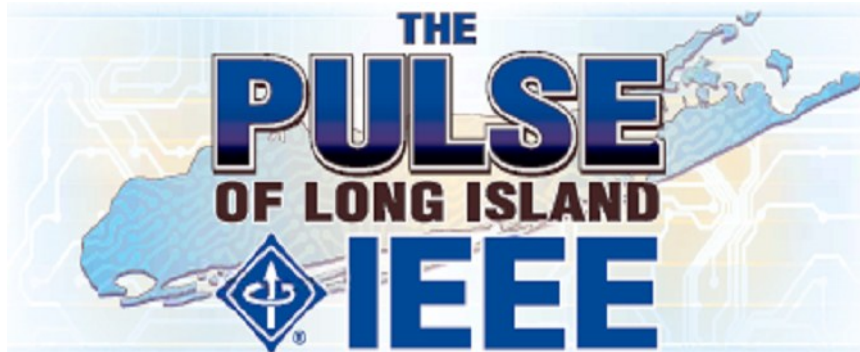


PRODUCED BY THE
LONG ISLAND
SECTION OF THE
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ELECTRICAL &
ELECTRONIC
ENGINEERS



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February 2012

Inside this issue:

Awards Banquet	4 - 6
LISAT2012	7
Long Island's Electronic History	8
February Seminars & Lectures	9
Phadke Associates Webinar	10 - 11
Region I Student Conference	12
Fellow Nominations	14
IEEE USA	16
2012 IEEE Region I Awards	17
Engineer's Week	18-22
Long Island Consultants Network	24



Chair's Message By Susan Frank, Chair IEEE Long Island Section

As the end of my first month in office approaches, I ask myself what is the magic that draws over 400,000 members to the IEEE and drives its volunteers. Some of the obvious benefits include staying current in engineering and computer topics through publications, local talks, webinars, and conferences, many of which are free or discounted, discounts on insurance and other services, and professional networking. In addition, there are several intangible benefits that those lucky enough to be in the Long Island Section are privy to.

The Long Island Section has a culture of inclusiveness and camaraderie. Nothing beats the deep relationships that are developed over several decades with people that build some of the hottest technology around, who can grasp the true extent of the work ethic that it takes to do so, and grasp the complexity of the problems that you need to discuss. You can connect directly and indirectly with the engineers and computer professionals who, like you, have been driven by the desire to solve challenging and important problems, to work with intelligent people, and to contribute to our nation's security and the betterment of society. You are able to share the IEEE-LI experience some of the most important people in the area as you peruse through PULSE newsletters, awards winner biographies in the Awards Banquet programs, and past leader information, all archived on the Long Island Section website. The Awards Com-

mittee does its best to recognize all of the unsung heroes in our field. Please be sure to notify them if you are aware of any worthy awards candidates.

This September marks the 60th anniversary of the PULSE and to celebrate our Webmaster, James Colotti, has started scanning the earliest issues so they could be posted on the website. Reading the first Chairman's Message, by 1952 Chairman, Charles J. Hirsch, it is clear that our goals are fundamentally the same as the Long Island Sub Section goals that he writes about: *The purpose of this pamphlet is to act as mutual conductance between your Executive Committee and you and, by feedback, to keep it working for your benefit. Please comment on our future plans before the future arrives...It is the intention of your Executive Committee to present papers of broad and timely interest; papers that widen the frontiers of our profession and stir the imagination.*

Some of the more tangible benefits are in the form of upcoming events, listed in this newsletter and on the website. Students are encouraged to attend the [Region I Student Conference](#) on March 10-11, 2012 at the Marriott Hartford in Hartford, Connecticut. There are several competitions, and invited speakers, and it is co-located with the Region I Volunteer Training Workshop, facilitating networking with many established members of the IEEE community. Registration deadline is February 20, 2012.

Did you know that as an IEEE or Computer Society member you can enjoy a free online subscrip-

tion to IEEE Transactions on Visualization and Computer Graphics? To take advantage of this member benefit, log in to your IEEE account, then in the IEEE shop search for Visualization and Computer Graphics, choose IEEE Transactions on Visualization and Computer Graphics Subscription - Electronic. Add the free subscription to your cart and check out.

I encourage you to get involved with the Long Island Section. Check the IEEE Long Island Section Calendar in this newsletter, or our website, for details about the many technical meetings, conferences and workshops where you can network, earn CEU credits, participate in STEM initiatives, and stay in tune with the latest breakthroughs in technology. Also listed are the dates for the monthly Executive Committee meeting, held at Telephonics in Farmingdale. This is an open meeting that you can attend to see what's going on in the Section. Just drop me an email so I can add your name to the attendance list.

Section volunteers are crucial to the success of our Section. If you are interested in volunteering, the Long Island Section webpage contains a list of [current positions](#). Please look at it and choose a vacant task you would like to try; we'll find you a place if you're interested.

Best Regards,
Susan Frank, PhD
Chair, IEEE Long Island Section
chairman@IEEE.LI

Calendar of Events

February 2012

February 1st

MTT Society Meeting
Digital Predistortion for Everyone and by Everyone
By Murtha Upmaka
6:00pm Refreshments 6:30pm Lecture
Narda L3 - Hauppauge, NY

February 1st

IEEE Consultants Network of Long Island
America Invents Act - 2011 Patent Reform Act
By Gerald T. Bodner
7:00pm Lecture
Briarcliff College- Bethpage, LI

February 16th

National Engineer's Week Seminars
Dave & Busters - Farmingdale, LI

February 27th

EXCOM Meeting
5:45pm Dinner 6:15pm Meeting
Telephonics - Farmingdale, LI



**ENGINEERS
WEEK® 2012**
February 19-25

March 2012

March 7th

IEEE Consultants Network of Long Island
Briarcliff College- Bethpage, LI

March 19th

EXCOM Meeting
5:45pm Dinner 6:15pm Meeting
Telephonics - Farmingdale, LI

March 29th

Long Island Section Awards Banquet
Hyatt Regency - Hauppauge, LI

March 22nd & March 23rd

International Energy and Sustainability
Conference 2012
Farmingdale State College - Farmingdale, LI

For more information about these meetings and lectures,
please visit:

<http://www.IEEE.LI/calendar/index.htm>



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The IEEE LI Section Website

The IEEE LI Section website is update regularly to reflect recent section activity and upcoming events. Each society and affinity group has a dedicated page which describes their function and includes contact information.

