Wavelengths

IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

Volume 60 – Issue 11

Contents

Upcoming Events

We have a number of events coming up this month. Be sure to check out the Section Website

https://r4.ieee.org/sem

As well as vtools:

IEEE Region 4 - SE Michigan Section Upcoming

Listed below are some of the events, FYI.

Event	Date	Time
SEM Section ExCom Monthly Meeting (Teleconference) for November 2020	11/4/2020	12:00
Bringing Cosmic Shock Waves Down to Earth	11/4/2020	15:30
A comprehensive technical history of Video Conferencing	11/5/2020	17:30
Limits of Renewable & Baseload Energy Sources (part 2)	11/6/2020	15:00
Do Magnetic Fields Exist? : Lawrence Inst of Tech	11/9/2020	18:00
Chapter 8: AdCom Teleconference	11/12/2020	11:00
Chapter 8: Monthly Technical Meeting	11/19/2020	17:30

Chair's Message

Welcome to the November issue of the Wavelengths. Like the rest of society, the Southeast Michigan section has been focused on elections. Several new officers will be coming on board in 2021 to help run our section activities. We look forward to the new faces. There are still several open positions. If you are reading this and ready to make the step towards becoming an IEEE volunteer, please reach out. We will find a way to get you involved.

The section's elected members are also busy at work. Recently we formed a strategic planning committee to look at 2021 section activities. Topics we discussed include 2021 conferences, industry engagement, technical activities, and several other topics. Next steps of the committee include working to define success for the section and budgeting for 2021. The committee will be proposing several events for 2021 that will maximize the value of IEEE to our local members.

It is anticipated that Section activities will largely be virtual through at least summer 2021. We are hoping that we can develop activities that can be appealing to members virtually in the first half of the year, and then transition to a mix of in person and virtual events later in the year. I'm confident that our members will find ways to engage whatever the circumstances facing us.

Finally, I'd like to thank our volunteers for doing what they could to ensure a successful 2020. The pivot to virtual meetings threw many of us off, but several groups of volunteers found ways to be successful. I'd especially like to highlight the Embedded Systems Workshop and the recent event on how sci-fi impacts society for throwing very successful virtual events. Additional information on those events are in this edition of the Wavelengths.

Stay safe everyone and I look forward to 2021.

David Mindham
dmindham -At- ieee.org

2020 Elections

As this is being written…..

The election process is well underway, and once the 'switch' is thrown nothing can stop it until the voting is concluded.
We will not know the results until after this issue is 'put to bed' and 'goes to press'.
I am sad to report that the turnout of members nominated (or self-nominated) was the lowest I have seen since I began working on our Section elections many years ago.

I attribute this to a number of factors:
- The global virus pandemic has certainly focused many on just staying alive.
- Our national election has become the most divisive and corrosive of any in recent memory.
- Many of us are adjusting to doing our normal jobs entirely in a virtual environment.
- There are many out of work as the economy is crushed as a pandemic side effect.
- Some view IEEE and its activities as a 'social' organization without relevance to their 'real' lives.

One way to view the current situation and current events is as a test.
Whether we pass this particular test, or not, is completely dependent on the strength of our own character.
Outside circumstances will come and go but our internal character is under our complete control.
How we respond to any challenge or opportunity is totally up to us.
No one else!

Read the last few pages of "The Martian" or watch the last 5 minutes of the motion picture. To paraphrase;…"Do the math. Solve one problem. Then solve the next. If you solve enough you get to go home."...

So….Solve that first problem!

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Why do we have a Section Mission?
The Section Mission statement and goals below provides guidance when any situation stretches beyond the normal parameters of our operation or when we are considering new options and opportunities.
Normal operating procedures are intended to cover the most usual and 'normal' situations. But, when a situation is not covered by existing procedures, we need a philosophical base to fall back upon for how we are to conduct ourselves.
This is the function of our Mission statement, to provide that philosophical base.

The Mission statement serves a similar role as the Constitution of the United States of America which provides the guidance for all governmental decisions, as well as the philosophical foundation for future and past actions.

Section Mission
Inspire – Enable – Empower and Engage Members of IEEE at the local level.
For the purpose of:
- Fulfilling the mission of IEEE to foster technological innovation and excellence for the benefit of humanity,
- Enhancing the members' growth and development throughout their life cycle, and
- Providing a professional home.

Section Goals
- **Increase member engagement, (**Declared most important by our Section Chair.)
- 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.

On the Internet

On the internet: Share your knowledge (virtually) with IEEE students, career resources from the IEE Member Benefits Bulletin, Keysight Scope Probe Webinars

By Dan Romanchik

Join the IEEE Virtual Speakers Bureau
Share your knowledge, skills and experience to inspire others to progress in their own lives, careers, professional and personal development. If you are able and willing to share knowledge and experience in your field, the IEEE Student Activities *Virtual Speakers Bureau* gives you an opportunity inspire IEEE Students in your region or in another part of the world.

Click here for more info
https://students.ieee.org/virtual-speakers/

Free e-Book: *Why STEM is Important*
STEM is all about combining content and process to solve problems and create new products and services. Not every child will become an engineer, but all can benefit from STEM education to help them think and analyze more effectively.

DOWNLOAD
https://ieeeusa.org/shop/policy/stem-education/new-ebook-why-stem-is-important/
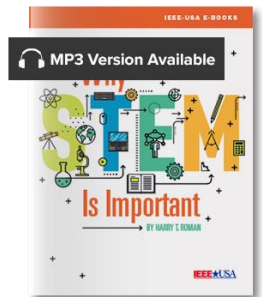
More Free e-Books & Book Discounts for Members
The e-Book Classics program offers IEEE members free access to over 370 e-Books from the IEEE Press collection through IEEE Xplore. IEEE members also receive a 35% discount on all Wiley-IEEE Press books, as well as all titles available from our publishing partner.

Visit the IEEE Press website for more information
https://ieee-press.ieee.org/ieee-member-benefits/

New Course: IEEE English for Technical Professionals
The new online course program, "IEEE English for Technical Professionals," enables professional engineers and technical professionals whose first language is not English to improve their language skills in a way that fits the needs and priorities of working adults in the engineering fields. Members save US$100 on the course.

Learn more about the course on the IEEE Learning Network
https://iln.ieee.org/public/contentdetails.aspx

Scope probe webinars
On September 29, Keysight held a webinar on oscilloscope probe architecture and techniques. It covered the following topics:
- The fundamentals of oscilloscope probes and probing
- The features and benefits of both passive and active probes
- Specialized probing solutions for high-power applications, current measurement and high-temperature probing
- Offset compensation, signal compression, and single-ended versus differential probes

The webinar was recorded, and you can view the recording by registering online (https://app.connection.keysight.com/e/er?elq_cid=2149857&cmpid=&elqCampaignId=11535&s=609785623&lid=11871&elqTrackId=F9DA5E00C990CCC8B8F7187A765D8516&elq=c7e1c138420f43d9ab71a09ed7e9ffe5&elqaid=21689&elqat=1).

