

# Wavelengths



## Volume 61 – Issue 12

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### Upcoming Events

We have a number of events coming up this month. Listed below are some of the events, FYI.

Event	Date	Time
<a href="#">SEM Section ExCom Monthly Meeting (Teleconference) for December 2021</a>	01 Dec 2021	06:30 PM
<a href="#">How to Write an Effective Research Paper</a>	03 Dec 2021	08:00 AM
<a href="#">Hot Chips 2021 conference report</a>	07 Dec 2021	06:00 PM
<a href="#">Time Domain Studies for DER Interconnections - Lunch &amp; Learn</a>	08 Dec 2021	12:00 PM
<a href="#">Dynamics of Low Temperature Magnetized Plasmas: Self-Organization and Anomalous Electron Transport</a>	08 Dec 2021	03:30 PM
<a href="#">Ch8: AdCom Teleconference</a>	09 Dec 2021	11:00 AM
<a href="#">Networking Event (IEEE WIE SEM)</a>	15 Dec 2021	05:30 PM

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

**Chair Person's Column**

I'm sad to report that this will be my last Chair's message. Effective this month, I will be stepping down from the post. I recently started a new position within my company and will not have the time required to give the position the respect it deserves.

Stepping up will be Sharan Kalwani. Sharan has served in numerous roles within our Chapter and has served as Vice Chair for the last few years. He brings a vast volunteering knowledge and I know he will be immensely effective as the new Chair. I'm sure he will welcome your feedback and continued participation in the Section activities. If you are not already engaged, please reach out to find a position!

I've truly enjoyed my time as Chair and look forward to continuing participating in Section activities at a reduced level. I hope to bump into many of you at events soon! Thank you to all the volunteers that helped make the Chair position so enjoyable.

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



## Writing a Research Paper

**IEEE SE Michigan Computer Society & Education Society Chapters**  
Presents:  
**Writing an Effective Research Paper**



Research paper writing is an important part of conveying the results of one's own research to the technical community and getting the paper accepted in reputed journals is a difficult task. It is both an art and science. Based on the speaker's experience in both academia and R&D over 50 years, the speaker will present important ways of writing an effective research paper in a step by step approach. The lecture will be highly interactive and the participants are expected to chime in and share their experiences in writing papers and become enlightened of the improved ways of writing an effective research paper.

Speaker:  
Professor N Sundarajan (retired), IEEE Life Fellow  
Nanyang Technological University, Singapore

## At Glance

- **When:**  
Date: Dec 3<sup>rd</sup>, 2021  
Time: 08:00 – 9:00 AM  
(EST/EDT)
- **Where:**  
Online via Webex (to be shared only after you have a confirmed registration)
- **Audience: OPEN to ALL\***

*Sponsored by*  
**IEEE**  
*SE Michigan*  
*Computer Society*  
&  
*Education Society*  
*Chapters*

**\*Pre-Registration Required!**

<https://events.vtools.ieee.org/m/288287>



**IEEE Southeastern Michigan Section**

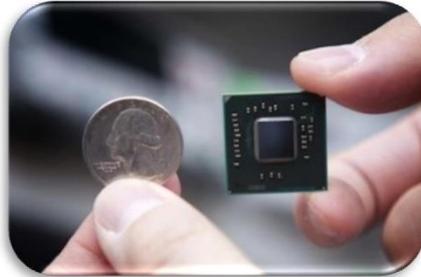


Credit: Photos by Convert Kit & [Med Badr Chemmaoui](#) on [Unsplash](#)

\*

## Hot Chips 33 Report

**IEEE SE Michigan Computer Society Chapter  
Presents  
“Hot Chips 2021 report”**



Since it started in 1989, HOT CHIPS has been known as one of the semiconductor industry's leading conferences on high-performance microprocessors and related integrated circuits. It provides an opportunity for chip designers, computer architects, system engineers, attendees from national laboratories and academia to mix, mingle and see presentations on the latest technologies and products. It features a variety of subjects related to microprocessors and integrated circuits. The conference emphasis this year, as in previous years, is on real products and realizable technology. “Hot” topics include embedded and reconfigurable processors, quantum computing, nano structures, wireless chips, network/security processors, advanced packaging technology etc.

#### Speaker Bio:

Sharan Kalwani is an industry technology specialist with 25+ years of experience. Sharan has degrees in both Engineering and Computer Science. He has worked in many diverse areas. He is a sought after speaker at many a diverse conference and seminars, such as Supercomputing, HPC Advisory Council, SIAM, Infiniband Trade Association, etc. He has delivered several tutorials, workshops and chaired Birds-of-a-Feather (BoF) sessions. Sharan is a senior member of IEEE-Computer Society, IEEE-Education Society and Vehicle Tech Society, an Emeritus member of Michigan!UNIX/user group (mug.org) the oldest of the \*nix user groups based in Michigan (they were first established in late 1985), member of Association for Computing Machinery (ACM) and also leads the SIG-Linux section of SEMCO. He enjoys teaching, holds an Adjunct Faculty position at local educational sites. He has published one book and is now working on his second. He is a recipient of the IEEE MGA Achievement award for his contributions to IEEE activities in 2018.

