THE PULSE OF LONG ISLAND IEEE

Chairperson's Message by Santo Mazzola, chairman@IEEE.LI

It is that time of year again when the summer is coming to an end. Here at the IEEE Long Island Section we have had a busy summer. We have had a significant number of summer meetings that I hope were enjoyed by the members. I am a big fan of popular music and the late James Brown was known as the "hardest working man in show business." Here at the IEEE Long Island Section, I would nominate **Nick Golas** as the hardest working man in the IEEE. Nick wears many hats and does many jobs on the Executive Committee (ExCom) and is the editor of the Pulse and his efforts are always first rate. Nick, your efforts are very much appreciated.

The new Long Island Section **Women in Engineering (WIE) Chairwoman Christina Nickolas** is involved with a terrific **Women in Engineering Professional Development Seminar (PDS)** on September 25–27, 2009 in White Plains, NY. This year's theme is: **"Engineer the Future, Sharpen your Competitive Edge"** and is sponsored by the IEEE Region 1 and Region 2. Please support this event in any way that you can. There is information about corporate support and how to attend this very special event inside this issue of the Pulse. You don't have to be a woman to be involved with this WIE event.

I was one of seven people from the Long Island IEEE ExCom that recently attended the Region 1 Summer training session in Springfield, MA. It was highly informative and we all learned a lot. The theme of the event was that it is "all about the members." We are all here to serve you. If there is anything that you want to discuss or if you would like to attend the next ExCom meeting on September 21st at Telephonics in Farmingdale as a guest, please contact me at chairman@IEEE.LI and we will make the arrangements for you to attend. You will be glad that you did.

Another thing that I am very excited about is that we now have our own Long Island Section **Power and Energy Society (PES) and Industrial Applications Society (IAS) Chapter**. The new **Chairman Steve Rubin, Vice Chairman Matt Nissen** as well as organizers **Robert Berger** and **Terry Stratoudakis** are all to be commended for their efforts in making this happen. It is obvious that in today's world Power and Energy are important subjects. Look inside this issue for information about future Power and Energy Society meetings and seminars.

I am proud to announce that Long Island Section has a new **Graduates of The Last Decade (GOLD) Chairman**. **Kris Waage** took over the responsibilities as the new **GOLD Chairman** and **Michael Co** will continue as our **Student Activities Chairman**. Kris and Michael are working together planning future GOLD and Student activities and events.

I am happy to announce that **David Bomzer** is the new Long Island Section **Communications Society Chairman** and **Dave Mesecher** is the new Long Island Section **Aerospace and Electronics Systems Society Chairman**. Please wish everyone well in their new endeavors.

There is a lot going on in the IEEE Long Island section. You should get involved and become a part of it.

Peace Out,

Santo (Sandy) Mazzola, Chair IEEE Long Island Section
chairman@IEEE.LI

CALENDAR OF IEEE EVENTS

SEPTEMBER 2009

2 **Long Island Consultants Network Meeting**
Topic: ***Collecting from Problem Customers***
Speaker: **Don L. Hochler**
Location: The Great Room, Briarcliffe College, Bethpage, LI
Time: 7:00 PM

3 **Instrumentation and Measurement Meeting**
Topic: ***What's New in LabVIEW 2009?***
Speaker: **Robert Berger**
Location: Telephonics, Farmingdale LI
Dinner 5:30 PM, Lecture 6:00 PM

15 **Power & Energy Society Meeting**
Topic: ***Role of Biomass-Derived Fuels in the 21st Century***
Speaker: **Devinder Mahajan**
Location: Stony Brook University, Stony Brook, LI, Lecture 6:00 PM

16 **Circuits and Systems Society Meeting**
Topic: ***Design Implementation for the Long Term***
Speaker: **Robert Gezelter**
Location: BAE Systems, Greenlawn, LI
Refreshments 6:00 PM,
Lecture 6:30 PM

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

29 **Computer Society Meeting**
Topic: ***Estimating Effort and Duration of Software Projects***
Speaker: **Pierre Bourque**
Location: Telephonics, Farmingdale, LI
Dinner 6:00 PM, Lecture 6:30 PM

OCTOBER 2009

1 **Center of Excellence in Wireless & Information Technology (CEWIT) Conference**
Location: Marriott Islandia, Islandia, LI.

6 **Women in Engineering (WIE) Society**
Topic: ***Benefits of WIE Membership***
Speaker: **Christina Nickolas**
Location: Telephonics, Farmingdale, LI
Dinner 6:00 PM,
Lecture 6:30 PM

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THE PULSE OF LONG ISLAND

Produced by the Long Island Section of the Institute of Electrical & Electronic Engineers Email: pulse@IEEE.LI

The PULSE of Long Island is published monthly except July and August by the Institute of Electrical & Electronics Engineers, Inc., Headquarters: 445 Hoes Lane, Piscataway, NJ 08855-1331. $1.00 per member per year (included in annual dues) for each member of the Long Island Section. Periodical postage paid at New York, NY, and at additional mailing offices. Postmaster, send address changes to: IEEE PULSE 445 Hoes Lane, P.O. Box 1331 Piscataway, NJ 08855-1331 (USPS 450-540) The opinions expressed in this newsletter are those of the authors, and no endorsement by the Institute, its officials, or its members is implied

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Alison Rubin, Associate Editor

LET US HEAR FROM YOU

The PULSE encourages letters to the editor. Members of the IEEE Long Island Section are encouraged to write in about Pulse articles or about other topics of interest to Long Island engineers. While the IEEE Long Island Section greatly appreciates feedback, we cannot guarantee that all letters will be answered or published. Please direct comments to pulse@IEEE.LI or to a Section officer.

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Consultant's Network of LI

The Consultants Network of LI maintains a referral service of Engineering, Computer, Managerial & Technical Professionals. Call or write for more information. There is no charge to the client for this service.

Voice Mail: 516-379-1678

IEEE Consultants Network of Long Island
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GOLD
Graduates Of the Last Decade

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Membership News

by Nikolaos Golas, Membership Development Chairman

The IEEE Long Island Section would like to welcome all the new members that just joined us and the members that moved to our section. The new members should familiarize themselves with what the Section has to offer by visiting the Long Island Section website at: www.IEEE.LI

