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THE PULSE

OF LONG ISLAND



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The weather has turned clear and warm- I wish I could say that the local Engineering business climate was as pleasant.

We all have heard of the local downsizing of some of the largest defense contractors on Long Island, with jobs either being eliminated or sent down south. Many of our friends are now facing unemployment with a shrinking job pool, with difficult prospects ahead. So what can we do to help to help them and ourselves if we are in that position?

First off, let's share any job openings we have amongst our members. Our Employment Assistance Committee (EAC) maintains an email list to help disseminate job opportunities and resources to prepare for interviews. You can find it here at: http://IEEE.LI/mailman/listinfo/eac_list_ieee.li. Our **Pulse** newsletter will also list any job openings at no cost. Please encourage your company to post any new job opportunities on the **Pulse**.

Job Preparation advisors say that most jobs are found by friend-to-friend recommendations. Companies often start by looking for the 'Purple Squirrel'; a perfect candidate that is currently doing everything they want the new employee to do for them, with all the perfect qualifications. This ignores the reality that Engineering is a learning profession! We constantly gain new technical knowledge and acquire new complex skills all the time. We can play a part here by helping our IEEE friends get past the Human Resources (HR) filters and promote their abilities. I encourage everyone to keep alert for opportunities and look for connections to help.

At the personal level, we should be taking advantage of all the seminars and lectures offered by the Section. Some are high level, some are introductory, and they all help us build a pool of knowledge, and to make personal connections and network with our colleagues. There is no better resource than a lot of people who know us and our abilities. Always make good use of your IEEE membership!

I would also encourage you to consider contributing your knowledge to the Section by offering to present a Lecture. Aside from helping others, it will demonstrate your expertise. You also can (and please should!) suggest lecture topics – what interests you? I can't imagine that there isn't one topic of interest you wouldn't like one of the Society Chapters to present – and I know for a fact that some of the Society Chairs struggle to know what would be of interest. Start by emailing the Chapter Chair suggestions or offers – we need and should help each other! The email address of all the Society Chapter and Affinity Groups are on their respective webpages and can be accessed from our main page at: <http://www.IEEE.LI>.

The Section Officers will be busy this summer. The triennial IEEE Sections Congress is being held this August in Amsterdam and the Section will be sending our representatives. Sections Congress involves hundreds of delegates from all over the world. At the Sections Congress; they learn how to utilize the resources of IEEE to maximize their effectiveness as IEEE volunteer leaders by attending working sessions, panel discussions and tutorial sessions. We are also preparing to hold several informal meetings to discuss how the Long Island Section can increase our relevance and value to Small and Medium Businesses (SMBs). In my experience, Engineers at SMBs often have a broader range of job duties than those at larger firms. For example, a Design Engineer may also be called on to do Pre-Sales work or Technical Support, whereas a large firm would have dedicated resource for those jobs.

Coming full circle – what can the Section do for you? Please let me know! Our next Executive Committee (ExCom) meeting is on Monday August 18th – just send me an email at chairman@IEEE.LI and I will add your name to the attendance list. Any member is welcome to attend.

Thank you!

John G. Schmidt
Chairman, IEEE Long Island Section
chairman@IEEE.LI

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The IEEE Long Island Section Website

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

Visit our site at: www.IEEE.LI

Consultant's Network of Long Island

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

www.consult-li.com

Membership Development

For more information on membership with the Long Island Section of the IEEE, e-mail Nikolaos Golas at:

membership@IEEE.LI

JUNE 2014

June 4, Wednesday
Long Island Consultants
Network Meeting

Briarcliffe College
 The Great Room
 Bethpage, LI
 7:00 PM - Meeting

June 4, Wednesday
Computer Society Meeting
Internet of Things:
Ecosystem, Platform
and Open Source

By Artyom Astafurov
 CA Technologies
 Islandia, LI
 6:00 PM - Refreshments,
 6:30 PM - Lecture

June 5, Thursday
Instrumentation and
Measurement Society Meeting

Principles to Code by:
Designing and Defining
for Beyond Today

by Alexandra Valiton,
 National Instruments
 Telephonics Corporation,
 Farmingdale, LI
 6:00 PM - Refreshments
 6:30 PM - Lecture

For more information about these meetings and lectures, please visit: www.IEEE.LI/calendar



June 5, Thursday
AESS Meeting
National Security and
Human Spaceflight

By Michael Griffin
 Palmer's Grille
 Farmingdale, LI
 6:00 PM - Social Time
 6:30 PM - Dinner
 7:15 PM - Presentation

June 18, Wednesday
APS Meeting
Mixed Domain
Oscilloscopes:
Discover the Possibilities

By Alan Wolke
 Telephonics
 Farmingdale, LI
 6:00 PM - Refreshments
 6:30 PM - Lecture

June 18, Wednesday
MTT Meeting
Design of GaN
Power Amplifiers

By Edward Niehenke
 L3 Narda
 Hauppauge, LI
 6:00 PM - Refreshments
 6:30 PM - Lecture

June 26, Thursday
Joint EMB & PSES Meeting
Smart Integrated
Medical Systems &
Assistive Technologies

By Aydin Farajidavar
 Palmer's Grille
 UL, Melville, LI
 6:00 PM - Pizza & Refreshments
 6:30 PM - Lecture



JULY 2014

July 2, Wednesday
Long Island Consultants
Network Meeting

Briarcliffe College
 The Great Room
 Bethpage, LI
 7:00 PM - Meeting

July 17, Thursday
IEEE EMC Society Meeting
The Impact Of Cables & Connectors
On Radio Frequency and Microwave
Measurement Uncertainties

By Dennis Lewis, Boeing
 Bae Systems, Greenlawn, LI
 6:00 PM - Pizza & Beverages
 6:30 PM - Presentation



Long Island's Electrical and Electronic History

By Jesse Taub, IEEE Long Island Section Historian

We continue our examination of items from *Pulse* issues from the 1950's. This month we look at the January to April 1955 issues.

The January issue featured a talk by Dr. Everitt on speech compression or expansion. He described ways of speeding up one's speech without changing the audio frequency. He indicated that it had application to talking books. Dr. Everitt was well known in those days for a basic text book on electronics and was the Dean of Engineering at the University of Illinois. This issue also announced a 6 part lecture series on electronic measurements from dc to millimeter wavelengths. Each session was given by a distinguished lecturer.

The February *Pulse* advertised a talk to be given by Dr. A. L. Samuel of IBM at the Section's monthly meeting. His topic was how digital computers work. Engineers were still rooted in the analog world at that time. It also had an article by the Section Treasurer, Carol Veronda of Sperry, on how the Section spends its money. The ads in these old issues look quaint by today's standards. I noted one on a microwave power meter by FXR. FXR was a company that went out of business many years ago but was well regarded in the mid-1950s.

The March *Pulse* announced four new IRE Fellows that would be given their awards at the Garden City Hotel. It is interesting to note that 600 people attended. This is clear evidence of a very active Section. The issue also described the annual IRE convention that was held in New York City with 40,000 attendees. This type of general national convention went out of style with the growth of many technical societies within the IEEE. Each Society now has at least one meeting a year.

The talk at the April meeting was given by C. G. Fick of GE on Light Amplification. While this topic was of interest then, it became largely obsolete with the invention of the laser in 1960 that could amplify coherent light.

Airborne Instruments Laboratory had one page ads in each of these issues. They used the space to highlight technical accomplishments. The origin of the company was in the January *Pulse*. February's article was on techniques for screening cancer cells. Means for predicting the performance of microwave mixers from the dc characteristics of diodes was described in the March article. Circuits to integrate received radar signals were highlighted in April. They continued these ads for another 10 years.

