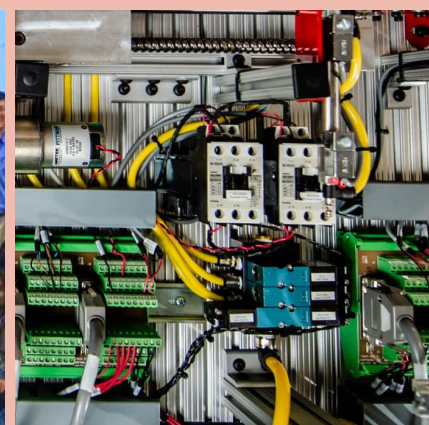




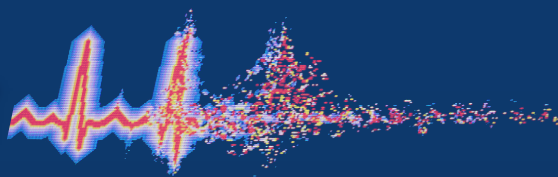
LONG ISLAND SECTION

# THE PULSE

OF LONG ISLAND



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Dear **IEEE Long Island Section Members**, as we experience the warmth and vibrancy of summer I want to extend my heartfelt wishes to each of you for a season filled with joy, relaxation and cherished moments with loved ones. This time of year provides a wonderful opportunity to reflect on the remarkable achievements we've accomplished together and to recharge for the exciting endeavors that lie ahead.

I am continually inspired by the dedication, innovation and collaboration that define our section. Your relentless pursuit of excellence and your contributions are truly commendable. As we enjoy the summer break I encourage each of you to take pride in the significant impact we've made and to continue the great work that propels our mission forward.

Looking ahead, our September **ExCom** meeting will mark the beginning of an exhilarating new chapter. As we reconvene, I urge all members to prepare for the upcoming events and initiatives that will shape the future of our Section. Hosting events is a pivotal aspect of our activities providing valuable opportunities for networking and the Section is rewarded with an activity bonus. I encourage everyone to start brainstorming ideas, planning activities and considering how we can continue to elevate our presence and influence within the IEEE community.

Thank you for your unwavering commitment and enthusiasm. Together we will continue to make strides in advancing technology for the benefit of humanity. Wishing you all a fantastic summer and I look forward to reconvening with renewed energy and exciting plans in September.

Warmest regards,

**Rhonda Green**

*2024 IEEE Long Island Section Chair*  
chair@ieee.li



# THE PULSE

OF LONG ISLAND

The Pulse of Long Island is produced by the Long Island Section of the Institute of Electrical & Electronics Engineers.

**Editor:**  
**Trevor Jackson**  
pulse@ieee.li

**Graphic Designer:**  
**Anthony Giresi**  
pulse@ieee.li

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## INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS

445 Hoes Lane, Piscataway, NJ 08855-1331

**Phone:** (USA & Canada): 1-800-678-4333

**Phone:** (Worldwide): 1-732-981-0060

**Website:** [www.ieee.org](http://www.ieee.org)

**E-mail:** [contactcenter@ieee.org](mailto:contactcenter@ieee.org)

## IEEE LONG ISLAND SECTION OFFICERS

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**RHONDA GREEN**  
CHAIR@IEEE.LI

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TREASURER@IEEE.LI

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AWARDS@IEEE.LI

**EMPLOYMENT ASSISTANCE**  
**CHARLES PLECKAITIS**  
EAC@IEEE.LI

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**BILL WILKES SR.**  
EN@IEEE.LI

**LEGAL AFFAIRS**  
**JOHN VODOPIA**  
LEGAL@IEEE.LI

**LIFE MEMBERS**  
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LIFE@IEEE.LI

**MEMBERSHIP DEVELOPMENT**  
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**STUDENT DEVELOPMENT ACTIVITIES**  
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**LONNI CHU**  
WIE@IEEE.LI

**YOUNG PROFESSIONALS**  
**RAJ YOGARATHNAM**  
YP@IEEE.LI

[www.ieee.li](http://www.ieee.li)

### THE IEEE LONG ISLAND SECTION WEBSITE

The IEEE LI Section website is regularly updated to reflect recent section activity and upcoming events. Each Society and Affinity Group has a dedicated page that describes their function and includes contact information.

