

# Wavelengths



## Member News!

### Volume 59 – Issue 9

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Dear Colleagues and Friends,

We would like to share with you all - great news that one of our active Student members recently received a major IEEE award. Thassyo Pinto of Michigan State University (MSU), has been selected as the recipient of the 2019 Larry K. Wilson Award from the IEEE. This is one of the most prestigious IEEE student awards, and it recognizes the student member most responsible for an extraordinary accomplishment associated with student activities.

It is indeed very exciting and gratifying that one of our Section members is honored to receive this award. Thasso also shares with me that he would like to dedicate it to everyone who has encouraged him in his academic achievements through the years and who continue to support his endeavors (like this section for example!).

Enclosed is his picture, bio and the commendation letter from the IEEE!

**Sharan Kalwani,**  
**Editor, Wavelengths,**  
**2017-2018-2019**

Thassyo's Bio:

- Chair/Founder of the IEEE/RAS Humanitarian Tech Day@MSU 2017
- Chair/Founder of RAS Society Chapter@MSU 2018
- Advisor and Co-Founder of the MSU STARX Robotic Exoskeleton Team



Thassyo Pinto received his B.S. in Mechatronics Engineering from Universidade Salvador (UNIFACS), Brazil, in 2014. He is now a Ph.D. Candidate in Electrical Engineering at Michigan State University, and a member of the Smart Microsystems Lab and Adami Lab. His research interests are in soft robotics, evolutionary robotics and biorobotics. Through his leadership abilities, he has been guiding and improving many engineering student organizations at MSU as an advisor for the IEEE Student Branch, RAS Student Chapter, and for the STARX Robotic Exoskeleton Team. He is also an active member of IEEE executive committees, acting as the RAS Regional Student Representative for Regions 1 through 7.



Thassyo da Silva Pinto

PhD Candidate - Michigan State University  
Department of Electrical and Computer Engineering  
IEEE Region 4 SAC RSR | [thassyo@ieee.org](mailto:thassyo@ieee.org)

-----Forwarded message-----

From: **Christine Eldridge** <[c.eldridge@ieee.org](mailto:c.eldridge@ieee.org)>  
Date: Fri, Aug 23, 2019 at 2:47 PM  
Subject: 2019 Larry K Wilson Award  
To: Thassyo Pinto <[thassyo@ieee.org](mailto:thassyo@ieee.org)>  
Cc: PRASANTH M <[prasanthey@ieee.org](mailto:prasanthey@ieee.org)>

Dear Mr da Silva Pinto:

Congratulations on being selected the Region 4 2019 Larry K. Wilson recipient. The IEEE Student Activities Committee and Mouser Electronics proudly sponsor this award. As a recipient of the 2019 MGA Larry K Wilson Regional Student Activities Award, IEEE will pay your membership dues for 2020, 2021 and 2022. Please note that the IEEE Member and Geographic Activities Board have paid your basic IEEE dues. If you are a member of an IEEE Society, you are responsible to pay that portion of your renewal notice.

We want to thank you again for your vital role in organizing and implementing IEEE student activities in your area. We look forward to your continued involvement in the IEEE. If we can be of further assistance to you in the future, please do not hesitate to contact us.

Sincerely,

*Christine Eldridge*

Christine Eldridge,  
Administrative Assistant  
Member and Geographic Activities Dept.  
Student Services & Young Professionals

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**Section Chair's Message****Congratulations:**

Thassyo Pinto has been selected as the 1999 recipient of the IEEE Larry K. Wilson Award. You have read about it on the first two pages of this newsletter. As Chair of our SEM Section, I just want everyone to know how very proud we are of his hard work and accomplishments.

**Nominations:**

Nominations are open for elected positions in our Section, Technical Chapters and Affinity Groups. Nominations will close on September 27, 2019. At the Section level we are looking for nominations for Treasurer - Elect and Secretary - Elect who will train in 1999 and take office for two years, 2021 and 2022. Chapters and Affinity Groups have yearly elections and are looking for Chair, Vice Chair, Secretary and Treasurer to serve in 2020. Please see pages 4 and 5 for details and available training.

**Volunteering:**

Elected positions are but one of the ways you can volunteer here in Southeastern Michigan. The Volunteer Portal found in the "About SEM" tab at our website <https://r4.ieee.org/sem/> is designed to assist you in investigating positions and opportunities for you to contribute and grow your network, friendships and leadership skills.

**Upcoming Events:**

Many events are planned by our Chapters and IEEE for the upcoming months. Some of these are presented on pages throughout this newsletter. More can be found on the SEM Calendar at the SEM website home page <https://r4.ieee.org/sem/>.