Visit our site at: www.IEEE.LI

Consultant's Network of Long Island

The Consultant's Network of Long Island maintains a referral service of engineering, computer, managerial & technical professionals. For more information, please visit their website at www.consult-li.com.

Membership Development

For more information on membership with the Long Island Section of the IEEE contact:

Nikolaos Golas 631-755-7059

membership@IEEE.LI

2012 IEEE Long Island Section Awards Banquet



IEEE

Is Proud to Announce the

IEEE LONG ISLAND SECTION ANNUAL AWARDS BANQUET

Thursday March 29, 2012 at 6:00 PM

Hyatt Regency Long Island at Wind Watch Golf Club, Hauppauge, NY

Contact Robert Berger at: robertberger@ieee.org for ticket information

Dr. Craig L. Woody, Brookhaven National Lab, **Fellow Award** for *The Development of Radiation Detectors for High Energy and Nuclear Physics and Medical Imaging*

Dr. Graham C. Smith, Brookhaven National Lab, **Fellow Award** for *Contributions of Detectors for X-Rays, Charged Particles and Thermal Neutrons*

Mr. Nikolaos Golas, Telephonics, **Long Island Section Alex Gruenwald Award** for *Leadership in a Wide Range of Activities in the Long Island Section that Has Greatly Enhanced Member Participation and Benefits*

Dr. Eugene Feinberg, Stony Brook University, **Long Island Section Charles Hirsch Award** for *Developing and Implementing on Long Island, Electric Load Forecasting Methods and Smart Grid Technologies*

Mr. Henry Bachman, BAE Systems, **Long Island Section Lifetime Achievement Award** for *An Outstanding Career in Engineering Management and Dedication to the IEEE at All Levels Including Serving as its President*

Dr. Thomas Robertazzi, Stony Brook University, **Long Island Section Athanasios Papoulis Award** for *Contributions to Inter-disciplinary Education in Engineering and Sciences*

Mr. William Pawlowski, Telephonics, **Long Island Section Harold Wheeler Award** for *Developing and Managing Creative FPGA RADAR Solutions and Exemplary Mentoring of Engineers*

Mr. Robert Schmid, PACS Industries, Inc., **Long Island Section Outstanding Young Engineer Award** for *Innovative Contributions to Power Distribution, Lighting and Relay Protection*

Mr. Matthew B. Nissen, Sigma Energy Solutions, **Long Island Section Outstanding Volunteer of the Year Award** for *Forming the Long Island Chapter of the Power Engineering Society and for Organizing Outstanding Programs for its Members*

Brookhaven National Lab, **Friend of the IEEE Long Island Section Award** for *Many Years of Support of the IEEE Long Island Section by Hosting Meetings of the Nuclear and Plasma Science Society*

Mr. Lloyd Blueweiss, The Omnicron Group, **Region 1 Award** for *the Development of Innovative RADAR Analysis and Accurate Evaluations of RADAR Performance*

Mr. T. David Bomzer, Day Pitney LLP, **Region 1 Award** for *Effective Leadership of IEEE LISAT Exhibits and Logistics*

Mr. Philip Ferraro, BAE Systems, **Region 1 Award** for *Contributions to Engineering Management in the Fields Of Reliability, Maintenance, Product Safety, Testability and Logistics*

Mr. Jonathan Garruba, Northrop Grumman, **Region 1 Award** for *Leadership in Developing Innovative Engineering Solutions for Complex Military Programs*

Mr. Thomas Lanzisero, Underwriters Laboratories, **Region 1 Award** for *Innovative Technical Contributions for Applied Safety Science and Engineering Techniques (ASSET)*

Mr. Stephen O'Brien, ITT Exelis, **Region 1 Award** for *Technical Leadership in the Development of RF and Receiver Technology Subsystems for Defense and Space Products*

Mr. Richard Law, BAE Systems, **Region 1 Award** for *Contributions to Combined Synthetic Aperture RADAR and Electro-Optical Data Fusion for Application to Airborne Target Recognition*

Mr. Thomas Schneider, Telephonics, **Region 1 Award** for *Technical Management of EMC Testing of Complex Electronic Systems*

Mr. Terry Stratoudakis, ALE System Integration, **Region 1 Award** for *Development of the IEEE LISAT CEU Track and Exhibits*

FEATURING KEYNOTE ADDRESS BY

Eduardo F. Palacio, PMP
*VP Programs & Business Operations
Electronic Systems, ITT Exelis*



*"Being a Defense Electronics
Professional in an Uncertain
Market."*

Award descriptions and nomination information can be found at: www.IEEE.LI/awards

Awards Banquet Supporter Opportunities

If you would like to help the IEEE Long Island Section defray some of the costs of the 2012 Awards Banquet, you may consider requesting support from your company.

We appreciate your help in making our 2012 Awards Banquet a success!

