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*All announcements for publication in a particular month's bulletin are due to the Editor by the 20th of the previous month. The accuracy of the published material is not guaranteed. If there is any error, please bring it to the Editor's attention. The Section's web site, [webinabox Pittsburgh](http://webinabox.pittsburgh.ieee.org), has recent issues of the bulletin and lots of other useful information.*

## • Chair's Corner

Welcome to March.

In continuing the trend of highlighting societies, the next one I would like to discuss is the communications society. As the name suggests, this society is for any professionals who work with communications technology – those who are advancing communications and networking technology for the betterment of humanity. The society is currently looking for a chair, so please let me know if you would be interested in filling that role ([jprice@ieee.org](mailto:jprice@ieee.org)) or would like to know more about what this role would entail.

I would also like to discuss the IEEE History Center. Because IEEE has 140 years of history, the organization takes great care in preserving its history. Recently, the history center moved to a new location and has increased efforts to improve both its physical collection and its online database platforms. If you would like to assist the center, you can do things such as proposing an IEEE milestone ([ieeemilestones.org](http://ieeemilestones.org)), contributing a first-hand history, or authoring an article for the engineering & technology history wiki, ETHW ([ethw.org/create](http://ethw.org/create)). You can also learn more about IEEE's history by going to the wiki and milestones websites ([https://ethw.org/Main\\_Page](https://ethw.org/Main_Page), [https://ethw.org/Milestones:List\\_of\\_Milestones](https://ethw.org/Milestones:List_of_Milestones)), (Editor's note: at least 2 of the milestones were in Pittsburgh: KDKA and Westinghouse atom smasher). This is a great way to learn about the history not just of our own section, but of IEEE as a whole and of how this organization has been at the forefront of technological advances for over a hundred years.

Jenna Price

2024 Pittsburgh Chair

[jprice@ieee.org](mailto:jprice@ieee.org)

### Section

Chair - Jenna Price, [jprice@ieee.org](mailto:jprice@ieee.org)

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### Chapters

Communications Society – Chair: Dr. Balaji Palanisamy,  
[bpalan@pitt.edu](mailto:bpalan@pitt.edu); Sec: Phil Cox, [p.e.cox@ieee.org](mailto:p.e.cox@ieee.org)

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Education Society- Chair: Ahmed H Dallal, [ahd12@pitt.edu](mailto:ahd12@pitt.edu)

Electronics Packaging/Electron Devices Societies – Chair:  
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Engineering In Medicine & Biology Society  
Chair: Steve Mozelewski, [Steve.Mozelewski@gmail.com](mailto:Steve.Mozelewski@gmail.com)

Electromagnetic Compatibility Society - Chair: Louis Hart,  
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Magnetics Society – Chair: Dr. Simran Singh -  
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Nanotechnology Society - Chair: Andrew Cochran,  
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Power Electronics Society – Chair: Patrick Lewis, [ptl7@ieee.org](mailto:ptl7@ieee.org)

Power & Energy & Industry Applications Societies  
Chair: Martin London, [mlondon@alumni.scu.edu](mailto:mlondon@alumni.scu.edu)

Robotics Society – Chair: Ralph Sprang, [rsprang@ieee.org](mailto:rsprang@ieee.org)

Signal Processing & Control Systems Societies – Chair: Danson  
Garcia P.E., [dansongarcia@ieee.org](mailto:dansongarcia@ieee.org); Vice Chair: Jesse Mahn,  
[jesse.mahn@outlook.com](mailto:jesse.mahn@outlook.com)

Society on Social Implications of Technology  
Chair: open; Vice Chair: Joe Kalasky, P.E., [j.kalasky@ieee.org](mailto:j.kalasky@ieee.org)  
724-244-1609

Council of Electronic Design Automation Chair: Baris Taskin,  
[taskin@coe.drexel.edu](mailto:taskin@coe.drexel.edu)

### Affinity Groups

Young Professionals (formerly GOLD) – Chair: Jesse Mahn,  
[jesse.mahn@outlook.com](mailto:jesse.mahn@outlook.com)

Women In Engineering – Chair: Martin London

Life Members: Joe Kalasky, P.E., [j.kalasky@ieee.org](mailto:j.kalasky@ieee.org)

### Committees

Consultant network: George Crawford, [gwc2gwc2@gmail.com](mailto:gwc2gwc2@gmail.com)

Professional/Career Activities (PACE)  
Chair: Joe Cioletti, P.E. [jcioletti@ieee.org](mailto:jcioletti@ieee.org)

Student Activities – Chair: Connor Watson,  
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Membership Development – Vishal Rastogi, [vishal.ras@gmail.com](mailto:vishal.ras@gmail.com)