**IEEE Target of e-Mail Fraud:**

Important: Please take a few minutes to read the letter from IEEE on page #7 and the additional cybersecurity information on the pages following it. Your SEM Section has procedures in place to identify and prevent fraud attempts but constant vigilance by our members is also required.

I look forward to seeing you at our upcoming events. As always, your ideas and suggestions are encouraged and welcome read about it on the first two pages of this newsletter. As Chair of our SEM Section, I just want everyone to know how very proud we are of his hard work and accomplishments.

**Robert Neff**  
**IEEE SEM Section Chair**  
[RLNeff1@gmail.com](mailto:RLNeff1@gmail.com)

## 2019 Elections

### 2019 SEM Officer Elections!

#### Elections in 2019:

Our Section Chair and Section Vice-Chair will have completed their year of 'training' and will begin serving their full two-year terms in 2020.

Each year we select our Section, Senior Executive Committee officers, alternating between Chair & V-Chair and Secretary and Treasurer, every other year. This provides an overlap with experience with 'in training' officers to ensure greater continuity of operations and the fulfillment of long term programs and projects. (Of course, we also look for the immediate 'past' officer to remain active and help coach the entire team.)

#### Staggered Election Terms:

Because of the 'staggered terms' that were enacted with the 2015 elections, this year we will elect our Secretary-elect and Treasurer-elect for their training terms.

Next year we will elect our Section Chair-elect and Vice-Chair-elect for their training terms.

#### Affinity Groups and Technical Chapters:

Officer elections are held each year for all of the Section's 4 Affinity Groups and 17 Technical Chapters (geo-units).

- ☐ Chair,
- ☐ Vice-Chair,
- ☐ Secretary,
- ☐ Treasurer,

This will continue without changes.

While several Affinity Groups and Chapters have been observing implementation of the current ExCom election process with a great deal of interest, none have come forward to propose a modification to their own election process.

#### Requirements:

Note that holding office in any Affinity Group (AG), or Technical Chapter (Ch), requires membership in the AG or Ch., in addition to membership level above Student level. Please ensure that you (if you self-nominate) or your acquaintance (if you nominate another person) holds the required membership in the organization.

You will also need the Candidate's IEEE Member number in order to complete the survey form. This helps avoid 'surprise' nominations where the person elected does not know they are on the ballot for an office election.

Student members are encouraged to seek offices in their local university Student Branches, and gain experience in those organizations.

Students may not hold office in any Section geo-unit. (We want them to concentrate on getting that all-important degree before becoming too involved with Section level activities.)

#### Ballots for Election to Office:

Any member of the Section, above the level of Student Member may submit a nomination for someone they know or for themselves by filling out the form at:

<https://getfoureyes.com/s/a60uH/>

The ballot process opened on September 6, 2019 and will close on September 27, 2019.

Please use the link above to submit a nomination now.

### Candidate & Officer Training

A series of Officer Training events which to cover the elements needed by our SEM election Candidates (and our current Officers) will be broadcast early in September. These are a series of training sessions, potentially for new officers.  
(*Though some 'old' officers could use them as well.*)

☐ Zoom virtual workshops at **Noon** on Mondays & Wednesdays:

- ☐ **September 9 - Chair Functions**
- ☐ **September 16 - Secretary Functions**
- ☐ **September 17 - Vice-Chair Functions**
- ☐ **September 18 - Treasurer Functions**

**Use the link below to connect to the Zoom meeting**

<https://getfoureyes.com/s/a60uH/>

If you miss a training session, 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/>

## 2019 Election – Continued:

**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.

**Election Schedule:**

As noted in our announcement of the election process early in the year, we are now notifying all “voting members” of the opportunity to run for election to any elected governing position within the Section, Affinity Groups or Technical Chapters.

The election schedule we are following for 2019 is as follows:

- **March:** Announce upcoming Elections.
- **August:** Advise members of the election schedule and options for ballot nominations.
- **September:** Open the survey site for candidates for nomination (self-nominated or nominated by another member.)
- **October:** Open the vTools election system for two weeks
- **November:** Compile election results, resolve alternatives, fill vacancies.
- **December:** Deliver results report to the Section Executive

All members above Student Member grade are eligible to vote and hold Chapter, Affinity Group and Section

office. (Yes, Graduate Student Members do qualify for election to officer positions.) Please consider what positions you might wish to both serve the IEEE as well as learn new leadership and organization governance skills.

Be prepared to submit a self-nomination for an officer position when we open the balloting process. If you are new to this process, it makes good sense to begin your involvement in any of the governance areas by initially gathering experience in ‘volunteer’ roles. You are encouraged to have involvement at the committee volunteer level as stepping stones to prepare for elected offices.

