



Volume 57 – Issue 10

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Section Chair's Message



Section Chair's Message:

Elections:

October is the time of year we elect our officers for the upcoming year beginning January 1.

Yes, nominations were last month but you can still volunteer where you see openings via a "write in" vote for yourself. Please see details on pages 2 and 5. More information on volunteering is on page #20.

Fall Conference:

November 9 is our Section Fall conference to be held at the Burton Manor in Livonia. The theme is "Ethics in Engineering, Science and Technology". Please see details on page #12 and a link to the conference registration.

Computer Society – 2 Great Events this month:

On October 10 at 6:30 PM at Oakland University will be a presentation "Common Vision for IoT, 5G and Virtualization by 2020". See page #9 for more details.

The very popular "Imbedded Systems Work Shop" will be held October 21 at Oakland University. See pages #10 and 11 for more details.

Web Site:

The two easiest ways to learn what's going on is at our web site.

www.ieee-sem.org and....

e-Wavelengths: at

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

IEEE tv:

<https://ieeetv.ieee.org/series>

Have you visited the IEEE tv web site lately?

Have you visited the IEEE tv web site at all?

I encourage you to spend a few minutes that will entertain and inform you. The productions are high quality and cover timely topics of interest to many people. You are sure to find something you can be fascinated with.

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

Welcome to “Shocktober”!

The 4th Quarter of the year brings the “Fall,” especially of leaves, along with the traditional celebrations of one of the cardinal points on the great circle of life:

This is the traditional time when we usher the ‘old’ out, and make way for the new.

Elections:

Our annual elections also begin the cycle of training new officers to take the place of the previous holder as they prepare to move on to other duties and responsibilities.

September: our election Ballots have been assembled..

October: - We will be conducting the elections ‘on line’, as usual. After the SEM ExCom views the proposed ballot at its face-to-face meeting on October 5th, we will launch a two week voting period on October 7th and conclude on October 28th and present the results to the ExCom at its November 1st meeting.

November: We will rationalize the results, verify all candidates willingness to serve.

December: Report the final results to the Section Executive Committee at its December meeting.

Write In Candidates:

With the election also comes the option to ‘write-in’ your selection for the job that will allow you to stretch out your capabilities and begin to learn new skills. So, even if you did not enter your candidacy via the September survey, you still have the ‘write-in’ option on each ballot.

Meeting Information:

We publish a number of coming event notices in the Wavelengths but, your most up to date and current information may be found on the SEM Website:

<http://sites.ieee.org/sem/>
and on the e-Wavelengths:

<http://www.ieee-sem.org/ewavelengths/>

Both need to be in the ‘favorites’ places in your internet browser.

Amateur Radio:

Last month we presented fliers announcing several classes to prepare for Amateur Radio “Ham” licenses. It is our hope that you or someone you recommended will be able to take advantage of this stepping stone to a deeper understanding of electronics, communications, E-Mag Fields, satellite communication, RF components, signal propagation, microwave, ionic atmospheric disturbances, sun spot cycles, antenna configurations, coaxial cable attenuation, ... the list goes on and on. It is no wonder that the Radio Amateur’s Handbook is over 1½ inches thick, and is referenced often in university classes dealing with electricity and electronics.

If you missed the class beginnings, please notice the flier for the Great Lakes HamCon in October which will bring a major Amateur Radio convention back to Michigan.

Election Volunteers

We are seeking Volunteers for the Section Nomination and Appointments Committee.

The Nominations and Appointments Committee is looking for volunteers interested in participating at the Section level to gain experience in IEEE without the requirements of an elected position.

Nominations & Appointments Committee:

The Nominations & Appointments (N&A) Committee is in need of volunteer assistance as we cycle through the yearly election period, assist Affinity Groups and Chapters to fill elected and appointed position vacancies as they occur throughout the year, and help members find Committee positions that allow them to grow among the many Section level standing committees.

There is one restriction on Nominations and Appointments Committee members:

No N&A Committee member may also hold an elected office.

This prevents any possible conflict of interest or even the perception of such conflict.

Rewards:

As an N&A committee member you will have an opportunity to interact with many members and all of the Standing Committees and the Executive Committee to gain an overview of the entire Section and its activities.

If you are interested in looking more closely at Section operations and getting a chance to ‘lift the hood’ and see what goes on in the machinery of governance of the Section, please contact:

Kimball Williams
k.williams@ieee.org

ZF Opportunities:

A recruitment advertisement for ZF. The background is a photograph of a man in a light blue polo shirt working on a car's engine. Overlaid on the image is the ZF logo (a blue circle with 'ZF' in white) in the upper center. To the left, the text 'WHAT'S NEXT?' is written in large, bold, white capital letters. Below it, 'JOIN ZF' is written in smaller white capital letters, with a white line connecting the two. At the bottom, a white line leads to the text 'WORK AT THE FOREFRONT OF AUTOMOTIVE INNOVATION WITH ZF, ONE OF THE WORLD'S LEADING AUTOMOTIVE SUPPLIERS. ZF.COM/CAREERS'. The entire advertisement is framed by a blue border with a binary code pattern.

**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

Senior Roundup Report:**IEEE SEM SENIOR MEMBER 'ROUNDUP' & NETWORKING AT LTU**

On Saturday September 23rd at 9 AM seven dedicated Senior Members assembled at the Lawrence Technical University at the 'University Technology and Learning Center' "Gallery" to assist other IEEE members to 'step up' to Senior Member status. During the next three hours they helped members update their Senior Member applications and provided the necessary three 'References' required to accompany each application.

Each of these Senior Members devoted their Saturday morning to helping other members in the best tradition of the IEEE. They are:

Aisha Yousuf
Ashok Prajapati
Ben Sweet
Kimball Williams
Priyantha Mudalige
Rae Nims
Sharan Kalwani

The next time you see one of these members, please thank them for dedicating their valuable personal time to assist other members take the next step in their IEEE career.

The accompanying photographs show the assembled Senior Members and many of the candidates. Comments from several of the members suggested that the opportunity to gather and get to know other members was just as valuable as completing their Senior Member applications. Once again proving the worth and value to all of us of what we call

'networking', which others refer to as 'talking.' In this age when many people only communicate by 'texting' one another, or phone, or e-mail, we often need to be reminded of the value of face to face conversation in which we really 'get to know' another person.



Some of what happens in 'networking is gaining a 'feel' for what the psychologist, Carl Jung, called the 'gestalt'. Of course, a short, face to face conversation can only provide a glimpse into the depths of another person but the depth achieved is usually many times more profound than conversations 'at a distance.'

We were slightly disappointed that none of the Student Branch members joined us for the morning. It had been our hope that there might have been a lively conversation between students, preparing for an engineering career and members with sufficient background 'in the field' to make the step up to Senior Member. We shall have to try harder when we hold our next event at another Southeastern Michigan University to engage more fully with the Student Branch members.