Platinum Supporter

\$2500.00

- One Table (10 people)
- Full page COLOR ad in banquet program and a listing in the Supporter Honor Roll
- One year listing in the Long Island Section Newsletter, *The Pulse*
- Additional tables for \$1000.00 each
- Four registrations to the 2012 LISAT Conference

Gold Supporter

\$2000.00

- One Table (10 people)
- Half-page COLOR ad in banquet program and a listing in the Supporter Honor Roll
- Additional tables for \$1000.00 each
- Four registrations to the 2012 LISAT Conference

Silver Supporter

\$1500.00

- Six complementary tickets
- Quarter-page COLOR ad in the banquet program and a listing in the Supporter Honor Roll
- Two registrations to the 2012 LISAT Conference

Bronze Supporter

\$1000.00

- Four complementary tickets
- Listing in the Supporter Honor Roll
- Two registrations to the 2012 LISAT Conference

Advertising Option A

\$750.00

- Full-page COLOR ad in the banquet program
- Listing in the Supporter Honor Roll

Advertising Option B

\$500.00

- Half-page COLOR ad in the banquet program
- Listing in the Supporter Honor Roll

Advertising Option C

\$250.00

- Quarter-page COLOR ad in the banquet program
- Listing in the Supporter Honor Roll

Reception Co-Sponsor

\$500.00

- Poster (2' X 1.5', supplied by co-sponsor) displayed at banquet serving table
- Listing in the Supporter Honor Roll

To sponsor the 2012 Awards Banquet or to submit an advertisement, please contact Susan Frank at chairman@IEEE.LI

The deadline for inclusion in the Banquet Program is March 1, 2012. Payment is due at time of order. Please note that advertising space is limited, and is offered on a first come, first serve basis.

To see samples of previous advertisements, please visit

<http://www.IEEE.LI/awards/program2011.pdf>

Awards Banquet Registration Form

IEEE Long Island Section 2012 Annual Awards Banquet Thursday, March 29, 2012

Member and Member's Guests - \$40.00 (each person)

Non-Members - \$60.00 (each person)

Make checks payable to: IEEE Long Island Section

Send this form with your payment by March 20th, to:

T. David Bomzer
IEEE Awards Banquet
40 Highland Court
Huntington, NY 11793

Name: _____

Guest Name: _____

Guest Name: _____

Guest Name: _____

Company: _____

Address: _____

City & Zip: _____

Home phone: _____ Business phone: _____

E-mail address: _____

Amount Enclosed: \$ _____

For more information about registration to the Awards Banquet, please contact David Bomzer at tdbomzer@ieee.org



LISAT 2012

**IEEE****IEEE LONG ISLAND SECTION** and
IEEE REGION 1 present

LISAT2012

*The Eighth annual conference on**Long Island Systems, Applications, and Technology***Friday, May 4, 2012***in cooperation with the***INSTITUTE FOR RESEARCH & TECHNOLOGY TRANSFER****LUPTON HALL****Farmingdale
State College****Farmingdale State College, State Univ. of NY**

THREE ALL-DAY PARALLEL TECHNICAL TRACKS

INDEPENDENT ALL-DAY CEU TRACK

CEU credits available for all topics in this track.

Pick and choose the topics of your interest.

EXHIBIT HALL

See exhibits from local technology companies, universities, and professional societies.

*To inquire about exhibiting : Fred Kruger at fmkruger@optonline.net
or Gil Lipper at Gil.Lipper@atm1.com*

POSTER SESSION

Authors will be available for one-on-one discussions about their research topics.

OTHER INFO: www.ieee.li/lisat**LISAT2012 Organizing Committee****CONFERENCE CHAIR:** Dan Rogers, Telephonics <drogers@ieee.org>**CONFERENCE CO-CHAIR:** Charles Rubenstein, Pratt Institute <c.rubenstein@ieee.org>**TECHNICAL PROGRAM CHAIR:** Dave Mesecher, Northrop Grumman <d.mesecher@ieee.org>**EXHIBITS CHAIR:** Fred Kruger, Consultant; Gil Lipper, ATM; Co-Chairs**TREASURER:** Plato Apergis, RFI **PUBLICATIONS CHAIR:** Susan Frank, Farmingdale College**FACILITIES CHAIR:** John Fiorillo, Farmingdale State College**CONFERENCE SPONSOR Executive Officers:** Region 1 Director Charles Rubenstein;
Long Island Section Chair Susan Frank

Long Island's Electronic History

By Jesse Taub, IEEE Long Island Historian

I recently saw an off-Broadway play, "The Dangers of Electric Lighting" which highlighted the famous controversy between Thomas Edison and Nikola Tesla over the merits of ac vs. dc for distributing power to homes and industry. This issue coincided with the formation of the AIEE in 1884. The play made me recall that Tesla also had a Long Island connection.

Nikola Tesla became famous in the late 19th century by demonstrating that ac power distribution is for more cost effective using direct current, which was promoted by Edison. The ability to transform ac to very high voltages significantly cut down on ohmic losses in transmission lines and allowed power to be efficiently sent over hundreds of miles. Power stations using dc could only serve a one-two mile radius. He also invented the ac induction motor and the system of three phase power transmission which is still in use. Much of this work was supported by Westinghouse. Tesla was eventually awarded the AIEE's prestigious Edison Medal for this work in 1916.

By 1891 (well before Marconi), Tesla became interested in transmitting energy by wireless, made a successful demonstration and received a patent. Most of his subsequent research shifted to the wireless field.

By the early 20th century, he became an independent researcher whose wireless efforts were funded by J.P. Morgan and others. He had the notion that large amounts of energy could be transmitted over long distances by radio. He set up his Wardenclyffe Laboratory near Shoreham. Tesla erected a gigantic radio tower to experiment with sending energy by wireless. This idea did not materialize. Morgan withdrew funding and the tower was dismantled for scrap metal during World War I. In 1915, he erected a wireless station for Telefunken in Sayville in an attempt to continue his research. The facility was seized and torn down in 1917 because we were at war with Germany and our government saw the building as a site for a potential spy operation. It is worthy of note that Tesla, during this period, was one of the first people to believe that radio waves could be used to develop radar.