Note: All standing committee positions are ‘appointed’ and not ‘elected’. Contact the current Committee Chair to discuss volunteer options. Also see the SEM Organization Roster posted in the SEM Website for details of each committee.

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

Look for the button “Organization Roster” and download the PDF file.

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

**Ballots for Election to Office:**

Submit a nomination for someone you know, or for yourself by filling out the form at:

<https://getfoureyes.com/s/a60uH/>

The ballot process opened on September 6<sup>th</sup> and will close on September 27<sup>th</sup>, 2019. Please use the link above to submit a nomination now.

**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.

## Ham Radio ‘Elmer’

**‘Elmer’** - *An experienced Amateur Radio operator with a steady hand who took you under their wing and taught you the right way to be a proper radio operator.*

Unfortunately, many Amateur Radio operators never had the benefit of an Elmer’s attention and kindness. Most of us were left to our own devices when it came to figuring it out. And most of the time it worked out fine... but there were other times, like the times we were wondering why nobody ever answered our CQs, because we didn’t know our code sending was so atrocious. It would have been nice back then, when CW was still relatively new to us, to have someone sit next to us and show us how to send better code...

Howard Bernstein, WB2UZE and Rich Collins, K2UPS - the New Elmers - are changing all that with the Long Island CW Club. Beginning in January 2018, they started teaching Morse code and CW in live classes over the Internet to anyone who wanted to learn.

Their method of teaching Morse code and CW is casual and fun. It is a unique experience that has already appealed to more than a hundred students wanting a less structured and more relaxed approach to learning the code.

In a recent podcast, Howard and Rich explain how the club got started, their unique way of teaching, and the classes available to anyone wanting to learn the code and have fun.



If you’re brand new to the code, or someone who’s been struggling to learn, checkout the Long Island CW Club and the podcast: <https://www.ditdit.fm/shows/episode-23-the-new-elmers>

And look into the Long Island CW Club on line at: <https://longislandcwclub.org/>



## WIE Summit

Click on page to open Registration Option.



### WHAT: IEEE Women in Engineering AI Leadership Summit in Chicagoland

Join women leaders and innovators to learn about AI technologies, AI applications, how to build an AI solution, and to understand the ethical complication of AI.

Women and men are welcome to attend the event!



- AI Projects for Crime Prevention and Smart City Initiatives
- Building AI in Your Solution**
- AI/ML applications to data mining problems in Location Intelligence
- Supercomputing in AI**
- Open Standards for Predictive Model Deployment**
- Impact of AI on Medical Imaging and Healthcare
- AI in Sports** **Ethics in AI**
- AI & Telecommunications**
- AI in the Electric Energy Sector**
- AI/ML in Cybersecurity**
- AI for Conservation: AI and Humans Combating Extinction
- Together**
- Leadership in AI**

**WHEN:** 8:18 – 5pm, followed by a reception, 9/20/2019

**WHERE:** Nokia Auditorium, 2000 W. Lucent Lane, Naperville, IL 60563

**HOW:** <https://attend.ieee.org/wieails-2019/>

#### Our Speakers:



Dr. Tonya Bringer Wolf  
COMPUTER SCIENCE PROFESSOR -  
UNIVERSITY OF ILLINOIS AT CHICAGO



Dr. Tessa Derry  
INFORMATION TECHNOLOGY -  
NORWICH UNIVERSITY



Danielle DuMerout  
LECTURER -  
UNIVERSITY OF SHEFFIELD



Amy Gile  
CONSULTANT -  
IBM



Nina Salak  
PRESIDENT EMERITA  
PHOTOGRAPHY -  
NINA SALAK



Anne Lee  
CELL LABS LTD. -  
NORFOLK



Dr. Svetlana Levitan  
DEVELOPMENT -  
NORFOLK



Dr. Veena Mendiratta  
PROFESSOR -  
UNIVERSITY OF SHEFFIELD



Dr. Katrina Michael  
UNIVERSITY OF  
SOUTH AUSTRALIA



Dr. Helen Sun  
PROFESSOR -  
UNIVERSITY OF SHEFFIELD



Melissa Napoles  
SOLUTIONS ENGINEER -  
SUNBELT



Dr. Binsha Rao  
DEVELOPMENT -  
UNIVERSITY OF SHEFFIELD



Marie Rios  
PROFESSOR -  
UNIVERSITY OF SHEFFIELD



Suzanne Tedrick  
DEVELOPMENT -  
SPECIALIST - IBM



Sara Taylor-Domas  
CEO -  
UNIVERSITY OF SHEFFIELD

IEEE WIE event!

