

Wavelengths



Volume 59 – Issue 6

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TAKING BIPEDAL ROBOTS

FROM SCIENCE FICTION TO SCIENCE FACT

Speaker: [Prof. Jessy Grizzle](#)



Abstract: The fields of control and robotics are working hand-in-hand to development bipedal machines that can realize walking motions with the stability and agility of a human. This talk will show how model-based feedback control and optimization methods are enhancing the ability to achieve highly dynamic locomotion in bipedal robots and exoskeletons. The presentation will be amply illustrated with graphics and videos of our experiments to make the material accessible to a wide audience. Just for fun, a few equations will be thrown in!

Where: Rm 2540, G.G. Brown building (Mechanical Engineering) at the University of Michigan Ann Arbor (2350 Hayward Street, Ann Arbor MI 48109). Parking instructions and map found inside "Click here for Map" under Location.

When: Wednesday June 5th, 2019 From 6:00PM to 8:00PM

IEEE members (and non-member family and friends) are welcome.

Free admission but **registration is required** for an accurate food head count.

For details and **Registration** use Link below:
<https://events.vtools.ieee.org/m/198716>

Pizza and drinks will be provided by SEM Robotics and Automation Society. IEEE SEM Chapter 14.

Section Chair's Message

**STEM:**

Our front page is a great introduction to this topic. So what are your kids up to this summer? Many schools and clubs are offering robotics summer camps. IEEE SEM has been a sponsor of Robofest international robotics competition for many years. www.robofest.net The finals were just held at Lawrence Technological University and IEEE SEM received a sponsorship award again. Our Library STEM program is growing thanks to our volunteers and the generous financial support of ZF. No kids at home, consider volunteering.

Volunteering:

Technology advances are happening faster than most people can keep up with, so are organizations, jobs and how we communicate as humans. IEEE SEM volunteers learn leadership and team building skills that are not usually part of the engineering curriculum. We have openings at some of our chapters and we are seeking help with our Fall Conference planning committee.

IEEE SEM Calendar:

Many events are planned over the next few months. These can be viewed on the interactive calendar on the home page of the section web site. <https://r4.ieee.org/sem/>

Chapter and Affinity Group Activity:

All Chapters and Affinity Groups are encouraged to have monthly meetings and educational events as often as possible. They are required to have a minimum of 2 meeting/events per year. Chapters and AGs can use your budgeted allowance without seeking permission from the Section. If you did not ask for funding or if wish to apply for funds beyond your budget you need to contact our Financial Committee and supply a plan for what you want to do.

Officers Training:

As a reminder, all Southeastern Michigan Section Chapter and Affinity Groups elected and appointed officers are requested to visit the Virtual Officers Training so you are better able to understand your position and to make you aware of available IEEE's support. The virtual format allows you to proceed through the training modules as you have time. They are available on our SEM web site <https://r4.ieee.org/sem/> under the "About SEM" Tab and click on the "Training Materials" link. More details on page 3 of this newsletter.

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

Robert Neff
IEEE SEM Section Chair
RLNeff1@gmail.com



Bob accepting the 2018 Robofest Support Award

Officer Training:

Officer elections will be coming again this fall, and some of our members will take advantage of the opportunities that exist for both officer training and the 'On the Job' experience that follows successful election or appointment to a Geo-unit or Standing Committee position.

However, there is no reason to wait for the elections to begin the officer training program, which is available 24 hours / day, on line, at the SEM Website:

<https://r4.ieee.org/sem/about-sem/training/>

The training is primarily a collection of 'Voice over Power Point' videos which will play directly and immediately from a Google Chrome browser. (They may not work well using Internet Explorer.) Turn OFF your pop up blocker if you don't see it load or download. Blank Titles (Links) are still in development.

(If you wish to rewind sections and play again, we suggest you download the module to your computer and play it using your systems 'media player'.)