His connections with Shoreham and Sayville are of important historical significance to the IEEE Long Island Section. Thanks to the efforts of Vic Zourides and Lou Luceri, our Section recently co-sponsored the Tesla Conference 2011. The Section also held a meeting arranged jointly with several Society Chapters. The topic was "Nikola Tesla, Forgotten Genius of Electricity and His Historic Wardenclyffe Laboratory". We hope that someday we can honor his memory with a plaque approved by the IEEE History Center that can be placed on or near the site. This will be a fitting tribute to one of the most brilliant engineers/inventors in the history of the IEEE.

February Lectures and Seminars

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

Digital Predistortion (DPD) for Everyone and By Everyone

By Murthy Upmaka, Ph.D - Agilent Technologies

Wednesday, February 1, 2012

Refreshments 6:00PM, lecture starts at 6:30PM

L-3 Communications Narda Microwave, Hauppauge, NY

Who Should Attend? Engineers with an interest in the design, evaluation, and/or use of microwave amplifiers.

Abstract: Today's modern communication systems face conflicting requirements. They operate with signals that have high peak-to-average power ratios (PAPR), such as multi-carrier WCDMA and OFDM based LTE, since these signals inherently possess good spectral efficiency. At the same time, modern communication systems need to have high power added efficiency (PAE) in order to minimize DC power consumption. Unfortunately, operating the PA in a region where it achieves high PAE increases signal distortion. Without corrections, the drive level of the PA needs to be backed off to reduce distortion to acceptable limits, thus compromising PAE. The problem is further compounded by the fact that high PAE design typically relies on techniques that result in PA nonlinearities with memory. The most popular techniques for reducing distortion when the PA is operated at high efficiency operating points uses PA linearization with digital predistortion (DPD). The performance that the DSP engineer can achieve using the DPD technique depends heavily on the PA model. This presentation provides an overview of popular DPD techniques and some unique approaches for PA modeling.

About the speaker: Dr. Murthy Upmaka has held various positions with Agilent Technologies over the past 15 years. As a Senior Application Specialist, he has been located in the NJ/NY/PA area for the past 8 years supporting designers with Agilent's simulation and modeling tools. While he was in the R&D he developed many test systems including one related to today's presentation, a Multi carrier Power Amplifier Tester. Before joining Agilent Technologies he worked for national defense lab where he developed various EW receivers and direction finding systems largely based on the non linear components he developed. Murthy holds a Ph.D degree from Indian Institute of Technology, Madras, India in Physics. He conducted postdoctoral research at Trinity College Dublin as a Lever Hume Trust fellow in the years 1988-89. He has over 20 publications and two patents.

Registration: Registration is required, and is available online only. Please visit the calendar page of the IEEE Long Island Website www.ieee.li, click on the registration link, and fill out the form. A photo ID is needed to enter the facility.

Lecture Coordinator:

Eric Darvin, MTT Chairman for the IEEE Long Island Section (mtt@ieee.li)

Industry News

Telephonics Leadership Reorganization

Kevin McSweeney has been named Chief Operating Officer of Telephonics, a new position reporting directly to Joseph J. Battaglia, President and Chief Executive Officer of Telephonics. This is part of a reorganization of Telephonics' leadership team that has been undertaken to better facilitate planned growth and business development. Telephonics is a leading global designer, developer and manufacturer of high-technology, integrated information, communication and sensor system solutions for use in military and commercial markets.

Mr. McSweeney has been with Telephonics since 2004 with direct responsibility for management of the Company's Radar Systems Division. Under his leadership, revenue for radar systems has doubled and the Company has made significant progress in a variety of key technologies, including Identification Friend or Foe systems and the US Navy's Multi-Mode Radar system.

Mr. Battaglia commented, "Kevin has demonstrated outstanding

leadership abilities. We are confident that he will prove capable of further expanding our global business and enhancing our position in the marketplace for both commercial and military applications in a variety of product categories. These changes in management structure will support our growth and allow us to better serve our customers."

Mr. McSweeney will have direct oversight responsibility for Radar Systems, Communications and Integrated Systems, Systems Engineering and Business Development. Telephonics is also pleased to announce the promotion of Gary Fortmeyer to the position of Vice President and General Manager of the Radar Systems Division. Mr. Fortmeyer will report directly to Mr. McSweeney.

Telephonics has initiated a search for a Vice President and General Manager of the Communications and Integrated Systems division. In the interim, Mr. McSweeney will have direct management responsibility for this business.

Phadke Associates Webinar

Efficient and Effective Software and System Testing utilizing Orthogonal Arrays and rdExpert™ Software

Thursday, February 23, 2012
11:00am to 4:00pm (Eastern Time)

Abstract

Customer satisfaction and development costs are directly impacted by the effectiveness of testing in an engineering organization. Any faults that are missed during testing and reach the field adversely affect customer satisfaction. Long test cycles, whether they find all faults or not, cause delays in product introduction and lead to missed sales cycles. Whether it is software, hardware, or a system, the complexity of today's products makes it challenging to select effective test scenarios that provide high assurance of successful performance while minimizing cost and schedule.

The course "Efficient and Effective Software and System Testing utilizing Orthogonal Arrays and rdExpert™ Software" will provide a scientific, reproducible test planning process that ensures high test effectiveness and significantly reduces test cost and schedule. Industry estimates show that you can reduce total end-to-end test cost by 40% and improve test effectiveness (find more defects/bugs). The four hour training covers the methodology of Orthogonal Array (OA) testing, exercises for practical skill building, and a software license so you can immediately start using OAs for generating efficient and effective test plans.

