurity

Department of Computer Science & Engineering

Oakland University, Rochester, MI 48309

https://oakland.edu/secs/labs-and-centers/cybersecurity/

# Student+HKN Guides

#### Student & HKN Guide(s)

One of the duties of my 'office' as Section Information Management Coordinator is to periodically look through the records of recently planned and executed meetings by the 'Geo-units' in our IEEE Section.

For any not already familiar with the term Geo-units, these comprise the sub-elements of our membership organization:

- **Technical Chapters** (Local homes for our many technical Societies) These come as single Society organizations, and also 'Joint' Chapters who may 'host' several different Societies.
- **Affinity Groups** (Identified by common non-technical factors or interests) Four are present in our Section (Consultants / Life Members / Women in Engineering and Young Professionals).
- Student Technical Chapters (Similar to Section level Technical Chapters but organized under the umbrella of a local university.)
- Student Branches (Similar to Affinity Groups where the common element is attendance at a particular university.)
- **HKN Chapters** (The Honors Society within the IEEE, originally housed at universities until the creation of HKN Alumni Chapters for HKN members who are no longer students.)

All elements within the IEEE Member Geographic Association (MGA) above fall under the guidance and requirements of the MGA Operations Manual – 27 February 2025. That is a 142 page document and not an 'easy read' by any means.

Fortunately, the MGA has published several documents that focus on specific elements of creating and operating many of the Geo-units listed above:

- Student Branch Manual and Counselor Guide
- Student Branch Vitality Guide
- IEEE-HKN Faculty Advisor Handbook Sept 2021
- Chapter Operations IEEE Eta Kappa Nu (IEEE-HKN)
- Chapter Handbook
- Chapter Resources

(Use cntl+click to follow the links above.)

That is good to know, but why are we making a point of mentioning this now?

Well it just so happens that last Saturday I opened the IEEE vTools Event tool and downloaded all the reported events for 2025, (There were 244) excluded any that had been cancelled, and I listed only the ones that had not been 'Reported'. That means that IEEE HQ does not know that they took place.

There were 17 in all.

- Two were from the Section itself,
- One from a Section Committee,
- Three from Technical Chapters,
- Ten from a single Student Branch over a 4 month period.

The interesting thing about the Student Branch reports is that those missing reports had all been brought to the attention of members of that Student Branch community several times, and several month ago.

It is obvious that the Section has been letting the Student Branches and the HKN down by not providing training for the officers that are often inducted in the fall semester and need guidance immediately. It also seems obvious that the Student Branch Councilors also need training, since no one who knew and understood the importance of scheduling and reporting meetings would have ignored those lapsed meeting reports.

The Section schedules Officer training focused on Technical Chapters and Affinity Groups early in the new year to help bring all officers (not just newly elected officers) up to speed.

It appears we also need to schedule Student and HKN officer training in the Fall if we are not to continue to fail those who can benefit from that training the most.

# TEMS 10<sup>th</sup> Celebration



# Come join us! Saturday Afternoon Cocktail Reception, Section Awards, Planetarium Light Show 1 to 5 pm October 18th 2025

The Talbert and Leota Abrams Planetarium 755 Science Road, MSU campus East Lansing, MI 48824

Registration Required (limited to 79!)

https://events.vtools.ieee.org/m/498955



# **Student Chapters?**

#### **Student Chapters?**

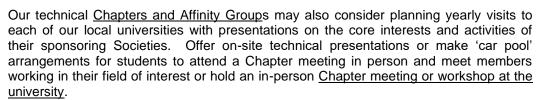
We all know that at our universities we encourage students to join IEEE and establish Student Branches as the focal point of their technical and professional interests. All well and good.

However, we are finding university students organizing Student Technical Chapters aligned with one or more of the IEEE Societies, when there already exist functioning Technical Chapters in the Section with the same technical focus! What's wrong with this picture?

Most probably the students, or their counselors, are not aware of the existence of viable functioning Chapters within the Section, and somewhere along the way, the Chapter officers have not realized that many of their future new members may be attending classes at a nearby university.

#### So, what's to be done?

The Section may consider organizing training sessions for the <u>University Counselors</u> and not only provide detailed information on <u>their specific job functions</u> within the IEEE framework but include local Section update on what Chapters are available and of possible interest to their students. (Should we consider an 'invitational' Student Branch Counselors' Workshop or Conference where ALL the Student Branch Universities are invited?)



How difficult would that be for a Chapter to arrange a once-a-year visit to each university?





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# **Tech Activities Report**

As of September 30, 2025

| 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<br>Mtgs |
|-------------|----------------------|--------------------|-----------------|-------------|-------------------|-------------|---|--------------|---------------|
| Cnslt       | 25                   | 13                 | 2               | 1           | 3                 | 1           | Consultants Network                         | 0            | 7             |
| LIFE        | 9                    | 0                  | 2               | 0           | 1                 | 3           | Life Members                                | 0            | 6             |
| WIE         | 48                   | 28                 | 2               | 8           | 0                 | 0           | Women In Engineering                        | 0            | 10            |
| YP          | 8                    | 0                  | 4               | 7           | 1                 | 0           | Young Professionals                         | 0            | 12            |
| 1           | 0                    | 0                  | 0               | 1           | 0                 | 0           | Circuits & Systems, Signal Proc., Info Th.  | 0            | 1             |
| 2           | 17                   | 1                  | 2               | 9           | 0                 | 0           | Vehicular Technology                        | 1            | 11            |
| 3           | 16                   | 10                 | 2               | 7           | 1                 | 0           | Aerospace & Elec. Sys., Communications      | 0            | 10            |
| 4           | 37                   | 25                 | 6               | 8           | 1                 | 0           | Trident (Ant, Elect Dev., uWave, Photo)     | 0            | 15            |
| 5           | 57                   | 31                 | 23              | 8           | 11                | 3           | Computers                                   | 0            | 45            |
| 6           | 29                   | 9                  | 6               | 0           | 0                 | 0           | Geoscience & Remote Sensing                 | 0            | 6             |
| 7           | 31                   | 13                 | 2               | 5           | 0                 | 1           | Power Engineering, Industrial App.          | 1            | 8             |
| 8           | 48                   | 28                 | 10              | 7           | 0                 | 0           | Electromagnetic Compatibility (EMC)         | 0            | 17            |
| 9           | 113                  | 18                 | 1               | 2           | 0                 | 0           | Power Electronics, Industrial Electronics   | 0            | 3             |
| 10          | 16                   | 10                 | 1               | 5           | 0                 | 0           | Engineering Management                      | 0            | 6             |
| 11          | 14                   | 2                  | 3               | 0           | 0                 | 0           | Eng. in Medicine & Biology                  | 0            | 3             |
| 12          | 28                   | 7                  | 2               | 0           | 0                 | 0           | Control Systems                             | 0            | 2             |
| 13          | 14                   | 1                  | 5               | 0           | 1                 | 1           | Education                                   | 0            | 7             |
| 14          | 352                  | 340                | 2               | 4           | 0                 | 0           | Robotics & Automation                       | 1            | 6             |
| 15          | 25                   | 12                 | 3               | 0           | 0                 | 0           | Nuclear Plasma Science Society              | 0            | 3             |
| 16          | 368                  | 347                | 2               | 0           | 0                 | 0           | Computational Intelligence / Sys.Man.Cyber. | 0            | 2             |
| 17          | 22                   | 9                  | 1               | 1           | 2                 | 0           | Nano Technology Council                     | <u>v</u>     | 4             |
| 18          | 20                   | 8                  | 1               | 0           | 0                 | 0           | Magnetics Society                           | 0            | 1             |
| 10          | 20                   | 0                  | <u>"</u>        | U           | U                 | U           | magnetics society                           | U            | 0             |
| SEM         | 44                   | 24                 | 5               | 22          | 6                 | 3           | SEM (Section)                               | 3            | 36            |
|             |                      |                    |                 |             |                   |             |   |              |               |
| Tot         | 1337                 | 933                | 87              | 95          | 27                | 12          | NOTE: Highlight Green = Active              | 6            | 221           |

