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Chairperson's Message by Jon Garruba, chairman@IEEE.LI



February is usually not a month that most get excited about, as winter is still upon us, the holidays have passed and many are anxiously waiting for spring. However, we as engineers do have something to celebrate. This year, February 14th is not just Valentines Day, it also marks the beginning of another important event: the start of National Engineers week! **National Engineers Week** or **E-Week** is being observed from **February 14 – 20**, and now is the time of year to celebrate all things engineering. Visit the IEEE-USA web-site here to find out more information on the array of exciting events and activities that are planned.

This month we also have several interesting power related events planned. On February 17 and 18 there is a special **Engineers Week** seminar series planned for the **Aerospace & Electronics Systems Society**. Topics include: "An Introduction to Solar Energy, System Types, and Installation," "Nuclear Power Plants and Future Energy Needs," and "OSHA Construction Safety & Health Certification." This meeting will be held at Dave and Busters in Farmingdale jointly with the **ASME, ISA, and NSPE**. Attendees will be eligible for **Continuing Education Units (CEUs)**. Additional information and registration forms can be found here. Also on the February 17, the newly established **Power and Energy Society** will hold an evening meeting and lecture on "Nuclear Power & Future Energy Needs" at 6:00 PM. Lastly, on February 25 the Circuits and Systems society will present a lecture on "Switching Power Supply Architectures." For the latest events always remember to check the section calendar at: www.IEEE.LI/calendar/

Although it is still winter, its not too early to start thinking about two of the major events for the Section coming this spring, the **LISAT Conference** and our annual awards banquet. Each of these events represents the culmination of considerable effort of the executive committee, and both are excellent opportunities to network with peers. If you haven't attended these events in the past, I strongly recommend attending.

This year the IEEE Long Island Section is holding our annual **2010 Awards Banquet** on **Thursday April 8, 2010** at the Hyatt Regency in Hauppauge. The LI Section Awards Banquet is our venue for thanking the deserving volunteers and members that make our section what it is. **Awards Banquet** details will be posted as they develop at: www.IEEE.LI/awards/

The following month after the **Awards Banquet** will be the **LISAT Conference** (Long Island Systems, Applications and Technologies). The IEEE Long Island Section will hold the **2010 LISAT Conference** on **Friday, May 7, 2010** at Farmingdale State College of the State University of New York. **LISAT** will feature presentations that highlight new and interesting work on a variety of electronic systems, technologies and applications - most of which are Long Island based. This is the sixth annual conference, and each year volunteers work hard to improve it. This year will be no exception. The more people, who participate, contribute and attend this event the better we are all able to generate and promote future success for Long Island. Please join us at the LISAT conference this year. For the latest on LISAT conference, see:

www.IEEE.LI/LISAT/calendar/lisat2010.pdf

Remember, the executive committee is always looking to expand and improve our sections' services. If you have any suggestions, contributions, or if you would like to become more actively involved, please contact me at: chairman@IEEE.LI

CALENDAR OF IEEE EVENTS

FEBRUARY 2010

17 **IEEE, ASME, ISA & NSPE**
 Topic: **Engineer's Week Seminar Series**
 Speaker: **Various**
 Location: Dave & Buster's Farmingdale, LI
 Time: **8:00 AM - 5:00 PM**

17 **Power & Energy Society Meeting**
 Topic: **Nuclear Power Plants & Future Energy Needs**
 Speaker: **Howard Sobel**
 Location: TBA
 Refreshments 6:00 PM, Lecture 6:30 PM

18 **IEEE, ASME, ISA & NSPE**
 Topic: **Engineer's Week Seminar Series**
 Speaker: **Various**
 Location: Dave & Buster's Farmingdale, LI
 Time: **5:00 PM - 9:00 PM**

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

25 **Circuits & Systems Society Meeting**
 Topic: **Switching Power Supply Architectures**
 Speaker: **TBA**
 Location: **BAE Systems, Greenlawn, LI**
 Refreshments 6:00 PM, Lecture 6:30 PM

MARCH 2010

4 **Instrumentation & Measurement Society Meeting**
 Topic: **TBA**
 Speaker: **TBA**
 Location: **Telephonics, Farmingdale, LI**
 Refreshments **5:30 PM**, Lecture **6:00 PM**

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

APRIL 2010

8 **Long Island Section Awards Banquet**
 Location: Hyatt Regency, Hauppauge, LI
 6:00 PM - 10:00 PM

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THE PULSE OF LONG ISLAND

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LET US HEAR FROM YOU

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

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 For more information visit:
<http://www.ieee.org/web/aboutus/whatis/policies/p9-26.html>



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

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Letters to the Editor



Dear Mr. Golas:

I need help from my fellow engineers and scientists to educate our children and theirs, for it's been nearly a year since my letter to the editor "Radioactive Water" was published in the Southampton Press:

<http://gfxtechnology.com/RAW.pdf>

Yet, despite presentations to the Suffolk County Legislature and correspondence with the NRC & CDC, nothing has been done to protect the Public or warn them not to drink untreated tap water. The three CDC & NRC letters opened by these links are scandalous at best: <http://www.gfxtechnology.com/CDC-NRC.pdf>.

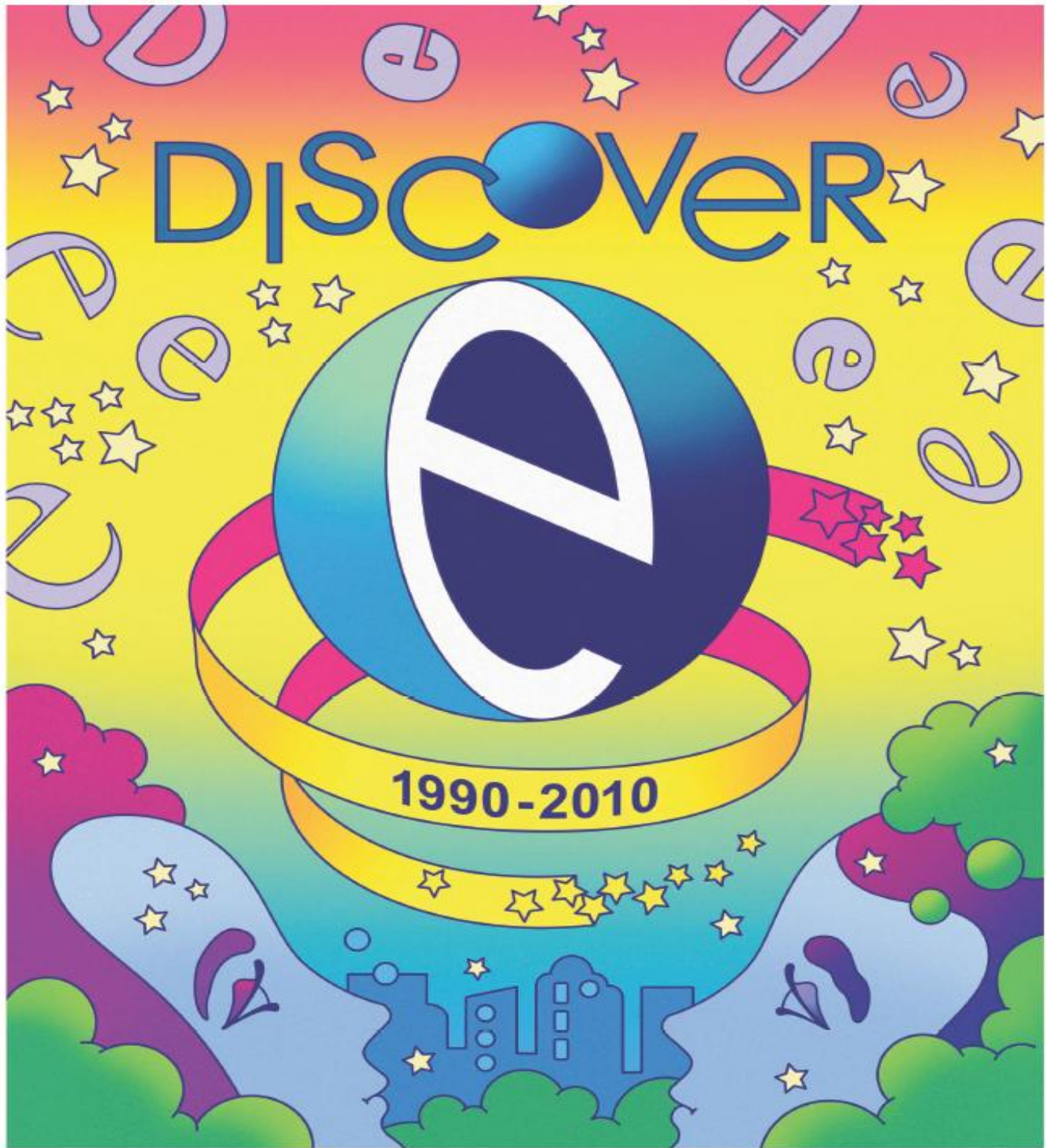
To make matters worse, the Tuesday before Thanksgiving, NRC Director Thaggard arranged a conference call with me during which he insisted, repeatedly, that Radon, Cesium-137, Bismuth-214, Lead-210 levels found in SCWA wells (<http://gfxtechnology.com/Table-A.pdf>) were either erroneous or within background levels --- even though Radon levels exceed the MCL (300 pCi/L) proposed in the EPA's Radon Rule of 1999. This Rule was blocked by the Bush & Obama Administrations. The former attempted to open Yucca Flats; the latter blocked it in May of 2009. Therefore, America will not have a safe place to store nuclear waste for decades to come -- and our groundwater will become increasingly radioactive.