As you begin the training, we recommend starting with Module # 46: [Virtual Training Plan](#), and follow its recommendations for the training sequence. Officers who have gone through the sequence recommended in the 'Plan' have been able to complete all the modules easily within a 2 week period, using only ½ to 1 hour a day.

If you find you have questions, we encourage you to send questions about these training modules to: [Virtual Training Q-A Forum@googlegroups.com](mailto:Virtual_Training_Q-A_Forum@googlegroups.com)

Not an Officer? Why Train?

One of the primary goals of IEEE has always been to enhance the knowledge and understanding of engineering (all engineering) of our members. The experts who watch engineering careers tell us that only 15% of a successful career in engineering (or any other discipline) is due to the technical knowledge you gathered in your school and on the job training.

The other 85% of a successful career is your ability to master the 'Soft Skills'

At least one source identifies this skill set as:

- **Leadership Skills.**
- **Teamwork. ...**
- **Communication Skills. ...**
- **Problem Solving Skills. ...**
- **Work Ethic. ...**
- **Flexibility/Adaptability. ...**
- **Interpersonal Skills.**

Most of these are similar to the skill sets one associates with a sport, or playing a musical instrument. They need experience and practice to develop fully, and can only be 'introduced' through study.

(How many people can learn how to play tennis only by reading a book?)

The Training Modules on the SEM Website provide an introduction to developing a soft skill set. To fully realize the benefits of learning a soft skill requires practice, which is gained by working with, or leading teams.

We gain these experiences by serving as IEEE officers in Geo-units or in standing committees.

Which Officer Position?

Please don't make the 'freshman' mistake of trying to become the CEO of a major corporation, (or *the Section Chair*) for your first officer position. If you are a rookie, work your way up.

Each officer position offers a unique training experience, and when you get to the top, you are most effective if you know and understand the full set of details of each of the positions which will report to you. You can only gain that understanding by actually working in that position long enough to fully appreciate its qualities.

To find out which officer positions are currently available for appointment; see the IEEE SEM [Organization Roster](#). - Download it from the SEM Webpage at:

https://r4.ieee.org/sem/wp-content/uploads/sites/6/2019/04/Organization_Roster_3.29.2019-1.pdf

For any who need more advanced training, please see the "VOLT" article on the 2019 IEEE Volunteer Leadership Training Program (VoLT), elsewhere in this issue.

Geo-unit Activity:

As this is being written, we are fast approaching the midpoint in our calendar year, and it is with concern that we observe the activity levels within some of our IEEE Section Geo-units, (Chapters, & Affinity Groups).

The chart at the right is a visual record of the current status of our Geo-unit 'reported' activity so far this year. (We emphasize the 'reported' nature of the chart, since there are an additional 21 events that were scheduled by various Geo-units, which have not been finally reported in the system.)

The system of reporting has been made so simple, that it only takes about two minutes to log in and complete a meeting report, if the meeting is already in the IEEE MGA vTools system. Normally that duty is handled by the Geo-unit Secretary and in some units by other officers when the Secretary is not available. If no one completes a report, from the point of view of IEEE, that meeting never took place.

Concerns:

Our major concern is for those Geo-units which show no activity in the current year, and which failed to record the minimum number of meetings in the previous year to satisfy the requirements to remain "Active" in the MGA records. When that happens over a two year period, the Section leadership is advised that the Chapter or Affinity Group should be disbanded, and its records and assets assumed by the Section.