SEM Section Chapter and Affinity group leaders who are not showing any technical or administrative meetings are encouraged to conduct meetings of your leadership ASAP. The TAcom will be contacting the following Geo-Units next month: Young Professionals, Chapters 1, 9, 10, 17 and 18 to help you establish a projected plan of event for the remainder of the year as well as to provide any other assistance needed. We were planning a working session before the end of the year to get all GA's to meet their goals. More to come as we need to get leadership as well as a DTG and location finalized.

Thanks to all Geo Units working to engage their membership!!!

Jeff Mosley, TAcom Chair, CIS CH 16 Chair (SEM Section, Region 4)

# **Errors: DoE Climate Report**

#### Dozens of scientists find errors in a new Energy Department climate report

Dozens of scientists find errors in a new Energy Department climate report <u>Julia Simon</u>

September 2, 20259:00 AM ET

Energy Secretary Chris Wright spearheaded a recent DOE report about climate science. Now more than 85 scientists say the report is full of errors and misrepresents climate science.

Energy Secretary Chris Wright spearheaded a recent DOE report about climate science. A new rebuttal from more than 85 scientists finds the report is full of errors and misrepresents climate science.

A group of more than 85 scientists have issued a joint rebuttal to a recent U.S. Department of Energy report about climate change, finding it full of errors and misrepresenting climate science.

This comes weeks after the Union of Concerned Scientists and the Environmental Defense Fund filed a lawsuit against the Trump administration that alleges that Energy Secretary Chris Wright "quietly arranged for five hand-picked skeptics of the effects of climate change" to compile the government's climate report and violated the law by creating the report in secret with authors "of only one point of view."

The DOE's Climate Working Group consisted of four scientists and one economist who have all questioned the scientific consensus that climate change is a large threat to the world and sometimes frame global warming as beneficial.

The group of climate scientists found several examples where the DOE authors cherry-picked or misrepresented climate science in the agency's report. For instance, in the DOE report the authors claim that rising carbon dioxide can be a "net benefit" to U.S. agriculture, neglecting to mention the negative impacts of more heat and climate-change fueled extreme weather events on crops.

The DOE report also states that there is no evidence of more intense "meteorological" drought in the U.S. or globally, referring to droughts that involve low rainfall. But dozens of climate scientists point out that this is misleading, because higher temperatures and more evaporation — not just low rainfall — can lead to and exacerbate droughts. They say that there are, in fact, many studies show how climate change has exacerbated droughts.

"This report was reviewed internally by a group of DOE scientific researchers and policy experts from the Office of Science and National Labs," writes Ben Dietderich, chief spokesperson for the DOE in an email to NPR.

Dietderich adds that "the Trump administration is committed to engaging in a more thoughtful and science-based conversation about climate change and energy."

The Trump administration wants the government to stop regulating climate pollution. The DOE report was cited multiple times by the Environmental Protection Agency in its recent proposal to roll back what's known as the endangerment finding, which is the basis for rules regulating climate pollution, including from coal and gas-fired power plants, cars and trucks, and methane from the oil and gas industry.

The DOE report "is about providing fodder for further actions down the track, which will roll back progress on climate action," says John Cook, a senior research fellow at the University of Melbourne who studies climate science misinformation. "The DOE report is basically arguing climate change is no big deal, therefore we shouldn't act. Always it's about trying to delay action and maintain the status quo."

The group of more than 85 scientists recently submitted their review of the Climate Working Group report to the Federal Register as part of the DOE's 30-day open-comment period, which closes on Tuesday.

Andrew Dessler, professor of atmospheric sciences at Texas A&M University, coordinated the response from dozens of climate experts. He says unlike the DOE report, climate reports from groups such as the United Nations' Intergovernmental Panel on Climate Change feature the work of hundreds of global scientists and require multiple rounds of peer review.

#### October 3, 2025

#### **IEEE SOUTHEASTERN MICHIGAN – WAVELENGTHS**

Dessler argues that this DOE report, released in late July, is important to pay attention to, because of what he and other scientists identify as problems with the science, and because of how the report is being used by the Trump administration to roll back the endangerment finding. EPA administrator Lee Zeldin has said the goal of the administration is "driving a dagger straight into the heart of the climate change religion."

Travis Fisher is the director of energy and environmental policy studies at the Cato Institute; a libertarian think tank. He coordinated the work of the DOE's Climate Working Group. He says the DOE would look at what comes in during the open-comment period.

"If there are errors, they'll correct them, of course," Fisher says. "And I don't know if any group like this could produce a 150-page document without any errors. So, we'll see what comes up."

Fisher adds, "It's just a matter of good government and good science to address all comments that come in."

**Julia Simon** writes and reports for NPR as their Climate Solutions correspondent, covering efforts to reduce greenhouse gas emissions. She also contributes to NPR's website, podcasts, and radio, with previous work for other news organizations like BBC News, APM's Marketplace, and PRI's The World.

# This Month in October

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

October 1, 1908 - Henry Ford's Model T, a "universal car" designed for the masses, went on sale for the first time.

