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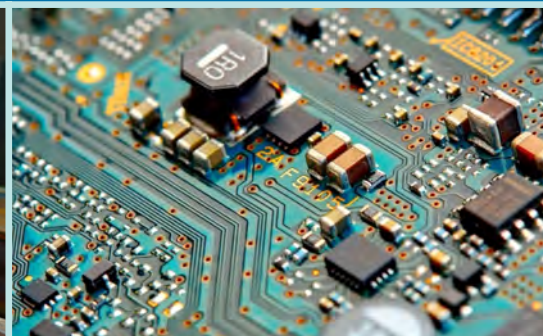
LONG ISLAND SECTION

THE

# PULSE

FEBRUARY 2022 | VOL. 69, NO. 2

OF LONG ISLAND



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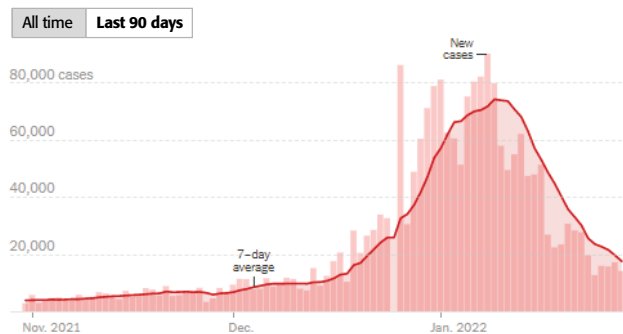


2020 OUTSTANDING MEMBERSHIP  
RETENTION PERFORMANCE  
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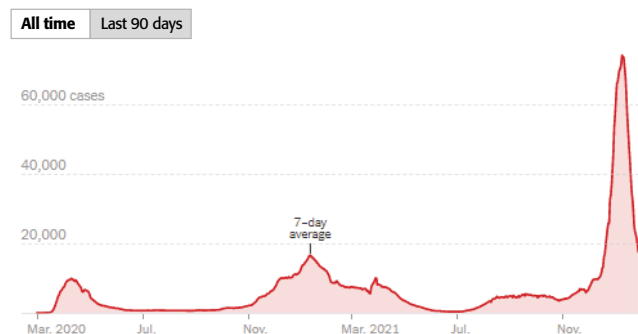


A blizzard seems to be very conducive to sitting down to write, which is the case as I write this. I hope the historic storm we experienced in the last days of January has not affected anyone too adversely. Being confined to the house by weather also allows time for continued planning for an uncertain future. However, things are looking hopeful. These figures below indicates the course of the omicron variant of the Covid-19 pandemic. Expectations for in-person meetings and events remain good.

NEW REPORTED CASES OF COVID-19 OMICRON VARIANT BY DAY  
**HOW TRENDS HAVE CHANGED IN NEW YORK**  
November 2021 - January 2022



NEW REPORTED CASES OF COVID-19 OMICRON VARIANT BY DAY  
**HOW TRENDS HAVE CHANGED IN NEW YORK**  
March 2020 - November 2021



Some things to look forward to are the **LISAT 2022 Conference** in May and the **EICLI Engineers Week Seminar Series** coming up in February, only a few weeks away, the 16th, to be exact. It takes place at the conveniently located Holiday Inn on Sunnyside Boulevard, Plainview. [The registration link for the series is here.](#)

February also brings us **Black History Month**; a celebration of the accomplishments and contributions that African-American engineers have made. An instructive but by no means comprehensive take is in this [video](#). It is helpful for all of us to remember that the history of Black Americans is unique among our immigrant experiences. Those of us who are not Black have immigrant stories of arriving in America with a few dollars and the Statue of Liberty's guarantee of freedom. We do not have a forebear's experience of arriving chained to a deck penniless and naked, being forced to work for no pay and denied the freedoms granted to all others over the span of ten generations. Accomplishment should always be appreciated and honored, moreso when it overcomes unique adversity.

