Wavelengths

IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

Volume 64 – Issue 3

Contents

Upcoming Events

We have several events coming up this month, all are listed below, FYI.
Note: All times are EST/EDT. If any events are missed do kindly bring them to the attention of wavelengths@ieee-sem.org. Enjoy!
You can also use this bookmark to view All of the links at a single glance
http://bit.ly/sem-upcoming

Event	Date	Time (EST/EDT)
Art of Writing an Effective Research Paper	1 Mar 2024	08:30 am
Documentary Night: Alexander Bell	1 Mar 2024	5:00 pm
Advanced Vtools Training	2 Mar 2024	09:00 am
EMC: From ElectroMagnetics to ElectroMagnetics_Engineering	6 Mar 2024	7:30 pm
Documentary Night: Vannevar Bush	8 Mar 2024	5:00 pm
Officer Training: IEEE Code of Ethics	9 Mar 2024	09:00 am
SEM Life Members Affinity Group Admin Mtg	11 Mar 2024	12 noon
Current Status of Quantum Computing	12 Mar 2024	6:00 pm
SEM Computer Society Admin Mtg	12 Mar 2024	7:30 pm
Ch8 Adcom Teleconference	14 Mar 2024	11:00 am
Section Monthly Meeting (IN person)	14 Mar 2024	6:30 pm
Documentary Night: Future By Design	14 Mar 2024	5:00 pm
Documentary Night: Wernher Von Braun	22 Mar 2024	5:00 pm

IEEE
Advancing Technology for Humanity

140 YEARS

Chair's Column

Happy soon-to-be-Spring 2024 and may March be equally rewarding!

2024 is now 2 months old and we have gotten off to a good start. We have done several technical events, several educational events, several student events, several documentaries (future scheduled documentaries: you can see the list here), several professional skills events (Agile Methods, Critical Thinking and Root Cause Analysis) and several training events (Secretary, Treasurer, IEEE Code of Ethics and Vice-Chair responsibilities). In other words – a lot of diverse events, fulfilling a broad spectrum of our member needs and always something for everyone! Planning is in full swing for several distinguished speakers share their perspectives, via online sessions and a few in person too, stay tuned!

The IEEE is now 140 years old! We are planning a celebration like the event we held for the 60th anniversary of our Section. Ideas for a venue, type of celebration, theme, etc are all invited. We will have at least a distinguished talk by an IEEE leader, member awards and recognition, sumptuous dinner and memorable eclectic entertainment. Send your suggestions/ideas/emails to sharan.kalwani@ieee.org or chair@ieee-sem.org

A budget process was started at our February Section ***ExCom*** meeting. Officers and volunteers are expected to run their portions of our organization according to this approved budget. Officers – look for an email in your Inbox later by March 4th.

Volunteering:
We, IEEE Southeastern Michigan Section, function based on the work of our volunteers. If someone has important obligations that reduce their ability to volunteer, other volunteers need to step in and carry the load. The more volunteers we have, the easier the workload on everyone. Please volunteer, you will find the experience interesting and rewarding.

Policies and Procedures:
Most Policies and Procedures that we follow, are spelled out in the IEEE MGA (Membership & Geographic Activities) manual. A few are unique to our Section. These unique to our section polices will be placed in a folder in the Website as well as Collabratec for referral by officers and members of our section. Additional information will be added as needed. A document with links to the MGA Manual will also be located in that folder.

You can find all the other upcoming events using the short URL link: **https://bit.ly/sem-upcoming**

Remember – every little bit helps, and the Section is here to help! If you have not taken the opportunity, do reach out to any of the Section officers (lifelong email contacts listed below). Who knows what unknown but immense value you may discover, by simply connecting with us. A possible membership annual rate discount, OR an upcoming soft skills event OR need of a professional member for a technical person resource OR opportunity to participate in a standards making process OR a chance to mentor a young graduate student in a domain badly needed in our section of the world OR network with a book publisher OR….the possibilities are limited only by your enthusiasm.

Finally, I ask you to help share news about our IEEE Section to fellow engineers. This will help us fulfill the mission and goals, which is to use technology to help society. Do help us gain more visibility – word of mouth, invitations to our tech events, skills, join as members, post our events to your social media feeds, etc.

I look forward to hearing from you and seeing you at our events. As always, your ideas and suggestions are encouraged and welcome.

Sharan Kalwani
Via email: chair@ieee-sem.org
Section members are encouraged to engage using <u>any</u> of these online platforms:

To reach any of our SECTION officers, for any help/assistance you seek you may try these easy to remember email addresses. The objective is to ensure business continuity, so one need not try to remember or hunt for the contact information! They can help you find your chapter officers or point you in the right direction for any query. They are:

- 📖 Chair is   chair@ieee-sem.org
- 📖 Vice Chair is   vicechair@ieee-sem.org
- 📖 Treasurer is   treasurer@ieee-sem.org
- 📖 Secretary is   secretary@ieee-sem.org
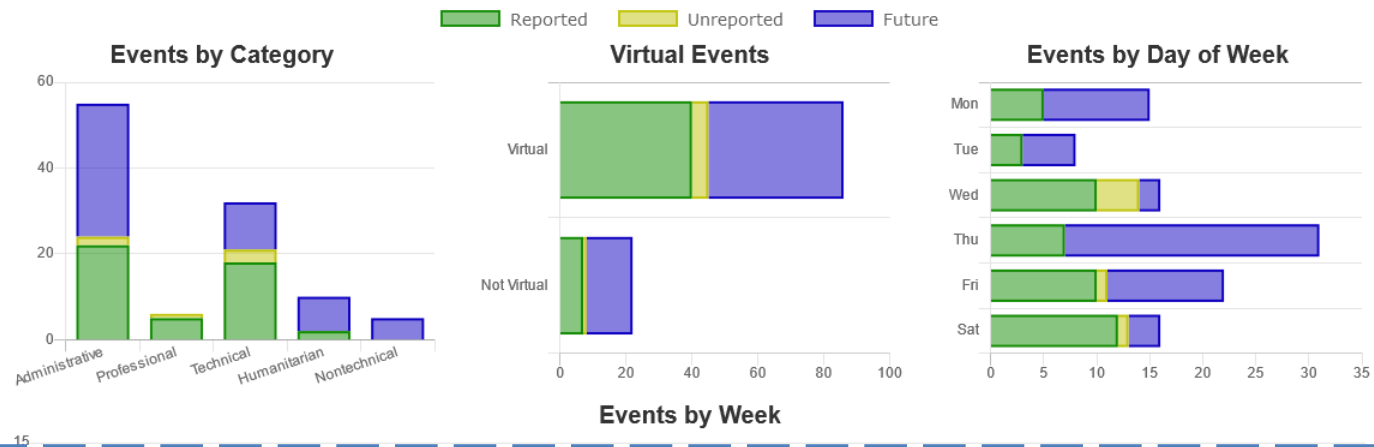- 📖 Advisor is   advisor@ieee-sem.org

📈 EVENTS ACTIVITY

Year ❓

2024 ⌄

Organizational Unit ❓

R40035 - Southeastern Michigan Section ⊖   Go

R40035 - Southeastern Michigan Section Charts ❓

ℹ These data counts and charts include the selected OU and all related organizational units. See below for individual OU numbers and charts.

Name	Prof	Tech	Non-Tech	Admin	Hum	Pre-U	Total
Southeastern Michigan Section	6	32	5	55	10	0	108

■ Reported   ■ Unreported   ■ Future

Events by Category

Virtual Events

Events by Day of Week

Events by Week

Tech Activities REPORT

2024 IEEE SE Michigan Section Geo-unit Status (Till Jan 30th)

Ch's & AG's	Ave Tech Mtg. Attend	Ave Tech Mtg Guest	#L31 -Technical	#L31 -Admin	#L31 Professional	#L31 -Other	Geo-Unit Name	# Unreported	Total Mtgs
Cnslt	0	0	0	0	0	0	Consultants Network	0	0
LIFE	0	0	0	1	0	0	Life Members	0	1
WIE	0	0	0	1	0	0	Women In Engineering	0	1
YP	0	0	0	0	0	0	Young Professionals	0	0
1	0	0	0	0	0	0	Circuits & Systems, Signal Proc., Info Th.	0	0
2	0	0	0	0	0	0	Vehicular Technology	0	0
3	0	0	0	0	0	0	Aerospace & Elec. Sys., Communications	0	0
4	24	0	1	0	0	0	Trident (Ant, Elect Dev., uWave, Photo)	0	1
5	26	14	1	0	4	2	Computers	0	7
6	17	0	2	0	0	0	Geoscience & Remote Sensing	0	2
7	22	3	1	0	0	0	Power Engineering, Industrial App.	0	1
8	47	27	1	1	0	0	Electromagnetic Compatibility (EMC)	0	2
9	0	0	0	0	0	0	Power Electronics, Industrial Electronics	0	0
10	0	0	0	1	0	0	Engineering Management	0	1
11	0	0	0	1	0	0	Eng. in Medicine & Biology	0	1
12	0	0	0	0	0	0	Control Systems	0	0
13	0	0	0	0	0	0	Education	0	0
14	0	0	0	0	0	0	Robotics & Automation	0	0
15	24	0	1	0	0	0	Nuclear Plasma Science Society	0	1
16	0	0	0	0	0	0	Computational Intelligence / Sys.Man.Cyber.	0	0
17	0	0	0	0	0	0	Nano Technology Council	0	0
18	0	0	0	0	0	0	Magnetics Society	0	0
SEM	0	0	0	5	1	0	SEM (Section)	0	6
	160	44	7	10	5	2	NOTE: Highlight Green = Active	0	24
		28%					NOTE: Highlight clear = Concern		

SEM Section Chapter and Affinity group leaders who are not showing any technical or administrative meetings are encouraged to reach out to the TAcom for assistance. We are in a new year within the Section where we plan to exceed our projections for technical meetings hosted for our membership. Thanks to all GAs working to engage their membership.