Our Member Committee Chair, Aisha Yousuf

indicated an interest in scheduling another one or two in the next couple of quarters, so stay tuned for the next opportunity.



Meanwhile, if you were unable to attend due to unforeseen conflicts, and still wish to make the step up to the next member grade, the entire process can take place 'electronically.' There is no cost to becoming a Senior Member, and this step is a necessary prelude to seeking the IEEE 'Fellow' level. For a complete description of the Senior Member process and its benefits, see the link at:

http://www.ieee.org/membership_services/membership/grade_elevation.html

If you missed this event, keep an eye on the Wavelengths, e-Wavelengths and the SEM Calendar on the SEM Website for the next time we gather for the next 'Round UP' and join us, if even only to talk and relax with some of the most interesting folks on the planet, your fellow IEEE members.

kw

SEM Officer Elections

Officer Nominations were held for 2017 IEEE Southeastern Michigan Section using the survey site nominate members for a place on the ballot during the period between September 9th and September 29th, 2017

An 'eNotice' was sent to all SEM Members when the survey site opened with the 'link' to the site.

"Executive Committee" 'officer 'elect' positions.

We are now in our 2nd 'Transition' year as we move from electing new officers for the Section Executive Committee each year to the election of 'Elect' positions for all the ExCom officers (Chair, Vice-Chair, Secretary and Treasurer). The 'Elect' position provides for the election of new officers one year ahead of their taking office and assuming their duties. This will accomplish several beneficial factors for both the Section and the Officer. Most obvious and important is that the 'elect' position officer will know, one year in advance of taking office which position she or he is to prepare to hold. This will allow a full year in which the newly elected officer is able to 'shadow' the current officer holding the position for which they have been elected and 'learn the ropes' for that office. This will mean that the transition to the new officers should be 'seamless' and the new officer should be fully up to speed as their term starts.

In addition, the expansion to two year terms enacted for SEM with the 2015 election will give our elected 'ExCom' officers sufficient time to plan and execute more 'long term' projects and plans than was feasible with only a single year term and virtually no knowledge as to whether they would have the opportunity to plan and carry out large scale tasks.

Note: The full ExCom officer terms require a 5 year commitment of

each officer candidate. (See below:)

One year as the 'elect' position.

Two years filling the actual post for which they are elected.

Two years as the 'Past' position officer during which they serve as advisers and assistants to the current officer holding the position.

Staggered Election Terms:

Because of the 'staggered terms' that were enacted with the 2015 elections in which we elect our Section Chair and Vice-Chair in separate years from our Secretary and Treasurer, this year will be an 'interesting' variation on the election process as we introduce the new 'elect' position.

Elections in 2017. This year we are holding elections for the following Section level Officers:

Secretary & Treasurer. They will begin serving two year terms in 2019.

Thereafter, each year we will select 'elect' officers alternating between Chair & V-Chair and Secretary & Treasurer, every other year. This will provide overlap with experienced and '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.)*

Affinity Groups and Chapters:

Elections for the Section's four Affinity Groups and seventeen Technical Chapters will continue without changes. We know that several of the Affinity Groups and Chapters have looked on the current ExCom election process with interest. However, at this time, none have come forward to the Nominations and Appointments Committee with a recommendation for consideration to modify their own electrical process. *(They are probably wisely watching the ExCom to see how this experiment plays out.)*

	2016	2017	2018	2019	2020	2021	2022	2023
chair	S0	S0	S1	S1	S2	S2	S3	S3
Ch-Elect	E1	Train	E2	Train	E3	Train	E4	Train
V-Chair	S0	S0	S1	S1	S2	S2	S3	S3
V-Ch-Elect	E1	Train	E2	Train	E3	Train	E4	Train
Secretary	S0	S0	S0	S1	S1	S2	S2	S3
Sec-Elect		E1	Train	E2	Train	E3	Train	E4
Treasurer	S0	S0	S0	S1	S1	S2	S2	S3
Treas-Elect		E1	Train	E2	Train	E3	Train	E4

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 submit a ‘write-in’ candidate to any governing position within the Section, Affinity Groups or Technical Chapters. Our plan for the election schedule for 2017 is as follows:

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

Voting Members:

All members above Student Member grade are eligible to vote and hold Chapter, Affinity Group and Section office. Yes, Graduate Student Members 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.

http://sites.ieee.org/sem/files/2017/08/Organization_Roster_1EEE_SEM_8.28.2017.pdf

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

Chapter 1 Report:

Chapter One of the IEEE SEM Section represents the Signal Processing, Circuits and Systems, and Information Theory Societies. While they do not have any meetings currently scheduled for the remainder of the year, they are in need of volunteers, specifically for these positions:

- Vice Chair of the Signal Processing Society
- Secretary
- Treasurer
- Technical Coordinator

If you are willing and able to increase your level of involvement with this core chapter, please contact Chair Bob Adams (Robert.T.Adams5@gmail.com) or Vice Chair of the Circuits and Systems Society Kenji Aono (aonokenj@egr.msu.edu).

-K. Burnham

Member News

Introducing a new feature, little snippets celebrating news about all our members in the Section. We would like to congratulate:

- CJ Chung, LTU, who has completed 19 years at his current position with LTU
- Sharan Kalwani, who was recently nominated to the post of ‘Publicity Manager’ for the newly formed IEEE Technical Community-High Performance Computing (IEEE TC-HPC).



Chapter 10 Report

The Southeastern Michigan Technology & Engineering Management Society (TEMS) Chapter 10 has 28 members on its membership rolls. Since 2015 Dave Werden (Secretary/Treasurer), Mark Robinson (Vice-Chair), and Ray Sasinowski (Chair) have been the chapter officers. The chapter is currently in need of a nomination for the position of chapter treasurer for the 2018 term. If interested, please contact any of the TEMS officers for more information.

The Engineering Management Society (EMS) was founded in 1951, becoming the Technology Management Council (TMC) in 2007. In 2015 we transitioned to the Technology and Engineering Management Society

The Technology & Engineering Management Society's fields of interest encompass the management sciences and practices required for defining, implementing, and managing engineering and technology. Specific topics of interest include, but are not limited to: technology policy development, assessment, and transfer; research; product design and development; manufacturing operations; innovation and entrepreneurship; program and project management; strategy; education and training; organizational development and human behavior; transitioning to management; and the socioeconomic impact of engineering and technology management.

In 2017, recognizing the broad subject matter of interest to TEMS members, TEMS formed five Technical Activity Committees ("TACs") which are groups of individuals within TEMS with a common technical area of

particular interest. The current TACs are:

1. Leadership and Management of People & Organizations
 - People and Organizations
 - Social Issues and Sustainability in Engineering Management
2. Engineering Processes
 - Models and Methodologies
 - R&D and Engineering Projects
 - Manufacturing and Supply Chain Systems
3. Digital Enterprise Technologies
 - Information Technology
 - e-Business
4. Project and Delivery Management
5. Entrepreneurship and Innovation

Additional TACs may be formed in the future. Please visit <http://www.ieee-tems.org/tems-technical-activity-committees/>

for more information regarding the current TACs within TEMS.