[www.consult-li.com](http://www.consult-li.com)

### CONSULTANT'S NETWORK OF LONG ISLAND

The Consultant's Network of Long Island maintains a referral service of engineering, computer, managerial and technical professionals.

[membership@ieee.li](mailto:membership@ieee.li)

### MEMBERSHIP DEVELOPMENT

For more information on membership with the LI Section of the IEEE, e-mail John Schmidt at: [membership@ieee.li](mailto:membership@ieee.li)



THE IEEE LI SECTION HAS 19 CHAPTERS. EACH CHAPTER IS A TECHNICAL SUBUNIT OF THE LI SECTION, ASSOCIATED WITH AN IEEE SOCIETY. THE CHAPTERS, AS WELL AS THE SECTION, ARE ALWAYS WELCOMING VOLUNTEERS. IF YOU WOULD LIKE TO HELP WITH ANY OF THE LI CHAPTER'S STEERING GROUPS, PLEASE DO CONTACT THE RELEVANT CHAPTER CHAIR, VICE CHAIR, OR ONE OF THE SECTION OFFICERS.

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# LOOKING FOR AN UPDATE ON SECTION EVENTS?

FOR UPDATES ON ALL LONG ISLAND SECTION EVENTS, CHECK OUT THE IEEE LONG ISLAND SECTION WEBSITE:  
[www.ieee.li](http://www.ieee.li)



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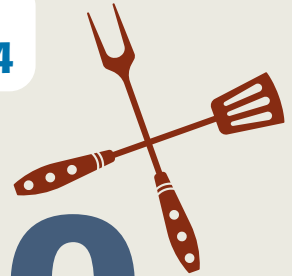
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The IEEE App connects you to the world's largest professional technology community. Stay informed with cutting-edge content from IEEE Spectrum, IEEE Transmitter, and more. Receive personalized technology and engineering content relevant to your activities and interests and stay connected to your tech community.



SUNKEN MEADOW STATE PARK • 12:00 PM - 5:00 PM  
EAST ORCHID PAVILION

SATURDAY,  
SEPT. 7, 2024



# FALL BBQ PICNIC



IEEE



**SOCIALIZE** and **MINGLE**  
with **IEEE MEMBERS!**

\* \* \*

**BRING A GUEST**

\* \* \*

ENJOY **THE PARK FACILITIES**  
and the **BEACH**

\* \* \*

**FREE FOOD!**

**BBQ PICNIC REGISTRATION:**  
**CLICK HERE**

**TO REGISTER YOUR FOOD CHOICES:**  
**CLICK HERE**



# The IEEE Consultants Network of Long Island (LICN) is presenting a lecture titled:

## **ARTIFICIAL INTELLIGENCE FUNDAMENTALS**



**DATE:** Thursday, August 1, 2024

**SPEAKER:** Michael Verdecanna

**LOCATION:**

**Online Event**, register for link

**TIME:**

7:00 PM - Networking

7:20 PM - Presentation

**COST:** This seminar is **free** and all are invited. However, there will be a \$15 charge for PDHs

### ABSTRACT:

2023 was a pivotal year for AI, with ChatGPT capturing significant attention. Since then, almost every company has been developing their AI strategies to gain a competitive advantage. This lecture will cover the basics of AI, starting with the differences between Machine Learning (ML), Artificial Intelligence (AI), Deep Learning (DL), and Generative AI (GenAI), and how they work. A basic neural network will be explained, including input, hidden, and output layers.

