

Wavelengths



Spring Conference

Volume 59 – Issue 5

Contents

Spring Conference	1
Section Chair’s Message	2
Officer Appointments	3
Soft Skills Training:	3
Volunteer Portal	4
EMCFest 2019:	5
Electric Aircraft Symposium	7
ITC2019 Conference	8
Military Banquet	9
ROBOFEST!	11
STEAMers Think Tank:	12
ZF Employment Ad	13
Section Matters	14
ORG UNITS cheat sheet	15
Non-IEEE Events	16
Executive Committee	17
ExCom Meeting Schedule	18
Editor’s Corner	19
Section Officers	21
Web & Social Sites	21
Advertising Rates	22
Leadership Meetings	22

2019 IEEE SEM Spring Conference

The Next Big Thing

May 2, 2019



U of M Dearborn
Fairlane Center North
19000 Hubbard Dr
Dearborn, Michigan



Register at: <https://events.vtools.ieee.org/m/191793>

Section Chair's Message

**Volunteering:**

According to ["Volunteering and its Surprising Benefits, How Giving to Others Makes you Healthy and Happier"](https://www.helpguide.org/articles/healthy-living/volunteering-and-its-surprising-benefits.htm/).
<https://www.helpguide.org/articles/healthy-living/volunteering-and-its-surprising-benefits.htm/>

1. Volunteering connects you to others,
2. Volunteering is good for your mind and body,
3. Volunteering can advance your career,
4. Volunteering brings fun and fulfillment to your life.

IEEE SEM needs people who are interested in building their networks, growing their social skills, learning leadership skills and mentoring others with their technical knowledge and experience.

To volunteer, please contact leaders in the areas of your interests (go to <https://r4.ieee.org/sem/> and click on the "About SEM" tab) where you will find our Roster and Organization Chart.

Or, at the same page, click on the Volunteer Portal and describe your interests. We will contact you to explore options.

Busy Spring:

There are many activities planned by our Chapters and our Section this spring. Those coming up very soon are:

IEEE SEM Spring Conference May 2, The Next Big Thing

EMC Fest on May 9 , Illustrating Signal and Power Integrity Principles through Measurement Examples - Eric Bogatin

For these and other events see the SEM calendar at <https://r4.ieee.org/sem/sem-calendar/>

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

Officer Appointments

Our March newsletter held the eNotice of our 2019 elections. However, many of our Geo-units (Chapters and Affinity Group) are in need of replacement officers now.

Every year students graduate, get jobs that take them out of our state and while we wish them well as they grow their career and their skills, many leave behind a vacant officer position that they held while they were active in our Section.

Also, many of our members become well known in their chosen fields, and follow offers of more exciting jobs that take them away from us as well.

Hopefully in each case, the new positions will prove to be all that they had planned. However, we are left with a need to replace those officers in our Geo-units in order to continue operations and bringing our members the events and comradery they have come to expect from an active IEEE Section.

Of course, this opens up opportunities for new volunteers to seek appointment to officer positions where they can learn the specialty skill set that goes with Chair, Vice-Chair, Secretary and Treasurer. In some Geo-units there are expanded Administrative Committees with additional, non-standard officer positions which offer their own requirements and the opportunity to build different skill sets for the volunteer who takes on that position.

If a position is not immediately available in the Geo-unit of your choice, consider the option of joining one of the many Standing Committees listed in the Organization Roster. These offer 'on the job' training in similar skills that can transfer directly to Geo-unit officer positions at a later time.

Meanwhile, you can be contributing to the success of the Section, while gathering experience and practice at new skills.

Of course, you would want to have an appreciation of what each position would offer as a growth path, and how much effort it would likely require once you have settled comfortably into the position.

Links to most Job Descriptions may be found on the Volunteer Portal at:

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

Links to the Affinity Groups and to the Chapters may be found at:

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

Direct questions to:
K.williams@ieee.org
Chair: N&A Committee.

Soft Skills Training:

We encourage members who are considering running for an officer position or looking into a possible standing committee office to take advantage of the 'Training Materials' available on the IEEE SEM Website at:

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

FREE Voice over Power Point Training:

On-line virtual training modules are available through the SEM Website [Training page](#) at:

These videos will play directly and immediately from 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 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'.)

Note: If you are beginning training, we recommend starting with Module # 46: Virtual Training Plan, and follow its recommendations for the training sequence.

