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Chairperson's Message by Jon Garruba, [chairman@IEEE.LI](mailto:chairman@IEEE.LI)

As we move into summer I'd like to thank all who have come out and participated in the section's events this year. Participation in live events is surely the best way to get the most value out of your membership. However, it has the added benefit of improving the membership experience for all members. Similar to Metcalfe's law, which states that the value of a communications network is proportional to the square of the number of users ( $n^2$ ), the value of the IEEE is the interaction between members. So if you haven't already, or even if you have, get to a meeting or two this month.

Changing topics for a bit, I would like to write about something I feel very strongly about, an engineer's expanding role in today's community.

As engineers, we all share a common goal, improvement. Whether we work on products, processes, or services, we all strive to improve things in our niche. While it may be difficult to see how some of our everyday tasks contribute to larger community improvements, it is important to take a moment and reflect. How does my work affect the community? What have I done to improve or manage those effects? Those are tough questions and ones typically not considered by an engineer during his or her daily work. In today's world an engineer's responsibility doesn't end in the lab, he or she must proactively help shape society through greater community involvement.

Whether you view your community as the block you live on, the town you live in, a professional society to which you belong, the country of which you are a citizen or even a global community member, you as an engineer have a special role. As the world's natural problem solvers, engineers quickly spot areas for improvement in any activity, and their pragmatic approach shapes their ideas in such a way that makes those ideas achievable. This natural talent combined with their understanding of technology uniquely positions engineers as key influencers of tomorrow's communities.

This role has never been more important than today. As the complexity of the world increases, and technology becomes essential in all aspects of life, it becomes critical that engineers take an expanded role in shaping public policy. Today new technologies are developed and released to market so rapidly that laws and regulations affecting their use are an afterthought. Without a comprehensive understanding by our government leaders of the relevant technologies, citizens will experience the negative effects of poorly written laws for a lifetime. As the engineers that create these new technologies, it is also our responsibility to help guide our leaders to ensure that they are used in responsible ways that benefit our communities.

Two critical technology policy debates that are ongoing today are digital freedoms and carbon emissions. I'll leave the carbon emissions debate to the environmental engineers, but the digital freedom debate is uniquely suited for members of the IEEE to be key influencers. This issue requires in-depth knowledge of communications, computers, and systems. All of which are core competencies of the IEEE.

Internet Freedom, What does it mean? Internet or digital Freedom is the freedom for anyone to access any information that is publically available, use any application, or transfer information directly to any other internet user without interference.

I'm sure I don't need to remind anyone that right now the world is undergoing dramatic changes, both technological and cultural. The rapid advances in technology have created an information revolution. Providing access to any information anywhere an internet connection or cell phone is available. This paradigm shift empowers people as never before. When the internet was first made public it was the most democratic distribution medium ever created. Anyone with a connection could have access to any public information. As technologies have advanced enabling tighter control over how people can use the internet some seek to change this free and democratic paradigm by limiting people's access to information.

Countries such as China and Iran are implementing restrictive country wide firewalls to control access to websites sites and applications. Iran has shut down the internet within their country during elections and even blocked Google mail to force citizens to use a government run email service. China has blocked twitter and face book in an effort to control the flow of information. A less invasive effort is underway in Australia, which implements a national web filter for censored websites.

How does this affect us as US citizens? While we may not be experiencing internet interference of the same magnitude as other countries, there are documented cases where internet service providers have chosen to block or restrict legal content, or data communications. One internet service provider was covertly closing data connections between users without warning. Another has blocked their customers from accessing a competing voice over IP service, and most have restrictive user service agreements, which declare direct data exchange with other users as service violations that are subject to penalty. While these types of behavior have not affected most internet users and the details are not widely understood by the general public, they are the start of what I see as a disturbing trend. Without support and guidance from users with technical backgrounds we may find that our once free internet has long been forgotten. Innovative new products, such as Vonage, Netflix, YouTube, and Hulu have the potential to become nostalgic memories of the good ol' days.

So what can you do? As engineers, many times we are too busy with long hours at work to find time to be proactive. We must make time stay on top of technical policy debates and make our opinions heard. Join an IEEE-USA policy committee, write your congressman a letter, or simply explain a technical policy issue to a non-engineer. There is no time better than now; your participation will have dramatic effects for generations to come.

The internet freedom debate is just one example of a technical policy debate that requires active participation by engineers, there are hundreds others. Pick one you feel strongly about and help shape tomorrow.

# CALENDAR OF IEEE EVENTS

## June 2010

**2** IEEE, Microwave Theory & Techniques (MTT) Soc. presents:  
**TOPIC: AN 8X8 KA-BAND ANTENNA ARRAY WITH INTEGRATED TX MODULE**  
 Speaker: Winfried Simon  
 Location: L-3 Comm. Narda Microwave, Hauppauge, NY  
 Refreshments 6:00 PM, Lecture 6:30 PM

**2** Long Island Consultants Network Meeting  
 Location: Briarcliffe College (the Great Room), **Bethpage, LI**  
**6:00 PM Refreshments-see LI calendar**

**3** LabVIEW User Group Meeting  
 Telephonics Corporation  
**Farmingdale, LI**  
**6:00 PM Refreshments-see LI calendar**

**9** IEEE, Nuclear & Plasma Sciences Society presents:  
**Topic: Fast Timing Readout For MRPC-TOP Detectors**  
 Speaker: Zhi Deng, University of Beijing  
 Location: Bldg 535, BNL; Lecture 2:30 PM

**15** IEEE, Engineering in Medicine & Biology Society presents:  
**Topic: Innovative Infusion Pump Technologies**  
 Speaker: Izabella Gieras, Clinical Engineering Director, Mt. Sinai Hospital  
 Location: NYU-Poly, Melville, NY  
 Refreshments 6:00 PM, Lecture 6:30 PM

**17** IEEE, Society on the Social Implications of Technology presents:  
**Topic: Can SSIT Also Include Societal Influence on Society**  
 Speaker: Dr. Richard LaRosa  
 Location: NYU-Poly, Melville, NY  
 Refreshments 6:00 PM, Lecture 6:30 PM

**22** IEEE, Power & Energy Society and Industry Applications Society  
**Topic: Solar PV for Engineers - Part 2/2**  
 Speaker: Greg Sachs  
 Locating: NYIT  
 Refreshments 6:00 PM, Lecture 6:30 PM

**28** ExCom Meeting  
 Location: Telephonics, Farmingdale, LI  
 Dinner 5:45 PM, Meeting 6:15 PM

## July 2010

**2** Long Island Consultants Network Meeting  
 Location: Briarcliffe College (the Great Room), **Bethpage, LI**  
**6:00 PM Refreshments-see LI calendar**

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## THE PULSE OF LONG ISLAND

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## Key to YOUR Benefits



Discover the Benefits of Membership

A monthly column by Nikolaos Golas, Membership Development Chairman

### *Mozy Online Backup and Storage Service for IEEE Members*



IEEE is partnering with **Mozy** to offer IEEE members its online backup services at an exclusive discounted rate. Protect your most important business documents, home movies, photos, music, and other digital information stored on your computer with **Mozy**. **Mozy** securely backs up all of your data off-site so in case of hard drive crash, lost laptop or virus, you can easily restore what's most important. Every photo, document, or song is safe with **Mozy**.

