Wavelengths

IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

Volume 58 – Issue 5

Contents

Section Chair's Message

Chairman's Letter
May 2018 Wavelengths

Volunteering:
IEEE SEM needs people who are interested in building their networks, growing their social skills, learning leadership skills and mentoring others with their technical knowledge and experience. To volunteer, please contact leaders in the areas of your interests (go to www.ieee-sem.org and click on "About SEM" tab) where you will find our roster and organization chart. Or, contact Kimball Williams our Chair of Nominations and Appointments at k.williams@ieee.org . Don't miss the interview with Carla Gerst (Computer Society chapter) on page 11.

Busy Spring:
There are many activities planned within our Section this spring. Those coming up very soon are:

- IEEE SEM Spring Conference May 5, Government Regulation and Engineering. See page 2 for more information.
- IEEE International Conference on Electro/Information Technology (EIT) on May 3-5. More details are on pages 3-6.
- EMC Fest on May 10. See pages 7-8 for more information.
- For these and other events see the SEM calendar at www.ieee-sem.org .

Detroit Police Radio Dispatch Anniversary:

This April IEEE, SEM, Association of Police Communications Officers (APCO) and Amateur Radio Association (HAMS) gathered to celebrate the 90th anniversary of the first police radio dispatch service. The broadcast station was located on Belle Isle to reduce interference. An IEEE plaque is mounted on the station. See pages 14 – 17 for a report on this event.

STEM Activities:
Our SEM STEM activities take place formally in our Library Electronics Education Program (pages 18-20) and in our 32 years of participation in the Detroit Science and Engineering Fair (page 10).

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

Spring Conference

IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

2018 SPRING CONFERENCE

Saturday, May 5

GOVERNMENT REGULATION AND ENGINEERING

Location

Troy Community Center
3179 Livernois, Troy, Michigan 48083

Conference Agenda

09:30 AM	*10:00 AM*	*Registration / Networking*
	(coffee, tea, and a light breakfast provided)	
10:00 AM	*12:00 PM*	*Speakers*
12:00 PM	*01:00 PM*	*Lunch*
12:30 PM	*01:00 PM*	*IEEE Section Awards*
01:00 PM	*02:00 PM*	*Keynote Speech*
02:00 PM		*Closing Remarks*

Registration

https://events.vtools.ieee.org/meeting_registration/register/160622
Early Online Registration ends April 20
Late Online Registration ends May 3 (deadline for meal orders)
Day-Of / In-Person Registration - Credit Cards Only (No Cash or Checks)

Conference Attendee Fees:	**Early / Late**
Students/Retired/Unemployed (Members)	*$25 / $35*
IEEE / ESD / SWE Members	*$45 / $60*
Non Members	*$60 / $80*
Technical Sessions Only	*$30*
Primary Poster Authors	*$0*
Additional Poster Author	*$25*
Student Table Sponsor (8 students)	*$250*
*Silver Sponsorship Registration**	*$500*
*Gold Sponsorship Registration**	*$1000*
*Platinum Sponsorship Registration**	*$2000*
*Diamond Sponsorship Registration**	*$3000*

*Please contact organizers at isullivan@ieee.org for further sponsorship details.

Conference website: htttp://www.ieee-sem.org/spring

EIT2018 Program

http://www.eit-conference.org/eit2018/
All conference events will be held at the
Oakland University Engineering Center (EC), 115 Library Drive, Rochester, MI 48309
Parking on campus is free of charge
May 3 thru May 5, 2018

Thursday, May 3, 2018

Time	Session				
1:00 PM -6:00 PM	Registration @ EC Atrium				
2:00 PM -2:30 PM	**Welcome Remarks** Conference Chairs: H. Mousavinezhad, S. Ganesan, and D. Aloi OU School of Engg Dean: L. Chamra OU Provost: J. Lentini IEEE Region 4 Director: Bernie Sander IEEE Region 4 Conferences Administrator: J. Riess EC 116				
2:30 PM -3:15 PM	**Keynote: Recent Advances in Machine Learning and Classification Algorithms** Prof. Hojjat Adeli, Ohio State University EC 116				
3:15 PM -3:45 PM	Break and Networking EC Atrium				
3:45 PM -6:00 PM	Session RP1 EC 116 Computer Vision Prof. Shadi Alawneh, Oakland University	Session RP2 EC 254 Cyber Security Prof. Dietmar Möller, Clausthal University	Session RP3 EC 275 Electromagnetics and Antennas Mr. Sergey Gladyshev, University of Michigan-Dearborn	Session RP4 EC 279 Engineering Education Prof. Debatosh Debnath, Oakland University	Session RP5 EC 281 Power Systems and Power Electronics Prof. S. Ali Arefifar, Oakland University
6:00 PM -8:00 PM	Welcome Reception Buffet Mrs. Dona Burkard, Ford Motor Company Tent				

Friday, May 4, 2018			
Time	**Session**		
8:00 AM – 4:00 PM	Registration EC Atrium		
8:30 AM – 9:15 AM	**Keynote:** ***Brains, Memristors and Race Logic*** Dr. Advait Madhavan, NIST Center for Nanoscale Science and Technology EC 116		
9:15 AM – 9:45 AM	Break and Networking EC Atrium		
9:45 AM – 11:45 AM	Session FA3 EC 275 Biomedical Applications, Telemedicine Prof. Wenbing Zhao, Cleveland State University	Session FA4 EC 279 Cyber Security Prof. Anyi Liu, Oakland University	Session FA5 EC 281 Power Systems and Power Electronics Prof. S. Ali Arefifar, Oakland University
11:45 AM – 1:15 PM	Lunch Mr. Dave Robins, President, Intrepid Control Systems Tent		
1:15 PM – 3:15 PM	Session FP3 EC 275 Natural Language and Image Processing Prof. Shadi Alawneh, Oakland University	Session FP4 EC 279 Signal, Image and Video Processing Dr. Jean Jiang, Purdue University Northwest	Session FP5 EC 281 Systems Engineering Prof. Hua Tang, University of Minnesota Duluth
3:15 PM – 3:45 PM	Break and Networking EC Atrium		
3:45 PM – 5:45 PM	Session FP8 EC 275 Software Engr. and Middleware Architecture Prof. Myoungkyu Song, University of Nebraska at Omaha	Session FP9 EC 279 Wireless Communication and Sensor Networks Prof. GirmaTewolde, Kettering University	Session FP10 EC 281 Industry/Oral Only Presentations Mr. Sharan Kalwani, Vice Chair Computer Society, Chair Education Society
6:00 PM – 9:00 PM	Awards Banquet Prof. Mark Steffka, IEEE EMC Society Distinguished Lecturer Tent		