Keysight also offers a more basic oscilloscope probe class—Oscilloscope Probes 101 – Basics. This is a 30-minute online class. You can register for this course here (https://learn.keysight.com/oscilloscope-probes-101).

Do you subscribe to an email newsletter that's interesting and useful or know of a website or online resource that other IEEE members should know about? If so, please email me with the details. My email address is d.romanchik@ieee.org.

'Ham' Nets

No, 'Ham'nets are not designed to capture pigs.

A net in general is when a group of hams meet on a prearranged frequency and time
There are many types of nets
- CW (Morse Code) Practice & Training (Slow Speed / Basic Traffic)
- Traffic (Local / Regional / Transcontinental Corps)
- Find many on the internet at: http://www.arrl.org/nts
- The Letters 'NTS' refer to the National Traffic System
- Social (Radio Clubs / Special Interest / Friends & Family)
- Emergency (ARES / RACES / Sky Warn / ETC.) - These are special nets usually only activated during a local or national emergency and only activated by a government officer, such as the local Emergency Management Coordinator.

All but the Emergency nets operate every day, 365 days a year to keep everyone involved in the system fully trained and ready to respond in an emergency. So, when all else fails…the power goes out, the internet is no longer operating, cellphones and even land line phones are 'down', look to your local Amateur Radio community to be your first line of communications with the outside world.

Morse Code During COVID

TEACHING HOME BOUND KIDS MORSE CODE

Due to COVID-19 concerns, **Long Island CW Club** has stepped in, offering free on-line ZOOM instruction in Morse code to Kids K-12.

- 6 1-hour long classes weekly
- Grade K-12
- 75 students, USA and Europe
- Some are making CW QSOs (on air conversations) already!
- 11 students got their Technician licenses and 3 students have already upgraded to General and we are very proud of all of them.

If you have an interested child for this program, please email to: **info@longislandcwclub.org**

SYFY Conference Report

DOES SCIENCE FICTION INFLUENCE TECHNICAL & SOCIAL CHANGE?

IEEE Conference - October 10, 2020

The <u>focus of this conference</u> was the question "When looking at those times when science fiction has seemed to predict a change in technology or social behavior, are we witnessing a real effect, or only a coincidental alignment of circumstances?" i.e. Can 'Art,' in general, influence technology and society?
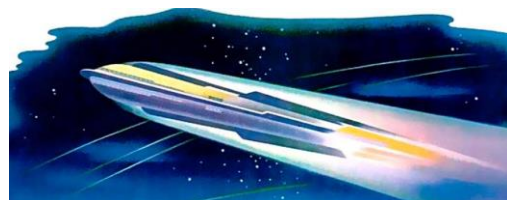
The search for a Keynote speaker netted doctor Lisa Nocks, Ph.D., a historian of science and technology at the IEEE History Center. Her research focus is the history of robotics and AI.

The panel participants were sought out by Karen Burnham who is vocationally an engineer and 'avocationally' a science fiction reviewer.

Lisa   Karen

Keynote & Panel Discussions:

Dr. Lisa Nocks: "The Science Fiction Android as Gedankenexperiment"

"**Will SF help lead us to an integrated C + FE future?**"

In what ways may SF and STEM reduce inequality and promote human wellbeing?"

Does Science Fiction Influence Technical and Social Change?

Roundtable Open Discussion.

Countries Registered:

Australia	Iran
Bangladesh	Mexico
Brazil	Norway
Canada	Peru
Denmark	Sri Lanka
England	Taiwan
Germany	USA
India	Wales

202 total registrations were collected for the conference, though we are unable to accurately track who attended for what time. Given that interest was marked by registrations from 16 different countries (see insert at left) with as many time zones complicating attendance we expect a lot may have visited until they could no longer stay awake.

A comment from one attendee was that there was a…'*Ted Talk all day with many 'heavy hitters' discussing environmental change….but our conference was 'more interesting and more fun'.*'

Just the Facts:

38%	Members
62%	Non-Member
12%	Non -USA
28%	Local Section

Our intention was to draw in both IEEE members who are generally not currently members of any one Technical Society, or Affinity Group, as well as interested non-members who have 'not yet' joined IEEE, EMC-S, SSIT or ESD. The numbers shown here indicate we got a good 'spread' of interest.

Sponsors:

Sponsors for the SYFY Conference were Southeastern Michigan Section, and its EMC Chapter, The Engineering Society of Detroit, which provided the 300 attendee capacity ZOOM site and the Society on the Social Implications of Technology. All helped spread the word about the conference, and we thank them all.

Panel Members (shown below):

Karen Burnham assembled an array of science fiction writers, engineer writers, scientist writers, international writers, educator writer, led all but one panel and did an outstanding job as 'Master of Ceremonies'.

A.T. Greenblatt is a mechanical engineer by day and a writer by night..


Tobias Buckell was born in 1979 in Grenada in the Caribbean and raised on a boat. .

Dr. Gary K. Wolfe is a US academic and author. Associated with Roosevelt University in Chicago until his recent retirement,

Michael J. DeLuca's roots are mycorrhizal with sugar maple and Eastern white pine. He's the publisher of *Reckoning*, an annual journal of creative writing on environmental justice
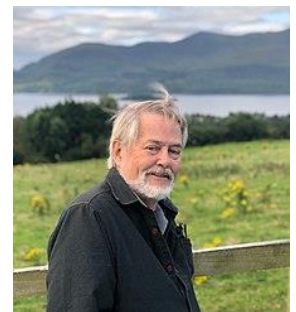
Geoffrey Alan Landis (born May 28, 1955) is an American aerospace engineer and author, working for the National Aeronautics and Space Administration (NASA) on planetary exploration, interstellar propulsion, solar power and photovoltaics.

Dr. Mary Turzillo: After a career as a professor of English at Kent State University Her novel "An Old-Fashioned Martian Girl" was selected as recreational reading on the International Space Station.

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SusTech 2021 CF Papers

IEEE SusTech 2021

http://ieee.org/sustech   **Call for Papers**   Orange County, CA. April 22-24, 2021

This Year's Theme: How Emerging Technologies Are Driving Sustainability

The 8th **IEEE Technologies for Sustainability Conference** (SusTech 2021) is designed to explore the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It brings together scientists, engineers, technologists and scholars from multiple disciplines to hold a dialogue on environmental issues and collaborate on ideas to develop and utilize innovative tools and intelligent systems to address them. Attendees will learn about the emerging technologies, latest tools, and proactive solutions to take their sustainability programs to the next level.

- **SusTech 2021** will be held online and it will feature technical papers & presentations, posters and workshops.
- Prominent experts will be giving keynotes, plenary presentations and invited talks.
- Best Posters and Papers in the conference will be eligible for an award.
- Full papers will be published in the SusTech 2021 Proceedings.
- Conference content that meet IEEE quality review standards will be submitted for inclusion into IEEE Xplore as well as other Abstracting & Indexing (A&I) databases.