## ESW 2019



## Embedded Systems Workshop 2019

October 19, 2019, 8:30 a.m. to 4:30 p.m. (Saturday)

EC 116, Engineering Center

Oakland University, 115 Library Drive, Rochester, MI 48309

IEEE Computer Society in collaboration with the IEEE Education Society (South East Michigan Chapters) is offering a one-day (**free**) workshop on Embedded Systems on Saturday, October 19<sup>th</sup>, 2019. This workshop is open to all engineers and students. This is the 17<sup>th</sup> year that the event is being held.

The aim is to disseminate knowledge, directly benefitting the IEEE members, at the same time **improve the technology skills pool, indirectly boosting the Michigan economy.** Speakers and experts from the embedded systems industry will be making presentations, and will also be available for discussions and networking throughout the day. In addition to the technical presentations, there will be industry information display and professional recruitment tables. Use this opportunity for networking with other engineers, industry experts and embedded enthusiasts.

Please confirm your participation by registering on the IEEE events web site (**Deadline is 15<sup>th</sup> October 5 pm!**)

<http://bit.ly/embed2019>

Venue: EC 116, Engineering Center, Oakland University, 115 Library Drive, Rochester, MI 48309



**Sponsors: Vector North America, DataSpeed Inc, Beningo Embedded Group, Altair, Intrepid CS, iSystem, SimuQuest and many others...**

Vendor tables with demos, technical booklets, and job recruiting opportunities will be available. There is no cost to attend. A complimentary lunch is provided. Random raffle and door prizes representing the embedded systems industry will take place. All are welcome. Do post this flyer in your workplaces, share/inform your peers & colleagues about this event. It is a great way learn not only what is going on, but network with other professionals as well.

*Brought to you by the IEEE SE Michigan Computer Society & IEEE SE Michigan Education Society. Do consider choosing to become a member, boost your technical skills, broaden your awareness of compute-based engineering in the region, support numerous similar initiatives & learn other benefits this brings.*

**Open to all, Pre-registration is necessary prior to attending! The deadline to register is 15<sup>th</sup> October 5 PM**

When responding, please indicate your lunch preference: *vegetarian sandwich or chicken wrap*

For Technical questions, contact the Program Committee at: [esw2019@ieee-sem.org](mailto:esw2019@ieee-sem.org)

A CEU/PDH Certificate will be made available for participants who Pre-register and attend the full event.

**ESW 2019 Program & Organizing Committee:** Subra Ganesan (Chair), Sharan Kalwani (Vice Chair), Ashok Prajapati, Ramesh S, Carla Gerst and Ben Sweet



## Cybersecurity Tips



Fellow IEEE members:

I am writing today to update you about a recent increase in fraudulent email scams targeting IEEE members.

- These fraudulent email messages have used spoofed addresses to pose as someone known to the recipient.
- Fraudulent messages often contain personal details about IEEE members drawn from non-IEEE online sources and from social media sites accessible by search engines.
- These emails attempt to commit financial fraud by exploiting the professionalism and camaraderie among IEEE members.
- These fraudulent messages often include a request for urgent assistance and will ask the recipient to transfer funds or goods to a third party.

I encourage all IEEE members to remain alert to the risk of fraudulent emails and to maintain continued vigilance online.

Please feel free to contact the IEEE IT security team by replying directly to this email if you have any questions, concerns, or need help with this topic.

With best regards,  
Steve

Stephen Welby  
Executive Director

---

[Manage your IEEE Communications Preferences](#)



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[Website](#) | [Privacy Policy](#) | [Contact](#)

**IEEE Cybersecurity Alert!**

**The scammers often perform a fair amount of research before executing financial scams over email.**

**The rely heavily on social engineering tactics to trick unsuspecting employees and executives.**

**Email Financials Scams**

These scams target companies and individuals seeking to gain access to funds or to trick someone into performing a financial transaction.

Corporate or publicly available email accounts of executives or high-level employees are either spoofed or compromise to execute these scams.

One example of this is Executive fraud, wherein the scammers spoof or hack into the email of an organization's executive in order to initiate a fund transfer to their own accounts, request payments or the approval of gift cards.

**IT Security****Beware of Financial Email Scams**

## IEEE Cybersecurity Alert 2

## ***The SCAMS***

### ❖ The Bogus Invoice

- Asks to wire funds for invoice payment to an alternate, fraudulent account via spoofed email or telephone call.

### ❖ Executive Fraud

- Impersonate high-level executives or other types representatives requesting the initiation of a wire transfer or invoice payment.

### ❖ Email Account Compromise

- An email account of an employee or legal representative is hacked and then used to make requests for invoice payments, wire transfers or gift cards.