Reading these old issues of the *Pulse* continues to give us a window on the technologies that were important in those days. It also shows us that we had a very active Section that is worth emulating in many ways. Once again, we are grateful to Rod Lowman, our past Historian for saving these old issues and James Collotti, our webmaster, for posting them on www.IEEE.LI.

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IEEE-USA 2014 Annual Meeting & InnoTek 2014 Technical Conference

by Nikolaos Golas,
PACE Chair,
IEEE Long Island Section

I attended on behalf of the Section the **2014 IEEE-USA Annual Meeting** and **InnoTek 2014** Conference Innovations in Technology Technical Conference (<http://sites.ieee.org/innotek>)

It was held at the Crowne Plaza in **Warwick, Rhode Island** from 15-18 May 2014. It was hosted by the IEEE Region 1 and the IEEE Providence Section. The opening ceremony and dinner was on Thursday evening, 15 May and contained the opening remarks by Gary Blank, the **2014 IEEE-USA President** welcoming the attendees at the Garden Pavilion following by the introduction and Q&A of the 2015 candidates for **IEEE President-Elect: Frederick Mintzer** and **Barry Shoop** and the **IEEE-USA President-Elect: 2015 candidates Peter Eckstein** and **Keith Grzelak**.

The **InnoTek 2014** Conference started early on Friday 16 May with presentations by Jeff Greer on **Engineering's Role in Agile Manufacturing**, Barry Shoop on **Developing Critical Thinking, Creativity & Innovation Skills**, Michelle Morey on **InfraGard, Partnership is Our Key Resource**, Henry Constant and Frank Metayer on **Real-time Digital Image Acquisition and Processing** and the Rhode Island Commissioner Paul Roberti covered **Energy Conversion & Distribution**. The lunch presentation featured an outstanding speaker in Sally Sutherland of the Naval Undersea Warfare Center and was titled **Innovations in Technology for the Undersea Domain**. It was the highlight of Friday.



On Friday afternoon the **InnoTek 2014 Conference** featured 4 parallel tracks promoting **INNOVATION: Innovation in Education, Technologies for New Policy Systems, Innovation in Business and Innovations in Medicine**. I attended the Technical Innovation In System Design track. It featured the following presentations: **Unleashing Innovation through Internal Hackathons** by Shiven Kumar, Bernard Rosell, John Shepherd from AT&T, **Strong Ties Despite Decentralized Network Design** by Philip Muller from Aachen University, **Advanced Complex Searches on Encrypted Unstructured Data in Cloud Environment** by Mohammad Zaman Fakhra, Schoab Ahmad Khan, Madiha Waris from EME College and **Preventing Recreational Boating Fatalities and Serious Injuries** by C. David Rogers from Collaborative Technologies.

On Saturday the **IEEE-USA Annual Meeting** featured presentations by IEEE-USA Vice-Presidents, committee chairs, and experienced volunteers. The program provided sessions on volunteer training, interactive workshops honing leadership skills, exhibits on the latest IEEE products and services, opportunities for networking and exchange of best PACE practices. There were 3 parallel tracks: **Professional Activities - Engaging Your Members Locally, The Professional - Career and Member Services and The Profession - Government Relations**. Another track covered the **IEEE Insurance Solutions** with the topic titled: **"Protecting Your Greatest Asset. You!"**

The IEEE-USA Annual Awards ceremony on Saturday evening recognizing the best of our U.S. engineers was the fitting end to a very productive day. The Annual Meeting ended around noon on Sunday. There were many chances to network with other members and associates, learn what works and what does not for topics of PACE meetings at various IEEE Sections, learned about all the accomplishments, plans & ideas which we can implement at the IEEE Long Island Section.



by Nikolaos Golas,
Awards Committee

CELEBRATING 50 YEARS OF IEEE FELLOWS

In 2014, IEEE will mark its **50th Fellow Class**. It represents decades of honoring IEEE Fellows whose extraordinary accomplishments have changed the world. The work of IEEE Fellows has touched just about every aspect of our lives. Their designs can be found in cellphones, video games, the Internet, and medical devices. Fellows have also started up some of the world's best-known companies, made major changes in EE education, served in top IEEE leadership positions, and even had some IEEE medals and awards named after them.

The IEEE grade of Fellow was born in 1964 when the **American Institute of Electrical Engineers (AIEE)** and the **Institute of Radio Engineers (IRE)** which merged in 1963 to form IEEE. Put on hold during that transition year, the program began anew in 1964 with 10 Fellow elevations. The emphasis on the elevation was and still is reserved for select IEEE members who have contributed importantly to the advancement of engineering, science, and technology, bringing the realization of significant value to society.

About 10,000 IEEE Fellows have been elevated to this honor since the program began 50 years ago in 1964. Only one-tenth of one percent of the total voting membership can be elevated in any one year. This is a very small percentage compared to the total membership. Each new Fellow receives a beautifully matted and framed certificate with the name of the Fellow and a brief citation describing the accomplishment, a congratulatory letter from the incoming IEEE president and a gold sterling silver Fellow lapel pin with antique finish. Fellows are the crown jewels of the IEEE organization. One can only imagine what the next fifty years will bring, and the new technology that will be developed, discovered, or taught, and what new IEEE Fellows will be recognized for their achievements.



Prospective Fellow nominees have to be nominated by a nominator and between five and eight references have to assess the nominee's contributions. To learn the criteria, follow the [“Steps to Become an IEEE Fellow.”](#) The IEEE Fellow Committee then reviews the nominations and recommends those for elevation to the IEEE Board of Directors, which makes the final determination.

The list of IEEE Fellows reads like a Who's Who of engineering pioneers. There's [Martin Cooper](#) (1976), who invented the handheld cellular mobile phone, and the inventor of the home console for video games, [Ralph H. Baer](#) (2013). [Leonard Kleinrock](#) (1973), [Robert E. Kahn](#) (1981), and [Vinton Cerf](#) (1988) are credited with helping to develop ARPANET, the precursor to the Internet. [Thelma Estrin](#) (1977) was one of the first to apply computer technology to health care and medical research. [Fujio Masuoka](#) (1995) invented flash memory, and [Mitsumasa Koyanagi](#) (1997) devised the stacked capacity cell, the dominant cell design for dynamic random access memory.

Continued on page 9 ►

CELEBRATING 50 YEARS OF IEEE FELLOWS

◀ Continued from page 8

The first woman to be elevated to IEEE Fellow was Jenny E. Rosenthal (1966), recognized for her achievement in spectroscopy, optics, and mathematical techniques and their application to electronic engineering. The class of 2008 Fellows set the record for the most women (27) elevated in a single year.

Some Fellows founded what came to be very well-known companies, such as Bose (Amar G. Bose, 1972), Intel (Robert Noyce, 1966, and Gordon Moore, 1968), & Qualcomm (Andrew J. Viterbi, 1973, and Irwin Mark Jacobs, 1974).

Fellows also have changed the face of engineering education. Mildred Dresselhaus (1979), a professor of electrical engineering and physics at MIT, was recognized for her work to enhance women's opportunities in engineering education. John L. Hennessy (1991) was the first engineer to be named president of Stanford University. He has created a university with an interdisciplinary approach to addressing global concerns. He's also known as the inventor of the reduced instruction set computing (RISC) processor. Another university president, Hean-Teik Chuah (2014), leads Universiti Tunku Abdul Rahman, in Malaysia. It's ranked one of the top universities in Asia and has received awards for the quality of its engineering program.


The IEEE Fellow Web Site has a new redesigned **Fellows Directory**. It is the most comprehensive online search and networking tool available to members. If you need to complete an **IEEE Fellow Nomination**, gather information for a region, section, or society, it's now easy to accomplish.