Ch's & AG's	Ave Tech Mtg. Attend	Ave Tech Mtg Guest	#L31 -Technical	#L31 -Admin	#L31 Professional	#L31 -Other	Name
Cnslt							Consultants Network
LIFE							Life Members
WIE							Women In Engineering
YP							Young Professionals
1							Circuits & Systems, Signal Proc., Info Th.
2	10	3	1	2			Vehicular Technology
3							Aerospace & Elec. Sys., Communications
4	32	14	2				Trident (Ant, Elect Dev., uWave, Photo)
5	28	19	14	4			Computers
6	27	4	1	1			Geoscience & Remote Sensing
7							Power Engineering, Industrial App.
8	52	36	8	4		1	Electromagnetic Compatibility (EMC)
9							Power Electronics, Industrial Electronics
10	8		1	4			Engineering Management
11				1			Eng. in Medicine & Biology
12							Control Systems
13	35	24	6				Education
14							Robotics & Automation
15	31	19	2				Nuclear Plasma Science Society
16							Computational Intelligence / Sys.Man.Cyber.
17	23	19	3	5			Nano Technology Council
SEM	10	5	2	9	0	1	SEM (Section)
Tot	257	144	40	30	0	2	NOTE: Highlight Green = Active
		56%					NOTE: Highlight clear = Concern
							All L31 Reports: 72

In the accompanying chart, any Chapter or Affinity group in the list that does not show with a green highlight on its 'Name' has not met the minimum so far. Given that many others have been able to arrange to hold multiple (up to 14 for Chapter 5!) meetings so far in the current year, we believe sufficient time has elapsed to suggest those Geo-units with no activity may need assistance.

The problem is that none of them have approached the Section leadership with requests for help or assistance in preparing and holding meetings.

If you see that your' Chapter or Affinity Group leaders may need help to organize meetings, use the SEM Organization Roster located on the SEM Website at: https://r4.ieee.org/sem/wp-content/uploads/sites/6/2019/04/Organization_Roster_3.29.2019-1.pdf ...to find the contact information for your Geo-unit officers, and offer your assistance.

Technical Activities Committee: TACom.

VOLT:

Call for participation: 2019 IEEE Volunteer Leadership Training Program (VoLT) - The MGA Training Committee is pleased to announce the launch of the 2019 Volunteer Leadership Training Program (VoLT). The program continues this year after graduating over 250 graduates to date. VoLT graduates represent all IEEE Regions and over 100 Sections. As a testament to its success, graduates are taking positions of leadership within their local operational units and at the region level.

Participation Criteria - VoLT targets volunteers who have a true desire to learn about the broader IEEE and are considering taking leadership positions within their local units and roles in IEEE committees. IEEE volunteers with 2+ years of volunteer experience in their local units and who have not held a Section Chair position are highly encouraged to participate. The program runs in two phases as described below. **Please read the information carefully.**

Track 1 - IEEE volunteers are invited to participate in Track 1, which covers the core organizational units of IEEE and provides key foundation knowledge of the organization. The eight courses are located in the IEEE Center for Leadership Excellence (CLE) web site. Participants will need to complete a short quiz at the end of each session. If you are interested in participating in the 2019 VoLT Program you should complete these courses between **May 28 and July 9, 2019.**

To access Track 1 courses, log into the CLE (<https://iee-elearning.org/CLE/>) with your IEEE account starting May 28 and click on the “VoLT Program” icon from home page to begin. **Volunteers who complete Track 1 within May 28 and July 9 can apply for consideration for Track 2.**

This monument to Alessandro Volta overlooks Lake Como in the home town of the famous inventor and scientist.

Track 2 - After completing Track 1, volunteers will receive an email notification in July 2019 with a link to complete an application form, completion deadline, and other details of the program. **Track 2 candidates need to send an endorsement note** (e.g., email or word file) signed by either his/her Region Director, Section Chair, Chapter Chair, or local Committee Chair. We may consider endorsements from other IEEE volunteer leaders on a case-by-case basis. The endorsement is a short note by a volunteer leader who knows you and believes the program will be beneficial to you. **Send an endorsement only if you completed Track 1 within the dates defined above and receive the email with the program application link.**

Please note that participation in the program requires a time commitment of 4-8 hours a month.

Track 2 will run from early September thru early December 2019. During these 3 months, participants will have weekly live webinars focused on leadership related topics. They will have a mentor and will work on a project assignment as part of a team.