October 3, 1884 – IEEE Day, the first Tuesday of October, when a small group of individuals in the electrical professions met in New York, USA. They formed a new organization to support professionals in their nascent field and to aid them in their efforts to apply innovation for the betterment of humanity—the American Institute of Electrical Engineers, or AIEE for short. That October, the AIEE held its first technical meeting in Philadelphia, PA, USA. Many early leaders, such as founding President Norvin Green of Western Union, came from telegraphy. See also <a href="https://www.ieee.org/about/ieee-history.html">https://www.ieee.org/about/ieee-history.html</a>



October 4, 1957 - The Space Age began as the Russians launched the first satellite into orbit. Sputnik I weighed just 184 lbs. and transmitted a beeping radio signal for 21 days. The remarkable accomplishment by Soviet Russia sent a shockwave through the American political leadership resulting in U.S. efforts to be the first on the moon.





October 5, 1882 - Birthday - "Father of the Space Age" Robert Goddard (1882-1945) was born in Worcester, Massachusetts. During his lifetime he was ridiculed by the public and the press over his idea of constructing a space flight machine. In 1926, he launched the world's first liquid-fueled rocket on a farm near Auburn, Mass. In 1935, his liquid-fueled rocket surpassed the speed of sound. Other developments included a steering apparatus for rocket machines, staged rockets to reach high altitudes, rocket fuel pumps, and a self-cooling rocket motor.

October 6, 1846 -Birthday - Engineer and inventor George Westinghouse (1846-1914) was born in Central Bridge, New York. He developed air brakes for trains and was later responsible for the adoption of alternating current (AC) systems for electric power transmission in the U.S. He was also the first employer to give his employees paid vacations.



October 11, 1939 - Albert Einstein warned President Franklin D. Roosevelt that his theories could lead to Nazi Germany's development of an atomic bomb. Einstein suggested the U.S. develop its own bomb. This resulted in the top secret "Manhattan Project."

October 13, 1884 - Greenwich was established as the universal time from which standard times throughout the world are calculated.



October 21, 1879 - Thomas Edison successfully tested an electric incandescent lamp with a carbonized filament at his laboratory in Menlo Park, New Jersey, keeping it lit for over 13 hours.

October 24, 1861 - The first transcontinental telegram in America was sent from San Francisco to Washington, addressed to President Abraham Lincoln from the Chief Justice of California.

October 30, 1938 - The War of the Worlds radio broadcast panicked millions of Americans. Actor Orson Welles and the Mercury Players dramatized the story by H.G. Wells depicting a Martian invasion of New Jersey. Their script utilized simulated radio news bulletins which many listeners thought were real.

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: <a href="mailto:wavelengths@ieee-sem.org">wavelengths@ieee-sem.org</a>.

Past readers have asked to feature one or more of these events in more detail. So, we have been featuring both documentaries and black & white movies, that will help shed more light on these luminaries and also explore the hidden side of their life stories. We will also endeavor to republish an article from various publications in the same month of Wavelengths. I urge any and all faculty of the STEM departments to share this with their students!

Sharan Kalwani

2022-2025 Chair, Southeastern Michigan Section,
Passionate Teacher/Engineering History Buff and Technology Aficionado

#### **ELECTIONS!!**

#### Election 2025 - Voting:

<u>IEEE Southeastern Section members</u>: As you read this the 2025 election committee is preparing to launch the voting system ballots for officers for the:

- Section Secretary and Treasurer Elect:
- Technical Chapters and Affinity Groups (in two categories):
  - Secretary only, and
  - Full Admin Committee (Chair, Vice-Chair, Treasurer and Secretary)

Everyone in the Section will receive the ballots for Section Secretary and Treasurer - Elect.

Only IEEE members who are members of the Technical Societies 'hosted' by each Chapter and Affinity Group will receive ballots for those elections:

**Note:** If you receive a ballot for a Chapter or Affinity Group, then you ARE a member of that organization and your vote counts!

If you are in doubt about which local (in our Section) Chapter(s) you have residence, there are two ways to check:

- Open the main IEEE webpage at: IEEE.ORG
  - Using your IEEE credentials: (Username and password) log-into the site.
  - o When you see your name show up near the top right corner of the page. Click on it.
  - That will send you to your Personal Profile.
  - o In your Personal Profile, click on: **Membership Information**
  - When that page opens, click on: Membership and Subscription Information
  - \*This page will list all the IEEE Societies of which you are a member.
  - o To find the local Chapter name / number, find the October 2025 issue of Wavelengths.
  - https://r4.ieee.org/sem/ Click on the Wavelengths TAB, and select October 2025.
  - Page 31 lists all the Chapters and Affinity Groups along with their related Societies.

--- OR---

- Open the vTools page at: https://vtools.ieee.org/
  - O Click on the **Membership Validator**
  - o In the box, enter your IEEE Member #, or the <a href="mailto:email account you registered">email account you registered</a> with.
  - o The system will return with a list of all your IEEE Society memberships.

Keep an eye on your IEEE email account for invitations to vote in the elections as they take place.

We need your votes!

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# **IEEE Elections 2025-26**

#### **Election Operations:**

Each Chapter and Affinity Group:

- Decided whether to elect just their Secretary (Oher officers shift up one position.)
- Or... Elect a full slate of officers

The chart below shows the final arrangement. It is interesting to note that, we have almost a perfect 50:50 spilt decision which should give us helpful data as to how well each approach will affect the resulting officer mix during the next 4 to 5 years of the experiment.

|            |   | New      | Trad.            |        |
|------------|---|----------|------------------|--------|
| Ch #s      | SEM Geo-units: All                        | ElectSys | <b>Elect Sys</b> | On Own |
| 0          | R40035 - SEM Executive Committee          |          | 1                |        |
| 1          | CH04049 - SEM Jt.Chap,SP01/CAS04/IT12     | 1        |                  |        |
| 2          | CH04051 - SEM Chapter, VT06               | 1        |                  |        |
| 3          | CH04053 - SEM AES10/COM19                 |          | 1                |        |
| 4          | CH04050 - SEM Chap, AP03/ED15/MTT17/PHO36 | 1        |                  |        |
| 5          | CH04055 - SEM Chapter, C16 - Computers    | 1        |                  |        |
| 6          | CH04056 - SEM Chapter, GRS29              | 1        |                  |        |
| 7          | CH04057 - SEM Chapter, PE31/IA34          |          | 1                |        |
| 8          | CH04088 - SEM Chapter, EMC27              |          | 1                |        |
| 9          | CH04087 - SEM Chapter, IE13/PEL35         | 1        |                  |        |
| 10         | CH04142 - SEM, Chapter TEM14              | 1        |                  |        |
| 11         | CH04099 - SEM Chapter, EMB18              | 1        |                  |        |
| 12         | CH04103 - SEM (Chap 12),CS23              |          | 1                |        |
| 13         | CH04113 - SEM Chapter, E25                | 1        |                  |        |
| 14         | CH04115 - SEM Chapter, RA24               |          | 1                |        |
| 15         | CH04144 - SEM Chapter, NPS05              |          | 1                |        |
| 16         | CH04125 - SEM Chapter, CIS11/SMC28        |          | 1                |        |
| 17         | CH04128 - SEM Chapter, NANO42             | 1        |                  |        |
| 18         | CH04162 - SEM Chapter Magnetics, MAG33    |          |                  | 1      |
| AG-Consult | CN40035 - SEM Consultants Network         | 1        |                  |        |
| AG-Life    | LM40035 - SEM Life Members                |          | 1                |        |
| AG-WIE     | WE40035 - SEM Women in Engineering (WIE)  |          | 1                |        |
| AG-YP      | YP40035 - SEM Young Professionals         |          | 1                |        |

(Chapter 17 has decided to conduct its own election this year.)

