

The *Pulse* of Long Island



September 1, 2002 - Vol. 52 No. 7

The monthly newsletter of the Long Island Section of the Institute of Electrical and Electronics Engineers, Inc.

Chair's Message

Now that the summer is almost over, and hopefully many of you have enjoyed some time off from work and spent it with the family, it's time to review what has happened and will be happening in the world of the IEEE.

Growth in the Engineering field is of major concern to the Executive Committee of the Long Island Section. I can only applaud the efforts of the IEEE-USA President LeEarl Bryant in his message to the U.S. Congress. Babak Beheshti, our Pulse Editor, has included the IEEE-USA notice in this issue of the Pulse. I strongly recommend that you read it.

Northrop Grumman is planning to sponsor a Long Island Technology Day addressing "Integration of Emerging and Convergent Technologies" in October. Emphasis will be on those technologies that will be applicable for Homeland Security. There are certainly companies on Long Island that can contribute to this important endeavor. I expect to provide more details in the next issue of the Pulse.

Polytechnic's Long Island Graduate Center has expanded its curriculum and moved to a permanent state-of-the-art, fully wired campus in the Melville Corporate Center. Many of us on Long Island have attended Polytechnic University and wish them well in their attractive new setting. In particular, we wish David Chang, President and Ivan T. Frisch, Vice President and Provost of Polytechnic, much success in their mission of helping Long Island Industry grow by providing skilled graduates and providing continuing education programs.

A final note on a topic we have discussed in earlier issues of the Pulse. On 28 May, the U.S. Supreme Court unanimously ruled in *Festo Corporation v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.* to restore patent holders' ability to protect their amended patents from "equivalent" products. The justices' decision substantially incorporates the proposed "foreseeable bar" standard outlined in an amicus curiae brief submitted by IEEE-USA and argued by the Court in January. As reported by Bloomberg News, this "ruling may prove to be the most significant Supreme Court patent decision in two decades, affecting as many as 90 percent of the 1.2 million patents now in force."

William Rooney, Chair
W.rooney@ieee.org

The PULSE is now available on-line!

To get the on-line PULSE and get up-to-date information about the Section, visit our web site at:

http://www.ewh.ieee.org/r1/long_island/

Candidates for LI Section Officers

The Nominating Committee of the Long Island Section has announced the following slate of Executive Officer Candidates for the 2003 Administrative year:

Chair: *Dave Mesecher*
1st Vice Chair: *Christian DiFranco*
2nd Vice Chair: *Daniel Rogers*
Secretary: *TBD*
Treasurer: *David Wolff*

Additional nominations may be made by petition from now until October 1st, 2002. Petition nominations must be in writing, including the membership numbers and include the signature of at least 10 members of the Long Island Section. The petitions must be delivered no later than October 1, 2002 to be included on the ballot which will appear in the October issue of the Pulse.

In order to validate the nomination, it must include the member's name and his/her membership number.

Send nominations to:
 Babak Beheshti
 101 Caffrey Ave
 Bethpage, NY 11714

Long Island Section Officers

Chair. William Rooney
 1st Vice Chair Dave Mesecher
 2nd Vice Chair. . . Christian DiFranco
 Secretary. Lisa Zannella
 Treasurer. Daniel Rogers

Address All Correspondence to:

PULSE EDITOR

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Send Address Changes to:

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PULSE Deadlines

For Oct. 2002: **9-5-02**
 For Nov. 2002: **10-5-02**

Consultants

Network of LI

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

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The Conference Committee for the 2003 Sarnoff Symposium on Advances in Wired and Wireless Communications has just released the Call for Papers <http://ewh.ieee.org/r1/princeton-centraljersey/Sarnoff_Symposium2003/Call_for_Papers.htm> . The deadline for submission of a 500 word abstract is September 30, 2002. The Symposium will be held on March 12, 2003 at the College of New Jersey in Ewing, NJ.

The Sarnoff Symposium (<<http://www.sarnoffsymposium.org/>>) has a long tradition as an event where the latest technologies and applications in the field of wired and wireless communications are being presented and discussed. This year the conference is expanding to include peer reviewed papers and tutorials in addition to the invited papers and vendor exhibition of components, technologies, systems and services. A detailed conference schedule will be published in August.

Thank you for your support,

Gerhard Franz

Chair, IEEE Princeton/Central Jersey Section
g.franz@ieee.org

IEEE Long Island Section Calendar

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

Please visit our web site at http://www.ewh.ieee.org/long_island/ for up to date listings, changes and corrections.