### ❖ Attorney Impersonation

- Impersonate lawyers or representative of law firms pressuring the contacted party into acting quickly or secretly in handling the transfer of funds.

### ❖ Data Theft

- Impersonate role-specific employees to get personal or sensitive information to tailor the scams.

## Email Message Red Flags

### ❖ Spoofed sender domain

- Scammers usually register a domain similar to its target using slight variations

### ❖ Position or Organizational role of the e-mail sender

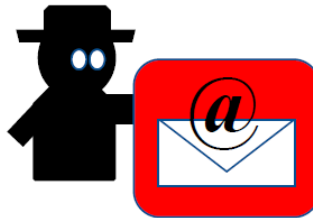
- Scammer pose as someone influential in an organization

### ❖ Urgent e-mail subject requesting immediate fund transfers, invoice payments or gift cards

- Typical subject lines imply urgency regarding these transactions

### ❖ Body of the E-mail

- Message is asking for fund or wire transfers to an account that's different from ones normally used for that specific transaction. This may also include requests for purchases of gifts cards.



## **Always verify!**

- ✓ Confirm details with the parties involved, especially when it comes to messages that involve fund transfers, invoice payments and the purchase of gift cards.
- ✓ Do not use any of the information included in the suspicious email to validate the request.
- ✓ Establish secondary verification protocols that include non-email (such as phone or text messaging).

## IEEE Cybersecurity Alert 3

## Phishing – Internet Fraud Scam

### About the scammer

- Pretends to be a reputable person or organization.
- Sends email messages that appear to be from financial institutions or credit card companies that try to trick recipients into giving personal or financial information.

### Other related terms:

- Spear phishing – Targets a selected group of people
- Whaling – Targets executives

## Be Careful!

Review email messages

- ✓ Check the headers
  - Someone you know or bogus sender?
  - Sent to bogus list?
- ✓ Check the subject
  - Immediate action required?
- ✓ Check the body of the message
  - Generic greeting used?
  - Immediate action required?
  - Misspellings and grammatical errors?
  - Includes links or attachments?

***Stop, Think  
before you Click!***

**Trust your instincts!**

## IT Security

### *How to Spot a Phishing Email*



## IEEE Cybersecurity Alert 4



## Common Phishing Scams

### Business Email Compromise (BEC)

- Fake wire transfer requests
- Often targets "Money people" who have authority to make a payment or wire money

### IRS Scam

- Request a refund in your name/SS#

### Tech Support Scam

- Caller pretends to be from Microsoft or other vendor
- Attempts to have you send them money or let them control your computer

### Holiday & Charity Scams

- Often at Christmas or after a disaster – Bogus money requests

## What to Watch for?

### Watch out for misspellings or unknown senders

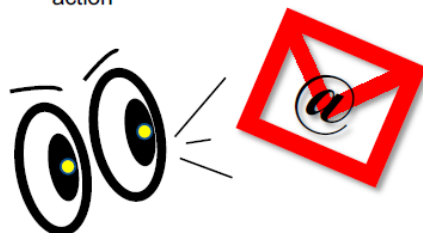
- Legitimate business names are missing or the name of the business is misspelled
- Unexpected email from an address you have never communicated with before

### Watch out for email sent to an unknown email address and pay attention to subject lines

- Example: To: [payroll@companyxyz.com](mailto:payroll@companyxyz.com)
- Careful with "too good to be true" offers or threatening statements (meant to elicit emotional reaction)

### Watch for generically addressed message (Dear Customer) and its content

- Especially the ones regarding a personal account, financial information or threatening legal action



### Watch out for links or attachments included in the message

Hover over the the link to see where the URL would actually take you, if clicked

Scammers will try to implant real business names in the URL

**In all circumstances unexpected attachments should not be opened.**

**These points do not represent all the ways in which scammers will attempt to phish you.**

**You are the one who has the best understanding of what sort of email messages you usually get at home and at work.**

**If an email just feels 'off' for any reason, that's enough to be wary of it.**



ZF Employment Ad

A man with a beard wearing Google Glass, looking at a glowing 3D mechanical assembly of a car's drivetrain. The background is a blurred industrial setting. The ZF logo is in the top right corner. The text 'WHAT'S NEXT?' is prominently displayed in the center right, with 'JOIN ZF' below it. Further down, it says 'WORK AT THE FOREFRONT OF AUTOMOTIVE INNOVATION WITH ZF, ONE OF THE WORLD'S LEADING AUTOMOTIVE SUPPLIERS.' At the bottom right, the URL 'ZF.COM/CAREERS' is shown.