2017 Chapter Events:

Alfred Gunther of Global Engine Cooling Solutions gave a talk on "Consulting Entrepreneur 101 or a guide to making it on your own". The presentation was held on Wednesday July 26th at the Engineering Society of Detroit's Southfield HQ. We had 12 attendees listen to Al's firsthand experience transitioning from a corporate employee to an independent consultant or businessman. Al did a fantastic job of explaining and outlining the steps he took to become a successful consulting business.

Mark Robinson, our current Chapter Vice-Chair, will be presenting "Fundamental Issues

for Successful IP Licensing". The chapter's meeting will be kindly hosted on Thursday October 19th at Lawrence Technology University (LTU).

2018 Chapter Goals:

The TEMS Leadership team intent is to hold a technical meeting once per quarter in the 2018 calendar year. Please review the S.E. Michigan's IEEE Events calendar for upcoming TEMS presentations & meetings. TEMS is always looking for new volunteers to step up, be engaged, and support the Chapter whether as an officer, volunteer, or presenter. Contact one of the TEMS Chapter officers if you are interested in becoming more active in the chapter.

-Ray Sasinowski, Ch 10 Chair

Chapter 5 Report:

The IEEE Southeast Michigan Computer Society Chapter is one of the largest societies in the SEM section. There is much activity happening in this society every month.

15th Annual Embedded Systems Workshop 2017

IEEE SEM Computer Society and Oakland University are offering one-day (free) workshop on Embedded Systems on Saturday, October 21st, 2017 from 8:30 AM till 4:30 PM EST. This workshop is open to all engineers and students. 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 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. You can confirm your participation by registering on the IEEE events website at:

events.vtools.ieee.org/m/45108

A flyer is attached to in this newsletter regarding this embedded systems workshop.



ESW 2017 Program & Organizing Committee consists of Subra Ganesan (Chair), Sharan Kalwani, Ashok Prajapati, Rama Gottumukkula, Dheeraj Patel, and Ben Sweet. For any questions regarding this workshop please

contact Program Committee at: esw2017@ieee-sem.org

Technical Meeting Reports

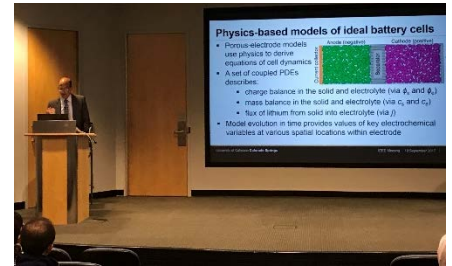
Chapter 5 held another technical meeting on “*Model Predictive Control Using Physics-based Models for Advanced Battery Management*” on 19th September, 2017 from 6:30 PM to 8 PM EST at the main Auditorium, Altair Engineering, 1820 Big Beaver Road, Troy, MI 48128.

The speaker was Professor Scott Trimboli, who is an Assistant Professor of Electrical and Computer Engineering at the University of Colorado (UCCS) and is a former Director of the Center for Space Studies (CSS) in the National Institute of Space, Science and Security Centers (NISSSC). His research is conducted in collaboration with Professor Gregory Plett where the focus is on development of control strategies for the management of high capacity battery systems such as found in electric vehicles.



Richard Yen of Altair welcoming the IEEE attendees to the talk

This event was of interest to all of the local engineering community as it pertains to the modern day electric vehicle and related technologies. There were numerous questions from the assembled audience and many were practicing professional engineers with the major OEMs and suppliers, all engaged in the battery research and systems delivery field. We had a total of over 45 people attend the talk.



Prof. Scott Trimboli addressing the topic at hand

We would like to extend our thanks to Altair for extending their support to the chapter in this regard. Also a special thanks to our newest member – Marcelo Xavier, who helped arrange for the speaker and talk. For those who attended the talk and would like a copy of the slides, please feel free to contact Sharan Kalwani.

On October 10th (or 11th), we will be hosting Dr. Fawzi Behmann, who is a national expert on “**5G and IOT**”. This talk will be held at Oakland University. Look for the flyer and vtools registration link in this edition of the Wavelengths newsletter.

Also planned are technical talks on High Density Compute Systems Cooling Technologies, Recent Advances in High Performance Computing, JavaScript, Python and Kotlin. We also will be collaborating with WIE in holding a “Soft Skills” seminar in October as well. Besides technical talks, we are already planning 2018 topics, so feel free to contact us with ideas & suggestions.

*IEEE Computer Society
SE Michigan Chapter
(aka Chapter 5)*

IEEE Computer Society (SE Michigan Chapter) Presents Distinguished Speaker Talk a common vision for IoT, 5G & Virtualization By 2020?

**Date:****10th October 2017****Time:****6:30 PM to 8 PM (EDT)****Location:****MSC 372****Math & Science Building****Oakland University****Rochester, MI 48309****Space is limited**

To reserve your seat,
please RSVP at

events.vtools.ieee.org/m/46666

For clarifications contact:

Sharan Kalwani at

sharan.kalwani@ieee.org

Phone: +1 (248) 980-UNIX

OR

Subra Ganesan, PhD

ganesan@oakland.edu

Phone: +1 (248) 635-5890

We are grateful to Oakland University, for hosting this technical presentation and providing the space

Abstract

Several technologies are converging empowering IoT and delivering a greater impact and advance services to multiple markets by 2020's. This keynote presentation will introduce the concept of IoT and architectural evolution from a pre-IoT to Collaborative IoT.

Fawzi Behmann will highlight technology trends and provide various examples and scenarios for different market domains such as smart home, smart energy, smart buildings, smart connected vehicles, smart infrastructure, public safety, smart health & wellness, and smart city. Solution building blocks include sensing, wearables, aggregation/gateway, mobile devices and data analytics will be highlighted.

Finally the talk will conclude with some of the factors and challenges to deliver scalable solutions, delivering better quality of services and experience. These include development platforms, 5G, virtualization and security.

Speaker Biography

Fawzi is a senior member of IEEE, and is currently the ComSoc NA vice chair, CTS Conference & PACE Chair, and ComSoc & SP and CS & EMBS Joint Austin chapter chair. He is currently serving as Conference chair for IEEE Central and organized sessions and IoT workshops at BHI, Himss, Smart Tech, and in Africa Uganda and Kenya. Fawzi holds a Bachelor of Science with honors and distinction from Concordia University, Montreal; Masters in Computer Science from the University of Waterloo, Ontario and Executive MBA from Queen's University, Ontario Canada.