Papers are solicited for presentations from industry, government, and academia (including students) covering relevant research, technologies, methodologies, tools and case studies. Topics with policy implications are also welcome.

Selected Technologies that contribute to sustainability in all applications affecting human life:

- IoT: Internet of Things
- Renewable / Alternate Energy
- Intelligent Transportation Systems
- Sustainable Electronics
- Water Resources Management
- Societal Implications / Quality of Life / Public Policy
- Smart Cities
- Energy Efficiency

Other topics of interest include: Smart Grid, eWaste, Ocean Waste & Pollution, Ecological Sustainability & Conservation, Agriculture & Food Technology, Sustainable Management. Visit http://ieee.org/sustech for more information on topics of interest and related details.

Instructions to Authors: Submit in **PDF** form, a full submission of the paper for oral presentation via the SusTech website. For information for authors, please visit the conference website at http://ieee.org/sustech/. Select **Authors** *tab* and follow the instructions.

There will be a separate Student Poster Competition.

Important Dates	November 1, 2020	Submission deadline for paper
	December 15, 2020	Notification of acceptance
	January 30, 2021	Final manuscript submission deadline

For more information or questions, please contact: Sustech@ieee.org

Sponsors for SusTech 2021 include the IEEE Oregon, Phoenix, San Fernando Valley, Inland Empire, Orange County, Metro Los Angeles, and Coastal Los Angeles Sections, IEEE Region 6, IEEE-USA; and co-sponsored by IEEE PES, SSIT and TEMS societies.

PLEASE FORWARD THIS NOTICE TO YOUR COLLEAGUES

SusTech 2021 CF Posters

IEEE SUSTECH 2021

8th Annual Conference / Orange County, CA / April 20-24, 2021
This Year's Theme: How Emerging Technologies Are Driving Sustainability

Student Poster Contest - Call for Abstracts

Key Dates	Dec 15, 2020	Submission deadline for poster abstract
	Jan 31, 2021	Notification of Acceptance
	Apr 22, 2021	Final ONLINE Poster Display During Conference

>>> Accepted posters must register for the contest and pay a submission fee <<<.

For more information, abstract upload, and registration, please visit https://ieee-sustech.org/

Topics: Technologies that contribute to sustainability in all applications affecting human life.

Internet of Things – IOT	Agriculture & Food Technology	Smart Grid
Renewable / Alternate Energy	Water Resources Management	Energy Efficiency
Societal Implications	Intelligent Transportation Systems	Sustainable Electronics
Quality of Life / Public Policy	Ocean Waste & Pollution	eWaste
Smart Cities	Ecological Sustainability & Conservation	Air Pollution

Prizes:
Prizes will be awarded for first, second and third places as determined by the judges. First place $1000; second $500; third(x2) $250. Information on the winners will be posted on the IEEE SusTech and IEEE Region 6 websites.

How to Submit?
To participate in the contest students should write a 2-page (500-700-word) description (extended abstract) of the poster, along with authors names, respective university and contact details; and submit it in PDF at **https://ieee-sustech.org/student-poster-contest/** by the deadline. Contestants will need to prepare a poster of 48 x 36 inches in PDF for **online presentation**.

Poster Contest Chair: Dr. Sean Monemi seanmonemi@ieee.org

IEEE Region 6   Coastal Los Angeles, Foothill, Metro LA, Orange County, Oregon, Phoenix, and San Fernando Valley Sections   IEEE★USA   SSIT   PES Power & Energy Society   IEEE TEMS

IEEE Day 2020 Report

by Sharan Kalwani
Membership Development Committee

Our official IEEE Day 2020 banner

IEEE Day 2020 was celebrated all over the IEEE global community, many of them on actually October 6th and several close to that date, depending on local arrangements, circumstances. The IEEE Day 2020 team encouraged many of them to track their events at https://ieeeday.org/eventslist-2020/. Michigan featured with two events (although one of them ran into a technical glitch). Globally the most events were held in Region 10 (Asia Pacific+Australia).

The SE Michigan section celebrated their event, by holding an online quiz contest. Congratulations to:
- ✓ Benjamin Sweet
- ✓ Colleen Chmielewski and
- ✓ Bharat Khasatiya (recently joined our Section)

For scoring the top 3 spots! They all won a gift card from our Section.

The quiz was preceded by a brief video of the history on the formation of the IEEE, and then a list of all the wonderful discounts, created special for the event. If you would like to know more or hold an online quiz, specially tailored for your local chapter or student branch, feel free to contact Membership Development (see last page of this issue).

We would like to acknowledge the kind assistance of Kimball Williams who put together a list of questions on the history our SE Michigan section as well as questions of a basic EE technical nature. The online quiz was conducted using **centi.com** and held using the Webex platform. Incidentally the IEEE Day 2020 team conducted a few days' prior, an online event using Collabratec, a little less complicated plus no time constraint, for all the sections and branches. Membership Development earned our Section badge and it will go on display on the section web page, but here is a preview below.

We already look forward to 2021!

ESW 2020 Report

Embedded Systems Workshop 2020 Report

The Embedded Systems Workshop was held virtually for the very first time in its history – spread over two days - on October 17th and October 24th, 2020. This was the 18th year that this event has been continuously held and we had a registration of over 120 people!

1) Attendees of the 2020 ESW event, Day 1

This in itself is rather remarkable, as the organizers debated the merits of doing everything virtually, whether a fulld ay event can even last for 8 hours and many other perplexing questions. The planning for this event began in earnest from June 2020 onwards requiring many regular Webex (sometimes Google Meet, sometimes Zoom) online meetings, as well as using a number of technology tools (such as the IEEE G Suite) to assist in making things run smoothly, on time, and on budget.

ESW 2020 had over 120 folks register right up to the last day (October 15th), including a few walk-ins as well. The event had 5 major sponsors, chief among them were Intrepid Control Systems, Beningo Embedded Group, Infineon, iSYSTEM, NVIDIA, Ms Jhansi Manda, TeKnowledge, DigiKey and DataSwing LLC. Results are still being compiled at the time of writing this report, but expect (or feel free to remind us) a summary later in these columns.

We had eight technical presentations in all, 100% by practicing industrial professionals (we also threw in an academic as well on the last day). These ran up to 45 minutes each, including Q&A. Most of the speakers stayed on after the talks as several of the attendees had questions, which they answered as best as they could via the chat feature.

ESW 2020 Event/Logo

Using the Webex and Zoom recording feature came in extremely handy – so we have recorded all the sessions. The presentation PDF documents will also be made available to those who ***attended***. A certificate of attendance will also be sent to all who joined us online, once we get thru the manual sorting of names.

The organizing chapters – Computer Society and Education Society, also plan to send via US postal mail, copious literature and informative documents on the benefits of IEEE membership, including new membership forms, as well as technical swag to help demonstrate the value of the IEEE and its potential for future engineers & leaders.