Sept. 4, 2002 - LI Consultant's Network at 7:00 PM at Weeping Willow on Route 110 in Farmingdale, No pre-registration is required. There will be coffee and Danish. For further info call Irwin Weitman (631) 266-2428. (For more details, please read Irwin's column on page 5 of this issue)

Sept. 30, 2002 - EXCOM meeting at 6:00 PM, The Weeping Willow on Route 110 in Farmingdale

October 28, 2002 - EXCOM meeting at 6:00 PM, The Weeping Willow on Route 110 in Farmingdale

November 25, 2002 - EXCOM meeting at 6:00 PM, The Weeping Willow on Route 110 in Farmingdale

Record Engineering Unemployment Spurs IEEE-USA Call for Congressional Action

WASHINGTON (12 July 2002) - Although the overall U.S. unemployment rate fell in the second quarter, it increased significantly for engineers and computer scientists. IEEE-USA is calling on all Members of Congress to conduct a field hearing or town hall meeting during the August district work period to gather input on the situation from engineers and other high-tech professionals.

The unemployment rate for all engineers increased from 3.6 percent in the first quarter of 2002 to 4.0 percent in the second quarter, data from the U.S. Department of Labor, Bureau of Labor Statistics reveals. The rate for electrical and electronics engineers (EEs) rose from 4.1 percent to 4.8. The rate for computer scientists, which includes systems analysts, jumped from 4.8 to 5.3 percent. Overall unemployment fell from 5.9 to 5.4 percent.

"IEEE-USA is concerned that the most recent increase in engineering unemployment is not a short term or cyclical phenomenon, but represents a more fundamental shift in engineering utilization that has potentially negative impacts for our nation," IEEE-USA President LeEarl Bryant said in a letter to Congress (<http://www.ieeeusa.org/forum/POLICY/02July12.html>).

IEEE-USA is asking Congress to investigate the impacts of increased hiring of non-U.S. guest workers, the greater use of temporary workers and the outsourcing of engineering work overseas as causes of the unemployment problem, in addition to the economic downturn. **(Continued on page 5)**

EDA AD
here

IEEE Signal Processing Society . IEEE Communications Society and
IEEE Long Island Section
Present
Fundamentals of Digital Signal Processing
October 7,9 - 2002

Overview

The Long Island Section of IEEE and its Signal Processing Society are presenting two three hour sessions (3 hours per session) training course “*Fundamentals of Digital Signal Processing*”.

Who Should Attend

This course is intended for managers involved in DSP applications, entry-level engineers intending to master basics of this field, and practicing engineers planning to utilize DSP in their designs. Individuals with a basic understanding of analog signals and systems can benefit from this seminar.

Key Benefits

- Learn the terminology and fundamental key concepts of DSP
- Understand sufficient amount of the technology to be able to do further study on your own
- Understand what software and hardware tools are the minimum requirements for a successful development

Content

What you will learn: Review of fundamentals, Applications of DSP, Benefits of digital processing, Discrete time systems and signals, Sampling theorem, Aliasing, Effects of quantization, Frequency domain representations of sampled signals and systems, Processing sampled signals, Design of Finite Impulse Response(FIR) digital filters, Program samples, Infinite Impulse Response (IIR) filters, stability considerations, Use of commercially available DSPs, development tools, do's and don'ts, future trends

Seminar Coordinator and Instructor

Babak D. Beheshti is the seminars coordinator and the chair of the Long Island Signal Processing Society.

Location and Times

The seminar will be given in Woodbury, 6:00 to 9:00 PM. Registrants will be advised of the exact location and receive an acknowledgment by mail shortly after registration. The seminar is wholly the responsibility of IEEE Long Island Section and the instructor.

For further information contact Babak Beheshti via email at b.beheshti@ieee.org or by phone at 516-686-7437.

Fees will be refunded in full if the seminar is canceled or the registrant cannot be accommodated due to capacity limitations. Other refunds will be considered.

Fees

If Payment Made by Date	Public	IEEE	Student/Life Member
Sept 25	\$375	\$325	\$250
Oct 2	\$425	\$400	\$275

Registration Form

Fundamentals of DSP Oct. 02

Make checks payable to “IEEE Long Island Section”.
Send form to Babak Beheshti, 101 Caffrey Avenue,
Bethpage, NY 11714-1435

Name: _____

Company: _____

Home Address: _____

City and Zip: _____

Hphone: _____ Bphone: _____

email: _____

Member #: _____ Grade: _____

Amount enclosed: _____

Professional Activities Report

by Irwin Weitman, P.E.