V/r Jeffery V. Mosley

Chair, Technical Activties Committee (TAcom)
jvmosley@ieee.org
Southeastern Michigan Section, IEEE Region 4

This Month in March

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

March 1st, 1880 – date of birth for <u>Sir Isaac Shoenberg</u>. Russian-Born British electrical engineer and principal inventor of the first high-definition television system, as used by the British Broadcasting Corporation (BBC) for the world's first public high-definition telecast (from London, 1936). He had installed the first radio stations in Russia before moving to England in 1914. He was head of a research group for Electrical and Musical Industries (EMI) that developed (1931-35) an advanced kind of camera tube (the Emitron) and a relatively efficient hard-vacuum cathode-ray tube for the television receiver. Until 1964 the BBC used his technical standard proposal - 405 scanning lines and 25 pictures a second. He was director of EMI from 1955. His youngest son, David Shoenberg, became a noted physicist.
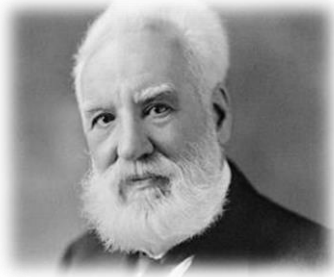
March 3rd, 1847– <u>Alexander Graham Bell</u> is born. He was a scientist, inventor, and engineer. He is credited with inventing the first functional telephone. He is also credited with co-founding America's major telephone company AT&T, which has been going strong since 1885. Bell's later life was marked by his groundbreaking work in aeronautics, hydrofoils, and optical telecommunications. {{We are featuring a special screening of a documentary on him – see https://events.vtools.ieee.org/m/401393 }}

March 7th, 1958 – <u>Alan Hale</u> is born. He is an American astronomer and writer who co-discovered the Comet Hale-Bopp (1995). After service in the navy, he worked at the Jet Propulsion Laboratory (1983-86) as an engineering contractor on several projects, including Voyager II. After earning a Ph.D. in astronomy, he founded the Southwest Institute for Space Research (now named the Earthrise Institute). His interests include near-Earth objects and their possible impact on Earth, and the search for planets outside our solar system. He advocates for improved science literacy in society, and better career opportunities for graduating scientists. Hale is also active in developing international collaboration for observational projects.

March 11h, 1890 – <u>Vannevar Bush</u> is born. American electrical engineer who oversaw the massive government mobilization of scientific research during World War II. At the age of 35, in 1925, he developed the differential analyzer, the world's first analog computer. It was capable of solving differential equations. The modern day NSF (National Science Foundation) was a direct result of the lineage established by him. During the war, numerous history changing projects were championed and guided by him such as the proximity fuse and the Manhattan project. Apart from teaching and working as an electrical engineer, Vannevar Bush had also been the dean of the MIT School of Engineering. Working with the government, he initiated military funding of research projects, later known as the military-industrial complex. He also penned books such as

Modern Arms and *Free Men*. {{We are featuring a special screening of a documentary on him – see https://events.vtools.ieee.org/m/405031 }}

March 13th, 1916 – Jacque Fresco was an American futurist who lectured and wrote his views on various subjects, such as energy efficiency, sustainable cities, cybernetic technology, natural-resource management, and automation. His life and career inspired the 2006 semi-biographical film Future by Design. In 2016, Jacque Fresco was honored with a Novus Summit award for his work. {{We are featuring a special screening of a documentary on him – see https://events.vtools.ieee.org/m/405809 }}

March 23rd, 1912 – Wernher Von Braun is born. He was German-born American aerospace engineer and space architect, and initially worked in Nazi Germany's rocket development program as a young man. After World War II, he moved to the United States where he became a pioneer of rocket and space technology in the nation. In his later career, he became director of the newly formed Marshall Space Flight Center. {{We are featuring a special screening of a documentary on him – see https://events.vtools.ieee.org/m/405808 }}

March 25ᵗʰ, 1883 – (Henry Charles) later Fleeming Jenkin is born. He was a British engineer noted for his work in establishing units of electrical measurement. After earning an M.A. (1851), he worked for the next 10 years with engineering firms engaged in the design and manufacture of submarine telegraph cables and equipment for laying them. In 1861 his friend William Thomson (later Lord Kelvin) procured Jenkin's appointment as reporter for the Committee of Electrical Standards of the British Association for the Advancement of Science. He helped compile and publish reports that established the ohm as the absolute unit of electrical resistance and described methods for precise resistance measurements.

March 27ᵗʰ, 1845 – Wilhelm Rontgen was a German physicist and mechanical engineer. He is best remembered for producing and detecting X-rays for which he was honored with the first Nobel Prize in Physics in 1901. His discovery of X-rays remains one of the greatest achievements in the field of medical science.

March 27ᵗʰ, 1855 – Sir Alfred Ewing's official date of birth. He was a Scottish physicist who discovered and named hysteresis (1881), the resistance of magnetic materials to change in magnetic force. Ewing was born and educated in Dundee and studied engineering on a scholarship at Edinburgh University. He helped Sir William Thomson, later Lord Kelvin in a cable laying project. In 1878 he became professor of Mechanical Engineering and Physics at Tokyo University, where he devised instruments for measuring earthquakes. In 1903 he moved to the Admiralty as head of education and training, where during WW I, he and his staff took on the task of deciphering coded messages.

March 29ᵗʰ, 1853 – Elihu Thomson, an English-American engineer and inventor whose discoveries in the field of alternating current phenomena led to the development of successful alternating current motors. Thomson invented electric welding and other important inventions in electric lighting and power among his lifetime total of about 700 patents. Thomson was also a cofounder of the General Electric Company (in 1892, in a merger with the Edison Company) industry.

This continues the yearlong feature of interesting *engineering* events or milestones that occurred in a specific month. Readers are invited to share their views and opinions (or suggestions) at the accompanying link. Submissions can also be made using direct email to the editors at: wavelengths@ieee-sem.org.

Past readers have asked to feature one or more of these events in more detail. So, starting in 2024, we will have documentaries that will help shed more light on these luminaries and also explore the hidden side of their life stories. We will also endeavor to republish an article from various publications in the same month of Wavelengths.

Here is a link which lists all of the documentaries featuring several of the folks mentioned in the past 12 months of "This month…." Series. Enjoy!

Sharan Kalwani
2022-2023 Chair, Southeastern Michigan Section,
Passionate Engineering History Buff/Aficionado

EMB Society Chapter

Proudly re-introducing the rejuvenated Engineering in Medicine & Biology (EMB) Society Technical Chapter Officer profiles (aka Chapter 11):

Chair: Maurice Snyder

Maurice Snyder has a Bachelors, Masters and PhD all in electrical engineering and Bio-Engineering. He is a life senior member of IEEE. He and his family spent 14 years living and working in Asia. He published a book Structures Beyond Structures about engineering projects in Japan like no other in the world. His PhD research project was based on real-time simulation of cardiovascular arterial and venous pressures, flows and volumes in a closed-loop math model, 36-segment, of the entire human cardiovascular system.

Treasurer: James Hamilton

James (Jamie) Hamilton has held engineering, executive and leadership roles in medical device, digital healthcare, consumer electronics and aerospace companies, and is a former startup founder. He is currently Chief Technology Officer at Emerge Inc., a consumer electronics company developing products for Metaverse applications. Jamie is a senior member of IEEE and earned his Ph.D. degree from the University of Michigan and a B.S. from the University of Rochester.

Vice-Chair: Durga Chavali

Durga P. Chavali specializes in technology and healthcare. She has a background in cloud computing, AI technologies, IoMT, deep learning, blockchain, machine learning, and big data analytics. She has edited and authored books on behavioral health, AI remedies, and AI virtual assistance for care management. She has a bachelor's degree from India and currently pursuing her master's in health care administration. She is currently serving as a vice chair for the EMBS chapter in Southeastern Michigan section.

Secretary: Yan Yan

No photo or bio at the time of going to press.

Volunteer+Officer Training

Icon shared by the Region 4 twitter account!

For the year 2024, we have notified individual officers elected of their status. **Virtual officer training sessions** were scheduled and 6 of 7 them have taken place. - see the vTools system for March, to learn some of the new features. Interestingly – news of our training sessions has made its way far beyond our neck of the woods and we had attendees from England (UK), West Coast (Oregon), Illinois and Iowa! Word of mouth helps spread news of our events all over ! If those folks see a benefit – then it must be worth something…..If you missed any sessions – contact us and we can share the slides and video recording links.

Showing 3 of 3 upcoming events, based on search criteria.