The first day started off with a brief welcome by Michelle Piskulich, Interim Vice President & Provost of Oakland University. Oakland University has been a long host and supporter of the workshop, since its inception.
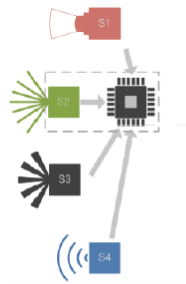

Atilla Bulmus

That was followed by Atilla Bulmus and Jeffrey Kelley of Infineon, who both gave an interesting talk on how Side Channel attacks can take place in Embedded Systems, and what can be done to detect and stop them.

Sensor Fusion in ADAS

JHANSI MANDA

Jhansi Manda

Ms Jhansi Manda, an experienced software professional and team lead at a major automotive supplier, then gave a very comprehensive talk on sensor fusion in the developing world of autonomous driving.

What followed on was Chris Schlink of iSYSTEM, who dialed in all the way from *San Diego, California* (thank you Chris for getting up so early on a Saturday morning!) and gave a fascinating hands on nuts and bolts talk on the difficult subject of hardware trace debugging. He did indeed make it look easy with the tools he had at his disposal.

Chris Schlink

One of the well-known and I dare say eagerly awaited breaks are the door prizes, usually conducted during the coffee break. Although we had no actual coffee or door this year and no paper sign in sheet, we did manage to find a way to do this online and gave away a number of prizes such as a Cypress Semiconductor prototyping kit, a book on Embedded Systems (by Dr Satwant Kaur) and a low power Bluetooth development kit. Congratulations to all the winners (**insert names here**).

Jacob Beningo

After the virtual coffee break and raffle prizes, we had Jacob Beningo give a deep detailed talk on best practices based on his long experience with the RTOS platform. Jacob was also generous in inviting all the attendees to a future 3-day seminar of his on the same subject with a discount code. Contact the ESW2020 organizers if you too are interested.

Suraj Gajendra

Then wrapping the day's technical sessions, we were honored to hear from Suraj Gajendra (Arm Semiconductors, whose chip designs power most of our smartphones) give a detailed talk on opportunities for embedded system developers, on using Arm in both automotive and IoT worlds. Arm has indeed a very vast and global ecosystem in this space. Suraj spoke to us all the way from *Cambridge UK*, the current headquarters of Arm.

Ending the day, we also held the final raffle draw for door prizes – it was a delight to discover folks from Iowa, Indiana, Illinois attending the online event. The lucky winners were: Nour Salama, Dr Hadi Alasti (Indiana) , Amar Dabaja, Ngoc Nhu Y Duong, Alexander Lukens (Illinois), Bushra Mogram (Iowa) Congratulations to all of them!

Day2: October 24th we had a near disastrous start. Despite being assured that our Webex link would also work on the final day of the event, that turned not to be the case. We lost nearly 20 minutes scrambling to get tech support to help us, but to not much luck. Fortunately, yours truly had a plan B, and we quickly switched over to zoom and conducted all of the planned proceedings w/o loss of any content or schedule!

The Day 2 session kicked off by our keynote speaker – Francesco Richichi – all the way from ***Rome, Italy***. Francesco is a very experienced VHDL engineer and works in the Aerospace industry. He made a very convincing case for choosing VHDL for embedded systems, when conditions require it. He runs his own website – surf-vhdl.com – no doubt being a surfing enthusiast himself, combining both fo his passions. He answered every question thrown at him and indeed we are very fortunate to have had Francesco share his insights with all of us.

Post the VHDL talk, we had a local leading company in the Automotive electronics world - Intrepid Control Systems, give us a pre-recorded talk on the massive challenges when dealing with data logging in autonomous driving systems. He covered a lot of ground, highlighted the logging approach, attributes of just 1 sensor (which applies to all other sources of inputs), so clearly there is a great deal of activity and opportunity ahead in this field!

The next session began with a talk on Real Time Operating System RTOS in the IoT domain by Professor Subra Ganesan. Clearly while the technical aspects are there, IoT imposes many more demands on the final product, especially the critical sections of algorithms employed in this world. This was for many an illuminating talk. The talk touched upon

many industry practices, as they have to deliver critical products and are faced with daily methods to help prove their work will stand up to rigorous requirements of the development timeline, costs, and investment of the project.

This year we had a very insightful and talk from the trenches by Benjamin Sweet on how to improve the process of creating, maintaining and enhancing embedded systems software using a model based approach.

The final session was delivered by Bill VeenHuis of NVIDIA, who spoke on the rapid advances in the last 1 year in ADAS technologies and offerings, for example the Jetson, a very low cost ($59) entry level platform, which gives both experienced and new professionals, students and researchers a great way to create software for embedded systems, autonomous driving, machine learning and intelligent systems. The software for this is available to all for no cost and is compatible across the current line of systems using NVIDIA.

Bill VeenHuis

Several attendees found this a very refreshing addition to the roster of talks. To help round off things, these days it is hard not to find conversations often straying into the hot topic of AI.

All throughout the day, several raffle/door prizes were given away to randomly chosen attendees. These included Cypress controller boards. Congratulations to XingXing Liu (Iowa), Padraic Cyril McFreen (Indiana), Nima A, Junkeun Park, Patrick Wong, Robert Stemp (Illinois). And the grand prize courtesy of Jacob Beningo from the **Beningo Embedded Group**

This is just a small example of what one could have missed, if they gave this event a bye.

2 persons can attend FREE w/ special ESW2020 coupon

Grand Prize:
Free 3 day seminar on RTOS best practices

RTOS Best Practices Virtual Workshop

November 3 - 5, (3 Hours each day)
$150 (with coupon RTOS_NOV)

Presented By: Jacob Beningo
Click here to learn more

ESW 2020 Program Committee
esw2020@ieee-sem.org

Subra Ganesan, *Chair*
Sharan Kalwani, *Vice-Chair*
Ashok Prajapati
Ramesh Sethu
Carla Gerst
Ben Sweet
Nilesh Dudhaia
Praveena Jakkula
Sreeniwas Eeshwaroju

ESW 2020 Committee

Lest we forget, we would like to also thank the volunteers for all their hard work behind the scenes.

See you all next year!

EMBEDDED

Sharan Kalwani
Chair
SE Michigan Education Society Chapter
Vice-Chair
SE Michigan Computer Society Chapter, (Chapter 5)
sharan.kalwani@ieee.org

Writing for Engineers

{Editor's Note: One of the planned trivia questions was why Engineers make for poor writers. Although we ended up not using that question it did get one thinking. During a conversation with Professor Chuck Hawkins, a very interesting story emerged. So intriguing was it, that it made for a compelling case to share it with our SE Michigan IEEE readership. --Sharan Kalwani}

Writing for Engineers

Reprinted with kind permission of the Tampa Bay Times (previous St Petersburg Times) and Professor Chuck Hawkins
https://www.tampabay.com/archive/2014/09/21/on-writing-oh-rote-is-us/

ON WRITING, OH, ROTE IS US
By CHUCK HAWKINS
Published Sep. 23, 2014

I teach an undergraduate class in electrical and computer engineering at the University of Florida. My job is to introduce these future engineers to topics relevant to their college and professional careers. This includes helping them to write competently.

