

Wavelengths



Volume 58 – Issue 10

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October ExCom & IEEE Day



Join Us to Celebrate IEEE Day 2018: Social Mixer* this Thursday, October 4!

***ExCom Face-to-Face meeting immediately preceding**

RSVP: <https://events.vtools.ieee.org/m/176421>

Directions & Parking: [click here](#)

WHAT: Join students, faculty, young professionals, and members for a networking dinner.

WHY: Expand your network, meet others!

HOW MUCH WILL IT COST ME? It's ***FREE*** to attend! Well, you do still have to get here...

NOT A MEMBER? No problem! We want to meet you, so come see what IEEE is all about!

DRESS CODE? Absolutely, positively, no suits.

HOW DO I GET IN? RSVP [here](#)!

CAN I BRING A GUEST? Sure, but they have to [RSVP](#) as well!

We hope to see you there!

Section Chair's Message**Elections:**

Nominations for 2019 are closed and the Election process has begun. You should receive an e-mail inviting you to vote in the SEM officers election and any societies or affinity groups you belong to. If you have not received an e-mail invitation, please check your IEEE personal settings to be sure you have not opted out of receiving mail from our section.

Fall Conference:**“IMAGINE THE FUTURE:
DEVELOPING ARTIFICIAL
INTELLIGENCE”**

The Section Fall Conference is planned for November 3 at 9:30 AM at Schoolcraft College's Vista Tech. The conference information is available at <http://sites.ieee.org/sem/fall-2018-section-conference/> or you can also be access it at our SEM web site (www.ieee-sem.org).

IEEE Day – Social Mixer

Please see the front page for details of this event coming up quickly on October 4 in Ann Arbor.

2019 Budget:

This month the Financial Committee (Fin Com) will begin the process of collecting information and requests for the SEM 2019 Budget. The ExCom will begin reviewing the 2018 budget the first week of November. An updated version, based on inputs from the ExCom, will be considered at the December ExCom meeting. A Final

Budget will be presented and approved shortly thereafter.

If your group, committee or chapter has approved funding in the budget, you need not request addition funding. Please remember funding payments are based on actual expenditures, expense reimbursement requests, and the budget is a not to exceed guidance.

Should you find that you need funding outside of the budget, the process is to request it through the Fin Com.

Web Site:

We have a lot of activities coming up this Fall season and the easiest to learn what's going on is on the interactive calendar at our web site. www.ieee-sem.org .

e-Wavelengths:

The close second way to learn what is coming up is in the e-Wavelengths. <http://www.e-wavelengths.org/>

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

Election 2018**2018 SEM Officer Elections!**

Elections ballots for all Section and Geo-unit offices will be launched on October 2nd, and close on October 23rd.

Affinity Groups and Technical Chapters:

Elections for the Section's four 'Affinity Groups and seventeen Technical Chapters' (geo-units) officers:

- **Chair,**
- **Vice-Chair,**
- **Secretary,**
- **Treasurer,**

This will continue without changes.

Section Chair and Section Vice-Chair will begin their year (2019) as 'Elect' – Officers in training 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.)

Write-in Option:

The process for nominations to be placed on the ballot opened on August 10, 2018 and closed on September 21, 2018. This process allows us to put candidate information on the electronic election system.

If, for some reason, you found the 42 day 'window' for registering a candidate (yourself or another member) was too short, each of the election ballots contains the option for a 'write-in' during the actual election. In this way, someone who 'missed' the nomination process can still enter a name on the final election document.

Note: Since a name that is already on the ballot is likely to receive a large number of 'hits', any 'write-in' candidates are advised to have as many of their friends and associates as possible to also 'write-in' the same name.

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.

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. (IEEE wants them to focus on getting that all-important degree before becoming too involved with Section level activities.)

Officer Training

The Technical Activities Committee (TACom) plans a series of Officer Training events to cover the skills needed by our SEM Officers. These are in the early planning stage. More on these training events will be sent to all officers as the schedule solidifies. Look for announcements in the Wavelengths and e-Wavelengths newsletters.

.....meanwhile.....

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/>

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://sites.ieee.org/sem/about-sem/volunteer-portal/>

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.

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 will be 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=1DAyfMNizv4W0lh_hwlsKKvvIPGNLHexoEi99FFmhnile

kw

2018 Fall Conference



Photo by Andy Kelly on Unsplash

IEEE SOUTHEASTERN MICHIGAN FALL CONFERENCE - SATURDAY, NOVEMBER 3 SCHOOLCRAFT COLLEGE

YOU ARE INVITED!