Course Outline

- Fundamental principle of using Orthogonal Arrays for testing and benefits
- Historical background of OAs
- How to construct Orthogonal Arrays for test problems
- Case Studies and benefits of OA testing in the Telecommunications, Automotive, IT/Software, Defense, Financial Services industries.
- Comparison of OA testing with other common test methodologies including pair-wise, n-way, and classical design of experiments.
- Hands-on exercises.
- To understand the challenges of the current practices for generating test cases
- To use the OA testing method and rdExpert™ Test Planning Lite software to generate efficient and effective test cases. **Note: Each participant will receive a license for rdExpert Test Planning Lite software (\$235 retail value).**

No statistics background or expertise required.

Duration

4 hours live web training. 11 am to 4 pm Eastern Time with one hour break from 12:00 noon to 1:00 pm.

Takeaways

Participants in this course will learn what Orthogonal Arrays are, how they benefit development and test organizations, and will be able to use Orthogonal Arrays to prepare test plans for their projects. Additionally, all participants receive a license to rdExpert Test Planning Lite software, the industry leader in OA test planning (\$235 retail value). The course qualifies for 4 hours of PDU for PMP certification by Project Management Institute

Phadke Associates Webinar (continued)

Who should attend?

Professionals looking to significantly reduce cost, schedule, and risk in testing.
Hardware and software engineers / developers
Systems engineers
Managers
Scientists
IT consultants

Instructors:

Dr. Madhav S. Phadke is the Founder and President of Phadke Associates, Inc. He is an ASQ Fellow and a recipient of the 2011 IEEE Region I Award. He is the author of the first engineering textbook on Robust Design Methods in the US titled "Quality Engineering Using Robust Design". He pioneered the use of orthogonal arrays for testing. He holds a PhD in Mechanical Engineering and MS in Statistics from the University of Wisconsin – Madison, MS in Mechanical and Aerospace Sciences from the University of Rochester, and a BTech in Mechanical Engineering from the Indian Institute of Technology – Mumbai. Prior to founding Phadke Associates, Dr. Phadke was a manager in AT&T Bell Labs, a visiting scientist at the IBM Watson Research Center, and a Research Associate at the Mathematics Research Center and Statistics Department of the University of Wisconsin – Madison.

Kedar Phadke is Vice President of Phadke Associates, a global consultancy and software company specializing in statistical tools for improving testing and design productivity. Kedar has led numerous deployments for improving test and design effectiveness. He has a MS in Statistics, MS in Management, and a BS in Economics from the Wharton School, University of Pennsylvania.

Cost:

The standard price for the course is \$425. Members of the participating Sections pay \$340, a 20% discount. IEEE student member price is \$195. A limited number of unemployed members may attend for \$80 (excludes software), software can be purchased for \$135. Space is limited, so register early to guarantee a seat.

For more information contact

Web: www.PhadkeAssociates.com

Email: sales@phadkeassociates.com

Phone: 732-577-2878 M-F 9:30 AM to 4:30 PM Eastern US

rdExpert is a trademark of Phadke Associates, Inc.

Software licenses are valid in USA, Canada, Western Europe, Japan, and Australia.

Individuals must register in advance to participate in this course.

*100% money back if you are not fully satisfied with the training after attending the full course and if you inform the instructor

(send email to Support@PhadkeAssociates.com) within 24 hours.

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Be a part of engineering your future.

Come Join Us!
Get Involved.
Volunteer.



IEEE Region 1 Student Conference

Connecting Students with Industry Professionals and IEEE Leaders

Date:

10-11 March 2012

Location:

Marriott Hartford
200 Columbus Blvd
Hartford, Connecticut

*For additional information,
please e-mail:*

*IEEE Region 1 SAC Chair
Ravi Todi
(rtodi@ieee.org)*

Or

*IEEE Region 1 RSR
William Dorney
(william.dorney@ieee.org)*

Region 1 Student Conference is the premier annual event where all student branches from IEEE Region 1 (Northeast Region of United States of America) will meet, and engage in activities such as leadership training and various competitions. It provides the great opportunity for the student members to network with the Industry Professionals and the IEEE Leaders.

Conference Highlights:

- ❖ Student Paper Contest
- ❖ Student Ethics Competition
- ❖ T-Shirt Design Competition
- ❖ Micromouse Competition and Workshop
- ❖ Leadership Training Session
- ❖ Plenary Session
- ❖ Region 1 and Award Reception
- ❖ Meet Leaders on Region 1 Board of Governor

Registration Deadline: **February 20, 2012**

To register online:

<http://ewh.ieee.org/reg/1/sac/conference>



IEEE Region 1

Industry News

Telephonics Delivers First IFF All-Mode Interrogator System with Multi-Channel ADS-B Capability

Telephonics Corporation announced that they have successfully tested and implemented the multi-channel ADS-B (passive Mode S) function on their IFF Interrogator product line. This capability was delivered to FMV (The Swedish Defence Material Administration) in November 2011 as part of a larger enhancement program to the Swedish Long Range Air Defense System.

This new ADS-B capability allows the use of squitter replies to passively detect and process targets. It also provides the interrogator additional situational awareness and the ability to reduce the number of active interrogations which reduces transponder occupancy and interference with other IFF systems. Through the addition of multiple ADS-B squitter processing channels within the interrogator hardware and the use of multiple monopulse channels of the IFF antenna to passively receive, process, and report ADS-B squitter, Telephonics' AN/UPX-44 IFF interrogator has been significantly enhanced. The ADS-B channels can be user controlled to process ADS-B data on the Sum antenna channel, and the Difference antenna channel, or on the Omni antenna channel. This capability significantly extends the effective field-of-view for ADS-B replies fully utilizing the conventional IFF antenna system.

With this enhancement, the AN/UPX-44 is capable of processing ADS-B squitter data on the multiple IFF antenna beams through 360 degrees. "This is a great enhancement to our IFF interrogator product line," states Scott Danziger, Director of Program Management, Telephonics' Radar Division. He adds that this feature is requested by numerous customers to fulfill the need for maximum situational awareness and reducing active interrogations in the IFF surveillance volume.