We will then delve into prompt engineering, beginning with the building blocks of a prompt, followed by more advanced techniques such as few-shot learning, chain of thought, personas, self-prompting, prompt chaining, & Retrieval-Augmented Generation (RAG). Examples will be shared throughout, with an emphasis on using text-based modalities and use cases for productivity improvements. We will also discuss pitfalls to avoid, including security, shadow prompting, bias, overfitting, technical debt, and ethics. The lecture will conclude with a discussion on trends and future developments in AI.

### REGISTRATION:

The presentation is open to the general public. Registration link:

<https://www.meetup.com/licn-long-island-consultants-network/events/302032848/>

### SPEAKER BIOGRAPHY:

**Mike Verdecanna** holds both a Bachelor and Master of Science Degree in Electrical Engineering from NYIT Old Westbury, as well as a Master of Business Administration from LIU CW Post. Since 1998, he has worked for Symbol Technologies, Motorola Solutions, and Zebra Technologies in Holtsville, NY. He started as an electrical engineer and has designed numerous products. He currently holds the role of Head of Engineering for the Handheld Mobile Computing Division of Zebra Technologies.

Previously, Mike worked for a startup defense contractor designing simulators for submarines and also as a calibration technician for a test lab. Mike is a Licensed Professional Engineer and an IEEE member for 28 years. This is Mike's first presentation to the LICN, and he is looking forward to giving back to this great group for all the insightful presentations he has attended over the years.

### COST:

There is no cost to attend this meeting, however, if you are a NYS Professional Engineer and would like to receive 2 Professional Development Hours (PDHs) of continuing education credit, then payment of a \$15 fee (via Zelle) is required. If paying by Zelle is a problem, contact Ed Gellender at [edgellender@gmail.com](mailto:edgellender@gmail.com) for an alternate payment method. You will also have to properly fill out an Evaluation Form to prove that you attended this lecture.

# IEEE of Long Island is presenting a lecture titled: **MAXIMIZING PV HOSTING CAPACITY** *in a* **100% RENEWABLE POWER GRID**

**DATE:**

Thursday, August 8, 2024

**SPEAKER:**

Dr. Richard Perez

**LOCATION:****Online Event**, register for link**TIME:**

7:00 PM - 8:00 PM

**COST:**This seminar is **free****ABSTRACT:**

The rapid increase in the integration of inverter-based resources (IBRs)/DERs has driven the grid transition to renewable energy, introducing challenges such as overvoltage, undervoltage, harmonics, and protection scheme failures. To manage these issues, the concept of hosting capacity (HC) was developed, defining the maximum amount of solar photovoltaics (PV) that can be accommodated by an electric grid without necessitating additional infrastructure changes. As countries worldwide adopt the goal of achieving net-zero emissions by 2050, the rapid integration of IBRs is transforming the nature of grids globally. This webinar will explore strategies for maximizing distributed PV hosting capacity in regional 100% renewable (wind/PV) energy grids, considering technical constraints like power flow and voltage limits, as well as the uncertainties associated with renewable energy sources. Understanding and optimizing HC is crucial for effective power system planning and ensuring the reliability and quality of our future energy grids.

**REGISTRATION:**

We invite all those interested in clean energy and the future of our renewable grid to join us for this insightful session.

Registration link: <https://events.vtools.ieee.org/m/425901>

**COST:**

There is no cost to attend this meeting.

**SPEAKER BIOGRAPHY:**

**Dr. Richard Perez** is a Senior Research Faculty member emeritus at the University at Albany's Atmospheric Sciences Research Center, where he directs applied research and teaches in the fields of solar radiation, solar energy applications, and daylighting. He holds a Master's and Doctorate in Atmospheric Sciences (University of Paris and SUNY-Albany) and an Undergraduate degree in Electrotechnics. Dr. Perez has made significant contributions to the field of solar energy, notably identifying the potential of photovoltaic (PV) power generation to meet the electrical power demand of large cities in nontraditional solar regions such as the northeastern U.S., and developing solar radiation models that have been incorporated into standard solar energy and daylighting calculation practices worldwide. With more than 200 journal articles, conference papers, and technical reports to his name, Dr. Perez also holds two U.S. patents on methods of load management using photovoltaics. He has received numerous awards for his work. A long-time advocate for solar energy, Richard Perez firmly believes that it will play a critical role in helping the United States achieve its ambitious goal of net-zero carbon emissions by 2050. His research primarily focuses on solar energy resource assessment and evaluating the impact of solar energy systems on utility power grids.