**Mozy.com** makes online backup possible for everyone with an affordable, secure solution that's easy to use. Check out the news section on the **Mozy.com** website to see all the awards they have received and what the experts are saying about **Mozy.com**.

**Mozy** was founded in 2005 and they are located in Pleasant Grove, Utah. They are part of Decho Corporation and they're focused on making simple things simple and complex things possible.

As the world's most trusted online backup **Mozy** provides service for both consumers and small businesses with more than 1 million customers and 50,000 business customers backing up 25+ petabytes of information to multiple data centers around the globe.

Mozy is owned by EMC Corporation, a Fortune 500 company. They are headquartered in Seattle, Washington with offices in Pleasant Grove, Utah; London, England; Cork, Ireland; Shanghai, China; Montreal, Canada; and Bangalore, India.

Your backup should be set up once, and then work automatically. Your backup files should be encrypted and stored in a secure, remote location that's only accessible to you from anywhere. Your backup system should be smart enough to only back up data that's not already been backed up, only back up parts of a file that have changed, and be able to back up open and locked files. Backup all type of files including:

- **Every photo**
- **Every home movie**
- **Every document**
- **Every song**
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All the important information in our life is now stored on a computer. Whether its photos and music or business documents and financial records, everything is digital. With Mozy, you can be sure your digital life will always be there when you need them.

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[http://www.ieee.org/memberonly/fap/mozy\\_program.pdf](http://www.ieee.org/memberonly/fap/mozy_program.pdf)

You will need your **IEEE** web account **User Name** and **Password** to access the discount for **Mozy**.





## Job Postings

**JOB**s from **Arrow Electronics** which has posted immediate openings at [https://arrow.myvurv.com//main/careerportal/Job\\_Profile.cfm?szOrderID=1517&szReturnToSearch=1&szWordsToHighlight](https://arrow.myvurv.com//main/careerportal/Job_Profile.cfm?szOrderID=1517&szReturnToSearch=1&szWordsToHighlight) for the following:

Field Applications Engineer (Altera)  
Arrow Electronics, Inc.  
Hauppauge, NY

At present, Arrow has an open position for a Field Application Engineer for Altera products in their Hauppauge, NY location.

The Field Application Engineer (FAE) will provide comprehensive technical support for customer circuit design and system development, with an emphasis on Altera FPGA products. You will be involved with customer presentations, semiconductor product introductions, and technical sales training for the local Arrow Electronics sales team. You will work with Arrow Electronics field sales management and marketing managers to develop and execute successful demand creation strategies for Arrow and selected digital and analog semiconductor suppliers.

Minimum Qualifications: Minimum BSEE or equivalent of 5 years of hands-on Altera design experience and various semiconductor products, or equivalent applications engineering experience.



## NEWS from IEEE-USA: Employment Up for U.S. Electrical Engineers and Computer Professionals

In what could be a positive sign of recovery for the U.S. economy, employment in three high-tech job categories electrical and electronics engineers; software engineers; and computer scientists and systems analysts -- returned to levels last seen in 2008, according to data released this month by the Department of Labor's Bureau of Labor Statistics.

For electrical and electronics engineers (EEs), employment grew 7.8 percent from the fourth quarter of 2009 to the first quarter of 2010, and now stands 16.1 percent above its historical low in the first quarter of 2009. Software engineering employment was essentially unchanged quarter to quarter, but remains 5.3 percent above its first-quarter 2009 low.

For computer scientists and systems analysts, first-quarter employment grew 4.7 percent and is now 14.5 percent above its second-quarter 2009 low.

The unemployment rate for EEs has fallen from a high of 8.6 percent in the second quarter of last year to 4.6 percent in the first three months of 2010. In the other job categories, joblessness grew despite the stable or positive employment numbers.

For software engineers, the unemployment rate went from 4.1 percent to 5.5 percent quarter to quarter. During that same time, joblessness for computer scientists and systems analysts rose slightly (5.2 percent vs. 5 percent). This trend might indicate that displaced employees in these areas are again seeking jobs.

"As we watch for signs of recovery, we think it's important to focus on the employment numbers," IEEE-USA President Evelyn Hirt said. "Re-employed engineers, scientists and other technology professionals will help create more jobs and ratchet the economy forward."

Unemployed and at-risk IEEE members can find help at <http://www.ieeeusa.org/careers/help/>. Career enhancement resources are available at <http://www.ieeeusa.org/careers/>.

The Long Island Chapter of the IEEE Microwave Theory & Techniques Society is presenting a lecture titled:

# An 8x8 Ka-band Antenna Array with a Highly Integrated Tx Frontend Module

Winfried Simon, IMST GmbH

Wednesday, 2010 June 2 at 6:00 PM

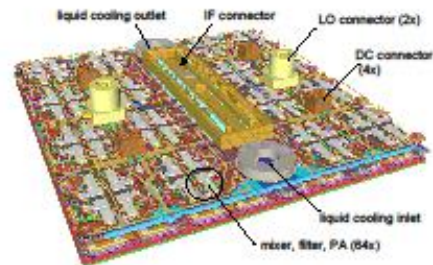
(This lecture is free and all are invited. Pizza and soda will be served at 6:00 PM.)

### Who Should Attend?

Design, test, and system engineers interested in antenna, multilayer packaging, and circuit design as well as those involved in electromagnetic simulation.

### Abstract:

The fundamentals and design of a highly integrated KA-band Tx frontend module will be presented. The integration and packaging techniques employed to fabricate the antenna, RF circuitry and cooling system as one functional block in LTCC technology will be discussed in detail. The efficient RF design process of the various functional blocks (antenna, LO feed network, calibration network, etc.) utilizing a full wave EM simulation software program will be explained. It will be shown that this system concept can be applied to large antenna arrays as needed to fulfil link budget requirements for satellite communication (in this instance) as well as for other phased array applications.



