IEEE Rochester Section

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September 2023 Newsletter

Message from the Chair

Dear Colleagues,

Another Rochester Summer has flown by, but many scheduled IEEE Rochester Section Events are coming up. On September 18, the Section will host a Joint Chapters Meeting featuring technical talks by Young Professionals and networking with IEEE Rochester Women In Engineering (WIE) (vTools #369555).

On October 10th, the joint Aerospace and Electronic Systems (AES) and Communications (COM) Society Chapter will host a Workshop on Secure and Sustainable Communications Networks that brings Academic researchers and IT industry professionals together (vTools #368255).

Finally, the 2023 edition of the Western NY Image and Signal Processing Workshop will take place on November 3rd (vTools #364310).

The next Rochester Section ExCom meeting will virtual and in-person on Tuesday, October 3rd (vTools #360680) from noon to 1:00 pm. Please pre-register on vTools for in-person or virtual attendance.

Stay healthy, and best regards,

Eric T. Brown

Joint Chapters Meeting (9/18/23)

The IEEE Rochester Section will hold its Joint Chapters Meeting on Monday September 18, 2023. All are welcome to attend! Our event will focus on Young Professionals who graduated from college within the last 10 years.

Time: 1:00 PM – 9:00 PM EDT
RIT CIMS Conference Center
Louise Slaughter Hall (SLA / Bldg. 78) Rooms 2210 -2240

JCM AGENDA

1:00 PM - 1:15 PM	Welcome
1:15 PM - 3:15 PM	Presentations
3:15 PM - 3:45 PM	Networking Break
3:45 PM - 5:45 PM	Presentations
5:45 PM - 6:30 PM	Networking Reception
6:30 PM - 7:30 PM	Dinner
7:30 PM - 8:30 PM	Keynote Presentation

Presentations will be 30-minute perspectives presentations by Young Professionals from Rochester and local Western New York companies.

Our suggested presentation format is:
- (10 min) Employer Introduction
- (15 min) Personal Perspectives:
    - Technical Work (just info that can be shared publicly)
    - Transition from Academia to Industry
    - How well did college prepare you for employment?

Please join us for our Young Professionals Event. To volunteer to be a Presenter, email Kelly Robinson at kelly.robinson@electrostaticanswers.com .

Register to attend at https://events.vtools.ieee.org/m/369555. (**No registration fee for Presenters**.)

Why Does The Bose Acoustic Wave Radio Sound So Great? (9/27/23)

Sreeram (Ram) Dhurjaty, Former Bose Engineering Manager, current Consumer Electronics Distinguished Speaker, and former Rochester Section Chair will present a talk at the Antique Wireless Association 2023 Annual Conference on Wednesday, September 27 at 9:15 am - at the RIT Inn and Conference Center, 5257 West Henrietta Rd. Ram will discuss the science and operation of the innovative transmission line speaker in the context of his work on the Bose radio. Analogies between antennas and the Bose system will be used to help frame the analysis in electrical engineering terminology.

You can register in vTools for $15, which will allow you to attend Ram's (live-only) talk and the other 3 talks on Wednesday 9/27. The registration site will also show how to register for the entire 3-day (Wed.-Fri.) Annual Conference and get full information about *all* of the talks and activities, which includes admission to the Antique Wireless Museum in Bloomfield.

Please register at: https://events.vtools.ieee.org/m/369519

Oxygen Concentrator Presentation   (10/7/23 Noon - Virtual)

A Life Saver and Life Restorer - Oxygen Concentrator

Dr. Aparna Dixit
Associate Professor - Department of Physics
Pranveer Singh Institute of Technology (PSIT)-Kanpur, Uttar Pradesh, India