Younger engineers need to know why Radon, Strontium, and their nasty decay-daughters will continue contaminating drinking water wells like the SCWA's West Neck Road well, for example. It's next to the Nike site in Lloyd Harbor; one of those listed @ http://en.wikipedia.org/wiki/List_of_Nike_missile_locations. To better understand the seriousness of this problem, Google "groundwater pollution from old Nike sites" and get a host of hits like those listed below. Few young engineers can fully understand the implications of drilling a potable-water well near an old Nike site, but some of your older members do -- especially retired Grumman Engineers like me that used to work on nuclear power plants for space/sea/undersea/air-craft applications. (I became involved in the infamous Hanford site in Washington State after Rockwell International began to manage it in 1977. During the seventies, I also managed a Grant program on nuclear power plant safety, consulted for EPRI and invented ways to improve the safety of the Breeder Reactor -- which Carter sent to France.)

If you publish this letter perhaps a few old engineers will join me by posting comments like these: "This analysis <http://gfxtechnology.com/pdf/WestNeckRd.html> of the SCWA's public well next to an old Nike Site began feeding Lloyd Neck, NY several years after private wells became contaminated with MTBE, according to 30 spill reports compiled since 1987 by the NYSDEC. Residents, including yours truly, were never told our private wells were contaminated with MTBE -- or that the sole public well that began feeding the Neck in the 1990's was contaminated with Radon & Strontium (Sr-90 misreported as Strontium-89) and their decay daughters.

Decay chains for Radon (http://en.wikipedia.org/wiki/Decay_chain) & Sr-90 (<http://en.wikipedia.org/wiki/Strontium-90>) include deadly daughter isotopes -- and "Radon exposure is considered the leading cause of lung cancer in non-smokers." -- yet the EPA's Radon Rule has been blocked since 1999 & NY residents have never been told how to protect themselves; unlike New Hampshire residents, for example! See New Hampshire Fact Sheet @ <http://www.gfxtechnology.com/NHFS.pdf>." (Comment @ <http://www.longislandpress.com/2009/10/10/pollution-an-enduring-legacy-at-old-missile-sites/>)

Yours truly,
Dr. Carmine F. Vasile
Life Member
Patchogue, NY



DISCOVER ENGINEERING

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ENGINEERS WEEK® 2010
February 14-20

Great Job Search at SimplyHired.com

by Ahmad Haque, IEEE-LI Section IEEE-USA Liaison

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job search made simple

Simply Hired is a vertical search engine for a job. It is one of the major job search aggregators available in the web. Like Indeed, Simply Hired gathered job posting from other sites, structures the data on

posting and allow it users to search the job with specific titles, companies, etc.

Simply Hired is a vertical search engine for a job. It is one of the major job search aggregators available in the web. Like Indeed, Simply Hired gathered job posting from other sites, structures the data on posting and allow it users to search the job with specific titles, companies, etc. According to their goal stated in company website, "we're building the largest online database of jobs on the planet. Our goal is to make finding your next job a simple yet effective, enjoyable journey". I will share my experience as a user to find next job.

Creating "My Simply Hired" is strongly recommended since it allows us to rate and save job listings. With sign up we get added advantage: our comments on job listings that we may be interested can be saved. Without this account, information on job and searches can be saved, but it resides in browser and gets deleted with the invocation of cache and cookies delete option. Email alert on new job posting can only be created through My Simply Hired account. This feature help to monitor new jobs that matches the criteria deliver on desktop. I was able to create an account with ease, however Simply Hired required unique user name beside the email address and password. An optional feature is available during sign up is Universal Profile through Talent Exchange; a free service allows profile to be seen by thousand of employers. Resume cannot be saved since Simply Hired is purely a job search engine. It will redirect to an individual company website where the resume can be submitted and apply for a job.

I like the simple and clean design of the browser. The browser reflects two special boxes: keyword to search job by title, skills or company and location by city, state, and zip (optional). Jobs can also be searched by category such as architecture/engineering by clicking Browse Job Listing, which can be limited to local jobs by specifying city and zip. Other search options available that will aid job seeker in their job search: salaries and trend. RSS Feeds is handy; the jobs come to us without doing same search manually. This option need to set by clicking bright-orange button that say RSS on saved search. I think this feature is extremely beneficial, not only it saves my time but also prevent repeats of same search cri every day. Simply Hired also has link to other job widgets that may be of interest to job seeker such as MySpace -JobAlert, Facebook -Workin'It etc. Internationals jobs are listed by the countries sub grouped under Americas, Europe and Asia/Pacific.

Browsing a job in Simply Hired is very easy. From the homepage search begin with keyword; the result comes with the list of jobs. If too many job shows up the filter's option narrow down the choices. I started the search with keyword "Electrical Engineer" and put location NY returned 132 jobs. Local job search option provides list of jobs with exact location to within 50 miles radius of location specified. I found this helpful, ran multiple searches by specifying different cities within Long Island that yielded quite a few jobs from local companies, saving my time to search individual company. The results show the most current and refresh after 30 days if this job still available. I set email alert for Electrical Engineering jobs so that I can receive notification if new job posting comes up. Simply Salary feature shows average salaries offered based on geographical location. It is very helpful to ascertained salary offered by the company and aid in negotiation during job offer. Another interesting feature I noticed is Employment Trends where the graph displays the percentage of job search term anywhere in the job listing. As of this writing this graph shows that Electrical Engineering jobs decreased 21% since May 2008.

I ran comparison of job search engines between indeed vs. simply hired. They came out to be tied in terms of search results relevancy. I think we have two great complementary job search engines available to us. To find your next job check:

www.simplyhired.com



by Steve Rubin, Legal Affairs Chairman

In the patent infringement case of *i4i v. Microsoft*, the Patent Appellate Court upheld the jury's finding of willful infringement and an award of \$240M in damages against Microsoft. The injunction prohibiting sale of Microsoft WORD was also affirmed. Microsoft issued a patch to avoid infringement. The patch blocks updated versions of Word from reading Custom XML elements contained within DOCX, DOCM, or XML files.

Following up on the *Cardiac Pacemakers Inc. v. St. Jude Medical Inc.* decision, the Supreme Court denied review of the Patent Appellate Court decision. This means that the Appellate court ruling stands. A patent on a method cannot implicate a particular portion of the infringement statute. This portion finds infringement if you supply the components of an invention inside the United States so that when those components are combined outside the United States, the combination would infringe.