### Speaker Bio:

Winfried Simon studied Electrical Engineering at the Mercator University in Duisburg Germany where he received his Diploma Degree in 1997. Currently he is working as a senior engineer in the department of Antennas & EM Modelling at IMST GmbH in Kamp-Lintfort Germany. His primary fields of activity are electromagnetic simulations and the design of waveguide components, multilayer LTCC circuits and MEMS devices. He is lecturer for the European School of Antennas and author and co-author of more than 40 scientific publications.

### Location:

This lecture will be held at L-3 Communications Narda Microwave located at 435 Moreland Road in Hauppauge. Pizza and soda will be served starting at 6:00 PM, and the presentation will begin at 6:30 PM. (Please try to join us early and enjoy networking with your colleagues.) The lecture is scheduled to last 60-90 minutes. **The lecture is free and all are invited, however registration is required. A photo ID is needed to enter the facility.**

### Directions:

From LIE East: Take I-495 to exit 53. Stay on EXPRESS DR S. (Service Road) until you reach WICKS RD. Turn LEFT onto WICKS RD. WICKS RD becomes MORELAND RD. Cross over MOTOR PARKWAY and look for Narda on your right. Please use the main entrance parallel to Moreland Road.  
From LIE West: Take I-495 to exit 53. Exit at WICKS Road. Turn left at traffic light onto MOTOR PARKWAY. Take MOTOR PARKWAY to MORELAND RD. Make right turn onto MORELAND RD. and look for Narda on your right. Please use the main entrance parallel to Moreland Road.

### Registration:

Registration is required, and is available online only. Please visit the calendar page of the IEEE Long Island Website [www.ieee.li](http://www.ieee.li), click on the registration link, and fill out the form.

### Lecture Coordinator:

Eric Darvin, MTT Vice Chairman for the IEEE Long Island Section ([mtt@ieee.li](mailto:mtt@ieee.li))  
Jim Colotti, MTT Chairman for the IEEE Long Island Section ([mtt@ieee.li](mailto:mtt@ieee.li))

THE LONG ISLAND CHAPTER OF THE IEEE Nuclear & Plasma Sciences Society (NPS) presents:

## DEVELOPMENT OF FAST TIMING READOUT ELECTRONICS FOR MRPC-TOF DETECTORS

**Wednesday, June 9, 2010 at 2:30 PM**

Donuts and coffee will be served; the seminar is free; government issued photo ID required.

The Long Island Section of the IEEE chapter for Nuclear & Plasma Sciences will present a lecture on recent development of fast timing readout electronics for multi-resistive plate chamber (MRPC) detectors for time of flight (TOF) measurement. Two design techniques will be addressed to achieve 10ps

timing resolution: a fully current mode preamp and discriminator and FPGA based time-to-digital converter (TDC).

The lecture will be presented by Zhi Deng, Dept. of Engineering Physics, Tsinghua University, Beijing.  
Large Seminar Room, Building

535, Brookhaven National Laboratory.  
Time: 2:30 PM

Presented by IEEE NPS of LI  
Arlene Zhang, NPS Chair  
[arling@bnl.gov](mailto:arling@bnl.gov)

Please visit the Calendar Page of the IEEE Long Island Website at [www.IEEE.LI](http://www.IEEE.LI) and click on the registration link, and fill out the form.

THE LONG ISLAND CHAPTER OF THE IEEE Society on the Social Implications of Technology (SSIT) presents:

## CAN SSIT ALSO INCLUDE SOCIETAL INFLUENCE ON TECHNOLOGY?

**Thursday, June 17, 2010 at 6:00 PM**

Refreshments will be served at 6:00 PM; lecture begins at 6:30PM.

**Speaker:** Dr. Richard LaRosa ([sealevelcontrol.com](http://sealevelcontrol.com)), whose former career at Hazeltine Corp. was concerned with microwaves, surface acoustic waves, and low-noise devices.

**Abstract:** Social Implications of Technology should be broadened to include Social Influence “on” Technology and Science. Premise: We have to tighten the coupling between urgent human needs and the efforts of scientists, technologists, other highly

educated professionals and the grunts that make the system work.

The first program deals with the hurricane threat to our Gulf Coast caused by the Loop Current intruding into the Gulf of Mexico.

The second program is more speculative, dealing with the more serious problem of worldwide drought.

Perhaps SSIT members and others concerned with human needs may have some ideas on how to get some attention

focused on these world problems.

Date: Thursday June 17, 2010

Place: Polytechnic Institute of NYU

Long Island Graduate Center  
105 Maxess Road, suite N201,  
Melville, NY 11747 (Please enter from the rear entrance).

Presented by IEEE SSIT of LI  
Vic Zourides, Chair  
([vzourides@ieee.org](mailto:vzourides@ieee.org))

Please visit the Calendar Page of the IEEE Long Island Website at [www.IEEE.LI](http://www.IEEE.LI) and click on the registration link, and fill out the form.



The Long Island Section Power & Energy Society and  
Industry Applications Society Joint Chapter  
Invites you to a presentation on  
**"Solar PV for Engineers – Part 2/2"**

This two part presentation series is tailored specifically for practicing Engineers and Architects and provides the professional an intermediate to advanced overview of the design and contracting process for both residential and commercial scale photovoltaic systems. Participants in this course shall obtain a more detailed understanding of the following Solar Photovoltaic topics and issues:

- system classifications; individual components;
- flat & pitched roof mounting; roof types; contractor selection;
- electrical design & interconnections;
- Inverter design, panel layout, code issues
- optimizing solar production; architectural 'best practices';
- wind calculations; structural considerations; endorsing;
- regional considerations; other resources.



*featuring* **Greg Sachs**

Chief Technology Officer, EmPower CES, LLC

**Greg Sachs, P.E.** is CTO of EmPower CES, LLC, a Solar Contracting & Consulting company on Long Island. He is an elected Officer of Long Island Solar Energy Industries Association (LISEIA) and LISEIA-LIPA Commercial/Technical Committee Chair. He is the co-founder of the US Merchant Marine Academy (USMMA) Alternative Power Program and has served as a USMMA Electrical Engineering Instructor. Mr. Sachs is a Masters candidate in the MIT-Sloan Systems Engineering & Management program.