#### At Glance

- **When:**  
Date: Dec 7<sup>th</sup>, 2021  
Time: 06:00 – 7:30 PM  
(EST/EDT)
- **Where:**  
Online via Webex (to be shared only after you have a confirmed registration)
- **Audience: OPEN to ALL\***

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

**\*Pre-Registration Required!**

<https://events.vtools.ieee.org/m/279787>

IEEE Southeastern Michigan Section



## Technical Activities Report

2021 IEEE SE Michigan Section Geo-unit Status (Till Nov 29th)

Ch's & AG's	Ave Tech Mtg. Attend	Ave Tech Mtg Guest	#L31 - Technical	#L31 -Admin	#L31 Professional	#L31 -Other	Geo-Unit Name	# Unreported	Total Mtgs
Cnslt	20	1	1	5	1	0	Consultants Network	0	7
LIFE	45	42	1	0	6	0	Life Members	0	7
WIE	0	0	0	10	2	0	Women In Engineering	1	12
YP	0	0	0	0	0	0	Young Professionals	0	0
1	2	1	3	3	0	0	Circuits & Systems, Signal Proc., Info Th.	2	6
2	40	9	3	1	0	0	Vehicular Technology	0	4
3	124	69	4	0	0	0	Aerospace & Elec. Sys., Communications	0	4
4	22	7	5	0	0	0	Trident (Ant, Elect Dev., uWave, Photo)	0	5
5	34	4	55	12	6	3	Computers	0	76
6	300	200	1	0	0	0	Geoscience & Remote Sensing	1	1
7	41	8	7	4	0	0	Power Engineering, Industrial App.	0	11
8	77	32	15	10	0	0	Electromagnetic Compatibility (EMC)	0	25
9	42	14	4	1	0	0	Power Electronics, Industrial Electronics	0	5
10	4	0	3	1	0	0	Engineering Management	0	4
11	0	0	0	0	0	0	Eng. in Medicine & Biology	0	0
12	30	1	1	3	0	0	Control Systems	0	4
13	45	4	17	1	3	0	Education	0	21
14	0	0	0	0	2	0	Robotics & Automation	0	2
15	64	39	5	0	0	0	Nuclear Plasma Science Society	3	5
16	0	0	0	0	0	0	Computational Intelligence / Sys.Man.Cyber.	0	0
17	21	17	3	0	0	0	Nano Technology Council	0	3
SEM	22	2	4	15	4	1	SEM (Section)	2	24
Tot	932	451	132	66	24	4	NOTE: Highlight Green = Active	9	226
		48%					NOTE: Highlight clear = Concern		

The monthly Section Health report now includes columns representing the numbers of Unreported Meetings see Column I, (#Unreported) as well as Total Meetings Column J see (Total Mtgs) for each GA.

The following GAs have unreported meetings, WIE (1); Chapter 1 (2); Chapter 6 (1); and Chapter 15 (3). Your activity is applauded. However, I encourage the leadership in each GA identified to make every effort to take the action to either complete the report or input that the meeting was cancelled.

GA leaders are requested to review the report and clarify any unreported meeting activity by either submitting the appropriate L31 status report or by contacting the undersigned for assistance.

Our Section receives funds to support our technical meetings as a result of the reported meetings from our GAs. Let's finish this year as strong as possible, by getting our reports in by next month. Remember that our technical chapters and societies can conduct joint technical meetings where both groups can receive recognition by IEEE and our Section.

Please endeavor to engage your group membership by: 1. Meeting F2F or virtually to discuss IEEE presentations or other technical content germane to your group; 2. Invite members or outside speakers to present relevant technical achievements and or issues; and 3. Collaborate with other GAs on relevant joint technical topics of interest via webinar.

These are just a few suggestions to maintain healthy technical interchanges within our Section. We have only a few GAs who seem to be inactive as of the end of November (i.e. Chapters 6, 11, 12, 14, and 16).

The Tacom is making contact with each identified Chapter in order to offer planning assistance to develop a meeting schedule for 2022. Chapters 11 and 12 have been contacted and have already responded positively.

Your Technical Activities Committee (TACom) stands ready to assist as needed. Stay well and stay safe.

Jeff Mosley

Chairman, Technical Activities Committee, R4 IEEE SEM, [jymosley@ieee.org](mailto:jymosley@ieee.org).

## Member News



## Increased Section Membership Retention

The IEEE Southeastern Michigan Section Membership Development is pleased to report that our Section for the 2<sup>nd</sup> year running has achieved the Silver Award for membership. We are also planning a bevy of activities in cooperation with several of the student branches, outreach events in January and February of 2022. Plus, there will be a senior elevation event also scheduled for February 2022 (we need activities to keep us all warm!). Look for the email from the section vttools site. If you do not get those emails, contact the undersigned for tips on how to enable notification.