#### **Member Alert:**

Our members should notice that many of our Chapters are composed of more than one Society. These 'Joint' Chapters such as #1, 3, 4, 7, 9 and 16 may be unfamiliar to members with only one Society membership and they may be confused when asked to vote for an organization they do not know and are unfamiliar with the candidates.

You will only receive nomination requests and election ballots that align with your Society or Affinity Group memberships. If you are not a member of any Geo-unit, you will only receive requests that refer to the Section Executive Committee election, which will be sent to ALL SEM members. To check on your membership, open the vTools 'Member Validation' tool, enter either your IEEE member #, or the email account used to register with IEEE and YOU'RE list of Societies.

#### Caution:

If you have modified your IEEE Personal Profile to 'Opt Out' of receiving 'Local' news and information you will not be able

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to receive the eNotice of nominations, nor the Ballots for officer elections. You may easily check that status by logging into IEEE.ORG and Signing In with you IEEE username and password. When your name appears in the top black navigation bar, click on your name and it will open your Personal Profile. Then click on 'Communication Preferences'.

The window that opens suggests three options: (Click on '... Your Election Communications...'.)

- Select Your Communication Preferences
- Select Your Election Communication Preferences
- Review Your Accepted Polices & Terms

Clicking on "Your Election Communication Preferences and will move you down to that section. To receive local election notices, select the top option: "I want to receive email notification about voting online."

#### Officer Training Sessions:

As in previous years we will offer training sessions covering the functions, duties, responsibilities and tools associated with officer positions for all officers in our Section.

Note: These training sessions are also 'Open' to all members who wish to understand how the IEEE is organized and governed and how your Section is administered by the officers you elect each year. This is also a great way to begin learning some of the 'soft skills' that go beyond the technological topics you were trained on during your formal education as an engineer or scientist and give you some of the tools that can make a significant difference between holding down a job and building a career.

Management skills are not only for managers! Every engineer during his/her growth in their chosen profession will need to write formal letters or recommendations or reports and give presentations to industry groups, or boards of directors, or conduct classes for associates and customers, lead a project team, conduct meetings, write up agendas and minutes, etc. etc..

Those skills are not learned by reading about them but are 'learned by doing' and a great place to have that learning experience is by participating in managing a Chapter or Affinity Group.

Consider offering your time to such a team by nominating yourself for an office in one of the many Geo-units in our Section.

I strongly urge all officers, both experienced and new, to attend these training sessions to refresh your understanding of what you are supposed to be doing for your members as a functioning leader within and IEEE Geo-unit. We have noted, with dismay, that some officers seem to believe that their only duty and function is the 'warm the chair'. (See the Geo-Unit Health chart in this month's Wavelengths newsletter and notice the Chapters that are not highlighted in green!)

Don't become one of those!

Kimball Williams

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#### Fear takes Flight!

When Fear Takes Flight: A Dad's First Flight with His Daughter at the Controls By Christopher Johnson, IEEE Southeastern Michigan Section Secretary

As engineers, we're trained to understand systems, assess risks, and maintain control. But sometimes, growth comes from letting go.

This spring, I climbed into the right seat of a two-seat Diamond aircraft at Ann Arbor Municipal Airport—my youngest daughter, Sara, in the pilot's seat. Sara isn't just a licensed pilot; she's also a certified airframe and powerplant mechanic working for a major airline. Watching her confidently command the cockpit was a mix of pride, awe, and a deep sense of humility.

In my feature for Michigan Public, I reflect on that transformative flight—the smooth takeoff, circling over familiar landmarks, and the quiet moment when I realized the shift: she wasn't just my daughter anymore; she was the pilot, and I was the passenger.

It's a story about trust, expertise, and celebrating the next generation as they take the controls.

Read or listen to the full story:

 $\underline{https://www.michiganpublic.org/arts-life/2025-07-02/when-fear-takes-flight-a-dads-first-flight-with-his-daughter-as-the-pilotent and the pilotent and the p$ 

# Celebrating TEMS 10th

Celebrating a Decade of Excellence: The IEEE TEMS Southeastern Michigan Chapter's 10th Anniversary

The Southeastern Michigan (SEM) Section of the IEEE is proud to announce the **10th-anniversary celebration of its Technology and Engineering Management Society (TEMS) Chapter**, marking a decade of dedication to its mission:
"supporting excellence in the leadership and stewardship of transformational technologies and organizations."

Over the past ten years, the TEMS chapter in the SEM section has cultivated a vibrant engineering community. Fostering collaborations with vital groups like IEEE Women in Engineering (WIE) and the Young Professionals communities, the TEMS chapter has been instrumental in enabling peer-to-peer learning and has provided crucial programming focused on career development, such as the transition "From Engineer to Leader," while also addressing complex issues like "Balancing the Norms of Society, Government, and Regulators."

The chapter's journey reflects the evolution of the global society itself. With roots in the Professional Group on Engineering Management founded in 1951, the organization evolved into the IEEE Engineering Management Society in 1973. It later adapted to the technology boom by becoming the Technology Management Council before being reborn as the modern TEMS—a *member-focused society* designed to directly engage and serve individual practitioners, researchers, and students in alignment with its renewed mission.

As the era of Industry 5.0 emerges to expand Industry 4.0 with a focus on human-centricity, sustainability, and Al ethics, the TEMS chapter in the SEM section remains dedicated to its mission of integrating engineering, technology, and leadership while bridging the gaps between academia, industry, and government.

We extend a special thanks to all the volunteers, members, and supporters who have been integral to the success of our mission and cordially invite you to celebrate this important milestone with us.

Subhadip Ghosh, Chair TEMS (Chapter 10)

#### Senior Member News



The <u>IEEE Southeastern Michigan Section</u> is extremely proud and happy to welcome many senior members, who got upgraded (or elevated as we like to call it) to senior status. It is all part of our Membership Development on-going initiative to play a role in the professional lives of our members and support them in every which way possible. <u>Congratulations to all.</u> Do feel free to contact them for follow up.