Publicity – Chair: Thomas Dionise, P.E.  
[ThomasJDionise@eaton.com](mailto:ThomasJDionise@eaton.com)

- ***"Profiling Humans from Their Voice: A Journey from the Past to Future Generation Technologies"***

**Speaker:** Rita Singh, Associate Research Professor, School of Computer Science, Carnegie Mellon University  
**Date:** Friday, March 1, 2024  
**Time:** 12:00 noon – 1:00 pm  
**Location:** University of Pittsburgh, 130 North Bellefield Ave., Conference Rooms, (5th Floor)  
**Sponsor:** Pittsburgh Chapter, Communications Society  
**RSVP:** <https://events.vtools.ieee.org/m/408756>

**Abstract:** In this talk, we will explore the fascinating domain of human voice profiling, a field at the confluence of voice forensics and artificial intelligence (AI) that I have been developing since 2014. The human voice serves as a unique and dynamic biometric signature, rich in personal information and responsive to a variety of influencing factors. This presentation will chart the evolution of voice profiling techniques—from traditional signal processing to advanced AI-driven methods—highlighting the key methodologies used to delve deeper and deeper into the human persona through voice. These methodologies essentially emerge by connecting the dots between a wide range of areas—from physics and biomechanics to machine learning and AI, to cytogenetics and genomics. As we navigate through the complexities and mysteries of the human voice, as a biometric identifier and a medium to infer the speaker's state, we uncover its profound implications for future human-machine interactions. As the world progresses towards Artificial General Intelligence (AGI) — we also speak of its physical embodiments. We will discuss why the science of human profiling is expected to play a pivotal role in embodied AGI systems of the future.

**Bio:** Rita Singh is an Associate Research Professor at the CMU's School of Computer Science/Language Technologies Institute, with affiliations to three other departments. At CMU, she leads the Center for Voice Intelligence and Security (CVIS: <http://cvis.cs.cmu.edu/>), and co-leads the Machine Learning for Signal Processing and Robust Speech Processing research groups. She has worked on speech and audio processing for over two decades, focusing on developing the science of profiling humans from their voice, a niche area at the intersection of Artificial Intelligence and Voice Forensics. The technology pioneered by her group has led to three world firsts: the world's first voice-based profiling system, demonstrated live at the World Economic Forum; the world's first instance of human voice – that of the artist Rembrandt – generated based on evidence from facial images; the first voice-based detection system for Covid-19. She is the author of the book "Profiling Humans from their Voice," published by Springer-Nature in 2019.

- ***Standardization of Contactless Fingerprint Capture***

**Speaker:** John Libert  
**Date:** Monday, March 4, 2024  
**Time:** 5:00 PM – 6:00 PM (EST)  
**Place:** Zoom- <https://wvu.zoom.us/j/9188836315>  
**Contact:** [skhushalanisolanki@mail.wvu.edu](mailto:skhushalanisolanki@mail.wvu.edu)

**Abstract:** Contactless acquisition of fingerprints presents a fundamental departure from legacy capture technologies. The friction ridge surface that comprises a fingerprint is a three-dimensional topography superimposed upon a three-dimensional curved surface of a finger presenting many challenges in both acquisition as well as interoperability with legacy contact collected imagery. In this presentation we will discuss NIST's work in the area of standardizing this nascent technology, and the challenges in doing so.

**Biography:** John Libert has worked at NIST for over twenty-four years, variously engaged in developing measurements by which to assess video quality, performance of electronic flat panel displays, and biometric image quality. His current primary focus is development of metrics, protocols, and standard test artifacts for the evaluation of contactless fingerprint acquisition devices and their interoperability with legacy contact devices.



- ***Beyond GPT - Knowledge Advantage Machines***

**Speaker:** Yenumula Reddy  
**Date:** Monday, March 25, 2024  
**Time:** 5:00 PM – 6:00 PM (EST)  
**Place:** West Virginia University, Building ESB, room G-102 or **Zoom:**  
<https://wvu.zoom.us/j/9188836315>  
**Contact:** [skhushalanisolanki@mail.wvu.edu](mailto:skhushalanisolanki@mail.wvu.edu)

**Abstract:** The term “Artificial Intelligence” was coined by John McCarthy in 1956 to attract more attention to the planned Computer Science Conference at Dartmouth. Ever since, the society expected some day machines will do the manual labor and thinking for us and we will live in a society of leisure surrounded by unlimited number of “Machine-Servants.” Even after 68 years, we have not realized that Utopian Society. We may be closer than ever, but we are not there, and may be never. If we examine the history of science and technology, we will realize mere invention of a technology will not automatically improve the society. Machines that can do what we do have to do must be invented before the promise of the inventions could be fully realized. Invention of steam engine did not automatically benefit farmers until machines like tractor and harvester were developed. Invention of electricity automatically impact the society until the lightbulb, motors, etc. were developed. Recent developments in Generative AI and the possibility of developing the Artificially General Intelligence (AGI) has led to wild speculations the future of the society. In this talk I will discuss the concept of Knowledge Advantage and how it could be exploited by Knowledge Workers using Personal Knowledge Advantage Machines that are within reach.