Registration is Required and Spots are Limited

Register [Here!](#)

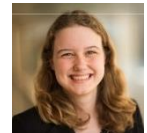
EVENT
SUBTOPICSAI IN
TRADITIONAL
INDUSTRIESAI IN SERVICE
INDUSTRIESDEVELOPMENT
METHODSETHICS, PRIVACY,
WORKFORCE,
DISPLACEMENTTHE HUMAN
EXPERIENCE

KEYNOTE ADDRESS



The Ups and Downs of Word Embeddings

[Rada Mihalcea, Ph.D.](#) and [Laura Wendlandt](#)



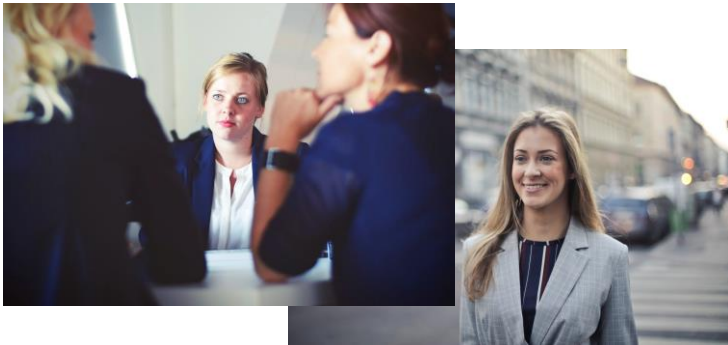
Electrical Engineering and Computer Science, University of Michigan

Words are the central units of the languages we all speak. In a similar way, word representations are the core units of algorithms that we build to automatically process language. These representations form the foundation for many applications of natural language processing, ranging from question answering systems, to chat bots, search engines, or systems for machine translation. Dr. Mihalcea and Laura Wendlandt (Ph.D. candidate) will take a deep dive into word embeddings – a popular way of representing words with the help of neural networks trained on very large collections of texts.

**Big Thank You to Our
Sponsor!
[VisTaTech](#)**



Membership Events



**IEEE SOUTHEASTERN MICHIGAN WOMEN
IN ENGINEERING + SOCIETY OF WOMEN
ENGINEERS DETROIT SECTION**

SATURDAY, NOV. 10 10AM-2PM

CONTINENTAL @ AUBURN HILLS

PROFESSIONAL HEADSHOTS EVENT

WIE/SWE Student Members \$5 • WIE/SWE Professionals \$10*

*All event proceeds will be donated to SWE-Detroit Scholarships Fund

PLUS PERSONAL BRAND AND IMAGE WORKSHOPS

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****ADVANCED REGISTRATION REQUIRED**SPOTS ARE LIMITED****

REGISTER HERE: <https://formsmartis.com/form/1znv?mode=h5>

Who doesn't like some quality time at the **Henry Ford Museum**
to visit with their fellow IEEE members and their families?



Save-the-Date

Sunday, November 11

Afternoon

20900 Oakwood Blvd, Dearborn



**We'll be gathering for a stroll among
some of the finest historical exhibits and artifacts in the Metro Detroit Area.
More information and registration details will follow soon.**

**So, grab your spouse, kids, friends, and neighbors, and
we look forward to seeing you there!**

ESW 2018 Flyer

Lawrence
Technological
UniversityIEEE
Southeastern
MichiganIEEE
computer
society

Embedded Systems Workshop 2018

October 20, 2018, 8:30 a.m. to 4:30 p.m. (Saturday)

Lawrence Technological University (LTU)

21000 West Ten Mile Road, Southfield, MI, 48075

IEEE South East Michigan Computer Chapter is offering a one-day (**free**) workshop on Embedded Systems on Saturday, October 20th, 2018. The workshop is open to all engineers & students. This is the 16th 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 18th October 5 pm!**):

<https://bit.ly/esw2018>

Venue: LTU, Room A200, Architecture Bldg, 21000 West 10 Mile Road, Southfield, MI, 48075



Sponsors: Vector North America, Beningo Embedded Group, DataSpeed Inc, LTU, SimuQuest, iSystem, Intrepid CS, Altair 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 controllers and systems industry will take place. All are welcome. **Do post** this flyer in your workplaces, share/inform your peers and 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 & 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 18th October 5 PM

