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THE PULSE OF LONG ISLAND IEEE

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OCTOBER 2006 ISSUE

IN THIS ISSUE

Chairperson's Message *By David Wolff*

Last month marked the 5th anniversary of the 9/11 attacks. It was a time when we remembered our fallen brethren and recalled the sobering event that cast us into a new challenge facing humankind — the Global War on Terrorism. Just as the end of World War II ushered in the Cold War, the turn of the millennium catapulted us into a new way of life in America. We now face the ever-present fear of a foreign, indiscriminate attack on our homeland, something that, until now, eluded us in the history of our nation. For most Americans the attack represented a paradigm shift in the way we approach our daily lives, a redefinition of the rules of engagement and a pervasive vigilance that accompanies even the most mundane aspects of our lives. In times like this the public looks to the best and the brightest for answers and among them are the engineers charged with devising technology solutions that render us safe. As usual, capitalism in action serves as a self-forming vehicle for quick responsiveness. However, when the stakes are so high and the widespread public safety is at risk there must be additional institutions in place to facilitate and coordinate these solutions. One such institution is the newly formed New York State Applied Science Center of Innovation and Excellence in Homeland Security located right here on Long Island.

Situated in Bethpage, the Center is the brainchild of the energetic President of the Long Island Forum of Technology (LIFT), Ken Morrelly. The facility, funded by a $25 million grant from New York State and secured by State Senator Dean Skelos, seeks to provide linkage between the public and private sectors in the development and application of homeland security solutions. The 65,000 sq. ft. facility will serve as a focal point for collaboration by bringing together industry research cells and academia to focus on the Systems Engineering and Testing processes needed to deploy technology solutions for the First Preventer and First Responder. The Center will be fitted with a high tech infrastructure that will be made available to its occupants. This includes satellite communication with national reach-back, all band terrestrial communications to area first responders, modeling and simulation lab with digital theatre, prototyping lab, as well as a secure conference center and auditorium. It is envisioned that one day the facility will also become a regional disaster response center, serving as headquarters for governmental decision makers and providing the situational awareness, command and control needed to coordinate a disaster response on Long Island.

As engineers and good citizens it is incumbent on us to apply our expertise to the security and the safety of our nation. In this regard we certainly have a very strong legacy.

(Continued on page 3)

THE PULSE OF LONG ISLAND IEEE

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

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

FUTURES IN POWER ENGINEERING

Most engineers have heard about the fact that thousands of software engineering jobs are being outsourced to India. Perhaps less well known is that many of the hardware jobs in communication, analog and digital design are also going to engineers in foreign countries, because some U.S. employers wish to lower the salary portion of their overhead.

Not so in power engineering: Generation/transmission/substation design/power-monitoring and control. Members of the local Power Engineering Society tell me that they see very few, if any, replacements for the jobs they now hold, but will ultimately retire from. Compounding the problem is the fact that many universities have dropped the power curriculum altogether, and offer only a BS in electronics.

This is a message that should get out to high school seniors with talent in science and math, who are looking for an education that will lead to a stimulating and long-term career in engineering. Here is a job that is difficult or impossible to outsource, in a field that promises professional-level salaries and job stability. A word to the wise is sufficient.

Robert Bruce
Long Island Liaison to the Joint NYC/LI Chapter of PES/IAS

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THE PULSE OF LONG ISLAND IEEE

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David L. Wolff

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For Oct 2006 09-15-06
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MEMBERSHIP INFORMATION:
For information on membership in the Long Island Section of IEEE contact
Ted Pappas
tpappas@keyspanenergy.com

Chairperson's Message *By David Wolff*

(Continued from page 1)

With the onset of the Cold War in the mid 20th century, our nation's engineers mobilized to provide the technology that fueled our assured defense and led to our eventual victory. Long Island's defense industry played a vital role in this response - a role that I believe most of us are very proud of. We now must recognize that at the dawn of the 21st century we face a new challenge, that of the Global War on Terrorism, Once again we must mobilize our nation's engineers to devise technology that will thwart the asymmetrical threat to our homeland security. And once again Long Island must play an important role - one that we can once again be proud of. Unfortunately, this war will likely be long and protracted so it is important for us, at the start, to place emphasis on the strategic resources and infrastructure needed to prosecute it.