Saturday, May 5, 2018					
Time	**Session**				
8:00 AM -1:00 PM	Registration @ EC Atrium				
8:30 AM -9:15 AM	**Keynote:** ***Knowledge-Based Perspective on Big Data-Driven Smart City Developments*** Prof. Madjid Fathi, University of Siegen, Germany EC 116				
9:15 AM -9:45 AM	Break and Networking EC Atrium				
9:45 AM -12:00 PM	Session SA1 EC 116 Control Systems and System Identification Prof. S. Hossein Mousavinezhad, Idaho State University	Session SA2 EC 254 Environment and Infrastructure Mr. Aqeed Chyad, Western Michigan University	Session SA3 EC 275 Power Systems and Power Electronics Prof. Vincent Winstead, Minnesota State University, Mankato	Session SA4 EC 279 Reconfigurable and Embedded Systems Prof. Daniel Llamocca, Oakland University	Session SA5 EC 281 Wireless Communication and Sensor Networks Prof. Kiho Lim, University of South Dakota
End of Conference					
12:15 PM -6:00 PM	Trip to the Henry Ford Museum (with boxed lunch, requires separate registration) Meet in front of EC building EC				

EIT2018 Welcome

IEEE INTERNATIONAL CONFERENCE on ELECTRO/INFORMATION TECHNOLOGY

Welcome Message

Dear Friends and Colleagues:

It is a great pleasure and an honor to extend to you a warm invitation to attend the 18th International Conference on Electro Information Technology, to be held on May 3-5, 2018 at Oakland University, Rochester, MI, USA. IEEE Region 4 and Oakland University jointly organize the 2018 Conference. It has been co-sponsored by the following industries: Intrepid CS, Vector, Infineon, and dSPACE.

We received more than 240 papers and we have accepted nearly 195 papers from over 10 countries. There are 5 industry speakers and 6 keynote speakers.

Oakland University had the pleasure of hosting the same conference in 2001 before. Rochester is an exceptional location for a conference. It is surrounded by automotive companies and suppliers. The conference is held at the new Engineering Center building at the university.

The EIT 2018 Conference will provide a wonderful forum for you to refresh your knowledge base and explore the innovations. The Conference will strive to offer plenty of networking opportunities, providing you with the opportunity to meet and interact with the leading academicians and researchers, friends and colleagues as well as sponsors and exhibitors.

We hope you will enjoy the conference and take a little extra time to enjoy the 1400 acre campus and unique beauty of this region.

With best wishes,

General Chairs: Dr. Daniel Aloi, Dr. Subra Ganesan

Program Chair: Dr. Osamah Rawashdeh

Conference Founding chair: Dr. Hossein Mousavinezhad

R4 Conferences Administrator: James Riess,

And all Organizing Committee members

EMCFest 2018

The Southeastern Michigan EMC Chapter
Proudly Presents:
EMCFest 2018

The Art and Science of EMC Design

A Tutorial and Exhibition
With Honored Guest Speaker

Colin Brench

Thursday, May 10, 2018

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

IEEE Electromagnetic Compatibility (EMC) Society.
EMCFest 2018 Home Page:
http://www.emcfest.org
Register On-Line!

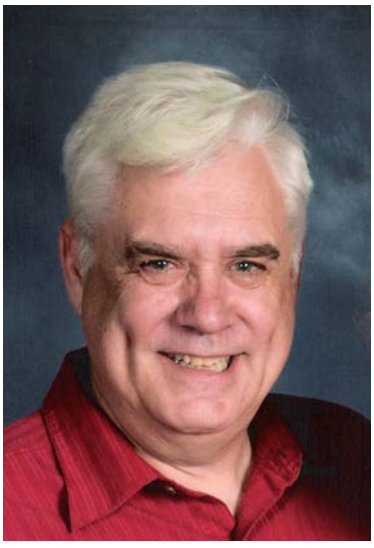
Colin Brench is currently a Principal Engineer at Amphenol High Speed Interconnects, in Nashua, NH. He is a co-author of the book, EMI/EMC Computational Modeling Handbook, has authored over 20 technical papers and articles, and holds 12 patents. Colin is a Senior Member of the IEEE, member of the EMC Society, and an iNARTE certified EMC Master Design Engineer. He has been a Distinguished Lecturer for the IEEE EMC Society, and has given several seminars for various IEEE Chapters and Sections. In 2002 he was awarded the Certificate of Technical Achievement by the IEEE EMC Society for his contributions to the development of EMC modeling directed to understanding EMI shielding and antenna behavior. .

The Program:

The Art and Science of EMC Design:
EMC design is an involved process and, while some portions of the work can be done very precisely, there are others that are too complex to easily analyze. Indeed, it is not uncommon for some critical information to be simply unknown. This leaves the design engineer with an array of tools and, more often than not, a wider range of questions.

There are many design aids available, computation tools that permit the analysis of very complex problems, rules of thumb that provide guidance on more standard situations, and the engineer's experience and understanding of similar products is also a major resource. It is essential however to understand the limits of all these resources.

Both computational and analytical tools are capable design tools but to use them reliably it is essential to know exactly what assumptions are built into them. Rather than a 'how to design for EMC Compliance', this presentation will focus on how to use the appropriate tools correctly. The strength and weaknesses of tools, measurements, and even our own understanding will be examined in a way to provide the EMC design engineer with a robust process.



EMCFest 2018 – Continued:

Program Outline
Thursday May 10, 2018

6:00	Vendor Table Setup (till 8:30)
8:00	REGISTRATION & EXHIBITS
8:30	CONTINENTAL BREAKFAST
9:00	The Science of EMC Design
10:00	Break & Exhibits
11:00	EMC Design Tools
12:00	LUNCH
1:00	The Art of EMC Design
2:00	Break & Exhibits
3:00	Design Verification and Validation
4:00	Ice Cream Reception
5:00	Close of EMCFest

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

Hotel Information

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

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

Embassy Suites in Livonia is offering reduced room rates for reservations. Special Room rates are available (standard room) $121.00, plus tax. Internet, pool, exercise facility, breakfast and a cocktail reception are free.. There are a LIMITED number of hotel rooms at the reduced price. You must mention **"Group ID: EMC Fest 2018"** to get this special rate and reserve your room by April 13. After which rooms and rates are subject to availability.