Highly prized though they may be, STEM (science, technology, engineering and mathematics) graduates must still be able to explain themselves and their ideas. Over the past two years when I turned to the writing element of the coursework, I began the lecture with a direct question: "How many hate writing?" Every time, 80 or 90 percent of the 110 students in the class would wildly wave their hands.

My inner self would mumble; how can they be so dumb? Don't they understand that clear writing makes for clear thinking? And that if they can't communicate, they can't succeed? All engineers write copiously - just not in college.

Some may blame their aversion on the old idea that math and science people aren't writers, just as poets aren't programmers. Neither stereotype need be true, but I wanted to understand what was happening. Finally, this semester I concocted a better follow-up question to plumb this visceral revulsion to what is logically one of the most important activities of professional careers.

So I spontaneously came up with an assignment: Write a 300-word article on why they hate writing. The results showed a barely submerged anger, and sometimes one that was boiling right on the surface. Remember, these are many of the best students in the state.

Fifty of the 109 students wrote with some emotion about nine years of being drilled to write the "FCAT‡ way": a formulaic, bloodless exercise that drained the fun out of putting pen to paper. Here is a typical sample of three student papers expressing their opinion on FCAT education.

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FCAT Writing: help or harm?
By Elise duTreil
My hatred for writing stems from the first time I had to practice an FCAT Writing essay. They taught us the proper formula for planning an FCAT essay: figure out if the prompt is narrative, expository, or persuasive, draw your graphic organizer, make a book and introduction, write two to three paragraphs, and form a conclusion. It didn't matter how creative or insightful one wrote, it only mattered if that writing had the correct organization. They would choose bland, uninspiring prompts that sometimes were difficult to relate to and build upon. For example, the eighth-grade essay for 2004 was to persuade the principal to allow or not allow chewing gum at school.

Teachers would teach students to support such prompts with made-up statistics or quotes encouraging them to lie on essays. This would not help them later on when they were supposed to cite sources and provide real, not fabricated, evidence. Also, the grading depended upon two random people, possibly in a different state, that were paid to get through as many essays as fast as possible and agree on the scores. Many students were devastated when scores came out, and they didn't get what they expected.
We never got feedback, just the cold, hard numbers. Our scores would also affect the teacher's and school's funding and rankings. If a school's kids did poorly, the school was punished with a low grade and less funding. This spurred the teachers to focus solely on the FCAT style of five-paragraph essays. It got boring and repetitive to write these formulaic essays every FCAT Writing year. I grew to dread the FCAT Writing season and was

relieved when it was finally over after 10th grade. By the time FCAT Writes was done, my relationship with writing was damaged for good and to this day I still hate to write.

⌘⌘⌘⌘

Breaking up is just the write thing
By Tim Schoenrock
Dear Writing,
It's not you, it's me. We first met in elementary school, and we were always close. At times, I would catch myself staring blankly in to your soul, at a loss for words. Other times, we would share experiences only limited by our imaginations. The contrasts of your tattoos to your skin were unique and ever changing, but you always knew how to explain them. We sometimes even shared the occasional ice cream cone. You expressed who I was like no one else or ever will.
But alas, we both knew it couldn't last. They made me abuse you. We both knew that you had very strong feelings of the great matters of the world. Here I was, forcing you to argue things of little importance, all the while knowing you had no interest in whether polka dots or stripes were better and if brown was an ugly color. As we got older, they started limiting how big or small you could be. This hurt you; you had always believed that it was on the inside that mattered, not how you looked at first glance. They took you away from me and highlighted everything they thought was wrong with you. They started rating you on a scale 1 to 6 and telling you that you had no voice. They were shallow and didn't know you like I did.
They convinced me to make you into what they thought was beautiful, and I did it. You went along with it to let me follow my dreams, but I couldn't stand what you had become. I wanted to be someone and move on in life, and I forgot what we used to be. Hopefully we can meet again one day under better circumstances.
Sincerely,

⌘⌘⌘⌘

Pasteurized prepared cheese product
By Daniel Holloway
As I open my fridge for the fourth time tonight, I am greeted by a lonely package of American cheese labeled "Kraft Singles American Pasteurized Cheese Product." I return to my room defeated. The staggered whines of my empty stomach slowly form a thought. Why did I buy that cheese? It is generic, bland, lazily spat out by a factory in some dusty city. I didn't buy it with quality in mind. I bought it because it was cheap.
But why am I writing about cheese? Shockingly, the plight of modern dairy is the same as public education. Young students are taught to treat creative writing as a meaningless hurdle, not as an expressive pursuit. Instead of knowing the beauty of writing, students are handed a sterilized checklist and are told to pass the test. School systems have taken art and transformed it into drudgery. In short, I love writing, but how I hate how it is taught today.
Our schools must be released from the chains of lifeless tests. We should take all of the funding that goes toward exams and invest in a wider breadth of age-targeted reading. Give the students an hour every day to sit down with a book and learn. They would expand their vocabulary, learn new ideas, and see the value of writing. The greatest novelists have also been the most avid readers. We should use this knowledge to cultivate fledgling writers.
I believe that the greatest adventures begin with a suggestion, not a command. Writing is a wonderful activity, and we must start to present it as such. When we treat people like they're slices of cheese product, nobody wins. We waste money, we waste time, and we waste potential. The goal of education should be to make individual lives more interesting. Leave conformity to Kraft.

These examples above are just three of the 50 papers that unanimously scorched the FCAT process. It turns out, these engineering students can write but have been so discouraged by the rote process of the FCAT that they no longer enjoy it. You can get a further sense from some of the titles, such as "Stripped of Thought" by Tiffany Dixon, "FCATs to F-Bombs" by Nicholas Imamshah, "Literary Despise" by John Wilson, "Writing Reports for Big Brother" by John Varela, "Disciplined to Detest" by David Zobel, "I Hate Writing" by Alexandra Hagan, and "Zero My Hero" by Dustin Remsen.

The essays were considerably better than preceding classes. I asked myself if the FCAT approach was so damaging, why were so many of these essays good, as demonstrated in the three examples. I discussed this with the students and together we felt that the subject hit a raw nerve, and that energized them - they lost inhibitions and felt free of restrictions. The essay length was small at 300 words, and there was no evidence of FCAT formatting. And my observation from teaching at other universities was that these students were very much above average - their intelligence overcame a system.

The writing style taught in this class is not just engineering writing, but universal writing. We require Roy Peter Clark's book How To Write Short, and students have four one-page essays for the term. (Clark is vice president and senior

scholar of the Poynter Institute, which owns the Tampa Bay Times.) Writing small is not a fad but the way that engineers, scientists and others have communicated for more than 100 years.

