

# The *Pulse* of Long Island



February 1, 2006 - Vol. 56 No. 2

## Chairperson's Message

By David Wolff  
[dwolff@ieee.org](mailto:dwolff@ieee.org)



CQ CQ CQ ..... WB2IHS ..... CQ CQ CQ

No doubt that many of you recognize this amateur radio general call used to establish a contact with another amateur operator. For me it was an important part of my teenage years when operating an amateur radio station cemented my aspiration to be an electrical engineer.

A memory that I will never forget occurred on April 21, 1974 at 10:15 PM ( I still have my radio logs), a few months after bringing home my novice license, when I made my first DX (long distance) contact with an operator in Belo Horizonte, Brazil on the 15 meter CW band. It is hard to put in words the excitement that I felt to be communicating from my basement with someone thousands of miles away using a Heath Kit radio that I built with my very own hands along with a dipole wire antenna that I strung up in my own backyard. It is a feeling that I suspect most scientists and engineers can truly appreciate – one in which you feel that your mind has harnessed or even conquered the laws of nature. It was at this moment that my future as an engineer was sealed. I had a similar “first time” experience –although not quite as exciting - when as a young engineer I saw my first significant circuit design work exactly as I planned. I am sure that most of you can recall a similar experience.

In these days when engineering college enrollment is waning I have no doubt that exposing teenagers to the excitement of harnessing the laws of nature is a key to sustaining our profession. As it did for me 30 years ago, embarking on a project that allows one to conceive and realize a tangible result by utilizing the laws of nature provides an immutable attraction to science and engineering. It also seems to me that there is no nobler cause than for an engineering professional to help a youngster achieve this particular feeling of accomplishment. Whether it is for your own child or for an associate met through volunteer work, what better gift can one give than the excitement of mind over nature that opens the door to a lifetime of achievement. I applaud those who devote themselves to this cause and urge others to become involved.

The Executive Committee of the Long Island Section is very supportive of pre-college engineering programs. In particular, we support the LIM-SAT (Long Island Museum of Science and Technology - [www.limsat.org](http://www.limsat.org)) and many of our members volunteer to assist in FIRST robotics competition ([www.usfirst.org](http://www.usfirst.org)). But we could be doing much more. I would like to establish a lead position on the Executive Committee to focus on pre-college activities. If you are interested in volunteering please contact me. I believe that we can make a real difference on Long Island by focusing our collective resources on inspiring our young people to become the scientists and engineers of the 21<sup>st</sup> century.

73's, WB2IHS

David Wolff  
[dwolff@ieee.org](mailto:dwolff@ieee.org)

## The PULSE is now available on-line!

To get the on-line PULSE and get up-to-date information about the Section, visit our web site at: **[www.IEEE.LI](http://www.IEEE.LI)**

*You can also register for IEEE LI Section events online at this web site!*

# CALL FOR PAPERS for LISAT2006

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

The second annual

LONG ISLAND SYSTEMS, APPLICATIONS AND TECHNOLOGY CONFERENCE

Friday, May 5, 2006

**INSTITUTE FOR RESEARCH AND TECHNOLOGY TRANSFER**  
**State University of New York, Farmingdale**

This will be the second LISAT Conference. Last year's Conference featured a wide variety of topics presented by invited speakers. It is our intention for LISAT2006 to have most of the papers given by speakers responding to this Call for Papers. Technical papers describing research, development and application on a broad range of electronic and electrical engineering topics are solicited. Each paper will be 30 minutes in length with a 10 minute question period.

Papers will be selected based on originality, quantitative content, clarity, and interest to IEEE members.