**Biography:** Ramana Reddy is a professor of Computer Science at West Virginia University (WVU). He created the first AI Lab in 1981 which gave rise to two successful start-up companies acquired by Fortune 100 companies. His team at the AI Lab and later at the DARPA funded Concurrent Engineering Research Center (CERC) demonstrated how AI could be used in designing complex industrial products. Later, under the DARPA Dual Use Technology Initiative, in collaboration with the National Library of Medicine, CERC demonstrated the first Web-Based Electronic Medical Record – even before Web Browsers were





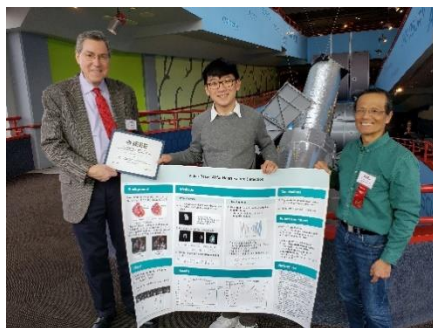
commonplace. Professor Reddy is now focused on creating a framework for building Knowledge Advantage Machines. He is also involved in realizing Healthy Longevity through exploitation of Robotics and Knowledge Advantage.

- ***Pittsburgh Regional Science and Engineering Fair 2024 - Call for Judges***

Once again, volunteers are needed to represent the IEEE Pittsburgh Section as Judges for our four Sponsor Awards at the 2024 Pittsburgh Regional Science and Engineering Fair (PSREF).

**SAVE THE DATES – APRIL 2-3, 2024.**

The 85th Annual Pittsburgh Regional Science & Engineering Fair (PRSEF), the third oldest science fair under the affiliation of the Society for Science, will be held April 2-3, 2024 at Carnegie Science Center. The IEEE Pittsburgh Section will again underwrite sponsor awards and members like you are needed to judge projects in the Junior, Intermediate and Senior levels. The goal of the PSREF coincides with one of the missions of the IEEE, that is to foster an interest in the engineering profession.



To volunteer to be an IEEE judge for PRSEF, just email [tom.dionise@ieee.org](mailto:tom.dionise@ieee.org), and you will be given information on registration and included in future mailings.

- **IEEE Pittsburgh Section Annual History and Awards Dinner**

**Date:** Friday, May 3, 2024

**Time:** 5:00 PM: Arrival  
6:00 PM: Dinner and Awards Presentations  
7:00 PM: Keynote Speech

**Place:** Edgewood Country Club  
100 Churchill Rd, Pittsburgh, PA 15235.  
Phone: 412-823-7300 x12; Email: [events@eccgolf.com](mailto:events@eccgolf.com)

**Cost:** \$30 per member; \$50 member plus guest (Cash Bar is available)

**Organizer:** IEEE Pittsburgh Section.

**RSVP:** **Required** by April 15, 2024. Seating is limited to 50 people. Register online at: <https://events.vtools.ieee.org/m/408008>. Payment can be made by sending a check, payable to “IEEE Pittsburgh Section,” to Mey Sen, 126 Pauline Dr., Monroeville, PA 15146. Checks should be posted April 15, 2024. Please provide the name of your guest, if any. For any question, please write to Mey at [senml@ieee.org](mailto:senml@ieee.org).

## A History of Computing

**Speaker:** Dr. David A Fisher, Emeritus Professor, Carnegie Mellon University

**Abstract:** This presentation includes several little-known milestones in the history of computing. It provides a personal perspective on computing from a hardware, software and mathematical perspective. It discusses challenges and likely success for current technological developments.



**Biography:** David A Fisher is a mathematician, electrical engineer, and computer scientist. He is an inventor of computer processors, data structures, and high-performance algorithms. He has been an entrepreneur, professor, and Government executive. Dr. Fisher is currently a senior life member of the IEEE, chief engineer at Reasoning Technology LLC, a distinguished lecturer of the IEEE-computer society, and owner of a historic house with many ties to George Westinghouse.