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PATENT ATTORNEY

(formerly an electrical engineer with AIL Systems, now ITT)

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gbodner@bodnerorourke.com

Fellow Awards

AWARDS – FELLOW NOMINATIONS

By Jesse Taub
IEEE LI Section Awards Chairman

In the September issue of The Pulse, I described the awards that our Section gives annually and solicited nominations. This article is concerned with Fellow awards.

The IEEE solicits nominations for the Fellow grade each year. They are due at IEEE headquarters on March 1st. The Fellow grade recognized members whose technical or managerial contributions have been distinguished. The nomination procedure is arduous requiring at least 5 IEEE Fellows to serve as References and a strong endorsement from one of the IEEE's many Societies. Furthermore, the candidate's accomplishments must be documented. This usually means publications in peer reviewed journals.

As the Section's Awards Chairman, our Awards Committee and I want to be sure that any worthy member is nominated. Our Section has many Fellows. In recent years very few have come from industry. Brookhaven National Laboratory and SUNY Stony Brook have been our main sources. This is a concern because I am certain that we have several worthy candidates who work in our local companies. The problem appears to be that some companies do not overly encourage their engineers to publish. In my view, this is misguided. I believe that the slight risk of giving away proprietary information is more than offset by the favorable publicity for the companies.

If you know of any engineer who may qualify for Fellow, please contact me. Our Awards Committee will evaluate each candidate. We will also assist the nominator to ensure that the nomination form is properly processed. Please contact me at: jjtaub@aol.com.



<http://www.ieee.org/renew>



Students: Energize Your Future!

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This offer ends 15 August 2012

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IEEE USA



Nominees Sought for IEEE's Leaders in 2013

Volunteers are key to the smooth functioning of IEEE. Only through dedicated individuals volunteering their time and expertise can IEEE fulfill its core purpose of fostering technological innovation and excellence for the benefit of humanity. Accordingly, the IEEE Nominations and Appointments Committee is looking for people with the skill, passion, and perspective to serve in 2013 as IEEE corporate officers or on committees of the IEEE Board of Directors.

DEADLINES

Submit nominations for standing committee chairs by March 1, 2012. The date for submitting nominations for IEEE president-elect, corporate officers, and standing committee members is July 1, 2012.

ELIGIBILITY

Each position has eligibility and qualifications requirements with which the N&A Committee evaluates candidates.

WHO CAN NOMINATE?

Anyone may submit a nomination; you need not be an IEEE member. Self-nominations are encouraged. An IEEE organizational unit may submit recommendations provided that its governing body, or the body's designee, endorses the nominee.

HOW TO NOMINATE

Review the eligibility requirements and qualifications for the positions, then complete the form. Incomplete nomination forms will not be considered.

PEER NOMINATIONS

Include the nominee's name and recommended positions,

as well as brief explanations of the person's qualifications and accomplishments specific for the positions. A person may be nominated for more than one position. Nominators do not need to contact their nominees before submitting the form. The N&A Committee will contact eligible nominees to ascertain their willingness to serve and, if necessary, to obtain more information.

SELF-NOMINATIONS

If you nominate yourself, include a photograph, desired position or positions, qualifications and accomplishments that are specific for the desired position, and a biography, along with your name. Use the template provided on the nomination form.

THE PROCESS

The N&A Committee makes recommendations for IEEE corporate officers to the IEEE Assembly, which then elects the officers. The committee also makes recommendations to the IEEE Board of Directors for IEEE president-elect, as well as for the chairs and members of standing committees. The Board then must ratify the recommendations. The Board also recommends the candidates for president-elect to be placed on the IEEE annual election ballot, with IEEE's voting membership choosing the president-elect.

For more information about the positions, including qualifications and estimates of the time required by each position during the term of office, check the [Guidelines for Nominating Candidates](#).

IEEE-USA Supports Inventors' Rights in Brief before U.S. Supreme Court

A brief IEEE-USA filed in support of inventors' rights was part of a case the U.S. Supreme Court heard on January 9, 2012.

"The court reviewed inventors' rights this morning and IEEE-USA was pleased to take the side of innovators and major technology companies," said Chris Katopis, a Washington, D.C., intellectual property attorney and former U.S. Patent and Trade Office executive who wrote the *amicus curiae* (friend of the court) brief on behalf of IEEE-USA.

The question before the court in *Kappos v. Hyatt* is whether an inventor who has been denied a patent by the PTO may present new evidence that the person had but did not present in the original application. In a 6-2-1 appellate decision, the Federal Circuit ruled in November 2010 that the PTO must accept a petitioner's new evidence.

2012 IEEE Region I Awards

Region I of the IEEE gives awards to its members in a variety of technical, managerial and professional categories which are described below. Nomination forms and other instructions can be found on the IEEE website: www.ieee.org and then ask for "Region I Awards" in the search box.

Please send your nominations to Jesse Taub, the Section's Awards Chair at jjtaub@aol.com. They will be reviewed by the Section's Awards Committee. Nominations must be received on or before May 15, 2012. If you have any questions, please call 631-420-1564.

IEEE REGION I AWARDS

PURPOSE: The purpose of the Region I Awards Program is to publicly recognize professional and technical excellence and major accomplishments and contributions made by Region I IEEE members.

AWARD CATEGORIES: There are seven categories for the Region I Awards:

1. **New Technical Concepts in Electrical Engineering**

For significant patents, for discoveries of new devices or applications, and for significant reductions in components or processes.

2. **Electrical Engineering Professionalism**

For personal, high level leadership in research and design performance in support of all phases of the Electrical Engineering Profession.

3. **Promotion of Self-Development for Practicing Electrical Engineers**

By arranging courses, seminars, and tutorials to enhance the educational level and the competence of practicing electrical engineers.

4. **Enhancement of IEEE in Industry and Community Service**

For outstanding service to the IEEE at the Chapter, Section, Region, and national level, and for major contributions to the industry and to the community.