--Mohamad Berri, Sharan Kalwani, Sreekanth Narayan: Membership Development Committee ME WAS NEWS

#### Ramprasad Reddy Mittana



Now a Senior IEEE member, Ram has over 20 years of experience in the technology industry, having worked with leading organizations such as NSF International, Abu Dhabi Investment Authority (ADIA), Oracle, and HCL Technologies. Throughout his career, he has been instrumental in championing digital transformation, integrating artificial intelligence and machine learning, and architecting enterprise technology solutions. His expertise spans HR and Finance technology modernization, cloud ERP implementations, and Al-driven automation across diverse industries and global regions. These multicultural experiences has equipped him with a deep understanding of how innovative solutions can drive operational efficiency and deliver meaningful business outcomes.

Ram holds a strong **academic foundation** in **technology and engineering** from globally recognized institutions:

- MBA candidate at Boston Questrom University, 2026
- Bachelor of Engineering (BE) in Electronics and Communication Andhra University, India.
- TOGAF and PMP certified

# **Member Spotlight**

# Feature Article: IEEE Member Spotlight: Shaping the Future of Energy-Efficient Trucking

The transportation industry faces growing pressure to reduce energy costs and emissions, and members of the IEEE Southeast Michigan Section are leading the way in developing solutions. One such member is Naren Reddy Dhansri, Principal Controls Engineer at Traxen Inc., whose work on advanced longitudinal control for heavy-duty trucks is helping fleets achieve significant annual savings and measurable reductions in greenhouse gas emissions.

Mr. Dhansri played a leading role in developing iQ-Cruise®, a longitudinal control system for heavy-duty trucks that uses high-definition maps, GPS localization, and onboard perception sensors such as radar to determine the vehicle's most probable path (MPP). With this information, its patented optimization algorithms calculate the most energy-efficient control actions in real time, planning continuously with long look-ahead using HD maps and perception sensors. The result is measurable improvements in energy efficiency — from fuel savings in diesel fleets to extended range and optimized power usage in hybrid and electric vehicles — while also supporting smoother driving and improved safety. The technology has already been deployed across hundreds of trucks in commercial fleet operations, demonstrating both its scalability and its value to the industry.

Designing and deploying real-time optimal control solutions on an automotive-grade embedded system was not without challenges. Unlike laboratory prototypes, truck controllers have limited processing power and memory, yet must deliver decisions within milliseconds to safely guide 80,000-pound (36-ton) Class 8 trucks in dynamic traffic. The algorithms also needed to operate reliably under vibration, temperature extremes, and long duty cycles, while adapting to hundreds of variants of fleet vehicles with widely differing operating conditions, such as variations in gross vehicle weight (GVW), and still scaling consistently across commercial deployments. Meeting these constraints required balancing mathematical rigor with practical engineering, careful optimization of code and computation, and extensive on-road validation. The result was a robust and commercially viable system — something rarely achieved at this scale.

The system's commercialization is rapidly ramping up through an exclusive global alliance with Eaton. Real-world fleet trials have shown 6–7% verified fuel savings. For a typical Class 8 truck, this is equivalent to about \$3,000–4,000 in annual savings per vehicle at typical U.S. diesel prices. Across current deployments, fleets are already achieving significant annual savings measured in the millions of dollars, while also reducing emissions.

The impact has been independently validated by the North American Council for Freight Efficiency (NACFE) in a cross-country field trial, and further highlighted in leading trade publications such as *FleetOwner, Heavy Duty Trucking,* and *Automotive World*.

Beyond deployment, Mr. Dhansri is the named inventor on multiple U.S. and international patents in longitudinal vehicle control and energy optimization. These patents have already been referenced in later innovations, reflecting their influence on the direction of ongoing automotive research and development.

His work exemplifies the qualities IEEE members bring to industry: rigorous engineering, innovative thinking, and a focus on measurable real-world impact. By bridging advanced control theory with commercial deployment, he has helped create a technology that not only improves fleet profitability but also supports global sustainability goals across both conventional and electrified drivetrains.

#### Member Bio:

Naren Dhansri is an engineering professional with over 12 years of experience advancing the fields of robotics, control systems, optimization, and machine learning for intelligent mobility applications. He currently leads research and development at Traxen Inc., where he architects scalable, commercially deployable autonomous driving solutions for Class 8 trucks. His work—protected by multiple patents—forms the foundation of Traxen's energy-efficient semi-autonomous longitudinal control system, which has been deployed on hundreds of vehicles, delivering measurable reductions in fuel consumption, emissions, and roadway incidents. Prior to Traxen, Mr. Dhansri held key engineering roles at Continental Automotive Systems, contributing to the development and global deployment of safety-critical embedded control systems, including Antilock Braking Systems (ABS), Electronic Stability Control (ESC), and Adaptive Cruise Control (ACC). His work



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emphasized real-time reliability and compliance with ISO 26262 functional safety standards.

He is currently pursuing a Ph.D. in Electrical Engineering, with a research focus on optimization-based motion planning for robotic systems with nonlinear dynamics operating in uncertain environments. This academic pursuit complements his industry leadership by bridging foundational research with practical automation solutions. Mr. Dhansri maintains strong engagement with the research community, with peer-reviewed publications in IEEE, ASEE, and Complex Adaptive Systems conferences, including an award-winning paper. His areas of expertise include Model Predictive Control, Large-Scale Optimization, Reinforcement Learning, Trajectory Planning, Sensor Fusion, Multi-Object Tracking, and Real-Time Embedded Systems.

# **A&A Panel Schedule**

#### IEEE HQ Admission and Advancement (A&A) Review Panel Meeting Schedule

The Admission & Advancement (A&A) Review Panels usually meets six times annually to review applications and/or nominations for election or elevation to Senior Member (SM) or Life Senior Member (LSM) grade.

- The review panel meetings are held in various locations throughout the world.
- A panel of reviewers is recruited among Senior members, Life Senior members, and Fellows in the section where the meeting is to be held. This full-day session is presided over by the Admission and Advancement Chair and/or Vice Chair, as well as a representative of the Member and Geographic Activities staff.
- In order for an application to be reviewed at the next Panel meeting, the application, resume, and required reference forms have to be submitted and received at least Seven days prior to the meeting date
- About two weeks following a review panel meeting, an update report with the names of the newly elevated Senior members is published and available for those who hold a volunteer position.

Review panel dates and locations (note: Dates and locations are subject to change without notice.) Please see Meeting Deadlines (Eastern Standard Time) below for more details.