New IEEE Members

Fauzia Ahmed - S	Michael Gilberti - G	Bo Li - G	Charles Reibeling - M
Nazmul Arefin - S	J.P. Grossman - M	Vladiuefr Litvinenko - M	Christopher Rose - S
Erica Aycin - M	Zhiyang Guo - G	Michael Livoti - M	Michael Scaturro - M
Joseph Barcia - S	Ramesh Gupta - M	Hamilton Lozada - S	R Sekar - M
Steeve Bissereth - S	Nathan Hagan - S	Sean Lucey G	Jamin Shah - M
Bhawana Bist - M	Peter Happ - M	Vyacheslav Makarov - M	Joshua Shishkoff - S
Christine Brancaccio - M	Jerry Harrison - S	Shadrak Martinez - S	Gurpreet Singh - S
Joseph Brennan - M	Casey Harwood - S	Gerald Mathieu - M	Daniel Snyder - S
Guy Brenner - M	Matthew Hassell - S	Keith McDonald - A	Hetal Soni - S
Steven Chan - S	Roland Hazzard - S	Andre McKenzie - S	Chaim Stitzer - S
Santhosh Chellappan - G	George Henry - A	R. Moreno Rodriguez - G	Gerard Sullivan - M
Teuh Shan Cheng - M	Ady Hershcovitch - M	Geetha Narayan - M	Raj Sumangali - M
Richard Cho - M	Douglas Holmes - M	Yehuda Nishli - M	Howard Tempro - M
Eileen Clancy - M	Donovan Holness Jr - S	Satoshi Ozaki - M	Chris Tomasino - S
James Clarke - M	Christopher Hooper - S	A. Panagopoulos - G	Rao Triveni - M
Adam Connell - S	Tingbo Hou - G	Susan Pankowski - A	Kshitij Tyagi - S
Joseph Danisi - M	Brant Johnson - M	Kiran K. Parvathala - G	Ryan Vellia - S
Chris. DeMartino - M	Lynne Johnson - M	John Petrsoric - M	Tianyuan Wang - S
Xiaoping Ding - M	Haifeng Ke G-	Robert Pinkerton - S	Adam Wechsler - M
Muhammad Farooqui - S	James Kearney - M	Gopinath Polavarapu - M	Dennis Wilde Jr - S
Anthony Favale - M	Chong IL Kim - S	Michael Powell - S	Daniel Worley - M
Cristian Ferent - G	Stephen Kramer - A	William Powell - M	Morgan Yang - M
Kelcey Fredette - S	Rony LaBonte - M	Houjun Qian - S	
Piter Garcia - S	Robert Lafferty - M	Scott Reed - G	

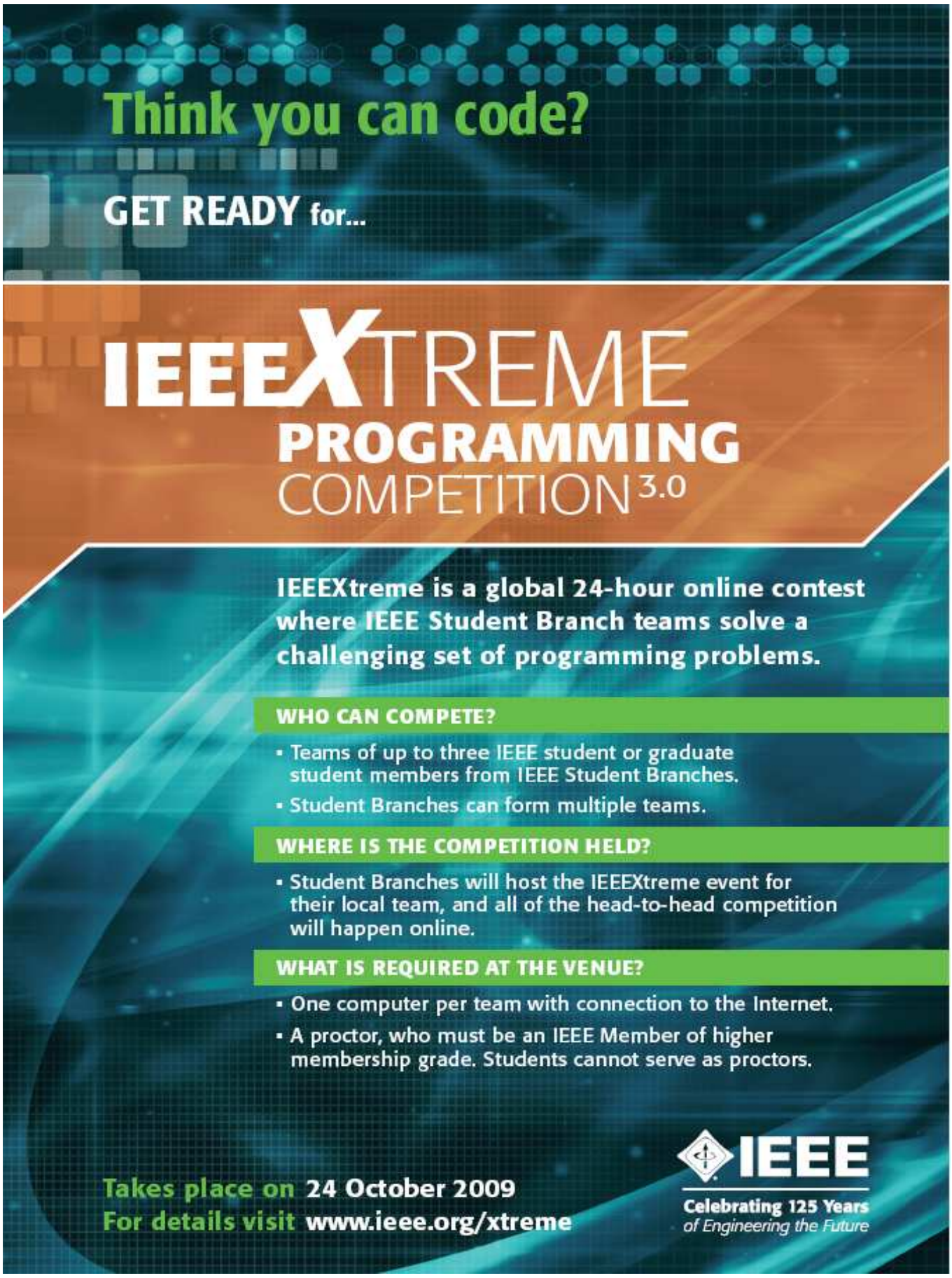
Members Moved into Section

Alex Avitabile - M	Michael Keber - S	Arthur Otis - LM	Joel Snyder - LS
Henry Bachman LF	Saad Khan - M	Rafael Ottmann - M	Raj Sumangali - M
Paul Birman - LM	Toshihiro Kobayashi - M	A. K. Penumarthy - S	Seymour Sutkin - LM
Christopher Comack - M	Maohua Lu - G	Jaime Peretzman - M	Clemens Wan - M
Joseph Dalven - M	Dan Marantz - LM	Edward Petry - M	Yannick Williams - S
Nicholas Fraine - M	Emil Martin - M	Stefan Robila - SM	Huong-Yu Wu - M
Asher Hensley - S	Matthew Nissen - M	Anthony Santosus - M	Keith Yu - S
Ady Hershcovitch - M	John Nobile S	Jeremy Schein - S	William Ziegler - M
Mark Hybertsen - M	Anthony Nocito Jr - M	Robert Schmid - M	
Pankaj Kataria - M	Johnny Oh - A	Ravikant Singh - S	

Membership Legend

A=Associate Member, AF=Affiliate F=Fellow, G=Graduate Student Member, LF= Life Fellow, LM=Life Member, LS=Life Senior, M=Member, S=Student Member, SM=Senior Member

Welcome to the IEEE and the IEEE Long Island Section


Think you can code?
GET READY for...
IEEEXTREME
PROGRAMMING
COMPETITION 3.0
IEEEXtreme is a global 24-hour online contest where IEEE Student Branch teams solve a challenging set of programming problems.
WHO CAN COMPETE?
• Teams of up to three IEEE student or graduate student members from IEEE Student Branches.
• Student Branches can form multiple teams.
WHERE IS THE COMPETITION HELD?
• Student Branches will host the IEEEXtreme event for their local team, and all of the head-to-head competition will happen online.
WHAT IS REQUIRED AT THE VENUE?
• One computer per team with connection to the Internet.
• A proctor, who must be an IEEE Member of higher membership grade. Students cannot serve as proctors.
Takes place on 24 October 2009
For details visit www.ieee.org/xtreme
IEEE
Celebrating 125 Years
of Engineering the Future

Join the New IEEE Long Island Section Women in Engineering (WIE) Affinity Group

by Christina Nickolas, Chairwoman Women in Engineering

After petitions were collected this past winter, the Long Island IEEE WIE affinity group was formed on May 22, 2009. To celebrate this accomplishment, we would like to invite you to our first meeting that will be held on October 6th, 2009 at Telephonics, Farmingdale, LI. For more details on the event and how to register, please visit

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

Well, it's official - we've got our new LI Chapter of the IEEE Product Safety Engineering Society. Thanks go out to all members for their support to get this local chapter formed.