The following, is excerpts form the July 15, 2002 issue of EETimes. The numbers tell the story and don't require much explanation. "Every year, we're educating half the engineers we need and importing the rest." That's a prescription for going out of business as a country." "The United States imported 90,000 engineers and computer scientists in 2000, while graduating 65,000 engineers and 15,000 computer scientists." "as other countries improve their technological sophistication, their engineers will stay there and instead of coming to the U.S. If that happens, observers believe that U.S. industry will face a terrible shortage of technical talent."

The percentage of unemployed engineers is now estimated to be 3.3 times the national unemployed average. There are many reasons for this, but, THAT'S THE WAY IT IS!. There are many reasons, and H1-B doesn't help. Engineers are often treated by corporate management as a disposable labor commodity instead of an essential investment in our nation's future. To quote LeEarl Bryant, IEEE-USA President, "We need to understand why people don't go into engineering and when they do, (why they) don't stay. They don't stay because they are driven out."

NEW CAREER NEWSLETTER BEGINS PUBLICATION: "IEEE Career Alert," a new weekly opt-in online newsletter, written by "IEEE Spectrum" editors, is available. The publication focuses on issues such as professional growth opportunities, continuing education, management and the engineering workplace. It also will include related articles from "IEEE Spectrum," other IEEE resources and the Web. Subscribe at "<http://www.spectrum.ieee.org/careers/signup.html>". "IEEE Spectrum Online" also has revamped the IEEE Web site career section at "<http://www.spectrum.ieee.org/careers>" to include easier navigation and an articles archive, plus links to the IEEE Job Site at "<http://jobs.ieee.org/index.html>".

Sept 7, 2002 the IEEE Consultants Network of Long Island (LICN) will hold it's monthly meeting at a new location. The former meeting Place at Polytechnic University in Farmingdale has moved to a new location and the largest room available is too small to hold the usual 30 to 40 people. We have been able, through the good graces of Briarcliffe College in Bethpage, to have a meeting place for the coming year. IEEE members are invited to attend all meetings at 7:00 PM at the College located at 1055 Stewart Ave. See map at the LICN web site: www.consult-li.com select "next meeting" then "Briarcliffe" for directions and a map. Or if you want to go directly to the map, the URL is <http://consult-li.com/images/Briarcliffe.jpg>

The September 4 meeting at 7:00 should be useful to both consultants and employees. All IEEE members are welcome to attend. The subject will cover the area of how to market yourself to obtain engineering work. There will be two speakers to give us the viewpoint of the corporate executive. The emphasis is be about how the "Human Resources Department" can help the consultant. The speakers will be Matthew L. Sadinsky and James R. Campbell. This is the second, in a series of tutorials designed to improve the business and engineering skills of our members. Stay tuned since several upcoming presentations will also be of value to employees.

Attention: Members of Power Engineering Society (PES) or Industry Applications Society who are members of Long Island Section IEEE.

Information to enable me to do my job better

I would like to collect the email address of Long Island IEEE members who belong to either of the two above-mentioned IEEE Technical Societies. This will enable me to notify personally all such persons of meetings, seminars, symposia that might be of interest to them. It permits rapid dissemination of information. I pledge not to divulge these email addresses to any other person or entity. I also pledge not to utilize this information frivolously or for any other purpose than to circulate information.

Robert Bruce, Member of Long Island Section EXCOM, L.I. Liaison to PES/IAS r.n.bruce@ieee.org

Continued from page 3:

"It is time for Congress to take a closer look at the problem of engineering unemployment and to eliminate the government subsidies and incentives that encourage corporate management to treat U.S. engineers as a disposable labor commodity rather than an essential investment in our nation's future," Bryant said. IEEE-USA is an organizational unit of The Institute of Electrical and Electronics Engineers created in 1973 to promote the careers

And public-policy interests of the more than 235,000 electrical, electronics, computer and software engineers who are U.S. members of the IEEE. The IEEE is the world's largest technical professional society. For more information, go to <http://www.ieeeusa.org>.

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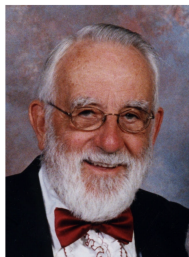
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Here!

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

A View of Electromagnetic Life above 100 MHz

(An Experimentalist's Intuitive Approach)

Tuesday, October 8, 2002



WHO SHOULD ATTEND? Individuals who design and test equipment containing circuitry that operates in this frequency range, and individuals interested in learning more about the less desirable implications of the increasingly fast circuitry used in today's products

WHAT ARE THE KEY BENEFITS? The opportunity to learn practical design and measurement approaches from a leader in the EMC area.

