Pittsburgh Section

Bulletin

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Contents

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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., has recent issues of the bulletin and lots of other useful information.

- ***Chair's Corner***

Welcome to the February edition of the Pittsburgh Bulletin!

In keeping with the idea of spotlighting groups within the section, I would like to introduce the Student Activities Committee. The Student Activities Committee and its committee chair acts as a liaison between the students and the section, working hand-in-hand with the student representative. Part of their work includes organizing student-focused events and representing the Pittsburgh Section for local universities. Some previous activities this committee sponsored was a joint University of Pittsburgh and Carnegie Mellon University Ice Skating get-together and various picnics between student IEEE members. We currently do not have a Chair for the Student Activities Committee, and are actively searching for one. If you are interested, please reach out to me at jprice@ieee.org.

In addition to the call for a Student Activities Committee Chair, if you don't want to take on a chairship but still want to volunteer your time and are willing to present any technical seminars that you feel would be of interest to your fellow members, please reach out to me and I will put you in touch with a society chair who would be happy to host you. With hybrid and remote meeting possibilities, we have more opportunities than ever for meeting platforms.

This month also includes Engineers Week from Sunday, Feb. 18 to Saturday, Feb. 24. This tradition was started by the National Society of Professional Engineers (NSPE) in 1951 and this year's theme is Welcome to the Future, focusing on today's achievements and paving the way for a brighter and more diverse future.. The goal of this week is to increase interest in engineering and technology careers and to show appreciation to those who are working in these careers. Please celebrate and make our profession known! Whatever activities you are involved in, post them on social media using the hashtag #NationalEngineersWeek.

You can also use this as an opportunity to engage students through DiscoverE Engineering:
https://discovere.org/engage/engineers-week/

Jenna Price

2024 Pittsburgh Chair

jprice@ieee.org

Section
Chair - Jenna Price, jprice@ieee.org

Vice Chair - Greg Price, gprice@ieee.org

Treasurer – Dr. Jianan (Leo) Jian, jij52@pitt.edu

Asst. Treasurer – Martin London, mlondon@alumni.scu.edu

Secretary – Alexis Gorgacz, agorgacz@ieee.org

Immediate Past Chair – Steve Mozelewski, Steve.Mozelewski@gmail.com

Special Events Chair – Dr. Kal Sen, senkk@ieee.org; Mey Sen, senml@ieee.org

Webmaster – Gerry Kumnik, g.kumnik@computer.org

UpperMon Subsection: Chair: Dr. Gianfranco Doretto, Gianfranco.Doretto@mail.wvu.edu

Chapters

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

Computer Society – Chair: Vishal Rastogi, vishal.ras@gmail.com

Education Society- Chair: Ahmed H Dallal, ahd12@pitt.edu

Electronics Packaging/Electron Devices Societies – Chair: John Mazurowski jsm23@arl.psu.edu

Engineering In Medicine & Biology Society
Chair: Steve Mozelewski, Steve.Mozelewski@gmail.com

Electromagnetic Compatibility Society - Chair: Louis Hart, Louishart@ieee.org

Magnetics Society – Chair: Dr. Simran Singh - simranjs@andrew.cmu.edu

Nanotechnology Society - Chair: Andrew Cochran, acochran@andrew.cmu.edu,

Power Electronics Society – Chair: Patrick Lewis, ptl7@ieee.org

Power & Energy & Industry Applications Societies
Chair: Martin London, mlondon@alumni.scu.edu;

Robotics Society – Chair: Ralph Sprang, rsprang@ieee.org

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

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

Council of Electronic Design Automation Chair: Baris Taskin, taskin@coe.drexel.edu

Affinity Groups
Young Professionals (formerly GOLD) – Chair: Jesse Mahn, jesse.mahn@outlook.com

Women In Engineering – Chair: Martin London

Life Members: Joe Kalasky, P.E., j.kalasky@ieee.org

Committees
Consultant network: George Crawford, gwc2gwc2@gmail.com

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

Student Activities – Chair: Connor Watson, connor.watson@pitt.edu

Membership Development – Vishal Rastogi, vishal.ras@gmail.com

Publicity – Chair: Thomas Dionise, P.E. ThomasJDionise@eaton.com

• *IEEE Robot Car Race 2024 – Call for Volunteers*

IEEE will host the annual Robotic Car Race called the IndEEE 500cm at Eaton Power System Experience Center on February 24, 2024 during Engineer's Week. Ten to twelve teams of 8th graders from local schools will build a robot car using Lego NXT kits and program it to negotiate a 500cm track with some challenges along the way. The program starts at noon and is over by 5 PM. Volunteers arrive around 10:00 AM to setup. We will hold the next workshop on February 10 for volunteers to prepare for the race. If working with children, sharing your profession and explaining electrical concepts capture your interest, then consider volunteering for the IEEE Robot Car Race.