FEE SCHEDULE	
IEEE Members, Registered before April 21st	**$50**
Non IEEE Members, Registered before 21st	**$75**
Full –time Students with copy of valid Student I.D.	**$25**
Unemployed / Retired IEEE Member	**$25**
CEU Certificate Only	**$25**
All Registrations after April 21st	**$100**

Register On-Line!

The registration fee includes one copy of the tutorial record, continental breakfast, lunch, and reception. The organizing committee reserves the right to substitute speakers, restrict size, or to cancel the tutorial. In the event EMCFest 2018 is canceled by the organizing committee, registration fees only will be fully refunded.

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

www.emcfest.org

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EMC Training Classes

LEARN EMC

Become an EMC Expert!

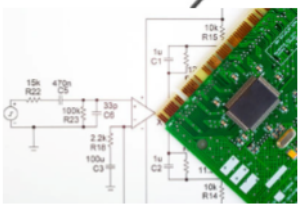
Professional EMC training in the Midwest

2018

Stoughton, Wisconsin
May 22-23 Electronic Systems Design for EMC Compliance
May 24 Advanced Printed Circuit Board Design for EMC

Detroit, Michigan
Sept 17-18 Design for Automotive EMC Compliance
Sept 19 Automotive Printed Circuit Board Layout
Sept 20 Power Electronics Design for Electromagnetic Compatibility

Stoughton, Wisconsin
Oct 15-16 Fundamentals of Electromagnetic Compatibility
Oct 17-18 Design for Guaranteed EMC Compliance



For Details & Registration, visit LearnEMC.com

10% discount for IEEE Members! Use Coupon IEEE-EMC at checkout.

Register early, classes are expected to fill!

Prof. Todd Hubing, IEEE Fellow and past-president of the IEEE EMC Society, is the primary instructor for LearnEMC short courses. His unique approach to EMC education uses real applications to demonstrate important fundamental concepts.

2018 Science Fair

By Don C. Bramlett, PE, IEEE-SEM Section Advisor

The 61st Annual Science and Engineering Fair of Metropolitan Detroit (SEFMD) was held from March 13 through March 17, 2017 in the Oakland Hall of the Cobo Conference Exhibition Center in downtown Detroit. Judging of student projects was performed on Wednesday, March 14. This year the SEFMD had over 130 schools participate from Wayne, Oakland, Macomb and Washtenaw counties with approximately 2,000 students having 1600+ projects on display in two Divisions, the Junior Division (6th thru 8th grade students) and the Senior Division (9th thru 12th grade students). Exhibits were classified into 23 general categories for judging; including Embedded Systems, Energy: Physical, Robotics, and System Software.

For the 23rd straight year the IEEE Southeastern Michigan (IEEE-SEM) Section has provided a team of volunteer judges to evaluate student projects associated with IEEE fields of interest. The Section would like to express its appreciation to the IEEE-SEM Section members who volunteered to be members of the IEEE professional organization awards judging team or serve in other roles this year.

The Section wishes to thank the four (4) IEEE-SEM members, and their companies/institutions, for taking the time to volunteer and help to make the Science Fair a more pleasurable and meaningful experience for the middle school and high school students who participated.

The IEEE-SEM judging team was composed of the following three (3) volunteers:

Don C. Bramlett, PE, SMIEEE, FESD, FMSPE
DTE Electric (DTE Energy) – retired

Ralph Mackiewicz
SISCO, Inc.

Laurence Dishman
Wayne State University – retired

Other IEEE/SEM Section members served in other capacities at the SEFMD, such as:

Dave Morris, Ph.D. (General Category Judge)
Mitre

The judges had the opportunity to view and evaluate a number of exhibits, especially some interesting projects in areas pertinent to IEEE fields of interest. The judges and the high school students in the Senior Division had the pleasure to interface and discuss in depth some of the principles, scientific techniques, engineering approach, experimental results and applications pertinent to the projects.

The IEEE-SEM Section, based on the evaluations of the panel of judges, awarded three (3) First Place Grand Awards in the Senior Division, consisting of a personalized certificate and a cash award for each awardee. These awards were presented to:

Senior Division:

Tony Pan, a senior at University Liggett in Grosse Pointe Woods, for his project entitled
"LightScribe Graphene Supercapacitor."

Alexander Wan, a freshman at Novi Senior High School in Novi, for his project entitled
"Using Deep CNNs and Feature Matching Algorithms for Smarter Autonomous Cars."

Anirudh Cowlagi, a sophomore at Huron High School in Ann Arbor, for his project entitled
"Maximizing Solar Energy Storage Using Algorithm-Based Power Diversion and MPPT."

The panel of judges also determined that the IEEE-SEM Section would provide s number of Outstanding Achievement Awards to other noteworthy projects in the Junior and Senior Divisions. Each Outstanding Achievement Award consisted of a personalized certificate for each awardee. Some of these awardees include:

Akshitha Sahu, a seventh grade student at Baker Middle School in Troy, for her project entitled
"LeadMe/FollowME or PortMe."

Josh Zhe, a Junior at Detroit Country Day Upper, for his project entitled "Traffic Management of
Autonomous Vehicles at Uncontrolled Intersections."

Ashwin Mahendran, a sixth grade student at Indus Center for Academic Excellence - Middle School in Lathrup Village, for his project entitled "Using Raspberry Pi for Assistive Technology for the Blind."

For further information on the Science Fair judging, awards and project abstracts go to www.sefmd.org .

The IEEE/SEM Section plans to continue to staff other panels of special awards judges at both the Michigan Regional Future City Competition and the SEFMD in 2019, and in subsequent years. These are just a couple of the pre-university education programs that the IEEE-SEM Section promotes.

Intro to Chapter Officers

Over the course of 2018 we will be featuring interviews with different Section officers. This month we're pleased to interview the Student & Education Liaison Officer of Chapter 5 (Computer Society).

Carla Gerst

What is your educational background?
I am currently pursuing MS in Mechatronics from Oakland University. I recently received a BSE in Electrical Engineering from Oakland University (December 2017). Additionally, I have a BS in Applied Mathematics from Michigan Technological University (March 1993).