We are hoping by having a group of this kind based on Long Island that it will provide a way for women in engineering and technology to interact and share information with similar interests and to participate in activities that support the WIE mission. We invite you all to take a look at our website

http://www.IEEE.LI/wie/index.htm

where you can find links to special resources relate in women engineering groups in the states and internationally.

So, if you are an IEEE member and not a WIE member yet, I'd like to encourage you to join this group. Currently WIE has about 240 Affinity Groups worldwide and more than 10,000 members. The group not only provides an excellent network of support, but also has developed programs and activities to promote women in the profession while also enhancing their career progress. More information can be found at:

http://www.ieee.org/women

Here are some WIE Membership benefits:

- Join the WIE team and develop your leadership skills
- Awards and scholarships
- Discounts to events
- Monthly electronic newsletter with career information, reports on WIE and Affinity Group activities, IEEE news, and more
- Access to the WIE electronic membership directory listing of all WIE and IEEE women members. This online directory is a great networking tool!
- WIE Magazine

Membership is open to women and men alike. WIE members can be engineers, scientists and students whose technical interests are rooted in electrical and computer sciences, engineering and related disciplines.

In addition, the annual **IEEE WIE 2009 Region 1 Professional Development Seminar** will take place on September 25-27 at the Crowne Plaza Hotel, White Plains, NY. The conference's theme is: **"Engineer the Future, Sharpen your Competitive Edge"** and is sponsored by the IEEE Region 1 and Region 2. It will offer networking opportunities, professional seminars with the option to obtain CEU's, company exhibits, and more. For more information, navigate to:

http://www.ieee.org/go/wiepds2009

If I don't see you at this conference, I hope to meet you on our "Benefits of WIE Membership" on October 6th.

Please don't hesitate to contact me at:

Christina Nickolas wie@IEEE.LI

Also follow us on TWITTER at: http://twitter.com/IEEE_WIE_LI

About myself: I am an Editor for **Electronic Products Magazine**. Prior to that I was a Staff Engineer at RFI Corp and a Project Engineer at Underwriters Laboratories. I graduated from Manhattan College with a BEEE and an MSEE degrees.

LEGAL AFFAIRS

by Steve Rubin, Legal Affairs Chairman

I am going to try to take a break from my reporting on the ***Bilski*** case and talk a little bit about inequitable conduct. In order to obtain a patent on an invention, you must file a patent application with the Patent Office. The Patent Office will examine the application to see if it complies with certain requirements. For example, the application must recite something that is new to the world. If the application complies with these requirements, the Patent Office will issue a patent.

During the process, everyone involved with the application, such as the inventor and his attorney, are under a duty of candor. If they discover any information that may be relevant to the Examiner, or that may be material to patentability (whatever that is) they have to disclose the information to the Patent Office. If they fail to disclose this information, a claim can be made that their conduct was inequitable – which is similar to saying that they defrauded the Patent Office – and the resulting patent may be unenforceable.

Here's the problem. Almost every defendant alleges that the Patentee defrauded the Patent Office. As a consequence, litigation is more expensive because there is another defense that must be addressed by the Patentee. Moreover, the threat of a potential inequitable conduct claim means that any piece of prior art that looks even remotely relevant is submitted to the Patent Office during prosecution of an application. This makes the files in the Patent Office significantly more voluminous and consequently Patent Examiners have more work, more to review and can't keep up with their backlog.

In ***Exergen Corp. v. Wal-Mart Stores***, decided in August 2009, the Patent Appellate Court gave us a little reprieve on inequitable conduct. The court ruled that in order to allege inequitable conduct, the defendant must be very specific about the defense. A general claim of a violation of the duty to disclose is insufficient. The inequitable conduct claim must be specific and identify: the particular individual, the prior art reference that is relevant, what part of the reference is relevant, how it is relevant to the claimed invention, and some set of facts showing that the particular individual intended to deceive the Patent Office. Without these facts, a defendant can no longer state a claim for inequitable conduct. This is a good ruling because inequitable conduct has become a part of every patent case. It complicates litigation, prosecution and the burden on the Patent Office.

Bilski – briefs were filed over the summer and into September. As of the writing of this column, the IEEE is looking into submitting an Amicus (friend of the court) brief reflecting our position that the test for patent protection on processes should include protection for software.

Steve Rubin srubin@dilworthbarrese.com

LECTURES

The Long Island Chapter of the IEEE Instrumentation & Measurement Society and the Long Island LabVIEW User Group (LILUG) are presenting a lecture titled:

What's New in LabVIEW 2009?

Thursday, September 3, 2009 at 6:00PM

This seminar is free & all are invited. Refreshments will be served at 5:30pm

Speaker: Robert Berger

Abstract: In addition to providing increased performance for parallel programming with multicore processors and field-programmable gate arrays (FPGA's), LabVIEW 2009 provides access to the latest wireless technologies and simplifies real-time math by streamlining mathematical algorithm design and deployment to deterministic hardware. See Next-Generation Technologies including: VI Snippets Tools, 3D Math Plots, Partial Diagram Cleanup, VI Recursion, Parallel For Loops, Enhanced Icon Editor, Probe Watch Window, LabVIEW MathScript RT Module

Speaker Bio: Robert Berger is the District Sales Manager at National Instruments. He joined National Instruments Engineering Leadership Program in 2001. He supported and trained customers for approximately 4 years in Texas and then moved to the Long Island region in April 2007. His territory covers both Long Island and NYC. Robert holds a BS degree in Electrical Engineering from Texas A&M. He is available for demos, onsite seminars, technical consultation, specification assistance, and loaner equipment.

Seminar Coordinator: Nikolaos Golas, Chair IEEE Instrumentation & Measurement Society, LI Section

Location: Telephonics Corporation, 815 Broad Hollow Road, Farmingdale, New York

Registration: Registration is required. Please visit the calendar page of the IEEE Long Island website www.IEEE.LI Click on the registration link and fill out the form.

INDUSTRY NEWS

Telephonics Corporation Signs $US16.3 million Contract with Lockheed Martin Canada to Provide Combat System Component for Halifax Class Frigate Upgrade

Telephonics Corporation announced that it signed a contract with Lockheed Martin Canada to provide an Identification Friend or Foe (IFF) Interrogator as part of the Halifax Class Modernization Program. The initial award is for $US16.3 million with a projected value expected to exceed $US20 million.

This contract represents Telephonics' first entry into the shipboard IFF market for its all new Common Module ALL MODE interrogator system. Variants of this equipment are currently sold under the nomenclature AN/UPX-40, 40(V), 505, 505(V) and AN/UPX-43 (V).

"Telephonics has been in the worldwide shipboard IFF markets with our BTE-2000 IFF processor and on board U.S. Navy carriers with our AN/TPX-42 systems for many years. Now, together with Lockheed Martin Canada, we are preparing to meet the threat of increased littoral conflicts in this century and it is critical that IFF sensors such as ours have the automation and capability to rapidly and accurately identify friendly and neutral parties in dense platform environments in order to prevent fratricide," said Kevin McSweeney, President of Telephonics Radar and IFF Systems.