### Menu for Buffet Dinner:

- Soup and Salad
- GINGER AND HONEY-GLAZED SALMON with Lemon Mascarpone Sauce
- STUFFED CHICKEN BREAST with Spinach, Mushroom, and Gruyere Stuffed Chicken Breast with Balsamic Glaze
- Herb Roasted Redskin Potato
- Wild Rice Pilaf
- Roasted Asparagus
- Rustic Rolls & Butter
- Chef's Choice Assorted Desserts
- Coffee, Decaf, Lemonade, and Iced Tea

- **IEEE Pittsburgh Section Outing to Smithsonian National Air & Space Museum**

**(Steven F. Udvar-Hazy Center in Chantilly, VA)**

**Date:** Saturday, June 1, 2024  
**Time:** 6:00 AM: Departure, Panera Bread, Miracle Mile,  
4172 William Penn Hwy, Monroeville, PA 15146.  
10:00 PM: Return  
**Cost:** \$40 per person  
**RSVP:** Required at <https://events.vtools.ieee.org/m/393683>. These seats are available on a first-come-first-serve basis. If interested, please send an email to [senkk@ieee.org](mailto:senkk@ieee.org) and send your check in the amount of \$40 per person, payable to IEEE Pittsburgh Section to the following address: Mey Sen, 126 Pauline Drive, Monroeville, PA 15146.

**Organizers:** IEEE Pittsburgh Section

We are organizing an outing to Smithsonian National Air & Space Museum – Steven F. Udvar-Hazy Center at 14390 Air and Space Museum Parkway, Chantilly, Virginia 20151. The event is open to the IEEE Pittsburgh Section's members and their guests and limited to the capacity (38 people) of the bus on a first-come-first-serve basis. The event is highly subsidized by the Section. As of now, we have 17 participants. If interested, please register at the vtools weblink above.

The Steven F. Udvar-Hazy Center displays thousands of aviation and space artifacts, including the Space Shuttle *Discovery*, a Blackbird SR-71, and a Concorde, in two large hangars. For further information, you may click on the following weblink at: <https://airandspace.si.edu/visit/udvar-hazy-center>.

- **Subject: Senior Membership Drive Announcement**

Dear IEEE Members,

We are pleased to inform you that the Membership Development chapter is launching a Senior Membership Drive, aimed at elevating memberships within our esteemed organization. This initiative is scheduled to run from January 1st, 2024, to March 31st, 2024.

Should you require any assistance or guidance throughout the membership elevation process, we encourage you to reach out to our dedicated point of contact, Mr. Vishal Rastogi, who serves as the Chair of the Membership Development chapter.

Your participation and support are crucial to the success of this endeavor, and we look forward to your active involvement in making our organization's Senior Membership Drive a resounding success.

Best Regards,

Vishal Rastogi

[Vishal.rastogi@gmail.com](mailto:Vishal.rastogi@gmail.com)

- ***Joe Kalasky meets Rep. Guy Reschenthaler***



**Joe Kalasky of our Section Excom and the Region 2 Professional Activities Chair meets with U.S. Congressman Guy Reschenthaler at an event to discuss Energy Policy**



## 2024 Calendar – Meetings of IEEE Pittsburgh Section

	Jan	Feb	Mar	Apr	May	June	July	August	Sept	Oct	Nov	Dec
<b><u>Executive Committee (AdCom)</u></b>	18 Virtual	15 Virtual	21 Virtual	18 TBD	16 TBD	20 TBD	18 TBD	15 TBD	19 TBD	17 TBD	21 TBD	19 TBD
<b><u>Section</u></b>		15 – Meetings 101; 24 Robot Car Race		2-3 Science Fair	3 History Dinner	1 Museum Tour						
<b><u>Communications</u></b>			1 Voice									
<b><u>Computer</u></b>												
<b><u>EMBS</u></b>		5 Data Analytics										
<b><u>EMCS</u></b>												
<b><u>Power Electronics</u></b>												
<b><u>PES/IAS</u></b>												
<b><u>Magnetics</u></b>												
<b><u>Nanotechnology</u></b>												
<b><u>Robotics</u></b>												
<b><u>SPS/CSS</u></b>												
<b><u>EPS/ED</u></b>		6 Fiber Attach										
<b><u>Education</u></b>												
<b><u>Social Impl Technology</u></b>												
<b><u>Upper Mon</u></b>		5 Data Analytics	4 Fingerprints 25 GPT									
<b><u>Women in Eng'ing</u></b>												
<b><u>Young Pros</u></b>												
<b><u>Life Members</u></b>												
<b><u>PACE</u></b>												
<b><u>Student Act</u></b>												