ESW2017 Announcement

Embedded Systems Workshop 2017 Announcement

The 15th Annual IEEE Embedded System Workshop is planned on October 21, 2017, 8:30 AM to 4:30 PM (Saturday), at Hannah Hall – Room 190, Oakland University, Rochester, Michigan 48309

IEEE South East Michigan Computer Society (aka Chapter 5), and Oakland University are offering a one-day workshop on Embedded Systems from 8:30 am to 4:30 pm, Saturday October 21st, 2017. This is a **free** workshop open to all engineers, students and this is the 15th year of this annual workshop.

The aim of this workshop is to disseminate knowledge, which will directly benefit the IEEE members and indirectly **improve the technology expertise and the Michigan economy**. Speakers and experts from the wide spectrum embedded systems industry will be making presentations, and also be available for discussions, networking throughout the day.

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, which will be available to all. At the time of going to press the enrollment was 57 persons. There is an upper limit of 200, So do not

delay, as the registration, at the time of going to press has reached 150 already!

Lunch will be provided, courtesy of the various sponsors, supporters and conference well-wishers. When responding, please indicate *your lunch preference: turkey, tuna, chicken or vegetarian sandwich*. Coffee/tea, water, juice and snacks will be provided during the breaks.

For Technical questions, feel free to contact:

Prof. Subra Ganesan at: ganesan@oakland.edu; by phone: (248) 370 2206

or
Sharan Kalwani at: sharan.kalwani@ieee.org ; by phone: (248) 980-UNIX

We have also set up a general email for questions that attendees or presenters may have:

esw2017@ieee-sem.org

The link for registering is located at

events.vtools.ieee.org/m/45108

Register and attend for a chance to win multiple door prizes (Books/Boards/T-shirts/novel-tech gadgets)

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



**Attendance from the
2016 event**



**Subra Ganesan speaking on
Validation Techniques at the
2016 event**

**OAKLAND
UNIVERSITY™****IEEE**
Southeastern
MichiganIEEE
**computer
society**

Embedded Systems Workshop 2017

October 21, 2017, 8:30 a.m. to 4:30 p.m. (Saturday)

Room 190 - Hannah Hall, Oakland University
Rochester, Michigan 48309

IEEE South East Michigan Computer Chapter and Oakland University are offering a one-day (free) workshop on Embedded Systems on Saturday, October 21st, 2017. This workshop is open to all engineers and students. This is the 15th 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:

<https://events.vtools.ieee.org/m/45108>

Venue: Room 190, Hannah Hall, 244 Meadow Brook Rd, Oakland University, Rochester, MI 48309



Directions to Oakland University: Take Exit 79 East on the I-75 freeway. You will find the university within a mile. Parking is free. Look for Hannah Hall Room 190. Alternatively enter via Pioneer Blvd from Squirrel Road, just south of University Avenue.

Industry sponsors: Vector CANtech, ETAS, NVIDIA, Intrepid Control Systems, DfR Solutions 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 & 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 Computer 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, however Pre-registration is necessary prior to attending

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

For Technical questions, contact the Program Committee at: esw2017@ieee-sem.org

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

ESW 2017 Program & Organizing Committee: Subra Ganesan (Chair), Sharan Kalwani, Ashok Prajapati, Rama Gottumukkula, Dheeraj Patel and Ben Sweet

IEEE Southeastern Michigan Section 2017 Fall Conference

November 9, 2017



Ethics in Engineering, Science and Technology

THE DATE: Thursday, November 9, 2017. 4:30 – 9:30 PM

VENUE: Burton Manor: 27777 Schoolcraft Road, Livonia, MI 48150 (734)427-9110.

PROGRAM:

- Modern engineering ethics and ethical standards, and
- Their impact on our lives, careers, profession and society.

SPEAKERS: ETHICS 2017 will host an impressive range of topics and invited speakers, including a panel forum, and dinner reception which will facilitate an exchange of experience:

Cheryl L. Brown (University of North Carolina, Charlotte, NC)

Emily McReynolds (University of Washington, Seattle, WA)

Ali Muzzaffar (Deloitte, Orange County, CA)

Yue-Yun Wang (General Motors, Warren, MI)

REGISTER at: <https://meetings.vtools.ieee.org/m/47031>

FURTHER INFORMATION: For further information, please contact the Conference Chair, Philip Hall at philip.hall@ieee.org.

This Month in October

Or: I Did Not Know This!

October 1, 1908 - Henry Ford's Model T, a "universal car" designed for the masses, went on sale for the first time.

October 3, 1884 – IEEE Day, the first Tuesday of October, when a small group of individuals in the electrical professions met in New York, USA. They formed a new organization to support professionals in their nascent field and to aid them in their efforts to apply innovation for the betterment of humanity—the American Institute of Electrical Engineers, or AIEE for short. That October, the AIEE held its first technical meeting in Philadelphia, PA, USA. Many early leaders, such as founding President Norvin Green of Western Union, came from telegraphy.

October 4, 1957 - The Space Age began as the Russians launched the first satellite into orbit. Sputnik I weighed just 184 lbs. and transmitted a beeping radio signal for 21 days. The remarkable accomplishment by Soviet Russia sent a shockwave through the American political leadership resulting in U.S. efforts to be the first on the moon.

October 5, 1882 - Birthday - "Father of the Space Age" Robert Goddard (1882-1945) was born in Worcester, Massachusetts. During his lifetime he was ridiculed by the public and the press over his idea of constructing a space flight machine. In 1926, he launched the world's first liquid-fueled rocket on a farm near Auburn, Mass. In 1935, his liquid-fueled rocket surpassed the speed of sound. Other developments included a steering apparatus for rocket machines, staged rockets to reach high altitudes, rocket fuel pumps, and a self-cooling rocket motor.

October 6, 1846 - Birthday - Engineer and inventor George Westinghouse (1846-1914) was born in Central Bridge, New York. He developed air brakes for trains and was later responsible for the adoption of alternating current (AC) systems for electric power transmission in the U.S. He was also the first employer to give his employees paid vacations.

October 11, 1939 - Albert Einstein warned President Franklin D. Roosevelt that his theories could lead to Nazi Germany's development of an atomic bomb. Einstein suggested the U.S. develop its own bomb. This resulted in the top secret "Manhattan Project."

October 13, 1884 - Greenwich was established as the universal time from which standard times throughout the world are calculated.

October 21, 1879 - Thomas Edison successfully tested an electric incandescent lamp with a carbonized filament at his laboratory in Menlo Park, New Jersey, keeping it lit for over 13 hours.

October 21, 1915 - The first transatlantic radio voice message was made by the American Telephone and Telegraph Company from Virginia to Paris.

October 24, 1861 - The first transcontinental telegram in America was sent from San Francisco to Washington, addressed to President Abraham Lincoln from the Chief Justice of California.