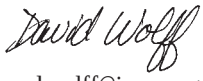
The New York State Applied Science Center of Innovation and Excellence in Homeland Security is an excellent start to securing Long Island's legacy in the fight against terrorism. I urge you to encourage your company's participation in its programs and to contact Ken Morrelly at LIFT to find out more about it. I also urge you to remain cognizant of our responsibilities as engineers to contribute to our nation's safety and recognize that we are only at the beginning of a long and difficult path.

The response to our new Pulse layout has been very positive and I thank everyone who has contributed to its success. We would however, like to add more character to the publication. The Executive Committee is very interested in entertaining contributions to the Pulse from the membership at large. If you would like to submit an article, a letter, or some human interest story about Long Island engineering, please contact me. As usual, making use of our advertising space is also very much appreciated.

Last but by no means least, I would like to appeal to all our members, partners and sponsors to support and participate in LISAT2007. Our Third Annual Long Island Systems, Applications and Technology Conference scheduled to be held all day on Friday May 04, 2007 at SUNY's Farmingdale, New York Campus, is now calling for papers, exhibitors and corporate sponsors. LISAT2007 is the IEEE Long Island Section's very own forum for technology and truly deserves your support. Please help energize engineering, manufacturing, research and development and technology on Long Island by presenting, exhibiting, sponsoring and / or attending LISAT2007.

For more information refer to page 10 in this issue or visit www.IEEE.LI and click on the LISAT07 banner located in the right hand corner of our Home page.

Thanks for all your support!



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PACE ACTIVITIES REPORT

(Professional Activities Committee for Engineers)

By: Irwin Weitman
P.E. Pace Chairman

The Professional Activities Committee has supported the needs of professionals since its inception. Announcing a registration simplification and short-cut for Professional Engineers who wish to attend Seminars that offer Continuing Education Units (CEU) that award credits that are accepted by the NY State Department of Education that are required for renewal of their PE Licenses. I have collected the names of PEs that have attended the last 5 seminars that registered and received CEUs and prepared a spreadsheet with their names. This will save them from filling in all the data required and at the same time sign in at the seminar on a spreadsheet that requires all the information for CEUs submission to IEEE. I ask only that they send me an e-mail saying they will attend (so we know how many people will be there). New attendees not on the printed list will be added to the list before the next seminar that is approved for CEUs.

If you are a PE who wishes to be added to the spreadsheet, just be extra careful to PRINT your information on the next blank row and I will add your information to the spreadsheet. If I cannot decipher what you write you may not get your CEUs. Of course you must sign-in and hand me a check for $20.00, made out to "IEEE Consultants Network of Long Island" when you leave. This charge is to cover the cost data handling and filing expenses. "NO CHECK – NO CEUs".

This should save you and me a lot of time.

For all non-PEs: The seminars offered have good technical content and should be useful to any hardware or software Engineer. I suggest you attend. Just be sure to register on the IEEE LI Section web site at www.ieee.li The Calendar is on the right hand side of the home page. The dates and venues are listed under "for information" on the web site.

The September meeting of the Consultants' network was programmed to have the attendees bring up questions and subject areas including hardware, software and business that they would like to hear comments, suggestions and solutions to problems that have perplexed them. This meeting was so successful that we are continuing our discussions into the October meeting.

If you have any questions,
you can reach me at:
i.Weitman@ieee.org or 631-266-2651.

IEEE Industry Applications Society Outstanding Chapter Award

Congratulations! Chapters and Membership Department Award Committee Chair Balvinder Blah and Sunita Kulkarni announced that the New York/Long Island Chapter has been selected as the IEEE Industry Applications Society's 2006 Continued Outstanding Performing Chapter. This award will be presented at the IAS Annual Meeting Awards Luncheon in Tampa, Florida on Tuesday October 10th, 2006. We look forward to seeing you there!