IMPORTANT NOTE: Volunteers who completed Track 1 in CLE after the June 25, 2018 deadline and before the start of Track 2 on September 8, 2018, and are interested in the 2019 Track 2, send us an email at volt@ieee.org.

Thank You.
Diane Bowen Collier, 2019 MGA Training Committee Chair

E-mail VOLT staff with questions: volt@ieee.org



Amateur Radio 'Field Day'



Field Day (June 22-23, 2019) is an annual amateur radio exercise, widely sponsored by IARU regions and member organizations, encouraging emergency communications preparedness among amateur radio operators.

In the United States, Field Day is typically the largest single emergency preparedness exercise in the country, with



over 30,000 operators participating each year.

Field Day is always the fourth full weekend of June, beginning at 1800 UTC Saturday and running through 2059 UTC Sunday. Amateurs in Canada and Mexico also cooperate in the operations and add an international component to the exercise.

Since the first **American Radio Relay League** (ARRL) Field Day in 1933, radio amateurs throughout North America have practiced the rapid deployment of radio communications equipment in

environments ranging from operations under tents in remote areas to operations inside Emergency Operations Centers (EOCs). Operations using emergency and alternative power sources are highly encouraged, since electricity and other public infrastructures are often among the first to fail during a natural disaster or severe weather.

To determine the effectiveness of the exercise and of each participant's operations, there is an integrated contesting component, and many clubs also engage in concurrent leisure activities (camping out, cookouts, etc.).

Operations typically last a continuous twenty-four hours, requiring scheduled relief operators to keep stations on the air.

..

Additional contest points are awarded for experimenting with unusual modes, making contacts via satellite, and involving youth in the activity.

Local Field Day Sites:

Most amateur radio club sponsored field day sites encourage visitors to come and see what amateur radio is all about, and many also have "Get On The Air" (GOTA) stations set up for non-amateurs to operate under the control of a licensed amateur radio operator.

Local locations of field day sites may be found by using the ARRL 'field day locator' interactive map on-line at:

<http://www.arrl.org/field-day-locator>

See below:

As you can see on the map, there are many field day sites in Michigan and the surrounding states open to the 'public' to visit during the event. Use the map link above to locate the site nearest you and contact the club representative to find the exact location of the outdoor exercise.

Note: This page is intended to show public Field Day sites that members of the public and media can visit. There are many more private sites operating during a Field Day exercise.

Simply click on one of the 'balloon' indicators on the live ARRL map, and details for that site will appear to help locate the site, and provide contact information. Example below:

W8MRM

Motor City Radio Club
Grosse Ile Twp Centennial Farms
Grosse Ile Twp, MI

GOTA: no

Talk-in: 147.840/147.240

Contact: Bruce Menning

[313-410-3335](tel:313-410-3335)

brewmenn@yahoo.com

w8mrm.net

Courtesy ARRL, the national association for Amateur Radio hq@arrl.org

Electric Aircraft Symposium

AIAA/IEEE ELECTRIC AIRCRAFT TECHNOLOGIES SYMPOSIUM

22-24 AUGUST 2019 | INDIANAPOLIS, INDIANA

Building upon a successful event in 2018, the 2019 Electric Aircraft Technologies Symposium will look at progress over the past year and continue the discussion about the aerospace industry goals for future aircraft. To accommodate rapid growth in emerging markets and ensure sustainability of air travel, one approach being explored is using nontraditional aircraft propulsion: electric, turboelectric, or hybrid-electric powertrains. AIAA and IEEE crafted this unique symposium to bring the aerospace engineers and the electrical engineers together to discuss these topics and their challenges.

The 2019 symposium will focus on electric aircraft technology across three general areas: electric-power-enabled aircraft configurations and systems requirements, enabling technologies for electric aircraft propulsion, and electric aircraft system integration and controls.