The information in the directory can be accessed by six categories: **alphabetical by last name, year elevated, gender, IEEE Region, IEEE Society, and deceased**. Within these categories, members can search, sort, or run a filter. For example, a report can be compiled on all Fellows within a specific region elevated in a particular year. The directory allows members to view the profiles of Fellows plus the ability to network with the Fellows.


If you are not an IEEE member, you will have limited access to certain information. Check it out today. The directory works on handheld devices and computers. To access the directory, go to www.ieee.org/fellows, then click the Fellow Directory icon.

Throughout the year, various celebrations will take place to honor those who have achieved the Fellow distinction. If you know an IEEE Fellow, congratulate him/her again for receiving this honor. You can recognize them personally, or you can acknowledge them publicly at Region meetings, Society meetings, Section meetings, and/or conferences.

Portions of this article written by Rosann Marosy and Kathy Pretz

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Note: The Internet address above is hyperlinked to the image above!

SOLAR ENERGY AT CEDAR CREEK

Nassau County Executive Edward P. Mangano announced the selection of a firm to construct, operate & manage a two-to-three megawatt solar energy project on the grounds of the Cedar Creek Wastewater Treatment Plant. The project is estimated to generate \$100,000 annually, for 20 years, in lease revenue to Nassau County while providing a green energy to Long Island's power grid.

"This public-private partnership establishes green production, generates revenue for taxpayers and provides clean energy to our power grid," stated County Executive Mangano. "Nassau County is a leader in green energy projects and this partnership further greens our County."



SunEdison, a nationally recognized leader in the industry, has implemented successful green energy programs throughout the globe. This competitive bid contract moves to the Nassau County Legislature for consideration. This initiative is part of the LIPA/PSEG's Feed in Tariff (FIT II) program. The County will make available a 12.5-acre site at the southern tip of Cedar Creek Wastewater Treatment Plant in return for annual lease payments over a term of 20 years. SunEdison also proposes to provide a development rent to the County during the design and construction period.

The Cedar Creek site is well-suited to accommodate solar energy production as it contains unobstructed year-round southern sky exposure and is well buffered from the residential areas to the east. The project will have no impact on Cedar Creek Park. Park visitors will be able to observe the facility through an existing access road and the County will install solar energy production informational kiosks at various park and cultural venues that display real-time information regarding the output of the photovoltaic arrays at Cedar Creek. Informational signage will also be installed at Cedar Creek Park to educate the public on the benefits of solar energy.

TELEPHONICS' PRESENTS VISIONEDGE™ AT THE 2014 AAAA SUMMIT

Telephonics Corporation presented its VisionEdge™ Degraded Visual Environment (DVE) sensor solution at the 2014 Army Aviation Association of America's (AAAA) Annual Meeting and Mission Solutions Summit in Nashville, Tennessee. VisionEdge addresses the life threatening challenges associated with degraded visual environment situations, enhancing the military aviator's ability to maneuver through adverse weather conditions, hard-to-detect wires, and other flight path obstacles.

VisionEdge is a millimeter wave radar sensor that provides a constant, real-time image of the aircraft's forward viewing area via a 3D visual display. With no moving parts, the small size, lightweight and low power consumption of VisionEdge enhances overall system reliability and easily integrates with a wide variety of fixed and rotary-wing aircraft platforms.

VisionEdge is a commercial Enhanced Flight Vision System (EFVS) solution already in development at Telephonics, which can be leveraged by the U.S. Military, providing fiscal benefits in this constrained budgetary environment.



"Throughout my 20-year tenure as a military pilot, I frequently flew through dangerous weather conditions and other flight path obstacles that made it particularly difficult to complete missions effectively," said Telephonics' team member, retired Lt. Col. Jack Sullivan. "VisionEdge will alleviate the vast majority of those problems."

Sharing in Mr. Sullivan's enthusiasm, Telephonics' President and Chief Executive Officer, Joseph J. Battaglia stated, "For decades, degraded visual environment-related conditions have caused significant loss to life and property in the military aviation community. Telephonics is proud to be developing this vital technology for the men and women who risk their lives during flight operations, enabling them to fly with greater confidence and focus on the critical missions at hand."





Presented by IEEE Aerospace and Electronic Systems Society and
the American Institute of Aeronautics and Astronautics Long Island Section

NATIONAL SECURITY & HUMAN SPACEFLIGHT



DATE: Thursday, June 5, 2014

PRESENTED BY:

Dr. Michael Griffin

AIAA President, Past NASA Administrator

LOCATION:

Palmer's American Grille

123 Fulton Street

Farmingdale, NY 11735

TIME:

6:00 PM - Social Time

6:30 PM - Dinner

7:15 PM - Presentation

COST:

Members & Guests- \$30

Students- \$15



It is widely recognized that the national security imperatives of Cold War competition gave birth to the human spaceflight programs of both Russia and the United States. What is not as widely recognized is that human spaceflight remains important for precisely the same reasons of national security. The sharp point of the battle for Cold War supremacy is gone, replaced by broader but sometimes less apparent motivations that, while lacking the urgency of three generations ago, remain of critical importance nonetheless. Dr. Griffin will discuss how these factors have influenced, and continue to influence, space policy from Apollo to the present day, and why such influence is likely to continue.

Michael Griffin is the Chairman and CEO of Schafer Corporation, a leading provider of scientific, engineering and technical services and products in the national security sector. He was previously NASA Administrator (2005-09), NASA Chief Engineer and Associate Administrator for Exploration, Deputy for Technology at the Strategic Defense Initiative Organization, Professor of Mechanical and Aerospace Engineering at the University of Alabama, and Space Department Head at the Johns Hopkins University APL. He has been President and COO of In-Q-Tel, CEO of Magellan Systems, General Manager of Orbital Science Corporation's Space Systems Group, and Executive Vice President and Chief Technical Officer at Orbital. He is the lead author of over two dozen technical papers and the textbook Space Vehicle Design.

Mike obtained a B.A. in Physics, Master's degrees in Aerospace Science, Electrical Engineering, Applied Physics, Civil Engineering, and Business Administration, and a Ph.D. in Aerospace Engineering. He is an Honorary Fellow and the current President of AIAA, a Fellow of the American Astronautical Society, a member of the National Academy of Engineering and the International Academy of Astronautics and a Senior Member of the IEEE. He is the recipient of numerous honors and awards, including the NASA Exceptional Achievement Medal, and the Department of Defense Distinguished Public Service Medal, the highest award which can be conferred on a non-government employee. He is also a PE and a Certified Flight Instructor.

RESERVATIONS REQUESTED RSVP BY June 4, 2014

to: **David Paris** at:

davidsparis@optonline.net or (516) 458-8593

Directions: Palmer's Grill is on the northwest corner of Fulton Street (NY24) and Merritts Rd in Farmingdale. About one mile east of NY135 exit 7 (Hempstead Tnpk.), about 0.6 miles east of Bethpage St. Pkwy. exit B3 & about 2 miles west of Rt.110 (Broadhollow Road) either on Conklin St. (NY24) or on Fulton St. (Rt.109).



The Long Island Chapters of the **IEEE Antennas & Propagation Society** and the **IEEE Photonics Society** are pleased to announce the following lecture:

MIXED DOMAIN OSCILLOSCOPES: DISCOVER THE POSSIBILITIES



DATE: Wednesday, June 18, 2014

PRESENTED BY:

Alan Wolke, Tektronix Corporation

LOCATION:

Telephonics Corporation

815 Broad Hollow Road, Farmingdale, NY 11735

TIME:

6:00 PM - Food & Refreshments

6:30 PM - Presentation

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

ABSTRACT:

The Mixed Domain Oscilloscope is a new category of test equipment that features new levels of convenience, efficiency, cost savings and cross-domain measurement capability that had been previously unavailable in a single instrument. Two families of Mixed Domain Oscilloscopes will be discussed and demonstrated, each bringing a unique and powerful blend of measurement and analysis across analog, digital and RF domains.