**Tuesday June 22, 2010**

6:00PM

New York Institute of Technology (Northern Blvd., Old Westbury, NY)  
Saltan Hall - Room SC1



This lecture will provide **0.2 CEU credits or 2 PDH**  
CEU fee is \$30 – make checks payable to IEEE Long Island Section

All are welcome - **NO** cost to attend - Pizza will be provided  
Proof of citizenship and photo ID are **NOT** required

If you wish to attend, please register by clicking on the following address  
<http://www.ieee.li/calendar/index.htm>

# Long Island's Electronic History

by Jesse Taub, IEEE Long Island Section Historian

As part of our on-going series, this month's Pulse highlights the history of Underwriters Laboratories. They have been in business for 116 years and their story will be told in a two-part series. This issue chronicles their accomplishments in insuring electrical products safety. The next issue will highlight many of their design contributions that have contributed to improved product safety

## Underwriters Laboratories: Working for a Safer World since 1894

By Thomas Lanzisero and Bob DeLisi, UL

### Part 1

Underwriters Laboratories® (UL) is an internationally recognized product safety testing and certification organization. Founded in 1894, UL has earned a reputation as a global leader in product safety standards development, testing and certification. The New York engineering and test facility of Underwriters Laboratories was established in Melville in 1963, relocated and expanded from its former New York City location. At that time, Walt Whitman Rd was an unpaved lane, the Melville Marriott was a drive-in movie theater and sod farms ruled the landscape.

UL evaluates thousands of products, components, materials and systems for compliance to specific requirements. UL's time-tested system supports governmental product safety regulations, and it complements federal, state and local government public safety initiatives. Today, UL helps companies bring safer products to the global marketplace, whether they are electrical devices, programmable systems or building products, while supporting the management and quality system processes of these same companies. UL supports regulators, retailers, insurers and consumers in the supply chain.

Underwriters Laboratories was founded in 1894 by William Henry Merrill. Merrill began his career as an electrical engineer in Boston, Mass., and at the age of 25 was sent to Chicago to investigate fire safety issues associated with electrical wiring at the Colombian Exposition (also called The Chicago World's Fair). The problem was that the Palace of Electricity consisted of a frightening entanglement of untried electrical hook-ups in close proximity to a massive flammable facade. Before the fair opened, fires broke out all over the place ... frequently! Insurance companies were more than reluctant to risk the great losses predicted, and those deep concerns almost stopped the fair. Merrill incorporated best practices throughout the Palace of Electricity and stopped the fires. The fair and demonstrations of electricity were a huge success, and the market for electricity was ready to take off.

Seeing the growing potential for research and investigation of electrical apparatus, Merrill opened UL's doors, then known as Underwriters' Electrical Bureau. The first year the lab opened, its staff of three conducted tests on products and issued 75 reports to customers on a budget of just \$3,000. By 1897, Underwriters' Electrical Bureau published the first "List of approved fittings and electrical devices" based on test reports published by the laboratory – firmly establishing UL's mission of safety in the eyes of consumers. Merrill stated "The aim of UL is to secure the best and fairest opinion regarding the merits or demerits of every device, system, machine, or material in respect to life and fire hazards and accident prevention and to have the work so conducted and reviewed as to secure accuracy and uniformity in its findings."

But not everyone was comfortable with this magical thing called electricity, especially the insurers. Fires, injuries and deaths were widely reported by the media. Here's the situation: A manufacturer wants to sell this new and exciting technology, consumers want it, but are afraid it's going to cause fires and insurers are afraid it's going to burn down the building, resulting in financial loss. UL started developing standards and performing conformity assessments to make it safe to bring electricity into a building, so consumers and insurers could feel comfortable investing in new technology.

Quickly, UL moved to the forefront of leadership by establishing the safety system that remains in place in North America today. It was UL that developed the approach of testing products in the laboratory AND

checking products at the manufacturing location to determine that they continued to meet requirements. Additionally, UL recognized that developing standards independent from installation codes would create an untenable situation for product manufacturers. UL remains actively involved today in model code development to make sure its safety requirements make it possible for manufacturers to market a code-compliant product.

Some early UL accomplishments are shown in the figures at the end of this article.

For more than 115 years, UL has committed its resources and energies to making the world a safer place. The UL mission includes elements to promote safe living and working environments by the application of safety science and hazard-based safety engineering; support the production and use of products which are physically and environmentally safe and to apply its efforts to prevent or reduce loss of life and property; and advance safety science through research and investigation.

Today, UL is an independent product safety certification organization that has been testing products and writing standards for safety, spanning three different centuries. Each year, UL evaluates more than 19,000 types of products, components, materials and systems annually with 20 billion UL Marks appearing on 66,000 manufacturers' products. UL's worldwide family of companies and network of service providers includes 68 laboratory, testing and certification facilities serving customers in 102 countries.

UL Melville currently handles a variety of industries associated with electronics, including Appliances (HVAC/R, Switches, Motors, Controls), Chemicals (Plastics, Electrical Insulation Systems), Energy (Alternative, Renewable), Health Sciences (Medical Devices), High Tech (Consumer Electronics, Information Technology Equipment, Lasers, Power supplies, Printed Wiring Boards, Telecommunications Equipment), Life Safety and Security (Fire Equipment, Security and Signaling, Alarm System Certificate Services), Lighting (General, Decorative, Signs), Power and Controls (Power Distribution, Functional Safety, Industrial Control, Robotics, Semiconductor, Smart Grid, Smart Meters, Electric Vehicle Infrastructure) and Wire and Cable (Appliance Wiring Material, Optical Fiber).

### UL Historical Timeline

The graphic features a snippet of a 'LABORATORY RECORD' document at the top. The document is dated 'March 24 1894' and contains the handwritten text: 'device to be used as a Noncombustible Insulator'. Below this is a horizontal timeline with years from 1890s to 2020s. The 1890s is highlighted in yellow. Below the timeline, the text 'UL Historical Timeline' is displayed. To the left is a portrait of William Henry Merrill. To the right, key events are listed: 1894 (The Birth of UL), 1895 (First-Year Metrics), and 1899 (1,000 Test Reports). A small image of a light bulb is shown at the bottom right.