Title	Date	Host	Location	Reported On	Options
📝 Advanced Vtools & other Features Training	02 Mar 2024 09:01 AM	R40035			View | Manage
📝 Officer Training 2024 (part 7 of 7)	09 Mar 2024 09:00 AM	R40035			View | Manage

NOTE: All the training, and all the governance meetings are open to all IEEE Members at all grades. All you need to do to participate is **register for each session** and show up.

https://events.vtools.ieee.org/m/406161
https://events.vtools.ieee.org/m/382581

EIT 2024 CFP

ANNOUNCEMENT and CALL FOR PAPERS (version June, 2023)
2024 IEEE INTERNATIONAL CONFERENCE
on ELECTRO/INFORMATION TECHNOLOGY
May 30, 31, June 1, 2024
University of Wisconsin-Eau Claire, Eau Claire, Wisconsin 54702-4004
http://www.eit-conference.org/eit2024

ORGANIZING COMMITTEE

R4 EIT Conference Administrator
Tarek Lahdhiri, lahdhiri@ieee.org

EIT Conferences Founding General Chair
Hossein Mousavinezhad, hossein.mousavinezhad@ieee.org

2024 Conference General Chair
Rahul Gomes, gomesr@uwec.edu

Program Chairs
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Ibrahim Abdel-Motaleb, ibrahim@niu.edu
Benjamin Fine, finebt@uwec.edu

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Publication Chairs
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Bob Evanich, b.evanich@ieee.org, Duke Energy

Awards Committee
Sat Basu, satbasu@ieee.org, Hossein Mousavinezhad, Subra Ganesan

The IEEE 2024 International Electro/Information Technology Conference, sponsored by the IEEE Region 4 (R4), in collaboration with University of Wisconsin-Eau Claire, is focused on basic/applied research results in the fields of electrical and computer engineering as they relate to Electrical and Computer Engineering, Information Technology, and related applications. The purpose of the conference is to provide a forum for **researchers and industrial investigators** to exchange ideas and discuss developments in these growing fields. There will also be exhibits where the latest electro/information technology tools and products will be showcased. This is also an opportunity for professional activities development, workshops and tutorials.

Topics of interest include but are not limited to:
- **Robotics and Mechatronics**
- **Intelligent Systems and Multi-agent Systems**
- **Control Systems and System Identification**
- **Reconfigurable and Embedded Systems**
- **Power Systems and Power Electronics**
- **Solid State, Consumer and Automotive Electronics**
- **Electronic Design Automation**
- **Biomedical Applications, Telemedicine**
- **Biometrics and Bioinformatics**
- **Nanotechnology**
- **Micro Electromechanical Systems**
- **Electric Vehicles**
- **Wireless communications and Networking**
- **Ad Hoc and Sensor Networks**
- **Internet of Things**
- **Artificial Intelligence and Machine Learning**
- **Cybersecurity**
- **Computer Vision**
- **Signal/Image and Video Processing**
- **Distributed Data Fusion and Mining**
- **Cloud, Mobile, and Distributed Computing**
- **Software Engineering and Middleware Architecture**
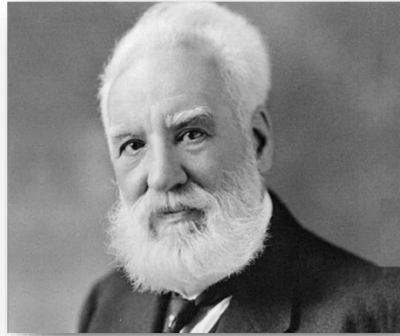- **Engineering Education**

Important dates:
- Submission of full papers: February 16, 2024
- Notification of acceptance: March 15, 2024
- Final manuscript (PDF) due: April 26, 2024
- Early registration: May 10, 2024

For more information, ideas for organizing/chairing sessions, industry participation, tutorials, professional activities sessions, please contact: **Drs. Gomes or Mousavinezhad.**

IEEE eit2024 International Conference Announcement and CFP

Alexander Graham Bell

IEEE SE Michigan
Presents
"The Life Story of Alexander Graham Bell"

IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

At Glance

- **When:**
  Date: March 1st, 2024
  Time: 5:00– 6:30 PM EST

- **Where:**
  Online via Webex (to be shared only after you have a confirmed registration)

- **Audience:** All eligible members and potential members (only if slots available)

  *

  Sponsored by IEEE Southeastern Michigan

One of the greatest inventors of the late 19th century, Alexander Graham Bell is probably most famous for the invention of the telephone and the 'Bell Telephone Company'. Throughout his life, he sought to foster the advancement of scientific knowledge with his utmost dedication and sincere efforts. His career only began in earnest after his family moved from London, England to Ontario, Canada in an attempt to improve his health. He started as an elocution teacher for the deaf people where he worked tirelessly to spread an early form of sign language across America. He displayed his innovative talent with his invention of various sound recording and transmission devices. His greatest achievement remains the invention of the telephone that has changed and continues to change the way people communicate around the world. He was a pioneer, who gifted mankind with one of the most astonishing and trailblazing discoveries in human history, the telephone.

Running Time: 90 minutes

Pre-Registration Required!

https://events.vtools.ieee.org/m/401393

IEEE Southeastern Michigan Section

"When one door closes another door opens; but we so often look so long and so regretfully upon the closed door, that we do not see the ones which open for us."
Alexander Graham Bell

IEEE
Advancing Technology for Humanity

ICCM 2024

ICMM 2024
International Conference on Microwave Magnetics

8th International Conference on Microwave Magnetics

We would like to invite you to attend the 8th International Conference on Microwave Magnetics, which will be held from Sunday, June 16 until Wednesday, June 19, 2024, at Oakland University in Rochester, Michigan, in the United States.

Abstract submission:

Please submit your abstracts electronically using the following template: https://tinyurl.com/ICMM2024-template
The link to the submission form can be found here: www.icmm2024.org/registrationsubmissions
Further information can be found at the conference website: www.icmm2024.org
The abstract submission period begins **January 1, 2024**, and the deadline is **February 8, 2024**.

Scope of the conference:

This is the eighth ICMM conference after the success of Fort Collins (USA, 2008), Boston (USA, 2010), Kaiserslautern (Germany, 2012), Sendai (Japan, 2014), Tuscaloosa (USA, 2016), Exeter (UK, 2018), and Beijing (China, 2022). The conference will focus on new developments in all branches of fundamental and applied microwave magnetics. The technical areas covered are as follows:
- Magnetization and relaxation dynamics
- Applications in communication, sensing, and energy harvesting
- Cavity and hybrid magnonics
- Spin waves, spintronics, and nonlinear magnetic phenomena
- Microwave and millimeter wave magnetic materials and devices
- High-frequency magnetic materials and characterization
- Integrated RF and microwave magnetic devices

Features:
- Four days
- Single Session: Keynote, Invited, and Contributed talks
- Poster Session
- Social Outing at Henry Ford Museum
- Banquet Dinner at Meadowbrook Mansion

Special Notice!

If you plan to submit an abstract and/or attend the 8th ICMM 2024, please make an appointment NOW to apply for your visa to visit the U.S. This application process can take some time, so we urge you to submit your application as soon as you read this.

Send your request for a letter of invitation to: icmm2024@gmail.com

Important Dates:

Abstract submission opens:
January 1, 2024

Abstract submission deadline:
February 8, 2024

Registration opens:
March 1, 2024

Notification of acceptance:
March 15, 2024

End of early bird registration:
May 1, 2024

Conference begins:
June 16, 2024

Conference ends:
June 19, 2024

For more information about the conference, please visit:

icmm2024.org

Member News

A hearty congratulations to some of our newest Senior members! Mauricio Hess was also recently relocated to Michigan from California. Neron Nesmith, who recently retired. Durga Chavali who recently assumed the role of Vice chair of the rejuvenated EMB Society Technical Chapter. Subhadip Ghosh who also recently made Senior member is lead SW architect at Ford and working on his PhD. The most recent SEM member – Tauheed Khan is a professor at EMU.

Do extend your welcome to all of them.
--Sharan Kalwani

Subhadip Ghosh, Ford

Subhadip Ghosh is working as Software Security Architect for next generation vehicle autonomy at Ford Motor Company.

He has 17+ years of experience in vehicle security, ADAS and EV domains as software developer, systems engineer, team lead and technical collaborator between research, advanced engineering and product development. In the past five years, Subhadip has focused on emerging technologies for automotive including cyber security, AI/ML , SOA and SOTIF.

Subhadip has earned a Bachelor's degree in Computer Science and Engineering from India, in 2006, and a M.S. in electric-drive vehicle engineering from Wayne State University, Detroit in 2014. During his masters he was Controls Team Lead for Wayne State University's EcoCAR2 team. Currently, Subhadip is in the final semester of his professional doctorate in Automotive Systems and Mobility at University of Michigan-Dearborn. Last year he published two IEEE journal papers and filed a patent. His research focus is in automotive cybersecurity. Subhadip is an active peer reviewer of IEEE journals and contributor to IEEE standards.

Mauricio Hess, NASA

Mauricio Hess-Flores is currently a Data Scientist and Geospatial Image Data Specialist at the NASA Jet Propulsion Laboratory (JPL), based in Pasadena, CA. Dr. Hess-Flores has over 17 years of experience and 22 publications in computer vision techniques for dense and accurate structure-from-motion from aerial imagery, as currently applied towards processing of geospatial imagery, as well as stereo processing for autonomous navigation. In previous industry positions, he worked on Computed Tomography (CT) reconstruction and Machine Learning for object classification for Stratovan Corporation in Davis, CA, a company helping develop airport security techniques under TSA/DHS funding, and also stereo processing for autonomous driving applications while at Qualcomm Research. He also held positions as a former lecturer and national laboratory employee.

Previously, he obtained his PhD at the University of California, Davis, in 2011, where his dissertation was completed at Lawrence Livermore National Laboratory, and as a Postdoctoral Scholar, led computer vision efforts at the UC Davis Institute for Data Analysis and Visualization (IDAV), mentoring PhD students as well as undergraduates. He has been the recipient of multiple awards including the prestigious Voyager Award from JPL, an awarded Caltech Data-to-Discovery proposal, a best paper award (CONTENT 2014), the Lawrence Scholar Program Fellowship from LLNL, and an Office of Graduate Studies fellowship from UC Davis, and regularly reviews in all of the top computer vision conferences, including CVPR, ICCV, ECCV, and WACV.

