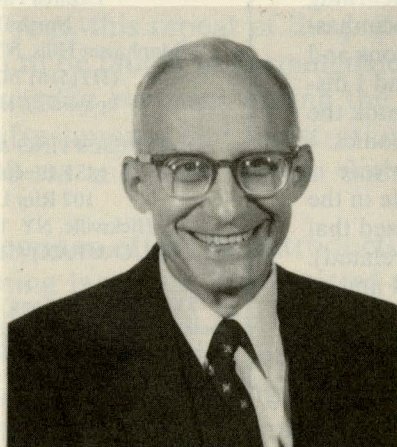


## Distinguished Lecturer to Speak to Long Island Section



*Dr. Eli Brookner*

The Long Island Section is proud to announce that the fourth session in our Distinguished Lecturer Series will take place on Monday, December 9, 1996. We will be honored by the presence of Dr. Eli Brookner of the Raytheon Company who will present his talk "Radar - Undergoing a Revolution." The meeting will take place in the main auditorium at AIL Systems, Inc. in Deer Park at 4:45 PM.

Dr. Brookner's talk covers the range from use of new, low cost MMIC chips in phased array antennas to the Theater Missile Defense radar to adaptive nulling techniques which null out enemy jammers. A complete abstract of the talk appeared on page two of the November *PULSE*.

Eli Brookner received his BSEE degree from the City College of New York in 1953, and the MS and DSc degrees in Electrical Engineering from Columbia University in 1955 and 1962, respectively.

During the summer of 1952 he was with the Radar Division of the Rome Air Development Center, Rome, N.Y.

In 1953, he joined the Columbia University Electronics Research Laboratories, where he was engaged in noise studies and the design of long-range radars. In 1957, he was employed as Project Engineer at the Federal Scientific Corporation (now part of Nicholet Instruments, Inc.), working in the analysis and development of coherent radar processors, such as the coherent memory filter.

Since 1962 he has been at Raytheon Company where he is presently a Consulting Scientist for the Equipment Division in Wayland, Mass. He conceived and helped design the Wake Measurement Radar, the first TWT radar put into space and has worked on Cobra Dane, Seasparrow, SIRC's, Milirad, Hardsite, Cobra Judy, PAVE PAWS, BMEWS, Solid State Demonstration Array (SSDA), Ground Based Radar (GBR), and Marine radar programs. He has been technical director for a number of space-based radar programs. Recently, he has worked on future improvements to the worldwide satellite-cellular IRIDIUM® communications system and future commercial high data rate communications systems.

Dr. Brookner is a member of Eta Kappa Nu and Tau Beta Pi, a Fellow of the American Institute of Aeronautics and Astronautics, IEEE Fellow, and Member of the Interna-

tional Union of Radar Science (URSI; commissions B and C). He has over 100 papers and talks to his credit. For one of his papers he has received the first Journal of the Franklin Institute Premium Award. He wrote a cover article for Scientific American entitled "Phased-Array Radars" (February, 1985). He is editor and principal contributor to the books *Radar Technology*, *Aspects of Modern Radar* and *Practical Phased-Array Antenna Systems* and is a lecturer on radar. He has taught his radar course to over 7000 engineers and scientists around the world.

He has organized and participated in other radar lecture series in the Boston area since 1972. About 2000 have registered for these. An IEEE video tape was made of the first of these courses. This tape was shown to engineers across the country and on the Kwajalein Island.

He has personally organized monthly talks for the Boston IEEE/AES since 1972. Over 2000 have attended these meetings. The Central New England chapter of the AES won the outstanding AES chapter of the year for 1977-1978 and 1983-84 while he was Chairman. He was a 1983-85 IEEE Antennas and Propagation Society Distinguished Lecturer and is a 1987-92 IEEE Aerospace and Electronics Systems Society (AES) Distinguished Lecturer. He was a recipient of the IEEE Centennial Medal; the 1986 IEEE Region One Award for continuing educational course development and teaching; and the 1990 IEEE Educational Activities Board Meritorious Achievement Award in Continuing Education Activities. He has lectured with great success to elementary school children on radar.