**LABORATORY RECORD.**  
1890s Rec'd March 24 1894 Ret'n'd 189  
device to be used as a Noncombustible Insulator

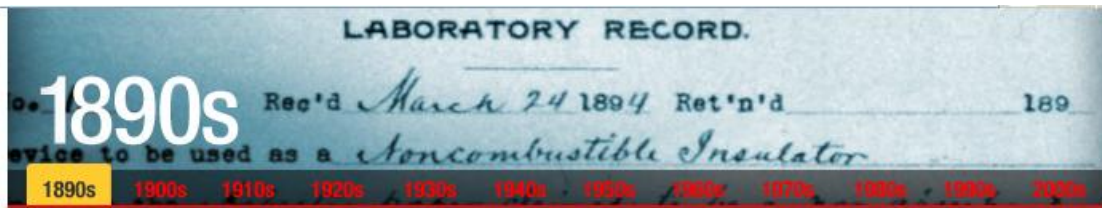
1890s 1900s 1910s 1920s 1930s 1940s 1950s 1960s 1970s 1980s 1990s 2000s 2010s 2020s

## UL Historical Timeline

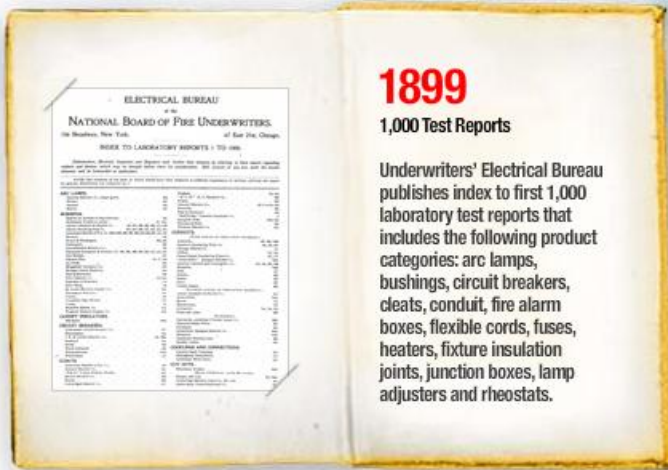
**1894**  
The Birth of UL

1895  
First-Year Metrics

1899  
1,000 Test Reports



## UL Historical Timeline



- 1894  
The Birth of UL
- 1895  
First-Year Metrics
- 1899  
1,000 Test Reports



## UL Historical Timeline



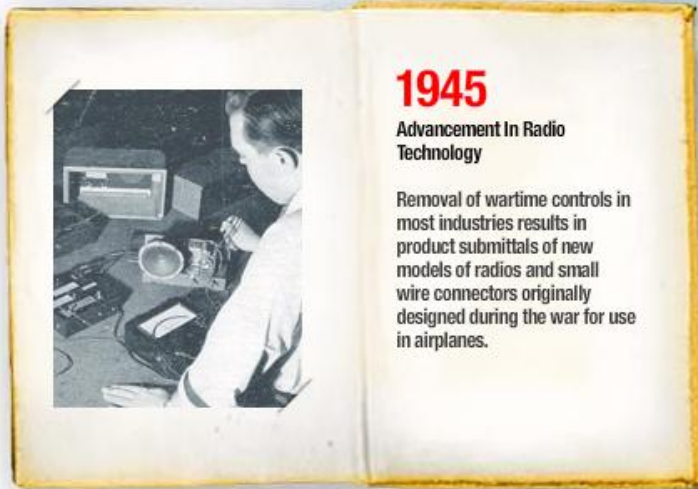
- 1903  
First Standard For Safety
- 1907  
The Age Of Audio
- 1908  
Fire Safety Matches



# 1940s

1890s 1900s 1910s 1920s 1930s 1940s 1950s 1960s 1970s 1980s 1990s 2000s

## UL Historical Timeline



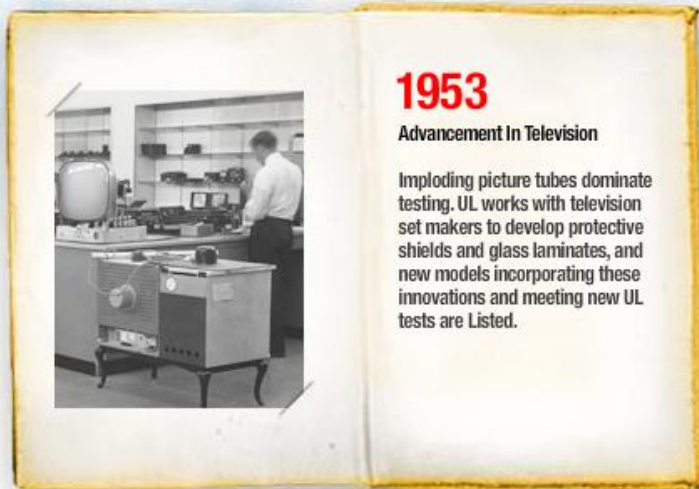
- 1941  
UL And Plastics
- 1942  
UL Aids The War Effort
- **1945**  
Advancement In Radio Technology



# 1950s

1890s 1900s 1910s 1920s 1930s 1940s 1950s 1960s 1970s 1980s 1990s 2000s

## UL Historical Timeline




- **1953**  
Advancement In Television
- 1956  
International Expansion
- 1958  
Fire Protection Laboratory





## UL Historical Timeline




**1975**  
Television Fires

After UL staff investigated 10,000 incidents of TV tube fires, UL develops the landmark federal television standard adopted by the Consumer Product Safety Commission as federal regulations for televisions.

- 1971  
First Life Vest Certified
- **1975**  
Television Fires
- 1978  
First Personal Computers Tested



## UL Historical Timeline



**1978**  
First Personal Computers Tested

In the late 1970s, the personal computer truly came of age. UL certifies the first personal computers in 1978, leading the way for the personal computer to be named Time's Man of the Year in 1983!

- 1971  
First Life Vest Certified
- 1975  
Television Fires
- **1978**  
First Personal Computers Tested





Engineering in Medicine & Biology Society (EMBS) of the IEEE Long Island Chapter presents a lecture on:

## **Innovative Infusion Pump Technologies**

**Izabella Gieras, Clinical Engineering Director - Aramark/Mt. Sinai Hospital**

**Tuesday, June 15<sup>th</sup> at 6:00 PM**

**This seminar is free and all are invited.**

**Refreshments will be served at 6:00 PM, lecture starts at 6:30 PM**

### **Lecture Description**

Izabella Gieras will present on the hospital wide infusion pump replacement project, focusing on the technology overview, application, design, human factors engineering principles, clinical acceptability and the overall project management. Based on the recent advancements in the infusion therapies, Ms. Gieras will also present on the integration of these pumps with various peripheral applications, further supporting the safe and effective healthcare environment for all.