To submit a paper, prepare a 500 word summary with a maximum of six figures and a 50 word abstract. They should be e-mailed to the LISAT Technical Program Co-Chairmen, Jesse Taub <[jjtaub@aol.com](mailto:jjtaub@aol.com)> and Dave Mesecher <[d.mesecher@ieee.org](mailto:d.mesecher@ieee.org)>

*Homeland Defense / Satellite Communications / Mobile Communications / RF ID Tag Technology / Ad Hoc Networking / Multi-level Network Security / Sensor Fusion / New Electrical Power Sources / Antenna Systems and Processing / Locationing / Radar Systems and Techniques / Medical Electronics*

**Exhibits:** For information on exhibiting at LISAT2006, please contact:

**Fred Kruger** <[f.m.kruger@ieee.org](mailto:f.m.kruger@ieee.org)> or **Mark Sadick** <[mark@sagharborind.com](mailto:mark@sagharborind.com)>

For any other information please contact the LISAT2006 Conference Chair:

**Dr. Charles Rubenstein** <[c.rubenstein@ieee.org](mailto:c.rubenstein@ieee.org)>

Or the LISAT2006 Conference Vice Chair:

**Babak Beheshti** <[b.beheshti@ieee.org](mailto:b.beheshti@ieee.org)>

## MESSAGE FROM THE EDITOR

BY: **BABAK D. BEHESHTI**

It has been more than 5 years that I have served as the Editor of the IEEE Long Island Pulse Newsletter. It has been a rewarding and exciting activity for me, but as all other things, it must come to an end. I am leaving this position to pursue my other IEEE activities at regional and international levels. I will however remain active at the section level, definitely serving as the Vice Chair of the LISAT (see announcement above).

I want to thank the IEEE EXCOM colleagues that have made these past 14 years or so of my serving the section at different capacities including the section Treasurer, Vice Chair and Chair a pleasure. I would also like to invite the incoming Pulse Editor, and request your support of the new Editor in this important undertaking.

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## Long Island Section Officers

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## PULSE Deadlines

For Mar. 2006 02-05-06  
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## IEEE Long Island Section Calendar

(No membership requirements, no registration, no fees at meeting unless otherwise noted.)

Please visit our website at [www.ieee.li](http://www.ieee.li) and click on the calendar for online registration (as available) and for listing updates

February 1, 2006 - A meeting of the Consultants Network of Long Island will be held at Briarcliff College, the Great Room, 1055 Stewart Ave. Bethpage. The meeting begins at 7:00 PM. The meeting is open to the public and no pre-registration is required. For additional details contact John Dunn at [ambertec@ieee.org](mailto:ambertec@ieee.org) or at 516-378-2149.

February 20, 2006 - The Long Island Chapter of the IEEE Circuits and Systems (CAS) Society is presenting a lecture titled: Characteristics of Underground Secondary Power Distribution Networks for use as a Communications Medium. The talk will be given at Telebyte, Inc. 270 Pulaski Road, Greenlawn, NY 11740 at 6:30pm. The speaker is Ralph Stolowicki – Principal, PowerCom Technologies Corp. This lecture is free and all are invited. For additional info, contact the lecture coordinator, Art Williams, at (631) 423-3232 ext 469 or [awilliams@telebytebroadband.com](mailto:awilliams@telebytebroadband.com)

February 22, 2006 - "Enlightened Phase Locked Loop Measurements Using Newly-Available Real-Time Spectrum Analysis", by Paul Bishop - an MTT lecture presented at Telephonics in Farmingdale. This event is free and all are invited. Refreshments will be served at 6:00 PM, lecture starts at 6:30 PM. Please visit the calendar page of [www.ieee.li](http://www.ieee.li) for registration and additional information.

February 28, 2006 – A talk on nanotechnology and biological nanomachines by Dr. Ben Ovrzyn Assoc. Prof at Einstein College of Medicine, Dept. of Anatomy & Structural Biology will be held at Telephonics, 815 Broadhollow Road, Farmingdale, NY at 6:30 PM. This lecture is free and all are invited. Refreshments will be served.

March 14, 2006 – “Broad band Over Powerlines”, presented by Ed Hare, of the American Radio Relay League (ARRL). A lecture sponsored by the IEEE EMC Society, will be held at BAE Systems Inc, 450 Pulaski Road Greenlawn, NY. Registration and refreshments at 6 PM and the lecture begins at 6:30 PM. The lecture is open to US citizens, but registration is required- see the announcement in this issue for details. For additional info, contact the lecture coordinator, Santo Mazzola at [mazzolas@ieee.org](mailto:mazzolas@ieee.org) or at 631-262-8367.