October 30, 1938 - The War of the Worlds radio broadcast panicked millions of Americans. Actor Orson Welles and the Mercury Players dramatized the story by H.G. Wells depicting a Martian invasion of New Jersey. Their script utilized simulated radio news bulletins which many listeners thought were real.

Readers are invited to share any major engineering event or milestones that they are aware of that occurred in October, or better yet submit a historical or noteworthy event for the November issue. Submissions can be made using the Suggestions Box or direct email to the editors at: wavelengths@ieee-sem.org

Sharan Kalwani

Associate Editor, Wavelengths,

Vice-Chair, Chapter 5 (Computer Society), Chair, Chapter 12 (Education Society)

Engineering History Buff/Aficionado

Great Lakes HamCon:



The newest major hamfest in our region will debut **October 7/8, 2017** at Michigan International Speedway. The Great Lakes Ham Convention, GLHamCon for short. It aims to be one of the biggest and best Amateur Radio gatherings in the country.

<http://glhamcon.org/>

Our Mission Statement

Who are we?

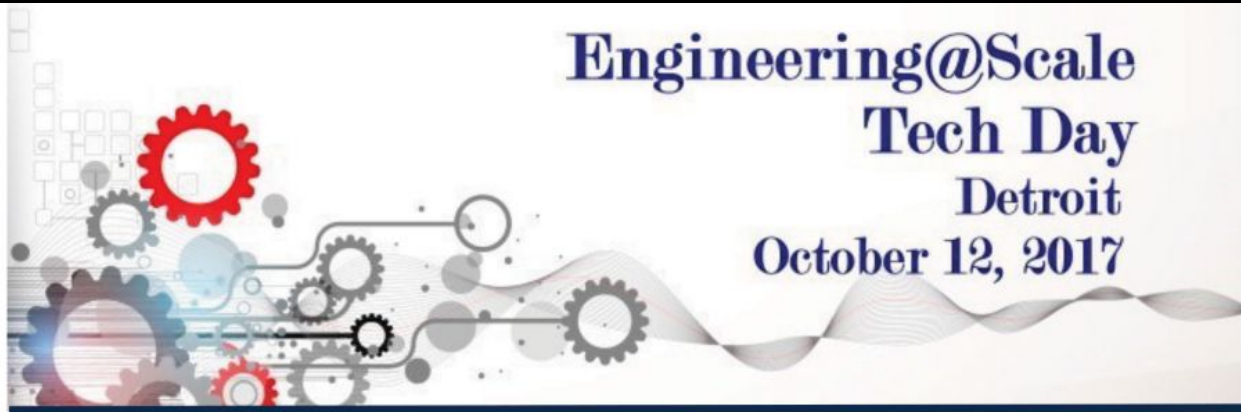
Great Lakes HamCon is being organized by the Great Lakes Amateur Radio Association. GLARA was formed to coordinate the activities of a consortium of local amateur radio clubs interested in supporting an event too large for one club. Proceeds from the Great Lakes HamCon will support amateur radio in the local area.

GLARA is a Michigan non-profit corporation exempt under section 501(c) (3) of the IRS code.

Great Lakes Amateur Radio Association (GLARA) Founding Members

Adrian Amateur Radio Club
Arrow Communication Association
Branch County Amateur Radio Club
Central MI Amateur Radio Club
Cascades Amateur Radio Society
General Motors Amateur Radio Club
Hazel Park Amateur Radio Club
Hillsdale County Amateur Radio Club
Livingston Amateur Radio Club
L'Anse Creuse Amateur Radio Club
Livonia Amateur Radio Club
Michigan QRP Club
Monroe County Radio Comm. Assn.
Motor City Radio Club
Oakland County Amateur Radio Soc.
South Lyon Area Amateur Radio Club
Southern MI Amateur Radio Society
Utica Shelby Emergency Communications Association
St. Joseph County MI ARC
Lowell Amateur Radio Club

Engg@Scale:



We invite you to join us for a Tech Day, to learn how new solutions and technologies are helping to lead the innovation agenda while addressing the complexity challenge in the automotive industry.

This event will focus on engineering systems and software development. We will feature sessions around industry best practices and the core processes of requirements management, architecture design, collaboration, change and configuration management, test and quality management, product line engineering and variant management. Improve your skills, network and collaborate with automotive industry experts.

What to expect:

- Keynote session by the American Center for Mobility
- Technical sessions for novices to experts, with topics ranging from:
 - Scaling Agile to the Automotive Enterprise
 - Convergence of MBSE and the Product Innovation Platform
 - Connected Product initiatives with Digital Twin and Digital Thread
 - Improving your processes with Automotive SPICE
 - Feature-based Product Line Engineering and Operations for the Automotive Enterprise
 - Certifiable framework for AUTOSAR
 - And more
- Networking lunch (no charge)
- Plus, tour the spectacular automotive collection at the GM Heritage



October 12th

8:00 AM—4:00 PM

Location:

6400 Center Drive

Sterling Heights, MI 48312

www.gmhertitagecenter.com

**Lunch and parking will
be complementary**

Register Today

<http://bit.ly/EngatScale2017>



Electric Car news:

The following press article has been reprinted with kind permission from the BBC (British Broadcasting Corporation).

Originally published at <http://www.bbc.com/news/business-41399497>

Dyson, the engineering company best known for its vacuum cleaners and fans, plans to spend \$2bn developing a "radical" electric car.



(Image Copyright: HEATHCLIFF O'MALLEY)

The battery-powered vehicle is due to be launched in 2020.

Dyson says 400 staff have been working on the secret project for the past two years at its headquarters in Malmesbury, Wiltshire.

However, the car does not yet exist, with no prototype built, and a factory site is yet to be chosen.

Sir James declined to give further details of the project. "Competition for new technology in the automotive industry is fierce and we must do everything we can to keep the specifics of our vehicle confidential," he told staff in an email.

Important points that are undecided or secret include the firm's expected annual production total, the cost of the car, or its range or top speed.

Sir James said about \$1bn would be spent on developing the car,

with another \$1bn on making the battery.

Further development work will take place at a former RAF base at Hullavington in Wiltshire, where staff will move to in February.

Sir James also said that his firm's car would look "radical and different", but will not be aimed at the mass market.

The motor is designed and ready to go, he said, but the firm is still designing the car.

Dyson's decision means it is joining the rush within the global car industry to develop and make electric cars.

Some manufacturers such as Nissan, Tesla, Renault, BMW and Hyundai already manufacture them.

Others such as VW, Volvo, Mercedes, Honda and Jaguar Land Rover have announced plans to sell electric or hybrid versions of their existing petrol and diesel engine ranges.

VW, for instance, plans to spend 20 billion Euros by 2030 to develop its battery powered vehicles.

Sir James said he had been interested since 1990 in developing filtration technology to stop vehicle diesel emissions polluting the environment.