Occasionally a student or two will loudly protest why they have to write so much. There are many answers, but here's what I tell them: In the modern world, people may text, Facebook and email four to eight pages per day. It was a point of several students that they did not actually hate writing, but wanted the topic to be their choice. The FCAT preparation did not give them a choice, and subjects were bland.

Todd Farley works as an essay grader for a standardized test company in Des Moines, Iowa. His book Making the Grades: My Misadventures in the Standardized Testing Industry describes an essay grading process in detail. Graders were given two minutes to put a grade from 1 (low) to 6 (high) on an essay. Graders were given a 15-minute break in the morning and afternoon, and had to request permission to go to the rest room. This dull, grinding atmosphere distorted an accurate grading system even if one ever existed.

What does all this mean? It means that in this sample we have taken the best and the brightest, and after nine tortuous teaching years, we have reduced their inclination toward writing to anger. It is not the teacher's fault. (Just ask my wife, Elaine, an elementary school teacher with strong opinions on this topic.) They are ordered to do this.

Now, these schoolchildren have grown up, and their adult voices are being heard. As currently constructed, Florida's comprehensive testing is a suffocating system that defeats creative writing. Let teachers teach. And let students learn.

Chuck Hawkins is a professor in the Electrical and Computer Engineering Department at the University of Florida. He has also been a professor in ECE at the University of New Mexico where he was an Associate Dean of the School of Engineering. He learned the value of good writing from participating in international engineering conferences, writing books and from editing, all of which taught him that a professional better be able to write so that people can understand.

♯ *Footnote:* FCAT is the Florida Comprehensive Assessment Test, or the FCAT/FCAT 2.0, was the standardized test used in the primary and secondary public schools of Florida. First administered statewide in 1998, it replaced the State Student Assessment Test and the High School Competency Test. For more details you can check out: https://en.wikipedia.org/wiki/Florida_Comprehensive_Assessment_Test

MSU Student Branch News

IEEE Electronics Packaging Society (EPS) sponsored student chapter at Michigan State University held its first online activity on October 1st in this Fall 2020 semester, as part of an educational series by experts from academia and industry. The EPS student chapter was established on October 16, 2019 at MSU. The IEEE Electronics Packaging Society is the leading international forum for scientists and engineers engaged in the research, design, and development of revolutionary advances in microsystems packaging and manufacturing. For more details about chapter activity at MSU: https://www.egr.msu.edu/eps/

A few words about our invited speaker Dr. Amanpreet Kaur:

IEEE ELECTRONICS PACKAGING SOCIETY

MICHIGAN STATE UNIVERSITY

IEEE EPS Student Chapter at MSU presents:

AN INVITED TALK ON HETEROGENEOUS INTEGRATION

Thursday, October 1st (10:30 - 11:00 AM)

By: DR. AMANPREET KAUR

Amanpreet Kaur received her B.S. (2005) and M.S. (2007) in Electrical Engineering from India. She worked as a fixed-term faculty in the Chandigarh Engineering College, India, from 2007 to 2010. She received her Ph.D. (2016) in Electrical Engineering from Michigan State University.

Since 2019, she is working as an Assistant Professor in the Electrical and Computer Engineering Department at Oakland University in Rochester, Michigan. Prior to that, she workerd as a Research Associate (2016-2019) in the Electromagnetic Research group at MSU. Dr. Kaur is a member of the Applied EMAG and Wireless lab at Oakland University.

Her research interests are in high-power RF electronics, Additive Manufacturing of Complex RF structures, wireless sensors, novel antenna design, high-frequency material characterization, and nanomaterials-based microwave circuits. She is a Senior Member of IEEE and SigmaXi. Dr. Kaur has authored/co-authored 33 technical papers, including the Best Paper Award in IEEE CPMT and IMAPS and 2 patents. Her work has been published in high-impact journals such as IEEE EDL, IEEE Transactions on CPMT, IEEE JEDS, and IEEE Sensors.

During her talk, Dr. Kaur covered different aspects of heterogeneous integration from material and different technology such as MEMES, analog, RF, digital system at very high frequency, applications targeted towards vehicle to vehicle (V2V) communication.
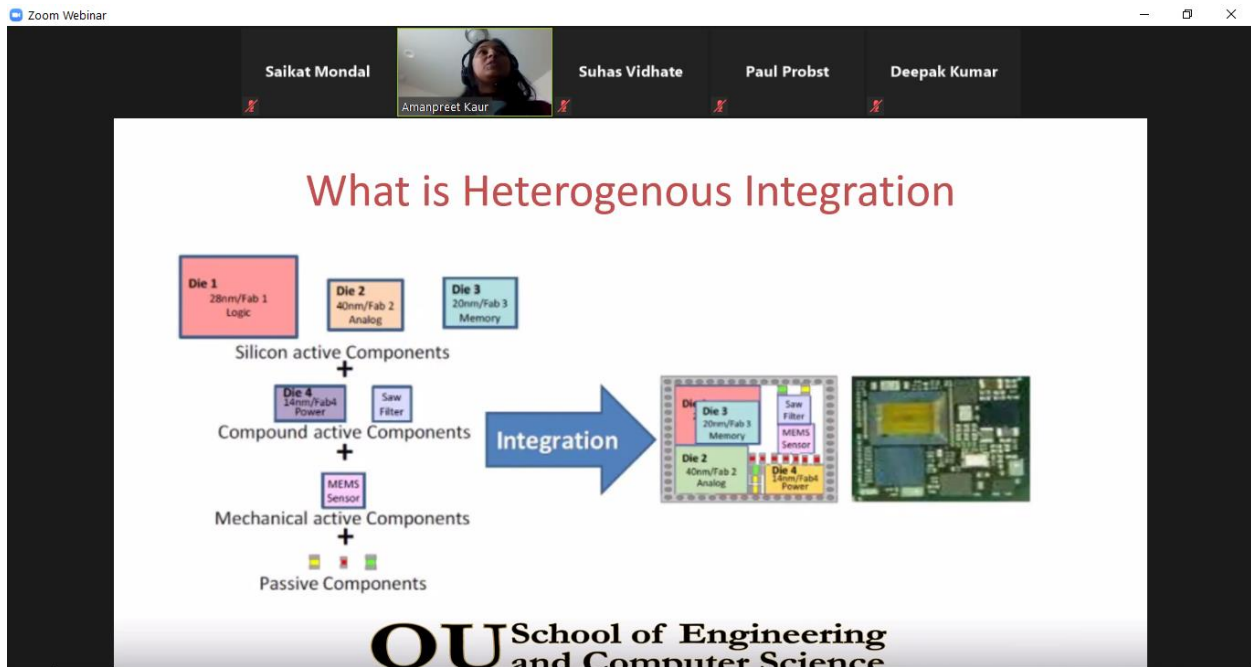
A snapshot of the zoom webinar talk

The MSU IEEE Branches have stayed very active during the Fall 2020. IEEE, IEEE Electronics Packaging Society(EPS) Chapter, and IEEE Nuclear and Plasma Sciences Society (NPSS) Chapter are all trying best to inspire students and create a club where we can all grow academically and professionally.