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

For Technical questions, contact the Program Committee at: esw2018@ieee-sem.org

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

ESW 2018 Program & Organizing Committee: Subra Ganesan (Chair), Sharan Kalwani, Ashok Prajapati, Ramesh S, Carla Gerst and Ben Sweet

ESW 2018 Announcement

The 16th Annual IEEE Embedded System Workshop is planned on October 20th, 2017, 8:30 AM to 4:30 PM (Saturday), in Auditorium Room A200, Architecture Building, LTU, 2100 West 10 Mile Road, Southfield, Michigan 48075

Please see November 2017 issue of Wavelengths Newsletter for a summary of the last year's event http://sites.ieee.org/sem/files/2017/11/November_2017_WL_Rev1.8-1.pdf

Please be sure to share as much as possible about this event in your organization for maximum participation in this workshop. In addition to the presentations, there will be vendor display tables and recruitment tables. We encourage all IEEE members to use this opportunity to interact & network with fellow professionals & engineers.

Please confirm your participation by **registering** on the IEEE vTools site: <https://bit.ly/esw2018>.

Lunch will be provided courtesy of several workshop sponsors, supporters, and conference well-wishers.

For Technical Questions, feel free to contact: **Prof. Subra Ganesan** at: ganesan@oakland.edu; or by phone: (248) 370 2206 or **Sharan Kalwani** at: sharan.kalwani@ieee.org; or by phone: (248) 980-UNIX

A Certificate of Attendance will be available for participants who preregistration and attend the full event.

The current schedule of speakers has been finalized and is shared here, for your attendance planning purposes.

Hope to see as many of you there at the 2018 edition!

--Sharan Kalwani

8:00 AM	Registration table Opens	
8:30 AM	Ganesan & Kalwani, ESW2018	Welcome
8:35 AM	Dr Virinder Moudgil, President, LTU	Keynote Speech
9:00 AM	Atilla Bulmus, Infineon	The needle in the haystack or Problem Solving strategies for Microcontrollers
9:35 AM	Jeremy Mangas, SimuQuest	There Must be a Better Way: Automating the Boring Stuff in Embedded Controls Development
10:10 AM	Micho Radovnikovich, DataSpeed	Design and Implementation of Autonomous Research Vehicle Platforms
10:45 AM	Coffee Break	Door Prizes/Raffle
11:05 AM	CJ Chung, LTU	ACTor: A Platform to Build a Talent Pipeline For Autonomous Vehicle R&D
11:40 AM	Salvador Alamanza, Vector North America	Introduction to Service Oriented Architecture (SOA) in Automotive Systems
12:15 PM	Lunch Break	Courtesy of Sponsors: SimuQuest, Intrepid CS & LTU; Door Prizes/Raffle
1:00 PM	Dave Robins, Intrepid CS	Cars with Lasers: the who, what, how and why of LiDAR
1:35 PM	Jeff Brockmole, Harman	Going to Eleven: Increasing Car Audio System Efficiency via DSP
2:10 PM	Felix Martin, iSystem	AUTOSAR Profiling for Multi-Core and Multi-ECU Automotive Applications
2:40 PM	Coffee Break	Door Prizes/Raffle
3:00 PM	Richard Kolk, Altair	Simulation-Driven Innovation through better Embedded Systems Development
3:35 PM	Bill VeenHuis, NVIDIA	Art of the possible in Deep Learning
4:00 PM	Jacob Beningo, Beningo Embedded Group	Jump Starting Code Development to Minimize Software Defects
4:30 PM	Ganesan & Kalwani, ESW2018	Grand Prize/Final Raffle, Vote of Thanks, Distribute Certificates

Robotics & Mcity

Register at <https://events.vtools.ieee.org/m/174406>**PRESENT****Connected and Automated Vehicles: History, Development, Mcity, and Future outlook****ABSTRACT**

Mcity is a research center established 3 years ago at the University of Michigan, which focuses on the research and early deployment of Connected and Automated Vehicles (CAVs). A unique feature of Mcity is the development of living laboratories, and their use as tools for research and education. In this talk, Dr. Peng will discuss current status of CAVs, major activities at Mcity, and their future challenges, including their societal impacts.