CANDIDATES FOR THE LI SECTION OFFICERS

The Nominating Committee of the Long Island Section announces the slate of Executive Officer Candidates for the 2007 Administrative year for the following positions:

Chair:	Ted Pappas
1st Vice Chair:	Bill DeAgro
2nd Vice Chair:	Santo Mazzola
Secretary:	Lucyna Plaskota
Treasurer:	Brian Quinn

Additional nominations may be made by petition from now until October 15, 2006. Petition nominations must be in writing, including the membership numbers and include the signature of at least 10 members of the Long Island Section. The petitions must be delivered no later than October 15, 2006 to be included on the ballot which will appear in the November issue of the Pulse. In order to validate the nomination, it must include the member's name and his/her membership number.

Send nominations to:

John Peterson
50 Dennis Street
Garden City Park, NY 11040-5043

IEEE

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LECTURES

The Long Island Chapter of IEEE Electromagnetic Compatibility Society is presenting a lecture titled

Overcurrent Protection Design *Tuesday, October 10, 2006 at 6:00PM*

Speaker: Mr. Carl Lindquist - VP New Product Development, San-O Industrial Corporation

Who should attend? People interested in learning about overcurrent protector selection and alternate sourcing selection.

Abstract: Those responsible for designing circuits using overcurrent protectors, as well as those purchasing such protectors, often misinterpret specified parameters and "equivalent" devices when seeking primary and secondary sources. A presentation will provide a brief overview of various types of overcurrent protectors, including fuses, PTC's, circuit breakers, etc. The discussion will concentrate on fuse design, the relative strengths and weaknesses of different types of fuse designs, important protector parameters and documentation recommendations.

Lecture Coordinator:
Mr. David Sterner, Mr. Sandy Mazzola

Speaker Biography: Carl has worked in the circuit protection field for nearly 40 years, starting as a Development Engineer at Western Electric Headquarters Staff Purchasing in New York City. He joined San-O Industrial in 1980. Carl has been a member of the IEEE-Surge Protective Devices Committee (SPDC) for over 15 years, chairs a subcommittee at the Electronic Component Assemblies & Materials Association (EIA/ECA Passive Components Committee) and chairs a working group established to generate a new safety standard for telecommunications overcurrent lightning surge withstand protectors at the Telecommunications Industries Association (TIA TR41).

Location, Time, and Registration: This 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) on Pulaski Road. The presentation will begin at 6:30 PM. Appetizers, snacks & beverages will be served starting at 6:00 PM. Seating is limited.

If you wish to attend, an RSVP is required prior to the meeting. To register please visit the calendar page of the IEEE Long Island Website, 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

Shielding Theory & Design *Tuesday, November 7, 2006 at 6:00PM*

Speaker: Mr. Mike Oliver - VP of EMC Engineering at MAJR Products Corp.

Who should attend? People interested in learning about shielding theory and design.

Abstract: It is important for electronic and hardware engineers to not only be knowledgeable of a products intended function and performance, but also the ability of the product to perform within electromagnetic compatibility (EMC) limits. In this talk, practical shielding theory and design fundamentals are introduced that includes crosstalk, electromagnetic fields, board level, and enclosure shielding. A segment on testing of board level shields is presented in conjunction with an aperture attenuation modeling program used to model attenuation characteristics prior to expensive FCC/CE compliance testing. As a final point, honeycomb vent panels and respective plating attenuation comparisons are discussed.

Speaker Biography: Mr. Oliver is Vice President of Electrical / EMC Engineering at MAJR Products Corporation in charge of customer technical quoting and consulting, new product development, and the ISO-9001:2000 management representative. Mr. Oliver holds a B.S. degree in Electrical Engineering from Gannon University and has been an Electrical Engineer since 1989. He currently holds three patents (two pending), on EMC shielding- thermal management devices. He currently serves as Chairman of the newly formed IEEE Pittsburgh EMC Society, Vice Chairman of the SAE AE4 Electromagnetic Compatibility Committee, and member of the IEEE EMC Standards Advisory Coordination Committee (SACCom).

Lecture Coordinator:
Mr. David Sterner, Mr. Sandy Mazzola

Location, Time, and Registration: This 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) on Pulaski Road. The presentation will begin at 6:30 PM. Pizza & beverages will be served starting at 6:00 PM. Seating is limited. If you wish to attend, an RSVP is required prior to the meeting. To register please visit the calendar page of the IEEE Long Island Website, www.IEEE.LI , click on the registration link, and fill out the form.