Durga Chavali

Durga Chavali, a distinguished researcher and leader in the field of technology and healthcare, has a robust background in Cloud Computing, AI technologies, IoMT, Deep Learning, Blockchain, Machine Learning, and Big Data Analytics. As an accomplished author, Durga Chavali has contributed significantly to the literature, having edited and authored best-selling books on Behavioral Health and AI Remedies, as well as AI Virtual Assistance for Care Management. With a strong presence in research publications, Durga Chavali has showcased expertise by publishing work on machine learning techniques with wide-reaching impact. Notably, contributions on ResearchGate have engaged millions of researchers, and participation in judging research papers at Springer journals, ACM journals, and international seminars and conferences attests to the commitment to advancing knowledge.

In research lab management, Durga Chavali has demonstrated leadership by overseeing a dynamic team of Ph.D. graduates, engineers, and business executives focusing on cutting-edge technologies like Federated Learning (FL) and Blockchain. In professional engagements, Durga Chavali serves on prestigious committees and boards, such as the SIG Advisory Board in HDAA, and as Vice Chair for IEEE Southeastern Michigan EMB Society Technical Chapter. As a Full member of the Sigma Xi, Durga serves as an editorial board reviewer for the Springer, IGI-global, and ACM Scopus-indexed AI journals. Durga Chavali has received nominations for the Best Innovator Award and Women in Engineering Award, showcasing an ongoing commitment to excellence.

Neron Nesmith, Retired

Neron Nesmith's engineering career spanned over 30 years at General Motors. He began as a contract employee in the Chassis Lab at Cadillac Engineering in Detroit. Within 18 months, he was hired directly. Later, Neron relocated to Truck Engineering's Development Lab in Pontiac and worked on GM's 'Road to Lab to Math' vehicle validation initiative with a focus on instrumentation, wheel force transducer (WFT) development and data acquisition.

After earning his BSEE from Lawrence Technological University, Neron was promoted to Instrumentation Engineer at GM's Milford Proving Ground working on common measurement solutions across the corporation. Later, he transferred to the Warren Tech Center as a Hardware and Software Validation Engineer for Body Control Systems. Afterwards, he joined the Battery Lab as a Senior Battery Development Engineer with a speciality in High Voltage Components for Hybrid and Electric vehicles, where he worked for 6 years before retiring in 2021.

Tauheed Khan, PhD

Tauheed Khan Mohd is a seasoned professional with 17 years of diverse experience, encompassing seven years in the IT industry in India, six years of research at The University of Toledo, Ohio, and four years teaching Computer Science at Augustana College, IL. Currently serving as an Assistant Professor at Eastern Michigan University since July 2023, Tauheed excels as a proactive Program Coordinator, guiding and advising a cohort of 40 Information Technology students while successfully launching a new Certificate program in Cybersecurity. His specialization includes teaching cybersecurity courses and researching ways to enhance autonomous vehicle security.

Prior roles include serving as an Assistant Professor at Augustana College, where Tauheed taught a range of courses, supervised Senior Inquiry projects, and contributed to faculty search committees. With a background in research, he has presented and published numerous papers at prestigious conferences and journals, covering topics such as AI, computer vision, cybersecurity, and human-computer interaction. Tauheed's educational journey includes a Ph.D. from The University of Toledo, an MS in Human-Computer Interaction, an Executive MBA from IIM Calcutta, and a B.Tech. in Computer Engineering from Jamia Millia Islamia.

Tauheed's extensive experience is complemented by active involvement in patent activities, international refereed journals, and conference publications. His commitment to education, research, and industry has consistently demonstrated a dedication to advancing the field of Computer Science and Information Technology.

2024 SEM Officers:

The IEEE SEM Organizational Roster is Located in the IEEE Southeastern Michigan website at:
http://sites.ieee.org/sem/

Under the TAB titled "About SEM" use the button:
"Organization Roster" to download the PDF version of the current Roster.

(Note: It is also a good idea to download the Organization Org Chart as well in order to get the complete 'big picture' of the Section.)

(Note: To protect the members from getting spam email, the roster is password protected. Request access by sending email to our web master – Scott Lytle.)

Years ago we used to publish the complete Chart and Roster in the Newsletter. But, that was when we had only 5 committees and 9 chapters.

Today we have 16 committees and sub-committees, 18 technical Chapters, 4 Affinity Groups and 8 Student Branches. The total roster divides into 12 pages with 247 identified officer positions.

That seems like a large organization, and it is, but it also presents our members with many volunteer opportunities to grow their capabilities through the experience of working with leaders who can guide and nurture engineering talent and widen the scope of volunteering through 'hands on' training in those 'soft skills' that can only be mastered by 'doing.'

We often refer to learning the non-technical side of an engineering career as similar to learning to play a musical instrument, or a sport, or how to dance. You can read all the books you want but, you only really learn by doing.

Reading the Roster:

Once downloaded notice that the roster is divided into five major segments:
- Executive Committee
- Standing Committees
- Affinity Groups
- Technical Chapters
- Student Branches

Within each segment you should find, at a minimum, the e-mail account for each officer, and in many cases, a work phone and a cell phone for quicker contact.

You may note a number of identified officer roles that have a blank cell (highlighted in yellow) where we would expect an officer name. These are vacant officer positions.

If you notice a vacancy where you might be interested in contributing to fill that role, please contact the relevant 'Chair' in that organization and discuss the duties of the office and consider helping out in that element.

As with all others, the road to this learning begins with the first step. That step is inquiring and finding out what skills go with each position. That information is maintained in the IEEE Center for Leadership Excellence at: **https://ieee-elearning.org/CLE/**

Good luck!

Vannevar Bush

IEEE SE Michigan
Presents
"Vannevar Bush"

IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

At Glance

- **When:**
  Date: March 8th, 2024
  Time: 5:00– 6:30 PM EST

- **Where:**
  Online via Webex (to be shared only after you have a confirmed registration)

- **Audience:** All eligible members and potential members (only if slots available)
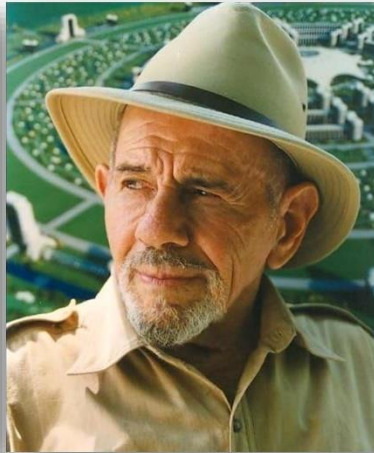
  *

  Sponsored by IEEE Southeastern Michigan

Vannevar Bush was an American engineer, inventor and science administrator, who during World War II headed the U.S. Office of Scientific Research and Development (OSRD), through which almost all wartime military R&D was carried out, including important developments in **radar** and the initiation and early administration of the **Manhattan Project**. He emphasized the importance of scientific research to national security and economic well-being and was chiefly responsible for the movement that led to the creation of the **National Science Foundation.**

Running Time: 60 minutes

Pre-Registration Required!

https://events.vtools.ieee.org/m/405031

IEEE Southeastern Michigan Section

IEEE *Advancing Technology for Humanity* | **140 YEARS**

IEEE SE Michigan
Presents
"Future By Design: Jacque Fresco"

IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

At Glance

- **When:**
  Date: March 15th, 2024
  Time: 5:00– 7:00 PM **EST**

- **Where:**
  Online via Webex (to be shared only after you have a confirmed registration)

- **Audience:** All eligible members and potential members (only if slots available)
  *

  *Sponsored by
  IEEE
  Southeastern
  Michigan*

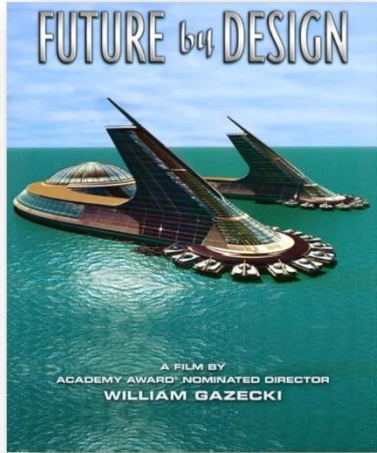Future by Design shares the life and far-reaching vision of Jacque Fresco, considered by many to be a modern day Da Vinci. Peer to Einstein and Buckminster Fuller, Jacque is a self-taught futurist who describes himself most often as a "generalist" or multi-disciplinarian -- a student of many inter-related fields. He is a prolific inventor, having spent his entire life (he recently celebrated his 100th birthday) conceiving of and devising inventions on various scales which entail the use of innovative technology. As a futurist, Jacque is not only a conceptualist and a theoretician, but he is also an engineer and a designer.
—Gazecki, William

Running Time: 86 minutes

Pre-Registration Required!

https://events.vtools.ieee.org/m/405809

IEEE Southeastern Michigan Section

IEEE Advancing Technology for Humanity | 140 YEARS

RoboFest REPORT

(1) Robofest World Championship Schedule Announced
(2) 2024 Game Judge Training Video and Presentation Available
(3) Team Registration is Still Open for Many Qualifiers
(4) Michigan Invitational Events to Open Monday, April 1
(5) Video Qualifier and Video Screening for Exhibition Team Deadlines
(6) In Search of 5-, 10-, 15- and 20-Year Coach Award Recipients
(7) MCWT $750 Grants for All-Girl Robofest Teams in Michigan: LAST CALL
(8) LTU Scholarship Opportunities

Note: All times are listed in Eastern Time unless noted

(1) Robofest World Championship Schedule Announced
The 25th Robofest World Championship Game and Exhibition Finals and Open Categories will be hosted on Lawrence Technological University's campus on May 9 ~11, 2024 with the following schedule:
    May 9: Unknown Mission Challenge and Jr BottleSumo (Group 1)
    May 10: Jr BottleSumo (Group 2), RoboParade, RoboMed, Sr BottleSumo Classic and Unlimited
    May 11: Jr BottleSumo Final Match, Vision Centric Challenge, RoboArts, Game Finals, Exhibition Finals

More details including practice times, event start times and campus locations can be found on the schedule:
https://www.robofest.net/images/2324/WC2024Schedule022124.pdf

Registration will open at 3:00pm Monday, March 18, 2024 for US Teams wishing to participate in the Open Category events. International teams who do not have a Robofest Director in their country may send an email to robofest@ltu.edu requesting registration.