SPEAKER BIOGRAPHY:

Alan Wolke is a senior field applications engineer serving customers in the northeastern corner of the U.S., focusing primarily on RF and high speed analog and mixed signal applications. He earned his BSEE in 1985 from NJIT and spent the majority of his career involved in various analog circuit design, test and application engineering roles before joining Tektronix in 2006. In his spare time, he is an active ham radio enthusiast (W2AEW) and enjoys tinkering in his home lab designing and building circuits, as well as debugging, repairing and restoring electronic equipment.

LOCATION:

This lecture will be held at Telephonics Corporation located at 815 Broad Hollow Road in Farmingdale. Food & refreshments will be served starting at 6:00 PM, & the presentation will begin at 6:30pm.. **Photo ID is required to enter the facility.**

DIRECTIONS:

Southern State Parkway, Exit 32 North (Broad Hollow Road, Route 110), Pass 56th Fighter Group, Telephonics is on the Right, #815 or LIE, Exit 49 South (Broad Hollow Road, Route 110), Pass Airport Plaza, Telephonics is on the Left, #815

REGISTRATION:

Registration is required, and is available online only. Please visit the Calendar Page of the IEEE Long Island Website www.ieee.li, click on the registration link, and fill out the form. All are invited, and the lecture is free.

SEMINAR COORDINATORS:

Bryan Tropper, Chair, IEEE APS Society, LI Section

Dr. M. Nazrul Islam, Chair, IEEE Photonics Society, LI Section



The Long Island Chapter of the **IEEE Microwave Theory and Techniques Society** is presenting a lecture titled:
DESIGN OF GaN POWER AMPLIFIERS

DATE: Wednesday, June 18, 2014

PRESENTED BY:

Dr. Edward Niehenke,
Consultant & Lecturer Baltimore Maryland
e-mail Address: eniehenke@ieee.org

LOCATION:

L-3 Communications Narda Microwave
435 Moreland Road in Hauppauge

TIME:

6:00 PM - Pizza & Refreshments

6:30 PM - Presentation

(Please try to join us early and enjoy networking with your colleagues.) The lecture is scheduled to last 60-90 minutes.

WHO SHOULD ATTEND?

Engineers with an interest in the design, test, and application of Microwave Transistor Devices used in Power Amplifiers Components and System Design

COST:

This seminar is free and all are invited.

Registration is required. A photo ID is needed to enter the facility.

REGISTRATION:

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

ABSTRACT:

This lecture introduces the GaN-transistor, its properties, various structures, including the latest GaN power amplifier (PA) design techniques. The advantages of using GaN devices over GaAs and Si will be presented. GaN HEMT transistors will be shown delineating the various geometries, semiconductor processes and structures with associated performance. Guidelines for reliable operation will be presented considering device junction temperature including thermal management techniques. The nonlinear models of GaN HEMT devices necessary for the CAD of PA's will be presented. Design considerations for both constant amplitude envelope signals as well as the non-constant amplitude envelope signals will be presented. Step-by-step design procedures will be shown for various GaN PA examples including different classes of operation as well as the popular Doherty PA.

LECTURE COORDINATORS (mtt@IEEE.LI)

Eric Darvin, MTT Vice Chairman, IEEE Long Island Section
Saikumar Padmanabhan, MTT Chairman, IEEE LI Section

SPEAKER BIOGRAPHY:

Dr. Niehenke has pioneered the development of state-of-the-art RF, microwave, and millimeter wave components and subsystems at Westinghouse/Northrop Grumman for 34 years. He previously worked in research at Martin-Marietta. He now consults and lectures on power amplifier, nonlinear circuit, and transceiver design. He holds nine patents and several awards from Westinghouse. He has given over 120 technical presentations and has authored over 30 papers. He was on the faculty of the John Hopkins University, teaching electricity and magnetism. Dr. Niehenke is a member of MTT-6, MTT-16 and MTT-20 Technical Committees and is a member of the IEEE IMS Technical Program Committee. Dr. Niehenke was the technical program chairman for the 1998 IMS and was Chairman of the 1986 IMS. He was the 1986/87 IEEE Distinguished Microwave Lecturer, served as a member of ADCOM for 9 years, and is the MTT-S Ombudsman. He was a recipient of the MTT Distinguished Service Award, IEEE Centennial and Millennium Medals, a Fellow of the IEEE, and a registered professional engineer in the state of Maryland.

DIRECTIONS:

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

From LI West: Take I-495 to exit 53. Exit at WICKS Road. Turn left at traffic light onto MOTOR PARKWAY. Take MOTOR PARKWAY to MORELAND RD. Make right turn onto MORELAND RD. and look for Narda on your right. Please use the main entrance parallel to Moreland Road.



The Long Island Chapter of **IEEE Engineering in Medicine & Biology Society (EMBS)** and **Product Safety Engineering Society (PSES)** are presenting a lecture entitled:

CLOSING THE LOOP: TOWARDS SMART INTEGRATED MEDICAL SYSTEMS & ASSISTIVE TECHNOLOGIES

DATE:

Thursday, June 26, 2014

PRESENTED BY:

Dr. Aydin Farajidavar,
Assistant Professor of Electrical and
Computer Engineering and Director of
Integrated Medical System (IMS)
Laboratory, New York Institute of
Technology (NYIT)

LOCATION:

Underwriters Laboratories
1285 Walt Whitman Road, Melville 11747

TIME:

6:00 PM - Pizza & Refreshments
6:30 PM - Lecture

COST:

The lecture is free and all are invited.
**Registration is required as is a photo
ID to enter the facility.**

REGISTRATION:

Please register online at the calendar page of
the IEEE Long Island Website www.ieee.li by
clicking on the registration link and filling in
registration information.

ABSTRACT:

In his talk, Dr. Farajidavar will focus on the Neural Stimulators, which have revolutionized the treatment of many neural disorders and explain strategies to develop smart integrated neuro-stimulators for pain management. The proposed approach exploits various Brain-Machine Interface technologies to acquire the neuronal state of the subject and deliver the electrical stimulation once a nociceptive signal is detected. The lessons learned from this research can be applied to a variety of disorders such as gastroparesis, Parkinson's disease, epilepsy, and incontinence to name but a few.

LECTURE COORDINATORS

John F. Vodopia, Esq.,
Chair for IEEE EMBS, LI Section
jvodopia@ieee.org

James Colotti,
Safety Chairman of the IEEE LI Section
safety@IEEE.LI

Glenn Luchen,
Safety Vice Chairman of the IEEE LI Section
safety@IEEE.LI

SPEAKER BIOGRAPHY:

Before joining NYIT, Dr. Aydin Farajidavar was a Post-doctoral Fellow in the School of Electrical and Computer Engineering at the Georgia Institute of Technology. Dr. Aydin Farajidavar received his Ph.D. in Biomedical Engineering from a joint program of University of Texas, Arlington and University of Texas, Southwestern Medical Center, Dallas in 2011. Research interests include: Implantable/Wearable Medical Devices, Assistive Technologies, Biological Signal Processing, Modeling Biological Phenomena and Medical Cyber Physical Systems. Dr. Farajidavar's research activities may be found in the "Physiological Measurement" journal and the "Scope" Magazine, NYIT.

DIRECTIONS:

Take the Long Island Expressway, the Northern State Parkway or the Southern State Parkway to Route 110. Take the North Service Road of the LIE west (from Rt. 110) to Walt Whitman Road, turn right (North) and UL is on the left (West side).

Please enter the facility through the front entrance and leave your cell phone in your car because cameras are not permitted in the facility.