Izabella Gieras

### **Speaker Biography**

Izabella Gieras is the Director of Clinical Engineering at Aramark/Mount Sinai Medical Center. She recently moved to the NYC after serving as the Director of Technology Management at William Beaumont Hospital in Royal Oak, MI. Izabella holds a B.S. in Electrical Engineering from the University of Cape Town in South Africa, a M.S. in Biomedical Engineering from the University of Connecticut and an MBA from Walsh College in MI.

### **Location**

NYU-Poly, 105 Maxess Rd, Melville, NY: Room 117 on the second floor within Poly's space. Please enter at the back of the building, the most northerly (North) entrance. The elevator proximate the back door will bring you up to the second floor, from which you will walk a few steps to the Poly entrance.

### **Registration**

Registration online is required. Please visit the calendar page of the IEEE Long Island Website <http://www.ieee.li/>, and complete the form. The lecture is free. I simply need you to register, so I have an idea of how much food needs to be ordered. I look forward to seeing you.

### **Seminar Coordinator**

**Allison Moreno, IEEE EMBS Vice Chair, LI Chapter, [Allison.Moreno@ieee.org](mailto:Allison.Moreno@ieee.org)**

*Presented by IEEE EMBS of LI*

*Allison Moreno, EMBS Vice Chair ([Allison.Moreno@ieee.org](mailto:Allison.Moreno@ieee.org))*

*John Vodopia, EMBS Chair ([jvodopia@ieee.org](mailto:jvodopia@ieee.org))*

**Products change.  
The need for safety doesn't.**



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The products once conceived as part of the future are making their way into our lives, every day. With the introduction of new technologies come risks. For over a century, Underwriters Laboratories has been helping to reduce those risks by taking a comprehensive approach to product safety and certification. We develop safety standards and rigorously test to certify that the products you bring home are safer and more reliable. That's why UL's reputation, experience, knowledge and brand name have been recognized and trusted worldwide. Trust more than 116 years of safety leadership. Trust UL.

 Visit [www.ul.com](http://www.ul.com) to learn more.



**the standard in safety**

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Laboratories**

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## **IEEE Membership Savings UL University Offers IEEE Members 15% Discount**

**Underwriters Laboratories University (ULU)** has established a discount code that will provide all **IEEE** members with a 15 percent discount off the price of all **ULU** public, instructor-led workshops and online training programs.

Program topics include:

- **Appliances**
- **Consumer Electronics Equipment**
- **Fire and Security**
- **Hazard Based Safety Engineering (HBSE)**
- **Hazardous Locations**
- **Industrial Control Equipment**
- **Information Technology & Communications Equipment**
- **International Certification / Market Access**
- **Lighting**
- **Lightning Protection**
- **Medical Devices / Risk Management**
- **Photovoltaics (PV)**
- **Plastics (Specifying & Evaluating Materials for Electronic, Electrical, Mechanical and Photovoltaic Module Applications)**
- **Printed Wiring Boards (Specifying in End-Product Applications)**
- **Restricted Substances (QC08000 / IECQ HSPM) Managing Hazardous Substance Directives, Regulations & Compliance (RoHS, Restriction of Hazardous Substances)**
- **Signs, Electric**
- **Test, Measurement & Laboratory Equipment**

The discount is applied during registration, which can be accomplished online at [www.uluniversity.com](http://www.uluniversity.com), or by calling 1-888-503-5536 in the U.S. or the country-specific number posted on the ULU website. To receive the discount, members must enter or mention the discount code **IEEE2010**. If you or any member has specific questions regarding ULU products or services, please call UL University at 1-888-503-5536 or email [uluniversity@us.ul.com](mailto:uluniversity@us.ul.com).

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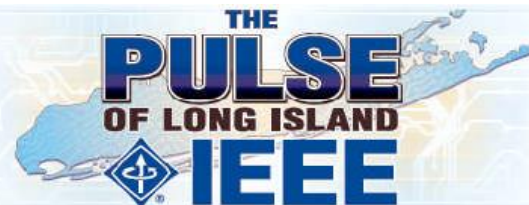
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## Attention Long Island IEEE Members!

The PULSE needs your support!

Please send any articles, notes of interest, letters to the Editor, Industry news, job postings for publication in the June PULSE

Regards,  
John F. Vodopia,  
Pulse Editor

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[gbodner@bodnerorourke.com](mailto:gbodner@bodnerorourke.com)

# LISAT2010

## LISAT Conference Has a Successful 6<sup>th</sup> Year

The 2010 IEEE Long Island Systems, Applications, and Technology (LISAT) Conference was held on May 7, 2010, and marks the sixth successful year of the conference. The conference was held once again at Farmingdale State College, in Farmingdale, NY.

Highlights of LISAT2010 included three parallel technical tracks, a product applications track, and a 6-hour CEU session. In addition, an exhibits hall featured 19 of Long Island's technology-industry companies, academia, professional societies, and economic-development organizations.

In previous years LISAT, in conjunction with the Farmingdale College Foundation, has provided scholarships to FSC engineering-technology students, and the tradition continued this year with five scholarships being awarded to FSC engineering-technology students. What was new this year was the addition of two scholarships outside of engineering – one to a student in the school of arts and sciences recognizing the social implications of technology, and one to computer systems student.



General Chair Dave Mesecher of Northrop Grumman Opens LISAT2010

### LISAT2010 Committee

Dave Mesecher (Northrop Grumman) General Chair  
Dr. Charles Rubenstein (Pratt Institute) Co-Chair  
Brian Quinn (Verizon) Treasurer  
Steven Rubin (Dilworth & Barrese, LLP) Secretary  
Dan Rogers (Telephonics) Technical Program Committee (TPC) Chair  
Jesse Taub (Independent Consultant) TPC Co-Chair  
David Bomzer (Day Pitney LLP) TPC  
Dr. Susan Frank (Farmingdale College) TPC  
Dr. Ronald Pirich (Northrop Grumman) TPC  
Dr. Stefan Robila (Montclair State) TPC  
Thomas Roslak (Motorola) TPC  
Dr. Robert Silberstein (Northrop Grumman) TPC  
Dr. Wendy Tang (Stony Brook University) TPC  
Dr. Stefan Robilla (Montclair University) Publications Chair  
Alison Rubin (Marketing/Graphic Design Consultant) LISAT Bulletin Designer & Editor  
Terry Stratoudakis (ALE System Integration) Product Applications Chair & Exhibits Committee Co-Chair  
David Bomzer (Day Pitney LLP) Exhibits Committee Co-Chair  
Dr. Fred Kruger (Consultant) Exhibits Committee  
Ted Pappas (National Grid) Education Committee Chair  
Irwin Weitman (Consultant) Education Committee  
Anthony Yackovich (Comtech Associates) Publicity Chair  
Dr. Babak Beheshti (New York Institute of Technology) Fund Raising Chair  
Dr. John Fiorillo (Farmingdale State College) Facilities Chair  
Nick Golas (Telephonics) Member-at-large  
Sandy Mazzola (BAE Systems) Member-at-large  
Jon Garruba (Long Island Section Chair) Member-at-large  
John Peterson (Peterson Associates) Member-at-large

Also recognized at LISAT were two Long Island companies that received the 2009 *Supporting Friend of IEEE* award for provided outstanding support to the Long Island Section: InterDigital for continuous financial and technical support of LISAT, and Telephonics for providing facilities for Section meetings and encouraging employee participation in the IEEE.