Lockheed Martin Canada is the prime contractor for the Halifax Class Modernization, and has been the combat systems integrator for the Halifax Class for the past two decades. The company hosts the Canadian Navy's integration lab at its facility in Montreal and employs dedicated teams in Esquimalt, BC, and Halifax, NS, to maintain and upgrade the combat systems, maintenance procedure trainers, and team trainers located there. The company is the original equipment manufacturer of the combat systems for the Halifax Class and is the in-service support provider for both the Halifax and Iroquois Class vessels.

LECTURES

The Long Island Section Power & Energy and Industry Applications Joint Societies Chapter are presenting a lecture titled:

Role of Biomass-derived Fuels in the 21st Century

Tuesday, September 15, 2009 at 6:30PM

This seminar is free & all are invited. Dinner will be provided

Speaker: Devinder Mahajan

Program Outline: Strategies to maximize carbon conversion in fuels production from biomass to minimize carbon footprint

Speaker Bio: Dr. Mahajan is a Professor and Co-Director of the Chemical & Molecular Engineer (CME) Program at Stony Brook University, Director of the NSF National Center for BioEnergy Research & Development (C-BERD) Industry/University Cooperative Research Center, and Group Leader of the Energy Sciences & Technology Department at Brookhaven National Laboratory. Dr. Mahajan's professional goal is to bridge science and technology for the benefit of mankind by focusing on energy issues. His projects portfolio includes Methane hydrates, hydrogen production, Fuel Cells, Fischer-Tropsch, Methanol and Mixed alcohols synthesis using soluble (single-site) or slurried (nano (colloidal) phase) catalysts. He serves on the Editorial Boards of the International Journal of Oil, Gas and Coal Technology and The Open Petroleum Journal and is the author of over 80 publications, 10 patents, and presented over 140 invited lectures around the globe. In 2009, he was appointed Associate Editor, Bioenergy of the Journal of Renewable and Sustainable Energy (JRSE). Dr. Mahajan is a member of the American Institute of Chemical Engineers (AICHE), the American Chemical Society (ACS), and the New York Academy of Sciences (NYAS).

Seminar Coordinator: Steven Rubin, Chairman PES & IAS Society

Location: Stony Brook University, Room TBA, Stony Brook, NY

Registration: Required.
Register by visiting the Calendar page of the IEEE Long Island Section webpage at:

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

SAVE THE DATE!!!

LISAT2010

Friday, May 7, 2010

Long Island Systems, Applications & Technology Conference
Farmingdale State University

Sponsored by the
IEEE Long Island Section
Farmingdale State University
Institute for Research & Technology Transfer

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Contact: pulse@IEEE.LI

AWARD NOMINATIONS SOLICITED

The IEEE considers the recognition of outstanding technical and professional contributions of its members an important activity. Accordingly, awards are given by IEEE headquarters, IEEE USA, Regions and Sections. The Long Island Section has an active Awards Committee that seeks out worthy candidates for a variety of awards. The awardees are honored at our Annual Awards Banquet in the spring.

We are always seeking nominations for IEEE Fellows, Region 1 and IEEE USA awards. A perusal of the IEEE, Region 1 and the LI Section websites will give you details on the kinds of awards, the nomination process and deadlines. We particularly wish to encourage past awardees to serve as nominators. You are in an excellent position to judge a candidate's qualifications.

Our Section's Awards Committee is currently soliciting nominations for its six awards. Nominations must be in the hands of the Awards Committee not later than December 1, 2009. These awards are given annually and they are:

- **Harold Wheeler Award** - This award recognizes an IEEE member who has demonstrated outstanding technical and management abilities. Harold Wheeler was a world-famous engineer, who throughout his career at Hazeltine and Wheeler Labs (now part of BAE Systems), made many important technical contributions. He was a founding member of the Long Island Section.

- **Alex Gruenwald Award** - This award honors an IEEE member who has made important contributions to our profession on Long Island, and to the IEEE at large. Alex Gruenwald was an IEEE pioneer in the area of professional activities. He was a very active member of the Long Island Section, and went on to be Director.

- **Charles Hirsch Award** - The award recognizes an IEEE member who has made an outstanding technical contribution that has benefited Long Island. Charles Hirsch was a creative engineer at Hazeltine.

- **Outstanding Young Engineer Award** - This award honors a Long Island IEEE member who has made important technical contributions before his or her 35th birthday.

- **Athanasios Papoulis Award** - This award is presented to educators in engineering science or mathematics, living in the boundaries of the Long Island Section, who have demonstrated outstanding teaching techniques. Athanasios Papoulis was a distinguished professor at Polytechnic University who was noted for promoting quality technical education on Long Island.

- **Outstanding Student Branch Award** - This award is given to an IEEE student chapter that is from one of the Long Island engineering schools. The award recognizes outstanding activities that encourage student interest in the IEEE.

If you are aware of possible candidates for Section or any other IEEE awards or have questions, contact **Jesse Taub**, the Award Nominations Chairman at: jjtaub@aol.com. We look forward to hearing from you.

IEEE-USA Awards and Recognition
http://www.ieeeusa.org/volunteers/awards/

IEEE Awards and Recognitions
http://www.ieee.org/awards/

IEEE Region 1 Awards and Recognition
http://ewh.ieee.org/reg/1/Awards.html

Long Island Section Awards and Recognition
http://www.IEEE.LI/awards/

Annual Engineer's Joint Council of Long Island (EJCLI) Dinner

by Terry Stratoudakis PE, Secretary Long Island Chapter of the IEEE Instrumentation & Measurement Society

On Wednesday, June 3, 2009 the Engineer's Joint Council of Long Island (EJCLI) met to discuss the planning of engineering events, seminars, and lectures. In attendance, there were approximately 35 engineers and engineering students & faculty from various disciplines including the AIAA, ASME, IEEE, ISA, NSPE, SWPD, and SWE.

The purpose of the meeting was to network and coordinate events between the various organizations. It was mentioned by many that sometimes events tend to conflict schedule-wise. Many of the lectures and seminars held by the various organizations tend to span multiple disciplines. Since it was agreed that since engineer's outside a particular organization could benefit technically, it was agreed that a central website or portal will be developed to have links to the various organizations and in the future possibly having their schedules in there as well. Engineer's Week 2010 was discussed as well.

The IEEE Long Island Section was represented by Robert Berger of the PES and IMS, James Colotti the IEEE LI Section webmaster & MTT and Terry Stratoudakis of the PES & IMS.

The meeting was coordinated by Tony Cacioppo of the ASME, ISA, and NYSSPE and Mark Klein, ASME LI Section Chair. The dinner was sponsored by the ASME's Long Island section. For more information please contact **Terry Stratoudakis** at 347-228-7379 or terry@aleconsultants.com

LECTURES & SEMINARS

The Long Island Chapter of the IEEE Circuits and Systems (CAS) Society is presenting a lecture titled:

Design Implementation for the Long Term

Wednesday, September 16, 2009 at 6:30PM

This seminar is free & all are invited. Refreshments will be served at 6:00PM

Speaker: Robert Gezelter

Who Should Attend?

Anyone interested in circuit design and is interested in how good design practices reduce project risk and increase the utility of the resulting design.

Abstract: It has become economic suicide to design hardware components for a single project. Computers on every scale have become ubiquitous, from rack-sized servers to programmable device controllers and logic arrays that cost fractions of a dollar. At the same time, the costs of designing and producing circuit cards have escalated to the point where correcting a shortcoming of the hardware layout or design is a financial and schedule catastrophe. In point, an extra etch on a circuit card is zero cost; correcting an omitted etch can cost in excess of $100,000 and months of schedule slippage.