As I mention often, the **Pulse** is seeking to remain relevant in a digital age. Articles of a technical nature are always welcome, as are articles involving engineering ethics, regulations, economics or other related subjects that may be inspiring or instructive to the membership. If there is interest, the Pulse may also highlight Long Island employers with IEEE members as well as individual members. Please send suggestions to [pulse@ieee.li](mailto:pulse@ieee.li). As usual, stay healthy and well.

**Arnold Stillman**  
*IEEE Long Island Section Chair, 2022*

## THE PULSE OF LONG ISLAND



*The Pulse of Long Island* is produced by the Long Island Section of the **Institute of Electrical & Electronics Engineers**. It is published monthly except during July & August.

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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.licn.org](http://www.licn.org) 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

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WEDNESDAY, FEBRUARY 16, 2022

## ENGINEER'S WEEK SEMINAR SERIES

HOLIDAY INN PLAINVIEW, 215 Sunnyside Blvd., Plainview, NY 11803 516-349-7400

Should conditions deteriorate due to COVID and we are unable to present these seminars in person, provisions will be made to present these workshops as webinars - the show must go on! Snow Date: Thursday, March 3, 2022.

[>>>> CLICK HERE TO REGISTER ONLINE <<<<<<](#)

9:00 am – 11:00 am • **TRACK A**

### AN INTRODUCTION TO FLOWMETER TECHNOLOGIES

Walter Freeman & Wayne Martin, Neal Systems, Inc.

We will be covering all of the following areas: Flow definitions, reasons for flow measurement, difference between total flow & flow rate, understand mass flow vs. volume flow, identify what is Standard Volume, understand accuracy & repeatability, calculate percent of rate vs. percent of full scale accuracy, determine range-ability, be knowledgeable of flowmeter technologies, and identify important standards organizations. (2 PDH)

11:15 am – 12:15 pm • **TRACK A**

### STEEP SLOPE ROOFING VENTILATION SOLUTIONS

Jonathan Parisi and Karl Luechau, GAF

An improperly ventilated house is susceptible to a range of problems, from mold growth and structural damage to increased energy costs. This course discusses principles of proper ventilation in houses with steep-slope roofing – from the science behind moisture and airflow to the products used to assist ventilation through a structure. (1 PDH)

1:15 pm – 3:15 pm • **TRACK A**

### PLANNING & DESIGN OF GAS DETECTION SYSTEMS

Dexter Vilar, Neal Systems, Inc.

This seminar will identify the seven main reasons to install Gas Leak Detection systems. Types of gas dangers such as asphyxiates, toxicity, explosives. Gas leak detection system guidelines for design will be introduced discussing portable and fixed systems. (2 PDH)

3:30 pm – 4:30 pm • **TRACK A**

### INVESTIGATION OF JET ENGINE EXHAUST DEFLECTION FOR LIFTING PURPOSES

Glenn Mackey, Retired Aeronautical Engineer

Desires by aircraft operators to reduce or eliminate runway requirements for takeoff and landing have resulted in development of various aircraft designs. One type which offers promise uses the deflected exhaust of the jet engine to produce lift. This seminar discusses a study that was made to evaluate characteristics of this type of jet deflection. (1 PDH)

9:00 am – 11:00 am • **TRACK B**

### UNCONVENTIONAL MATERIALS & EXPERIMENTAL STRUCTURES

Edward M. Segal, Ph.D., P.E., Hofstra University

Today, many built works utilize materials with well-established precedents, standards, and design guidelines (e.g., steel, concrete, and wood). While these structures may meet strength and/or serviceability criteria, considering a broader range of materials may lead to more sustainable systems. Unconventional materials may offer environmental, economic, and social advantages when used in place of or in combination with well-established materials in building structures. This presentation will include discussions of recent research and design projects that have utilized unconventional building materials such as polyester rope, aluminum cast into cracked clay, and scrap acrylic. (2 PDH)

11:15 am – 12:15 pm • **TRACK B**

### HVAC FILTRATION SYSTEM THAT NEUTRALIZES BACTERIA & VIRUSES, INCLUDING COVID

Carl Saieva, Sartek Industries, Inc.