TOPIC AREA 1

Aircraft Configurations and Systems Requirements

- › System feasibility studies
- › Electric-enabled innovative aircraft design and propulsion concepts
- › Electrical powertrain performance requirements
- › Safety, critical failure modes, certification
- › Lifecycle energy, operational cost, and emission analysis

TOPIC AREA 2

Enabling Technologies and Components

- › Machines and drives integration for optimum performance
- › Conventional, cryogenic, and superconducting
- › Energy storage devices and systems
- › Electric machine and gas turbine integration
- › New material solutions or applications
- › Novel thermal management solutions

TOPIC AREA 3

System Integration and Controls

- › Electric powertrain architectures
- › Fault isolation and reconfigurable systems
- › Energy management systems
- › Integrated electro-thermal systems
- › System modeling tools
- › Monitoring and diagnostics
- › Verification and testing

Learn More
propulsionenergy.aiaa.org/EATS

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ITC2019 Conference



IEEE Transportation Electrification Conference and Expo

Keynote Speakers



Nitin Patel
Head of Ept Technology and Design
FCA US LLC



Eric Hultgren
General Dynamics
Electric Boat



Hao Huang
Technical Chief
GE Aviation



John M. Miller
Technical Advisor
Momentum Dynamics



Igor Stamenkovic
Global Technology Director
Eaton



Carl Kutsche
Chief Technologist
Idaho National Labs



Richard Hellinga
Manager
Borgwarner Waterloo
Technical Center



Annette Muelze
Professor
Graz University of
Technology



Anand Sankaran
Director, Electrified
Powertrain Engineering
Ford Motor Company



Steven Boyd
Program Manager, Vehicle
Technologies Office
US Department of Energy

Program Details

- 5 Short Courses
- 8 Panels
- Town Hall Panel
- 5 Tutorials
- Networking Events

Industry Exhibition



And many more! Visit www.itec-conf.com/exhibition for more information about exhibiting.

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Military Banquet



Celebrate an Evening of Delight with the Armed Forces

Special Guest Performance By Detroit Jazz Vocalist **Kimmie Horne** Descendant of the late Great Hollywood Actress & USO Jazz Singer **Lena Horne**



Learn about a Special Historical Connection between two Jazz greats & the Nation's first African-American Marines

"Living the Legacy"

Your Distinguished Presence is Requested

3:00 p.m. Sunday, June 23, 2019

10th Annual Heritage Military Banquet

& Awards Ceremony

Tickets \$75 per Person in Advance
Tickets available online www.montfordpointmarinesamerica.org
(10 Seats per Table)

Burton Manor Banquet & Conference Center

27777 Schoolcraft Rd.
Livonia, MI 48150

Grande Buffet Dinner Served



Special Proclamation By Office of the Governor Gretchen Whitmer

Military Banquet Ceremony:

April 1, 2019**FOR IMMEDIATE RELEASE**

Detroit to embrace newest Mother Theresa Medallion Recipient; Ambassador Theodore R. Britton, at 2019 National Annual Heritage Military Banquet & Awards Ceremony

**Contact: Robert B. Middleton, Director of Communications
Email: montfordpointmarinesmichigan@comcast.net
Phone: 313-300-0165**

Detroit– This year our Armed Forces will celebrate the 10th Anniversary of one of the nation’s most prestigious military banquets on Sunday, June 23, 2019 at Burton Manor in Livonia, MI. At the 2019 National Annual Heritage Military Banquet, all branches of the military their pageantry will be on display, many wearing their mess dress and military uniforms. The event is attended by the general public as well as guest from all over the United States consisting of ranking military dignitaries, public and governmental officials, veterans and military organizations, historians, journalist, clergy, descendants of veterans, academic faculty and students, and local business executives.

The speaker will be will be Ambassador Theodore R. Britton, Jr. Honorary Consul General of the Republic of Albania. On March 9, 2019 he was awarded the Mother Theresa Medallion for humanitarianism having been invited to Tirana, Albania by President Illir Meta, who personally presented the award. President Meta presented Albania’s highest decoration for Ambassador Britton’s lifetime endeavors as humanist and diplomat that has promoted Albania in the United States and throughout the world, according to a prominent Albanian news source.