Conversely, the foresight of provisioning those connections and etches not strictly necessary for the task at hand can pay handsomely large dividends when design requirements change, underlying technologies change, or new sales opportunities arise.

This lecture will examine how good design practices reduce project risk and increase the utility of the resulting design.

Speaker Bio: Robert Gezelter is a Senior Member of the IEEE and an alumnus of the IEEE Computer Society's Distinguished Visitor Program. During his service with the Distinguished Visitor Program, Mr. Gezelter presented numerous times under IEEE Computer Society auspices throughout the United States and Canada. Mr. Gezelter has been in private practice for over 30 years.

His clients have included business enterprises ranging from the Fortune 10 to small business. His practice has ranged the gamut, from defense and real-time systems to commercial timesharing.

He is the author of several book chapters dealing with computer architecture chapters dealing with computer architecture and security and has spoken at many professional conferences, both in the United States and abroad. Mr. Gezelter can be contacted at www.rlgsc.com.

Seminar Coordinator: Arthur Williams, CAS Chairman. You can contact Mr. Williams at awilliams@telebytebroadband.com

Location: BAE Systems, 450 Pulaski Road, Greenlawn, NY. The facility is located just east of Park Avenue (Suffolk County Rte. 35) on Pulaski Road. Please enter from the main entrance facing Pulaski Road.

Registration: Registrants must be US citizens. Registration is required. To register please visit the calendar page of the IEEE website,

http://www.IEEE.LI/calendar/,

Click on the registration link, and fill out the form.

Brain Teaser Challenge Solution

by Butch Shadwell

I took a lot of pictures at the international science and engineering fair this year. It made me think of how these images were stored. "Most images and video stored and reproduced digitally, such as JPEG and MPEG, use a lossy type of data compression. This is accomplished through a mathematical transform that converts the image information into coefficients of sinusoids at various frequencies. Can you name this mathematical transform?"

Of course I am referring to the discrete cosine transform. It turns out that the DCT is much more efficient for representing these signals in a compressed form. It is similar to a DFT using only real numbers. But I bet you already knew that.

Brain Teaser Challenge

by Butch Shadwell

I attended a conference recently at the National Academy of Sciences in Washington DC, called the Humanitarian Technology Challenge. It was sponsored by the IEEE and the United Nations Foundation, among others. The objective was to organize volunteers from around the world to come up with better ways to apply technology to relieving human suffering.

Even though I am not really a power guy, I found myself engaged in number of conversations about power quality. We were talking about the amount of energy that gets converted to heat from harmonic distortion of the power waveform.

Your challenge this month, should you choose to accept it, is to explain why most of the harmonic energy you find on the power mains is in the odd harmonics of the fundamental?

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Long Island's Early Electronics History

by Jesse Taub

In our Section's commemoration of the IEEE's 125th Anniversary, we continue to highlight significant contributions made by Long Island companies in their early days. This month we feature Grumman Aircraft Engineering Corporation...

History of Electronics at the Grumman Aircraft Engineering Corporation

by Dave Durst, Val Kraut and Ron Pirich

When the pioneering founders of Grumman Aircraft Engineering Corporation (now Northrop Grumman) opened the doors to the garage that first housed their little company, the aviation lexicon had words such as "metalbending" and "canvass-covered." They surely had no idea that they and their followers would pioneer in a world that used worlds like "electronic battlefield" and "system-of-systems."

Leroy Grumman, a graduate of the Cornell University Engineering School, and his partners Edmund Poor, William Schwendler, Jake Swirbul, and Clint Towl, founded the Grumman Aircraft Engineering Corporation at Baldwin, Long Island, in December of 1929. As the company grew, it moved to Valley Stream, then Farmingdale, and finally to Bethpage, adding the testing and final assembly facility at the 6,000-acre Naval Weapons Station in Calverton, all located on Long Island.

Grumman manufactured its first fighter, designated the FF-1, for the Navy in 1932. This design was improved upon in subsequent models and led to the development of the successful F4F Wildcat, Grumman's first fighter with folding wings. The unique mechanical concept behind the folding wings set the stage for the unique electronic developments to come out of the company in the following decades.

Grumman has had a storied history of designing, developing and integrating complex electronic systems into its advanced air and space platforms. It is probably best known as the designer and manufacturer of the U.S. Navy's system-enabled vehicles from after World War II until today, such as the F-14 "Top Gun" fighter aircraft and the E-2D Hawkeye, an early warning airborne command center, and NASA's historic Lunar Module or LM.

Grumman Aircraft Engineering and subsequently Grumman (1969) Corporation worked throughout the 1930s to early 1994 (and subsequently after its merger with Northrop) with a number of talented electronics subcontractors. Together, they developed (and are continuing to develop) unique and next generation electronic systems. Some allowed the LM to successfully land and return from the lunar surface. Others enabled the development of advanced radar and other intelligence, surveillance and reconnaissance systems and enabling electronic warfare systems. The avionics groups in Grumman's Product Engineering department purchased most of the on-board equipment. They also wrote the detailed specifications and managed the myriad of electronics suppliers and electronic subsystem vendors. Test equipment was designed and built by the Grumman Product Support and Flight Test departments. Flight test engineers designed and built digital test equipment. Grumman Ground Support had a significant digital design group which designed test and interface equipment.

After the Apollo program ended, Grumman also developed several spin-off electronic technologies. One of these was a digital electronic transmitter for fire crews that eventually led to Grumman being involved in the fire engine business. At Calverton, Grumman built the first station to monitor flight test telemetry from an aircraft in real-time. As a result of this demonstrated electronics capability, Grumman won a job to modernize Edwards AFB and another to provide a new system for the Navy's Pacific Test Range. The associated computers were large commercial mainframes but Grumman designed the range instrumentation interface units.

Grumman established an Irvine, Calif. facility in the 1980s to build Z technology infrared (IR) focal planes that were designed and developed in Bethpage. The term "Z-technology" refers to the fact that a focal plane module, which has circuit carrying layers perpendicular to the focal plane, has a depth dimension Z in addition to the X and Y dimensions of the focal plane. The focal planes and support electronics were designed for systems intended to meet United States infrared space surveillance needs. These systems addressed critical warfighter requirements in the areas of missile warning, missile defense and battlespace characterization.

Grumman needed to develop an IR camera for that missile warning satellite that would have a very large dynamic range. They needed high sensitivity to detect dim missile stages while not being susceptible to saturation by bright plumes so that multiple missiles could be identified. These are conflicting requirements in the design of the unit cell of the readout integrated circuit for the focal plane since bright targets require a large integrating capacitor and short integration times and dim targets require long integration times and small integration capacitors.

The solution Grumman developed was to create a dual gain amplifier that split the integration time into two phases. The output of the short integration time (low gain) was sampled, followed by a long integration time sample. The result was a piecewise linear electronic front end for the focal plane that effectively achieved an extraordinary 18 bit dynamic range. This camera concept is due to be launched next year on the Space-Based Infrared System (SBIRS) GEO payload. SBIRs is a consolidated system intended to meet United States infrared space surveillance needs.

Another concept that was developed during the same time frame was called E-Zoom. It utilized an electronic switching network at the front of an IR focal plane to enable the camera to electronically switch between coarse and fine resolution while minimizing the silicon real estate needed for each pixel amplifier. This would allow the space-borne camera to observe large geographic areas in coarse resolution while switching to fine resolution only in areas of interest. E-Zoom minimizes the enormous quantity of data that would need to be processed on board the satellite or downlinked to the ground, while improving the silicon yield of the readout integrated circuits or ROICs.