# WHAT'S NEXT?

JOIN ZF

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

[ZF.COM/CAREERS](https://zf.com/careers)

## Computer Society Event

**SE Michigan CS Chapter  
Presents**

***“Cryptocurrency impact on Global Economy”***



We hear a lot of buzz about bitcoin and its impacts on markets across the globe. Today, in 2019, the question of whether or not digital money can actually become a useful and secure part of the world economy is being seriously debated. This talk is to discuss the various aspects of this “new-comer” at different levels.

**Audience**

This talk is for everyone who is tech-enthusiastic and willing to pamper/discuss their curiosity. Anyone as beginners/students young/experienced engineers, Managers who are keen plus motivated to learn more about technology are welcome.

**Speaker: Nilesh Dudhaia**

*Nilesh is an experienced Mechanical engineer specializing in FEA (Finite Element Analysis) techniques and methods. He has significant experience in engineering technical support roles, having spent more than 10+ years with Fortune 500 clients for complete CAE project life cycle, i.e. from project execution to project management. He had considerable expertise in multiple domains including Automotive, Construction and Agriculture machines, Industrial Products. These days he enjoys creating Automation, Scripting and Development for CAE software. He is also pursuing a masters in Engineering management at Oakland University.*

**At Glance****• When:**Date: Sept 18<sup>th</sup>, 2019

Time: 5:30 - 7:15 pm

**• Where:**Room 127, Dodge Hall  
Oakland University Rochester,  
MI 48309**• Parking:**118 Library Drive  
Oakland University Rochester,  
MI 48309**• Energy Sources:** Soda Pop,  
water, Vegetarian pizza to  
maximize information  
absorption bandwidth**• Audience:** All Students,  
Members, Professionals and  
Industry Techs

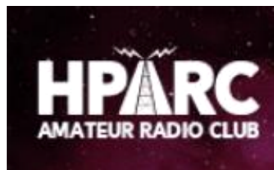
-----  
**Sponsored by**  
**SE Michigan Chapters**  
**Education Society**  
**Computer Society**

**Pre-Registration Required!**

<https://events.vtools.ieee.org/m/203438>

Amateur Tech Ham

## AMATEUR RADIO LICENSING COURSE



### BECOME A HAM RADIO OPERATOR!

**THE HAZEL PARK AMATEUR RADIO CLUB IS OFFERING  
A 10-WEEK COURSE FOR**

### **THE TECHNICIAN (ENTRY) AMATEUR RADIO LICENSE EXAMINATION**

(NO MORSE CODE REQUIRED)

**WHEN:** Every Thursday, from September 12, 2019 TO November 14, 2019—7PM- 9PM

**WHERE:** Southfield Parks & Rec Center (Basement)

26000 Evergreen, Southfield, MI 48034

**COST:** *INSTRUCTION IS FREE; LICENSE MANUAL IS \$25, AVAILABLE FROM THE INSTRUCTORS AT THE FIRST SESSION.*

*FCC License EXAM WILL TAKE PLACE AT THE LAST SESSION (Nov. 14) FEE: \$15*

**\*\*\*PRE-REGISTRATION IS NECESSARY\*\*\***

**AMATEUR RADIO IS ALIVE AND WELL! WE ARE AT THE CUTTING EDGE OF TECHNOLOGY! JOIN OVER 2.5 MILLION HOBBYISTS AROUND THE WORLD--and in Orbit-- WHO ARE INVOLVED IN EMERGENCY RESPONSE, INTERNATIONAL FRIEND-MAKING, RADIOSPORT CONTESTS, DIGITAL SIGNAL PROCESSING, SATELLITE DESIGN/BUILDING. A GREAT PLAYGROUND FOR HACKERS/MAKERS.**

*Due to Space Limitations, priority will be given to CERT members, then according to earliest registration times.*

**QUESTIONS AND REGISTRATION—CONTACT Jerry: [W9NPI@ARRL.NET](mailto:W9NPI@ARRL.NET)**

**SPONSORED BY  
THE HAZEL PARK AMATEUR RADIO CLUB, [HPARC.ORG](http://HPARC.ORG)  
Southfield Emergency Management Division**