**Sharan Kalwani,**  
**Chair, IEEE SE Michigan Section Membership Development**  
**2019-2020~2021**

## NASA's DART!

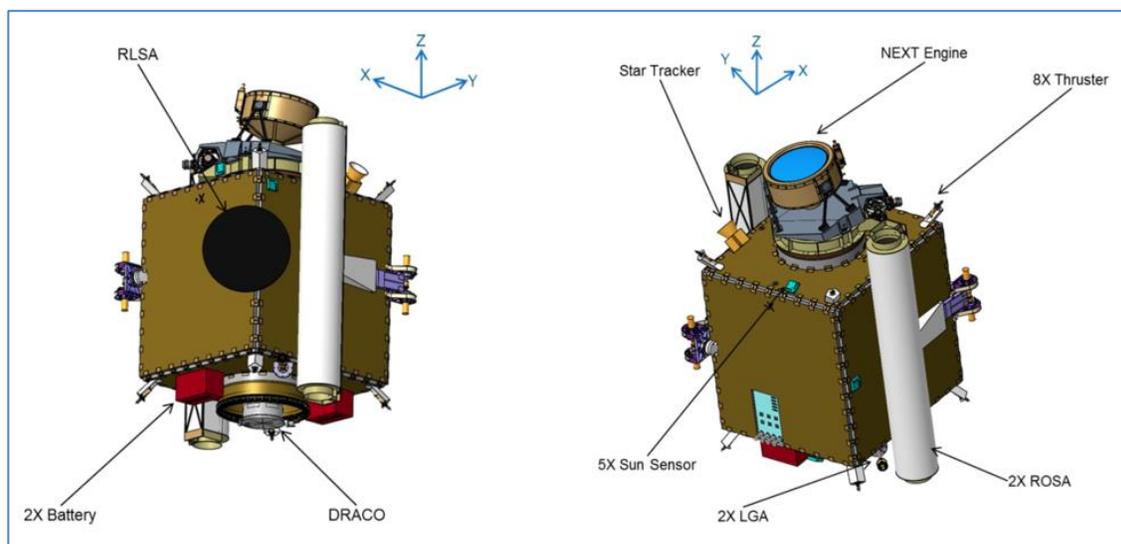
All about the Double Asteroid Redirection Test (DART) Mission

Reprinted from <https://www.nasa.gov/planetarydefense/dart>

The Double Asteroid Redirection Test (DART) mission is directed by NASA to the [Johns Hopkins Applied Physics Laboratory \(APL\)](#) with support from several NASA centers: the Jet Propulsion Laboratory (JPL), Goddard Space Flight Center (GSFC), Johnson Space Center (JSC), Glenn Research Center (GRC), and Langley Research Center (LaRC).

DART is a planetary defense-driven test of technologies for preventing an impact of Earth by a hazardous asteroid. DART will be the first demonstration of the *kinetic impactor* technique to change the motion of an asteroid in space. The DART mission is led by APL and managed under NASA's Solar System Exploration Program at Marshall Space Flight Center for NASA's [Planetary Defense Coordination Office](#) and the Science Mission Directorate's Planetary Science Division at NASA Headquarters in Washington, DC.

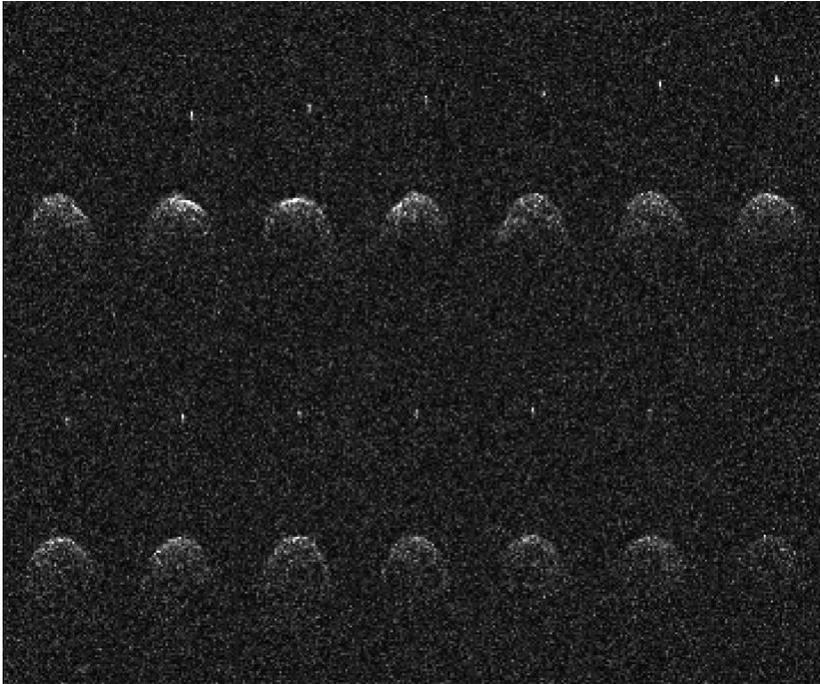
DART is a spacecraft designed to impact an asteroid as a test of technology. DART's target asteroid is NOT a threat to Earth. This asteroid system is a perfect testing ground to see if intentionally crashing a spacecraft into an asteroid is an effective way to change its course, should an Earth-threatening asteroid be discovered in the future. While no known asteroid larger than 140 meters in size has a significant chance to hit Earth for the next 100 years, only about 40 percent of those asteroids have been found as of October 2021.



1) Two different views of the DART spacecraft

The DRACO (Didymos Reconnaissance & Asteroid Camera for OpNav) imaging instrument is based on the LORRI high-resolution imager from New Horizons. The left view also shows the Radial Line Slot Array (RLSA) antenna with the ROSAs (Roll-Out Solar Arrays) rolled up. The view on the right shows a clearer view of the NEXT-C ion engine.