What is your current position and specialty?
I am a graduate student pursuing an MS in Mechatronics at Oakland University. I'm currently seeking a full time engineering position focusing in systems, controls, or mechatronics.

How long have you been involved in Chapter 5?
I've been involved since February 2018.

What is the role of the Student & Education Liaison officer?
The Student & Education Liaison officer helps facilitate communication between the SEM Computer Society Chapter 5 and the university student branches in our region. I'm in the process of connecting with the branches to make sure their contact information is up to date and see if there's anything we can do to help them.

Are there any plans for 2018 that you're particularly excited about?
I'm excited to begin working with the university branches. It will be interesting to see how this collaboration develops and strengthens the society and the university branches. I hope that this will help bring quality workshops and technical presentations to the universities.

Computer Society Update

The IEEE SEM Computer Society Chapter (aka Chapter 5) and IEEE SEM Education Chapter (aka Chapter 13) has held several events during this part quarter. Many of them dealt with several new and exciting technologies such as Block Chain and the rollicking wave of Data Science. We also did an update on the various security vulnerabilities which continue to plague us, perhaps since the day the computer was invented!

In these endeavors – we have been helped by the local IEEE student branch at Oakland University and challenge the other Student branches to work with us to bring exciting and new technology speakers to their campuses as well.

Of course, sister societies are not exempt and we have an open invitation to them to pool our resources together and bring fresh and relevant topics for their members as well.

We might experience a slight lull during the summer however we plan on working with the local PACE to deliver:

- ✓ soft skill tutorials
- ✓ job hunting and interviewing tips
- ✓ cultural awareness acumen, in order to shine as an international team member
- ✓ leadership skills
- ✓ modern programming language hands on tutorials
- ✓ security and computer protection revised checklists and finally
- ✓ computing technology refresher courses for the folks who fear falling behind

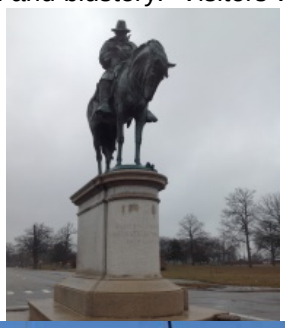
If there is a topic we have not mentioned, feel free to blast us an email, so we may accommodate you. All courses will take place either in the evening or on a Saturday, so you can get a good solid understanding and benefit in a meaningful way.

You can find all of our contact information at the IEEE SEM website under the roster, located at http://sites.ieee.org/sem/files/2018/04/Organization_Roster_IEEE_SEM_4.2.2018.pdf

ZF Employment Ad

Belle Isle April 7th:

The morning of April 7th, 2018 could best be described as cold and blustery. Visitors who turned past the statue of the civil war general on his horse and drove on to the old Belle Isle police station were greeted with the site of 17 warmly bundled Amateur Radio operators busily setting up antennas and simulated emergency communications stations. There was no obvious emergency, so what was going on?



The day had been set aside for three interested groups to visit to Belle Isle between 10 AM and 4 PM on April 7th and hold re-dedication ceremonies at 2 PM for two historical plaques.

The three groups, the IEEE – Institute of Electrical and Electronic Engineers- (**https://www.ieee.org**) placed a historical plaque 50 years ago at the Belle Isle police station building where the first radio broadcast to police car radios began at the police station on Belle Isle in 1928. The APCO –Association of Police Communications Officers- (**https://www.apcointl.org/about-apco.html**) supported the placement of a State of Michigan historical marker near the building 10 years ago. The Amateur Radio community (Hams) – American Radio Relay League- (**http://www.arrl.org**) represented the Amateur Radio operator who led the earliest experimentation conducted by Detroit Police Commissioner William P. Rutledge and Bernard (Barney) Fitzgerald, an amateur radio operator with call sign (W8FS) who performed the initial 'proof of concept' experiments
(See **http://ethw.org/Milestones:One-Way_Police_Radio_Communication,_1928**.)

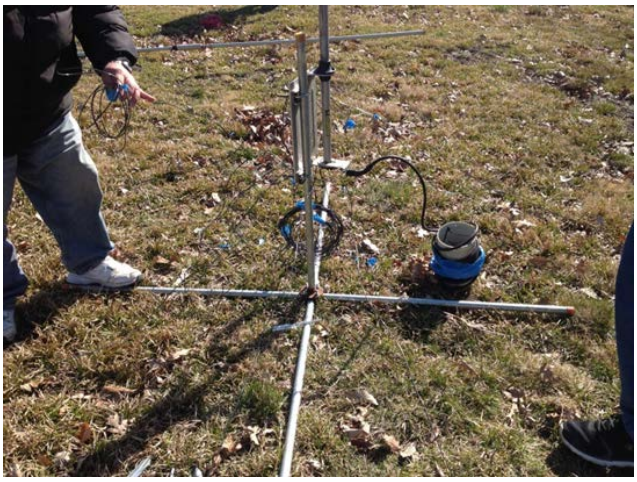
The Amateur Radio Operators represented Radio Clubs from the ARROW - Ann Arbor's Ham Radio Club, the Hazel Park Amateur Radio Club, the Livonia Amateur Radio Club (LARC), Ford Motor Company "Tin Lizzy" Amateur Radio Club of Dearborn, the WW8GM GM Amateur Radio Club of Detroit and Motor City Radio Club of Wyandotte, all of Michigan.

In order to remove the possibility of spreading tree disease spores, Michigan Parks do not allow attaching antennas to trees, so we saw magnetic loop, inverted 'V' dipoles and vertical antennas. All supported on tripods, extension poles or ground based and guy supported.

Going up or Coming down?

Belle Isle April 7th:

In acknowledgement of the technical and social significance of the event, the Federal Communications Commission had authorized Michigan Amateur Radio Operators to use 'Special Event' call sign K0P. During the day stations working on Morse code (CW) and Single Side Band (SSB) voice communications made contacts with other Amateur Radio stations all over the US as well as Germany and Belgium.



Base of a Vertical Antenna

Around 1 PM the crowd of on-lookers watching the Amateur Radio Operators began to grow as former police officers and police communications specialists, representatives of the City of Detroit and special sponsor 'OnStar' began to arrive in advance of the official rededication ceremony planned for 2 PM.
By time for the actual ceremony, a crowd of 40 to 50 people had gathered to celebrate the day.