As we wait for the Supreme Court's *Bilski* decision, an interesting Board of Patent Appeals and Interferences ("BPAI") decision was issued. If you are unhappy with a Patent Examiner's ruling on your patent application, you can appeal to the BPAI. Their rulings do not have the same force of law as a court but they give us an indication how the Patent Office will interpret the law. This may have the same practical consequence if you don't have the resources to appeal the Board's decision to a court.

In *Ex Parte Gutta*, the BPAI ruled on claims directed to a method and a system for implementing a particular algorithm. The Board ruled that the method was not statutory subject matter (and therefore not patentable) because the method was not tied to a particular machine nor did the method bring about a transformation of an article into a different state or thing. This type of ruling is generally in line with the Patent Appellate court *Bilski* decision and we'll see if the Supreme Court changes that law.

More interestingly, the Board also ruled that the system claim for implementing the algorithm was not patent eligible subject matter. The board reiterated the well known precept that abstract ideas are not eligible for patent protection. The Board then articulated the following test for whether a machine/system claim could encompass this known exception (and therefore result in an unpatentable claim): 1) is the claim limited to a tangible, practical application in which a mathematical algorithm is applied that results in a real world use? 2) is the claim limited so as not to encompass substantially all practical applications of the mathematical algorithm even if in only one field? The Board analyzed the pending claim and concluded that there were no practical applications of the algorithm that were outside the scope of the claim. Therefore, the claim was held invalid. This is yet another decision limiting the potential protection of algorithms and will be affected by the Supreme Court's *Bilski* decision.

Steve Rubin rubin@dilworthbarrese.com

LECTURES & SEMINARS

Long Island Section Power & Energy and Industry Applications Joint Societies are presenting:

“Nuclear Power Plants and Future Energy Needs”

Wednesday, February 17, 2010 at 6:30PM

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

Speaker: Howard Sobel, P.E.

Abstract: The worldwide demand for electricity is expected to double by the year 2023. Volatility in the fossil fuel market has required us to look into alternative fuel sources for generating power. Nuclear power plants currently supply about 20% of electricity in the U.S. However, no new plant projects have been initiated in over 25 years. This seminar will explore the current state of the U.S. nuclear plant fleet, the new design concepts and advanced technology for proposed projects, and the streamlined review and approved process which has come out of the ideology of standardized designs. Topics to be discussed include: the operating and safety of U.S. plants currently in service, state-of-the-art "standard plant" design concept for future plants, standardized design concept and NRC review procedure

advanced by the "NU-START" consortium of operating companies, how new reactor design has become more fail-safe by incorporating passive cooling technology.

Speaker Bios: Mr. Sobel has more than 35 years of experience in the power generation and construction industries with expertise in design, engineering, specifications, procurement, construction, startup, operations and maintenance for both new construction projects and rehabs. He spent 16 years in engineering and management at American Electric Power Corp., in the Nuclear Engineering Dept., where he was responsible for safety, licensing, engineering, refueling outage management, startups and maintenance. He subsequently spent many years as a consultant to the industry with regard to nuclear power plant operations and maintenance, regulatory and licensing

issues, and quality assurance. Mr. Sobel holds a BS in Physics from Cornell University, an MS in Nuclear Engineering from the University of Michigan, is a PE in New York and North Carolina, an honorary life member of the American Nuclear Society, and has presented numerous technical papers and courses on the subject of nuclear power.

Seminar Coordinators: Steven Rubin, Chair of the Long Island Section Power & Energy and Industry Applications Joint Societies. Mr. Rubin can be reached at srubin@dilworthbarrese.com

Location: TBA,

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

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

INDUSTRY NEWS

Telephonics Corporation Delivers P-8A Poseidon Mission System Software to Boeing

Telephonics Corporation announced that it has delivered the AN/UPX-43(V)1 Identification Friend or Foe Interrogator (IFFI) to Boeing for installation into one of its P-8A Poseidon test aircraft. The IFF will be installed on P-8A "T2", the first flight test aircraft being assembled and tested with the mission software and sensors as part of the System Development and Demonstration contract awarded by the U.S. Navy.

"Telephonics looks forward to providing Navy operators with the unprecedented performance and mission utility of the AN/UPX-43(V)1 IFFI. This flight test phase brings the program a significant step closer to production, fleet deployment, and long term support activities" said Mr. Andy Webster, Sr. Director of Business Development, Radar Systems Division, at Telephonics. The U.S. Navy is purchasing 117 P-8As to replace its aging fleet of P-3C aircraft.

The Telephonics AN/UPX-40, AN/UPX-43(V) and AN/UPX-505(V) All-Mode IFF Interrogators share a common module design approach with multiple platforms for the USN, USAF, USMC and Canadian DND. These platforms include Airborne Early Warning, Rotary Wing, Fixed Wing, Ground Transportable, Ground Fixed, and Ship board applications.



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

In Memoriam: Pavel Rehak



Pavel Rehak, a physicist in Brookhaven National Lab's Instrumentation Division whose outstanding contributions to research and development on particle and photon detectors are internationally recognized, died at 63 on November 4, 2009.

"Pavel ranks with the very best in the particle and photon detector field," observed Instrumentation Head Veljko Radeka. "He will be missed in the detector community, in which he pioneered far-reaching new concepts and widely influenced many individuals and groups around the world. Pavel was a foremost intellectual resource in solving any instrumentation and measurement-related problem arising in experimental sciences. He was truly a renaissance physicist, in that he could delve deeply into various areas of physics and was well known for his penetrating questions at seminars and colloquia on any physics subject."

He earned his first doctoral degree, RNDr, in natural sciences, at the University of Prague, Czech Republic, in 1969.

Rehak obtained a second Ph.D., in high energy physics, at the Scuola Normale Superiore, Pisa, Italy, in 1972

In August 1976, he joined BNL's Physics Department as an associate physicist, was promoted to physicist in 1979, and received a continuing appointment in 1981. He transferred to Instrumentation in 1994 and was granted tenure in 1997. He was honored with BNL's highest award, the Distinguished R&D Award, in 1997, and two years later, won a Region 1 Award for New Technological Concepts in Electrical Engineering from the Long Island Section of the Institute of Electrical & Electronics Engineers (IEEE). He was a Fellow of both the IEEE and the American Physical Society.

Among Rehak's many contributions, one of the most important was the unconventional idea and ultimate, extremely successful realization of the silicon drift detector (SDD), with Emilio Gatti. This innovative concept was used in two experiments at CERN's Super Proton Synchrotron, CERES and WA98; has made possible the silicon vertex detector for the STAR experiment and will be used in the ALICE experiment at CERN's Large Hadron Collider.

The SDD has inspired other devices — an example being novel x-ray detectors for astrophysics experiments at the Max Planck Institute in Munich, Germany, where his guidance and input greatly contributed to the development of several new detectors.

In addition, Rehak recently devised a technique to reduce significantly a shortcoming in position-sensitive gas detectors — broadening due to parallax in certain experiments. In principle, the idea can be used and retrofitted in most planar, two-dimensional detectors. He has also collaborated at BNL, in Germany, and in Italy on forefront design and development of detector electronics.

Radeka recalled, "Pavel led a very active life in many respects. Most of all he was generous, honest and caring. Pavel will be deeply missed by his colleagues and remembered for all he did and who he was."

A resident of Setauket, Pavel Rehak is survived by his wife Margareta Rehak of BNL's National Synchrotron Light Source II, his daughter Ludmila, and his son Pavel Ludwig.

INDUSTRY NEWS

Northrop Grumman Makes Early Delivery of Mine Detection System

Northrop Grumman Corp. delivered the first Low-Rate Initial Production (LRIP) Phase 2 Airborne Laser Mine Detection System (ALMDS) to the U.S. Navy more than six weeks ahead of schedule. Mounted on a helicopter, ALMDS rapidly detects and locates surface and near-surface moored mines so they can be neutralized before they can damage U.S. and allied military and commercial ships.

Northrop Grumman is delivering three ALMDS systems under the LRIP Phase 2 contract awarded in March 2008. The first system, accepted by the Navy on Dec. 16, 2009, had been scheduled for delivery on Jan. 31, 2010. The Navy already has two ALMDS systems produced under LRIP Phase 1.