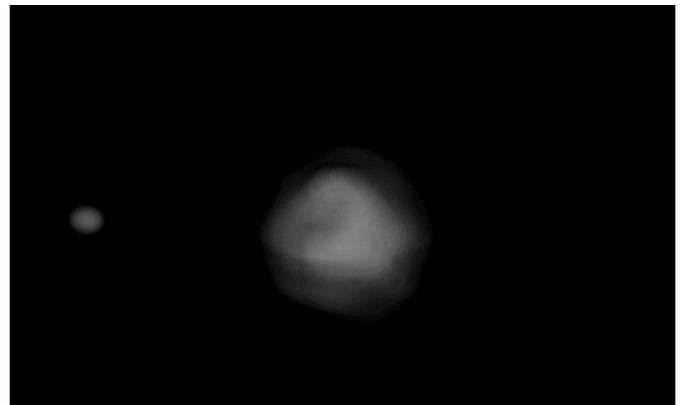
The binary near-Earth asteroid (65803) Didymos is the target for the DART demonstration. While the Didymos primary body is approximately 780 meters across, its secondary body (or "moonlet") is about 160-meters in size, which is more typical of the size of asteroids that could pose the most likely significant threat to Earth. The Didymos binary is being intensely observed using telescopes on Earth to precisely measure its properties before DART arrives.



2) Fourteen sequential Arecibo radar images of the near-Earth asteroid (65803) Didymos and its moonlet, taken on 23, 24 and 26 November 2003. NASA's planetary radar capabilities enable scientists to resolve shape, concavities, and possible large boulders on the surfaces of these small worlds. Photometric lightcurve data indicated that Didymos is a binary system, and radar imagery distinctly shows the secondary body. Credits: Naidu et al., AIDA Workshop, 2016

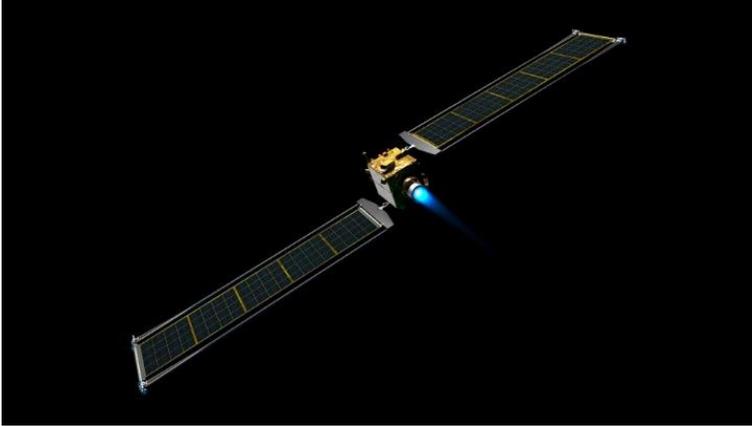
3) Simulated image of the Didymos system, derived from photometric lightcurve and radar data. The primary body is about 780 meters in diameter and the moonlet is approximately 160 meters in size. They are separated by just over a kilometer. The primary body rotates once every 2.26 hours while the tidally locked moonlet revolves about the primary once every 11.9 hours. Almost one sixth of the known near-Earth asteroid (NEA) population are binary or multiple-body systems.

Credits: Naidu et al., AIDA Workshop, 2016



Discovery (by Joe Montani, Spacewatch, KPNO)	April 11 1996
Provisional Designation	1996 GT
Aphelion	2.2755 AU
Perihelion	1.0141 AU
Heliocentric semi-major axis ( $a$ )	1.6444 AU
Eccentricity ( $e$ )	0.38388
Orbital period (about the Sun)	2.11 years
Orbital heliocentric inclination ( $i$ )	3.4078°
Known satellites	1
Rotation period (of primary body)	2.26 hours
Distance between primary and moonlet	1.18 km
Orbital period of moonlet	11.92 hours (tidally locked)
Diameter of primary	780 m
Diameter of moonlet	160 m
System mass	$5.278 \times 10^{11}$ kg
Density	$1.7 (\pm 0.4)$ g/cm <sup>3</sup>
Spectral type	Xk (optical); S (infrared)
Absolute Magnitude $H$	18.16
Last close approach to Earth (Nov 2003)	$7.18 \times 10^6$ km
Close approach for DART mission (Oct 2022)	$11 \times 10^6$ km

4) Didymos system details (from 1996)



5) Illustration of the DART spacecraft with the Roll Out Solar Arrays (ROSA) extended. Each of the two ROSA arrays is 8.6 meters by 2.3 meters.