In this seminar we will take a brief look at the evolution of air filters with specific application to currently available systems for antiviral & antibacterial uses. (1 PDH)

1:15 pm – 3:15 pm • **TRACK B**

### HOW TO PROTECT BUILDINGS FROM LEGIONNAIRES' DISEASE

Jay Egg, CMC and Kristy G. Richards Egg,

BSPH, RN, Egg Geo, LLC

Because of the deep knowledge required to fully comprehend the depth of breadth of complex water and mechanical systems, the relationship between Legionella and the facility structure, mechanical systems, and human activities, it is recommended that mechanical engineers, industrial hygienists, and infection control experts all be cross-trained to be considered for future cooling tower related legionella assessor licensing. As for building code requirements under recommendations by the 2024IAPMO Uniform Mechanical Code and the Uniform Plumbing Code, as part of a new construction permit, building remodel or upgrade, building owners shall be required to identify all evaporative cooling towers on property in order for permit consideration. (2 PDH)

3:30 pm – 4:30 pm • **TRACK B**

### NOISE CONSIDERATION AND REDUCTION IN AIR HANDLERS

Sean Garster, Nortek Air Solutions

This presentation will cover design and selection of Air Handling Units with an emphasis on noise considerations: components of sound, life of sound, processing sound as information; followed up with specific applications. Mr. Garster's presentation will help attendees understand how utilizing fan arrays can help significantly reduce noise in & around HVAC systems. (1 PDH)

9:00 am – 11:00 am • **TRACK C**

### GEOHERMAL HEATING AND COOLING SYSTEM CASE STUDY

Paul K. Boyce, PE, PG, PW Grosser Consulting

This seminar presents a case study of a new geothermal HVAC system for St. Patrick's Cathedral consisting of a 10-well array as well as reversible chillers and the new chilled and hot water piping distribution system. (2 PDH)

11:15 am – 12:15 pm • **TRACK C**

### GEOHERMAL HEATING AND COOLING ENGINEERING ASPECTS

Yongjian Gu, Ph.D., P.E., United States Merchant Marine Academy

Dr. Gu will present a general description of geothermal energy and its application. Engineering aspects of typical geothermal systems including piping loop variations, chiller & heat pump utilization, cogeneration-electricity production benefits will all be discussed. This seminar will be an in-depth review of the theoretical concepts behind the technology, as well as performance parameters & cost of geothermal energy for power production/cogeneration. (1 PDH)

1:15 pm – 4:30 pm • **TRACK C**

### GFCI AND AFCI REQUIREMENTS IN DWELLINGS & NON DWELLINGS

Stan Komoroski, Master Electrician & Instructor, Electrical

Training Center Topics to be covered are an overview of definitions, an overall discussion on understanding GFCI Protection as a whole, current GFCI requirements in a dwelling, GFCI requirements in locations other than dwelling units and understanding AFCI Protection and where it is required. (3 PDH)

8:00 am – 9:00 am	REGISTRATION & BREAKFAST
9:00 am – 11:00 am	MORNING SEMINARS
11:00 am – 11:15 am	BREAK
11:15 am – 12:15 pm	MORNING SEMINARS <i>continued</i>
12:15 pm – 1:15 pm	LUNCH
1:15 pm – 3:15 pm	AFTERNOON SEMINARS
3:15 pm – 3:30 pm	BREAK
3:30 pm – 4:30 pm	AFTERNOON SEMINARS <i>continued</i>



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**IEEE-LI SECTION**  
**AWARDS CEREMONY**  
**and DINNER**  
**THURSDAY,**  
**MARCH 31, 2022**  
**5:30 PM**



## THURSDAY, NOVEMBER 3, 2022 (tentative) **POWER ELECTRONICS SYMPOSIUM (PES)**

**The annual PELS PES has been rescheduled for November 3, 2022** (tentative date) because of concerns regarding the on-going COVID pandemic. After careful review of the issues hosting this event the PES committee has decided to take a safe conservative approach and postpone this event to 2022 when we have a better handle on the limitations with regard to social interaction. While this was a difficult decision the committee is ensuring that the high standards with regard to; number of exhibitors and participant attendance and robust presentations we developed over the previous events will be maintained when we host again.