The Long Island Chapter of the **IEEE EMC Society** is presenting a lecture titled:

THE IMPACT OF CABLES AND CONNECTORS ON RADIO FREQUENCY AND MICROWAVE MEASUREMENT UNCERTAINTIES



DATE: Thursday, July 17, 2014

PRESENTED BY:
Dennis Lewis, Boeing

LOCATION:
BAE Systems
450 Pulaski Road, Greenlawn, NY
The facility is located just east of Park Ave (Suffolk County Rte 35) on Pulaski Road.

TIME:
6:00 PM - Pizza & Beverages
6:30 PM - Presentation

WHO SHOULD ATTEND?

Individual interested in learning about error contributions of cables and connectors when making RF and microwave measurements.

REGISTRATION:

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.
Registrants must be US citizens.

SEMINAR COORDINATORS:

Mr. Sandy Mazzola, BAE Systems Inc, Greenlawn
Mr. Robert DeLisi, Underwriters Laboratories

ABSTRACT:

Microwave test and measurement equipment is used for many applications, including component measurements, electromagnetic compatibility testing, metrology and wireless environment assessments. Much of this equipment requires special care and consideration in order to eliminate damage and maintain a high level of accuracy. When developing these high frequency measurement systems and evaluating system performance, it is common to consider the warranted equipment specifications. Very often, however, the error contribution of cables and connectors to the system uncertainty is overlooked. Impedance mismatch is typically the largest source of measurement error and is largely influenced by the cables and connectors used within the system. Something as insignificant as a \$30 connector can adversely affect the performance of a system costing several hundred thousand dollars. This presentation provides an overview of commonly used cables and connectors and discusses some of the errors associated with them. The impact of these errors on overall measurement system uncertainties is discussed. The presentation finishes with some practical examples and real world applications to help guide participants in the selection and use of cables and connectors and more accurately assess system performance.

SPEAKER BIOGRAPHY:

Dennis Lewis received his BS EE degree with honors from Henry Cogswell College and his MS degree in Physics from the University of Washington. He has worked at Boeing for 25 years and is recognized as a Technical Fellow. He currently has leadership and technical responsibility for the primary RF, Microwave and Antenna Metrology labs. Dennis holds six patents and is the recipient of the 2013 Boeing Special Invention Award. He is a member of the IEEE and several of its technical societies including the Microwave Theory and Techniques Society (MTT-S), the Antennas and Propagation Society and the Electromagnetic Compatibility (EMC) Society. He actively contributes to these societies as a member of the IEEE MTT-S subcommittee 11 on microwave measurements and as a Distinguished Lecturer for the EMC Society. He is a Senior Member of the Antenna Measurements Techniques Association (AMTA) and chaired its annual symposium in 2012. Dennis is an active member and past chairman of the Technical Advisory Committee for North Seattle Community College where he mentors engineering students. His current technical interests include aerospace applications of reverberation chamber test techniques as well as microwave measurement systems and uncertainties.

WHY LIMIT PATENT PROTECTION FOR COMPUTER SOFTWARE?

By John F. Vodopia, Esq.,

Vice Chair, IEEE Long Island Section

You do not have to be a techie to know that software, at least the “right” software, can be pretty valuable. Just think of Google™, Facebook™, LinkedIn™, Windows™, Photoshop™, Word™, TurboTax™, MAC OS™, Apache™, CANDY CRUSH SAGA™, COD™, to name a few. I cannot even guess how much money is generated by software sales and licensing fees in any given year. Any website one might navigate to is defined by the software running on one or more servers—software runs our phones, TVs, entertainment systems, radios, desktops, laptops, iPods, iPads™, cars, GPSs, healthcare, air traffic, ... And in many cases, software defines the way businesses conduct business. Practically all corporate action is implemented through large integrated networks, for example, in the insurance industry, the financial industry, the auto industry, the medical industry, the education industry and for that matter, big and small government.

So it is a funny thing that software is not directly patentable in the US apart from claims for a machine in which software sought to be patentable is said to be running (i.e., a claimed method operating in real time), a computer readable medium in which the computer readable instructions comprising the software are embedded. That is, to realize patent protection for computer software (i.e., broadly, computer related inventions) in the US, the US Patent Office does not allow claims directed to software simply based on what the software does differently. To be patentable subject matter, the software must be articulated as method of carrying out the software function, established as novel and non-obvious, but perhaps more importantly, must be tied to a particular computer (machine). For that matter, merely implementing a computer-implemented method or process on a computer is not enough in and of itself if the computer is utilized merely for simple data processing, e.g., input and output of data or number crunching.

So why do the Courts & the US Patent Office limit software protection broadly and may be looking to eradicate software protection for software implemented methods of doing business?

Well, a patent on software provides the patent holder with the right to extract a royalty for anyone (i.e., business entity) that might be using the software.¹ And since March 16,

2013, there is no arguing with who is the rightful patent owner—if you filed first, you are the owner, even if you are a student at Stony Brook who has come up with a new way to shave off 20% of the memory-storage requirement for streaming video and it turns out that after the fact, Google or Apple are running the same function in substantially the same way to achieve substantially the same result, and didn’t get to the patent office before the kid from Stony Brook. Same goes for a software developer failing to notice a patent on a feature included in a commercial software product for implementation in an operating system of a National/multinational bank or financial house. And where an unlicensed user going about its day to day business, executing transactions and presumably making money, there is not only some egg on their faces if it turns out that there is a patent out there with claims that read on their product or operation, but perhaps what is worse is that they will be required to adjust their cost structure to pay unanticipated royalty charges under the patent, likely to the great chagrin of investors or shareholders.

Some entities are so big and wield so much influence in both the legislature and press that they would rather fight than pay.² As I see it, the changing US policy is reflected in software patentability issues raised by the US Patent Office during patent prosecution and by the federal courts that have jurisdiction over patent law-related issues, particularly, the Court of Appeals for the Federal Circuit (CAFC), when the validity of issued software patents is challenged during patent litigation. For that matter, the changing US policy reflects a concerted effort to harmonize US patent practice with the outside world (for example, as evidenced by the recently implemented laws/PTO rules changes deriving from the America Invents Act), as well as a position taken by many major high-tech US corporations and their advocates that software patents are offensive to business and stifle innovation and, that software patents issued by the US Patent Office are “sub-par,” i.e., that the software patents should never have issued in the first place.

Consequently, a spate of cases has been brought on appeal in recent years before both before the Court of Appeals for the Federal

Circuit (CAFC) and the US Supreme Court challenging software patentability under 35 USC §101³. Concurrently, there have been frequent articles published in the US Press taking a position that software patents broadly and, in particular, business method patents, stifle innovation and damage high technology companies because they are frequently asserted by non-practicing entities (NPEs) that purchase such patents for the sole purpose of generating royalty income, not to manufacture a competing product.

The press typically describes these NPEs in the pejorative as “patent trolls” and frequently characterizes NPEs as unscrupulous, i.e., that suing on a patent to generate a royalty income where Plaintiff does not have a competing product is akin to “extortion.” Many of the suits referred to have been brought against large software corporations, such as IBM, Microsoft, Google and Apple, as well as large corporate entities in the financial industry. The press fails to acknowledge, however, that patents are only granted as a sword for extracting a royalty payment or to otherwise limit competition against the patent holder, as patents do not give a manufacturer a right to make, use or sell anything—only the right to prevent others from doing so. Hence, it is objectively meaningless to a patent infringement suit whether a patent owner has a product in the marketplace or not.

In the Courts, the most recent case relating to the patentability of software and business method patents is *Alice Corporation Pty. Ltd. v. CLS Bank International, et al.*, 13-298 (*Alice Corp.*). *Alice Corp.* is an appeal to the US Supreme Court from the CAFC4 (which itself came to the CAFC on appeal from a trial court, referred to hereinafter as “CLS Bank”) to determine whether claims to computer-related inventions (implemented in systems, machines, processes and items of manufacture), are patent-eligible subject matter under 35 USC §101. Oral Argument was taken on March 31, 2014 and, the final decision is expected in the not so distant future.