"Mines are an inexpensive threat, deployable by terrorists and rogue states, to international shipping and access assurance by our military vessels. Both our customer and industry team saw the need to counter that threat as rapidly as possible," said Bob Klein, vice president, Northrop Grumman Maritime and Tactical Systems. "Mines are also a threat to the sailors who must neutralize them. Northrop Grumman's ALMDS, particularly when coupled with our mine clearance system, will not only address the threat but keep the sailor out of the minefield."

ALMDS, mounted on the port side of an MH-60 helicopter, uses pulsed laser light and streak tube receivers housed in an external equipment pod to image the entire near-surface volume area of the sea in 3-D. The ALMDS is capable of day or night operations. Eventually, ALMDS will be coupled with Northrop Grumman's Rapid Airborne Mine Clearance System (RAMICS), which is in development. RAMICS will take the mine location information from ALMDS, relocate and then neutralize the mine with its 30 mm gun. It also operates from a helicopter.

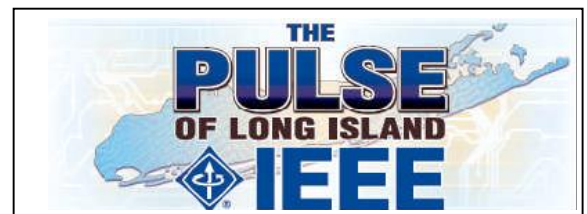
Northrop Grumman, which developed and produces the ALMDS at its Melbourne, Fla., facility, was able to make the early deliveries with the teamwork of the government PEO Littoral & Mine Warfare (PMS 495 Mine Warfare Program Office); the Naval Surface Warfare Center, Panama City, Fla.; the Defense Contracting Management Activity, Melbourne, Fla.; and, its subcontractor teammates.

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Farewell from the Pulse Editor

I have enjoyed my tenure as your Editor of the Pulse. I have been involved with the publishing of the Pulse since October 2008.

I appreciated all your letters, comments and suggestions to improve the Pulse. I would like to thank all members that have submitted articles.

Regards,
Nikolaos Golas, Pulse Editor

Long Island's Potential IEEE Milestones in Electrical Engineering & Computing (Part 3)

In the December 2009 Pulse Dr. Michael N. Geselowitz, Staff Director of the IEEE History Center covered the IEEE History Committee, the IEEE Global History Network and the IEEE Milestones in Electrical Engineering and Computing program. January's column explored some potential Milestones in the area covered by the IEEE Long Island Section and today's column explores a few more.

Long Island has a rich and diverse history of technological achievements and this month we will list a few more Milestones. Members are always encouraged to submit their own Milestones. Please send your suggestions along with a description of the Milestone to: pulse@IEEE.LI

1941 Millar's two-phase PSK modulator carrier system at the Western Union Experimental Lab (Watermill)



Julian Z. Millar invented the two-phase PSK (Phase Shift Keying) modulator carrier system, which consumed less bandwidth and performed better than some of the other systems at the Western Union.

1941-1996 Sperry Gyroscope Company (Lake Success)

The Sperry Gyroscope Company was located in Lake Success from 1943 for more than 50 years. It originally occupied 147 acres and extended east from Lakeville Road to New Hyde Park Road and south from Marcus Avenue to Union Turnpike in two buildings. During WWII it was the largest non-aircraft engineering company on Long Island occupying two buildings with 1.4 million square feet and 22,000 employees. It can be considered as a milestone candidate not because of any single event or technology innovation but because of the unusual diversity in its applications of electronics and electrical engineering to a wide range of military and civilian products for aircraft, ships, submarines and information systems.



1946 Wheeler IFF work (Smithtown)

Identifying a milestone associated with Wheeler's IFF work at Smithtown is somewhat of a conundrum. While Wheeler led a Hazeltine team in the development of IFF equipment and antennas, it was a continuation of original work by the British. The IFF antenna engineering was done in Little Neck with no mention of Smithtown. Wheeler did design an antenna test range for Hazeltine in the 50s that was located in Smithtown, apparently while still running Wheeler Laboratories.

1947-1951 Reformulation of field theory in microwave network terms at Brooklyn Polytechnic's Microwave Research Institute (Farmingdale)

We are working on the story behind the reformulation of field theory in microwave network terms at Brooklyn Polytechnic's Microwave Research Institute in Farmingdale

1955 American Bosch Arma Corporation's B-52 fire-control system for the B-52 and/or the invention of the PROM (Garden City)



The American Bosch Arma Corporation was formed in 1954 and the Arma Division moved into its new facility at Roosevelt Field in Garden City from the various hangers it had previously occupied. During the time it was at Roosevelt Field, Arma developed the advanced MD9 Fire Control System for the B-52 Bomber and Wen Tsing Chow invented the Programmable Read Only Memory (PROM), the essential chip for booting a computer. Arma's location at Roosevelt Field is not known.

1958 Higginbotham's pioneering video game (Brookhaven)

Designed by William Higginbotham in 1958 at Brookhaven National Labs on Long Island, NY, Tennis for Two is commonly regarded as the first video game ever designed. The technology consisted of an analog Donner computer linked to an oscilloscope used as display. The game was played by two people using hand controls. The engineers at Brookhaven rebuilt this game in 1997 for the 50th anniversary of the BNL labs. After working two months to improve the original circuits using integrated circuits, they finally got the game to work as it did in 1958.



1969 Grumman's Lunar Excursion Module (Garden City)



The Lunar Excursion Module or LEM was designed solely to land on the moon, and to ascend from the lunar surface to the command module. It had a limited heat shield and was of a construction so lightweight that it would not have been able to fly in Earth gravity. It carried two crew members and consisted of two stages, a descent and an ascent stage. The descent stage incorporated compartments in which cargo such as the Apollo Lunar Surface Experiment Package and Lunar Rover could be carried.

1969 1st networked ATM installed (Garden City)

The ATM, or Automatic Teller Machine, allows bank customers to withdraw money without the need for a live bank teller. ATM machines were originally connected directly to an individual bank. In 1974, the first networked ATM machines were created. This allowed customers to get cash from any ATM machine in the world, regardless of bank affiliation. It also allowed banks to place ATMs in more areas, including shopping centers, sports arenas and even on cruise ships. Throughout the 1970s and 1980s, interbank networks like Cirrus and Plus were created to authorize transactions between banks.



1973 Lauterbur's development of MRI (Stony Brook)



Physicist Paul C. Lauterbur received the 2003 Nobel Prize in Physiology or Medicine for giving physicians the ability to look inside the human body without using harmful radiation. Lauterbur conducted his work at Stony Brook where the best NMR machine on campus belonged to the chemistry department; he would have to visit it at night to use it for experimentation and would carefully change the settings so that they would return to those of the chemists' as he left. A replica of his original MRI machine is located at the Chemistry building on the campus of the State University of New York at Stony Brook in Stony Brook, New York. Although the first MRI instruments did not become available until the early 1980's, their use has exploded to the point that more than 60 million MRI examinations are performed every year.

The IEEE Global History Network has a list of potential IEEE Milestones for Long Island. This list is not very exhaustive, but is intended to encourage on-line "discussion" by IEEE members:

http://www.ieeeahn.org/wiki/index.php/Possible_Milestones_for_IEEE_Long_Island_Section

Chairman's Profile

Lou Luceri, LSMIEEE Life Members Affinity Group Chairman

Mr. Luceri is a Life Senior Member of IEEE. He has been active both in regional and technical activities. He is a Past Director of Region 1, a Millennium Medalist, and a William W. Middleton Award. Recipient. He has served on the Boards of Governors for Region 1 and the Engineering Management Society. Most recently, he serves as Treasurer for the newly-formed Technology Management Council.

His career in engineering encompasses 38 years in aerospace engineering as a Technical Specialist, in the field of test program design and development of optical and electro-optical displays for a variety of aircraft and aerospace programs.

He has also worked as an Independent Consultant, developing testing concepts of display systems.