SPEAKER: Dr. Lothar (Bud) O. Hoeft -- Consultant, Electromagnetic Effects

Abstract:

Interest in electromagnetic life above 100 MHz has increased in the past decade, primarily due to an increase in high speed digital electronics and telecommunications. In this frequency regime, many of the usual simplifying assumptions are no longer true and the EMC engineer must adopt a new way of looking at the problems. An intuitive approach allows the engineer to visualize the system as a collection of components whose characteristics can be estimated, or if necessary, measured. Effects, such as parasitic effects, absorption, radiation losses and wavelength effects become more significant above 100 MHz, but are reasonably well understood.

As a note, those of us who have heard Dr. Hoeft speak have been impressed with his ability to provide a lively talk while maintaining a careful balance between the theoretical and practical sides of the EMC world.

Seminar Coordinators:

Richard Mohr and Bruce Willard, Electromagnetic Compatibility Chapter Co-Chairs of the IEEE Long Island Section.

Speaker Bio:

Dr. Bud Hoeft received a B.S. and M.S. in physics from the University of Wisconsin and a PhD in physics and biophysics from Pennsylvania State University. In 1979, he completed a 25-year R&D career in the U.S. Air Force working on acoustical noise control, bionics, nuclear weapon simulation, pulse power technology and international R&D coordination. He joined BDM, where he was primarily concerned with helping designers build and test systems that are subject to electromagnetic effects. In 1994, he retired from BDM and became a private consultant. Dr. Hoeft is a Certified EMC Engineer. He has presented numerous papers and tutorials on shielding and electromagnetic effects at IEEE-EMC, NEM, Zurick-EMC, Wroclaw-EMC, IEE-EMC, Lightning and IICIT symposia. In 2001, he was appointed Distinguished Lecturer of the IEEE EMC Society.

Location and Time:

This lecture serves as the "kickoff event" for the Long Island EMC Chapter. It will begin at 7:00 PM on Tuesday 8 October at the Holiday Inn, on Sunnyside Blvd in Plainview (between the Long Island Expressway and Northern State Parkway). Coffee and a snack will be served beginning at 6:30 PM. Seating is limited. If you wish to attend an RSVP is required by no later than 1 October. Please contact Richard Mohr via E-mail at r.j.mohr@ieee.org or Bruce Willard by via E-mail at Willard@ieee.org. For those without E-mail access, a message may be left at (631)265-2282. This lecture is a part of the IEEE Distinguished Lecturer program and is locally sponsored by the IEEE Long Island Section.

30 YEARS AGO
By: Rod Lowman, Historian

For the section meeting in September Art Rossoff gave a thorough review of Portable Pensions. Working with Joel Snyder and Bob Barden, Art had pursued a solution for the pension problem for years. Art first wrote about it in the July 1970 SPECTRUM. He pushed for a solution while Section Chairman in 1970-71, as a member of the IEEE Professional Activities Committee, as a member of the Government Relations and Employment Practices Committee. He represented the IEEE on the Inter-Society Committee for Professional Employment Guidelines where he helped to write the Guidelines. Then as Chairman of the IEEE Region 1, he enlisted the support of other IEEE Sections in the Northeast. In addition to the IEEE he worked through the AIAA as a member of the AIAA National Pension Committee. As a member of the National Society of Professional Engineers he served as chairman of the Legislative Affairs committee for the Nassau Chapter of NYSSPE. As Chairman of the L. I. Engineers and Scientists (ALIES) he corresponded and offered testimony to Government officials on the pension problem.

Art, like other IEEE activists just never quits. After years of retirement Art is pushing for a Science Museum for Long Island and is actively canvassing industrial support. Long live the activists!

As a footnote, the July INSTITUTE carried the Obituary of John R. Pierce, a Bell Labs engineer who headed the team that developed the transistor, worked with NASA on large balloons like Echo 1, pioneered in acoustics, writing books about computers and music, and in his spare time wrote Science Fiction books under the pen name of J. J. Coupling. Like other sturdy engineers he died at the ripe old age of 92. He is fondly remembered by the Long Island Section for his presentation on "Facts and Fantasies of Space Travel" in October of 1957. Planned months before, the presentation was made just two weeks after the Russians launched Sputnik and over 800 people (including reporters from the N.Y. Times) filled the Garden City High School auditorium to capacity. How could we be so lucky-it was like winning the lottery! We need a few more breakthroughs like this to reinvigorate our section meetings.



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