To volunteer to help with the Robot Car Race, just email tom.dionise@ieee.org, and you will be given more details and included in future mailings.

• *Solving Global Grand Challenges with High Performance Data Analytics*

Speaker: David A. Bader
Date: Monday, February 5, 2024
Time: 5:00 PM – 6:00 PM (EST)
Place: **Zoom:** https://wvu.zoom.us/j/9188836315
Contact: skhushalanisolanki@mail.wvu.edu

Abstract: Data science aims to solve grand global challenges such as: detecting and preventing disease in human populations; revealing community structure in large social networks; protecting our elections from cyber-threats and improving the resilience of the electric power grid. Unlike traditional applications in computational science and engineering, solving these social problems at scale often raises new challenges because of the sparsity and lack of locality in the data, the need for research on scalable algorithms and architectures, and development of frameworks for solving these real-world problems on high performance computers, and for improved models that capture the noise and bias inherent in the torrential data streams. In this talk, Bader will discuss the opportunities and challenges in massive data science for applications in social sciences, physical sciences, and engineering.

Biography: David A. Bader is a Distinguished Professor and founder of the Department of Data Science and inaugural Director of the Institute for Data Science at New Jersey Institute of Technology. Prior to this, he served as founding Professor and Chair of the School of Computational Science and Engineering, College of Computing, at Georgia Institute of Technology. Dr. Bader is a Fellow of the IEEE, ACM, AAAS, and SIAM; a recipient of the IEEE Sidney Fernbach Award; and the 2022 Innovation Hall of Fame inductee of the University of Maryland's A. James Clark School of Engineering. He advises the White House, most recently on the National Strategic Computing Initiative (NSCI) and Future Advanced Computing Ecosystem (FACE). Bader is a leading expert in solving global grand challenges in science, engineering, computing, and data science. His interests are at the intersection of high-performance computing and real-world applications, including cybersecurity, massive-scale analytics, and computational genomics, and he has co-authored

over 300 scholarly papers and has best paper awards from ISC, IEEE HPEC, and IEEE/ACM SC. Dr. Bader has served as a lead scientist in several DARPA programs including High Productivity Computing Systems (HPCS) with IBM, Ubiquitous High Performance Computing (UHPC) with NVIDIA, Anomaly Detection at Multiple Scales (ADAMS), Power Efficiency Revolution For Embedded Computing Technologies (PERFECT), Hierarchical Identify Verify Exploit (HIVE), and Software-Defined Hardware (SDH). Recently, Bader received an NVIDIA AI Lab (NVAIL) award, and a Facebook Research AI Hardware/Software Co-Design award. Dr. Bader is Editor-in-Chief of the ACM Transactions on Parallel Computing, and General Co-Chair of IPDPS 2021, and previously served as Editor-in-Chief of the IEEE Transactions on Parallel and Distributed Systems. He serves on the leadership team of Northeast Big Data Innovation Hub as the inaugural chair of the Seed Fund Steering Committee. ROI-NJ recognized Bader as a technology influencer on its 2021 inaugural and 2022 lists. In 2012, Bader was the inaugural recipient of University of Maryland's Electrical and Computer Engineering Distinguished Alumni Award. In 2014, Bader received the Outstanding Senior Faculty Research Award from Georgia Tech. Bader is a member of Tau Beta Pi (National Engineering Honor Society), Eta Kappa Nu (Electrical Engineering Honor Society), and Omicron Delta Kappa (National Leadership Honor Society). Bader has also served as Director of the Sony-Toshiba-IBM Center of Competence for the Cell Broadband Engine Processor and Director of an NVIDIA GPU Center of Excellence. In 1998, Bader built the first Linux supercomputer that led to a high-performance computing (HPC) revolution, and Hyperion Research estimates that the total economic value of Linux supercomputing pioneered by Bader has been over $100 trillion over the past 25 years. Bader is a cofounder of the Graph500 List for benchmarking "Big Data" computing platforms. He is recognized as a "RockStar" of High Performance Computing by InsideHPC and as HPCwire's People to Watch in 2012 and 2014.

• *Fiber Attach: Technical progress within IEEE Standards*

Speaker: John S. Mazurowski of Penn State Applied Research Laboratory
Date: Feb. 6th, 2024
Time: 1:00PM-2:00PM EST
Location: Virtual, access information will be communicated to IEEE members and registered people
RSVP: Register at: https://events.vtools.ieee.org/m/399396
Organizers: Pittsburgh Chapter Electronics Packaging/Electron Devices Societies and Canadian chapters

Abstract: The IEEE Photonics Society / Standards Committee recently published a whitepaper on Fiber Attach. Transmission of light between or in and out of any photonic platform normally requires attachment to a fiber that is used as a flexible optical waveguide. An effective fiber attach involves many requirements and metrics that have so far involved decades of research. The presentation will cover the whitepaper in detail, some technical background, the path forward, and how to become involved.