Dr. Andrew R. Sass |

On May 10, 2024 eleven teams from five universities and colleges gathered at NYIT in Old Westbury, NY to compete in the **2nd Annual Micromouse of Long Island** competition. 41 students represented Stony Brook University, NYIT, Rutgers University, Vaughn College, & Fitchburg State College.

Each team fielded a palm-size robot, referred to as a Mouse, which employed Artificial Intelligence to autonomously navigate a complex maze from Start to Goal. The competition was coordinated by the **IEEE Long Island Robotics and Automation Society**. The IEEE introduced **Micromouse Competition** in 1977 in NYC. Since then it has become a little-known but world- wide competition with the participation of a small select group of avid participants. Following a hiatus on Long Island, it was re-introduced as an event in 2023. Rutgers University and NYIT placed first and second respectively in both events.



Impounded Robots

The Long Island event featured 2 distinct competitions; *Traditional Micromouse*, and *“Corsa Labirinto”* Labyrinth Race celebrating the Mille Miglia (1000 mile) race featured in the movie Ferrari. For each event, student teams designed and built a robot employing the ultimate in electronics microminiaturization and A.I. software of unique design. An experimental event, Mouse-Track was introduced and demonstrated by a Stony Brook team and an IEEE volunteer, Shel Lipsky.

Micromouse of L.I. 2025 will add 2 new events. The first will be the *Mouse-Track* event, also suitable for advanced High School students, where a small robot-mouse tracks through a matrix of lines. The second will be *“The Great Cheese Hunt”* where a small autonomous robot-mouse

# The IEEE Robotics and Automation Society **The 2nd ANNUAL MICROMOUSE COMPETITION of L.I.**



Micromouse Competition Contestants

navigates a 5 X 10 maze to find “cheese” (an IR transmitter), and then returns to the starting point. (This event is reminiscent of the Fire-Fighting competition pioneered by Trinity College where a robot travels through a simulated miniature one-story house to find a fire.)

All Micromouse of Long Island events are also open to High School student-teams of one to five students who can compete in the High School division. IEEE professionals are also welcome to compete in the PRO division. Although there is no entry fee for this event, all contestants (other than high school students) must be student-members or members of the IEEE.



Micromouse Maze





**THURSDAY,  
NOVEMBER 7, 2024**  
NOON TO 8 PM



**RADISSON HOTEL, 110 MOTOR PKWY, HAUPPAUGE LI**

## IEEE LI SECTION **POWER ELECTRONICS SYMPOSIUM 2024**

All professionals (engineers, managers, etc.) involved in the use, design, qualification, test or manufacture of power supplies, power converters, power management, servos or energy storage are invited. All sectors of power electronics are represented including military, industrial, medical, space, consumer and automotive.

### CALL FOR PAPERS

Abstract, viewgraphs, speaker bios and speaker contact information are due **October 4, 2024**. Scheduling of qualified papers is accomplished on a first-come/first-served basis. Notification of acceptance by **October 16, 2024**.



#### FREE GENERAL ATTENDANCE

REGISTRATION OPENS AUGUST 2024

A free invitation is extended to all Engineers, Managers, other Professionals and Students involved in the use, design, qualification, test or manufacture of power supplies, power converters, power management or energy storage. Registered attendees will receive complimentary networking lunch, admission to the exhibit floor, technical lectures, and a complimentary networking dinner.