First, MSU IEEE branches still have virtual meetings on a regular basis. Within these meetings we talk to our members on what events they are looking forward to and reflect on events that have happened for feedback on what we can do to always improve. So far, all IEEE branches have held successful events for our members.

During the Fall Semester, IEEE branches held virtual talks and a career fair for students to have more opportunities and learn more about the field. IEEE EPS invited Dr. Amanpreet Kaur from Oakland University, Rochester, Michigan. During her talk, Dr. Kaur covered different aspects of heterogeneous integration from material and different technology such as MEMES, analog, RF, digital system at very high frequency, applications targeted towards vehicle to vehicle (V2V) communication. IEEE Student Branch has also invited Mars Wrigley Incorporated to talk about their internship opportunities and work environment to undergraduates of all years. IEEE has also created opportunities for members to talk to companies such as IEEE Midwest Virtual Career fair on October 28, 2020.

To maintain balance, IEEE also hosted social events such as a Pictionary game night to provide a friendly competition and break for student to relax during the semester. There have been virtual Pictionary game nights where members would get to know each other and have fun.
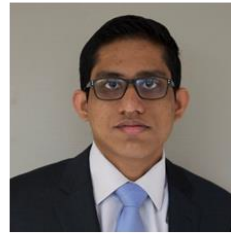
Saikat Mondal   Deepak Kumar   Paul Probst

Suhas Vidhate   Kanishka Wijewardena

Current organizing committee members of EPS student chapter at MSU

LTU Student Branch News

For details on this, go to: https://sites.google.com/a/ltu.edu/ieee-lawrence-tech/ or Email: ieee@ltu.edu
Or https://ltu.zoom.us/j/96068713727?pwd=Tnc3bUhVYVRPRkltbUY2V09VQXlpdz09

ORG UNITS cheat sheet

Section Unit Name or Affinity Group or Chapter Name (Organizational Unit is in parentheses)		
Consultants Network Affinity Group: (CN40035)		
Life Members:		
Young Professionals:		
Women in Engineering:		
Chapter: 01	(SP01)	Signal Processing Society,
	(CAS04)	Circuits and Systems Society and
	(IT12)	Information Theory Society
Chapter: 02	(VT06)	Vehicular Technology Society
Chapter: 03	(AES10)	Aerospace and Electronic Systems Society and
	(COM19)	Communications Society
Chapter: 04 "Trident"	(AP03)	Antennas and Propagation Society,
	(ED15)	Electron Devices Society,
	(MTT17)	Microwave Theory and Techniques Society,
Chapter: 05 "Computer"	(C16)	Computer Society
Chapter: 06	(GRS29)	Geosciences and Remote Sensing Society
Chapter: 07	(PE31)	Power Engineering Society,
	(IA34)	Industrial Applications Society
Chapter: 08 "EMC"	(EMC27)	Electromagnetic Compatibility Society
Chapter: 09	(IE13)	Industrial Electronics Society,
	(PEL35)	Power Electronics Society
Chapter: 10	(TEM14)	Technology and Engineering Management Society
Chapter: 11	(EMB18)	Engineering in Medicine & Biology
Chapter: 12	(CS23)	Control Systems Society
Chapter: 13	(E25)	Education Society
Chapter: 14	(RA24)	Robotics And Automation Society
Chapter: 15	(NPS05)	Nuclear Plasma Sciences Society
Chapter: 16	(CIS11)	Computational Intelligence Society,
	(SMC28)	Systems, Man and Cybernetics Society
Chapter: 17	(NANO42)	Nanotechnology Council

Section Unit Name or Affinity Group or Chapter Name (Organizational Unit is in parentheses)	
University Of Detroit-Mercy:	(STB00531)
Michigan State University:	(STB01111)
University Of Michigan-Ann Arbor:	(STB01121)
Wayne State University:	(STB02251)
Lawrence Technological University:	(STB03921)
Oakland University:	(STB06741)
Eastern Michigan University:	(STB11091)
University of Michigan-Dearborn:	(STB94911)

Curated & Formatted By

Sharan Kalwani,
Wavelengths,
2017 ~ 2020

Non-IEEE Events

We try to publish IEEE events in several places to ensure that everyone who may want to attend has all the available relevant information. **NOTE: The IEEE SE Michigan section website is changing to its new home, kindly make a note of it! The new home is located at http://r4.ieee.org/sem/.** The old links will continue to work for some time, but will be changing permanently in the near future.

SEM e-Wavelengths:
www.e-wavelengths.org
This is our 'Active' event listing site where everyone should look first to see what events are scheduled for our Section in the near future.

SEM Web Calendar:
http://r4.ieee.org/sem/
Select "SEM Calendar" button in the top row of the website.

SEM Web Meetings:
http://r4.ieee.org/sem/
Select "SEM Meeting List" button in the left-hand column.

vTools Meetings:
http://sites.ieee.org/vtools/
Select "Schedule a Meeting" button in the left-hand column of buttons.

Other IEEE Local Meetings:
http://www.e-wavelengths.org/

Other Happenings

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

Send details to: wavelengths@ieee-sem.org

• •

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

Model RC Aircraft
http://www.skymasters.org/

Model Rocketry
http://team1.org/

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

Experimental Aircraft Association
https://www.eaa.org/en/eaa/eaa-chapters/find-an-eaa-chapter

Robots
http://www.therobotgarage.com/about-us.html

Science Fiction Conventions
https://2021.penguicon.org/

http://www.confusionsf.org/

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

ESD PE Review Class
https://www.esd.org/programs/pe/

Maker Faire:
https://swm.makerfaire.com/

Executive Committee

The SEM Executive Committee is the primary coordination unit for Southeastern Michigan (SEM) IEEE operations. The basic organization chart below shows the 2019 arrangement of communications links designed to provide inter-unit coordination and collaboration.

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

If you wish to attend, or just monitor the discussions, please contact Christopher Johnson, the section secretary at: **cgjohnson@ieee.org** and request to be placed on the distribution list for a monthly copy of the agenda and minutes.