Send Questions about these Training Modules to:

Virtual_Training_Q-A_Forum@googlegroups.com

The Q&A Forum – Google Group site – is listed at the bottom of the training page in the SEM Website under the 'About SEM' TAB. .

Volunteer Portal

Non-Elected Geo-Unit Positions:

While we elect our basic officers (Chair, Vice-Chair, Secretary, Treasurer), many geo-units utilize the talents and energy of 'appointed' volunteers. For these positions, contact the Chair of the particular geo-unit, and discuss the opportunities. Alternatively, look at the article on the following page about the new Volunteer Portal, which may be a more comfortable.

Note: Chairs of all Geo-units and Standing Committees have full authority to appoint (or remove) appointed volunteers on their staff.

Nominations and Appointments Committee (N&ACom) supports a [Google Form](#) designed to identify volunteer opportunities available at all levels of our Section, including:

- Executive Committee,
- Standing Committees,
- Affinity Groups,
- Technical Chapters, and
- Student Branches.

The tasks and volunteer needs within our organization change with time, and it is not unusual for these tasks to require more time and energy than one elected or appointed officer can handle alone. When we find ourselves in that situation, we reach out to our members for assistance.

From Officers to Members:

With the help from our officers, the new Volunteer Portal will become a central depository for all our volunteer needs easily accessible to all members. This site will feature links to details for each volunteering opportunity being advertised, including estimated time commitment, a detailed job description, where applicable, and the name of the geo-unit and officer requesting the assistance along with pertinent contact information.

You can view a preliminary version of the Portal at:

<http://r4.ieee.org/sem/about-sem/volunteer-portal/>

Currently there are about 20 vacant positions for consideration and we encourage all members to view them and select those that may help them grow in knowledge and experience through volunteering.

The Portal is intended evolve into a 'one stop shop' for all members interested in volunteering with any of the SEM organizations. And each potential volunteer can select those opportunities that look most interesting to them and contact the particular officer seeking help to discuss the opportunity in more detail.

Note: While elected officer positions require membership level above the Student level, as well as, membership within the geo-unit, neither of those restrictions apply to appointed volunteer positions. This means that a volunteer position obtained through the Portal may be a great introduction to operations of a particular geo-unit and its management team.

Web Site Access:

The new Volunteer Portal is now accessible and shows a small selection of volunteering opportunities currently available with SEM. We expect that new opportunities will be added as the officers seeking help enter them into the system.

We hope that our members will find Volunteer Portal helpful in becoming actively engaged with the local IEEE organization that interest them and will give them the experience to grow new talents and skills.

IEEE SEM Geo-Unit Officers, Committee Chairs, etc. have been asked to fill in the Volunteer Survey form in order to populate the Volunteer Portal with the positions information about the area where you need volunteer help, or to replace vacant positions in their Administrative Committees.

SEM Officers may find the form at: <https://drive.google.com/open?id=1DAyfMNIzv4W0IhhwIsKKvviPGNLHexoEi99FFmhniiE>

EMCFest 2019:



The Southeastern Michigan
EMC Chapter Proudly
Presents:
EMCFest '2019

“Illustrating Signal and Power Integrity Principles through Measurement Examples”

A Tutorial and Exhibition
With Honored Guest Speaker

Eric Bogatin

**Thursday, May 9,
2019**

At
Embassy Suites
19525 Victor Parkway,
Livonia, MI 48152
734-462-6000

IEEE Electromagnetic
Compatibility (EMC) Society.
EMCFest'2017 Home Page:
<http://www.emcfest.org>
Register On-Line!

Program Outline Thursday May 9, 2019

6:00	Vendor Table Setup (till 8:30)
8:30	REGISTRATION & EXHIBITS CONTINENTAL BREAKFAST
9:00	Topic 1
10:00	Break & Exhibits
11:00	Topic 2
12:00	LUNCH
1:00	Topic 3
2:00	Break & Exhibits
3:00	Topic 4
4:00	Ice Cream Reception
5:00	Close of EMCFest

NOTE: breaks will be scheduled at the speaker's discretion. Table-top displays (exhibits) will be open during registration, lunch, all breaks, and the reception. Access to the table-top displays is available during the technical sessions, but the displays may not be manned during those times.

The Program:

Session 1 - What every scope user needs to know about transmission lines

Is it really true that the longer the cable, the longer the RC charging and the longer the rise time? Does this mean only short cables can offer high bandwidth? When should you use a 50 Ohm input and when a 1 Meg input to the scope? Why do I measure a rise time of 150 nsec for the compensation signal on the front of the scope and others report it as 5 nsec rise time?