Additional information regarding travel, nearby hotels and other important announcements will be posted on the World Championship page on the Robofest.net website, so check back often.

(2) 2024 Game Judge Training Video and Presentation Available
A recording of the Game Judging Training presentation and a pdf of the Judge Training slides have been posted on the Game page on the website. All Game Qualifier Site Hosts and volunteer Game judges should review the training.

(3) Team Registration is Still Open for Many Qualifiers
Please be sure to register your team for Qualifying and Open Competitions at local sites. Teams who do not have a local competition can also compete through the US and International Video Qualifier options for a chance to advance to the Robofest World Championship at LTU in May.

(4) Michigan Invitational Events to Open Monday, April 1
These events, hosted in the LTU Computer Science Robotics Lab, offer Game teams who do not advance from a Michigan Qualifier a second chance to compete. The 2024 Michigan Invitational Schedule for both Junior and Senior Divisions is as follows:
    April 20, 9:00am ~ 1:00pm
    April 20, 2pm ~ 6:00pm

(5) Video Qualifier and Video Screening for Exhibition Team Deadlines
Video_Qualifier_USA and Video_Qualifier_International Game and Exhibition teams must upload a link to a video to the Team Registration page to be screened and scored by April 15.

Exhibition trophy winners in all US competitions including Michigan must upload a link to a presentation video to the Team Registration page by April 15 to be screened before the World Championship. Teams that did not automatically advance may receive an invitation to the World Championship based on the video.

For more information, please see official rules on the 2024 Main page on the Robofest.net website.

(6) In Search of 5-, 10-, 15- and 20-Year Coach Award Recipients
We would like to acknowledge our coaches who have coached Robofest teams for 5, 10, and 15 and 20 years!
To submit your name, please send an email to robofest@ltu.edu with the subject *Coach Award*. Please include the coach name, coach ID (include all IDs used), and number of years coaching. We will recognize these dedicated coaches at the Robofest World Championship Awards Ceremony on May 11.

(7) MCWT $750 Grants for All-Girl Robofest Teams in Michigan: LAST CALL
The Michigan Council of Women in Technology Foundation, a Gold Sponsor of Robofest, is once again providing $750 grants for up to ten Michigan all-girl Robofest teams for the 2024 Robofest Game and Exhibition competitions. More information and the 2024 season application are now available on the MCWT webpage: https://mcwt.org/programs/list/K-12-Initiatives/ROBOTICS-GRANTS

(8) LTU Robofest Scholarship Opportunities
In order to truly recognize the effort and exceptional talent of the Robofest competitors, Lawrence Technological University has updated the Robofest Champion LTU Scholarship Award Offer for 2024. Each team member of the top 3 Senior Division Game, Exhibition, RoboArts, RoboMed, UMC and Vcc teams at the World Championship events will receive a scholarship certificate to attend LTU:
- 1st Place: $20,000 annual scholarship ($80,000 for 4 years)
- 2nd Place: $16,000 annual scholarship ($64,000 for 4 years)
- 3rd Place: $14,000 annual scholarship ($56,000 for 4 years)

Robofest participants who have competed at any time in any category may still apply for the annual $3,000 LTU Robofest scholarship. More details will can be found on the Scholarship page: https://www.robofest.net/index.php/about/scholarship

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Lawrence Technological University / Robofest / J-233 / 21000 W. Ten Mile Rd, Southfield, MI 48075
Prof. Elmer Santos, Director, esantos@ltu.edu
Shannan Palonis, Assistant Director, spalonis@ltu.edu
Pam Sparks, Coordinator, psparks@ltu.edu
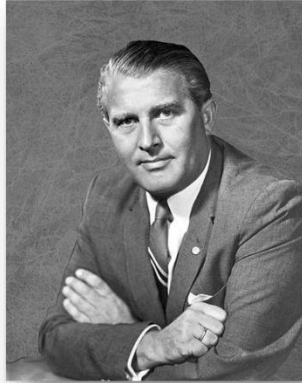Dr. CJ Chung, Robofest Founder, Executive Council Chair, cchung@ltu.edu
Dr. Chris Cartwright, Executive Council Member
Dr. Eric Martinson, Executive Council Member

http://www.robofest.net   http://facebook.com/robofest   https://www.linkedin.com/company/robofest-official

Wernher von Braun

IEEE SE Michigan
Presents
"Wernher von Braun"

Wernher von Braun was a German-American aerospace engineer and space architect. He was a member of the Nazi Party and Allgemeine SS, and the leading figure in the development of rocket technology in Nazi Germany, later a pioneer of rocket and space technology in the USA.

He helped design and co-developed the V-2 rocket during World War II, which became the first artificial object to travel into space on 20 June 1944. Following the war, he was secretly moved to the United States, along with about 1,600 other German scientists, engineers, and technicians, as part of Operation Paperclip. He worked for the US Army on a missile program, and developed the rockets that launched the USA's first space satellite Explorer 1 in 1958.

In 1960, his group was assimilated into NASA, where he served as director of the Marshall Space Flight Center and as the chief architect of the Saturn V that propelled the Apollo spacecraft to the Moon. In 1967, von Braun was inducted into the National Academy of Engineering, and in 1975, he received the National Medal of Science. He is also sometimes described by others as the "father of space travel", the "father of rocket science", or the "father of the American lunar program".

At Glance

- **When:**
  Date: March 22nd, 2024
  Time: 5:00– 6:30 PM **EST**

- **Where:**
  Online via Webex (to be shared only after you have a confirmed registration)

- **Audience:** All eligible members and potential members (only if slots available)
  *

Sponsored by IEEE Southeastern Michigan

Pre-Registration Required!

https://events.vtools.ieee.org/m/405808

IEEE Southeastern Michigan Section

ESD GOLD AWARDS

THE ENGINEERING SOCIETY OF DETROIT®
FOUNDED IN 1895

53rd Gold Award
RECEPTION & RECOGNITION 2024

2024 Gold Award Honoree:
James Boileau, PhD, FASM   *nominated by ASM International Detroit Chapter*

2024 Ann O. Fletcher Award for Distinguished Service:
Sharan Kalwani

and Featuring Individual Affiliate Society Awards

March 20, 2024
Tapestry, 24580 Evergreen Road, Southfield, MI 48075
5:30 p.m. Strolling Reception
6:45 p.m. Awards Program

Join the ESD Affiliated Technical Societies as we come together to honor and recognize our leaders – engineers, scientists and technical professionals who have distinguished themselves through outstanding achievement and service within their respective societies.

Hosted by The Engineering Society of Detroit and its Affiliate Council, the event will feature a presentation by this year's Gold Award winner. This award is given annually to an individual who is collectively upheld by the council for his or her outstanding contributions to the fields of science and engineering.

Please register by March 6, 2024; late registrations will only be accepted if space is available.

COST
$65 per person (5+ groups $60 each) through 3/6/2024.
$80 per person (5+ groups $75 each) 3/7–3/18/2024.

Cost includes a variety of hors d'oeuvres, beer and wine.

REGISTER AT ESD.ORG. To register groups of 5 or more or to register by phone, contact Elana Shelef at 248-353-0735, ext. 119, or eshelef@esd.org.

James Boileau, PhD, FASM

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Celebration Days

International Science and Engineering Celebration Days

The more time I spend as an engineer in various roles and with various colleagues all over the globe – the more I discover things I did not know!

a) **Earth Hour**, March 23, 2024. *The following is excerpted from Wikipedia.org* : (Not to be confused with Earth Day). Earth Hour is a worldwide movement organized by the World Wildlife Fund (WWF). The event is held annually, encouraging individuals, communities, and businesses to turn off *non-essential electric lights*, for one hour from 8:30 to 9:30 p.m., usually on the last Saturday of March, as a symbol of commitment to the planet. It was started as a lights-off event in Sydney, Australia, in 2007.

Official Link:
https://www.earthhour.org/

b) **World Meteorological Day**, March 23, 2024. World Meteorological Day was established in 1951 to commemorate the establishment of the World Meteorological Organization on 23 March 1950. This organization announces a slogan for World Meteorological Day every year, and this day is celebrated in all member countries.

c) **World Water Day**, March 22, 2024. World Water Day is an annual United Nations (UN) observance day held on 22 March that highlights the importance of fresh water. The day is used to advocate for the sustainable management of freshwater resources.[1] The theme of each year focuses on topics relevant to clean water, sanitation and hygiene (WASH), which is in line with the targets of Sustainable Development Goal 6.[2] The UN World Water Development Report (WWDR) is released each year around World Water Day.
Useful link:
https://www.un.org/en/observances/water-day

d) **Pi Day**, March 14, 2024. Pi Day is an annual celebration of the mathematical constant π (pi). Pi Day is observed on March 14 (the 3rd month) since 3, 1, and 4 are the first three significant figures of π. It was founded in 1988 by Larry Shaw, an employee of the San Francisco science museum, the Exploratorium. Celebrations often involve eating pie or holding pi recitation competitions. In 2009, the United States House of Representatives supported the designation of Pi Day. UNESCO's 40th General Conference designated Pi Day as the International Day of Mathematics.