As a result of his becoming the IEEE Region 1 Director, this was the first year that LISAT's founder, Dr. Charles Rubenstein or the Pratt Institute, did not chair the conference. He did, however, take the role of Co-Chair, and helped his successor Dave Mesecher of Northrop Grumman Aerospace Systems learn the ropes, with tremendous help from the entire LISAT team.

## LISAT2010 Photos with Captions Follow:



Engineering Technology LISAT2010 Scholarship Winners (front row): William Titus, Gino Vargas, Steve Bissereth, Michael Forte, and Daniel Ford. Back row: FSC IEEE Student Branch Counselor John Fiorillo, IEEE Region 1 Director Charles Rubenstein, LISAT2010 General Chair Dave Mesecher, School of Engineering Technologies Dean Kamal Shahrabi, FSC President Hubert Keen, FSC Foundation President Richard Overton, FSC VP of Development Henry Sikorski, FSC VP Academic Affairs (Provost) Lucia Cepriano, Asst. Dean and Engineering Technology Department Chair Socrates Thanasas

SUNY Stony Brook students Mark (Guodong) Feng and Zimu Li present their research in the LISAT2010 Systems Track



LISAT2010 Attendees visit Exhibitor booths in the LISAT2010 Exhibits Hall



George Ello of National Grid lectures in the LISAT2010 CEU Track



Dr. Andres Fortino of NYU-Poly delivers a paper in the LISAT2010 Applications Track



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Webinar Series

**DATE:** June 3rd, 2010

**TIME:** 2 PM ET / 11 AM PT /  
18:00 GMT  
(Duration: 1 hour)

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demand for 12 months after  
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### [AGILITY DEVELOPMENT OF SAFETY CRITICAL SYSTEMS](#)

**DATE:** Thursday, June 3rd, 2010  
**TIME:** 2:00 PM ET / 11:00 AM PT / 18:00 GMT  
(Duration: 1 hour)

Software is assuming an ever-increasing role in the control of potentially dangerous equipment. This applies to fly-by-wire aircraft, nuclear power plants, industrial control systems, and smaller-scale devices, such as drive-by-wire automobiles, microwave ovens, and medical equipment. As product development timelines continue to be compressed, how can development organizations apply the principles of agile methods to the development of highly-reliable and safety systems?

This talk, by the author of *Real-Time Agility* and *Real-Time UML Workshop for Embedded Systems*, presents a workflow with a core set of development practices tailored for safety critical systems development that produces the right set of work products at the right time with the minimum cost and effort.

**Presenter:**

**Bruce D Souglass, Ph.D., Chief  
Evangelist, IBM**

Bruce has over 30 years experience designing safety-critical real-time applications in a variety of hard real-time environments and has a doctorate in neurocybernetics. He is a well-known writer on these topics, having authored a number of books, including "*Real-Time Agility*", and "*Real-Time UML Workshop*".



**Moderator:**

**Dexter Johnson,**

Analyst at Cientifica, a business intelligence company for

### System Requirements

- 200 MHz or faster
- 64 MB RAM minimum/128 MB recommended
  - 16 bit sound card
- 16 bit color video display card
- Windows XP/Windows Vista
  - Apple Mac OS X 10.4
- Microsoft Windows Player 10 or 11
  - RealPlayer 10.X
- Microsoft Internet Explorer 6.0 or later,
- Mozilla Firefox 1.5 or later for Windows

emerging technologies  
Author and Editor of several market reports on nanotechnology  
Contributing editor for IEEE Spectrum's Tech Talk  
Program Director for numerous international conferences on  
nanotechnology, fiber optic telecommunications and IT

### WHO SHOULD ATTEND:

§ § § § §  
Software Engineers  
Test Engineers  
Software Developers  
Embedded Systems Engineers  
Engineering Management  
Academia

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## Other Webinars in the IEEE Spectrum Tech Insiders Series

### [Capture the Concept -- A First Look at COMSOL Multiphysics version 4.0](#) (June 16th 2010)

In this webinar, you will be introduced to COMSOL Multiphysics 4.0, featuring the latest advances in usability-- The COMSOL Desktop and Model Builder. These tools make creating realistic models fast and efficient.

<http://spectrum.ieee.org/webinar/1587987>

### [Calibre DRC Automated Waiver Technology](#) (Available on demand)

The Auto-Waiver technology significantly reduces the complexity of waiving false errors without the issues and limitations of historic approaches. In this webinar, the Auto-Waiver approach for Calibre DRC will be presented.

<http://spectrum.ieee.org/webinar/1504908>

### [Top 10 Clean Energy Business Opportunities -- Design, Prototype, and Deploy](#) (June 24th, 2010)

Learn about 10 clean energy business opportunities that address important industry needs in the smart grid, wind, solar, biomass, and energy storage markets. Gain useful tips for creating a prototype and an introduction to specific starter kits, reference designs, and other tools you can use to shorten time to market for high-quality products.

<http://spectrum.ieee.org/webinar/1595736>

## Upcoming Webinars

20 May, 2-3 PM ET  
24 Jun., 2-3 PM ET  
22 Jul., 2-3 PM ET  
19 Aug., 2-3 PM ET  
16 Sep., 2-3 PM ET

### [Webinar Series: Lessons from Bootstrap to Billions](#)

Dr. Dileep Rao, author of *Lessons from Bootstrap to Billions*, will lead a series of IEEE-USA webinars for future and seasoned entrepreneurs. The webinars will be based on Rao's book, which illustrates how, contrary to currently popular belief, entrepreneurs can bootstrap to success. *Bootstrap to Billions* shows entrepreneurs and managers how business giants used alternate financing options to grow. The first webinar in this series is on 20 May.