Remaining 2025 IEEE HQ Panel Meeting Date

| Submission <u>Deadlines</u> (Eastern Standard Time) | Panel Meeting Dates |
|---|---------------------|
| 11:59 p.m. on 15 November 2025                      | 22 November 2024    |

†See our own Section organized events at the Section web site OR

visit this major upcoming events: https://events.vtools.ieee.org/m/491077

#### **RoboFest Report**

Robofest eNewsletter



- (1) 2026 Season Kickoff Rules Released and Kickoff Meeting Dates
- (2) Fall UMC Scholarship Competition and Workshop for High School Students
- (3) LTU Visit Days on November 15 and December 13
- (4) Robofest Sponsorship Opportunity
- (5) LTU Robofest Scholarship Opportunity
- (6) Autonomous Robotics Field Trips Available for High School Students
- (7) Seeking Site Hosts for Competitions

Note: All times are listed in Eastern Time unless noted

#### (1) 2026 Season Kickoff - Rules Released and Kickoff Meeting Dates

The Robofest 2025 Season International Rules have been released! Please join us at one of the kickoff meetings to review the rules and ask questions for clarification. The US Rules, to include clarifications and updates, will be uploaded in November. Zoom links are posted on the home page and 2026 Main Page of the Robofest.net website.

The kickoff meetings schedule:

Friday, October 3, 2025 9:00 am~ 10:30 am (Zoom only) (Updated) Wednesday, November 5, 2025 7:00 pm ~ 8:30 pm (Zoom only) Saturday, January 10, 2026 10:00 am ~ 11:30 am (In person and Zoom)

#### (2) Fall UMC Scholarship Competition and Workshop for High School Students

Robofest is hosting our third annual Unknown Mission Scholarship Challenge this fall for High School students to compete to win up to a \$17,000 Annual LTU Scholarship. Individual students or teams of 2 will be challenged to build and program a robot kit to solve a task in a limited amount of time. The registration fee is \$25. The 2025 UMC Scholarship Rules have been posted to the UMC page: <a href="https://www.robofest.net/index.php/current-competitions/unknown-mission-challenge">https://www.robofest.net/index.php/current-competitions/unknown-mission-challenge</a>

Competition: Saturday, November 1, 2025, 1:00 pm ~ 5:00 pm

At Lawrence Technological University, Computer Science Robotics Lab, J234

21000 West 10 Mile Road, Southfield Michigan 48075

Building No. 8 on the LTU campus map: https://ltu.edu/about/campus-map/ Use parking lot E.

A free workshop has been scheduled for registered students to prepare for the competition using VEX IQ robot kits and VEXcode. Students who attend this optional UMC workshop may borrow a VEX IQ robot kit for the competition on November 1st.

Workshop: Saturday, October 18, 2025, 1:00 pm ~ 5:00 pm

At Lawrence Technological University, Computer Science Robotics Lab, J234

Registration links for the workshop and competition will be opened on the Robofest registration site on September 2nd.

#### (3) LTU Visit Days on November 15 and December 13

We encourage Robofest participants to consider LTU as an option for their higher education. To learn more about what the university has to offer (over 100 undergraduate, masters and doctoral degree programs), LTU is hosting 2 visit days from 9:00am to 1:30pm, on Saturday, **November 15th** and **December 13th**, where prospective students can meet current LTU students and faculty, hear about campus living, and much more. To register for either of the LTU visit day, visit: <a href="https://apply.ltu.edu/portal/ltuvisitdays">https://apply.ltu.edu/portal/ltuvisitdays</a>

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#### (4) Robofest Sponsorship Opportunity

If you would like to support Robofest through a financial gift, you can contribute through the College of Arts and Sciences and designate Robofest under \*Areas to Support\* <a href="https://www.ltu.edu/giving/areas-to-support/coas">https://www.ltu.edu/giving/areas-to-support/coas</a> A donation of \$200 or more will be recognized as a Friend of Robofest on our Sponsor page and on the World Championship promotional poster.

#### (5) LTU Robofest Scholarship Opportunity

In order to truly recognize the effort and exceptional talent of the Robofest competitors, Lawrence Technological University will continue to offer the Robofest Champion LTU Scholarship Award for 2026. Each team member of the top 3 Senior Division Game, Exhibition, RoboArts, RoboMed, UMC and Vcc teams at the World Championship events will receive a scholarship certificate to attend LTU:

- 1st Place: \$20,000 annual scholarship (\$80,000 for 4 years)
- 2nd Place: \$16,000 annual scholarship. (\$64,000 for 4 years)
- 3rd Place: \$14,000 annual scholarship. (\$56,000 for 4 years)

Robofest participants who have competed at any time in any category may still apply for the annual \$3,000 LTU Robofest scholarship. More details will can be found on the Scholarship page: <a href="https://www.robofest.net/index.php/about/scholarship">https://www.robofest.net/index.php/about/scholarship</a>

#### (6) Autonomous Robotics Field Trips Available for High School Students

The Robofest Office would like to invite High School Robotics Clubs or Teams and Computer Science, Math, or Science Classes to participate in a half-day or full day field trip activity that may include mini Robofest competitions. This is a unique opportunity to visit the LTU campus and learn about the exciting Computer Science and Intelligent robotics research currently being conducted in the Computer Science Robotics Labs. Students will also get hands-on experience with coding using Python with Robots. Coaches, Teachers or Parents interested in coordinating a field trip to campus should contact Prof. Elmer Santos, Robofest Technical Director, at esantos@LTU.edu.

#### (7) Seeking Site Hosts for Competitions

The Robofest Site Host Applications are ready, and we are seeking site hosts for the 2025-2026 Competition Season. In order to get your location on the pre-season promotional materials, US and International hosts must submit the application by December 19, 2025. New for the 2025-2026 season, in order to cover the rising cost of running the Robofest program, we are implementing a new fee structure for Option 2 & 3 International events. Interested individuals, organizations, or schools should contact the Robofest office at <a href="mailto:robofest@ltu.edu">robofest@ltu.edu</a> or visit <a href="mailto:https://robofest.net/index.php/for-site-hosts">https://robofest.net/index.php/for-site-hosts</a> for the fee options, information/FAQ document and site application forms.

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

Dr. Chris Cartwright, Assoc Professor of Math, Robofest Executive Director, Executive Council Member

Prof. Elmer Santos, Robofest Technical Director, <a href="mailto:esantos@ltu.edu">esantos@ltu.edu</a>

Shannan Palonis, Robofest Assistant Director, spalonis@ltu.edu

Pam Sparks, Robofest Coordinator, psparks@ltu.edu

Anne Ruch, Robofest Coordinator, aruch@ltu.edu

Dr. CJ Chung, Professor of Computer Science, Robofest Founder, Executive Council Chair

Dr. Eric Martinson, Chair of Math & Computer Science Dept, Executive Council Member

Dr. Vijay John, Associate Professor of Computer Science, Executive Council Member

http://www.robofest.net http://facebook.com/robofest https://www.linkedin.com/company/robofest-official

# Mission & Goals

# **Section Mission**

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

For the purpose of:

- Fulfilling the mission of IEEE (...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.