WHERE

University of Michigan Mcity Campus
2901 Baxter Road
Ann Arbor, Michigan

WHEN

Thursday October 18, 2018
6:00 PM to 8:00PM

The event is sponsored by Mcity of the University of Michigan at Ann Arbor. Admission is free, but **registration is required** for an accurate food head count. Pizza and drinks to be provided by Mcity. This is a great opportunity to network and meet peers in the Robotics field!

SPEAKER BIOGRAPHY

Dr. Huei Peng is the Roger L. McCarthy Professor of Mechanical Engineering at the University of Michigan and currently serves as the Director of the University of Michigan Mcity. Huei Peng received his Ph.D. in Mechanical Engineering from the University of California, Berkeley in 1992. His research interests include adaptive control and optimal control, with emphasis on their applications to vehicular and transportation systems. His current research focuses include design and control of electrified vehicles and connected/automated vehicles.

In the last 10 years, he has been involved in the design of several military and civilian concept vehicles, including FTTS, FMTV, Eaton/Fedex, and Super-HUMMWV—for both electric and hydraulic hybrid concepts. He served as the US Director of the DOE sponsored Clean Energy Research Center—Clean Vehicle Consortium, which supports more than 30 research projects related to the development of clean vehicles in the US and in China.

ZF Employment Ad





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In Memory of....

It is with great sadness that we share news about our long time member and volunteer Basil Sherlund (January 21, 1941 – November 14, 2017), who passed away last year. We only just learned of his sad demise. Attached here is his Obituary. You may go to the funeral home web page to share your thoughts on Basil, RIP.



Basil A. Sherlund, age 77, passed away on Tuesday, November 14, 2017 in West Branch. He was a resident of Rose City, formerly resided in Madison Heights, MI. He was born January 21, 1941 to Threasa and Earnie Sherlund in Detroit. Basil was married to Margaret (Chamberlain) Sherlund, the love of his life, for 34 years. Margaret preceded him in death in August 2015. He volunteered at Oakland Community College, helped with fundraising, and he and Margaret were grief counselors.

Over the course of forty years, with the last twenty five years as a member of IEEE, Basil has been involved in the development of military Command and Control systems and commercial Information Technology systems. Starting directly out of college as a defense contractor, his assignments consisted of the development of command and control systems for all branches of the military. The computer systems included AWACS for the Air Force, TACFIRE for Army artillery, TACTADS, and the Field Artillery Tactical Data System that communicates directly with marine and air force combat forces of the military. He also worked for the Detroit Homeland Security.

Basil is survived by his brother, Kenneth (Linda) Sherlund of Rose City; nieces Laura (Mike) Coleman, Kathy Sherlund, Julie (Duane) Sherlund-Pelfrey; great nieces and nephews, Stefphen (Brandy) Shellenbarger, Dwane (Abby) Coleman, Brandi Coleman, Brook Coleman, Seth King, and Paige Sherlund-Pelfrey; great great niece, Saylor Shellenbarger.

Private services have been held.

Arrangements were handled by Steuernol & McLaren Funeral Home in West Branch, MI. Online condolences can be shared at www.steuernolmclaren.com

Global Audio Teleconference in honor of Late Dr. A.K Kamal, IEEE Fellow.**Dr. A.K. Kamal (1926 – 2018)**

Dr. A. K. Kamal, one of the first IEEE Fellows from India in early 70's died at the age of 92 at Burlington, MA. In order to pay homage to him, an audio global conference was organized by his former students, friends and colleagues. This global conference was attended by the participants from USA, England, Canada, New Zealand and Australia. The global conference lasted for more than one hour and was attended by 41 participants. The YouTube link of the audio conference is given “ <https://www.youtube.com/watch?v=HDB32dSmoyE> ”.

A brief biography of Dr. A.K. Kamal is as below.

Aditya Kamal, Ph.D., long-time resident of Burlington, MA and Chief Engineer at Waltham based ARCON Corporation passed away on Thursday, April 19th at the age of 92.

Adit, as his colleagues called him, continued to defy the odds and worked all the way into his nineties. He had a passion for life and impeccable work ethic. He is survived by his wife Saroj Kamal, daughter Amita Sharma and two sons Pankaj and Arvind Kamal. He loved his family and was eternally proud of his eight grandchildren Raj, Nik, Shaan, Shivani, Jasmyn, Navahn, Akshay and Alex. Born in Kairana, India, Adit received a Bachelor's degree in Physics from Benares Hindu University and Masters in Science from Allahabad University.