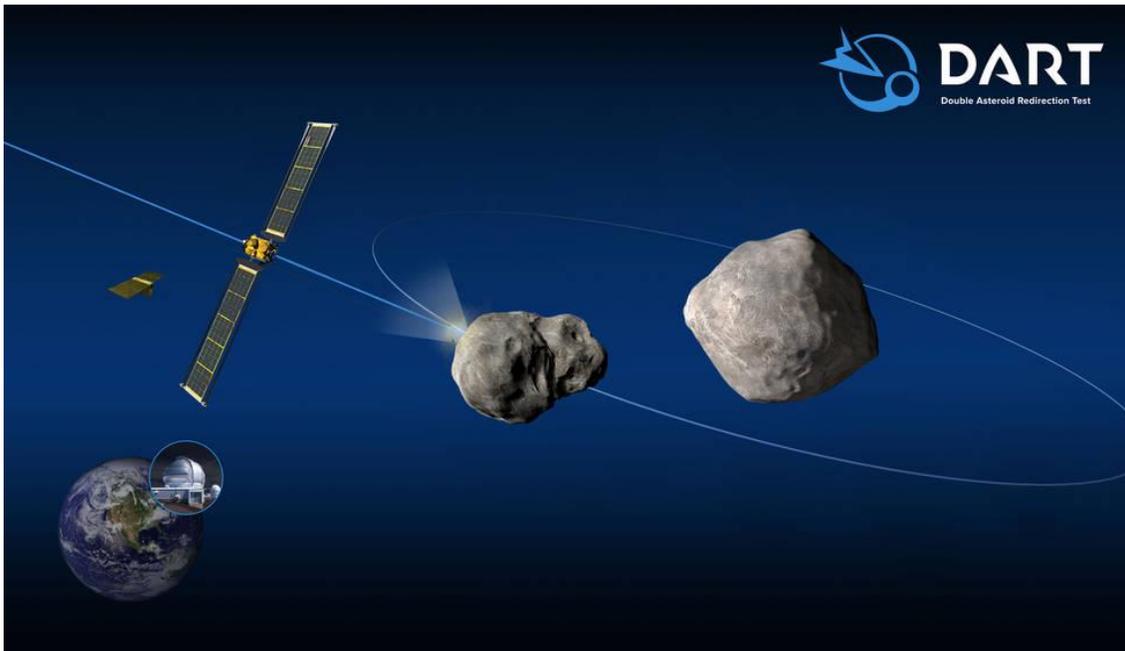
The DART spacecraft will achieve the kinetic impact deflection by deliberately crashing itself into the moonlet at a speed of approximately 6.6 km/s, with the aid of an onboard camera (named DRACO) and sophisticated autonomous navigation software. The collision will change the speed of the moonlet in its orbit around the main body by a fraction of one percent, but this will change the orbital period of the moonlet by several minutes - enough to be observed and measured using telescopes on Earth.



6) The ROSA array was tested on board the International Space Station (ISS) in June 2017.

Once launched, DART will deploy Roll Out Solar Arrays (ROSA) to provide the solar power needed for DART's electric propulsion system. The DART spacecraft will demonstrate the [NASA Evolutionary Xenon Thruster – Commercial \(NEXT-C\)](#) solar electric propulsion system as part of its in-space propulsion. NEXT-C is a next-generation system based on the Dawn spacecraft propulsion system, and was developed at NASA's Glenn Research Center in Cleveland, Ohio. By utilizing electric propulsion, DART could benefit from significant flexibility to the mission timeline while demonstrating the next generation of ion engine technology, with applications to potential future NASA missions.

The DART spacecraft launch window began November 24, 2021. DART will launch aboard a SpaceX Falcon 9 rocket from Vandenberg Space Force Base, California. After separation from the launch vehicle the DART spacecraft will intercept Didymos' moonlet in late September 2022, when the Didymos system is within 11 million kilometers of Earth, enabling observations by ground-based telescopes and planetary radar to measure the change in momentum imparted to the moonlet.



7) Schematic of the DART mission shows the impact on the moonlet of asteroid (65803) Didymos. Post-impact observations from Earth-based optical telescopes and planetary radar would, in turn, measure the change in the moonlet's orbit about the parent body.

Credits: NASA/Johns Hopkins Applied Physics Lab

For more information, (see the links below):

[Learn More About the DART Mission](#) | [DART News](#) | [DART Press Kit](#) | [DART Fact Sheet](#) | [DART Images & Videos](#)

**Re-formatted, Curated By**

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

## Robofest Update

Robofest eNewsletter 11-19-21

- [\(1\) International 2022 Robofest Game OceanBots Uploaded](#)
- [\(2\) Kickoff Meeting Wednesday, December 8 at 8:00 am on Zoom](#)
- [\(3\) Site Host Opportunity Returns for 2022](#)
- [\(4\) Warmup Competition/Judge Training February 12 at 1:00 pm at LTU](#)
- [\(5\) MCWT Grant for All-Girl Robofest Teams](#)
- [\(6\) LTU Robofest Scholarship Opportunity](#)

Note: All times are listed in EST/EDT unless noted otherwise

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### [\(1\) International 2022 Robofest Game OceanBots Uploaded](#)

The 2022 Game has been announced and International Rules and related documents have been posted at [robofest.net](http://robofest.net). Click on the Get Involved/Game page.

OceanBots Draft Rules: <https://robofest.net/images//2122/Game2022V05.pdf>

OceanBots Demonstration Video: <https://youtu.be/NUA21jExNlc>

The rules will be finalized and pre-registration will be open on January 15, 2022. If you have any questions about the rules that you would like to have clarified, please send an email to Shannan Palonis ([spalonis@ltu.edu](mailto:spalonis@ltu.edu)) and we will answer them in the FAQ and/or update the rules to add clarity. If your question is in regard to a specific strategy that you would not like to share with the Robofest community, please let us know in your inquiry. We will make the final decision whether or not to add to the FAQ, especially if the strategy is against the rules.

### [\(2\) Kickoff Meeting Wednesday, December 8 at 8:00 am on Zoom](#)

Site Hosts, coaches, volunteers and corporate partners ~ please join us via Zoom on December 8 at 8:00 am for the kickoff meeting to introduce the rules and plans for the upcoming 23<sup>rd</sup> Robofest season. The meeting will be recorded and uploaded at Robofest.net. Click on the Get Involved/2022 Main Page.