#### EXHIBITORS

REGISTRATION OPENS JUNE 2024

Limited exhibitor space is available to Long Island companies and reps that cover Long Island involved in the design, qualification, test or manufacture of power supplies, power converters, power management or energy storage. Tables are 2.5' x 8' and are provided with two chairs. All exhibitors are invited to provide business cards and giveaways for the swag bags. Exhibitors are also invited to enjoy the complimentary networking lunch and the complimentary networking dinner. Exhibitor tables are offered at \$450



#### SPONSORS

REGISTRATION OPENS JUNE 2024

A sponsorship entitles you to one free table with preferential placement. In addition, your company logo is prominently placed on the 200 swag bags, symposium flyer, and on all event posters. As a sponsor, you are also entitled to have up to two business cards and two items placed in the event swag bags. The number of sponsorship opportunities is limited to five and are available on a first-come, first-served basis. Sponsorships are offered at \$1000.

FOR MORE INFORMATION, GENERAL REGISTRATION, EXHIBITOR REGISTRATION, SPONSOR REGISTRATION AND CALL FOR PAPERS: [www.ieee.li/pes](http://www.ieee.li/pes)



OWN  
YOUR  
POWER  
SKILLS

NOVEMBER 7-9, 2024

MARRIOTT HOTEL & SPA

STAMFORD, CT.

**IEEE WIE Forum USA East** focuses on developing and improving leadership skills for individuals at all stages of their careers. Attendees will have the opportunity to hear inspirational and empowering talks presented by successful leaders from IEEE Northeast. Emerging technologies will also be demonstrated, engaging attendees to facilitate discussion and potential advancement of STEM outreach class ideas.

**INSPIRE**

Motivate positive progress  
in career and life

**EMPOWER**

Discover  
your true potential

**LEAD**

Advance leadership  
and career management

**CAREER FAIRS**

Meet with growing  
organizations

**WORKSHOPS**

Develop new skills  
or improve skills

[HTTPS://ATTEND.IEEE.ORG/WIE-FORUM-USA-EAST-2024/](https://attend.ieee.org/wie-forum-usa-east-2024/)

**KEY DATES**

**DEADLINES**

General Registration Opens	July 7, 2024
Abstract Submission Deadline	July 14, 2024
Speaker Notice of Acceptance	September 8, 2024
Early Registration Deadline	October 6, 2024
Forum Commencement	November 7, 2024
Career Fair	November 8, 2024
Forum Conclusion	November 9, 2024

**SPONSOR**



**REGISTER**



**PARTICIPATE**





FRIDAY, NOVEMBER 15, 2024



# LISAT 2024

18th ANNUAL IEEE LONG ISLAND SYSTEMS, APPLICATIONS, AND TECHNOLOGY CONFERENCE

ZEBRA TECHNOLOGIES, HOLTSVILLE

7:30 AM – 5:00 PM

THREE ALL-DAY PARALLEL TECHNICAL TRACKS

## SYSTEM | APPLICATIONS | TECHNOLOGY

- |   |  |   |
|---|--|---|
| <ul style="list-style-type: none"> <li>• Computer Networks</li> <li>• Wireless Sensors</li> <li>• Quantum Computing</li> <li>• Signal &amp; Image Processing</li> </ul> | <ul style="list-style-type: none"> <li>• Cybersecurity</li> <li>• Renewable Energy</li> <li>• Microwave Power Sensors</li> </ul> | <ul style="list-style-type: none"> <li>• Advanced Surveillance</li> <li>• Nanomaterials</li> <li>• Next Generation Health Care</li> </ul> |
|---|--|---|

## IEEE DISTINGUISHED LECTURE and INVITE PRESENTATION

IEEE Distinguished Lecturers (DLs) are recognized experts in their field. LISAT will invite DLs to present on the state-of-the-art technological research and developments. In addition, a couple of experts in various fields will be invited.