While we are all anxious to get back to our "Normal" industry dynamics, rest assured we are committed to continuing with the annual PES event. Please keep an eye out for future announcements on the future date for the PES and other PELS events.

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FRIDAY, MAY 6, 2022

# LISAT 2022

Sixteenth Annual IEEE Long Island Systems, Applications and Technology Conference

**HELD AT NEW YORK INSTITUTE OF TECHNOLOGY, OLD WESTBURY, NEW YORK**

## CALL FOR PAPERS, PRESENTATIONS, EXHIBITORS and STUDENT PAPERS

The Long Island Systems, Applications and Technology (LISAT) Conference features several parallel professional tracks including topics in systems, applications, and technology; a PDH program and an Exhibition. We are soliciting submissions for participation in both the technical program, applications program, and the exhibition, and are interested in papers, presentations, and exhibits that showcase the development and use of technology by local organizations. Small and Large Businesses, Government Agencies, LISAT 2022 will also include Distinguished Lecture presentations on topics of strong interest to the scientific and engineering community & will provide the opportunity for select Undergraduate and Graduate student papers and/or posters to be presented.

Authors shall be required to provide a six (6) page IEEE standard manuscript for publication in IEEE Xplore, and will be required to make a PowerPoint™ presentation at the conference. Manuscripts are subject to the LISAT Technical Program Committee's peer review and may require revision prior to final acceptance. Important dates for the Technical Program are:

LISAT 2022 IMPORTANT DATES	
MANUSCRIPTS FOR PUBLICATION AND COPYRIGHT RELEASES DUE	FEBRUARY 1, 2022
NOTIFICATION OF ACCEPTANCE OF MANUSCRIPTS (SUBJECT TO FINAL EDITS)	MARCH 7, 2022
FINAL MANUSCRIPT EDITS, BIOS, AND POWERPOINT DUE	APRIL 8, 2022
PRESENTER REGISTRATION	APRIL 20, 2022
LISAT 2022 CONFERENCE	MAY 6, 2022

Detailed instructions on submission, manuscript and presentation templates, and information on the conference are available on the LISAT web site at [www.ieee.li/lisat](http://www.ieee.li/lisat). Manuscript format must agree with requirements specified in the Author's Kit, which will be made available.

Each presentation will be 15 minutes long followed by 5 minutes of Q&A. At least one author must register for the conference for each paper/presentation. If one presenter is presenting multiple papers, then multiple registrations are required. A limited number of tutorial and application presentations, which will not be published by the IEEE, may also be accepted.

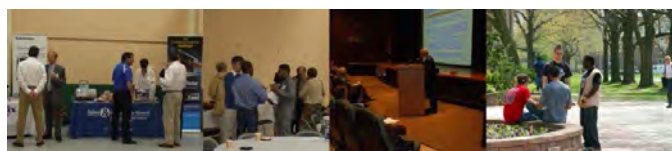
**LISAT has a strict "No Podium, No Publish" policy. "Manuscripts will only be submitted for publication in IEEE Xplore if a presentation is made at the Conference."**

**For information on Exhibiting at LISAT**, please contact: [exhibits@ieee.li](mailto:exhibits@ieee.li). For all other information contact LISAT 2020 Technical Program Committee Chair: Dave Mesecher at [d.mesecher@ieee.org](mailto:d.mesecher@ieee.org) Conference Chair: Dr. Charles Rubenstein at [c.rubenstein@ieee.org](mailto:c.rubenstein@ieee.org) or Conference Co-Chair: Dan Rogers at [drogers@ieee.org](mailto:drogers@ieee.org).