Biography: Mr. Mazurowski is the Director of the Electronics Manufacturing Center, a Navy Manufacturing Technology Center of Excellence, located within the Penn State Applied Research Laboratory; the center began operation in 2021. Previously he was the Head of the Fiber Optics and Photonics Department, a position he held since 2018. During 2005-2018 he led key projects in manufacturing technology. Before coming to Penn State, he was a Senior Engineer at Corning Photonics Division / Avanex Incorporated as a project engineer in advanced photonics manufacturing engineering. Prior to that Mr. Mazurowski was Manager of Manufacturing Engineering / Senior Electronics Engineer at Biocontrol Tech-

nology, where he worked in developing optical instruments for measurement of skin tissue constituents. Prior to that, Mr. Mazurowski was a Materials Engineer at the General Electric Electronics Laboratory where he developed new III-V heterostructures for photonic and high speed electronic devices using Molecular Beam Epitaxy (MBE). He also developed characterization systems and methods for millimeter wave materials, devices, and integrated circuits. He began his career in avionics and in product design at Harris RF Communications.

Mr. Mazurowski has over forty publications and presentations relating to solid state materials, electronics, and photonics, and holds three patents in the areas of design and packaging. He is the chair of the IEEE Pittsburgh Electronic Packaging and Electron Devices Chapter, former chair of the SAE AS-3 Fiber Optic and Applied Photonics Committee, and former chair of the IMAPS Cleveland/Pittsburgh chapter. He is a Senior Member of the IEEE, a member of IMAPS, and a member of SAE. He earned his BS and MS in Physics at Syracuse University.

• *Meetings 101*

Date: 2/15/2024
Time: 6:00-7:00 pm
Location: Virtual, register at: https://events.vtools.ieee.org/m/401022

A new year usually signifies leadership changes. With that in mind, this event is geared toward new leaders in the Pittsburgh section to help teach and answer questions about how to host an event. Topics will include how to navigate vtools, setting up online meetings, and suggestions for reaching your audience. This will be hosted by Greg Price, vice chair of the Pittsburgh section and former secretary.

• *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

- ***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 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.

- ***Pittsburgh Section Member Completes VoLT Program***

Jenna Price, current chair of the Pittsburgh Section, officially completed the 2023 Volunteer Leadership Training (VoLT). Since its pilot class in 2013, the Volunteer Leadership Training (VoLT) Program prepares IEEE volunteers for leadership roles in their local units and beyond. As of December 2022, 498 volunteers have graduated from the VoLT Program. VoLT graduates represent all 10 IEEE Regions, and 165 Sections. As a testament to the success of the program, graduates are taking positions of leadership across all levels of the organization.

The VoLT Program's three goals are to:

- Accelerate volunteers' knowledge of the IEEE's organization, products, services, and resources
- Help volunteers understand their roles within their local units and within the entire organization
- Create a succession tool that develops and prepares future IEEE volunteer leaders

Jenna's group consisted of six team members from across the world and focused on recruitment and retention of graduating students transitioning from student to full membership.

The application period for the next VoLT class is expected to open around June 2024. The VoLT Program is in two parts: Phase 1 is online-only (the eight prerequisite courses) and an application to Phase 2. A strong candidate for the VoLT Program will meet the following requirements:

- An active IEEE membership
- Completed all eight prerequisite courses by visiting the CLE at:
  - https://ieee.learningpool.com/index.php
- Two or more years of experience as an IEEE volunteer
- Four or more years as an IEEE member
- Is a Graduate Student Member or higher
- An interest in becoming a future IEEE leader
- An endorsement letter by a senior IEEE volunteer

If you are interested in learning more about the VoLT Program, please reach out to Jenna Price.

Thanks!!

Jenna

- ***Pittsburgh Section Outstanding Volunteer of the Year Nominations***

Dear members at large, we are seeking nominations for the 2024 IEEE Pittsburgh Section Outstanding Volunteer of the year award. This award seeks to honor an IEEE member or members who have demonstrated exemplary levels of dedication and service to IEEE in general and the Pittsburgh Section in particular over the 2023 calendar year. In order to qualify, the recipient must be an active IEEE member or student member volunteer that has contributed to IEEE in a demonstrable way. To nominate someone, please submit their name, IEEE number and a brief summary (250 words or less) highlighting their service and contributions in 2023. Nominations may be submitted via email to: jebeck@ieee.org. The cutoff date for nominations is February 29th, 2024. All nominations will be reviewed by the awards committee, and the recipient will be honored at the 2024 IEEE Pittsburgh Section's annual history and awards dinner which will be held next Spring (details to follow).

2024 Calendar – Meetings of IEEE Pittsburgh Section

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