He coordinated the design of computer-driven optical test equipment with software test programs and establishing the calibration and alignment criteria for the support test equipment.

Lou has written several papers on techniques of photometric calibration and electro-optical testing.

He holds a patent for the development of automatic test equipment for laser rangefinder designator pulse detection and measurement.

Lou was instrumental in the newly created Life Member Affinity Group (LMAG) and serves as its Chairman. The LMAG encourages our Life members to take an active part in the activities of the LI Section, to network among themselves, and to establish programs especially geared to the interests of Life Members. Life Members can be very helpful at the Section level in not only providing advice and assistance with the operation of the Section, but also pursue projects, such as history, Milestone, Historic, Landmark, etc

To contact Lou Luceri send email to:

Life@IEEE.LI

Brain Teaser Challenge Solution

by Butch Shadwell

Pulse code modulation was the topic last month. "...he decided to build a codec that would send 8 bit PCM audio at 2.5 kilobytes per second. It seemed to work pretty well on most male voices, but there was weird distortion with music and some women.

Fred may have fallen asleep in his DSP class. What do you think could be his problem? Fred often preferred to be called Stanley Smith for some odd reason, but I am not sure why I am telling you his alternate identification."

The clue referred to Fred's alias, Stanley Smith. And of course the answer to the question was aliasing. At the given sample rate, the highest frequency that can be digitized properly is 1.25 KHz.

If spectral components higher than this frequency are fed to the analog to digital converter at amplitudes greater than 1/512 of the peak signal voltage, then that energy will interact with the sample frequency and produce noise.

The typical answer is to have a filter on the analog input that attenuates these higher frequencies, or you can over sample and filter it after digitization. But I bet you already knew that.

Brain Teaser Challenge

by Butch Shadwell

Space travel has been the spark of imaginary adventures for over a hundred years. Jules Verne wrote "From the Earth to the Moon" in 1864. A popular film today is "Avatar" which takes place on a hypothetical planet some distance away where a very valuable mineral (unobtainium) is in abundance.

One of the things that always bugs me about these science fiction stories is that they always underestimate the sophistication of future technology. Avatar is supposed to take place over 140 years into the future, and the military is still flying around in a type of helicopter and firing weapons that have chemically propelled bullets. And the worst thing is that they miss the target most of the time (also true in Star Trek). I am quite confident that in 100 years we will have fire control systems in handheld weapons that will ensure better accuracy, if only to conserve energy. I can imagine that many of you are hoping that in 100 years the whole notion of weapons is obsolete.

Today we improve the accuracy of air dropped ordnance, and reduce collateral damage, by using a target designator system. Can anyone tell me how these work?

Reply to Butch Shadwell at: b.shadwell@ieee.org

Tel: 904-410-9751 Fax: 904-410-9750

3308 Queen Palm Dr., Jacksonville, FL32250

<http://www.shadtechserv.com>

Long Island's Electronic History by Jesse Taub, IEEE LI Section Historian

This month Data Device Corporation is featured. A summary of their many contributions to military electronics since its founding 45 years ago is described by Mike Glass.

Data Device Corporation (DDC)

Since its inception in 1964, Data Device Corporation (DDC) has evolved to its position of worldwide leadership in the areas of high reliability data networking, data conversion, and power distribution for military/aerospace applications. After operating in two different locations in Hicksville, DDC moved to its current facilities in Bohemia in 1974.

In its early years, DDC's initial products were discrete packaged operational amplifiers, prior to the wide availability of monolithic op-amps. These were internally compensated, with gain-bandwidth products of up to 100 MHz. Later in the 1960s, DDC developed data conversion products, including both linear analog-to-digital and digital-to-analog, along with synchro/resolver converters. Originally introduced as discrete modules, these products were later implemented as hybrid microcircuits.

DDC's oldest product area is synchro/resolver conversion. Synchros and resolvers, used originally during World War II, are rotating transformers used for position sensing. Synchros and resolvers are used in the rugged environments of fighter aircraft, ships, and military ground vehicles. Over the years, DDC's synchro-to-digital converters evolved from multi-chip discrete modules, to a 6-hybrid set, to a 2-hybrid set, to monolithic-based thick film hybrids, and eventually to fully monolithic mixed signal ASICs. These converters digitize the transducers' AC analog outputs to provide a high degree of both static and dynamic accuracy for use in modern digital position and velocity control loops, providing accuracy of ± 1.3 arc minutes at 16-bit resolution.

Introduced in the early 1980s, DDC's largest product area is MIL-STD-1553 data bus. During this time, MIL-STD-1553 has been the workhorse for system integration of military aircraft, ground, and space vehicles. Over the years, DDC's 1553 products have evolved from full boards, to sets of metal hybrids, single metal hybrids, ceramic hybrids, and most recently to its Total-ACE. As the world's first fully integrated 1553 component, Total-ACE is based on the confluence of analog, digital, and memory ASICs, transformers, and plastic packaging. In addition to miniaturization, each succeeding generation of DDC's 1553 products provided increased capabilities, with the major objectives of improved host interfaces and increased offloading.

In addition to components, DDC supplies 1553 cards. These include supporting software, including drivers for several real time operating systems; along with Windows menus and tools for system developers, system integrators and 1553 test applications.

DDC's other major product area is Solid State Power Controllers, or SSPCs. Since 1988, more than 500,000 DDC SSPCs have been installed on the Bradley fighting vehicle, the M1A2 Abrams tank, and other vehicles. For military power distribution, there's been an ongoing migration from electromechanical to solid state switching. In part, this is to improve distribution for power-hungry applications, such as computers, networks, sensors, and weapons. Critical design aspects for SSPCs include intelligent control, power switching and sensing, and thermal design. SSPCs' "I2T" protection, a method for emulating the behavior of thermal circuit breakers, allows short duration overloads at power-up, while protecting vehicle wiring against longer-term over-current conditions. Solid state switching provides high reliability, reduced EMI, and faster "reaction" time for clearing short circuit faults. In addition, SSPCs enable advanced energy conservation and management schemes, along with monitoring for preventive maintenance.

Two looming technologies for DDC's data networking business are HyPer 1553 and High-Speed 1760. HyPer 1553 leverages modern modulation techniques to communicate at tens and hundreds of MHz over a multi-drop 1553 bus designed for 1 MHz. High-Speed 1760 provides a 1553-like

protocol over a 1 Gb/s Fibre Channel network, for interfacing between launchers and weapons. In both cases, the new technologies support 1553's traditional command and control messaging, along with larger transfers such as sensor data, images, files, maps, and target information.

An emerging future trend for military power distribution involves the use of higher voltages such as 270 and 600 VDC. This entails additional challenges in the areas of thermal design and safety, areas of ongoing development for DDC.

February	
IEEE Calendar and Historical Events	
1: 1972: Hewlett-Packard introduces the HP-35 pocket calculator , the first to compute trigonometric functions and logarithms.	
5: 1952: New York City installs the first electric Walk/Don't Walk sign in Manhattan.	
7: 2003: IBM's chess computer Deep Junior and grandmaster Garry Kasparov end their two-week match in a draw.	
9-14: IEEE Meeting Series in Atlanta	
11: 1847: Birth date of Thomas A. Edison .	
19: 1878: Thomas Edison's patent for a phonograph is granted.	
20: 1962: John Glenn becomes the first American to orbit Earth, aboard the Friendship 7 spaceship on the Mercury-Atlas 6 mission	
23: 1927: U.S. President Calvin Coolidge signs into law the Radio Act of 1927 , which creates the Federal Radio Commission.	
27: 1891: Birth date of David Sarnoff , radio and television pioneer.	
27-28: Region 10 meeting in Lapu-Lapu City, Philippines	

Mark W. Kenny Named Vice President of Irregular Warfare Programs for Northrop Grumman

Northrop Grumman Corporation has named Mark W. Kenny vice president of Irregular Warfare (IW) Programs. Kenny will lead a team of professionals to provide the rapid fielding of advanced capabilities and integrated systems to the combat, intelligence and special mission environment.