To Join the Zoom Meeting

click:<https://ltu.zoom.us/j/92132784091?pwd=aHhtMDIwM0IRWWtBUGI3ZmJYTUszZz09>

Or login directly with meeting ID: 921 3278 4091 and Passcode: 347354

### [\(3\) Site Host Opportunity Returns for 2022](#)

Robofest is seeking site hosts for the following categories: Game Qualifiers, Exhibition Qualifiers, BottleSumo, RoboParade and other Open Category events during the spring of 2022. Returning Site Hosts may contact the Robofest office at [spalonis@ltu.edu](mailto:spalonis@ltu.edu) to start the registration process. Online Application is open on the Registration page and downloadable forms and New Site Host Information and FAQ documents are now available on the [For Site Hosts](#) page on the Robofest.net website.

### [\(4\) Warmup Competition/Judge Training February 12 at 1:00 pm at LTU](#)

This event will be held on Saturday, Feb 12, 2022 from :00pm ~ 5:30pm in Room J234 in the Taubman Complex. Teams who would like to participate should send an email to [spalonis@ltu.edu](mailto:spalonis@ltu.edu). Check-in for registered teams begins at 1:00 pm and Judge training will start at 1:45 pm. We encourage Michigan Site Hosts and Volunteer Game Judges to attend. Registration will open in Mid-December for teams and judges

### [\(5\) MCWT Grants for All-Girl Robofest Teams](#)

The Michigan Council of Women in Technology Foundation, 18-year sponsor of Robofest, is once again providing \$500 grants for up to ten Michigan all-girl Robofest teams for the 2022 Robofest Game and Exhibition competitions. More information, the application and deadline will be posted to their webpage: <https://mcwt.org/programs/list/K-12-Initiatives/ROBOTICS-GRANTS>

**(6) LTU Scholarship Opportunity for all Robofest Participants**

High School students who have participated in Robofest at any time and who are planning to attend LTU, can apply for a \$3,000 renewable scholarship (Total of \$12,000). Submit a 400-word essay describing your Robofest experience and your career goals, a letter of recommendation from one of your Robofest adult coaches or mentors, and the Scholarship Application by **April 1, 2022**. To find more information visit: [https://www.ltu.edu/financial\\_aid/scholarships-freshmen.asp](https://www.ltu.edu/financial_aid/scholarships-freshmen.asp)

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

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Dr. CJ Chung, Advisory Board Chairperson, [cchung@ltu.edu](mailto:cchung@ltu.edu)

<http://www.robofest.net>

<http://facebook.com/robofest>

## Officer Training

### Officer Training

A series of virtual Officer Training events are planned for mid-January. Since in the past these were only minimally attended, the Nominations & Appointments Committee is considering alternatives to offer these classes to all interested IEEE members in our Section.

Watch for a notice in the January issue of Wavelengths.

If an officer is unable to attend a training session, the option remains to look for the voice over power point training materials on the SEM webpage at:

<http://sites.ieee.org/sem/about-sem/training/>

#### **Voice over Power Point Training:**

Many on-line virtual training modules are available through the SEM Website Training page at:

<http://sites.ieee.org/sem/about-sem/training/>

More in depth training may be found on the IEEE Center for Leadership Excellence site located at:

<https://iee-elearning.org/CLE/>

Officer training presents organizational and personal tools that any engineer will find useful in his career. One of the reasons for the existence of Officer lead IEEE organizations is the practical experience and 'on the job' training that takes place in any officer position whether it be in a Section office, at a Committee, Chapter, Affinity Group or Student Branch or HKN Chapter. Learning how to build and lead a team, along with all the communications and management tasks and tools are 'portable' directly and indirectly to activities within business, manufacturing, and academic environments. No matter where your career takes you, experience and training in active IEEE organizations will prove a valuable tool in your career toolbox.

I look forward to working with you in January.

kw

## ORG UNITS cheat sheet

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

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

**Section Unit Name or Affinity Group or Chapter Name (Organizational Unit 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 & Maintained By**

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

## Activities & Events

We try to publish IEEE events in several places to ensure that everyone who may want to attend has all the available relevant information. **NOTE: The IEEE SE Michigan section website is located at <http://r4.ieee.org/sem/>**

### SEM Wavelengths:

<https://r4.ieee.org/sem/about-sem/sem-history/wavelengths-magazine-archive/>

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 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: You may need to copy the URL and paste it into your browser address bar.**

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

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**Michigan Institute for Plasma Science and Engineering:** Seminars for the 2021-2022 academic year:

[https://mipse.umich.edu/seminars\\_2122.php](https://mipse.umich.edu/seminars_2122.php)

### Model RC Aircraft

<http://www.skymasters.org>

### Model Rocketry

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

### Astronomy

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

### Experimental Aircraft Association

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

### Robots

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

### Science Fiction Conventions

<https://2021.penguicon.org/>

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

### Mad Science

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

### ESD PE Review Class

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

### Maker Faire:

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

**Executive Committee**

The SEM Executive Committee is the primary coordination unit for Southeastern Michigan (SEM) IEEE operations. The basic organization chart below shows the 2019/2020/2021 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 **Bhupinder Mavi**, the section secretary at: [bmavi@outlook.com](mailto:bmavi@outlook.com), 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.