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

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

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

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

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

Christopher Johnson - SEM Secretary

Download the **complete SEM Organization Chart**, in PDF format, from our Website at: http://r4.ieee.org/sem/
Click on "About SEM" Tab and "Current Officers" *(NOTE: this is now password protected)*

Current Organization - IEEE Southeastern Michigan Section (SEM)
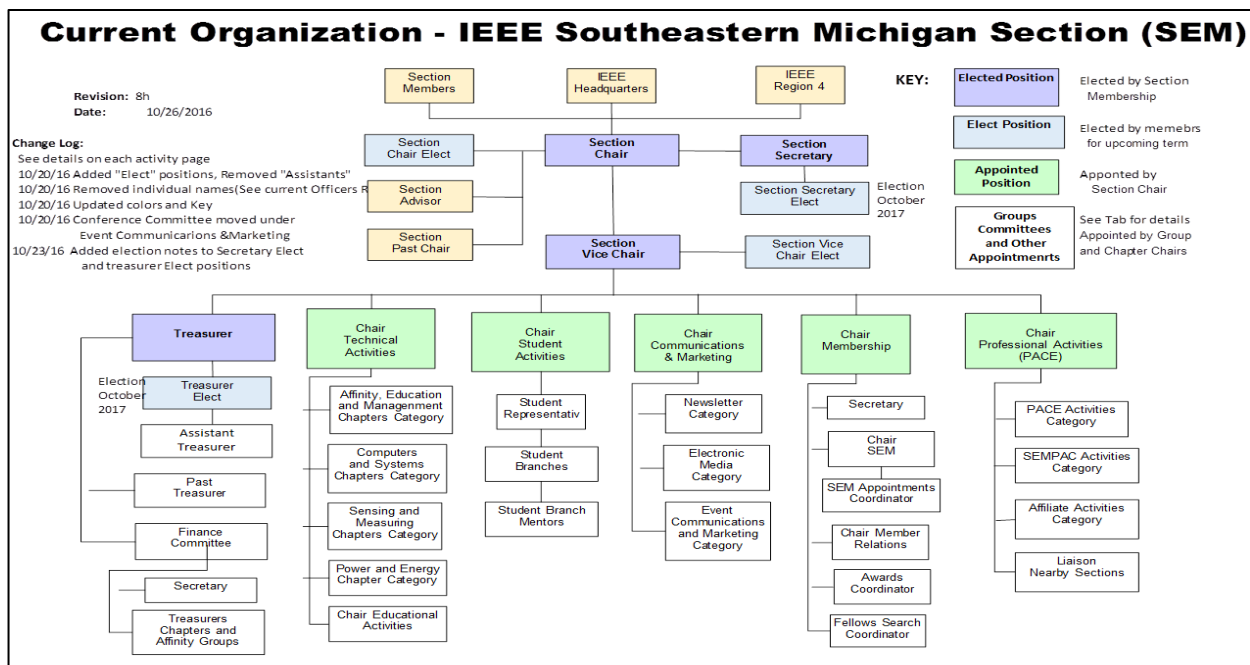
ExCom Meeting Schedule

<u>NOTE</u>: All SEM members are invited to attend ALL ExCom meetings:

Below is the 2020 schedule for the Section ExCom meetings with links to add the events to your calendar. It is important that at least one person from each Chapter/Affinity Group attends each scheduled ExCom meeting. Information on each Face-to-Face (in-person) Meeting will be sent out once the venue is confirmed.

Please mark your calendars for the 2020 meetings. Or, link your personal calendar to the SEM Web calendar.

Section Administrative Committee (ExCom) Meeting Schedule for 2020:

Note: <u>All IEEE Members</u> are welcome at any IEEE meeting, at any time but <u>please register</u> so we can be sure to accommodate you. This month's meeting is highlighted in **Bold**.

Teleconference, Wednesday November 4 https://events.vtools.ieee.org/m/216759

Teleconference, Thursday December 2 **https://events.vtools.ieee.org/m/216760**

Chris Johnson
SEM Secretary
cgjohnson@ieee.org

Editor's Corner

Previous editions in this series may be found on the IEEE SEM website at: http://r4.ieee.org/sem/. Click on the "Wavelengths" button in the top row of selections.

Comments and suggestions may be sent to the editorial team at wavelengths@ieee-sem.org
OR
sharan.kalwani@ieee.org
d.romanchik@ieee.org
nilesh.dudhaia@ieee.org
k.williams@ieee.org
cgjohnson@ieee.org
lunnmalcolm@me.com
nkaja@umich.edu
akio@emcsociety.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.

You may have noticed a few new items in this month's edition. First of all, we have two entries from our Student Branches: Michigan State University and Lawrence Technological University. Delighted to hear them, please welcome them on-board and the two articles they have contributed, telling us all about them and their activities for 2020.

Another new about to be a regular feature is Dan Romanchik's column on new things/ This time he writes to us about IEEE internet resources.

IEEE Day 2020 is coming up! Expect to hear more on that soon.

We also plan on starting a "letters to the Editor" column soon. Feel free to email away to help us get that started!

Editors:

We are always looking for members interested in helping to edit the newsletter. The process is always more fun with more people to share the duties. Having more participants and contributors also helps us keep the newsletter interesting.

Heads Up

We are contemplating making the submissions of articles and events for the Wavelengths, a little easier and a little more inviting. Ideas are of course welcome and to this end, we are toying with setting up a little "newsletter portal". Stay tuned for some news on that end!

Join the Team:

If you feel you might like to join the team, or would like to train with us, please contact one of us at:
wavelengths@ieee-sem.org OR any one of the following:

sharan.kalwani@ieee.org
d.romanchik@ieee.org
nilesh.dudhaia@ieee.org
k.williams@ieee.org
cgjohnson@ieee.org
lunnmalcolm@me.com
nkaja@umich.edu
akio@emcsociety.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://r4.ieee.org/sem/

Each of the sites below may be accessed through the SEM Website:

Section Website Event Calendar
(Select the "SEM Calendar" button - top row.)

SEM Facebook Page
(Select the " f " button under the top row.)

SEM LinkedIn Page
(Select the " in " 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."

Section Officers

Section Chair
David Mindham

Section Secretary
Chris Johnson

Section Vice-Chair
Sharan Kalwani

Section Treasurer
Michael Folian

Standing Committees:

Section Adviser
Don Bramlett

Chair Communications & Marketing

Chair Educational Activities
Christopher Guirlanda

Chair Finance
Nevrus Kaja

Chair Membership Development
Sharan Kalwani

Chair Nominations & Appointments
Kimball Williams

Chair Professional Activities (PACE)
Sharan Kalwani

Chair Student Activities
Mel Chi

Student Representative

Chair Technical Activities
Jeffery Mosley

Wavelengths Editor
Sharan Kalwani

Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

IEEE Southeastern Michigan

Visit Us on the Web at:
http://r4.ieee.org/sem

Leadership Meetings

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

SEM Executive Committee Face-to-Face Meetings:
- Once every Qtr. Find the location, and Registration at:
  https://meetings.vtools.ieee.org/main

SEM Standing Committee Meetings:
SEM Affinity Group Meetings:
SEM Technical Society/Chapter Meetings:
SEM University Student Branch Meetings:
- Meeting schedules are announced on SEM Calendar
  http://r4.ieee.org/sem/
  (Select the "SEM Calendar" button in the top row.)

- Registration for all at:
- **https://meetings.vtools.ieee.org/main**