### EXHIBITS HALL

Exhibits from Local OEMs, Manufacturers, Component Suppliers, Universities, Competition Winners, Local Associations and Professional Societies

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For Paper Submission, Registration, Program Schedule, Accommodation, Transportation, and Information



# IEEE MEMBERSHIP and MEMBER BENEFITS

IEEE membership offers access to technical innovation, cutting-edge information, networking opportunities, and exclusive member benefits. Members support IEEE's mission to advance technology for humanity and the profession, while memberships build a platform to introduce careers in technology to students around the world.



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## MEMBER-GET-A-MEMBER

Consider sharing your IEEE membership experience and get rewarded for doing so. Through the Member-Get-a-Member (MGM) program, IEEE rewards your efforts in recruiting new members. Your local IEEE Section can also benefit.



## IEEE.tv

Made possible by IEEE members, IEEE.tv is an award-winning, Internet-based television network, producing special-interest programming about technology and engineering for IEEE members and the general public.

Get access with new resources, valuable opportunities, and many discounts that will help you advance your career in the right direction.

## WHEN YOU JOIN IEEE, YOU:

- Join a community of over 425,000 technology and engineering professionals united by a common desire to continuously learn, interact, collaborate, and innovate
- Get the resources and opportunities you need to keep on top of changes in technology
- Get involved in standards development
- Network with other professionals in your local area or within a specific technical interest
- Mentor the next generation of engineers and technologists and so much more.

IEEE members can access information on local events and activities by signing in to myIEEE, the members' personalized gateway to IEEE membership. In addition, members can also:

- Access individual Society memberships and subscriptions
  - Connect with local IEEE Sections and volunteer leadership
  - Find upcoming conferences
- Learn more about individual benefits
- Read the latest news from IEEE, IEEE Spectrum, IEEE Standards News, and The Institute

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\*Where available



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## IEEE SENIOR MEMBER



Being elevated to senior member recognizes people who have moved beyond entry-level work in their careers. It also encourages them to engage more broadly with engineers and other technical professionals in companies and universities outside their own. To be eligible for senior member status, members must have worked in a professional capacity in a technical field for at least 10 years. Educational experience is partially credited toward that time. Nominees must also have professional references from three IEEE senior members, Fellows, or honorary members. If you're interested in elevation, you don't have to wait to be nominated—you can nominate yourself.

**>> APPLY FOR SENIOR MEMBER GRADE**

## IEEE LIFE MEMBERS, *WRITE FOR THE PULSE!*



The Section is inviting you to record your stories and histories in our monthly publication, the *Long Island Pulse*. An article of approximately 300 – 350 words is recommended.

LET US HEAR FROM YOU.

Send your article to: [pulse@ieee.li](mailto:pulse@ieee.li)  
Life Member Chair: [life@ieee.li](mailto:life@ieee.li)

The **IEEE Long Island Section** has held meetings with many of our Life Members and Senior Engineers, in recent months. Your stories and histories in engineering are interesting, inspiring and should be recorded for future generations. You have served your profession for many years, many have served our country in the military, many as engineers fighting the Cold War. The many contributions are the legacy to this new digital age, space age, environmental age and beyond.

**WANTED: IEEE LIFE MEMBER NEEDED TO VOLUNTEER TO SUBMIT A MONTHLY HISTORY ARTICLE FOR THE PULSE**

The **PULSE** is seeking a IEEE LI Life Member to write the *Long Island Electrical & Electronic History* monthly article for the *Pulse*. If interested contact [pulse@ieee.li](mailto:pulse@ieee.li)

**WE WANT YOUR STORIES**

# LET YOUR VOICE BE HEARD

## WRITE TO THE PULSE

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**CONTRIBUTION DEADLINE:**  
20th of a month for the next month edition.



# THE PULSE

OF LONG ISLAND

CONTRIBUTE TO THE PULSE – LET YOUR LETTER BE READ and LET YOUR YOUR VOICE BE HEARD





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John F. Vodopia, Esq.

[jvodopia@gmail.com](mailto:jvodopia@gmail.com)  
[jvodopia@ieee.org](mailto:jvodopia@ieee.org)