Grumman initiated the development of the AN/TPQ-36 Firefinder radar system, which detects adversary weapons and provides pinpoint targeting information for a counterattack. This system is now in use by the U.S. Army and Marine Corps and by nations worldwide. The Firefinder radar system, which had been transitioned to Northrop Grumman Electronic Systems after the union of the two companies, is a technologically and electronically advanced land based radar system that can acquire multiple targets simultaneously and relay that information to other weapons systems and troops to react to the threat accordingly. Over one hundred of these systems have been delivered to the U.S. Army and Marine Corps and upgrades are ongoing today.

For many years, Grumman was the largest single corporate employer on Long Island. Grumman's products, including their integrated electronics, were considered so reliable and ruggedly built that the company was often referred to as the "Grumman Iron Works." That proud tradition lives on today in the Bethpage-based employees, facilities and capabilities of Battle Management and Engagement Systems, a division of the new Northrop Grumman Aerospace Systems sector.

INDUSTRY NEWS

Northrop Grumman's E-2D Advanced Hawkeye Completes 2nd Year of Flight Testing

In the two years since Northrop Grumman Corporation's E-2D Advanced Hawkeye took flight at the company's East Coast Manufacturing and Flight Test Center in St. Augustine, Fla., the program has continued on a steady and successful course with an end goal of delivering this revolutionary Airborne Early Warning weapons system to the warfighter.

"Since our first flight in August 2007, the joint Advanced Hawkeye team has continued to demonstrate its commitment to deliver this state-of-the-art airborne early warning capability to the U.S. Navy," said Jim Culmo, Northrop Grumman vice president of Airborne Early Warning and Battle Management Command and Control Programs. "The team's solid performance and strong momentum has resulted in the program achieving, or exceeding, all major milestones."

Culmo said that E-2D pilot production continues ahead of schedule on the first three aircraft, and production of the first Low-Rate Initial Production aircraft began June 15 under a $432 million contract from the U.S. Navy. "The first two E-2D System Development and Design (SDD) aircraft have transitioned to NAS Patuxent River, Md., where they are undergoing additional testing in preparation for Initial Operational Test & Evaluation, scheduled to begin 1Q FY12,"

In addition to accumulating more than 1,000 flight hours, over half of which have involved in-flight radar testing, in the past year the Advanced Hawkeye program has successfully completed a Production Readiness Review, Operational Assessment, a Technology Readiness Assessment and a Milestone C.

"The E-2D program continues to be a great success story," said Capt. Shane Gahagan, program manager, Hawkeye Greyhound program office, PMA-231. "Not only is the weapon system meeting or exceeding our expectations, but the U.S. Navy has recognized the excellent performance of the joint program management team, evidenced by the Naval Air Systems Commander's award. Also, with the recent successful Office of Naval Research live-fire event, the commitments the E-2 program is making to the family of systems architecture known as Naval Integrated Fire-Control-Counter Air, or NIFC-CA, are also being met."

As the U.S. Navy's carrier-based airborne early warning and battle management command and control system, the E-2D Advanced Hawkeye, with its newly developed AN/APY-9 radar, works in concert with surface combatants equipped with the Aegis combat system to detect, track and defeat cruise missile threats at extended range.

After the Globalization Forum…

The Long Island Section recently held a Forum on Globalization at SUNY Farmingdale College to discus the impact of outsourcing and offshoring. One of the aims of the Forum was to provide the public with information……does outsourcing and offshoring provide any long term benefits to the United States; what about developed and undeveloped countries; what about here, on Long Island?

Another goal of the Forum was to find out how people reacted to the information presented, what their opinions were, and how much they are willing to stand up and help put an end to the practices that are draining the economic life of the Island. We wanted to motivate people to write to their congressional representatives, local newspapers and express their opinions. Feedback was solicited in the form of a questionnaire that was handed out, to be filled out at the Forum and returned.

Over 50 people attended the Forum….not exactly what we expected, but nonetheless as good as we could hope for on a beautiful Friday evening. Of those who took the time to fill out the questionnaires and return it to the committee, the results were as follows:

- 74% of the attendees felt that the Forum was very informative, while 26% felt that it was informative
- 89% of the attendees felt that the speakers that presented the information were very knowledgeable, while 11% felt that they were knowledgeable;
- 63% of the attendees felt that the depth of discussion was very informative, while 33% felt that it was informative. 4% felt that the forum did not go deep enough;
- 96% of those who attended felt that the forum presented them with information that they did not have before;
- 100% of the attendees agreed that these issues should be brought to the attention of their congressional and state representatives, but only 89% agreed to do so, and tell their representatives how they feel about it;
- When the attendees were asked if they would be interested in attending other Forums on timely subjects, 93% were in favor.

The attendees were also queried as to whether there were topics or subjects within the discussion that might have received too much detail. 41% of the respondents did not answer the question. Of those who did, 33% were satisfied with the topics covered, and that the mix of topics was good; 27% felt that too much emphasis was placed on education, China, and manufacturing.

The attendees were also asked to comment on those topics which they felt did not receive enough detail: answers ranged from the U.S. deficit; the interface between public and politics; protectionism; culturing influence on engineering; not enough discussion on how to make change; the impact on mid-career plans; how to deal with the negative aspects of off-shoring; is there a definition of an acceptable and relatively stable solution; how do you prevent the greater risk of spreading diseases that can be transported unintentionally between nations.

Telephonics Receives First Russian Contract Award for Search and Rescue, and Weather Avoidance Radar Systems

Telephonics Corporation announced that it has signed a multi-million dollar contract for 93 RDR-1600 Search and Rescue, and Weather Avoidance Radar Systems for the new Kazan's built Mi-17 helicopters.

The RDR-1600 radar systems state-of-the art features include very lightweight, extremely low-power consumption, exceptional sensitivity, and field-proven reliability. Weather detection and avoidance radar are critical to successful offshore missions. Their exceptional performance includes multiple modes of operation, and enables detection and tracking of targets at long range, in high clutter and low visibility.

"This first ever contract between Telephonics and a Russian customer affords us the opportunity to open a new chapter in company's expansion into the worldwide market", said Joseph J. Battaglia, President of Telephonics.

Northrop Grumman Begins First Low-Rate Initial Production Manufacturing of the E-2D Advanced Hawkeye

Manufacturing of Northrop Grumman Corporation's first Low-Rate Initial Production (LRIP) E-2D Advanced Hawkeye, the sixth E-2D to be produced, has kicked off with the start of keel assembly at the company's East Coast Manufacturing and Flight Test Center in St. Augustine, Fla.

The work is being performed under a $432 million contract awarded June 15 by the U.S. Navy, which includes two LRIP Lot 1 aircraft and an Advanced Acquisition Contract for two LRIP Lot II aircraft, as well as associated engineering and testing.

"The start of Low-Rate Initial Production brings us one step closer to delivering this high-quality, reliable E-2D Advanced Hawkeye weapons system to the warfighter," said Jim Culmo, vice president of Airborne Early Warning and Battle Management Command and Control programs for Northrop Grumman Aerospace Systems sector. "In addition to this first LRIP Lot I aircraft, the first three pilot production E-2D aircraft are moving through the production process, ahead of schedule, and we are on track to deliver the first pilot production aircraft in 2010."