The Chairman of the Banquet Planning Council, Robert Middleton; and commanding officer of a nationwide organization that represents African-American Marines of WWII, says Ambassador Britton has been a high achiever throughout his entire career, and currently at age 93, is the highest ranking official to evolve from that group of men over 70 years ago. Also, in 2012, Ambassador Britton received the Congressional Gold Medal along with over 400 other WWII heroes, awarded by President Barack Obama and 112th U.S. Congress in Washington, D.C. They were the remainder of over 20,000 of the nation’s first African-American Marines first inducted into the Marine Corps between 1942-1949. Middleton says, there are few words to express how grateful he is to have Ambassador Britton as a close friend and confidant, and member of his organization. Certainly, Ambassador Britton and his life’s work be remembered in the annals of American History far into the future.

The 2019 National Annual Heritage Military Banquet will also highlight Jazz Vocalist Kimmie Horne, descendant of the notorious Hollywood Actress and Singer Lena Horne who was also well known for her extensive touring with the USO during WWII and on the West Coast. Both Kimmie Horne and Mr. Middleton, agree that it is somewhat uncanny how history seems to be repeating itself, by performing for military troops like her ancestor, Lena Horne, that took place over 60 years ago.

For more details of this event please visit www.montfordpointmarinesamerica.org or call 313.300-0165

ZF Employment Ad



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ONE OF THE WORLD'S LEADING
AUTOMOTIVE SUPPLIERS.

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

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

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

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

Joe Giachino

Section Focus

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

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

Section Mission

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

For the purpose of:

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

Section Goals

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

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

ORG UNITS cheat sheet

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

Consultants Network Affinity Group: (CN40035)

Life Members:

Young Professionals:

Women in Engineering:

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

Chapter: 02 (VT06) Vehicular Technology Society

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

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

Chapter: 05 "Computer" (C16) Computer Society

Chapter: 06 (GRS29) Geosciences and Remote Sensing Society

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

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

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

Chapter: 10 (TEM14) Technology and Engineering Management Society

Chapter: 11 (EMB18) Engineering in Medicine & Biology

Chapter: 12 (CS23) Control Systems Society

Chapter: 13 (E25) Education Society

Chapter: 14 (RA24) Robotics And Automation Society

Chapter: 15 (NPS05) Nuclear Plasma Sciences Society

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

Chapter: 17 (NANO42) Nanotechnology Council

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)

Non-IEEE Events

We try to publish IEEE events in several places to ensure that everyone who may want to attend has all the available relevant information. **NOTE: The IEEE SE Michigan section website is changing to its new home, kindly make a note of it! The new home is located at <http://r4.ieee.org/sem/>.** The old links will continue to work for sometime, but will be changing permanently in the near future.

SEM e-Wavelengths:

www.e-wavelengths.org

This is our 'Active' event listing site where everyone should look first to see what events are scheduled for our Section in the near future.

SEM Web Calendar:

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

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

SEM Web Meetings:

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

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

vTools Meetings:

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

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

Other IEEE Local Meetings:

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

Other Happenings

Here are some of the non-IEEE events that may be of interest to you or someone you know. Let us know if you have a special interest in a field that encourages technical study and learning, and wish to share opportunities for participation with members of the section.

Send details to: wavelengths@ieee-sem.org

Michigan Institute for Plasma Science and Engineering: Seminars for the 2017-2018 academic year: <http://mipse.umich.edu/seminars.php>

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

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

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

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

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

Science Fiction Conventions
<https://2019.penguicon.org/>

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

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

ESD PE Review Class
<https://www.esd.org/programs/pe/>

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

Executive Committee

The SEM Executive Committee is the primary coordination unit for Southeastern Michigan (SEM) IEEE operations. The basic organization chart below shows the 2018 arrangement of communications links designed to provide inter-unit coordination and collaboration.