LISAT encourages submissions from all areas of engineering, science, and technology. Topics of particular interest include Surveillance & Navigation Systems, Communications (Military and Commercial), Sensors and Advanced Electronics, Photonics, Fiber Optics and Wireless Technologies and Applications, Data Acquisition, Analysis and Computational Science, Microelectronics and Antennas for Commercial, Military and Space-Based Applications, Nanomaterials, Climate, Environment and Biosciences, Energy and Cyber Security and Health Sciences and Health Care.

**Releases and Approvals:** This conference will be unclassified and attended by both US and non-US persons. It is the author's responsibility to obtain all required company and government releases and approvals prior to making a paper submission. A statement that such releases and approvals have been obtained as well as a completed IEEE Copyright Form (signed by the submitting author) must accompany the manuscript of each accepted paper. For those requiring a travel visa, it is strongly recommended that Authors apply for their visa as soon as is possible.

LISAT is sponsored by the IEEE Long Island Section and its Technical Society Chapters and IEEE Region 1, in cooperation, for the last fifteen years with the Farmingdale State College of SUNY.



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### CONTRIBUTION DEADLINE:

20th of a month for the next month edition.

### CONTRIBUTIONS FROM LONG ISLAND TECHNICAL & ENGINEERING COMPANIES:

Publish your technology-related press release (up to one page) at no cost. Please send the press release as a PDF file attached to email to [pulse@ieee.li](mailto:pulse@ieee.li), addressed to the Editor, with a Subject line "Pulse -PR" followed by your company name, and the responsible contact person's name, email and phone number in the email body.



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OF LONG ISLAND

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IEEE membership delivers access to the industry's most essential technical information and provides networking opportunities both locally and globally. Members have the ability to stay current in their chosen profession, connect with peers, and invest in their future.



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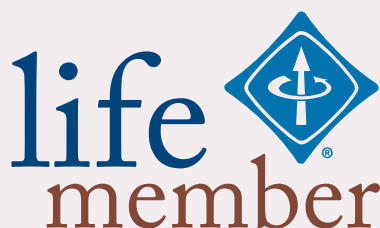
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The Section is inviting you to record your stories and histories in our monthly publication, the *Long Island Pulse*. An article of approximately 300 – 350 words is recommended.

**LET US HEAR FROM YOU.**

Send your article to: [pulse@ieee.li](mailto:pulse@ieee.li)  
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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)

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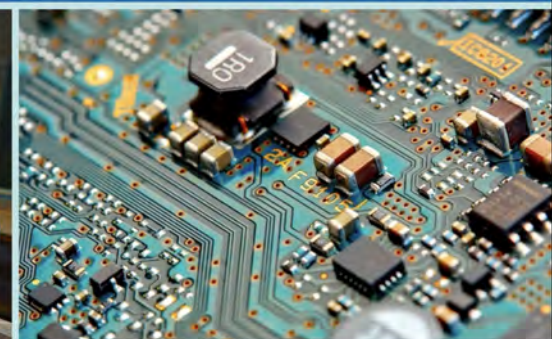
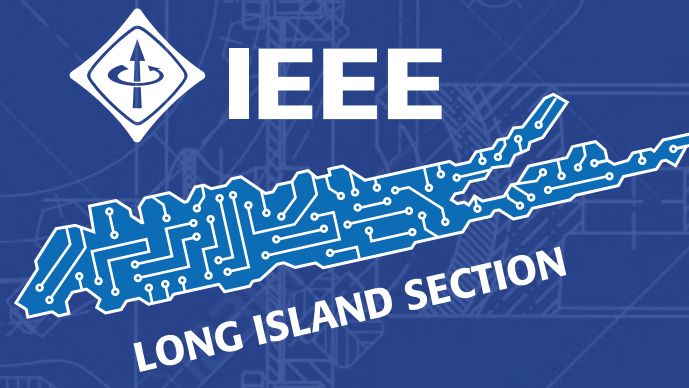
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