Belle Isle station & vintage vehicle

Richard Rybicki of the Michigan APCO welcomed everyone to the celebration and introduced Cathy Bishop of 'On Star' who sponsored the event. Cathy identified the alignment of objectives of all the groups present with reliable, mobile emergency communications. Richard outlined the background of the Belle Isle experiment and then introduced Kim Ostin of the Michigan APCO to also welcome everyone and note the significance of the event for every one present.

Kimball Williams who represented the IEEE and the ARRL spoke about the initial experiments that took place on Belle Isle, and the role played by the Amateur Radio Operators, who at that time, were the only 'experts' in this 'new' technology. Finally Richard gave closing remarks, and everyone chatted and marveled at the vintage police cruiser and talked with its owner, a retired police communications specialist. A general agreement was voiced that in 10 years, we should all return to celebrate the 100th anniversary of the development that took place in 1928.

In the group conversations that followed the ceremony, everyone agreed it was a good event, worthy of being remembered and significant as the beginning of our mobile communications culture. They also agreed that the day was becoming very cold, very windy, and a warm drive home was going to be a welcome change.

Belle Isle April 7th:

IEEE Re-Dedication of IEEE Milestone #9 Talk:

Malcolm Lunn brought refreshments!

The IEEE Milestones program honors significant technical achievements in all areas associated with the IEEE technical fields of interest. These Milestones honor the achievement, rather than a place or a person. To be proposed as an IEEE Milestone, an achievement must be at least 25 years old, have benefited humanity, and must have had at least regional and usually greater importance.

In 1985, the first IEEE Milestone was placed at Signal Hill, Newfoundland to honor the achievement on December 12, 1901, when Guglielmo Marconi and his assistant, George Kemp, confirmed the reception of the first transatlantic radio signals. With a telephone receiver and a wire antenna kept aloft by a kite, they heard Morse code for the letter "S" transmitted from Cornwall in the UK.

The 9th IEEE Milestone was placed at the Belle Isle Detroit Police Station in 1987 to honor the first mobile communications systems broadcast in 1928.

In 1921 Commissioner William P. Rutledge of the Detroit Police department became intrigued by radio. He envisioned a fleet of automobiles that were linked by radio to police headquarters. Rutledge contacted his nephew, Bernard (Barney) Fitzgerald, an amateur radio operator with call sign (W8FS). Rutledge and Fitzgerald worked together to first prove the concept, then to spread the results to the Detroit police department patrol cars.

The first transmitter was a one-tube self-excited oscillator and operated under amateur station license 8BNE in the 200 meter band in 1928. The receiver in the vehicle was a tunable receiver with earphones. I have found no historical photos or descriptions of the transmitting antenna used. But, it is interesting to consider that a half wave Dipole antenna for the 200 meter band would be longer than a football field!

The Commerce Department, through the then 'Federal Radio Commission', issued Detroit a radio license, KOP. Today our Special Station license from the Federal Communications Commission was issued as K0P as a salute to that first call sign.

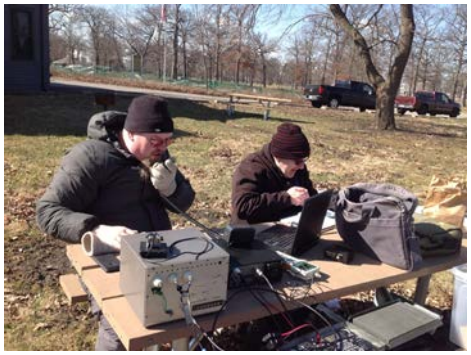
We celebrate this achievement with three core groups, The APCO (Association of Public-Safety Communications Officials), the IEEE (Institute of Electrical and Electronic Engineers) and ARRL (American Radio Relay League), the fraternal association of amateur radio operators.

Some may question; "Why the amateur radio operators?"

Belle Isle April 7th:

Part 97 of the FCC regulations contains the rules governing the Amateur Radio Service. It lists five "purposes" for the existence of amateur radio.
Number one is providing emergency and public-service communications. Another is advancing skills in the technical and communication phases of the radio art. Both of these were expressed in the vision and contribution of the early radio amateurs who were at the heart of the accomplishment we celebrate here today.

We remember the people who first made this this significant technical achievement possible, and honor the 90th anniversary of their work. The use of mobile radio communications to enhance the safety and security all people began here. What they accomplished here were the first steps toward our current mobile communications systems.



It was 90 years ago that this first step forward was taken. It will be interesting to come back 10 years from today to see where a full 100 years of continuing progress will have brought us.

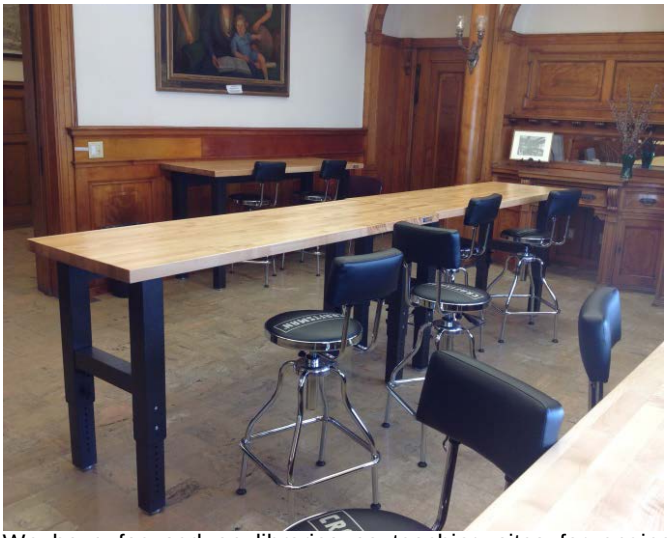
Thank you.

Networking - Making Friends

IEEE SEM Library STEM

STEM (Science, Technology, Engineering & Mathematics) classes in our Section have been growing and expanding in the past months, in great part due to the generous contributions from ZF Gives.

ZF funding has allowed us to expand existing and establish new and improved teaching capabilities and facilities at both the Dearborn-Heights Caroline Kennedy Library and the Bacon District Memorial Library in Wyandotte, MI.



These new facilities have allowed us to extend teaching the 'Fundamentals of Electricity at both libraries, and introduce new classes in Safe Soldering in both.