But as the motor industry had shown no interest in adopting this idea, he would instead join the fast-growing trend to make electric vehicles.

Analysis: Theo Leggett, BBC business correspondent

The electric car market is growing rapidly, but it is also about to become a lot more crowded.

Within the next few years, many new models are due to come on to the market, including Jaguar's Ipace, Porsche's Mission E, Volkswagen's I.D. family and Mercedes' EQ range. Tesla also has big plans for its recently launched Model 3.

They will be joining established models such as the Nissan Leaf, the BMW i3, the Renault Zoe and the Tesla Model S.

Dyson clearly sees an opportunity here. As new designs become available, and prices come down, more consumers will be willing to try electric vehicles.

Policymakers, concerned about air pollution, want them to do just that. The big question is whether Dyson can muscle in on territory that the major manufacturers are already trying to make their own. And let's not forget Google's designs on the electric/self-driving market.

Tesla was able to build a new car brand from scratch, but only by producing a design which effectively moved the goalposts and changed people's expectations of what an electric car could provide.

If Dyson wants to play with the big boys, it may have to pull off a similar trick.

*Reformatted by **Sharan Kalwani** for publication in the IEEE SE Michigan section Wavelengths Newsletter and its members reading pleasure*

Did you like this article? Want to see more like this? Send your thoughts to wavelengths@ieee-sem.org

The Great Internet Leap

While we were all asleep this last week of September, muddling the Fall Equinox, somewhere near the coastal town of Bilbao, Spain, a giant special purpose ship was laying the final pieces of a giant submarine fiber optic cable, paving the way for one of the fastest Internet speeds between North America and Europe. Then on Friday September 29th 2017 at approximately 0930 am EST/EDT, a quiet ceremony was held by folks from MicroSoft, FaceBook, and a Spanish Telecom Infrastructure company called Telxius to celebrate the final leg of this cable.

Why is this significant? Well a little history perhaps is first required in order to understand the immense gravity of this event. The internet is carried by many members of different consortia across the world and apart from the land based telecom copper and fiber optic lines between many points and servers which maintain routing tables, databases (aka DNS or Domain Name Servers/Services) of which Internet based service/server/device is located where, we have several thousands of miles of undersea cables [see *Picture 1*] which were laid during the last few decades by enterprising telegraph and telephone operators of the past.



Picture 1: Current map of submarine cables carrying voice, data and video across the world [Image:

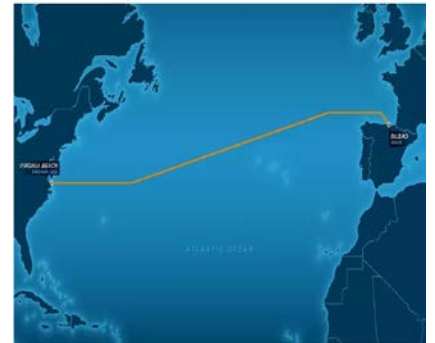
<https://www.submarinecablemap.com/>. The Submarine Cable Map is a free and regularly updated resource from TeleGeography.



Picture 2: Submarine cable laying in progress

Clearly as we all know, increasing Internet data traffic being carried on these aging cables makes things slow for everything and during any disruption, almost everyone gets affected one way or another. So when Hurricane Sandy, which hit the United States East Coast in October 2012, nearby data centers in Virginia and New Jersey were affected and consequently directly impacted many of the companies who depend on Internet traffic for their revenues. Chief among them were FaceBook.Com and Microsoft. Jointly they resolved to put huge investments into another submarine cable, with a huge capacity so they could continue to operate. They contracted Telxius and after an intense seabed survey, picked out a path nearly 4,100 mile long and at times laying nearly 17,000 feet below the Atlantic ocean surface to carry a new submarine cable for future Internet traffic (in addition to existing cables criss crossing the world, see accompanying picture) starting in 2018. This cable or project is called “**Marea**” which is Spanish for “**tide**”, extends from Virginia Beach and ends at Bilbao Spain. Marea also stretches a route south of most existing transatlantic cables. Because of this, this new cable will provide resiliency for those living in the US and Europe by safeguarding against natural disasters or other major events that might cause disruptions to connections like those seen during Hurricane Sandy.

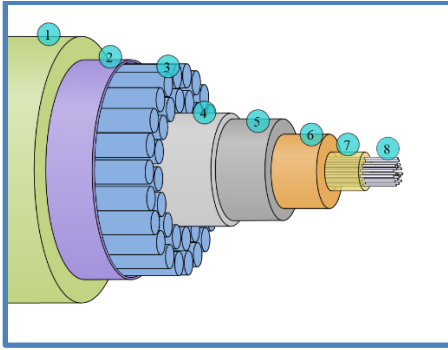
Marea comes at a critical time, since existing submarine cables in the Atlantic already carry 55 percent more data than trans-Pacific routes and 40 percent more data than between the North America and Latin America. And we also know that the demand for Internet data traffic across the Atlantic to Europe, will continue to increase, since we are growing globally business wise practically every day.



Picture 3: The Marea cable between Virginia Beach, USA and Bilbao, Spain.

Image: Courtesy of Microsoft

For most of the route, Marea — made up of eight pairs of fiber optic cables enclosed by copper — lays on the ocean floor. [See accompanying picture 4] Some parts are buried to protect from shipping traffic, usually in areas closer to the shore.



Picture 4: A cross section of the shore-end of a modern submarine communications cable.

- 1 – Polyethylene
- 2 – Mylar tape
- 3 – Stranded steel wires
- 4 – Aluminium water barrier
- 5 – Polycarbonate
- 6 – Copper or aluminium tube
- 7 – Petroleum jelly
- 8 – Optical fibers

So what is special about Marea? For one, it is an “open” design, which means it will can use newer and modern communicaiton techniques, which may be deployed in the future. Second, it has the capacity to transmit at speeds up to 60 Tera bit per second! To put this into layman

perpescive, it is capable of sending 71 million High Definition videos at the same time. Or it is 16 million times faster than your Internet home cable speeds. Byconnecting it to Europe it can also accept traffic from Middle East, Asia and Africa, where the Internet enabled popution is expected to continue growing by perhaps another billion users/people over the next few years.

A little bit about voice and data cables: From design through construction, Marea was completed in less than two years — nearly three times faster than the typical subsea cable project. Modern cables are typically about 1 inch (25 mm) in diameter and weigh around 2.5 tons per mile (1.4 tonnes per km) for the deep-sea sections which comprise the majority of the run, although larger and heavier cables are used for shallow-water sections near shore. Cable laying is a very special art and only a few companies in the world can do this job. Most of the ships which are capable of doing this, oddly are mostly anchored in Newfoundland and Nova Scotia in

Canada! These cables are massive and require special equipment and supervision. [See picture 5 of the cable itself].