Following that he received a Master's in Science in In Electronics and Communications Engineering, from the famed Indian Institute of Science, Bangalore.

He emigrated to England in the early 1950s and worked as an engineer at Marconi Wireless and Telegraph Company making advancements in Radar Technology. He was offered a position as a communications engineer specializing in Radar and Microwave technology at Thompson CSF (now part of Thales) in France. Following his move to Paris, he enrolled in the Doctorate program at the prestigious Sorbonne (University of Paris) and enrolled in classes to learn French so that he could complete his thesis, written and presented in French, towards a Ph.D. in Electrical Engineering. Adit went back to India to marry his sweetheart Saroj and start their wedded life in Paris. He passed away just short of their 63rd anniversary.

During a conference he received an offer from Purdue University in W. Lafayette, Indiana in the US to join the Electrical Engineering department as a professor. Adit, Saroj and their new baby daughter left Paris to move to the United States. After numerous accomplishments and a son as an addition to the family, he followed his mentor, Dr. Thomas Jones to the University of South Carolina. During his tenure as a professor in engineering, Adit sharpened his skills with industry assignments during the summers with leading organizations such as Bell

Labs, Varian Associates, Center for Applied Physics at John Hopkins University and MIT Lincoln Labs. At this point in his career he decided to act on his desire to give back to the old country and decided to move back to India with vision of creating a center of education related to Electronics and Communications Engineering. He landed at University of Roorkee, (India). This university was an engineering school that had been established during the commonwealth era. As the Chairman of this newly created Department of Electronics and Communications Engineering, he was successful in raising capital to construct a state of the art education and research facility including a 15-story communications tower that even today, stands as a landmark for the entire university. The department was soon matriculating hundreds of Bachelors, Masters and PhD students. For his contribution to the advancement of technology, he was elected by his peers to be a Fellow of the IEEE (Institute of Electrical and Electronics Engineers). University of Roorkee was later inducted into the IIT (Indian Institute of Technology) network of schools. After a substantial tenure and the birth of their third child, a son, he left India with the family and took on a visiting assignment at engineering university Ecole Polytechnique, in Grenoble, France. Following that he moved to Boston as a professor at Boston University and settled to this day in the Boston area. Mid-career he decided to transition from academia to industry and joined defense focused systems engineering company the MITRE Corporation where he worked on air traffic control and communications. He left MITRE to join ARCON Corporation where he became the Chief Engineer.

Adit was an avid reader, loved technology and tinkering with the latest devices. Even in his nineties he was proficient with Windows, Microsoft Office, iPhones, iPads and entertainment electronics. His favorite pastime was watching ethnic programming with his wife that consisted of complete seasons of sitcoms and dramatic series. He was quite proud of his collection of recorded shows that started with VCR tapes, then DVDs and finally transitioned to DVRs. In his later years he liked going for walks and avoided the New England weather by walking indoors at the Burlington Mall or at Costco down the street from Arcon. He also kept his French language skills sharp by stopping just about anybody that looked like they spoke French and would strike up a conversation. He loved getting dressed to go to work at ARCON and wore a jacket and tie every day he went to work. The last day he worked at ARCON, at age 92, was the day before he passed away, April 18th.

Chapter 5 Report

FYI

We have three immediate events coming early in October 2018. On 3rd October Chapter 5 is doing a joint event with the Oakland University Student Branch on the the history of computing in the automotive vehicle. It will be held in room MSC 187 (Math & Science Building) at 5pm. It will trace the use of ECUs, Infotainment, V2X and autonomous systems. What is new is the coming data deluge and issues with software in vehicles.

The second event is a celebration of Hedy Lamarr. Some of you may know her as an actress, but among a few serious folks of engineering history (including yours truly) she is a legend as she came up with spectrum and frequency hopping during WW 2 and that is what is now used to provide WiFi cellular, Bluetooth and similar technologies. In this celebration we will be showing a documentary originally aired on PBS followed by a discussion. Of course true to the cinematic experience we will have soda pop, pizza and pop corn.

The third event is a talk by a PhD candidate – Ahmad Mansour on Security in Ad Hoc Vehicle Networks which takes place on October 17th. Check this issue for the flyer and also the Section website calendar for information, details and registration.