# Summer Picnic!



# 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 <a href="https://r4.ieee.org/sem/">https://r4.ieee.org/sem/</a>** 

#### **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 WORK space for online chat, discussions, connecting with SECTION specific IEEE activities, besides geared/focused towards our local Southeastern Michigan officers.

#### vTools Meetings:

https://vtools.ieee.org/

Select "Events" on the right hand side and then "manage Events" and then "Schedule" 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:  $\underline{wavelengths@ieee\text{-}sem.org} \ OR \ \underline{letters@ieee\text{-}sem.org}$ 

#### Michigan Institute for Plasma Science and

Engineering: Seminars for the academic year:

https://mipse.umich.edu/seminars.php

#### **Model RC Aircraft**

http://www.skymasters.org

#### **Model Rocketry**

https://www.nar.org/find-a-local-club/nar-club-locator/

#### Astronomy

http://www.go-astronomy.com/astro-clubs-state.php?State=MI

#### **Experimental Aircraft Association**

https://www.eaa.org/en/eaa/eaa-chapters/find-an-eaa-chapter

#### Robots

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

#### **Science Fiction Conventions**

https://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.

# **ORG UNITS cheat sheet**

| Section Unit Name or Affinity Group or Chapter Name (Organizational Unit code is in parentheses) |
|--|
| Consultants Network Affinity Group: (CN40035)  |
| Life Members: (LM40035)  |
| Young Professionals: (YP40035)   |
| Women in Engineering: (WE40035)  |
| Chapter: 01 (CH04049)(SP01) Signal Processing Society,   |
| (CAS04) Circuits and Systems Society and   |
| (IT12) Information Theory Society  |
| Chapter: 02 (CH04051)(VT06) Vehicular Technology Society   |
| Chapter: 03 (CH04053)(AES10) Aerospace and Electronic Systems Society and                        |
| (COM19) Communications Society   |
| Chapter: 04 (CH04050)(AP03) Antennas and Propagation Society,                                    |
| (ED15) Electron Devices Society,   |
| (MTT17) Microwave Theory and Techniques Society,   |
| Chapter: 05 (CH04055)(C16) Computer Society  |
| Chapter: 06 (CH04056)(GRS29) Geosciences and Remote Sensing Society                              |
| Chapter: 07 (CH04057)(PE31) Power Engineering Society,   |
| (IA34) Industrial Applications Society   |
| Chapter: 08 (CH04088)(EMC27) Electromagnetic Compatibility Society                               |
| Chapter: 09 (CH04087)(IE13) Industrial Electronics Society,                                      |
| (PEL35) Power Electronics Society  |
| Chapter: 10 (CH04142)(TEM14) Technology and Engineering Management Society                       |
| Chapter: 11 (CH04099)(EMB18) Engineering in Medicine & Biology                                   |
| Chapter: 12 (CH04103)(CS23) Control Systems Society  |
| Chapter: 13 (CH04113)(E25) Education Society   |
| Chapter: 14 (CH04115)(RA24) Robotics And Automation Society                                      |
| Chapter: 15 (CH04144)(NPS05) Nuclear Plasma Sciences Society                                     |
| Chapter: 16 (CH04125)(CIS11) Computational Intelligence Society,                                 |
| (SMC28) Systems, Man and Cybernetics Society   |
| Chapter: 17 (CH04128) (NANO42) Nanotechnology Council  |
| Chapter: 18 (CH04162)(MAG33) Magnetics Society   |
| Section Unit Name or Affinity Group or Chapter Name (Organizational Unit code is in parentheses) |
| University Of Detroit-Mercy: (STB00531)  |
| Michigan State University: (STB01111)  |
| University Of Michigan-Ann Arbor: (STB01121)   |
| Wayne State University: (STB02251)   |
| Lawrence Technological University: (STB03921)  |
| Oakland University: (STB06741)   |
| Eastern Michigan University: (STB11091)  |
| University of Michigan-Dearborn: (STB94911)  |

And of course our Section OU # is : R40035!

**Use the Geo-unit 'Codes**' (Shown above between brackets '()' for faster access in the vTools system applications. **Example:** Using STB94911 in the vTools search window goes directly to the Student Branch.

Faster than typing 'University of Michigan-Dearborn'. This works for all Affinity Groups, Technical Chapters and Student Branches.

| 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   | N190 Oakland University, Iota Chi               |  |  |  |  |  |
| HKN244   | Southeastern Michigan Alumni                    |  |  |  |  |  |

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 (2022-2025) 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.

#### **Executive Committee**

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

The SEM Executive Committee meets in a teleconference each month, 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: <a href="https://r4.ieee.org/sem/">https://r4.ieee.org/sem/</a> 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 <a href="mailto:secretary@ieee-sem.org">secretary@ieee-sem.org</a> 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.

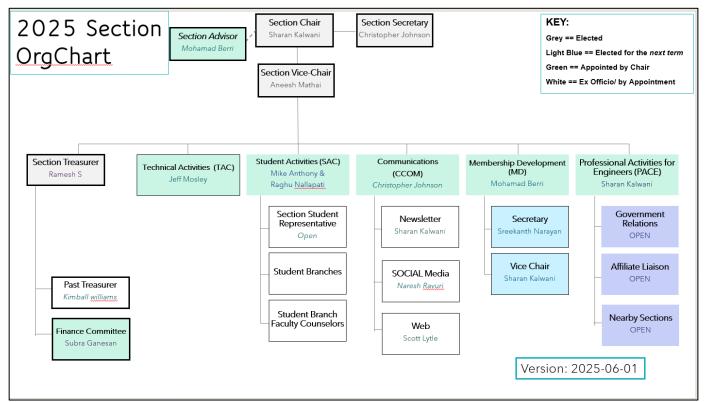
However, members of the section may have multiple technical interests and would like to have meeting information of other chapters. In order to communicate the meeting dates of all the chapters, affinity groups etc., to our members to facilitate their attendance, leaders of the groups are requested to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

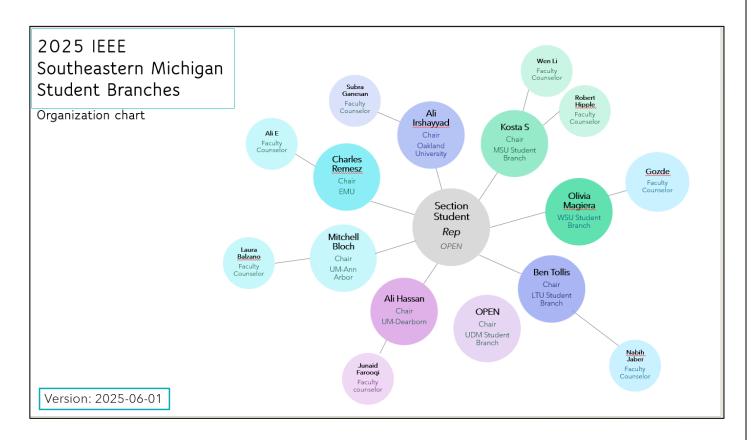
More detailed information on meetings may be found through the IEEE SEM Website: <a href="https://r4.ieee.org/sem/">https://r4.ieee.org/sem/</a> and clicking on the SEM meetings list button near the bottom of the left-hand banner.