Picture 5: The Marea cable wound up inside the ship hold

Sharan Kalwani
Associate Editor, *Wavelengths*,
Vice-Chair, Chapter 5 (Computer Society), Chair, Chapter 12 (Education Society)
Engineering History
Buff/Aficionado

Did you like this article? Want to see more like this? Send your thoughts to

wavelengths@ieee-sem.org

RAS Humanitarian Day



The poster features a central graphic with a blue gear, a circuit board, and binary code (011010, 01001100, 110110, 0101) surrounded by colorful swooshes. To the left and right are green and white gears. Below the central graphic, the text "1st IEEE RAS Humanitarian Technology Day" is written in blue, followed by the tagline "The world needs more humanitarian engineers!" in green. At the bottom, the date and location "SAVE THE DATE October 14th, 2017 at MSU Union" are displayed in blue, flanked by green stick figures holding hands. The footer contains the IEEE logo, the IEEE Robotics & Automation Society logo, and the Michigan State University logo with the text "University Outreach and Engagement".

1st IEEE RAS Humanitarian Technology Day

The world needs more humanitarian engineers!

SAVE THE DATE
October 14th, 2017
at MSU Union

 **IEEE**
Advancing Technology
for Humanity

 **IEEE**
**Robotics &
Automation**
Society

MICHIGAN STATE
UNIVERSITY | University Outreach
and Engagement

Election Time!

Once again we require all our members to step up to positions within IEEE that 'make sense' for them, for their personal and professional development, and for the good of the IEEE, for Society, and for their careers. These positions often are in leadership but, not always. Without the other volunteers to help carry out the overall Section plan, leaders would be helpless. So, this year, as you vote for your leaders, also consider how you can contribute to the total success for IEEE everywhere.

Officer 'Churn':

You may have noticed the tendency for officers in a Chapter, or Affinity Group, or Branch to rotate from year to year, taking on one position for a year or two, then moving to another position and rarely staying in a single position for a long period of time. This is something that is encouraged by the MGA when it suggests that a 'Chair' of a Chapter should not hold the position for more than 3 contiguous years.

There are three factors of concern here:

1st: By working as an officer, in any position, we learn and develop a unique set of skills. By changing office positions from time to time to another position, we develop and sharpen other skills, and can continue to grow. If we were to remain in only one office for an extended time, we limit the scope of those skills we can develop.

2nd: By moving from position to position, and especially when we advance from positions within a Chapter or Branch to those at the Section, and then on to positions at the Region or Society levels, we expand the possible set of tools we can learn, while also expanding

our personal and professional contacts within the areas where we volunteer.

3rd: By making 'room' for new officers to step into positions we have left, we give younger volunteers the opportunity to gain those skills we have already acquired.

What's Next for you?

This continual development of skills, talents and contacts is one of the primary reasons for the existence of an organization like IEEE, to give our members the setting and opportunity needed to develop and grow as individuals, and successful engineers.

However, some of us are aware of our IEEE affiliations only within the context of the technical Society to which we have focused our career goals. We may not even be aware of the local activities which occur around us in our Section all



through the year. To help sort out the mixture of Societies and local Chapters, Sharan Kalwani, one of our Wavelengths Editors, has created the 'cheat sheet' on the following page which gives a condensed overview of the Geo-units in our Section and their associated technical 'parent' organizations.

Let me encourage you to review that overview page, and consider what involvement in the local



organization for your technical discipline could do to enhance your personal skill set and foster the development of skills that can promote a more successful engineering career.

In September we called for ballot nominations to the elected offices, and you may find that a position within the Administrative Committee (AdCom) of a Geo-unit may be just the thing to help you on the next step of your career. Alternatively, simply volunteering with the Geo-unit to help out with its normal functions can give you a more subtle entry into local activities. This often leads to more responsibility and an elected position in the future.

Section level Standing Committees also can provide a more general and diverse set of skills. These are all appointed positions and do not require election to an office to begin active involvement with the Section. Contact any one of your Section officers to discuss your abilities, background, and where you might both 'fit in' and benefit from becoming a more active volunteer.

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 (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

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/>

However, since IEEE members tend to have eclectic interests, we want to give everyone a heads up for some of the non-IEEE events that may be of interest.

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 the particulars to

wavelengths@ieee-sem.org

OR

anyone of the following....

k.williams@ieee.org

karen.burnham@gmail.com

sharan.kalwani@ieee.org

An announcement may be placed in the newsletter.

Links:**Michigan Institute for Plasma Science and Engineering:**

Seminars for the 2017-2018 academic year:

<http://mipse.umich.edu/about/seminars.htm>.

Below are links to local SEM Clubs engaged in technical hobbies as well as links to sites that may be useful for locating clubs in the area.

Amateur Radio Clubs in Southeastern Michigan

(This is 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/eaaf/eaaf-chapters/find-an-aea-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

Makers Faire:

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

Other Happenings

Executive Committee

The SEM Executive Committee is the primary coordination unit for Southeastern Michigan (SEM) IEEE operations. The basic organization chart below shows the 2017 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 David Mindham, the section secretary at: dmindham@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