Amateur General Ham

## GENERAL CLASS LICENSING COURSE



### TAKE THE NEXT STEP!

**THE HAZEL PARK AMATEUR RADIO CLUB IS OFFERING  
A 12-WEEK COURSE FOR**

### THE AMATEUR GENERAL CLASS LICENSE EXAMINATION

**WHEN:** Every TUESDAY, from September 10, 2019 TO November 26, 2019—7PM  
TO 9PM

**WHERE:** SOUTHFIELD PARKS & REC BUILDING (BASEMENT)  
26000 EVERGREEN, SOUTHFIELD, MI

**COST:** INSTRUCTION IS FREE; LICENSE MANUAL IS \$25, AVAILABLE FROM THE  
INSTRUCTORS AT THE FIRST SESSION.

**FCC License EXAM WILL TAKE PLACE IN OAK PARK (DEC 3) FEE: \$15**

**\*\*\*PRE-REGISTRATION IS NECESSARY\*\*\***

**YOU'VE THOUGHT ABOUT IT--NOW, YOU CAN FINALLY GET AROUND TO IT! THERE'S  
NOTHING LIKE SEEING YOUR HARD WORK PAY OFF—HF PRIVILEGES WILL OPEN A NEW  
WORLD OF DXING TO YOU!**

**REGISTER: [W9NPI@ARRL.NET](mailto:W9NPI@ARRL.NET)**

**SPONSORED BY  
THE HAZEL PARK AMATEUR RADIO CLUB, [HPARC.ORG](http://HPARC.ORG)  
CITY OF SOUTHFIELD EMERGENCY MGMT DIVISION**



Amateur Extra Ham

## AMATEUR EXTRA LICENSING COURSE



### BECOME THE BEST YOU CAN BE!

**THE HAZEL PARK AMATEUR RADIO CLUB OFFERS A 12-WEEK COURSE  
FOR  
THE AMATEUR EXTRA CLASS LICENSE  
EXAMINATION**

**WHEN: TUESDAYS, from SEPTEMBER 10, 2019 TO NOVEMBER 26, 2019—7PM TO 9PM**

**WHERE: HAZEL PARK SCHOOLS ADMINSTRATIVE OFFICE, 1620 E. ELZA AVE,  
HAZEL PARK, MI**

**COST: INSTRUCTION IS FREE; LICENSE MANUAL IS \$25, AVAILABLE FROM THE  
INSTRUCTORS AT THE FIRST SESSION.**

**FCC License EXAM WILL TAKE PLACE AT THE LAST SESSION (NOV 26) FEE: \$15**

**\*\*\*PRE-REGISTRATION IS NECESSARY\*\*\***

**NOW, YOU CAN FINALLY GET AROUND TO IT! THERE'S NOTHING LIKE SEEING YOUR HARD  
WORK PAY OFF—OUR INSTRUCTOR IS INNOVATIVE AND THOROUGH, AND YOU'LL HAVE  
AN EXCELLENT CHANCE OF PASSING, IF YOU DO YOUR HOMEWORK.**

**REGISTER: [W9NPI@ARRL.NET](mailto:W9NPI@ARRL.NET)**

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**THE HAZEL PARK AMATEUR RADIO CLUB, [HPARC.ORG](http://HPARC.ORG)**





## Amateur: 1 Day Class



The next KB6NU One-Day Tech Class will take place on Saturday, September 28, 2019 at the University of Michigan – Ann Arbor, in the EECS Building, 1301 Beal Ave., Ann Arbor, MI (room tbd). The class will start at 9:00 am and run until 3:30 pm, at which time the license exam will be given.

There is a \$25 charge to take the class, but high school and college students can attend for free. Please register in advance. There are three ways to register:

- If you're a high school or college student, all you have to do to register is send an email to [cwgeek@kb6nu.com](mailto:cwgeek@kb6nu.com) stating that you want to take the class.
- All others, go to <https://www.kb6nu.com/product/one-day-tech-class-ann-arbor-20190928/> to register online.
- Send a check for \$25 to Daniel M. Romanchik, 1325 Orkney Dr., Ann Arbor, MI 48103. When paying by check, please include a note with your e-mail address so that I can send you logistical information for the class.

In addition, there is a \$15 fee to take the test. This fee is payable directly to the Volunteer Examiners on the day of the class.

When your registration is received, you will be put you on another e-mail list and sent more details a week or two before the class.

**Free study guide** The study guide for this class is the No Nonsense Technician Class License Study Guide. You can download the PDF version for free from <https://kb6nu.com/study-guides/>. Before the class, read through the study guide a few times, then take some online practice tests. If you don't study before the class, I can guarantee that you'll have a hard time passing the test.

**Need more info?**

For more information, contact Dan Romanchik, KB6NU: 734-930-6564, [cwgeek@kb6nu.com](mailto:cwgeek@kb6nu.com)

73, <--ham radio lingo for "best regards"

Dan KB6NU

**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 &amp; 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)

**Curated & Formatted By**

**Sharan Kalwani,**  
**Editor, Wavelengths,**  
**2017-2018-2019**

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

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

### SEM Web Calendar:

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

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

### SEM Web Meetings:

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

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

### vTools Meetings:

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

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

### Other IEEE Local Meetings:

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

## Other Happenings

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

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

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

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

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

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

**Experimental Aircraft Association**  
<https://www.eaa.org/en/eea/eea-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 2019 arrangement of communications links designed to provide inter-unit coordination and collaboration.

