



IEEE Rochester Section

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October 2023 Newsletter*

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Message from the Chair



Dear Colleagues,

On September 4th, IEEE held a section picnic at Genesee Valley Park. IEEE members and their families enjoyed a beautiful summer day and a Dinosaur BBQ lunch.

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 to bring Academic researchers and IT industry professionals together (vTools # 368255).

Finally, the 2023 edition of the Western NY Image and Signal Processing Workshop (WNYISPW) will take place on November 3rd (vTools # 364310). Paper submissions for the WNYISPW are due Oct. 13, and early registration ends Oct. 27.

The next two Rochester Section ExCom meetings will be on Tuesday, October 3rd (vTools # 360680) and November 7th (vTools # 360681) from noon to 1 pm. Please pre-register on vTools for in-person or virtual attendance. Stay healthy, and best regards,

Eric T. Brown

IEEE Rochester Section Picnic Picture



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>. There is no charge.

This virtual event will be held on October 7, 2023, at 12:00 pm EDT.

SSCN - 1st Annual IEEE Upstate NY Workshop On Secure & Sustainable Communications Networks (10/10/23 In-Person)

Date-Time-Place: October 10th, 2023, 8:30am-5pm EDT in the B. Thomas Golisano Auditorium at the Rochester Institute of Technology.

The SSCN workshop brings 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 elements to this Workshop including presentations, posters, product demonstrations. In addition, both oral extended abstracts and poster presentations will be part of the agenda.

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

SSCN 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)

2023 IEEE Western New York Image and Signal Processing Workshop (WNYISPW) Call For Papers & Registration Information

Date-Time-Place: November 3, 2023, RIT CIMS Conference Center (8:00 am-5:30 pm EDT)

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>