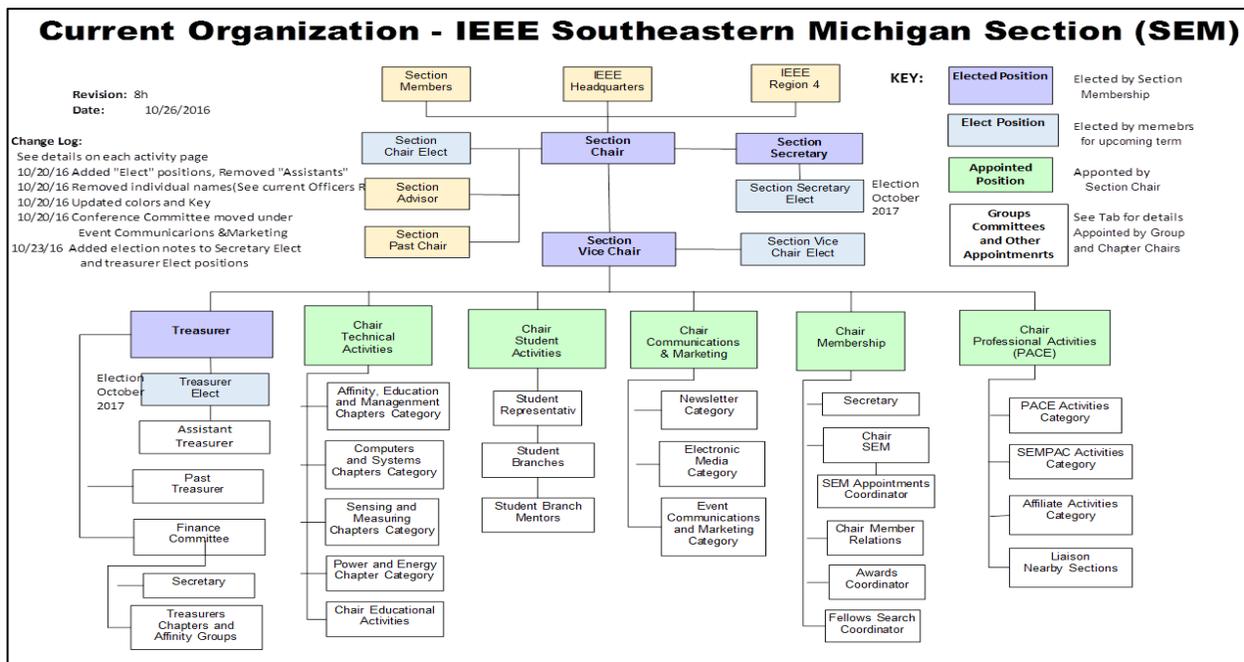
However, members of the section may have multiple technical interests and would like to have meeting information of other chapters. In order to communicate the meeting dates of all the chapters, affinity groups etc., to our members to facilitate their attendance, leaders of the groups are requested to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

**Bhupinder Mavi** - SEM Secretary 2021

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

### **NOTE: All SEM members are invited to attend ALL ExCom (executive committee) meetings:**

Below is the 2021 & 2022 schedule for the Section ExCom meetings with links to add the events to your calendar. It is important that at least one person from each Chapter/Affinity Group attends each scheduled ExCom meeting. Information on each Face-to-Face (in-person) Meeting will be sent out once the venue is confirmed. Please mark your calendars for the last 2021 meeting and 2022 meetings. Or, link your personal calendar to the SEM Web calendar.

#### **Section Administrative Committee (ExCom) Meeting Schedule for 2021:**

**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.

<i>ExCom Meeting</i>	<i>Date &amp; Time</i>
<a href="#">SEM Section ExCom Monthly Meeting (Teleconference) for December 2021</a>	12/1/2021 18:30

#### **Section Administrative Committee (ExCom) 2022 Meeting Schedule:**

<i>ExCom Meeting</i>	<i>Time</i>
Jan 12 2022 New Officers Meet and Greet for 2022 meeting (Teleconference) <a href="https://events.vtools.ieee.org/m/289865">https://events.vtools.ieee.org/m/289865</a>	6:30 PM
Feb 10,2022 - SEM Section ExCom Monthly Meeting (Teleconference) for February 2022 <a href="https://events.vtools.ieee.org/m/289866">https://events.vtools.ieee.org/m/289866</a>	6:30 PM
March 03,2022 - SEM Section ExCom Monthly Meeting (Teleconference) for March 2022 <a href="https://events.vtools.ieee.org/m/289867">https://events.vtools.ieee.org/m/289867</a>	6:30 PM
April 06,2022 - SEM Section ExCom Monthly Meeting (Teleconference) for April 2022 <a href="https://events.vtools.ieee.org/m/289868">https://events.vtools.ieee.org/m/289868</a>	6:30 PM
May 05,2022 - SEM Section ExCom Monthly Meeting (Teleconference) for May 2022 <a href="https://events.vtools.ieee.org/m/289869">https://events.vtools.ieee.org/m/289869</a>	6:30 PM
June 01,2022 - SEM Section ExCom Monthly Meeting (Teleconference) for June 2022 <a href="https://events.vtools.ieee.org/m/289870">https://events.vtools.ieee.org/m/289870</a>	6:30 PM
July 07,2022 - SEM Section ExCom Monthly Meeting (Teleconference) for July 2022 <a href="https://events.vtools.ieee.org/m/289871">https://events.vtools.ieee.org/m/289871</a>	6:30 PM
August 03,2022 - SEM Section ExCom Monthly Meeting (Teleconference) for August 2022 <a href="https://events.vtools.ieee.org/m/289872">https://events.vtools.ieee.org/m/289872</a>	6:30 PM
Sept 01,2022 - SEM Section ExCom Monthly Meeting (Teleconference) for September 2022 <a href="https://events.vtools.ieee.org/m/289873">https://events.vtools.ieee.org/m/289873</a>	6:30 PM
October 05,2022 - SEM Section ExCom Monthly Meeting (Teleconference) for October 2022 <a href="https://events.vtools.ieee.org/m/289875">https://events.vtools.ieee.org/m/289875</a>	6:30 PM
Nov 03,2022 - SEM Section ExCom Monthly Meeting (Teleconference) for November 2022 <a href="https://events.vtools.ieee.org/m/289876">https://events.vtools.ieee.org/m/289876</a>	6:30 PM
Dec 07,2022 - SEM Section ExCom Monthly Meeting (Teleconference) for December 2022 <a href="https://events.vtools.ieee.org/m/289877">https://events.vtools.ieee.org/m/289877</a>	6:30 PM