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

If you wish to attend, or just monitor the discussions, please contact Eric George, the section secretary at: eric.george.us@ieee.org and request to be placed on the distribution list for a monthly copy of the agenda and minutes.

More meeting details are available on the next page of this newsletter.

Other Meetings:

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

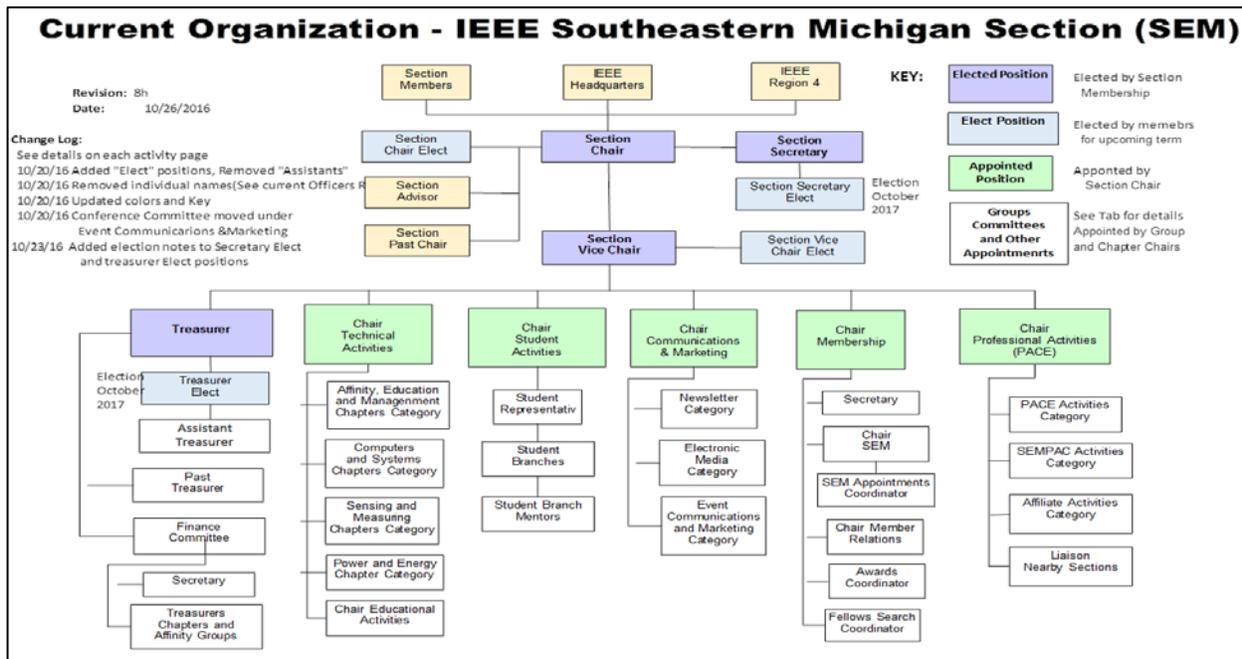
However, members of the section may have multiple technical interests and would like to have meeting information of other chapters. In order to communicate the meeting dates of all the chapters, affinity groups etc., to our members to facilitate their attendance, leaders of the groups are requested to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

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

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

Eric George - SEM Asst. Secretary

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



ExCom Meeting Schedule

Below is the 2018 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 2018 meetings. Or, link your personal calendar to the SEM Web calendar.

ExCom: Meeting Schedule for 2019:

~~F2F, Wednesday Jan 9, [New Officers Meet and Greet]~~

~~Teleconference, Thursday Feb 7~~

~~Teleconference, Wednesday March 6~~

F2F, Thursday, April 4

~~Teleconference, Wednesday May 1~~

Teleconference, Thursday June 6

F2F, Wednesday July 10 [Moved for the 4th of July]

Teleconference, Thursday August 1

Teleconference, Wednesday September 4

F2F, Thursday October 5

Teleconference, Wednesday November 6

Teleconference, Thursday December 5

Note: All IEEE Members are welcome at any IEEE meeting, at any time but, please register so we can be sure to accommodate you.