While the state-of-the-art E-2D's external appearance is similar to the E-2C, presently in operation with the U.S. Navy and four international customers, the systems and capabilities contained in the E-2D have been completely redesigned. At the heart of this redesign is the new, more powerful AN/APY-9 radar, designed and built by a radar team led by Lockheed Martin. Representing a two-generational leap in radar technology, the AN/APY-9 can "see" smaller targets, and more of them, at a greater range than currently fielded radar systems.

In addition to this award, the E-2D ITT has been recognized as a model Integrated Test Team by Vice Adm. David Architzel, Principal Deputy Assistant Secretary of the Navy (Research, Development and Acquisition). The team has also received recognition as: the U.S. Navy's VX-20 Test Team of the Quarter (second quarter 2008), the Naval Air Warfare Center Aircraft Division Test Team of the Year, 2007 and the 2008 James S. McDonnell Test Team of the Year from the Society of Experimental Flight Test Engineers.

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CANDIDATES FOR THE LONG ISLAND SECTION OFFICERS 2010

The Long Island Section of the IEEE is proud to announce the slate of Executive Officer Candidates for the 2010 Administrative Year for the following positions:

CHAIR: Jon Garruba
FIRST VICE CHAIR: Nikolaos Golas
SECOND VICE CHAIR: Susan Frank
TREASURER: Brian Quinn
SECRETARY: Robert Berger

If you are interested in volunteering for other positions in the Long Island Section please visit our website at **www.IEEE.LI** and click on the **Open Positions** button.

The official ballot will appear in the October Pulse

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Greg Bradley, VP of HR & Diversity, Metro North
Corinna Cortes, Ph. D, Google
Cathy Dwyer, Ph.D. Pace University
Amy Duncan, Tetra Tech EC, Inc.
Peter A. Eckstein, IEEE-USA
Constance Knapp, Ph.D. Pace University
Rashmi Jain, Stevens Institute of Technology
Laura Jennings, The Jennings Group
Howard Michel, Ph.D., IEEE Region 1 Director
Karen Panetta, Ph.D, IEEE WIE Committee Chair
Bala Prasanna, IBM
Denise Richardson, GCA
Charles Rubenstein, Ph.D., IEEE Region 1 Director-Elect
Jeff Rude, RSR Solutions
Carol S. Rudman, Ph. D., Rudman Associates Management Training
Ronald Saporita, MTA Office of Construction Oversight
George J Sierchio, Action Business Partners, Inc
Laura Trumbull, Thomson Reuters

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IEEE Provides Leadership for Smart Grid Initiative around the Globe

IEEE, the world's largest technical professional association, is at the forefront of both helping the world's citizens understand the benefits of smart grid, while also creating a forum for collaboration for all entities involved in this groundbreaking initiative. Members of IEEE have been working diligently on numerous aspects of smart grid development and execution, including developing interoperability standards, ensuring that the smart grid is environment-friendly and enacting protocols to maintain the grid's security.

As the smart grid development program has become a top priority - to move nations toward energy independence and environmentally sustainable economic growth - IEEE and other prominent organizations are working in collaboration to create a framework of standards that will bring together numerous industries, including power, security, technology, manufacturing, government, and communications toward furtherance of this vision. In the U.S., Dr. E. James Prendergast, Executive Director of IEEE, participated earlier this month in the Smart Grid Leadership meeting, organized by Commerce Secretary Gary Locke and Energy Secretary Steven Chu, which brought together industry leaders to share their vision on how to utilize standards to create a roadmap for successful smart grid implementation.

"IEEE is excited to be a central force in the smart grid initiative, as it will be impactful to life as we know it," commented Dr. Prendergast. "In the future, the smart grid is going to be the infrastructure that powers our daily lives. Not only will the smart grid be able to grow with our evolving energy needs as new technologies enter the power equation, but it will also help reduce blackouts and energy pollution as well. This is something that will benefit humanity on many levels, for developed and developing nations alike."

IEEE is engaged in a number of smart grid initiatives globally. On 4 May, 2009, IEEE announced a smart grid initiative for the power engineering, communications and information technology industries with the launch of a project to create "The IEEE Standard 2030 Guide for Smart Grid Interoperability of Energy Technology and Information Technology Operation with the Electric Power System (EPS) and End-Use Applications and Loads." The IEEE-SA P2030 guide will provide a knowledge framework for understanding and defining smart grid interoperability of the electric power system with end use applications, setting the stage for future standards related to the smart grid. The kickoff meeting of this standards body took place at Intel's headquarters in Santa Clara, CA, on June 3rd, 2009.

"In order for the smart grid to be successful, there needs to be a set of well-established standards in place that all industries and organizations involved can utilize," said Dr. W. Charlton Adams, Jr., President IEEE Standards Association. "IEEE, with over 375,000 members among the academic, government and private sectors worldwide, is in a unique position to bring everyone together to collaborate to create this standard foundation. Working hand in hand with other leading organizations to create one set of standards for the smart grid is the way we can ensure success."

Nearly 2500 papers focused on smart grid have been published in over 40 IEEE journals to date. To provide a primary source for the various smart grid facets such as design, implementation, and utilization, IEEE is creating a single Smart Grid Transaction – intended as a cross disciplinary and international archival journal aimed at disseminating results of research on smart grid. This integration of information will be vital to the careers of researchers and engineers involved in the development of smart grid technologies. Launch of the new Smart Grid Transaction is scheduled for 2010. At the forefront of this emerging initiative, IEEE's Power & Energy Society (PES) sponsors an Intelligent Grid Coordinating Committee. This committee serves to address the technologies that apply to activities within the IEEE PES, identify opportunities for their future applications, and provide a forum for the free exchange of information.

IEEE hosts many conferences and meetings throughout the world where information and best practices are exchanged. Over the last four years, over 100 smart grid technical sessions have been offered with growing interest. Examples of upcoming IEEE hosted conferences with smart grid activities include:

- At IEEE PowerTech 2009 in Bucharest, Romania 28 June – 2 July, 2009, scientists and engineers throughout Europe gathered to discuss topics such as artificial intelligence techniques in power systems, developing the concept of smart grids and restructuring of the electricity industry and transnational networks.
- IEEE PES held a meeting 26-30 July, 2009 in Calgary, Alberta, Canada focused on the theme, "Investment in Workforce and Innovation for Power Systems"; with major focus on Smart Grid including an in depth look at subjects such as integrating renewables and storage into the grid.
- The IEEE PES/IAS Conference on Sustainable Alternative Energy in Valencia, Spain, 28-30 September, 2009, will advance the smart grid discussion and development by focusing on the implications of a high penetration of wind power and other alternative energy on transmission and distribution networks; as well as that of distributive generation.
- Following on the unqualified success of the IEEE PES-sponsored Asia-Pacific Power and Energy Engineering Conference (APPEEC 2009), plans are underway for APPEEC 2010, which will be held 28-31 March in Chengdu, China and which will offer a substantive smart grid "track" covering topics such as operation and control, distributed generation, smart meters and renewable energy applications.

Policy development is occurring worldwide to address environmental concerns and increase energy independence. Smart grid is a significant technological enabler allowing consumers to participate in energy usage decisions while optimizing grid operations, enhancing grid security, and opening new markets for alternative energy production. "IEEE has been providing leadership for smart grid development and continues to build upon its vast membership, expertise, materials and conference venues to facilitate understanding," said Wanda Reder, President, IEEE PES and NTDC (New Technology Directions Committee) Smart Grid Chair. "IEEE is leveraging its strong foundation and collaborating to evolve standards, share best practices, publish developments and provide related educational offerings to advance technology and facilitate successful deployments throughout the world."