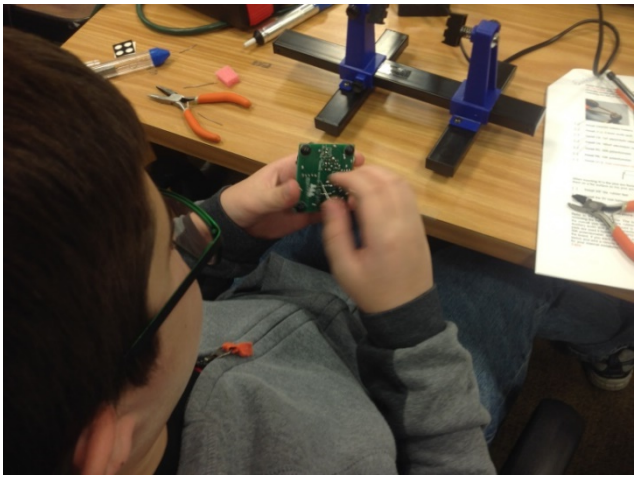
Why STEM?

There has been some discussion in the general technical media about the need for STEM exposure for young students. Many STEM based jobs go unfulfilled every year, forcing some companies to postpone the development of new products. However, we should not expect STEM educational experiences to solve those problems. STEM is not about turning students into engineers, but rather *helping them learn* how to think and analyze more effectively.

Why Libraries?

We have focused on libraries as teaching sites for engineer conducted STEM experiences for a number of reasons:

- Libraries provide a natural 'social' filter. Students who frequent libraries 'want to learn'. This avoids the problem in the school system in which some students are there as 'captives' of the system without the interest to explore and grow.
- Library teaching avoids state mandated curricula requirements and teacher certifications. This means that engineers who know and practice their disciplines in real life can offer their knowledge and experiences to those who want to learn.



Why SEM?

So, why are we seeing a strong STEM activity in South Eastern Michigan? The concentration of engineering and technical talent in South Eastern Michigan (SEM) represents an astounding diversity of technical disciplines. This results in a number of engineers, both currently working and retired, with a strong willingness to 'give back' to the community for the wonderful career and life that their technological experience has provided.

IEEE SEM Library STEM

Library Staff & IEEE Relationship
One of the most conducive aspects of working with libraries is the dedicated people who seek library science as a profession. They dedicate themselves to offering their repositories of knowledge to anyone who walks through their doors.

That attitude of giving to the community aligns with the goals of STEM teaching and makes libraries a natural focus of diverse learning experiences of all types.

Advertising & Outreach
One lesson that has been learned is the need to reach out to the community at large through public media to let students know of the class opportunities well in advance. Also, some age groups find commitment to a long series of classes difficult given their school study requirements. While some can make time for classes during the week, others can only find time on weekends. Thus class timing and flexibility becomes necessary in order to provide opportunities for as many as can be accommodated.

Teaching (IEEE) Staff
When the IEEE SEM Education Committee began working on STEM programs we initially looked to our large and diverse community of retired engineers in the Section as likely candidates for STEM teaching. However, it has been the working engineers and even students who have stepped forward to teach many of our classes.

Amateur Radio Club involvement
As part of our outreach beyond the 'normal' IEEE community we have partnered with several local Amateur Radio organizations who have helped us introduce students to "Ham" radio and the amazing diversity of opportunities it opens. Related classes include preparing for the FCC examinations for the 'Technician' (first introductory license) license, and Save Soldering and building a first low power Morse code radio station.

We are looking at other similar alignments with groups of like-minded people who maintain a core interest in technically related activities. These 'hobby' activities often focus the interest of youngsters in a science or technology related field which may lead to a future pursuit at university and a career.

Through our micro-computer programming and expansion classes we expect to be moving toward alignment with local robotics activities.

Curricula Options / Changes / Growth
In addition to the classes we have been teaching for a few years, we are also exploring options for 'micro' classes, focused on very young students. These will use science 'kits' that allow students to bypass some of the deeper learning required in our classes for older students, and see results of their experiments with immediate results.

These exposure events serve two functions:

- Young students can explore many STEM topics rapidly and discover which engage their interests.
- Those who find an immediate affinity for a particular topic will likely want to continue along that learning path by taking one of the deeper classes.

Requests from the School System
Students who have become involved in our STEM classes have interested some of the teachers in the local School System. When these teachers contact us, they often request that we consider bringing the STEM program into the school, as an 'after School' activity. This may take the form of a Science or Math club, led by an IEEE engineer or scientist.

IEEE SEM Library STEM

While the opportunity to present learning opportunities to more students is intriguing, developing the systems needed to support that additional activity, and recruiting the teaching teams needed to sustain it will require another level of commitment from the SEM Education Committee, and a probable expansion of the Committee charter. This is a topic to be discussed at the SEM Executive Committee level.

Current Classes:
The introduction of the new Fundamentals of Electricity classes at the Bacon library was well received, and the students were all very excited about the topic and the hands on experiments.

The new class on Safe Soldering classes that included each student constructing a low power, Morse code, Amateur Radio Station was well received at both libraries. We are now considering what other projects we might use to engage in developing the skills to build their own equipment as well as new circuit design and modeling before the final soldered stage.

More Libraries:
The current successes have encouraged us to begin to explore other libraries in Southeastern Michigan Section and we have turned up some interesting possibilities in the northern and western suburbs.

However, before we can take advantage of those new opportunities, we will need to recruit and engage more volunteer instructors.

We also need to improve the details of the entire set of class descriptions to provide a framework within which each instructor team can not only find the guidance where the material is currently a bit 'vague' yet remain sufficiently flexible to allow for the development of new and different 'Hands on' experiments and demonstrations.

At this time we are planning a series of brainstorming meetings with the current and past instruction teams to consider way in which the structure and content of the STEM classes can be improved to benefit the students.

Those interested in volunteering to help with our STEM program at existing or new libraries should contact Kimball Williams at k.williams@ieee.org.

This Month in May

Or: Notable Events in History, which I Did Not Know! ☺

Frank Conrad (Station 8XK 1920)

Born 4 May 1874, died at age 67;

An American electrical engineer whose interest in radio telephony led to the establishment of the first commercial radio station. Conrad worked for Westinghouse as assistant chief engineer at its East Pittsburgh Works and acquired over 200 patents in his lifetime. As an amateur, having built a transmitting station on the second floor of the garage behind his home in Wilkinsburg, PA, when he substituted a phonograph for his microphone, he discovered a large audience of listeners who had built their own crystal radio sets and who, upon hearing the music, wrote or phoned requests for more music and news. When he became swamped with these requests, he decided to broadcast regular, scheduled programs to satisfy his listeners. He coined the term "broadcast."