Briefly, the issue in both *Alice Corp.* and *CLS Bank* stems from software-related patents (owned by *Alice Corp.*) for reducing “settlement risk” in financial transactions in which several parties (typically banks) make transfers among themselves electronically through the course of a day, with a transfer of net balances to finalize those transactions at the end of the day. The risk is that one of the parties might not be able to pay its net share at the end of the day, leaving the others participants liable.

To allow an entity such as *Alice Corporation* to enforce its patent(s) against a bank such as

Continued on page 17 ►

◀ Continued from page 16

CLS Bank would require the bank to pay a royalty, likely calculated at a per transaction rate, where CLS Bank makes trades that settle about \$5 trillion in transactions on any given day. We believe that the Supreme Court will find against Alice Corp., i.e., that Alice's patents cover unpatentable subject matter under 35 USC §101 (even though Alice Corp. is not an NPE) because a decision otherwise is against the interests of large software entities, the financial industry and its advocates.

Hence, US patent Examiners as of late specifically raise the issue of "patentable subject matter" under §35 USC §101, or raise issues under 35 USC §112, e.g., §112(f), reflecting a USPTO policy to limit significantly the granting of software-based claims. And this understanding is not necessarily because the patent

In many cases, software method claims are independent of a particular computer or apparatus in which the software is in operation. As is known, software may be said to comprise a set of computer readable instructions that can be downloaded or otherwise memory-stored for access by a processor in a general purpose processor (e.g., a common PC). Also, however, software method claims are apparatus or system specific, for example, prepared for an automobile system or a station in an automobile assembly line. In that case, a drawing showing the PC and preferably, a computer readable medium (such as a computer disc (CD)) for carrying the inert code should be included in the disclosure. This way, if the patent that issues is asserted, royalties (if awarded), are calculated not only from the real-time

also is implemented with hardware, claims covering both software and hardware likely will not be allowed without detailed substantive support for the hardware aspect.

For example, most software-related applications should include an independent method claim and an independent system claim reciting the method steps. Additionally, however, many time applications are written with apparatus claims that articulate the software functional language in "means plus function" format under 35 USC §112(f), formerly §112, 6th par. While these claims are essentially software, issues arise when US patent examiners look to the disclosure to interpret the "means-plus-function" elements (in many cases, the only support is a block diagram including smaller blocks), couched in hardware (apparatus). If there is no express disclosure of hardware equivalents (other than the processor), the claims are rejected under 35 USC §112(f) or under 35 USC §112(b) and sometimes even under 35 USC §112(a). That is, the examiner will allow the method and system claims (if limited to a processor and memory) but not claims written in "means plus function" language.

The policy behind such action is that there should be no hardware equivalents for software unless an example is presented by the disclosure that is described sufficiently in writing, thereby preventing patentees from effectively asserting software claims against pure hardware devices. Hence, applicants wishing claims coverage for hardware analogs to software functions (for example, claimed using means-plus-function language) must provide clear disclosure of the non-processor/software means-plus-function elements.

The bottom line is be very careful drafting claims to computer-related inventions and pay attention to the changing patent law, particular with respect to 35 USC §101. Doing so should keep you close enough away from CLS Bank to be successful in realizing a software-based patent from your client before the USPTO.

"...for reducing "settlement risk" in financial transactions in which several parties (typically banks) make transfers among themselves electronically through the course of a day, with a transfer of net balances to finalize those transactions at the end of the day. The risk is that one of the parties might not be able to pay its net share at the end of the day, leaving the others participants liable."

examiners are "anti-software" in general, but because the law relating to §101 itself is unsettled and because the software and financial industry and their voice in the press raise the pressure to limit software patentability. For that matter, it is likely that the US patent examiners are directed to be very conservative in their examination of software-related claims and, when in doubt to reject such claims not just under §101, but also under §102 and §103(a).

In consideration of same, I thought it was worthwhile to provide some insight as to why the USPTO appears to apply particularly stringent standards when examining software-related patents and, for those considering patent protection for software, how you might more effectively protect your rights during the back and forth with the in your dealings with the US Patent Office, which is the gatekeeper.

Initially, preparers of software-related patent applications should be quite thorough and detailed when preparing written description support for software-related inventions, knowing that software-related inventions will be scrutinized very thoroughly by the USPTO. For that matter, it is very important to make clear that the method steps are implemented by a processor supported by memory, because under the current law, the software always must be tied to a "machine."⁵

processing of the method steps but also from an article⁶ sitting on a shelf, i.e., the computer readable medium holding the computer-readable instructions.

It is preferable also to include a drawing presenting a flowchart supporting at least one method claim, which includes what might be considered an "inventive" feature. Where applicable, include a drawing figure depicting a rules engine and a detailed description identifying the rules and the events that trigger operation of one rule as distinguished from another. And where data processed by the inventive method is sampled or sensor-derived, particularly where an analog sensor signal is converted to digital, it is good practice to include a figure and explanation. This avoids the US Examiner ever arguing successfully that the recited "processor & memory" is not used substantially, i.e., that the "machine" aspect is merely processing data in a way that also might be carried out with "pencil and paper."

Where the software is "apparatus or system specific," the different method steps or functional modules "drive" specific hardware; it is helpful to include a drawing of the "driven" hardware and a detailed explanation of the events that might trigger a step to control the hardware. And while we see many software-related patent applications that include language stating that the software functionality

¹ A US patent provides the owner with a limited monopoly to prevent others from using the patented invention as claimed for a period from the day a patent application becomes a patent to the date that is 20 years from the date that the patent application is first filed.

² which is their right under US law, particularly after *Citizens United v. Federal Election Commission*, 558 U.S. ____ (2010), (Docket No. 08-205) and more recently, *McCutcheon v. Federal Election Commission*, No. 12-536 (April 30, 2014)

³ Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

⁴ CLS Bank International and CLS Services Ltd. v. Alice Corporation Pty. Ltd., 2011-1301 (May 10, 2013)

⁵ *In re Bilski*, 545 F.3d 943, 88 U.S.P.Q.2d 1385 (Fed. Cir. 2008)