Eric George
SEM Assistant Secretary

Editor's Corner

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

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

OR

sharan.kalwani@ieee.org

nilesh.dudhaia@ieee.org

K.williams@ieee.org

We rely on our officers and members to provide the 'copy' that we finally present to readers of the newsletter. The **Wavelengths Focus Plan and Personal Profiles** plan shown in the matrix below is presented to ensure coverage of section activities and events.

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

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

Editors:

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

Heads Up

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

Join the Team:

If you feel you might like to join the team, or would like to train with us, please contact one of us at: wavelengths@ieee-sem.org OR any one of the following:

sharan.kalwani@ieee.org

k.williams@ieee.org

nilesh.dudhaia@ieee.org

Wavelengths Annual Publication Plan for Articles

Month	AG's	Ch's	Ch's	SB's	Special Notice	Reporting Events	Monthly Focus	Awards
Jan		1		OU	Future Cities Judges	Election Results	Resolutions	
Feb	Cons	2		MSU	Science Fair Judges	Officer's Welcome	Surviving Winter	Future Cities
Mar		3	13	EMU	Spring Conf. Flyer	Spring Conference	Spring Conference	Science Fair
Apr		4		U/M-D	National Engrs Wk.	Future Cities	Chapter Focus	ESD - GOLD
May	Life	5	14		Outstanding Eng Awd	Science Fair	Elections - Prep	New Fellows
Jun		6			IEEE-USA Apmts.	ESD Banquett	Leadership Skills	SEM Awards
Jul		7	15		Nominations Call	MD-Webcasts	Students Issues	Region 4
Aug	WIE	8			MGA - Apmts.	Tech-Webinars	Womens Issues	
Sep		9	16	LTU	Region 4 Apmts.	Engineers Day	Professional Skills	
Oct		10		U/M-AA	Fall Conf. Flyer		Fall Conference	
Nov	YP	11	17	WSU	ELECTIONS!		Humanitarian	
Dec		12		U/D-M	IEEE-Com Apmts.	Fall Conference	Happy Holidays	

Wavelengths Annual Publication Plan for Personal Profiles

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



Web & Social Sites

SEM Website

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

Each of the sites below may be accessed through the SEM Website:

Section Website Event Calendar

(Select the “SEM Calendar” button - top row.)

SEM Facebook Page

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

SEM LinkedIn Page

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

SEM Officers:

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

Online Community <http://sem.oc.ieee.org>

Section Officers

Section Chair

Robert Neff

Section Secretary

Eric George

Section Vice-Chair

Nevrus Kaja

Section Treasurer

Michael Folian

Standing Committees:

Section Adviser

Don Bramlett

Chair Communications & Marketing

Chair Educational Activities

Chair Finance

Nevrus Kaja

Chair Membership

Irina Sullivan

Chair Nominations & Appointments

Kimball Williams

Chair Professional Activities (PACE)

Sharan Kalwani

Chair Student Activities

Mel Chi

Student Representative

Chair Technical Activities

Kimball Williams



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



Advertising Rates

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

http://www.ieee-sem.org/ewavelengths/?page_id=181.

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

Leadership Meetings

SEM Executive Committee Monthly Teleconferences:

- 1st Wednesday or Thursday of Each Month @ Noon
- Check the Section Web Calendar at:
<http://r4.ieee.org/sem/sem-calendar/>
(Select the “SEM Calendar” button in the top row.)

SEM Executive Committee Face-to-Face Meetings:

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

SEM Standing Committee Meetings:

SEM Affinity Group Meetings:

SEM Technical Society/Chapter Meetings:

SEM University Student Branch Meetings:

- Meeting schedules are announced on SEM Calendar
<http://r4.ieee.org/sem/>
(Select the “SEM Calendar” button in the top row.)
- Registration for all at:
<https://meetings.vtools.ieee.org/main>