If you are looking for resources and experts to provide insightful commentary on smart grid topics, please contact IEEE at:

ieee-PR@ruderfinn.com

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LECTURES

The IEEE Long Island Section Computer Society is presenting a lecture titled:

Estimating Effort and Duration of Software Projects

Tuesday, September 29, 2009 at 6:00PM

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

Speaker: Pierre Bourque, Ph.D., École de technologie supérieure, Montreal, Canada

Who Should Attend: Persons who are interested in software project estimation.

Abstract: Learn about how to better estimate software projects using sound practices and historical data. The construction of an estimation model, whatever estimation method is used, usually requires a set of completed projects from which an estimation model is derived and which is used thereafter as the basis for the estimation of future projects. Until fairly recently, for those organizations without their own historical data sets for building estimation models themselves, and who could not afford the long lead time to do so, few alternatives were widely available. The International Software Benchmarking Standards Group (ISBSG) is dedicated to the development and management of a multi-organizational repository of software project data.

Speaker Bio: Pierre Bourque is an associate professor and the director of a professional master's degree program in software engineering at *École de technologie supérieure, Université du Québec*, Canada. He is coeditor of the 2001 and 2004 versions of the Guide to the Software Engineering Body of Knowledge (SWEBOK) project, sponsored by the IEEE Computer Society and funded by numerous industrial partners. The SWEBOK Guide is recognized as an ISO Technical Report. Hs is also coeditor of the upcoming 2010 version of the SWEBOK Guide. He is currently a member of the Computer Society's Professional Activities Board and acts as a liaison to the Educational Activities Board. He is a member of the Distinguished Visitor Program and was the recipient of an Outstanding Contribution Award from the Computer Society in 2001. He is currently running as a candidate to be a member of the Board of the Governors of the IEEE Computer Society. Bourque received his PhD from the University of Ulster (Northern Ireland) on the topic of the maturation of the software engineering discipline and profession. Prior to his academic appointment, he worked in software engineering , data modeling, and database design at the National Bank of Canada from 1987 to 1995.

Seminar Coordinator: Daniel Rogers, Computer Society Chair of the IEEE Long Island Section. You can contact Daniel Rogers at drogers@ieee.org

Location: Telephonics Corporation, Route 110, Farmingdale, New York.

Registration: Registration is required. To register please visit the Calendar page of the IEEE website,

http://www.IEEE.LI/calendar/

Click on the registration link, and fill out the form.

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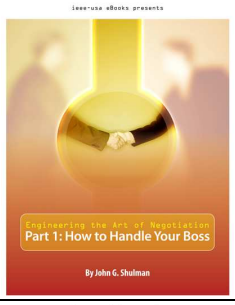
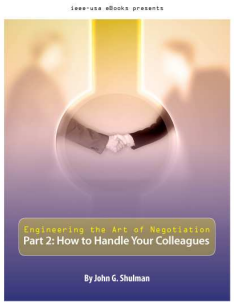


Engineering the Art of Negotiation is a series of ebooks demonstrating a practical approach to satisfying people's interests, including your own, through interest-based negotiation.

In Part 1: How to Handle Your Boss, internationally renowned negotiations consultant and trainer John G. Shulman shows you how you can get ahead in your organization and experience more career satisfaction by building a better relationship with your superior using the principles and practices of interest-based negotiation. People who have good relationships with their bosses get ahead in any organization. The good relationships with bosses do not happen by accident. This book will share a proven, practical approach to handling your boss that you can feel good about and it is an approach that builds on the very discipline and logic that have led you to this point in your career in the first place. The approach to negotiation shared in this book is recognized as a global best practice. You can apply the lessons in this books to make your professional and your personal life more rewarding and less stressful! Learn how you can apply and improve the key negotiation skills that will make the difference in your career advancement and success.



In Part 2: How to Handle Your Colleagues, John G. Shulman shows you how you can get ahead in your organization and experience more career satisfaction by building a better relationship with your colleagues using the principles and practices of interest-based negotiation.

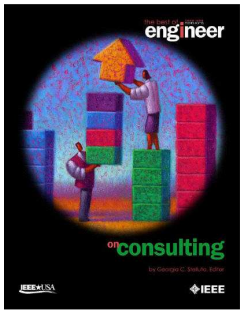
If you work in a large organization, or even a not-so-large organization, you are constantly forced to deal with your colleagues. In fact, you are constantly forced to negotiate with them. You have to negotiate with your colleagues about time lines and responsibilities, credit for work done and blame for work not done, or done wrong. You negotiate with your colleagues day in and day out and like family, you negotiate with your colleagues because you have to. You are tied together as part of a team that must function effectively for the larger organization to function well. These are special kinds of negotiations, where relationships matter because you have to deal with each other, over and over again.

The approach to negotiation shared in this book is deeply practical and has also been recognized as a global best practice.

Innovation is the latest buzzword rolling off everyone's lips. And innovation seems to be the new raison d'etre. People, employees, managers and corporate executives are all striving to be innovative. But what do we mean by innovation and how do we get more of it? To help you answer that question, The ***Best of Today's Engineer: On Innovation*** is a compilation of the IEEE-USA magazine's best articles on what it means, what it is, how to do it, what to think about it, how to achieve it, and how it might be affecting some aspects of engineering. A better definition of organizational innovation would relate to the ability to intentionally change to meet new opportunities having three primary aspects:

- Having a common direction or vision
- Recognizing and deciding on opportunities related to the vision
- Intentionally and effectively moving in a direction to achieve the objective

Organizations that establish an environment that supports these activities and the more people within the organization who are following the path, the more □



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LISAT*2010*

Farmingdale State College

Sixth Annual IEEE Long Island Systems, Applications and Technology Conference

Friday, May 7, 2010

The Institute for Research & Technology Transfer at Farmingdale State College
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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 2010 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 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:

Oct 31, 2009:	Abstracts due (300-to-500 words)
Nov 15, 2009:	Notification of accepted abstracts
Nov 30, 2009:	Biographies of authors and ½-page presentation outlines due
Jan 15, 2010:	Manuscripts for publication (MS Word) and copyright releases due
Jan 30, 2010:	Notification of final acceptance of manuscripts
Feb 15, 2010:	Presenter Registration Fee and two (2) sentence presentation descriptions due
Apr 1, 2010:	Power Point slide presentation due
May 7, 2010:	LISAT2010 Conference

All submissions must include the author's full names, affiliations, postal addresses, phone numbers, and email addresses. Submissions should be emailed to the LISAT Technical Program Committee at **LISATprogram@ieee.org** Detailed instructions on submission, manuscript and presentation templates, and information on the conference, is available on the LISAT web site at **http://ewh.ieee.org/conf/lisat**

At least one author of *each* paper/presentation must register for the Conference and will be expected to provide a 20-minute presentation at the conference followed by 5 minutes of Q&A. Longer presentations will be considered. One presenting author will be allowed to register at a discounted rate. A limited number of tutorial and application presentations which will not be published by the IEEE may also be accepted

While LISAT welcomes a wide variety of papers in systems, applications, and technology, some examples of topics of particular interest are: *Homeland Defense, Alternate Energy Sources, Green Building Technologies, Mobile Communications, Microwave Technology, Electromagnetic Compatibility, Mobile Ad Hoc Networking, Network Security, Sensor Fusion, Antenna Systems and Processing, Radio Locationing, Radar Systems and Techniques, and Medical Electronics.*

*For information on **Exhibiting** at LISAT, please contact: Fred Kruger at **f.m.kruger@ieee.org***
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