Of course, the biggest major event happening in October is the Embedded Systems Workshop, which is the 16th edition of this event. An event flyer and description of the event from 2017 is presented elsewhere in this edition of the Wavelengths, and it has also been posted to the section's Facebook, LinkedIn.com, website and it has been shared with the nearby sections as well. Flyers have also been distributed to many peer societies too, so it will be hard to escape. Also in the works are several half day tutorials being planned with several professional topics and skill enhancing subjects, which will give an edge to IEEE members (and incidentally just one of the several good reasons to join the IEEE!).

Sharan Kalwani

Associate Editor, Wavelengths,

Vice-Chair, Chapter 5 (Computer Society), Chair, Chapter 13 (Education Society) and PACE

Passionate Engineering History Buff/Aficionado

**IEEE Computer Society &
IEEE Student Branch
Jointly Present
"Celebrating Hedy Lamar:
Actress/Inventor"**



•**Date:** October 10th, 2018

•**Time:** 5 PM to 7 PM

•**Where:**
Dodge Hall 200
Oakland University
Rochester
MI 48309

At the beginning of World War II, she and George Antheil developed a radio guidance system for Allied torpedoes, which used spread spectrum and frequency hopping technology to defeat the threat of jamming by the Axis powers.

The principles of their work are incorporated into Bluetooth technology and similar to methods used in legacy versions of CDMA and Wi-Fi. Their invention was granted a patent #292,387 on August 11, 1942.

In 1997, Lamarr and Antheil received the Electronic Frontier Foundation Pioneer Award, given to individuals whose creative lifetime achievements in the arts, sciences, business, or invention fields have significantly contributed to society. This also led to their induction into the National Inventors Hall of Fame in 2014.

Documentary: Bombshell: The Hedy Lamarr Story

Summary: The film was broadcast in the United States on the PBS biography series American Masters in May 2018.

**... Sponsored by Oakland
IEEE Student Branch &
Computer Society Chapter**

Soda Pop, water,
Vegetarian pizza,
Cheese Pizza will be
served

All Students, Members,
Professionals and
Industry Techs are
welcome!

Pre-Registration Required! Go to

<http://bit.ly/ActressInventor>

Proudly Co-Sponsored by



IEEE



**IEEE Computer Society &
IEEE Student Branch
Jointly Present
"Using Asymmetric Keys for Securing
Vehicle Networks"**



•**Date:** October 17th 2018

•**Time:** 5 PM to 7 PM

•**Where:**
MSC 187
Oakland University
Rochester
MI 48309

Vehicular ad hoc networks (VANETs) are created by applying the principles of mobile ad hoc networks (MANETs) – the spontaneous creation of a wireless network for Vehicle-to-vehicle (V2V) data exchange – to the domain of vehicles

Needles to add such VANETs require high level of security and privacy. Achieving this thru the use of Asymmetric Multicast Encryption keys is the subject of Ahmad's research. He will introduce us to all the concepts, issues and ideas, so we can fully grasp both the problems and potential opportunities in this field. With growing application of the Connected Car – this is even more important.

Speaker: Ahmad Mansour

Bio: Ahmad is a PhD candidate in computer science and informatics at Oakland University. He has an extensive experience in the field of data security including; Cryptography, Steganography, and Vehicular Ad-hoc Networks (VANETs) security and privacy. He has experience in problem solving and designing, developing, implementing, and testing computer-based software and simulation.

**... Sponsored by Oakland
IEEE Student Branch &
Computer Society Chapter**

Soda Pop, water,
Vegetarian pizza,
Cheese Pizza will be
served

All Students, Members,
Professionals and
Industry Techs are
welcome!

For further details
contact:

Sharan.Kalwani

@ieee.org

Pre-Registration Required! Go to

<http://bit.ly/SecureVANET>

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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)

Curated & Formatted By

Sharan Kalwani,
Associate Editor, Wavelengths,
2017-2018

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.

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://sites.ieee.org/sem/>

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

SEM Web Meetings:

<http://sites.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/about/seminars.htm>.

Amateur Radio Clubs in Southeastern Michigan
A fairly comprehensive listing of all the 'Ham' clubs in SEM.) <http://www.wa2hom.org/ham-radio-clubs-in-se-michigan/>

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/eaa-chapters/find-an-eaa-chapter>

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

Science Fiction Conventions
<http://www.conclavesf.net/>

<https://2018.penguicon.org/>

<http://2018.confusionsf.org/>

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

ESD PE Review Class
www.esd.org

Maker Faire:
<http://www.thehenryford.org/events/makerFaire.aspx>

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://sites.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.