5. **Electrical Engineering Management**

For managerial excellence in organization, leadership, design, and development.

6. **Electrical Engineering Support for Student Activities**

For improving communications between the IEEE and a Student Branch or Student Group; for support and service to a Student Branch or Student Group; for service and leadership to the student community.

7. **The William Terry Distinguished Lifetime Service Award**

This award is intended to recognize those whose personal efforts have provided leadership, creativity, guidance, hard work, and inspiration in a wide range of IEEE activities over a long period of time.

Engineer's Week 2012



Engineers Joint Committee of Long Island

Andrew S. Haines, P.E., F.NSPE, Co-Chair

Anthony Cacioppo, P.E., Co-Chair

ENGINEERS WEEK SEMINAR SERIES

Thursday, February 16, 2012

Place: Dave & Busters • 261 Airport Plaza Blvd., Farmingdale, NY (631) 249-0708
www.daveandbusters.com

Program:	8:00 am – 9:00 am	Registration & Continental Breakfast
	9:00 am – 10:00 am	Morning Seminars
	10:00 am – 10:15 am	Break
	10:15 am – 12:15 pm	Morning Seminars Cont'd.
	12:15 pm – 1:15 pm	Lunch with Guest Speaker
	1:15 pm – 3:15 pm	Afternoon Seminars
	3:15 pm – 3:30 pm	Break
	3:30 pm – 5:00 pm	Afternoon Seminars Cont'd.

Seminars & Descriptions

“Power Quality Design Considerations” (1 PDH) 9:00am – 10:00am

Presented by: Paul Moraft – Data Power Systems

Data Power Systems provides power systems for critical facilities such as radio and TV broadcast, data centers and other critical facilities where power quality and down-time are important issues. This seminar will address the most up to date problems that effect these facilities and effective methods of preventing them. The presentation will illustrate ways to improve the effectiveness of designs while keeping costs within reason when planning for UPS and surge protection equipment. Topics to be covered include:

- Effects of transients on unprotected transfer switchgear
- UPS systems, etc.
- Where transients come from
- Anatomy of a lightning strike (what is the magnitude of a lightning strike)
- Applying surge protection
- Where and how much
- Options to avoid
- Pros and cons of putting surge protection inside a distribution panel
- General design considerations.

Engineer's Week 2012 (continued)

“Enclosed Switchgear / PCC Fundamentals” (2 PDH) 10:15am – 12:15pm

Presented by: Niel F. Miele, PE, LEED AP, Engineering Manager - PACS Industries, Inc.

PACS (Power And Control Systems), manufactures metalclad switchgear through 40.5 kV, and Power and Control Center (PCC) buildings. This seminar will discuss the basics of designing and specifying power and control systems in pre-engineered buildings. Major topics are:

- Introduction to Electrical over-current protection, relaying, SCADA
- MV (<40kV) Switchgear designs, applications, sample projects
- LV (<600V) Switchgear designs and applications, sample projects
- Structural Substation (<230kV) designs and applications, sample projects
- PCC designs and applications, sample projects
- Structural features (walk-in, non-walk-in, ratings, environments, coatings)
- Mechanical features, options, accessories

“Grounding and Lightning Protection” (2 PDH) 1:15pm – 3:15pm

**Presented by: Richard L. Rosner, P.E., Director of Engineering
and Donald Kane, P.E. - Nassau Suffolk Engineering & Architecture, PLLC**

This forum provides an overview of several aspects of electrical grounding and lightning protection, with a focus on the areas that pose hazards if left out of designs or if improper designs are implemented. Considerations for life safety will be stressed while Federal, State and local Codes & Standards will be reviewed for compliance. Practical solutions will be offered and design and installation pitfalls will be discussed.

“Specifying LED Lighting Equipment” (1 PDH) 9:00am - 10:00am

Presented by: Mike Ferraris - Electric Lighting Agencies, Inc.

National energy efficiency regulations have led to new developments in many electrical devices, including commercial and residential lighting. This seminar will provide you with a basic understanding of LED lighting equipment, which can provide as much as or greater light output while using much less energy than conventional fixtures and bulbs. Topics will include:

- What an LED is and how it creates visible light
- Design of the electrical/electronic power pack “driver” and how it works
- Arrangement of LED clusters and relationship to fixture/luminaire design
- Factors to be considered for long term performance
- Discussion of basic layout and fixture selection for an application

If time permits, we will briefly discuss where incandescent and fluorescent lighting technologies is headed, and try to dispel some of the myths that arose when the new regulations were first made public.

“Six Sigma” (2 PDH) 10:15am – 12:15pm

Presented by: Scott Damiani, Lead Business Analyst - Wolters Kluwer

In this session, attendees will learn about the components and tools which are used in the Six Sigma methodologies. Detailed examples of several tools will be presented for the various phases of a sample Six Sigma initiative. The session will also cover how Six Sigma integrates with other methodologies such as Lean. The session will also address how company management can create an environment for Six Sigma success. Various case studies will be reviewed. Attendees will also learn about the various levels of Six Sigma training and certification, and career opportunities will be highlighted in various industries which have embraced Six Sigma.

Engineer's Week 2012 (continued)

“Lean & Value Stream Mapping” (2 PDH) 1:15pm – 3:15pm

Presented by: Stan Stone, CEO, Founder & Lead Consultant - GreyStone Business Solutions, Inc.

This session will provide an introduction to the tools and techniques utilized in the Lean Enterprise methodology to eliminate waste and non-value added activities leading to dramatic improvements in operational efficiency, quality and the bottom line. Each of the key techniques including Value Stream Mapping, 5S, One Piece Flow, Kan Ban, and Single Minute Exchange of Dies (SMED) will be thoroughly discussed. Additionally, practical quality tools such as Pareto Analysis, the Five Y's and Root Cause Analysis will be explained and illustrated. Attendees of this session will obtain a fundamental understanding of these powerful Lean techniques as well as how to correctly select and apply them in their own organizations. This session is a must for anyone considering a Lean approach or just desiring to learn more about this highly effective continuous improvement process.