Session 2 – Challenges measuring power rails

Power rail measurements offer a few unique challenges that typical signal measurements do not. These arise from the low level voltages on top of large DC levels, the low impedance source, the high bandwidth and the potential of rf pick up from non-coaxial probes. We will show how accurate, high bandwidth measurements of power rail voltages are sensitive to artifacts and how to overcome them so you can get a more accurate and realistic measure of your power rails.

Session 3 – Don't let ground bounce ruin your day

Cross talk will always be lowest when the signals use a continuous return path. But not all interconnects provide a continuous return path. In packages, connectors, vias and gaps in planes, the return path has discontinuities. In these cases, and when multiple signals share the same return path, the cross talk will be much higher than for a uniform plane. We call this sort of cross talk, ground bounce. We will introduce the most important fundamental principles of ground bounce, how to measure it and how to avoid it in your next design. If you care about ground bounce, and everyone should, this seminar is for you.

EMC in Detroit--(Cont.)

Session 4 – Faster time to insight through the frequency domain

While the real world is the time domain, sometimes we can gain insight about the origin of problems by looking in the frequency domain. The time domain and frequency domain properties of power rail noise are a little different than for digital signals. For some types of components, such as analog parts, mixed signal or clock generation, very low levels of power rail noise can have a big impact on performance. Sometimes the best way of finding noise sources is by frequency domain analysis. We will discuss best measurement practices using real-time oscilloscopes to analyze power rail noise in the time and frequency domains to provide insight into the root cause of the problems

Speaker:

Eric Bogatin is currently a Signal Integrity Evangelist with Teledyne LeCroy and the Dean of the Teledyne LeCroy Signal Integrity Academy, at [Be The Signal](#).

Additionally, he is an Adjunct Professor at the University of Colorado - Boulder in the ECEE dept, and technical editor of the [Signal Integrity Journal](#).

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

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

Email: eric.bogatin@colorado.edu



FEE SCHEDULE

IEEE Members, Registered before April 2	\$50
Non IEEE Members, Registered before 2	\$75
Full -time Students with copy of valid Student I.D.	\$25
Unemployed / Retired IEEE Member	\$25
CEU Certificate Only	\$25
All Registrations after April 15 th	\$100

REGISTER ON LINE!

The registration fee includes one copy of the tutorial record, continental breakfast, lunch, and reception. The organizing committee reserves the right to substitute speakers, restrict size, or to cancel the tutorial. In the event EMC Fest 2019 is canceled by the organizing committee, registration fees only will be fully refunded. Individuals canceling their registration prior to April 15 will receive a full refund.

No refunds will be made to individuals who cancel their registration after April 15.

Attendance is limited. Registration will be confirmed on a first come, first served basis.

www.emcfest.org

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Hotel Information

The Embassy Suites Hotel is located 18 miles from Detroit Metropolitan Airport. From I-275 take the 7 Mile Road – East. Travel approximately 1/4 of a mile to Victory Parkway. Turn left on proceed approximately 1/4 mile. Embassy Suites will be on the left. Contact (734) 462-6000 to make arrangements. Airport shuttles are not available so plan a taxi or car to travel to the hotel.

There is no airport shuttle available. Please plan for rental car or taxi transportation.

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

Sponsored by:



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



Anette 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.

Suburban Collection Showplace

Novi, Michigan, USA

June 19-21, 2019

www.itec-conf.com

"ITEC is aimed at helping industry in the transition from conventional vehicles to advanced electrified vehicles."

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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

ROBOFEST!



LAWRENCE TECHNOLOGICAL UNIVERSITY
ROBOFEST

little robots, **BIG MISSIONS**

A Competition Motivating Young Minds to Master the Machine

Robofest® is a festival of competitions with autonomous robots offering students the opportunity to master principles of Science, Technology, Engineering, and Math (STEM) as well as Computer Science (CS), communication, critical thinking, teamwork, and problem solving skills while designing, constructing, and programming robots.

Since 1999, over 25,000 students have competed in Robofest, including teams from 14 US States, Brazil, Canada, China, Colombia, Ecuador, Egypt, England, France, Ghana, Hong Kong, Hungary, India, Lebanon, Macau, Mexico, Nigeria, Singapore, South Africa, and South Korea.