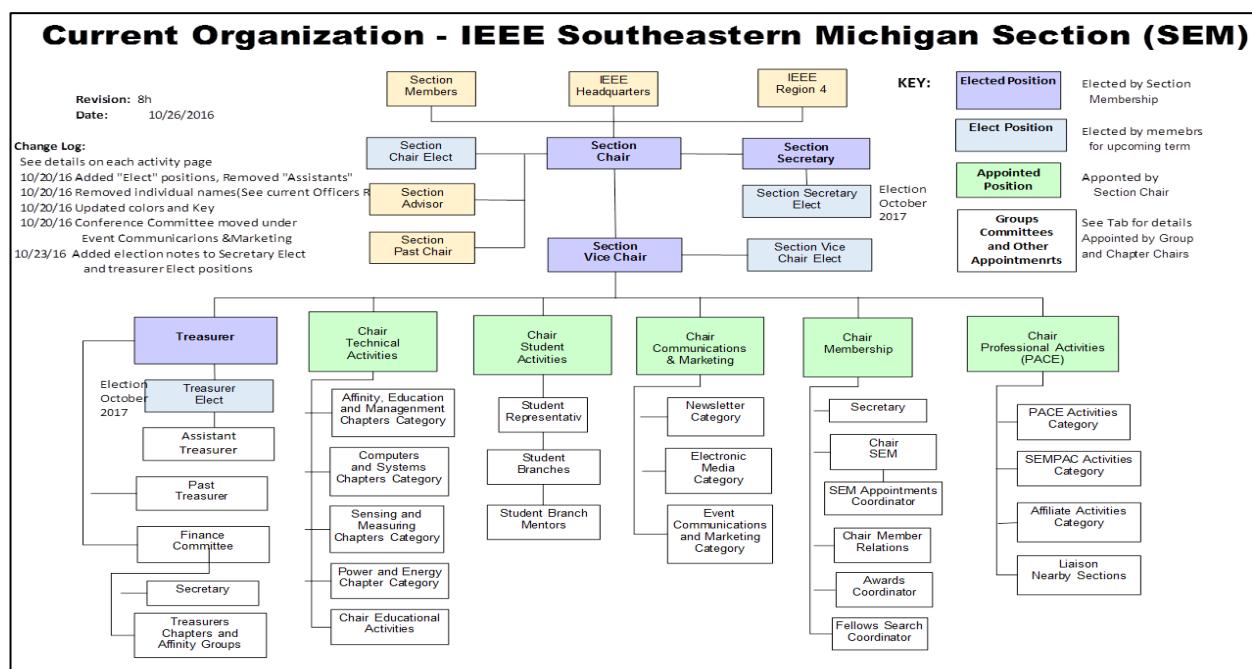
However, members of the section may have multiple technical interests and would like to have meeting information of other chapters. In order to communicate the meeting dates of all the chapters, affinity groups etc., to our members to facilitate their attendance, leaders of the groups are requested to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

October 4, Thursday, F2F (in-person meeting), 5:30 – 7:00 P.M., <https://meetings.vtools.ieee.org/m/49037>

November 7, Wednesday, Teleconference (online only), 12:00 – 1:00 PM, <https://meetings.vtools.ieee.org/m/49038>

December 6, Thursday, Teleconference (online only), 12:00 – 1:00 PM, <https://meetings.vtools.ieee.org/m/49039>

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

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.

Editor's Corner

Previous editions in this series may be found on the IEEE SEM website at: <http://sites.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
jrwwoodyard@gmail.com
isullivan@ieee.org

We also recommend a cc to the chair of the Communications and Marketing Committee, Ravi Nigam at: ravi.nigam@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

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://sites.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

Ravi Nigam

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



IEEE Southeastern Michigan

Visit Us on the Web at:

<http://sites.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, Ben Doerr, 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://sites.ieee.org/sem/sem-calendar/>
(Select the “SEM Calendar” button in the top row.)

SEM Executive Committee Face-to-Face Meetings:

- 1/Qtr. Find the location, and Registration at:
<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://sites.ieee.org/sem/>
(Select the “SEM Calendar” button in the top row.)
- Registration for all at:
<https://meetings.vtools.ieee.org/main>