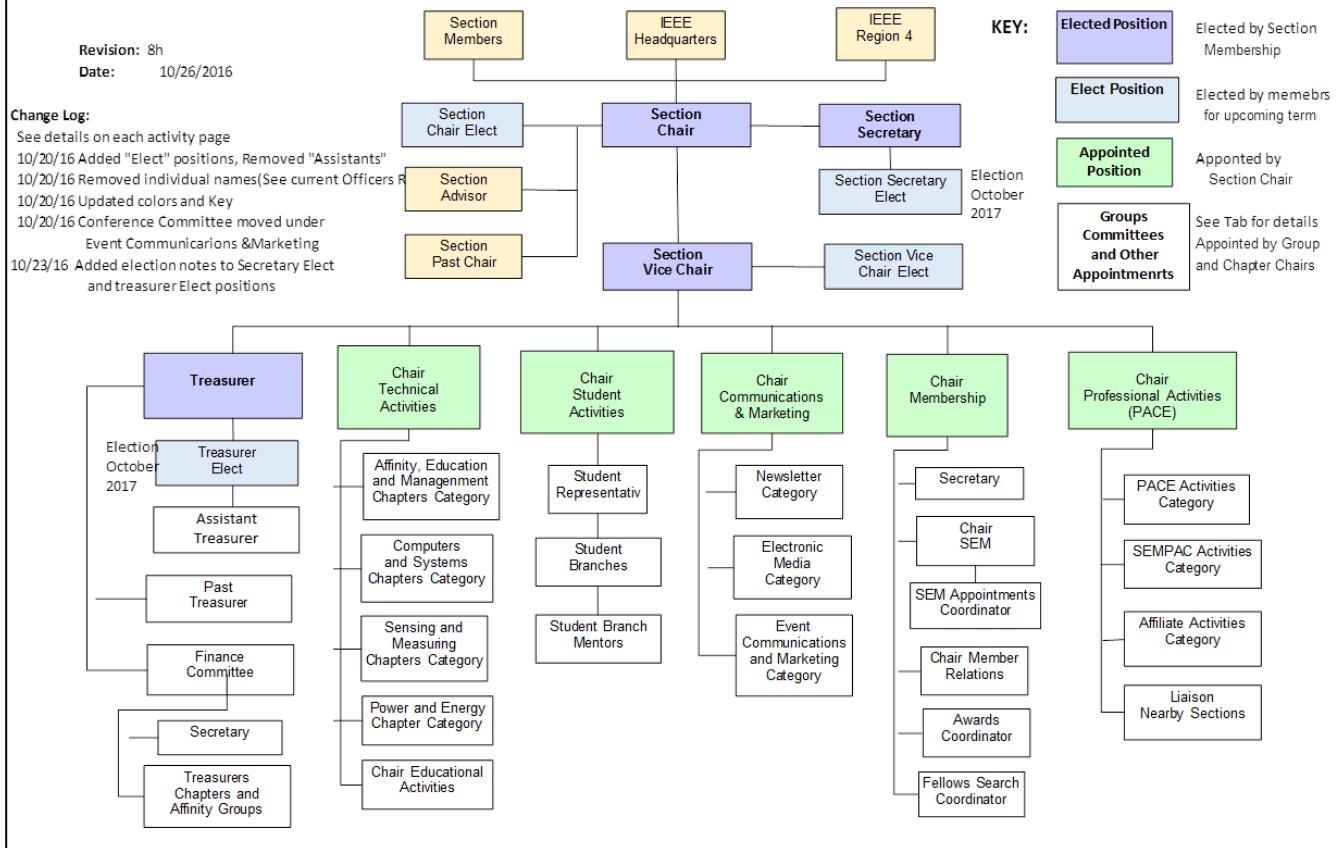
other chapters. In order to communicate the meeting dates of all the chapters, affinity groups etc., to our members to facilitate their attendance, leaders of the groups are requested to send meeting information to our webmasters for posting on section’s calendar.

More detailed information on meetings may be found by using the IEEE meetings site. This 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.

David Mindham - SEM Secretary

Current Organization - IEEE Southeastern Michigan Section (SEM)



Download the **complete SEM Organization Chart**, in PDF format, from the SEM Website at: www.ieee-sem.com. Then, click on “**About SEM**” Tab, followed by, click on “**Current Officers**” (NOTE: this is now password protected)

ExCom Meeting Schedule:

Below is the 2017 remainder 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 the meetings. Information on each Face to Face Meeting will be sent out once the venue is confirmed.

Please mark your calendars for the meeting.

October 5, Thursday, Face to Face, 5:30 – 8:00 P.M. https://meetings.vtools.ieee.org/feed/meeting_ical/42559

November 1, Wednesday, Teleconference, 12:00 – 1:00 P.M. https://meetings.vtools.ieee.org/feed/meeting_ical/42556

December 7, Thursday, Teleconference, 12:00 – 1:00 P.M. https://meetings.vtools.ieee.org/feed/meeting_ical/42557

David Mindham
SEM Secretary

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

David Mindham
SEM 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 (...**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.

The regular meetings of the SEM Leadership (Executive Committee) are scheduled well in advance to allow everyone to place them in their personal planning calendars, and then defend those dates against encroachment. (*Not always possible.*)

Two types of Monthly meetings are normally scheduled:

Monthly Teleconference / WebEx as well as:

Quarterly Face-to-Face (F2F). See schedule on the page above:

Note: All IEEE meetings are 'Open' for all members to attend.

The only caveat is that you please register using the specific meeting form on the vTools site at: <https://meetings.vtools.ieee.org/main>

Registering will ensure there is sufficient space, refreshments and support for attendees.

Teleconference Schedule
(Held from 12-1 p.m.):**F2F Meeting Schedule:**

More information for F2F meetings will be emailed to all officers, (and any members requesting the schedule), in a timely manner before the meeting dates.

Contact **David Mindham** the SEM Section Secretary at: dmindham@ieee.org for more information.

Additional information may be found at (<http://sites.ieee.org/sem/>).

All the normally scheduled meetings of each of the other section chapters, affinity groups etc. are listed each month in the vTools area of our SEM website at:

http://ewh.ieee.org/r4/se_michigan/calendar1.php

The information is for:

Standing Committee Meetings
Affinity Group Meetings
Technical Chapter Meetings
University Student Branch Meetings
University HKN Chapter Meetings

Calendar Schedule:

Meetings are also announced on the SEM Calendar web page

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

(Select the "SEM Calendar" button in the top row.)

Note: Often meetings of the Executive Committees of Chapters and Affinity Groups (and standing committees, of course) are listed only in the SEM Calendar page, since it is felt that most members would not wish to sit through administrative meetings.

However, if this type of meeting is just your 'cup of tea', then contact the officers of the unit that is conducting the meeting, and ask to be 'linked' into their teleconference, SKYPE, Google Hangout, or WebEx meeting. They will be happy to have you as a participant.

Many volunteers become interested in section activities when they get a chance to attend a monthly meeting and 'peek under the hood' to find out how the machinery of the section actually runs. It can be a rewarding experience.

David Mindham
SEM Section Secretary.
dmindham@ieee.org

SEM Monthly Meetings**Scheduled Meetings:**

The links to the SEM Facebook or LinkedIn pages on the SEM website may also be checked for updates.

Editors 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
karen.burnham@gmail.com

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 members to share the duties, and help keep the

newsletter alive and lively by providing alternative points of view.

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

anyone of the following:

karen.burnham@gmail.com
sharan.kalwani@ieee.org
jrwwoodyard@gmail.com
k.williams@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	

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	

← Wavelengths Annual Publication Plan for Personal Profiles



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”.

SEM On Line Community Section Officers
<http://sem.oc.ieee.org>

Section Officers

Section Chair
Robert Neff

Section Secretary
David Mindham

Section Vice-Chair
Nevrus Kaja

Section Treasurer
Xinhua Xiao

Standing Committees:

Section Adviser
Don Bramlett

Chair Communications & Marketing
Ravi Nigam

Chair Educational Activities
Aaron Romain

Chair Finance
Nevrus Kaja

Chair Membership
Aisha Yousuf

Chair Nominations & Appointments
Kimball Williams

Chair Professional Activities (PACE)
Sharan Kalwani

Chair Student Activities
Hashim Abdul

Student Representative
Mehdi Mohammadi

Chair Technical Activities
Kimball Williams



IEEE Southeastern Michigan

Visit Us on the Web at:

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

Click on the picture to give feedback!



Leadership Meetings

All IEEE members are welcome to join us at any regularly scheduled meeting:

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
arrangements.

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 Web 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>