SEMINAR

The IEEE Long Island Section Computer Society presents a seminar titled

Multicore Low Power Architectures *Wednesday, October 18 at 2006 6:00PM*

Speaker: Krishna Kavi

Who should attend? Persons who are interested in multicore low power architectures.

What are the Key Benefits?
Explore multicore low power architectures .

Abstract: With the feasibility of integrating more than a billion transistors on a chip, we can consider building multiple CPUs on a chip, support multithreading, provide gigabyte cache memories, support reconfigurable logic so that application specific functions can be programmed into hardware. The key challenge is in deciding on how best to utilize the available transistors effectively for each application.

While performance has been the driving factor of research in Computer Architecture, embedded applications that are pervasive in devices such as HDTV's, cell phones, and other appliances are requiring a balance between performance and energy consumption. More specifically we need systems that can provide performance on demand, but become dormant when not needed to save energy.

These conflicting choices are presenting new challenges to researchers leading to very innovative ideas. In this talk Mr. Kavi present several inter-related research projects that are underway at the University of North Texas. They include an innovative, scalable multithreaded architecture, effective use of cache memories for scientific applications, use of reconfigurable logic for memory management functions and how to eliminate redundant function execution dynamically at run-time. He will give an overview of each of the research projects, results thus far and our current plans.

Speaker Biography: Krishna Kavi is currently a professor and the Chairman of Computer Science and Engineering department at the University of North Texas. Previously he held the Eminent Scholar Chair professorship at the University of Alabama in Huntsville, and a professorship at the University of Texas at Arlington. He was a Scientific Program Director at the US National Science Foundation between 1993-1995.

His research interests are primarily in the various aspects of Computer Architecture. He also conducted research on formal methods for the design and verification of software systems, agent-based formalisms, performance and reliability analysis of computer systems using Petri nets. He authored or co-authored more than 150 technical publications.

Seminar Coordinators: Daniel Rogers, Computer Society Chair of the IEEE Long Island Section.

Registration: If you wish to attend, please register via internet in the calendar section of www.ieee.li/calendar.htm.

Location and Time: 6:00 to 8:30 PM Wednesday October 18, 2006 located at Telephonics Corporation on Route 110 in Farmingdale, New York. Pizza and soda will be provided. The seminar is free and open to all. You may contact the coordinator Daniel Rogers by email at drogers@ieee.org. The seminar is wholly the responsibility of IEEE Long Island Section and the speaker.

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LECTURE

The Long Island Chapter of the IEEE Aerospace & Electronic Systems Society and The Long Island Chapter of the AIAA Present

NATIONAL MISSILE DEFENSE

October 12, 2006, Lecture at 6:30 – 7:45 PM

Registration & Coffee/Tea/Cookies at 6 PM

Location

Farmingdale State University
2350 Broadhollow Road (Route 110), Farmingdale, NY
Lupton Hall, Room T101

A Lecture by Larry Chasteen, PhD, PE
Distinguished Lecturer of the AESS

Lecture Content: The United States Government (Bush Administration) made major changes to the limited National Missile Defense (NMD) system that was proposed earlier by the Clinton Administration. Even with the new national emphasis on anti-terrorism and closer relations with Russia, NMD is still a very controversial topic as seen with the recent US proposal to withdraw from the Anti-Ballistic Missile (ABM) treaty. The NMD program will continue to be a key technical, political, and legislative issue facing the U.S. and the rest of the world. The Bush Administration's NMD program focuses more on testing and developing new parts to the NMD system. The NMD system will still operate as an integrated system but will investigate a wider variety of sensors (such as space-based and sea-based) to detect and track incoming missiles. The upgrade to the existing Early Warning Radars (EWR) is one of the few features that has not changed from the proposed Clinton plan. This talk will provide background and technical information on the upgrades to the EWRs. The talk will also provide program and system engineering details on the new proposed testing of the total NMD system.