Some useful fun Links:
https://www.exploratorium.edu/pi
https://www.npr.org/sections/thetwo-way/2010/03/pi_day.html/
https://www.idm314.org/
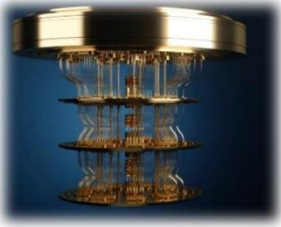http://www.math.utep.edu/faculty/lesser/piday.html

Other dates when people celebrate pi include July 22 (22/7 in the day/month format, an approximation of π) and June 28 (6.28, an approximation of 2π or tau)..

Sharan Kalwani is the current Chair of the IEEE Southeastern Michigan Section as well as the Chair of the Computer Society Technical Chapter. Besides working in the field of High Performance Computing as his daytime job, he is also Adjunct Faculty and teaches a number of courses such as: Introductory Computer Science, Information Security or Cybersecurity/ Computer Science Research Seminar/ Principles of Programming Languages/etc. He is the author of one book and is working on his second.

Quantum Computing

IEEE Southeastern Michigan
Presents a Distinguished Speaker Talk on
Current State of Quantum Computing

Credit: Bartlomiej K. Wroblewski / Shutterstock.com
© 2022

Bloch sphere representation of a qubit. The state $|\psi\rangle = \alpha|0\rangle + \beta|1\rangle$ is a point on the surface of the sphere, partway between the poles, $|0\rangle$ and $|1\rangle$.

This talk begins with a brief overview of quantum computing, including essential concepts and historical milestones. Then current research is discussed. This includes work in quantum key distribution, quantum proof cryptography, and quantum information. The current status of developments in quantum computing are covered. This means this talk is updated every time it is given

Speaker Bio:
Dr. Chuck Easttom is the author of 32 books, including several on computer security, forensics, and cryptography. He has also authored scientific papers on digital forensics, cyber warfare, machine learning, cryptography, and applied mathematics. He is an inventor with 22 computer science patents. He holds a Doctor of Science in cyber security, a Ph.D. in Nanotechnology, and a Ph.D. in computer science as well as three master's degrees (one in applied computer science, one in education, and one in systems engineering). He is a senior member of both the IEEE and the ACM. He is also a Distinguished Speaker of the ACM and a Distinguished Visitor of the IEEE.

Quick Summary

• **When:**
Date: March 12th, 2024
Time: 06:00 – 7:30 PM (EST/EDT)

• **Where:**
ONLINE/Virtual via WEBEX

• **Audience: OPEN to ALL**

Sponsored by IEEE Southeastern Michigan Computer Society Technical Chapter

Pre-Registration Required!

https://events.vtools.ieee.org/m/405117

Young Professionals AG

The SEM Young Professionals (YP) Affinity Group – Meet the Team!

Chair: Amar Dabaja

Amar Dabaja is an electrical hardware engineer at Veoneer Safety Systems, where she designs passive safety electronics that detect and respond to crashes in automotive applications. Amar graduated from Lawrence Technological University (LTU) in May of 2021 with a bachelor's degree in electrical engineering. Her involvement in IEEE began during her years at LTU, as she served multiple leadership positions in the LTU student branch. Amar now serves as the chair of the SEM Young Professionals Affinity Group. Outside of work and professional organizations, Amar enjoys volunteering at youth events, spending time with family outdoors, reading, baking, and learning new hobbies. Amar is excited to support the SEM YP community for another year in 2024. If you have any suggestions for YP activities, feel free to reach out to her at adabaja@ieee.org!

Vice Chair: Jonathon Wolf

Jonathon Wolf is a dual graduate of Central Michigan University where he earned his Bachelor's Degree in Electrical Engineering (2020) and his Masters of Science in Administration with a concentration in Engineering Management (2021). He has a passion for the automotive industry and currently works for Ford Motor Company as an Electrical Systems Engineer. Jonathon's first involvement in IEEE started in the Central Michigan Student Branch holding various positions. Today, he serves as the Region 4 Student Activities Chair (RSAC) along with the Vice Chair of Southeastern Michigan Young Professionals.

Treasurer: Abdelhamid Nasr
Profile was not received in time for publication.

Secretary: Bhupinder Mavi

Presently, Bhupinder Singh Mavi serves as the Lead Software Architect at LSPedia, located in Farmington Hills, MI, USA. Prior to this role, he held the esteemed position of Head of Engineering at HNC in Wixom, MI, USA.

Educationally, Mr. Mavi obtained his BE degree in Computer Engineering with first-class honors from Punjab Technical University, Jalandhar, Punjab, India. He furthered his academic pursuits by earning a master's degree in computer engineering from Wayne State University, Michigan, USA. Throughout his career, he has made significant contributions to academia, with numerous publications in journals and conference proceedings. Notably, he holds three patents in Healthcare and AI and is currently pursuing a PhD in Computers from Wayne State University.

Writing a Research Paper

IEEE Southeastern Michigan Computer Society Technical Chapter
Presents:
On the Art of Writing an Effective Research Paper

IEEE Southeastern Michigan
Electrical and Electronic Engineers Creating Our Future

Research paper writing is an important part of conveying the results of one's own research to the technical community and getting the paper accepted in reputed journals is a difficult task. It is both an art and science. Based on the speaker's experience in both academia and R&D over 50 years, the speaker will present important ways of writing an effective research paper in a step-by-step approach. The lecture will be highly interactive, and the participants are expected to chime in and share their experiences in writing papers and become enlightened of the improved ways of writing an effective research paper.

Speaker:
Professor N Sundarajan (retired), IEEE Life Fellow
Nanyang Technological University, Singapore

At Glance

- **When:**
  Date: March 1st, 2024
  Time: 08:30 – 9:40 AM (EST/EDT)

- **Where:**
  Online via ZOOM (to be shared only after you have a confirmed registration)

- **Audience: OPEN to ALL***

Sponsored by IEEE Southeastern Michigan Computer Society Technical Chapter

*Pre-Registration Required!
https://events.vtools.ieee.org/m/405612

140 YEARS

IEEE Southeastern Michigan Section

IEEE COMPUTER SOCIETY

*Credit: Photos by Convert Kit & Med Badr Chemmaoui on Unsplash **

ORG UNITS cheat sheet

Section Unit Name or Affinity Group or Chapter Name (Organizational Unit code is in parentheses)
Consultants Network Affinity Group: (CN40035)
Life Members: (LM40035)
Young Professionals: (YP40035)
Women in Engineering: (WE40035)
Chapter: 01 (CH04049)(SP01) Signal Processing Society, (CAS04) Circuits and Systems Society and (IT12) Information Theory Society
Chapter: 02 (CH04051)(VT06) Vehicular Technology Society
Chapter: 03 (CH04053)(AES10) Aerospace and Electronic Systems Society and (COM19) Communications Society
Chapter: 04 (CH04050)(AP03) Antennas and Propagation Society, (ED15) Electron Devices Society, (MTT17) Microwave Theory and Techniques Society,
Chapter: 05 (CH04055)(C16) Computer Society
Chapter: 06 (CH04056)(GRS29) Geosciences and Remote Sensing Society
Chapter: 07 (CH04057)(PE31) Power Engineering Society, (IA34) Industrial Applications Society
Chapter: 08 (CH04088)(EMC27) Electromagnetic Compatibility Society
Chapter: 09 (CH04087)(IE13) Industrial Electronics Society, (PEL35) Power Electronics Society
Chapter: 10 (CH04142)(TEM14) Technology and Engineering Management Society
Chapter: 11 (CH04099)(EMB18) Engineering in Medicine & Biology
Chapter: 12 (CH04103)(CS23) Control Systems Society
Chapter: 13 (CH04113)(E25) Education Society
Chapter: 14 (CH04115)(RA24) Robotics And Automation Society
Chapter: 15 (CH04144)(NPS05) Nuclear Plasma Sciences Society
Chapter: 16 (CH04125)(CIS11) Computational Intelligence Society, (SMC28) Systems, Man and Cybernetics Society
Chapter: 17 (CH04128)(NANO42)Nanotechnology Council
Chapter: 18 (CH04162)(MAG33) Magnetics Society
Section Unit Name or Affinity Group or Chapter Name (Organizational Unit code 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)

Use the Geo-unit 'Code' for faster access in the vTools system applications.

HKN Code	HKN Name (Student IEEE Honor Society)
HKN029	University of Michigan-Ann Arbor, Beta Epsilon
HKN042	University of Detroit-Mercy, Beta Sigma
HKN054	Michigan State University, Gamma Zeta
HKN073	Wayne State University, Delta Alpha
HKN163	University of Michigan-Dearborn, Theta Tau
HKN164	Lawrence Institute of Technology, Theta Upsilon
HKN190	Oakland University, Iota Chi
HKN244	Southeastern Michigan Alumni

Organization Unit IEEE Code	Student Technical Chapter name
SBC00531	University of Detroit-Mercy, Computer Society Chapter
SBC02251	Wayne State University, Computer Society Chapter
SBC03921	Lawrence Tech University, Computer Society Chapter
SBC06741	Oakland University, Engineering in Medicine & Biology

Why do we publish this? Well, this is most useful when searching the vTools page for entering L31s or creating new events or searching for existing events!