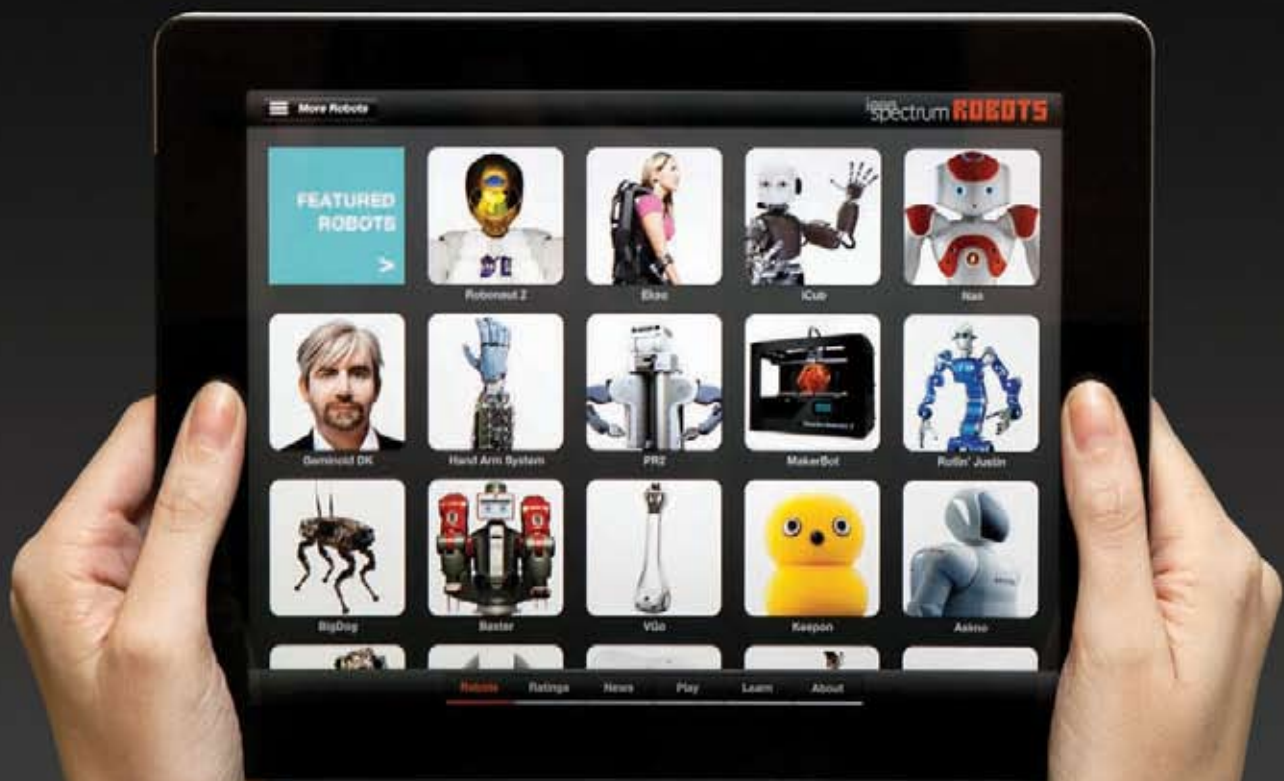
⁶ A non-transient computer readable medium containing program instructions for causing a computer to perform the method of: step 1; step 2; and step 3.

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OCTOBER 7, 2014

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IEEE Day 2014 is the 5th time in history when engineers worldwide will celebrate the anniversary of the first time IEEE members gathered to share their technical ideas in 1884. While the world benefits from what's new, IEEE is focused on what's next. We're looking for volunteer nominations from your section to help:

- Plan and Submit Your Event to our IEEE Day Team
- Promote Your Event (Section Newsletter, Region/Section website, local newspapers, student branches, company intranet)
- Have your event pinned to the global map
- Participate in the photo contest
- Member Engagement/Networking through participation
- Partner with your IEEE Day Ambassadors -responsible for increasing motivation to celebrate IEEE Day in your section /student branch/society/chapter
- Perfect opportunity for Membership Development

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1st IEEE EMBS International Student Conference in Malaysia (ISC 2014)



5th June 2014 | Universiti Putra Malaysia

By the Students, For the Students

IEEE-EMBS Malaysia Chapter is proud to inaugurate its first IEEE-EMBS International Student Conference in Malaysia. **ISC 2014 in Malaysia** is intended to provide a networking platform for student delegates through presentation of research findings, exchange of research experiences, inspiring and self-improvement lectures, games and BBQ, amidst a relaxing ambiance by the lake. The Organizing Committee is pleased to announce SIX Best Paper Awards and invite students engaged in research related to application of engineering/ computing etc in medicine and biology to attend and submit their work to the conference. Registration is **free** for IEEE members and **nominal** for non IEEE members.

SUGGESTED THEMES

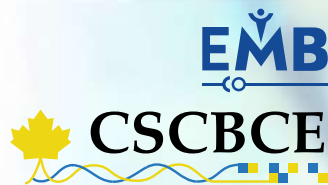
- Biomedical Signal and Image Processing
- Biomedical Instrumentation and Devices
- Rehabilitation and Health Systems
- Healthcare Information Systems
- Ergonomics and Human Factors
- Sensors and Wearable Technology

IMPORTANT DATES

- Ext Abstract Submission Deadline: **15 May 2014**
- Notification of Acceptance: **18 May 2014**
- Final Submission Deadline: **23 May 2014**
- Registration Deadline: **2 June 2014**
- Conference Date: **5 June 2014**

FOR MORE INFORMATION

www.myembs.org/conferences.php?p=42&utm_source=conference&utm_medium=email&utm_campaign=isc2014announce



ISC 2014

UOIT EMBS Welcomes You To CSCBCE / ISC 2014

7th Annual Canadian Student Conference on
Biomedical Computing and Engineering
+ IEEE EMBS International Student Conference (ISC)

June 25 - 26, 2014 | The University of Ontario Institute of Technology, Oshawa, ON, Canada

THE CONFERENCE

The 7th Canadian Student Conference on Biomedical Computing and Engineering and the IEEE EMBS International Student Conference (CSCBCE/ISC) will be held at **The University of Ontario Institute of Technology, Oshawa, ON, Canada** from 25-26 June 2014. The IEEE EMBS International Student Conference (ISC) is a student run conference driven by motto "*By the students, for the students*".

It is an exciting two day event where undergraduate and graduate students from a variety of disciplines and background come together to build new collaborations and friendships, while also doubling as an opportunity to showcase research related to any topics in Engineering in Medicine and Biology. Students interested in themes related engineering in medicine and biology or other related fields are strongly encouraged to attend and submit their work to the conference.

THE FOLLOWING IS ONLY A LIST OF SUGGESTED THEMES, ANY RESEARCH THAT IS RELEVANT TO ENGINEERING IN MEDICINE & BIOLOGY ARE WELCOME:

- **Big Data in Health** (data mining, data streams, cloud computing)
- **Bioinformatics/Computational Biology** (genomics and personalized medicine)
- **Biomedical Engineering Theory and Applications**
- **Clinical Decision Support** (computer-aided diagnosis, knowledge discovery)
- **Collaboration Tools** (social media, web apps, patient education)
- **Electronic Medical Records and Systems Integration**
- **Image Processing** (segmentation, image registration, functional imaging)
- **Monitoring and Devices** (bedside, embedded, wearable, smartphone)
- **Ontologies and Natural Language Processing**
- **Security and Privacy**

CALL FOR PAPERS

The submission deadline is **13 April 2014**. Papers should be submitted electronically using the EasyChair online submission system. All submissions will be peer-reviewed by at least 3 reviewers. Please refer to the For Authors page for more details concerning format, deadlines and copyright and disclosure requirements.

EMAIL

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PGBiomed / ISC 2014

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THE 8th IEEE EMBS INTERNATIONAL STUDENT COMMITTEE UK & REPUBLIC OF IRELAND POSTGRADUATE
CONFERENCE ON BIOMEDICAL ENGINEERING AND MEDICAL PHYSICS (PGBIOMED/ISC 2014)

CALL FOR PAPERS

The organizing committee are pleased to announce the 8th IEEE EMBS UK & Republic of Ireland Postgraduate Conference on Biomedical Engineering and Medical Physics, which in this year is also the IEEE EMBS International Student Committee (ISC). Following on from previous successful conferences, PGBiomed/ISC 2014 will be taking place at the **University of Warwick from 15 - 17 July 2014**.

This meeting will consider the scope of biomedical engineering and medical physics being studied in the UK and RI and will explore different aspects of these subjects. Topics from any aspect of Engineering, Physics, or Computing applied to Medicine or Biology are welcomed.

PAPERS SHOULD BE ADDRESSED TO A GENERAL AUDIENCE SO THAT NON-SPECIALISTS ARE ABLE TO UNDERSTAND THE CONTENT.