April 7, 2006 – Long Island Section Awards Banquet. Huntington Hilton. Route 110, Melville.

May 5, 2006 – Long Island System, Application and Technology Conference. Farmingdale State University of NY, 2350 Broadhollow Road, Farmingdale, NY. Lupton Hall. <http://www.ieee.li/lisat>.

May, 9-11, 2006 – Electro 2006. The New Boston Convention & Exhibition Center - South Boston, Massachusetts. <http://www.nepconeast.com/>.

**CALL FOR PAPERS - Second Annual IEEE Long Island Systems, Applications and Technology Conference—LISAT2006**  
<http://www.ieee.li/lisat>

EDA  
Ad

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**Professional Activities Report**  
**By: Irwin Weitman, P.E., PACE Chairman**

The following article should be of interest to all our members.

**Downside of Cleaner Air: More Warming**

Christian Science Monitor (12/27/05) P. 3; Spotts, Peter N.

A group of scientists led by Nicolas Bellouin at the UK's Meteorological Office says efforts to reduce air pollution may actually be speeding up global warming. Based on measurements of small particles in the Earth's atmosphere called aerosols, the UK and US scientists estimate that fewer aerosols could cause average worldwide temperatures to rise faster than previously projected. Aerosols, including emissions from volcanoes and burned fossil fuels, tend to cool the atmosphere due to their reflective characteristics, according to the research, which derives from data from NASA's Terra and Aqua satellites as well as ground-based and aircraft measurements. The results have been published in the journal Nature and suggest a narrower range of uncertainty compared to previous results from the United Nation's Intergovernmental Panel on Climate Change, notes James Coakley at Oregon State University in Corvallis. The new research comprises "a shot across the bow. The paper will be controversial," he says. Current estimates of global warming range from 2.7 degrees F to 7.9 degrees F for the end of the century, depending on different factors like emissions of greenhouse gases. The new data suggests "future atmospheric warming greater than is presently predicted, as aerosol emissions continue to decline," according to the scientists. Coakley adds that aerosols' other characteristics, such as the ability to seed clouds, need to be studied further, and could be facilitated by two new satellites -- Calipso and Cloudsat -- due out in 2006.

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# NYIT

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## IEEE Meeting - Talk on Nanotechnology

**Date:** Tuesday February 28, 2006

**Time:** 6:30PM

**Place:** Telephonics, Inc., 815 Broadhollow Road, Farmingdale, NY (RTE 110)

**Subject:** Nanotechnology and biological nanomachines.

**Speaker:** Dr. Ben Ovryn Assoc. Prof at Einstein College of Medicine, Dept. of Anatomy & Structural Biology

**Admission:** Gratis. To attend, register with Robert Bruce - [r.n.bruce@ieee.org](mailto:r.n.bruce@ieee.org)

**Speaker's bio -** Uses engineering principles to characterize quantitatively the molecular scale components human health. He has expertise optical microscopy and MRI.



### **The Long Island Chapter of the IEEE Circuits and Systems (CAS) Society is presenting a lecture titled: CHARACTERISTICS OF UNDERGROUND SECONDARY POWER DISTRIBUTION NETWORKS FOR USE AS A COMMUNICATION MEDIUM**

**Monday February 20<sup>th</sup> 2006 at 6:30pm**

**Speaker:** Ralph Stolowicki – Principal, PowerCom Technologies Corp.

*(This seminar is free and all are invited. Refreshments will be served.)*

*Who Should Attend?*

System and design engineers involved in the design of communication systems over long distances using secondary power lines in mostly metropolitan areas.

*Abstract:*

This seminar will present a number of results of actual measurements taken on an underground secondary power distribution network. An overview of the network will be presented. Network characteristic impedance and network path loss will be presented.