Teams compete in the junior (grades 5-8), senior (grades 9-12), and college divisions in the following broad & challenging categories:

- **Game:** Students complete annually-themed robotic missions
- **Exhibition:** Teams have complete freedom to show off any creative autonomous robotics project
- **Vision Centric Challenge (VCC™):** Teams develop robots to solve problems with cameras and computer vision algorithms
- **Unknown Mission Challenge (UMC™):** Mission tasks will be totally unknown until the day of competition
- **RoboArts™:** Robotics music, dance, and visual arts competition
- **BottleSumo™:** Push a bottle and/or opponent off the table
- **RoboParade®:** Parade of Autonomous robots!
- **Camps:** Hands-on workshop + Mini Competition
- **Carnival:** Hands-on STEM+ learning with interactive robots
- **WISER:** World conference on Integrated STEM Education through Robotics (High School Students, Parents, & Teachers)

2018 Major Sponsors



Lawrence Technological University Robofest World Headquarters
College of Arts and Sciences
Department of Mathematics and Computer Science
21000 West Ten Mile Road, Southfield, MI 48075-1058
www.ltu.edu

robofest@ltu.edu
facebook.com/robofest
@robofest
248.204.3568
www.robofest.net

Unique Features of Robofest

Look Mom, No Hands! Students must fully program their robots to perform their missions without human assistance. No joysticks or remote controls are allowed.

Your Mission, If You Decide to Accept It: Is (partly) unknown or dynamic. Students must program their robots to accomplish tasks in a dynamic environment.

Students Only Rule: While adult mentorship is encouraged, students design, construct and program the robots, and make all decisions during competitions without any direct adult help.

It's Flexible: Any type of robot kit/platform, materials, actuators, and sensors are allowed. Robots can be programmed with any programming language.

Affordable: Team registration is \$50 per team. Reusing parts and old kits is encouraged. Teams can be formed by any organization, school, home school, club or civic group.

Everyone is Recognized: All registered participants receive medals and personalized certificates. Winners of the qualifying and championship rounds receive trophies. Any participants who attend LTU can apply for a \$3,000 Annual Renewable Scholarship.

2018-2019 Academic Year Timeline

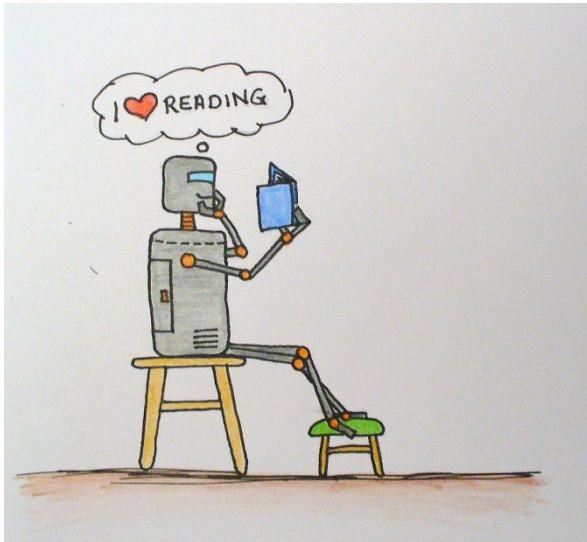
When	Events
Oct 2018	Draft Rules posted at robofest.net US Kick-off meetings start
Nov 2018	Rules for Spring season posted International Qualifying Competitions begin US Team Registration opens
Jan ~ Feb 2019	Free technical workshops for teams at LTU and through online webinars
Feb 16, 2019	Warm-up competition and Judge training at LTU
Mar ~ Apr 2019	US Qualifying Competitions
Apr 2019	Michigan Invitational Qualifying Events at LTU
May 16-18, 2019	20 th World Championship at LTU, Southfield, MI

Subscribe to Robofest monthly eNews at www.robofest.net

If you are interested in Hosting a Robofest Qualifier in your country/city, please email robofest@LTU.edu

STEAMers Think Tank:**STEAMers Think Tank: A Maker Unconference****May 2, 2019, 9:00am - 5:00pm**

Rochester Hills Public Library

*Adult*

A free participant-driven gathering of knowledge-sharing and brainstorming for makers, educators, library professionals and students of all experience levels.

REGISTER

Rochester Hills Public Library provides life-long learning opportunities, instills a love of reading, and offers equal access to information. The library serves as a community town square, where over 45,000 monthly visitors enjoy innovative ways to learn and socialize through a variety of programs including Sunday concerts, a summer reading challenge, parent-child workshops and weekly lectures.

The library's expansive and user-friendly database system allows its 70,000 card holders to utilize ebooks, movies, and music downloads, language and genealogy services, and consumer reports from the comfort of their own home at no cost.