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: <u>secretary@ieee-sem.org</u>

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





# **ExCom 2025 Schedule**

#### <u>NOTE</u>: All SEM members are invited to attend ALL ExCom (<u>Executive Committee</u>) meetings:

Below is the 2025 schedule for the Section ExCom meetings with links to add the events to your calendar. It is important that <u>at least one person</u> from each Chapter/Affinity Group attends each scheduled ExCom meeting. Please mark your calendars for the 2025 meetings. Or link your personal calendar to the SEM Web calendar.

Section ExCom Meeting Schedule for 2025: (clickable links, SO YOU CAN EASILY REGISTER)

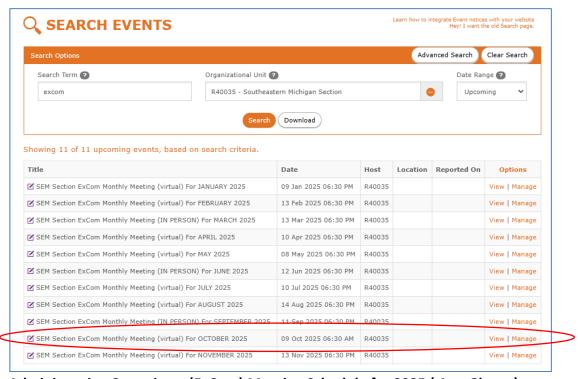
<u>Note</u>: All IEEE Members are welcome at any IEEE meeting, at any time but <u>please register</u> so we can be sure to accommodate you. This month's meeting is highlighted.

| ExCom Meeting (all clickable links)                           | Date & Start Time, Duration |
|---|-----------------------------|
|   |                             |
| SEM Section ExCom Monthly Meeting (virtual) For OCTOBER 2025  | 2025-10-09; 6:30 PM; 1 hour |
| SEM Section ExCom Monthly Meeting (virtual) For NOVEMBER 2025 | 2025-11-13; 6:30 PM; 1 hour |
|   |                             |

#### **Christopher Johnson (Secretary)**

Email: secretary@ieee-sem.org

#### ExCom 2025 Calendar



Section Administrative Committee (ExCom) Meeting Schedule for 2025 (At a Glance), you can print this page and pin it up anywhere easily visible......

# **Editor's Corner**

Previous editions in this series may be found on the IEEE SEM website at: <a href="https://r4.ieee.org/sem/">https://r4.ieee.org/sem/</a>. Click on the "Wavelengths" button in the top row of selections.

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

OR

sharan.kalwani@ieee.org k.williams@ieee.org cgjohnson@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 <u>do not be shy</u>. 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: <a href="mailto:wavelengths@ieee-sem.org">wavelengths@ieee-sem.org</a>

Sharan Kalwani, Chair, IEEE SE Michigan Education Society Chapter Vice-Chair, IEEE SE Michigan Computer Society Chapter

Co-Editor, Wavelengths, 2018~2019~2020~2021~2022-2023-2025

# **Wavelengths Annual Publication Plan for Articles**

| <b>Month</b> | AG's | Ch's | Ch's | SB's     | Special Notice       | Reporting Events  | Monthly Focus       | <u>Awards</u> |
|--------------|------|------|------|----------|----------------------|-------------------|---------------------|---------------|
| 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   | <u> </u> | 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          | ΥP   | 11   | 17   | WSU      | ELECTIONS!           |                   | Humanitarian        |               |
| Dec          |      | 12   |      | U/D-M    | IEEE-Com Apmts.      | Fall Conference   | Happy Holidays      |               |

# **Wavelengths Annual Publication Plan for Personal Profiles**

| <b>Month</b> | <u>Profiles</u> | <u>Profiles</u> | 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

# Southeastern Michigan Section Website

https://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 "I" button under the top row)

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

SEM LinkedIn Page

(Select the "in" button under the top row)

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

**SEM Twitter Account (new)** 

(Select the "button under the top row)

https://www.twitter.com/ieeesemich

# SEM Collabratec Community Page

https://ieee-collabratec.ieee.org/app/section/R40035/IEEE-Southeastern-Michigan-Section

# SEM Collabratec Workspace Page

https://ieee-collabratec.ieee.org/app/workspaces/5979/IEEE-Southeastern-Michigan-Section/activities

#### SEM Instagram (new)

https://www.instagram.com/ieeesemich/

#### **SEM Officers:**

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

# **Section Officers**

Section Chair Sharan Kalwani

Section Vice-Chair Aneesh Mathai

Section Secretary Christopher Johnson

Section Treasurer Ramesh Sethu

#### **Standing Committees:**

Section Adviser Mohamad Berri

Wavelengths Editor Sharan Kalwani

**Educational Committee** Anthony Will (Chair)

Finance Committee
Subra Ganesan (Chair)

Membership Development Mohamad Berri (Chair)

Awards & Nominations Jerry Song (Chair)

#### PACE

Sharan Kalwani (Chair)

Student Activities Michael Anthony, Raghu Nallapati (Co-Chairs)

Student Mentors OPEN

**SECTION Student Rep OPEN** 

Technical Activities
Jeffery Mosley

Information Mgmt. Coordinator Kimball Williams



IEEE Southeastern Michigan

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



# **Advertising Rates**

SEM Website & Newsletter Advertising is coordinated through Wavelengths@ieee-sem.org:

# **Leadership Meetings**

# SEM Executive Committee Monthly Teleconferences:

- 2<sup>nd</sup> Thursday of Each Month @ 6:30 PM
- Check the Section Web Calendar at:
   https://r4.ieee.org/sem/sem-calendar/
   (Select the "SEM Calendar" button in the top row.)

#### SEM Executive Committee Face-to-Face Meetings:

 1/Qtr. 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 <u>https://r4.ieee.org/sem/</u>
   (Select the "SEM Calendar" button in the top row.)
- Registration for all at: https://bit.ly/sem-upcoming