*Speaker Bio:*

Ralph Stolowicki is a Principal at PowerCom Technologies Corp. He has a Bachelor of Electrical Engineering degree from the City College of New York, and did graduate work at New York Polytech. Mr. Stolowicki has been involved in power line communication for the last 30 years.

*Location:*

Telebyte, Inc

270 Pulaski Road

Greenlawn, NY 11740

(631)423-3232 ext 469 [awilliams@telebytebroadband.com](mailto:awilliams@telebytebroadband.com)

*For Driving Directions:*

[http://www.telebyteusa.com/driving\\_directions.htm](http://www.telebyteusa.com/driving_directions.htm)

Note: We are just west of BAE on the North side of Pulaski Road

*Registration:*

Registration is required and is available on-line. 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.

### **The Long Island Chapter of IEEE Electromagnetic Compatibility Society is presenting a lecture titled: *Broadband Over Powerlines on Tuesday, March 14, 2006, 6:00 PM***

**WHO SHOULD ATTEND ?** Anyone interested in Broadband Over Powerlines (BPL).

**SPEAKER:** Mr. Ed Hare ("WIRFI")

**ABSTRACT:** The presentation explains what BPL is, its potential impact on HF communications, and what ARRL is doing to protect the interests of amateur radio.

**The Speaker:** Ed Hare is the (American Radio Relay League) ARRL's "RFI guru" and now holds the position of Laboratory Manager.

**LOCATION, TIME, AND REGISTRATION:** The lecture will be held at BAE Systems located at 450 Pulaski Road, Greenlawn, NY. The facility is located just east of Park Ave (Suffolk County Rte 35). The presentation will begin at 6:30 PM. Pizza will be served beginning at 6:00 PM. If you wish to attend, you must register no later than March 14, 2006. To register please visit the calendar page of the IEEE Long Island Website, [WWW.IEEE.LI](http://WWW.IEEE.LI), click on the registration link for the meeting, and fill out the form.

# 30 YEARS AGO

## Rod Lowman, Historian

February of 1976 further demonstrated the ancient wisdom that no matter how august the organization, it thrives and prospers only because of the men and women who invest their time and effort, their enthusiasm, their creative ideas and leadership skills to keeping it viable and attractive to its membership.

In his report to the membership on the Region 1 meeting, the chairman of the section reported that the incoming Director, Art Rossoff who had been Chairman of the L.I. Section and had pioneered the development of the Engineering Code of Ethics (which is only now after, more than 35 years being broadened to include not only Engineers but all those with Technological Responsibility) and pension reforms, encouraged us to work with him to suggest changes necessary to make IEEE international more relevant to its members. He pointed out that the Director of Region 1 is also a member of the Board of Directors of IEEE international and can influence directly improvements in national and international technological policy.

A unique opportunity for influence you say? Yes, but not an infrequent one. There have been at least 5 times in which a member of the L.I. Section has occupied the chair of the president of the IEEE. There are additional times when a member has been the Region One Director. Many members have served on regional and national committees. So when you have established your reputation as a leader at the section level, feel assured that there are additional challenges available at region, national and international levels.

In that same month Bob Bruce published in the PULSE an analysis of the member survey made in a 1975 special summer issue of the PULSE. The survey covered everything from career challenge, career development, utilization, career paths, reward climate, organizational climate, benefits, overtime policy, anxiety, and concern of layoffs. Respondents were a variety of ages, experience, education and salary. The largest numbers were from senior engineers with a BS or MS degree, about 40 years old and with a salary of about \$25,000. Respondents were generally satisfied with their environment but would like minor improvements in a number of areas.

It is interesting to note that the three who provided most of the action for the month, Bob Bruce, Professional Activities Chairman, Rod Lowman, Section Chairman, and Art Rossoff, Region 1 Director, are still actively involved in the section programs; Bob is the Power Society liaison and serves as the conscience of the executive committee, Rod serves on the Awards committee and is the Section Historian, and Art is promoting and raising funds for a Long Island Science Museum, which the Section is supporting. They not only continue their support, they also provide long term continuity for the organization..



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