Walter Bruch

Died 5 May 1990 at age 82;

Walter was a German electrical engineer who invented the Phase Alternating Line (PAL) color television system adopted in Europe. On a trip to America in 1953, he found inadequacies in the system as first developed there (NTSC, National Television Standards Committee). He returned to his German employer – Telefunken - and researched a way to improve color stability without need for tint and hue controls. By 1961, a preliminary patent was filed, but was superseded on 30 Dec 1962 with a definitive version of the PAL system. There followed a struggle for it to be recognized as the best coding method. Britain selected PAL as superior to NTSC and introduced it on 1 Jul 1967. Germany followed on 25 Aug 1967. Eventually most of the world, too.

Oskar von Miller

Born 7 May 1855, died at age 78;

A German electrical engineer who fostered the electric-power industry in Germany and founded the Deutsches Museum of Science and Technology in Munich. He made fundamental initial experiments on long-distance energy transmission such as (in 1882) over 57 km from Miesbach to Munich with 1400 volts direct current. In 1891, he organized a 20,000-volt power transmission line over 175 km from Lauffen to Frankfurt, an important advance in the transmission of alternating current. From 1918-24, he was project manager building the power station on Lake Walchen, at that time the largest hydroelectric power station in the world. With an average of 300 million kWh a year, the Lake Walchen power plant is still one of Germany's largest peak load power stations.

William Lear

Died 14 May 1978 at age 75;

An American aeronautical engineer, electrical engineer and inventor who taught himself electrical engineering and is best known for the Lear Jet Corporation he founded, the world's first mass-producer of business jet aircraft. Beginning in 1930, over a 20 year period, he secured more than 100 patents for aircraft radios, communications and navigation equipment. Lear's other inventions include the miniature automatic pilot for aircraft, the first commercial automobile radio, and the eight-track stereo tape player.

Oliver Heaviside

Born 18 May 1850, died at age 74;

Oliver was an English physicist and electrical engineer who predicted the existence of the ionosphere. In 1870, he became a telegrapher, but increasing deafness forced him to retire in 1874. He then devoted himself to investigations of electricity. In 1902, Heaviside and Arthur Kennelly predicted that there should be an ionized layer in the upper atmosphere that would reflect radio waves. They pointed out that it would be useful for long distance communication, allowing radio signals to travel to distant parts of the earth by bouncing off the underside of this layer. The existence of the layer, now known as the Heaviside layer or the ionosphere, was demonstrated in the 1920s, when radio pulses were transmitted vertically upward and the returning pulses from the reflecting layer were received.

Hideo Shima

Born 20 May 1901, died at age 96;

Hideo was a Japanese engineer, who designed and supervised the construction of the world's first high-speed "bullet" train, linking Tokyo and Osaka. It began service at 138 mph in Oct 1964. The rail line opened a new era in land transport. (The current generation reaches 169 mph). Shima also led Japan's space development program until 1977 at Japan's National Space Development Agency. In his early career, Shima worked hard to further develop powerful steam locomotives, culminating in the wartime 2-8-2 D51 and D52 for freight and the post-war 4-6-4 C62 for passenger trains. He next developed electrical motive power distributed along the whole train length yielding higher power output on a multiple-unit train without damaging tracks and structures.

Lillian Evelyn Gilbreth,

Born 24 May 1878, died at age 93;

Lillian (née Moller) was an American efficiency expert, who was the wife of Frank Bunker Gilbreth, contracting engineer, together developed the method of time and motion study. Upon her marriage, 19 Oct 1904, she became a partner in her husband's fledgling motion study business. As a contractor, he was already applying ideas to improve the speed of building. After a few years, they applied motion study to industry. Each step of work activity was to be studied in detail (employing motion pictures for analysis) to determine the optimal way to execute a given task. By choosing a method of least exertion, the employees would be healthier, more productive, and economically improve the business. She continued after her husband's death in 1924.

Ernst Ruska

Died 27 May 1988 at age 81;

Ernst August Friedrich Ruska was a German electrical engineer who invented the electron microscope. For “his fundamental work in electron optics and for the design of the first electron microscope” he was awarded a share of the Nobel Prize for Physics in 1986 (with Heinrich Rohrer and Gerd Binnig). In 1928, he found that a magnetic coil could act as a lens to focus an electron beam. Adding a second lens he produced the first primitive (x17 power) electron microscope. By 1933, his refinements increased the magnification to x7000, exceeding what was possible with visible light. The first commercial model was marketed in 1939. Since then, electron microscopes rapidly found applications in biology, medicine and many other areas of science.

Readers are invited to share any ***major engineering*** event or milestones that they are aware of that occurred in April, next issue. Submissions can be made using direct email to the editors at: wavelengths@ieee-sem.org

Sharan Kalwani
Associate Editor, Wavelengths,
Vice-Chair, Chapter 5 (Computer Society), Chair, Chapter 13 (Education Society), PACE

Engineering History Buff/Aficionado

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) (CAS04) (IT12)	Signal Processing Society, Circuits and Systems Society and Information Theory Society
Chapter: 02	(VT06)	Vehicular Technology Society
Chapter: 03	(AES10) (COM19)	Aerospace and Electronic Systems Society and Communications Society
Chapter: 04 “Trident”	(AP03) (ED15) (MTT17)	Antennas and Propagation Society, Electron Devices Society, Microwave Theory and Techniques Society,
Chapter: 05	(C16)	Computer Society
Chapter: 06	(GRS29)	Geosciences and Remote Sensing Society
Chapter: 07	(PE31) (IA34)	Power Engineering Society, Industrial Applications Society
Chapter: 08 “EMC”	(EMC27)	Electromagnetic Compatibility Society
Chapter: 09	(IE13) (PEL35)	Industrial Electronics Society, 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) (SMC28)	Computational Intelligence Society, 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

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@ieee.org
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.

XXXXXXXXXXXXXXXXXXX

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/eaa/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 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 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.