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

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

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

### Other Meetings:

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

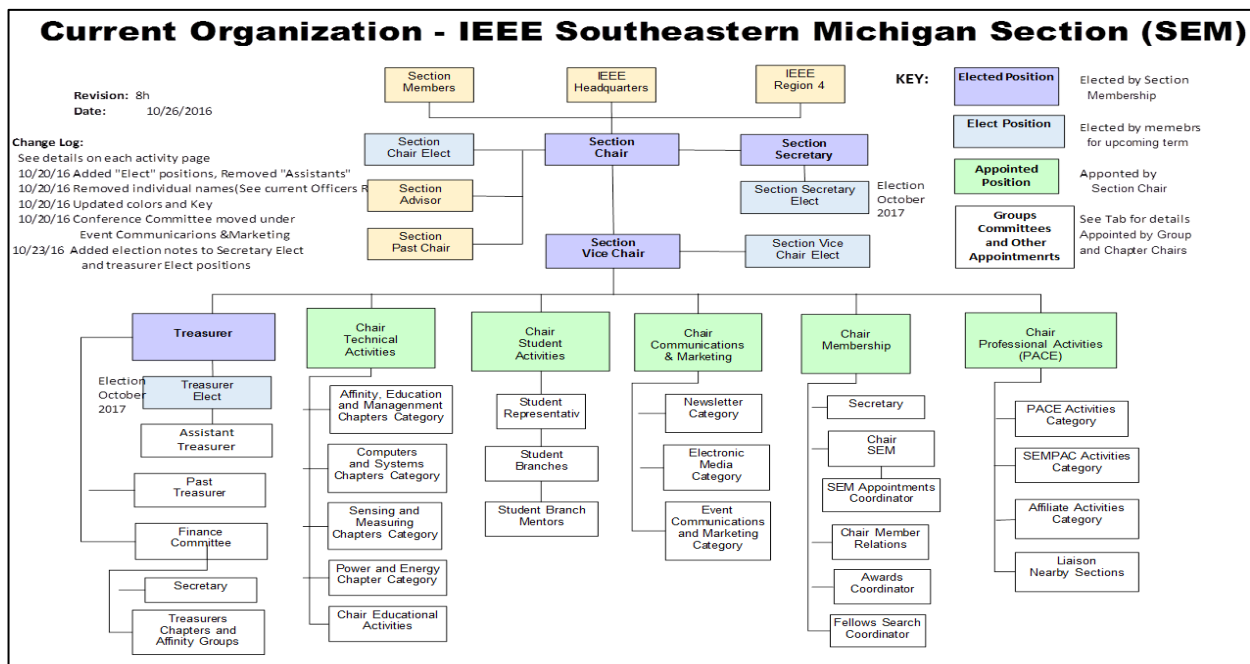
However, members of the section may have multiple technical interests and would like to have meeting information of other chapters. In order to communicate the meeting dates of all the chapters, affinity groups etc., to our members to facilitate their attendance, leaders of the groups are requested to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

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

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

**Eric George** - SEM 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 2019 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 2019 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 11; Vtools link <https://events.vtools.ieee.org/m/202560>

F2F, Thursday October 5; Vtools link <https://events.vtools.ieee.org/m/203338>

Teleconference, Wednesday November 6; Vtools link <https://events.vtools.ieee.org/m/203339>

Teleconference, Thursday December 5; <https://events.vtools.ieee.org/m/203340>

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

OR

[k.williams@ieee.org](mailto:k.williams@ieee.org)  
[sharan.kalwani@ieee.org](mailto:sharan.kalwani@ieee.org)  
[nilesh.dudhaia@ieee.org](mailto: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](mailto:wavelengths@ieee-sem.org) OR any one of the following:

[sharan.kalwani@ieee.org](mailto:sharan.kalwani@ieee.org)  
[k.williams@ieee.org](mailto:k.williams@ieee.org)  
[nilesh.dudhaia@ieee.org](mailto: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](http://www.ieee-sem.org/ewavelengths/?page_id=181).

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

### Leadership Meetings

#### SEM Executive Committee Monthly Teleconferences:

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

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

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

#### SEM Standing Committee Meetings:

#### SEM Affinity Group Meetings:

#### SEM Technical Society/Chapter Meetings:

#### SEM University Student Branch Meetings:

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