- Biomedical Signal Processing
- Biomedical Imaging & Image Processing
- Bioinstrumentation; Sensors; Micro, Nano & Wearable Technologies
- Bioinformatics & Computational Biology; Systems Biology; Modelling
- Cardiovascular and Respiratory Systems Engineering
- Neural Engineering; Neuromuscular Systems; Rehabilitation Engineering
- Molecular & Cellular Biomechanics; Tissue Engineering; Biomaterials
- Bio-Robotics; Surgical Planning and Orthopaedic Biomechanics
- Therapeutic & Diagnostics Systems, Devices & Technologies
- Healthcare Information Systems; Telemedicine
- Technology Commercialization; Education, Industry and Society

MORE INFORMATION

Guest speakers from academia and industry will kick off the proceedings on each day. As a conference organized for the students by the students, there is a valuable opportunity for students to present oral and poster presentations about their work within the field of biomedical engineering and medical physics in a friendly environment. There is also a competition for the best paper in both oral and poster presentations. Fees have been kept deliberately as low as possible in order to make the conference affordable to postgraduate students.

IMPORTANT DATES

- Submission of paper (2 pages A4 max):
17 April 2014
- Notification of paper acceptance:
12 May 2014
- Final Submission and registration:
26 May 2014

WEBSITE

ewh.ieee.org/sb/ukri/embs/pgbiomed14/call.html



International Energy & Sustainability Conference 2014, October 24, 2014

The third International Energy and Sustainability Conference will be held in October 2014 at Farmingdale State College.

The conference will bring together the latest research and development works in energy and related topics, along with industrial and management issues and challenges. Experts in research as well as in industry will be invited to present the emerging technologies and future directions in their field. Prospective authors are invited to submit original technical papers for presentation at the conference.

IMPORTANT DATES

Abstract submission	May 15, 2014
Accepted abstract notification	June 15, 2014
Deadline for accepted papers	September 5, 2014
International Energy and Sustainability Conference 2014	October 24, 2014

For more information send your inquiries to smartgrid@farmingdale.edu.

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SCOPE

The AI New NEB DC Power Utility Conference & Exhibition is devoted to those topics important to the utility DC Power industry. Products and developments featured include but are not limited to batteries, battery chargers, Control system, diagnostic and testing, communications capabilities and much more.

A CONFERENCE JUST FOR YOU

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Important DATES

Papers to be submitted by 7/7/14
Paper acceptance by 8/4/14
Final papers submitted by 8/25/14
Accepted Paper notifications 9/8/14
PowerPoints submitted by 9/22/14

User's Forum:

Uniquely designed for electric utility users only... NO commercial or vendor influence! The user's forum will consist of a session where specific topics of importance to the Utility users will be discussed. The User's Forum will be led by utility DC professionals Who will provide guidance and support to the forum. Further, a moderator will Be used to ensure that the meeting is kept on tract and garners the appropriate Questions for further debate. This will allow the users to pose relevant questions And concerns to the suppliers present and to the regulators in the form of follow up Correspondence sent by the AI New NEB management and to the industry at large Through neighboring and its regular communications.

This year's conference is focused on system reliability and the influence of the NERC requirements in shaping The utility DC system. We will draw from the industry at large, regulators, rule makers, utilities, manufacturers, educational institutions, and consultants to provide qualified speakers.

AI/NE MA PEN 5 working group session added on Wednesday morning October 29, 2014. Be sure to register for This important event. This is a very exciting and much needed update effort for NE MA Pen This document has Not been revised or even reviewed since 2003!





The 11th International Conference and Expo on Emerging Technologies for a Smarter World (CEWIT 2014)

Conference: CEWIT 2014

OCTOBER 29 & 30, 2014,
MELVILLE MARRIOTT LI, MELVILLE, NEW YORK



CEWIT 2014 is now announcing the Open Call for Papers. Abstract and Poster Submissions through July 1, 2014.

CEWIT 2014 is the premier international forum on the applications of emerging technologies in infrastructure, healthcare, and energy, which are three of the most critical components of a smarter global environment. Specific topics of interest for this year's Conference include, but are not limited to The Internet of Things; Cloud Computing, Networks, and Security; Health Technologies and Medical Devices; Big Data Analytics and Visualization; Smart Urban Systems and Smart Energy; and Information Technology and Society. In addition to the multiple new and recurring sessions this year, highly anticipated are the return of very well received Intellectual Property Panel, and the Student Poster Session.

The New York State Center of Excellence in Wireless and Information Technology (**CEWIT**) at Stony Brook University has been organizing this annual international conference since 2003 with a repertoire that has expanded significantly over the years to now encompass information dissemination, IT entrepreneurship, and elaborate cross-disciplinary research. The **CEWIT** Conference again returns to Long Island after a very successful 2013 event that welcomed over 600 attendees from 11 countries to the two-day program featuring special guest speaker New York State Governor Andrew Cuomo, 3 renowned keynotes, 69 academic and industry experts in 9 sessions, 16 distinguished panelists in 3 panels, & over 100 high quality poster presentations.

For the full Call for Papers and all additional **CEWIT 2014** Conference information, visit www.cewit.org/conference2014

8th INTERNATIONAL CONFERENCE ON ETHICS IN BIOLOGY, ENGINEERING & MEDICINE



**April
24-26
2015**

www.downstate.edu/orthopaedics/bioethicsconf2015

❗ Call for Abstracts

The program committee is seeking abstracts submission of paper relevant to this conference, which will be evaluated for inclusion in the final agenda as Oral presentations. The Deadline for abstract submission is **November 26, 2014**. Notification of abstract acceptance December 15, 2014. Selected papers will be published in the Ethics in Biology, Engineering, and Medicine: An International Journal.

An approximately 200-300 word single spaced abstract, text only, should be typed in font size No. 12. It should be typed on 8 1/2 x 11-inch paper with one-inch margins. The preferred way is to E-mail your abstract, followed with a hard copy. In your cover letter, please identify the corresponding author with complete mailing address, telephone number and E-mail address.

SUGGESTED TOPICS FOR PRESENTATIONS

- * ETHICS IN BIOENGINEERING
- * ETHICAL ISSUES IN BIOMEDICAL RESEARCH
- * ETHICS IN NANOBIO TECHNOLOGY
- * ETHICS IN GENETIC ENGINEERING and CLONING
- * ETHICS IN STEM CELL RESEARCH
- * RESPONSIBLE CONDUCT IN RESEARCH
- * ETHICS IN SYNTHETIC BIOLOGY
- * ETHICS IN MEDICAL RESEARCH
- * MEDICAL ETHICS & HEALTH POLICY
- * ETHICAL ISSUES IN TISSUE ENGINEERING
- * NEUROETHICS
- * PRIVACY AND BIOINFORMATICS
- * ETHICS IN BIOBANKS
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- * ETHICS IN DENTISTRY

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New York University, New York
Mildred Z. Solomon, Ed.D
The Hastings Center, New York

Invited Speakers:

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University of South Carolina
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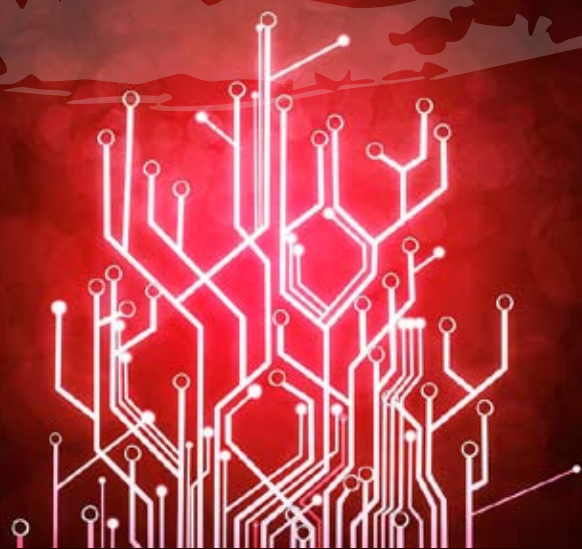
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