Speaker Biography: Larry Chasteen was the 1998 Dallas IEEE Section Chair and received the IEEE 3rd Millennium Medal for his service to the IEEE. He was also the 2000 IEEE Congressional Fellow and worked on the National Missile Defense Program at the Library of Congress in Washington, D.C. He had previously worked for 25 years in the defense industry for Texas Instruments and Raytheon specializing in radar and smart weapons. He also served in the Viet Nam War as a USAF B-52 pilot and just recently retired from the USAF Reserves with the rank of Colonel. He is now teaching Management and Entrepreneurship at the University of Texas at Dallas. His research concerns evolving technical communities and the processes of cluster formation.

Lecture Coordinator: Rich Pierro, IEEE Long Island Section Aerospace & Electronic Systems Society Chapter Chairman.

Registration: The lecture is open to the public, registration is required and is available online only. Please visit the calendar page of the IEEE Long Island website at www.IEEE.LI, click on the registration link and fill out the form. The lecture is wholly the responsibility of the IEEE Long Island Section and the speaker.

IEEE AIAA 75 Years
American Institute of Aeronautics and Astronautics

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 and click on the calendar for online registration (as available) and for listing updates.

October 4, 2006 7:00PM

Seminar - Control and Conniptions, Part 2, What's Good and What's Bad in Today's Professional PC - moderated by Mr. Peter Buitenkant, BA(Physics), BSEE, MSEE. This event, sponsored by the IEEE Consultants Network of Long Island will be held at Briarcliffe College, The Great Room, 1055 Stewart Avenue, Bethpage, NY. The meeting is open to the public and no pre-registration is required. See page 9 for details For additional info, contact John Dunn at ambertec@ieee.org or at 516-378-2149.

October 4, 2006 7:00PM

Long Island Consultants Network Meeting - Briarcliffe College (The Great Room) Bethpage, LI.

October 10, 2006 6:00PM

Overcurrent Protection Design - presented by Carl Lindquist of San-O Industrial Corporation. 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 page 6 for details. Contact the lecture coordinator, Santo Mazzola at mazzolas@ieee.org or at 631-262-8367.

October 12, 2006 6:30PM

National Missile Defense - Larry Chasteen, Distinguished Lecturer of the IEEE Aerospace & Electronic Systems Society. Joint IEEE AESS/AIAA lecture will be held at Farmingdale State University, Farmingdale, NY. The lecture is open to the public, but registration is required. See this article on this page. Contact lecture coordinator, Rich Pierro, at rspierro@optonline.net or 516-628-3156.

October 18, 2006 6:00-8:30PM

Multicore Low Power Processor Architecture Ideas - presented by Krishna Kavi, at Telephonics Farmingdale LI. See page 6 for details.

October 25, 2006 6:00PM

IPTV (Television over IP) - Faculty Lounge - Cooper Union, New York, NY. Additional information may be found at: local.iee.org/newengland. See page 11 for details.

October 30, 2006 6:00PM

EXCOM Meeting - Telephonics Farmingdale, LI.

November 3, 2006
CALL FOR PAPERS

Annual IEEE Long Island Systems, Applications, & Technologies Conference - to be held on May 4th, 2007 at SUNY Farmingdale. 300-word abstracts are due by November 3.

November 7, 2006

Shielding Theory and Design - presented by Mike Oliver of MAJR Products Corporation. A lecture, sponsored by the IEEE EMC Society, will be held at BAE Systems Inc, 450 Pulaski Road Greenlawn, NY. Registration and pizza at 6 PM and the lecture begins at 6:30 PM. The lecture is open to US citizens, but registration is required- see page 11 for details. For additional info, contact the lecture coordinator, Santo Mazzola at mazzolas@ieee.org or at 631-262-8367.

November 8, 2006 6:00-8:30 PM

Wireless Mesh Networking - presented by Samir Das of SUNY SB, at Telephonics Farmingdale.

November 15, 2006 6:00PM

Introduction to MIMO - Theory & Applications - An evening lecture by Jacob Sharony of SUNY Stony Brook's Center for Excellence in Wireless and Information Technology. Contact Dave Mesecher at d.mesecher@ieee.org. See page 11 for details.

November 30, 2006 6:00PM

The Digital TV (DTV) Revolution - A lecture by Bruce Willins, VP of Engineering and Marketing, Hauppauge Electronics. SUNY Farmingdale. Contact Dave Mesecher at d.mesecher@ieee.org. See article on this page.See page 11 for details.