Abstract - This work elucidates the developmental trajectory of oxygen concentrators within the COVID-19 pandemic, a period marked by a surge in demand for oxygen cylinders. We were presented with a chance to create a minimum viable product (MVP) for an oxygen concentrator by Dr. Sreeram Dhurjaty from Rochester and several engineers from PSIT. The adventure commenced by delving into the fundamental concepts of physics and chemistry. Initially, a machine with a wooden case was built utilizing readily accessible components, operating at a flow rate of 5 liters per minute (lpm). Following the determination of the precise volume of sodium zeolite granules, a machine was fabricated with an initial output purity of 75%. Various important changes were then subsequently made including improved sieve beds and heat radiator system to disperse thermal energy, and changes in the chemistry of the primary concentrator. The testing of an improved (preproduction) stainless-steel unit spanned a duration of six months and was conducted at various institutions, including Lala Lajpat Rai hospital, a government hospital, and Cardiology institute. During this period, we evaluated our oxygen concentrator with a flow rate of 10 lpm and a purity level of 90%. The cost of our final 5 lpm machine is approximately 25,000 Indian rupees (about $300).

Please register at: https://events.vtools.ieee.org/m/369419

2023 IEEE Western New York Image and Signal Processing Workshop (WNYISPW) CALL FOR PAPERS

November 3, 2023, at the RIT CIMS Conference Center (8:00 AM - 5:30 PM)

2023 WNYISPW Information Link: https://ewh.ieee.org/r1/rochester/sp/WNYISPW2023.html
For paper, poster, or abstract-only submissions: NYISPW@gmail.com.

The 2023 Western New York Image and Signal Processing Workshop is a premier venue for promoting image and signal processing research in our area and for facilitating interaction between academic researchers, industry professionals, and students. Sponsored by local chapters of IEEE and IS&T, the workshop comprises both oral and poster presentations.

Topics include, but are not limited to:

• Image Processing:
  - Applications of Machine Learning, Deep Learning, LLMs and Generative AI
  - Computer Vision
  - Image Compression and Segmentation
  - Image and Color Science
  - Object Recognition and Detection
  - Medical Imaging
  - Human-Computer Interaction
  - Video Processing and Analysis
• Signal Processing:
  - Radar and Wireless Communications
  - Synthetic Aperture Radar
  - Remote Sensing
  - Electronic Intelligence
  - Waveform Detection and Parameter Estimation
  - Speech and Audio Enhancement and Recognition

- Applications of Machine Learning, Deep Learning, LLMs and Generative AI

Important Dates:

6-October-2023	Abstract (for paper or abstract-only) submission closes.
13-October-2023	Paper submission closes
20-October-2023	Notification of Acceptance

For more important dates, information, and registration go to:
https://events.vtools.ieee.org/m/364310

1st IEEE Upstate NY Workshop On Secure & Sustainable Communications Networks (SSCN) CALL FOR PARTICIPATION

The 1st IEEE Upstate NY Workshop on Secure and Sustainable Communications Networks (SSCN), hosted by the Rochester IEEE Joint Chapters on Communications and Aerospace, will be held on **October 10th, 2023, 8:30am-5pm in the B. Thomas Golisano Auditorium at the Rochester Institute of Technology.**

It is hard today to find an organization that does not rely on communications networks. That makes network security and sustainability a problem that effects everyone. The complexity of today's networks and the systems that use them makes security and privacy a major challenge. Another major challenge faced is the growing energy demands by the IT and communications industry.

The SSCN workshop will bring together researchers in the upstate NY area working on different aspects of secure and sustainable communications and networking. The goal is to provide a forum where we can learn about the research and development being done in these fields in companies and universities in and around the Rochester area.

There will be various ways to participate in the Workshop such as presentations, posters, product demonstrations and financial sponsorship.

Both oral of extended abstract (max 2 pages) and poster presentations (submit ½ page abstract) at the workshop will be considered.

Please see this page for more information on submissions, sponsorships, registration, and other contact information: https://events.vtools.ieee.org/m/368255

Organizing Committee
- General Chair: Dr. Nirmal Shenoy (Rochester Institute of Technology)
- Technical Program Chair: Daryl Johnson (Rochester Institute of Technology)
- Publicity Chair: Bill Stackpole (Rochester Institute of Technology)
- Papers can be submitted at this link: https://forms.gle/JhwnqfUweF8bkNSy6
- Posters can be submitted at this link: https://forms.gle/Yu2wYvwoQyLZo54k6