ZF Employment Ad



WHAT'S NEXT?

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

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

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

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

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

Joe Giachino

Section Focus

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

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

Section Mission

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

For the purpose of:

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

Section Goals

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

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

ORG UNITS 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.

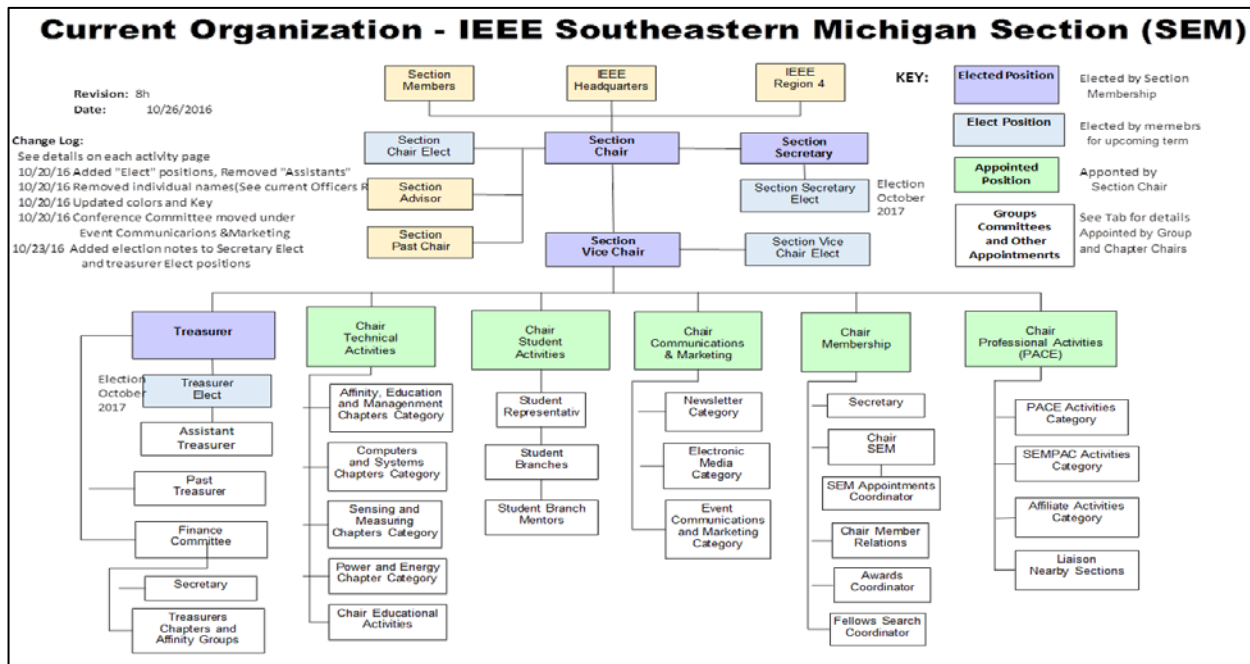
However, members of the section may have multiple technical interests and would like to have meeting information of other chapters. In order to communicate the meeting dates of all the chapters, affinity groups etc., to our members to facilitate their attendance, leaders of the groups are requested to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

k.williams@ieee.org
sharan.kalwani@ieee.org
isullivan@ieee.org
nilesh.dudhaia@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
jrwwoodyard@gmail.com
k.williams@ieee.org
isullivan@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

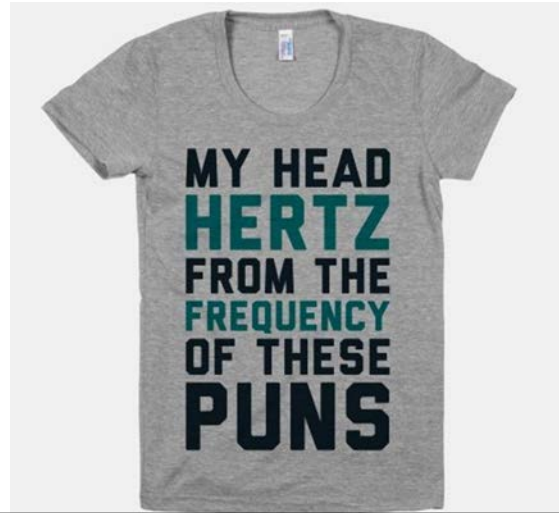
Chair Student Activities
Mel Chi

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>