“Building Information Modeling (BIM)” (2 PDH) 10:15am - 12:15pm

**Presented by: Steven V. Costa, BIM Specialist - Microsol Resources
Christopher S. Shoemaker P.E., Senior Associate -
Lizardos Engineering Associates, P.C.**

This presentation will provide an introduction to Building Information Modeling (BIM), an effective design and construction tool that provides a database of useful information for building owners, managers, architects, engineers, and constructors. An overview of what BIM is, and what it is not, BIM's features and use as a 3-dimensional virtual building model from initial building conceptualization, through design and construction, and throughout the life span of a building will be discussed. The discussion will include reasons for utilizing BIM in the design and construction of a building, and reasons for not using BIM. The contents of a typical BIM model will be presented including the building orientation; floor plan; construction of foundation, walls, floors, roof, windows, etc.; HVAC systems; electrical systems; plumbing and fire protection systems. How the BIM model contains CADD drawings embedded with building information. How construction drawings prepared in a BIM model differ from conventional CADD drawings. The BIM presentation will include use of BIM for building design as well as for the design of civil engineering projects. Computer system requirements for BIM will be discussed, as well as training of staff to use BIM and required coordination between the members of a design and construction team to effectively utilize BIM in the design and construction of a building.

“Gas Exposure Hazards – Risk Management” (2 PDH) 1:15pm – 3:15pm

Presented by: Stephen G. Phelps, Applications Manager - Sensidyne, LP

This seminar will explore gas exposure risk management in transportation and commercial HVAC systems. Discussions will include assessing, monitoring and controlling critical gas hazard exposures in transportation, commercial mechanical room HVACR, assembly occupancies and gathering places. The hazards are defined and illustrated with a discussion of compliance solutions with local state and federal regulations.

Engineer's Week 2012 (continued)

“Application of Wireless Measuring Instruments in Water and Wastewater Plants”

(1.5 PDH) 3:30pm – 5:00pm

Presented by: Tom Thomas, Municipal Regional Manager - Emerson Process Management

This seminar will cover Wireless field networks, HART protocol, security, and available measurement instruments including vibration monitoring of rotating machinery. Best practices in field monitoring and actual installations will be discussed. Systems integrate both wired and wireless plant and field networks to address process industry needs. Wireless monitoring can be integrated into existing SCADA systems.

Lunchtime Speaker: Robert F.Waite, P.E., PC

“Doing Business in China – Issues for an American Engineer”

SCHEDULE

	Room A	Room B	Room C
9:00a-10:00a	Power Quality Design	Specifying LED Lighting Equipment	
10:15a-12:15p	Enclosed Switchgear / PCC Fundamentals	Six Sigma	Building Information Modeling (BIM)
12:15p-1:15p	LUNCH with Guest Speaker		
1:15p-3:15p	Grounding and Lightning Protection	Lean & Value Stream Mapping	Gas Exposure Hazards Risk Management
3:30p-5:00p			Wireless Measuring in Water & Wastewater Plants

Engineer's Week 2012 (continued)



Engineers Joint Committee of Long Island

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ENGINEERS WEEK SEMINAR SERIES

Thursday, February 16, 2012

Dave & Busters • 261 Airport Plaza Blvd., Farmingdale, NY (631) 249-0708

To register, complete and return this form with payment by February 13, 2012 to: Andrew S. Haines, PE, 172 Sherry St, East Islip, NY 11730. Ph: 631-859-5190. Email questions to: ashaines@optonline.net

ALL FIELDS MUST BE COMPLETED. PRINT NEATLY. CHECK ALL SEMINARS YOU WISH TO ATTEND.

Fee: _____ \$110 for full day (4 to 6.5 PDH); includes lunch
_____ \$75 for half day (3 or fewer PDH); includes lunch

- 9:00am - 10:00am "Power Quality Design Considerations" (1 PDH)
10:15am - 12:15pm "Enclosed Switchgear / PCC Fundamentals" (2 PDH)
1:15pm - 3:15pm "Grounding and Lightning Protection" (2 PDH)
9:00am - 10:00am "Specifying LED Lighting Equipment" (1 PDH)
10:15pm - 12:15am "Six Sigma" (2 PDH)
1:15pm - 3:15pm "Lean & Value Stream Mapping" (2 PDH)
10:15am - 12:15pm "Building Information Modeling (BIM) (2 PDH)
1:15pm - 3:15pm "Gas Exposure Hazards - Risk Management" (2 PDH)
3:30pm - 5:00pm "Wireless Measuring Instruments in Water and Wastewater Plants" (1.5 PDH)

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March 22-23, 2012

Call for Papers

International Energy and Sustainability Conference 2012 Shaping the Future Through Smart Grid Technologies at Farmingdale State College

The topics / issues presented at the Farmingdale State College International Energy and Sustainability Conference will focus on the following technologies:

Renewable Energy:

- Solar PV
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- Wind
- Geothermal
- Tidal Power

Sustainability:

- LEED / Green Building
- Passive House
- Recycling
- Waste / Water Management

Alternative Vehicle:

- Electric
- Hybrids / PHEV
- Hydrogen
- Bio-Fuel

Smart Grid:

- Smart Metering
- Security
- Policy
- Supervisory Control and Data Acquisition

Energy Storage:

- Battery
- Fuel Cells
- Mechanical
- Electrical

Deadline for abstracts:February 15, 2012

Selected abstracts notification:February 22, 2012

Deadline for accepted papers:February 29, 2012

Conference dates:March 22-23, 2012



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Alison Rubin, Editor

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