Kenny will report to Tom Vice, sector vice president and general manager of the company's Aerospace Systems sector's Battle Management and Engagement Systems Division.

"We're honored to have Mark join our team as he has been on the cutting edge of IW for years. He is an outstanding addition to the company, and his credentials and experience speak to his ability to find solutions to the difficult challenges of IW," said Vice. "As our warfighter presents us with more difficult requirements, Mark and his team will readily understand their needs to deliver an effective and immediate solution."

Kenny will be based at Northrop Grumman's Washington D.C. office, and will lead the company's new National Irregular Warfare Center, located at the Aerospace Systems' East Coast Production and Flight Test Center in St. Augustine, Fla. Kenny will leverage several ongoing initiatives, including Improvised Explosive Device defeat and Intelligence, Surveillance and Reconnaissance Task Force programs that solve multiple Operation Iraqi Freedom (OIF), Operation Enduring Freedom (OEF), and asymmetric challenges.

Kenny, a retired United States Navy Rear Admiral, is a recognized expert in the fields of counterterrorism, special operations and irregular warfare. The Chief of Naval Operations appointed Kenny in 2008 to lead the Navy's Irregular Warfare Office as its first director.

In that role, Kenny deployed unmanned air and undersea systems while conducting the initial use of cruise missiles against high value terrorist targets in support of OIF, OEF, and other operational theaters. He expanded counterterrorism operational support to the Navy's surface and aviation communities by forming the Center for Expeditionary Counterterrorism Operations in Washington, D.C., Norfolk, Va., and in Groton, Conn. Kenny deployed teams forward in support of counterterrorism joint task forces. In March 2005, while in submarine group command, Kenny founded the Center for Submarine Counterterrorism Operations supporting Special Operations Forces and other communities.

Kenny earned a bachelor's degree in international security affairs at the United States Naval Academy and holds a master's degree in international relations from Salve Regina University in Newport, Rhode Island. His awards include the Defense Distinguished Service Medal, Legion of Merit (sixth award), Meritorious Service Medal, Navy and Marine Corps Commendation Medal (six awards), Navy and Marine Corps Achievement Medal, and various unit and campaign awards.



Webinars February 2010

IEEE Computer Society Webinar: "Advanced Agile: Beyond the Low Hanging Fruit"

Date: Wednesday, 3 February 2010 Time: 2:00 - 3:00 PM ET Speaker: Mary Poppendieck

Register: <http://computer.org/webinars/agile2>



The widespread adoption of agile software development is a double-edged sword. On the one hand agile teams have reported impressive gains in productivity. On the other hand, these gains seem to plateau after a while, leaving a disquieting suspicion that something might be missing. This webinar will cover a few things that might be missing. It will help you look at your software development process and find leverage points for sustained improvement.

IEEE-USA Webinar: "IEEE-USA: What Has It Done for You Lately?"

Date: Thursday, 4 February 2010 Time: 2:00 - 3:00 PM ET Speaker: Gordon Day

Register: <http://www.ieeeusa.org/careers/webinars/2010/webinar-02-04-10.html>



This first part of this webinar will cover IEEE-USA's new and updated resources for members who have lost their jobs, or fear losing them. This includes help for job seekers, for consultants and those who want to consult, either as a career or as a bridge to new employment, for entrepreneurs and want-to-be entrepreneurs, and for those who simply want to enhance their job security. The second part will be devoted to IEEE-USA's work with the U.S. government to influence science and technology policy.

IEEE-USA Webinar: "Getting the Job You Want: Tools for Making the Short List"

Date: Tuesday, 9 February 2010 Time: 2:00 - 3:00 PM ET Speakers: Ellen Sautter, Monique Suits, Bob Stump

Register: <http://www.ieeeusa.org/careers/webinars/2010/webinar-02-09-10.html>



Attendees will learn how to develop a successful job search strategy; what goes into a winning electronic resume; how to best present your qualifications in a short introduction of who you are; and how to participate successfully in a telephone interview.

IEEE GOLD Webinar: "Two Brains Are Better Than One: Right-Brained Leadership for Projects"

Date: Wednesday, 17 February 2010 Time: 11:00AM - 12:00PM ET Speakers: Dr. B. Michael Aucoin

Register: http://www.ieee.org/web/membership/gold/events/feb_2010_webinar.html



An entertaining and informative webinar on the important career skill of managing and leading projects. Learn tips that you can apply immediately to be effective on projects, and build a solid foundation for a successful and rewarding career as a leader. Projects that have performed phenomenally well attribute much of their success to the right brain – a powerful processing juggernaut that is often misunderstood and whose potential is scarcely used.

Snoopy Employers – Beware of Your Online Perception!

by Elizabeth Lions, Author of *Recession Proof Yourself!*

What Happens in Vegas doesn't Stay in Vegas!

There is an unspoken business practice among headhunters and corporate recruiters during this recession. We screen our talent *carefully*. Due to high unemployment and hundreds of emails daily for an open position, hiring managers and recruiters alike are going online to investigate possible candidates – before the interview process even begins.

To save the embarrassment and cost of running a standard background check or credit check, employers will often insist on doing an informal 'background' check on each applicant by simply running a Google search under their name, thinking if anything off color pops up, they will not continue to pursue the viable candidate.

Snooping on **FaceBook**, **My Space** and **LinkedIn** is nothing new. Employers figure that if a person is bold enough to



put drug use or other questionable behavior posted online, they have a right to screen you out based off of that information. It's a shame that an old college photo of a wild weekend can cost you the job, but it's true.



I have found **LinkedIn** to be the most valuable tool when looking at an applicant's profession. Quickly, it will tell me where a person went to school, the last few jobs they've held and perhaps even a picture. Unlike **FaceBook**, which feels

like a backyard BBQ chat, LinkedIn is the showboat of the who's who in the professional world. Many clients have asked me to look at their LinkedIn profile and comment on it, to ensure that it is really what an employer would look for during a search.



Having pertinent information on LinkedIn will give you traction in the market. It is also common that before an employer will post an ad, the department head will do a quick search on LinkedIn to see if there is a viable candidate available with a competitor, without going to the trouble of running an add and going through hundreds of responses.

Why not? For a few minutes invested, you've gone to the right candidate and saved the cost of the posting.

One recruiter told me he shuts his office door and spends 3 hours every morning mining talent on LinkedIn. In fact, 80% of companies utilize LinkedIn as a primary sourcing tool according to Socialnomics.

Social networks can make or break a job search. Put your best profile forward. You never know who is lurking.

*Elizabeth Lions is the Author of **Recession Proof Yourself!** She is a national speaker, writer and career coach who works with people in transition through her private practice. For more about Elizabeth or the book, please visit:*

www.elizabethlions.com

The online issue of **The Institute** has a feature on the recent webinar by Elizabeth Lions covering the same topic at:

<http://tinyurl.com/The-Institute-Elizabeth-Lions>

You can find Elizabeth's interview on **Dice.com** the job search website at:

<http://tinyurl.com/Elizabeth-Lions-Interview>



IEEE

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

Is Proud to Announce the

IEEE LONG ISLAND SECTION ANNUAL AWARDS BANQUET

Thursday April 8th, 2010 at 6:00 PM

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

- Mr. Thomas Roser**, Brookhaven National Laboratory, **Fellow Award** for Contributions to the Design of Magnets in Particle Accelerator Application
- Mr. Santo Mazzola**, BAE Systems, **Long Island Section Alex Gruenwald Award** for Exceptional Dedicated Efforts towards Strengthening the IEEE Professional and Technical Activities on Long Island
- Mr. Bert Moskowitz**, Telephonics Corp. **Long Island Section Harold Wheeler Award** for Many Innovative Contributions to the Successful Management of Engineering Programs
- Prof. John F. Hennings**, Webb Institute, **Long Island Section Athanasios Papoulis Award** for Innovative Teaching of Electrical Engineering and Dedication to Student Development
- Mr. Thomas R. Neiland**, Telephonics Corp. **Long Island Section Charles Hirsch Award** for the Development of a Single-slot VME Card for Front-end Radar Signal Processing
- Stony Brook University Student Chapter**, **Long Island Section Outstanding Student Chapter Award** for Promoting Many Activities that Assist Students to Become Effective Engineering Professionals
- BAE Systems Inc. Friend of the IEEE Long Island Section Award** for Long Term Encouragement and Financial Support of IEEE Long Island Section Activities
- Mr. Kenneth C. Baron**, **Region 1 Award** for Technical Innovation in Optimization of Battle-Space Image Processing for Dual Use Data Compression and Automatic Focus
- Mr. Nikolaos Golas**, **Region 1 Award** for Outstanding Support for the Mission of the IEEE in Outstanding Service to the IEEE Long Island Section by Single-handedly Starting a Chapter of the Instrumentation and Measurement Society and for Selflessly Undertaking Many Other Section Tasks
- Mr. Niel F. Miele**, **Region 1 Award** for Managerial Excellence in Overall Managerial Excellence in Organization, Leadership, Design and Development within an Engineering Organization
- Mr. Ronald G. Pirich**, **Region 1 Award** for Technical Innovation in Contributions to Aerospace Technology and the Modeling of Electromagnetic Effects of Systems Integration
- Mr. Brian J. Quinn**, **Region 1 Award** for Outstanding Support for the Mission of the IEEE in Outstanding Contributions to the IEEE Long Island Section and its LISAT Conference while Serving as Treasurer
- Mr. Richard R. Ronde**, **Region 1 Award** for Managerial Leadership in the Development of Antennas and Facilitating Borderless Operations amongst BAE Systems, Sanders and Wheeler-Hazeltine Legacy Antenna Technology Groups
- Mr. Michael L. Schreiber**, **Region 1 Award** for Technical Innovation in Outstanding Contributions to the Development of Advanced Waveform Generators for Identification Friend or Foe (IFF) Systems
- Mr. David Sterner**, Posthumously, **Region 1 Award** for Contributions to the Profession through Exemplary Service as the Long Island Section Pulse Newsletter Chair
- Mr. Robert Spira**, Ward Melville High School, **IEEE EAB Pre-University Educator Award** for Inspiring and Motivating High School Students through Imaginative Teaching and Extracurricular Activities
- Mr. Steven Rubin**, **PES Chapter Outstanding Engineer Award** for Contributions to the Engineering Profession, and for Leadership in the Formation of a New Power & Energy Society Long Island Chapter

2010 AWARDS BANQUET

Thursday, April 8, 2010

The IEEE Long Island Section 2010 Awards Banquet will be held this year at the Hyatt Regency on Thursday April 8 from 6:00 PM to 10:00 PM. We will be honoring the recipients of the Long Island Section Awards, as well as the recipients of the Region 1 Awards.

The Hyatt Regency is located at 1717 Motor Parkway, Hauppauge, NY. 11788. As is tradition, the Long Island Section will be subsidizing the cost of admission, allowing us to offer this memorable commemorative affair to our members and their guests for a minimum cost. So mark your calendars and set aside Thursday Evening April 8th, and join us for good food, good talk, and good friends.

Registration Form
2010 Awards Banquet
(Member and Member's guests - \$30 each, Non-Members -\$60 each)

Make checks payable to: **IEEE Long Island Section**

Send this form to:
Dr. Susan Frank
IEEE Awards Banquet
7 Grandview Lane
Smithtown, NY 11787-4231

Name: _____

Guest Name: _____

Guest Name: _____

Guest Name: _____

Company: _____

Address: _____

City and Zip: _____

Home Phone: _____

Business Phone: _____

Email: _____

Amount enclosed: _____



Job Postings

JOBs from **Telephonics** which has immediate openings for the following:

Senior Systems Engineer

Telephonics provides a unique opportunity to work with a world-class engineering staff that includes recognized experts in both the Radar and IFF areas, working on leading edge technology and with state of the art tools. The lead system engineer at Telephonics is responsible for the entire life cycle design and meeting the technical requirements of the project. Bachelor's degree in Electrical Engineering or Physics Engineering plus 10+ years related experience. Desired experience includes Radar, DOORS and Matlab database knowledge, system test, and integration.

Reference#: RSD-00000232

Senior Engineering Manager

Manages a multi-discipline engineering team to design and develop electronic equipment and subsystems. Responsible for all engineering activities for the programs within scope of direction, including technical compliance, schedule and budget adherence and customer satisfaction. Bachelor's degree in Electrical Engineering plus a minimum of ten (10) years related experience including three (3) years in engineering management.

Reference#: COMM-00000277.

JOBs from **Management Recruiters, Woodbury, Inc.**

Newly Created Role with a Very Stable Long Island Based Company

Excellent Company, Terrific Team, Tremendous Growth Potential. Desired Skills/Experience: Must Have Excellent Verbal Communication Skills as regular contact with customers, vendors, internal and external departments is an everyday occurrence. Must Have a Solid Electrical Engineering Background, preferably in the Design and Development of Electrically Engineered Hardware Based Products (a strong EE with a heavy Software [firmware, embedded SW, device drivers, low level coding] Design background may be considered for this role). Experience Working Closely With Sales in the development and design of customized solutions and products for key accounts (pre-sale, during sale and post sale support). Technical Skills Desired: Should have Experience with at least some of the following: Printed Circuit Boards, VHDL, FPGA, PCI, C-Programming, VxWorks (or another RTOS), Linux, Windows (testing experience with logic analyzers or oscilloscopes or similar tools is a plus), proficiency in MS Office Suite is strongly preferred. Experience working closely with and acting as the technical point person for existing and potential customers is strongly preferred. Experience Supporting Sales in terms of technical presentations, technical diagrams and data sheets, training and product manuals and similar is a plus. Excellent Compensation Package including Bonus and Benefits.

BSEE or BSCS is required, MSEE is a major plus. (candidates local to Long Island are preferred)

Call or Apply Today: Joe Gomer, 516-364-9290 x115

Private email: topjobs@mrcareers.com

IEEE Launches Smart Grid Web Portal, Content-Rich Gateway Providing Intelligence, Education and News on Global Smart Grid

IEEE Smart Grid brings multidisciplinary expertise and coordination to global effort

IEEE has launched the **IEEE Smart Grid Web Portal**

<http://smartgrid.ieee.org> an



integrated gateway to Smart Grid intelligence, education and news from IEEE and other expert sources. The Web Portal is designed for manufacturers, policymakers, educators, academics, governments, engineers, computer scientists, researchers and other stakeholders in the power and energy, information technology (IT), and communications industries.

The **IEEE Smart Grid Web Portal** is the first phase of IEEE Smart Grid, created to bring together IEEE's broad array of resources to provide expertise and guidance for those involved in Smart Grid worldwide.

"Contributions from across the global power and energy, communications and IT industries, as well as government and academia, are needed to ensure successful implementation of Smart Grid throughout the world. The IEEE Smart Grid Web Portal is designed to be an essential resource for anyone involved in Smart Grid, whatever their industry or technical discipline," said **Wanda Reder**, 2008-09 president of the **IEEE Power & Energy Society** and Chair of the **IEEE Smart Grid Task Force**. "With our unmatched diversity of expertise, richness of programs and proven standards-development capability, IEEE is the obvious global entity to take on a unifying role in the global Smart Grid arena."

The term "Smart Grid" refers to the next-generation, managed electrical power system that leverages increased use of communications and information technology in the generation, delivery and consumption of electrical energy. The new IEEE Smart Grid initiative will organize, coordinate, leverage and build upon the strength of various entities within and outside of IEEE with Smart Grid expertise and interest.

"The **Smart Grid** is a revolutionary undertaking, entailing new capabilities for communications and control, integration of new energy sources, distributed generation and adoption of a regulatory structure," said **Erich Gunther**, Chairman and CTO with **EnerNex** and member of the **Department of Energy (DOE) GridWise Architecture Council**. "Successful roll-out requires a phenomenal diversity of expertise and experience, proven standards-development capability and shared vision."

Added **Steve Diamond**, member of the IEEE Board of Directors and past president of the **IEEE Computer Society**: "Given its global representation across the technology spectrum, IEEE is ideally positioned to deliver thought leadership and coordination to **Smart Grid**."