<http://www.ieeeusa.org/careers/webinars/2010/Bootstrap-to-Billions.html>

**SPECIAL:** For a limited time, view Dr. Rao's first seminar based on *Lessons from Bootstrap to Billions*, recorded on 21 January 2010. <http://ieeedi.na4.acrobat.com/p60775420/>

10 June 2010  
2:00-3:00PM EDT

### [High-Skills Immigration Reform Update](#)

Presenter: Russ Harrison

Get the inside story on the state of immigration reform from IEEE-USA immigration lobbyists. For the past decade, IEEE-USA has been trying to persuade Congress to reform America's high-skill immigration system. As Congress prepares to address comprehensive immigration reform, join us to discuss the status of high-skill immigration reform and its prospects for 2010.

<http://www.ieeeusa.org/careers/webinars/2010/webinar-06-10-10.html> [[register now](#)]

17 June 2010  
2:00-3:00PM EDT

### [Consulting 102](#)

As a follow-up to last year's webinar "Consulting 101," Gary Blank is back to provide more valuable information consultants can use to improve their practice. This webinar will address the most important challenge facing consultants "How To Find Clients." He will pick up where he left off from his previous webinar "Consulting 101," which focused on how to get started in consulting, this webinar will present several proven methods for finding clients for consulting services and also how clients can find consultants.

<http://www.ieeeusa.org/careers/webinars/2010/webinar-06-17-10.html>



## Webinar Series: Lessons from Bootstrap to Billions

Presenter: Dr. Dileep Rao

### About the Series

Dr. Dileep Rao, author of [Bootstrap to Billions](#), will lead a series of IEEE-USA webinars for future and seasoned entrepreneurs. The webinars will be based on his book, which illustrates how, contrary to currently popular belief, entrepreneurs can bootstrap to success. *Bootstrap to Billions* shows entrepreneurs and managers how business giants used alternate financing options to grow. Most of them — about 80 percent — never got venture capital. These entrepreneurs found their best market; designed the right strategy; developed the organization culture and leadership; and reached the top with capital-efficient strategies that minimized the need for capital. Lack of money did not constrain their growth. Many entrepreneurs may be better off using alternate financing to build and control their business, and to create wealth and keep it. Dr. Rao's presentations are broken down into a series of four webinars:

### [Register Now](#)

The Event Code is 4BN. From your confirmation form you will need your attendee reference code # which will be on your e-mail copy of the registration.

24 June 2010, 2-3 PM EDT From Financing Needs to the Right Financial Structure

- 22 July 2010, 2-3 PM EDT      Fine-Tune Financing: Finding the Right Sources/Instruments
- 19 August 2010, 2-3 PM EDT      Reduce the Agony: Learn How to Find Financing
- 16 September 2010, 2-3 PM EDT      After the Financing: Better Decisions & Control

### About the Speaker

Dileep Rao, financier, columnist, adjunct professor and workshop leader, has partnered with the IEEE-USA Entrepreneurial Activities Committee to conduct a series of webinars for you. Dr. Rao financed more than 450 businesses and real estate projects as the vice-president of a venture development financial institution.

Currently, Rao is an advisor to governments, Fortune 1000 corporations, development financial institutions and entrepreneurs on business development and financing. He also teaches New Business Development & Financing in MBA and Executive MBA programs in the United States, Europe and Asia, and has been selected as Outstanding MBA Teacher at the Carlson School of Management located at the University of Minnesota. Rao is an entrepreneurial finance columnist for *Forbes.com*, and has written such acclaimed books as *Handbook of Business Finance & Capital Sources and Business Financing: 25 Keys to Raising Money*. He also holds two engineering degrees and a Ph.D. in Business Administration.

### Registration Fees

Registration for individual webinars is \$69 each for IEEE members (\$99 for non-members), or you can register for all five webinars for the discounted member fee of \$109 (\$205 for non-members). As part of your registration fee, you will receive a copy of Dr. Rao's workbook, *Lessons from Bootstrap to Billions*. You will need the workbook during the webinar, as Dr. Rao has indicated that he will refer to items in it during these sessions. After the webinar, you will also receive a copy of his presentation.

Register at:

<https://icm3.ieee.org/eventmanager/onlineregistration.asp?eventcode=4BN>

Check the following websites for additional free webinars.

IEEE Communications Society Webinars

<http://www.comsoc.org/webinars>

IEEE Spectrum Webinars

<http://spectrum.ieee.org/webinar/>

IEEE GOLD Webinars

[http://www.ieee.org/membership\\_services/membership/gold/events/](http://www.ieee.org/membership_services/membership/gold/events/)

IEEE Job Site Webinars

<http://careers.ieee.org/webinars/webinars.php>

IEEE Computer Society Webinars

<http://www.computer.org/portal/web/webinars>

IEEE-USA Webinars

<http://www.ieeeusa.org/careers/webinars/>

# LISAT2011

Seventh Annual IEEE Long Island Systems, Applications and Technology Conference

Friday, May 6, 2011

The Institute for Research & Technology Transfer at Farmingdale State College  
State University of New York - Farmingdale, NY

## ***Preliminary 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, along with an Exhibit Hall. We are currently soliciting submissions for participation in both the Technical Program and the Exhibit Hall, and are interested in papers, presentations, and exhibits that showcase the development and use of technology by local organizations.

LISAT 2011 will also provide the opportunity for select student papers to be presented. Undergraduate and graduate students are encouraged to submit papers in an area of their interest or current work.

Preliminary acceptance to the Technical Program will be based on a 300-to-500-word abstract. Authors of accepted abstracts will be required to provide a six (6) page IEEE standard manuscript (in MS Word or LaTeX format) for publication in IEEE *Xplore*, and will be required to make a power point 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:

<b>LISAT2011 Key Dates</b>	
<b>Abstracts Due</b>	<b>Oct 31, 2010</b>
<b>Notification of Accepted Abstracts</b>	<b>Nov 15, 2010</b>
<b>Manuscripts for publication (MS Word) and copyright releases due</b>	<b>Feb 15, 2011</b>
<b>Notification of final acceptance of manuscripts</b>	<b>Feb 28, 2011</b>
<b>Presenter Registration Fee Due</b>	<b>Mar 15, 2011</b>
<b>Power Point slide presentation due</b>	<b>April 1, 2011</b>
<b>LISAT2011 Conference</b>	<b>May 6, 2011</b>

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