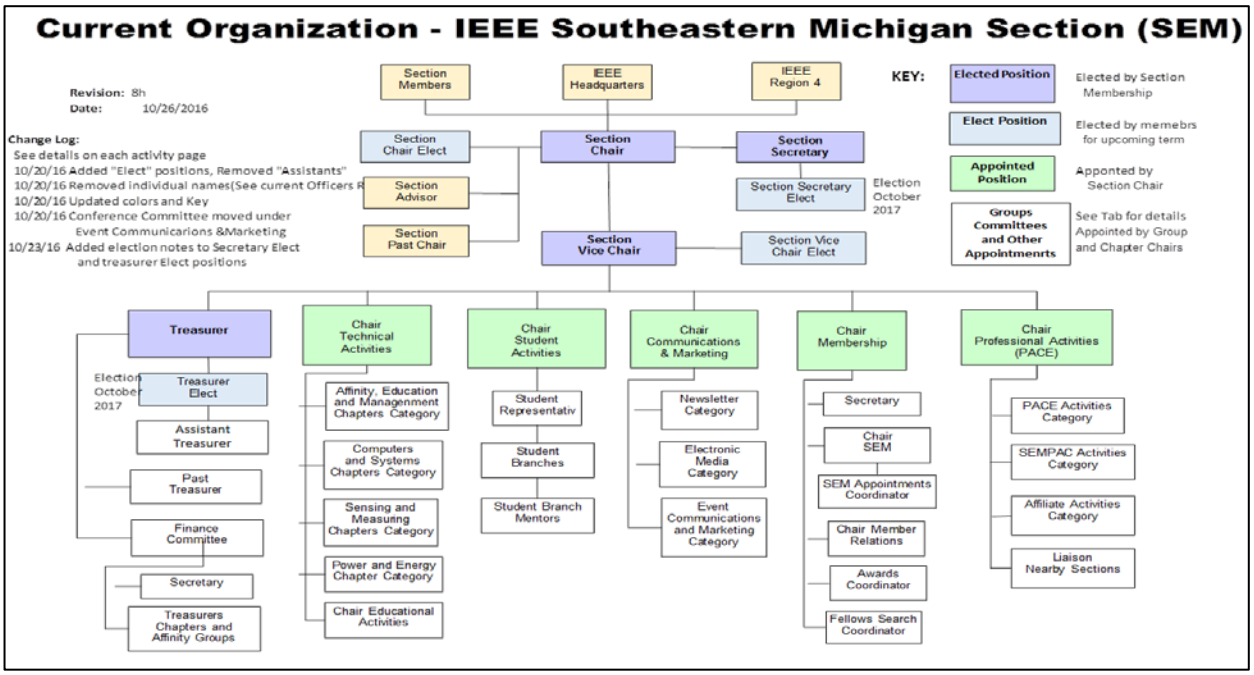
However, members of the section may have multiple technical interests and would like to have meeting information of other chapters. In order to communicate the meeting dates of all the chapters, affinity groups etc., to our members to facilitate their attendance, leaders of the groups are requested to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

More detailed information on meetings may be found 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.

Eric George - SEM Asst. Secretary

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 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 the meetings.
Information on each Face to Face 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.

May 2, Wednesday, Teleconference (online only), 12:00 – 1:00 PM, https://meetings.vtools.ieee.org/m/49032

June 7, Thursday, Teleconference (online only), 12:00 – 1:00 PM, https://meetings.vtools.ieee.org/m/49033

July 11, Wednesday, F2F (In person meeting), 5:30 – 7:00 P.M., https://meetings.vtools.ieee.org/m/49034

August 2, Thursday, Teleconference (online only), 12:00 – 1:00 PM, https://meetings.vtools.ieee.org/m/49035

September 5, Wednesday, Teleconference (online only), 12:00 – 1:00 PM, https://meetings.vtools.ieee.org/m/49036

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 (…**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.

SEM Monthly Meetings

Scheduled Meetings:
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.
(*Which we all understand is 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 **Eric George** the
SEM Section Secretary.at:
eric.george.us@ieee.org for more information.

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

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

Eric George
SEM Section Assistant Secretary.
eric.george.us@ieee.org

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@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 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@ieee.org
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	

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	

IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

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 OfficerSection Officers

Community Section Officers **http://sem.oc.ieee.org**

Section Officers

Section Chair
Robert Neff

Section Secretary
Eric George

Section Vice-Chair
Nevrus Kaja

Section Treasurer
Xinhua Xiao

Standing Committees:

Section Adviser
Don Bramlett

Chair Communications & Marketing
Ravi Nigam

Chair Educational Activities

Chair Finance
Nevrus Kaja

Chair Membership
Aisha Yousuf

Chair Nominations & Appointments
Kimball Williams

Chair Professional Activities (PACE)
Sharan Kalwani

Chair Student Activities
Mel Chi

Student Representative

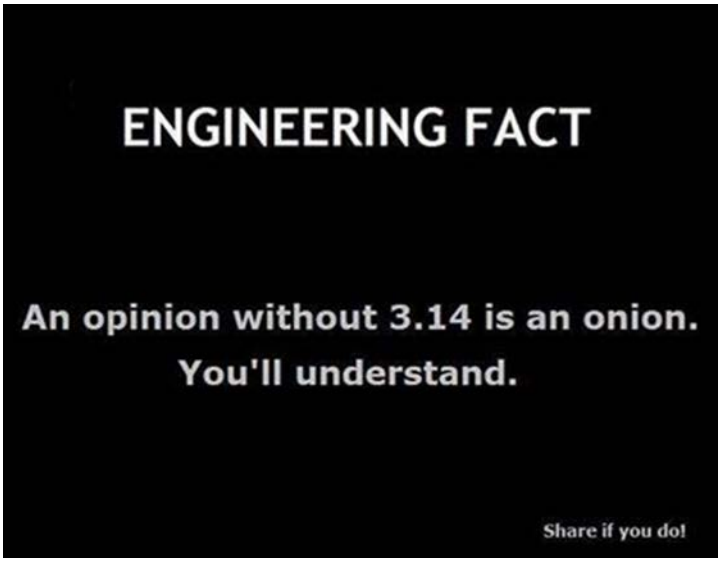
Chair Technical Activities
Kimball Williams

IEEE Southeastern Michigan

Electrical and Electronic Engineers Creating Our Future

IEEE Southeastern Michigan

Visit Us on the Web at:
http://sites.ieee.org/sem



Leadership Meetings

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

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