December 13, 2006 6:00PM

E-voting - presented by Dr. Stephen Unger, at Telephonics Farmingdale LI. If you wish to attend, register via internet in the calendar section of www.ieee.li/calendar.htm. No walk ins. Telephonics is a secure plant.

January 18, 2007

CEWIT 2007 - Annual Technology Conference at SUNY Stony Brook- Abstracts due Oct 15th. Go to www.cewit.org or contact Dr. Lisa Chichura of SUNY Stony Brook at lisa@ee.sunysb.edu.

ANNOUNCEMENT

The IEEE Consultants Network of Long Island Presents

Control & Conniptions, Part 2 October 4, 2006 7:00PM

What's Good & What's Bad in Today's Professional PC

Program Outline: Everyone has their stories to tell and their questions to ask about their PCs. This is the golden opportunity to do both. Questions and comments are invited from one and all for presentation to the meeting attendees for open discussion.

Biography: Peter Buitenkant has extensive experience in microcontroller based hardware and software design for industrial instrumentation, battery powered measurement devices, control, medical electronics (including hazard analysis and software validation), design for TUV, CE mark validation, high reliability software design, extended temperature design, data compression, electro-optics, communications, and PDME.

Registration: None required. Contact the coordinator by e-mail at ambertec@ieee.org or by telephone at 516-378-2149 for more info.

The presentations are wholly the responsibility of the IEEE Long Island Section and the speakers. The meeting admission is free and open to the public.

Program Coordinator: John Dunn

Location : Briarcliffe College, The Great Room, 1055 Stewart Avenue, Bethpage, NY 11714. More Details Available on our website: www.licn.org.

LISAT2007

Third Annual IEEE Long Island Systems, Applications and Technology Conference

Friday, May 4, 2007

Institute for Research & Technology Transfer • Farmingdale State University • Farmingdale, NY

CALL FOR PAPERS AND EXHIBITORS

Last year's successful conference featured contributed papers that were presented in three parallel sessions: Systems, Applications, and Technology. Technical papers describing research development and application on a broad range of electronic and electrical engineering topics are solicited for LISAT2007. Please send qualifications of your expertise in order to speak on said topic.

All paper submissions must include title and a 300 to 500 word summary, the speaker(s) full name, affiliation, address, phone number and email address and a 1/3 page long biography. Submissions should be emailed to the LISAT Technical Program Co-Chairmen, Dave Mesecher at d.mesecher@ieee.org and Daniel Rogers at drogers@ieee.org, as well as Jesse Taub, Technical Program Consultant, at jjtaub@aol.com. Papers will be accepted based on their originality, quantitative content, clarity, and interest to IEEE members.

THE DEADLINE FOR PAPER SUBMISSIONS IS DECEMBER 1, 2006. You will be notified of acceptance or rejection on or before January 10, 2007 and will be given instructions for electronic submission of your full paper which is due by February 15, 2007. One author of each paper must register for the Conference and will be expected to provide a 40 minute PowerPoint presentation at the conference followed by 10 minutes of Q&A. Presented papers will be part of the CD-ROM Conference Proceedings to be given to each attendee and will become part of the IEEE Xplore database.

While LISAT welcomes a wide variety of papers in systems, applications and technology, some examples of topics of particular interest are:

RELEASES AND APPROVALS: This conference will be unclassified and attended by both US and non-US persons. It is the author's responsibility to obtain all required company and government releases and approvals prior to making a paper submission. A statement that such releases and approvals have been obtained as well as a completed IEEE copyright form (signed by the submitting author) must accompany the final manuscript of each accepted paper.