IEEE Smart Grid leverages IEEE's long-term commitment to global modernization and optimization of the power grid to make it more reliable, efficient, secure and environmentally neutral. IEEE leverages its strong technical foundation to develop standards, best practices, publications, conferences and educational opportunities in Smart Grid:

- **Standards** — IEEE has more than 100 standards published and in development that are crucial to the Smart Grid, spanning digital information and controls technology, networking, security, reliability, assessment, interconnection of distributed resources including renewable energy sources to the grid, sensors, electric metering, Broadband over Power Line (BPL) and systems engineering.
- **IEEE C37.118** — is the standard specifying how phasor measurement units (PMUs) are interconnected to help manage the transmission system. According to the DOE, \$348 million of U.S. stimulus funding plus matching funds for a total investment of \$877 million will go to 11 projects involving installing PMUs. That translates to over 668 PMUs using the IEEE C37.118 standard to ensure interoperability is achieved.
- **Conferences** — IEEE annually hosts more than 850 conferences throughout the world where information and best practices are exchanged. Over the last four years, more than 100 Smart Grid technical sessions have been offered. The IEEE Innovative Smart Grid Technologies Conference continues today through Jan. 21 at NIST in Gaithersburg, Md. Attendees are discussing power and energy-system applications, cyber- and physical-security systems, wide-area protection in energy systems, smart sensing and advanced metering infrastructure and smart-grid standards.
- **Publications** — Nearly 2,500 papers focused on the smart grid have been published in more than 40 IEEE journals, and IEEE this year will launch two new cross-disciplinary and archival journals, "IEEE Transactions on Smart Grid" and "IEEE Transactions on Sustainable Energy."
- **Educational Programs** — IEEE courses, webinars and public outreach forums on Smart Grid technology and public policy take into account the needs of various audiences throughout the world, including technical and non-technical professionals and students.

To become involved in **IEEE Smart Grid** and learn more about the technical and public policy aspects of the Smart Grid and renewable energy, please visit:

<http://smartgrid.ieee.org/get-involved>

New IEEE.tv Web Site Features Advanced Viewer Interface and Improved Video Watching Experience

IEEE launched a new IEEE.tv Web site designed to bring an improved internet video watching experience to its members and technologists around the globe.

The new Web site incorporates advanced features as well as a redesigned viewer interface for watching programs. The Web site enables visitors to easily search and sort through the more than 130 videos currently part of the IEEE.tv video library, based on specific topics of interest.

The viewer that is used to play programs has also been upgraded to include additional capabilities including video sharing, social media integration, and full screen viewing.

The following are a list of additional new features:

- **Series Navigation** – Upgraded navigation now allows for improved video searching, sorting and scrolling similar to other Web sites;
- **Video Search** - A feature not available previously, users can now visit IEEE.tv and search through the video library without interrupting a video they are watching;
- **Full Screen Viewing** – Users will be able to expand all videos for full-screen viewing on their PC and/or Internet-connected television monitor;
- **Social Media** - The enhanced navigation improves portability to popular social networks (Facebook, Twitter, mySpace, Blogger, etc.), enabling viewers to make IEEE.tv more easily accessible across multiple domains;
- **Improved RSS** – Users can now pull RSS feeds based on the IEEE.tv series types;
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- **Marketing Homepage** – The IEEE.tv marketing homepage presence has been initiated with the intent of promoting upcoming programs, improving organization and layout, so users can easily find what interests them the most.

Member-Exclusive Features:

- **IEEE.tv Program Transcripts** – Transcripts for every video are available for download as a new feature for members only. Designed to assist members for whom English is a second language, the transcripts are also incorporated into a pilot initiative by IEEE Educational Activities that teaches technical English in the classroom.
- **Exclusive Programming** – It includes personalized tagging of favorite videos, and the ability to download videos for off-line viewing are also available only to IEEE members.

Registration Opens for Next Testing Phase of IEEE Certified Biometrics Professional Program

IEEE announced that enrollment for the next testing phase of its **Certified Biometrics Professional™** (CBP) program is now open. Testing windows for 2010 are scheduled for April 24 to May 31 and November 20 to December 31, with corresponding registration periods open from January 11 to May 26 and from August 9 to December 28, respectively.

IEEE and some of the world's leading biometrics experts developed the new program to help meet training, hiring and evaluation needs of professionals and organizations throughout the biometrics industry. The **IEEE CBP** program focuses on the relevant knowledge and skills necessary to apply biometrics to real-world challenges and applications.

"We strongly encourage the biometrics community to get involved in the next test group of this important program," said **Matthew S. Loeb**, staff executive, IEEE. "The **IEEE CBP** program provides the industry with an unbiased measure of the baseline level of knowledge held by an individual, and is a by-product of the evolving field of biometrics and the growth this industry has seen over the last 10 to 15 years."

The **IEEE CBP** program was recently named **#2** on its list of top 10 biometrics stories of 2009 by **Third Factor**, a leading publication offering news and insight into biometric identification and authentication technologies. Individuals who will benefit from the IEEE CBP program include biometrics professionals, practitioners and engineers from a wide array of industries.

The program consists of two components: certification through the **IEEE CBP Exam**, and training through the **IEEE CBP Learning System**.

"This program is of vital importance to the biometrics community," said **Vincenzo Piuri**, chair, **IEEE CBP Certification Committee** and professor, Department of Information Technology, University of Milan. "The IEEE CBP program helps organizations meet the increasing demand for skilled professionals who can successfully implement biometrics in a wide range of applications."

By passing the exam and earning the CBP designation, biometrics professionals demonstrate that they have the level of proficiency needed to perform in a competent and effective manner, and meet the demands of this rapidly evolving field.

The **IEEE CBP Learning System** combines print materials and online interactive software to provide effective biometrics training and CBP exam preparation.

Professionals who want to register for the exam and organizations that are interested in registering multiple employees should visit:

<http://www.IEEEBiometricsCertification.org>

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Photograph by Bob Johnson.

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—Winston Churchill



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WEDNESDAY FEB 17 PM: NUCLEAR ENERGY

4 PDHs have been approved by ASME for this topic. (Equivalent to 0.4 CEU hours)

WEDNESDAY FEB 17 ALL DAY: OSHA UPDATE

THURSDAY FEB 18 PM: OSHA UPDATE 3-HOUR EXTENSION

Registration fees: Solar Energy ½-day session: \$ 75 (includes breakfast)
 Nuclear Energy ½-day session: \$ 75 (includes lunch)
 Solar and Nuclear together: \$110 (includes breakfast & lunch)
 OSHA full-day session: \$110 (includes breakfast & lunch)
 OSHA extension: \$ 35 (includes appetizers)

To register please contact Tony Cacioppo at: tonycaci@aim.com

Did You Know?

Just a few fun, informative and interesting facts and tidbits about the IEEE

*Contributed by Charles Rubenstein,
IEEE Region 1 Director*

Career Development - Did you know?
IEEE Members attending local Chapter meetings find it a cost effective way to learn about State-of-the-Art developments in a field.

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As a member you have exclusive download privileges to view IEEE Spectrum articles and features. Check the current Spectrum feature articles at:
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A monthly column by Nikolaos Golas, Membership Development Chairman

IEEE Volunteer Opportunities



Volunteering your time at the IEEE can be a gratifying and memorable experience. Would you like to plan meetings, chair a committee, mentor students, work with finances, develop a newsletter, or website? Chances are your local Section or Society is in need someone with your expertise. As an IEEE volunteer, you will take pride in performing some of the tasks you prefer, while expanding your knowledge of the IEEE. Volunteering your time at the IEEE will assist in gaining valuable management and leadership skills for your career.

As an IEEE volunteer you can enhance your **Professional Growth** and derive **Personal Enrichment** as you volunteer your time and stay connected to a community of professionals.

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- Technical Activity
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If you are interested in volunteering with the IEEE Long Island Section, Chapter, or Society, please contact our Chairman Jon Garruba at: chairman@IEEE.LI



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