**Bhupinder Mavi (Section Secretary 2021) & Sharan Kalwani (Section Vice-Chair 2021)**  
[bmavi@outlook.com](mailto:bmavi@outlook.com); [sharan.kalwani@ieee.org](mailto:sharan.kalwani@ieee.org)

**Editorial Corner**

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

Comments and suggestions may be sent to the editorial team at [wavelengths@ieee-sem.org](mailto:wavelengths@ieee-sem.org)

OR

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

[d.romanchik@ieee.org](mailto:d.romanchik@ieee.org)

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

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[lunnmalcolm@me.com](mailto:lunnmalcolm@me.com)

[akio@emcsociety.org](mailto:akio@emcsociety.org)

We rely on our officers and members to provide the ‘copy’ that we finally present to readers of the newsletter.

The **Wavelengths Focus Plan and Personal Profiles** plan shown in the matrix below is presented to ensure coverage of section activities and events.

*We try to complete the newsletter layout a week before the first of the month to allow time for review and corrections. If you have an article or notice, please submit it two weeks before the first of the month or earlier if possible.*

The plan below relies on the contributions of our members and officers, so please do not be shy. If you have something that should be shared with the rest of the section, we want to give you that opportunity.

*We always encourage all chapters and student branches to share news of activities (both past and future) in their arenas. Please feel free to share any and all information so your peers, colleagues can hear about all the good work you do.*

Quote:

*“If a tree falls in a forest and no one heard it, how do you know it actually fell??”*

**So publicize your work, one never knows when it can pay off!**

**Editors:**

We are always looking for members interested in helping to edit the newsletter. The process is always more fun with more people to share the duties. Having more participants and contributors also helps us keep the newsletter interesting.

**Join the Team:**

If you feel you might like to join the team, or would like to train with us, please contact one of us at:

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

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

*Wavelengths Annual Publication Plan for Articles*

Month	AG's	Ch's	Ch's	SB's	Special Notice	Reporting Events	Monthly Focus	Awards
Jan		1		OU	New Year Officers	Officer's Welcome	The Year Ahead	
Feb	Cons	2		MSU	Science Fair Judges	National Engrs Wk.	Surviving Winter	
Mar		3	13	EMU	Elections - Prep			
Apr		4		U/M-D		ESD Gold Awards	Chapter Focus	
May	Life	5	14			Science Fair		
Jun		6					Leadership Skills	
Jul		7	15				Students Issues	
Aug	WIE	8			Nominations Call		Womens Issues	
Sep		9	16	LTU	Ballots	Engineers Day?	Professional Skills	
Oct		10		U/M-AA	Elections!	IEEE Day		
Nov	YP	11	17	WSU	Election Results	New Fellows		
Dec		12		U/D-M	IEEE-Com Apmts.		Happy Holidays	R4 Nom

*Wavelengths Annual Publication Plan for Personal Profiles*

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



**Web & Social Sites****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 Twitter Account (new)**

(Select the “” button under the top row)

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

**SEM Officers:**

For a complete listing of all - Section - Standing Committee - Affinity Group - Chapter and Student Branch Officers, see the SEM Officers Roster on the SEM web page under the “About SEM” button and select “Current Officers.”

**Section Officers****Section Chair**

David Mindham

**Section Vice-Chair**

Sharan Kalwani

**Section Secretary**

Bhupinder Mavi

**Section Treasurer**

Colleen Chmielewski

**Standing Committees:****Section Adviser**

Don Bramlett

**Wavelengths Editor**

Sharan Kalwani

**Chair Educational Activities**

Christopher Guirlanda

**Chair Finance**

Sharan Kalwani

**Chair Membership Development**

Sharan Kalwani

**Chair Nominations & Appointments**

Kimball Williams

**Chair Professional Activities (PACE)**

Sharan Kalwani

**Chair Student Activities**

Mel Chi

**Student Communications Coordinator**

Michael Anthony

**Student Representative****Chair Technical Activities**

Jeffery Mosley



IEEE Southeastern Michigan

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



*"We did a worst-case scenario of that asteroid hitting our planet. The only things that would survive would be weeds, cockroaches and embarrassing social media posts."*

### Advertising Rates

SEM Website & Newsletter

### 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:  
<http://bit.ly/sem-ieee>

#### SEM Standing Committee Meetings:

#### SEM Affinity Group Meetings:

#### SEM Technical Society/Chapter Meetings:

#### SEM University Student Branch Meetings:

- Meeting schedules are announced on SEM Calendar  
<http://r4.ieee.org/sem/>  
(Select the "SEM Calendar" button in the top row.)
- Registration for all at:  
<http://bit.ly/sem-upcoming>