- Homeland Defense
- Satellite Communications
- Mobile Communications
- RF ID Tag Technology
- Microwave Technology
- Electromagnetic Compatibility
- Mobile Ad Hoc Networking
- Multi-level Network Security
- Sensor Fusion
- New Electrical Power Sources
- Antenna Systems & Processing
- Radio Locationing
- Radar Systems & Techniques
- Medical Electronics

For information on Exhibiting at LISAT, please contact: Fred Kruger at f.m.kruger-@ieee.org or Mark Sadick at mark@sagharborind.com and/or Tel: 516-967-2970

FOR ALL OTHER INFORMATION contact LISAT2007 Conference Chair: Dr. Charles Rubenstein at c.rubenstein@ieee.org or Conference Vice Chair: Dr. Babak Beheshti at b.beheshti@ieee.org

LISAT is sponsored by the **IEEE Long Island Section** and its Technical Society Chapters, and **IEEE Region 1** in cooperation with the **Institute for Research & Technology Transfer (IRTT)** at **Farmingdale State University**

LISAT has successfully offered Continuing Education Units (CEUs) valid in the State of New York for the last two years. Again for LISAT 2007, the Committee intends to apply for authorization to award Continuing Education Units valid in the State of New York.

2006 Sponsors & Exhibits

- Contech Marketing Associates *(South Plainfield, NJ)*
- LNY Services Co. *(Ronkonkoma, NY)*
- Sonnet Software, Inc. *(North Syracuse, NY)*
- UBS Financial Services, Inc. *(Huntington, NY)*
- Tecknit, Inc. *(Cranford, NJ)*
- North Shore Financial Group *(Hauppauge, NY)*
- Hewlett-Packard, Inc. *(Melville, NY)*
- Tektronix, Inc. *(St. James, NY)*
- Space Alliance Technology Outreach Program *(Dix Hills, NY)*
- Ham Radio Information Exhibit

2006 Technical Presentations

- Design of an Asynchronous Wavelength-Time Optical CDMA Testbed
- Dual-Use of Modulation Recognition Techniques for Digital Communication Signals
- Performance Analysis of Software Implementation of a 3GPP Compliant Turbo Decoder
- EMC Design Fundamentals
- New Developments in Shielding Materials
- Curved Surface Diffraction for Phenomenology, Modeling and Characterization
- Artificial Intelligence Approaches for Intrusion Detection
- New Approaches for Feature Extraction in Hyperspectral Imagery
- Time-Stamp-Counter Mechanism and Application on Sensor Networks
- Proportional Time Sharing with Frame Size Adaptation of MB-OFDM Based UWB WPANs
- Modeling the AODV Routing Protocol in the Omega-Calculus
- A Low Cost Highly Reliable Virtual Network Storage System
- Radar Measurements Utilizing FFT Spectrum Approach
- High Performance Low Phase Noise PLL Clock Synthesizer with LVDS Outputs
- Low Noise Amplifier Design Using 0.35 micron SiGe BiCMOS Technology for WALN/WiMAX Applications
- Load Impedance Independent Ninety Degree Phase Shift Networks and Their Applications
- Control of Electromechanical Coupling in Stacked Crystal Filters
- Hurricane Suppression by Sea Surface Cooling
- Economic Analysis of Renewable Energy Systems
- How to Select a Consultant
- The Cognitive And Emotional Factors That Impact An Individual's Likelihood to Use Alternate Energy

LECTURE

The Long Island Section of the IEEE Communications Society presents

Introduction to Wireless MIMO - Theory & Applications

A lecture by: Dr. Jacob Sharony - Director, Network Technologies Center of Excellence in Wireless & Information Technology (CEWIT) Stony Brook University

November 15, 2006 at Telephonics, Rt. 110 Farmingdale
Pizza served at 6:00 PM, lecture at 6:30 PM. CEU hours (0.1) available.

Wireless MIMO (Multiple-Input Multiple-Output) communication exploits phenomena such as multipath propagation to increase data throughput and range rather than attempting to eliminate effects of multipath propagation as traditional SISO (Single-Input Single-Output) communication systems seek to do. In this talk we will review the basic theory behind MIMO used in modern high throughput wireless networks and some of its applications. MIMO is the underlying technology for the emerging IEEE 802.11n WLAN standard using multiple antennas and signal processing to more than quadruple the 20-25 Mbps throughput achievable with 802.11g and 802.11a. The first part of the talk will be dedicated to introducing the Center of Excellence in Wireless and Information Technology (CEWIT) at Stony Brook University.