Curated & Maintained By
Sharan Kalwani,
Chair, IEEE Southeastern Michigan Section (2022-2023)
Editor, Wavelengths (Serving you as an active newsletter contributor since 2018)
Enthusiastic IEEE volunteer since 2011

Use the Geo-unit 'Code' for faster access in the vTools system applications.

Activities & 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 located at http://r4.ieee.org/sem/**

SEM Wavelengths:
https://r4.ieee.org/sem/about-sem/sem-history/wavelengths-magazine-archive/

SEM Calendar of events:
https://r4.ieee.org/sem/sem-calendar/
Select "SEM Calendar" button in the top row of the website. 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 Collabratec Workspace:
https://ieee-collabratec.ieee.org/app/workspaces/5979/IEEE-Southeastern-Michigan-Section/activities
An IEEE supported space for online chat, discussions, connecting with other global IEEE entities, besides our local Michigan folks.

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

Other Happenings

Here are some of the non-IEEE functions 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. NOTE: Copy the URL and paste it into your browser address bar.
These websites were checked in June 2022 and found viable.
Send details to: wavelengths@ieee-sem.org OR letters@ieee-sem.org

Michigan Institute for Plasma Science and Engineering: Seminars for the academic year:
https://mipse.umich.edu/seminars.php

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

Model Rocketry
https://www.nar.org/find-a-local-club/nar-club-locator/

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
https://www.robofest.net/index.php/about/contact-us

Science Fiction Conventions
https://2022.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/

It appears that the SouthWest Michigan Maker Faire was a casualty of the Global Pandemic, as were many of our friends and several organizations.

However, we retain this link for anyone wishing to make contact and consider pumping life back into what was a wonderful experience.

Executive Committee

The Executive Committee is the primary coordination unit for Southeastern Michigan (SEM) IEEE operations. The basic organization chart below shows the 2023 arrangement of communications links designed to provide inter-unit coordination and collaboration.

The SEM Executive Committee meets in a teleconference each month on usually on a Thursday at 6:30 pm. 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 secretary@ieee-sem.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.
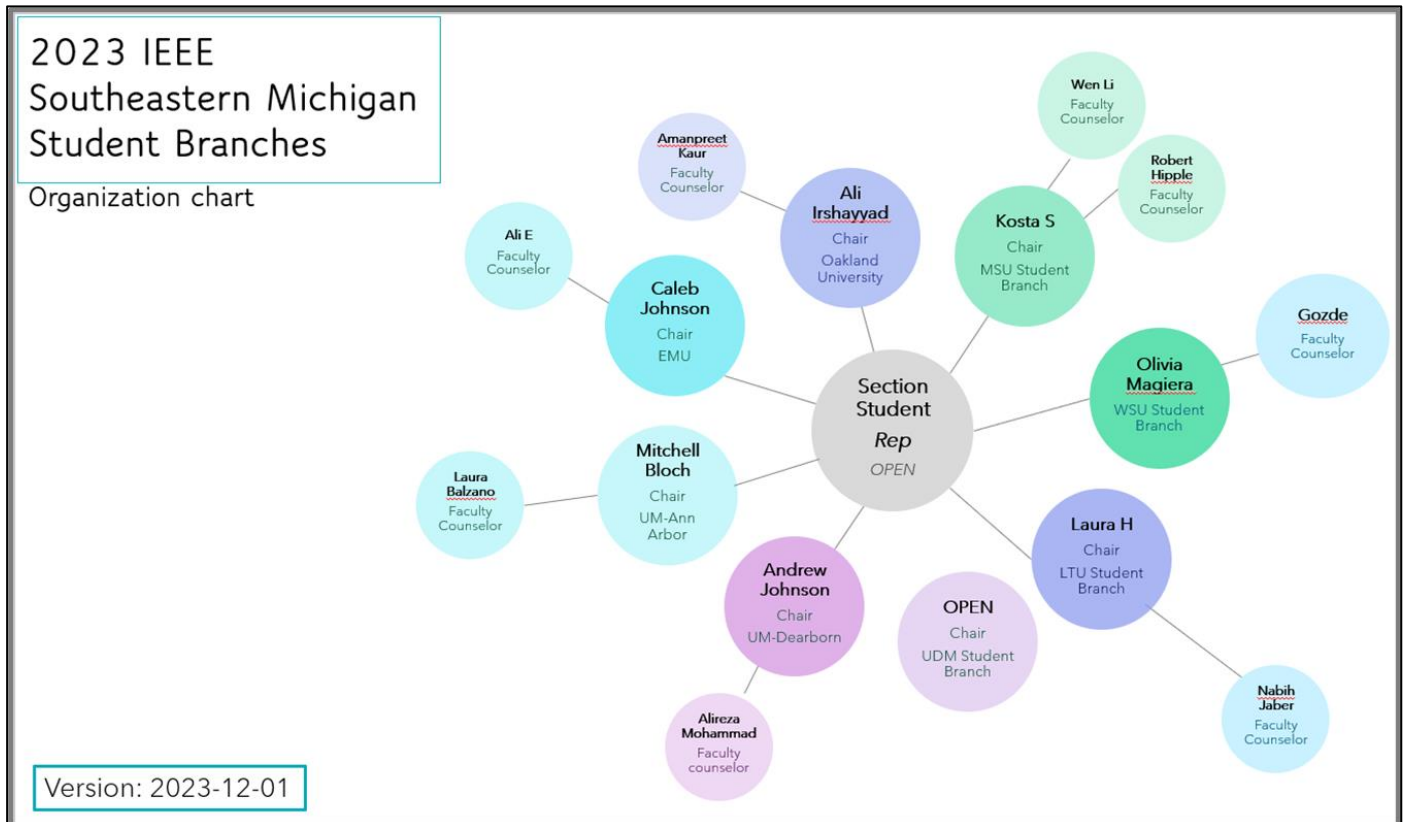
More detailed information on meetings may be found through the IEEE SEM Website: **http://r4.ieee.org/sem/** and clicking on the **SEM meetings list** button near the bottom of the left-hand banner.

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 (Secretary)
Email: secretary@ieee-sem.org

If you wish to download the <u>complete SEM Organization Chart</u>, in PDF format, it will be made available soon at http://r4.ieee.org/sem/ . In the meantime, you may use the diagram below (recently refreshed!)

2024 Section OrgChart

KEY:

Grey == Elected

Light Blue == Elected for the *next term*

Green == Appointed by Chair

White == Ex Officio/ by Appointment

Version: 2024-01-01

2023 IEEE Southeastern Michigan Student Branches

Organization chart

Version: 2023-12-01
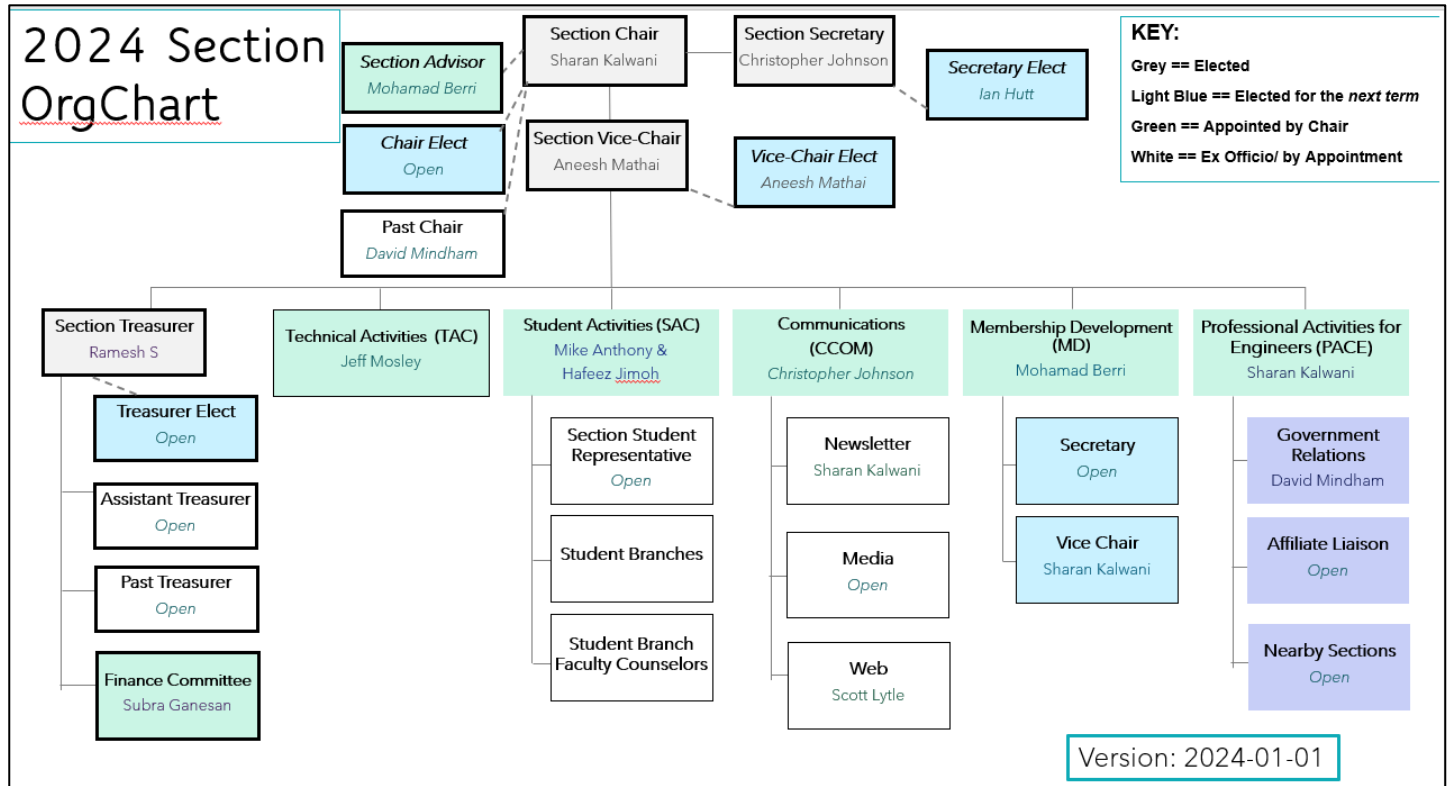
ExCom Meeting Schedule

NOTE: All SEM members are invited to attend ALL ExCom (Executive Committee) meetings:

Below is the 2023 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. Please mark your calendars for the 2023 meetings. Or link your personal calendar to the SEM Web calendar.