Dr. Jacob Sharony is an accomplished scientist with over 25 years experience in technology and business. He is a faculty member and director of the network technologies division of the Center of Excellence in Wireless and Information Technology (CEWIT) at Stony Brook University. Before that he spent eight years with Symbol Technologies, a global leader in enterprise mobility products and solutions for vertical markets. At Symbol he served as senior director research and development pioneering novel architectures and products in wireless networking and mobile computing. Prior to Symbol he held engineering and management positions in diverse technology disciplines at BAE Systems, NEC Research Institute, and IBM Research. Dr. Sharony received a Ph.D. degree in electrical engineering from Columbia University and MBA from Tel-Aviv University. He has over 25 U.S. patents issued or pending and published over 20 journal and conference papers. He consults and serves as an advisor to industry and government on wireless mobile technologies. Email: jacob.sharony@stonybrook.edu.

General admission is free but registration is required. CEU hours (0.1) available for $20. For registration and directions go to www.ieee.li, click on the Calendar link, and then click on the registration link for this event.

Lecture coordinator: Dave Mesecher, IEEE Communications Society LI Chapter Chair; d.mesecher@ieee.org.

IEEE is an Authorized CEU Provider of the International Association for Continuing Education and Training. IACET Provider #1255 New York State CE Provider #100996

IET New England Network Event

IPTV (Television over IP)

Wednesday, October 25, 2006 6:00PM

Faculty Lounge - Cooper Union, New York, NY

Alan Young, Senior VP and Chief Technology Officer of SES Americom will address a meeting of the Institution of Engineering and Technology (IET) on the topic of IPTV (Television over IP) that should be of interest to IEEE GOLD and other members.

"Telephone companies all over the world are upgrading their networks to carry television services to the home so that they can stem the tide of subscribers switching to cable's triple play offering of video, voice and internet access. SES Americom, a satellite operator which has delivered its broadcast customers' programming to cable operators across the US for 30 years, is now offering an IPTV service called IP Prime to the telephone companies to speed up their time to market with video services."

Alan Young, SES Americom's Senior Vice President and Chief Technology Officer, will explain the technology and business model behind IPTV as well as the role of satellite in bringing television to the consumer. He will also describe some of the challenges and opportunities in this new world where Broadcast Television meets Internet Protocol.

Additional information may be found at: local.iee.org/newengland.

LECTURE

The Long Island Section of the IEEE Communications Society presents

Digital Broadcast Television & IP TV A New Era For Multimedia

A lecture by: Bruce Willins - Vice President of Engineering & Marketing for Hauppauge Computer Works

November 30, 2006 at SUNY Farmingdale, Rt. 110
Pizza served at 6:00 PM, lecture at 6:30PM CEU hours (0.1) available.

Recent FCC studies indicate that Americans continue their voracious appetite for television, watching over 8 hours/day per household. In spite of this fixation and a huge market ecosystem, there have been relatively few changes in the underlying core technology since its inception.

Now, 65 years after the FCC released NTSC, television is poised to undergo a major inflection with changes in the information payload, transport, security rights, and rendering devices.

In this lecture Bruce covers the transition from analog to digital broadcast and IPTV. Specific topics include: new digital broadcast standards (e.g. ATSC, QAM, DVB-T/H/S/S2/C), security challenges in digital rights management (DRM), new rendering formats, air interface issues, and the convergence of computers, mobile devices, and legacy television.

Bruce Willins is a technology visionary who in the past presented very popular IEEE lectures on RFID, RTLS, and WLANs. He holds technical and business degrees from Polytechnic and Adelphi Universities. In 1984 he founded Netways Inc an internetworking company focused on DARPA internet research initiatives and the early commercialization of bridge/router products. Acquired by Raycom Systems in 1988, he continued to lead advanced development teams of switch/router networking products. From 1996 to 1998 he served as VP of Engineer for SMC Networks. From 1998-2005 he served as a Symbol Technologies Fellow and VP of R&D working on RFID, RTLS, WLANs, VoIP, Biometrics, and network security. Today he is VP of Engineering & Marketing for Hauppauge Computer Works developing terrestrial, satellite, and cable video tuner products.

General admission is free.Registration is required. CEU hours (0.1) available for $20. For registration/directions go to www.ieee.li, click on the Calendar link, then click on the registration link for this event. Lecture coordinator: Dave Mesecher, IEEE Communications Society LI Chapter Chair; d.mesecher@ieee.org.

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