Section Administrative Committee (ExCom) Meeting Schedule for 2024: (clickable links)

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

ExCom Meeting (all clickable links)	Date & Start Time, Duration
Section ExCom Monthly Meeting (Hybrid) For MARCH	14 Mar 6;30 PM, 2 hours
Section ExCom Monthly Meeting (virtual) For APRIL	11 Apr 6:30 PM, 1 hour
Section ExCom Monthly Meeting (virtual) For MAY	09 May 6:30 PM, 1 hour
Section ExCom Monthly Meeting (Hybrid) For JUNE	13 Jun 6:30 PM, 2 hours
Section ExCom Monthly Meeting (virtual) For JULY	11 Jul 6:30 PM, 1 hour
Section ExCom Monthly Meeting (virtual) For AUGUST	08 Aug 6:30 PM, 1 hour
Section ExCom Monthly Meeting (Hybrid) For SEPTEMBER	12 Sep 6:30 PM, 2 hours
Section ExCom Monthly Meeting (virtual) For OCTOBER	10 Oct 6:30 PM, 1 hour
Section ExCom Monthly Meeting (virtual) For NOVEMBER	14 Nov 6:30 PM, 1 hour
Section ExCom Monthly Meeting (In Person) For DECEMBER	12 Dec 6:30 PM, 2 hours

Christopher Johnson (Secretary)
Email: secretary@ieee-sem.org

Section Administrative Committee (ExCom) Meeting Schedule for 2024: (screen snapshot)

IEEE vTools EVENTS   ◆IEEE

VTOOLS ⌄   SEARCH   MY EVENTS   MANAGE EVENTS   API   ABOUT   CONTACT

🔍 SEARCH EVENTS

Learn how to integrate Event notices with your website
Hey! I want the old Search page.

Search Options		Advanced Search Clear Search

Search Term ❓	Organizational Unit ❓	Date Range ❓	
section excom	R40035 - Southeastern Michigan Sect ⊖	Upcoming ⌄	Search

Showing 12 of 12 upcoming events, based on search criteria.

Title	Date	Host	Location	Options
📝 SEM Section ExCom Monthly Meeting (virtual) For JANUARY 2024	11 Jan 2024 06:30 PM	R40035		View
📝 SEM Section ExCom Monthly Meeting (virtual) For FEBRUARY 2024	08 Feb 2024 06:30 PM	R40035		View
📝 SEM Section ExCom Monthly Meeting (Hybrid) For MARCH 2024	14 Mar 2024 06:30 PM	R40035	Southfield, Michigan	View
📝 SEM Section ExCom Monthly Meeting (virtual) For APRIL 2024	11 Apr 2024 06:30 PM	R40035		View
📝 SEM Section ExCom Monthly Meeting (virtual) For MAY 2024	09 May 2024 06:30 PM	R40035		View
📝 SEM Section ExCom Monthly Meeting (Hybrid) For JUNE 2024	13 Jun 2024 06:30 PM	R40035	Southfield, Michigan	View
📝 SEM Section ExCom Monthly Meeting (virtual) For JULY 2024	11 Jul 2024 06:30 PM	R40035		View
📝 SEM Section ExCom Monthly Meeting (virtual) For AUGUST 2024	08 Aug 2024 06:30 PM	R40035		View
📝 SEM Section ExCom Monthly Meeting (In Person) For SEPTEMBER 2024	12 Sep 2024 06:30 PM	R40035	Southfield, Michigan	View
📝 SEM Section ExCom Monthly Meeting (virtual) For OCTOBER 2024	10 Oct 2024 06:30 PM	R40035		View
📝 SEM Section ExCom Monthly Meeting (virtual) For NOVEMBER 2024	14 Nov 2024 06:30 PM	R40035		View
📝 SEM Section ExCom Monthly Meeting (In Person) For DECEMBER 2024	12 Dec 2024 06:30 PM	R40035	Southfield, Michigan	View

Editorial 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
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.

We always encourage all chapters and student branches to share news of activities (both past and future) in their arenas. Please feel free to share any and all information so your peers, colleagues can hear about all the good work you do.

Quote*:*
"If a tree falls in a forest and no one hears it, how do you know it actually fell??"

So, publicize your work, one never knows when it can pay off!

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.

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

Sharan Kalwani,
Chair, IEEE SE Michigan Education Society Chapter
Vice-Chair, IEEE SE Michigan Computer Society Chapter
Co-Editor, Wavelengths,
2018~2019~2020~2021~2022-2023

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	New Year Officers	Officer's Welcome	The Year Ahead	
Feb	Cons	2		MSU	Science Fair Judges	National Engrs Wk.	Surviving Winter	
Mar		3	13	EMU	Elections - Prep			
Apr		4		U/M-D		ESD Gold Awards	Chapter Focus	
May	Life	5	14			Science Fair		
Jun		6					Leadership Skills	
Jul		7	15				Students Issues	
Aug	WIE	8			Nominations Call		Womens Issues	
Sep		9	16	LTU	Ballots	Engineers Day?	Professional Skills	
Oct		10		U/M-AA	Elections!	IEEE Day		
Nov	YP	11	17	WSU	Election Results	New Fellows		
Dec		12		U/D-M	IEEE-Com Apmts.		Happy Holidays	R4 Nom

Wavelengths Annual Publication Plan for Personal Profiles

Month	Profiles	Profiles	Committees
Jan	Chair	New Officers	ExCom
Feb	Treasurer		Communications
Mar	Secretary		Conference
Apr	Stud-Rep		Education
May	V-Chair		Executive
Jun	Sect-Adviser		Finance
Jul	Sr Officers		Membership
Aug			Nominations
Sep			PACE
Oct			Student Activiies
Nov			Technical Activiies
Dec	Editor-WL		

Web & Social Sites

Southeastern Michigan Section Website
http://r4.ieee.org/sem/

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

Section Website Event Calendar
(Select the "SEM Calendar" button - top row)
SEM Facebook Page
(Select the "f" button under the top row)
https://www.facebook.com/groups/ieeesemich
SEM LinkedIn Page
(Select the "in" button under the top row)
https://www.linkedin.com/groups/1766687/
SEM Twitter Account (new)
(Select the "🐦" button under the top row)
https://www.twitter.com/ieeesemich
SEM Collabratec *Community* Page
https://ieee-collabratec.ieee.org/app/section/R40035/IEEE-Southeastern-Michigan-Section
SEM Collabratec *Workspace* Page
https://ieee-collabratec.ieee.org/app/workspaces/5979/IEEE-Southeastern-Michigan-Section/activities

SEM Instagram (new)
https://www.instagram.com/ieeesemich/

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 web page (top banner)

Section Officers

Section Chair
Sharan Kalwani

Section Vice-Chair
Aneesh Mathai

Section Secretary
Christopher Johnson

Section Treasurer
Ramesh Sethu

Standing Committees:

Section Adviser
Mohamad Berri

Wavelengths Editor
Sharan Kalwani

Educational Committee
Anthony Will **(Chair)**

Finance Committee
Subra Ganesan **(Chair)**

Membership Development
Mohamad Berri **(Chair)**

Awards & Nominations
Jerry Song **(Chair)**

PACE
Sharan Kalwani **(Chair)**

Student Activities
Michael Anthony & Hafeez Jimoh **(Co-Chairs)**

Student Mentors
OPEN

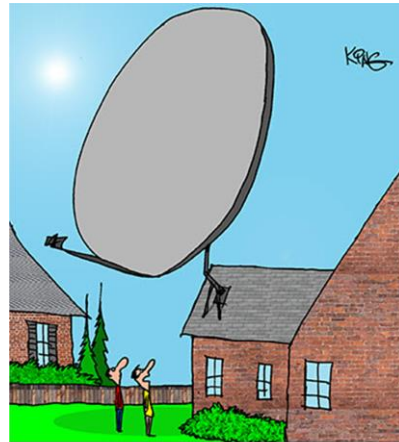**SECTION Student Rep**
OPEN

Technical Activities
Jeffery Mosley **(Chair)**

Information Management
Karthick Rajagopal, Naveen Bonagiri, Kimball Williams **(Co-Chairs)**

IEEE Southeastern Michigan

Electrical and Electronic Engineers Creating Our Future

IEEE Southeastern Michigan

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

"I get 572,000 channels. I watch 4 of them."

Leadership Meetings

SEM Executive Committee Monthly Teleconferences:
- 2nd Thursday of Each Month @ 6:30 PM
- Check the Section Web Calendar at:
    http://r4.ieee.org/sem/sem-calendar/
    (Select the "SEM Calendar" button in the top row.)
  OR

SEM Executive Committee Meetings:
- Find the location, and Registration at:
    http://bit.ly/sem-ieee

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:
    http://bit.ly/sem-upcoming