Please join us for this stimulating meeting and after meeting dinner with the speaker. Call Harvey Altstadter at (516)595-5608 for more information or for directions.

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## LI SECTION ON THE WEB

*by Harvey Altstadter*

We have arrived. After many months of planning, we finally have our Long Island Section Homepage up on the web.

We can be found by going to the IEEE Homepage at <http://www.ieee.org> and clicking on:

LOCAL ACTIVITIES

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LONG ISLAND SECTION.

Bookmark it!

Our page carries the information on how to reach any of the elected officers, the Society Chapter Chairs and the Chairs of all our activities. The calendar is updated frequently, and is a good place to check between issues of the *PULSE* to find out what is going on. Our tutorials and workshops, and our Distinguished Lecturer are additional featured areas on the page.

Our Homepage belongs to the section. We expect that it will be a dynamic, growing source of useful and interesting information for our membership. This is your page, please visit it often, and contact us with your suggestions for improvement. We are always under construction.



## EDITORIAL

by Lazaros Pavlidis

What is it that makes an individual an engineer? Curiosity and the desire to learn, I believe. I began my career very young by destroying things in my attempt to find what made them tick. My parents still complain today about an excellent Grundig radio that I took apart in elementary school. I was always eager to learn how things work, why they work and how I can modify them to do different things. I learned most of the things that I really know on my own; I was too impatient to wait for their formal introduction in school. It is interesting that my curiosity does not stop with electronics. I love learning how to do new things. My wife, Monica, and I recently bought our first house in Manhasset Hills. Even if the house is in good condition, I can't stop thinking of alterations and improvements. I took apart a small closet in the room that will be "my office" and I discovered that behind it there was an area under the stairs, a big unused space. It took the free time of two weeks to convert it to a beautiful storage room for my electronics. I learned how to take apart walls, put up sheetrock, plaster etc. I love it. My wife is amazed that I can work there for half a day, then deal with my consulting until late in the night and get up early the next morning to go to work with no complaints. I realized that I am at my best when I deal with new things (even if they are not electronics related). And everything starts with a "Why" or "How". My daughter is three years old and of course she is at her peak of asking "Why". My wife gets tired of it some days but I love it. I try to explain all my daughter's Whys. My wife laughs at me "she is too young to understand it...". She knows how to cut wires, how to use a screwdriver, the different types of screwdrivers, how to type on the computer and use the mouse. But to me, most important of all, she knows that I can fix things. If something does not work she brings it to my office, gets a couple of screwdrivers, sits on the floor and says "Daddy can you show me how to fix this?" I see an engineer in the making... I do not know how you feel, but as long as there are things to learn I feel and act as a young, enthusiastic student. I also love sharing the things I know with others. So if you need help with sheetrock or plastering give me a call. Hey you never know...

## Corrections

In the October and November Pulse "IEEE Section Awards Ceremony", Louis A. Luceri, Region One Chairman elect (pictured on the right), was mistakenly referred to under another name in the picture section and his name was misspelled in the small article that accompanied the pictures.



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## LONG ISLAND IEEE CALENDAR

(No membership requirements, no registration, no fees at meeting unless otherwise noted. IEEE Office is in the AIL Main Building on Commack Road, Deer Park, LIE exit 52.)

**December 4, 7:30 PM, --- Networking - LI Consultants Network ---** General Networking meeting. Coffee, bagels and more talk at local diner after the meeting. LILCO training center, off L.I.E. exit 57. For further information call Peter Buitenkant at (516) 491-3414.

**December 9, 4:45 PM --- RADAR--UNDERGOING A REVOLUTION,** Dr. Eli Brookner, Raytheon Company, will be the speaker in our Distinguished Lecturer Series. See article on page 1. AIL's main auditorium in Main Building on Commack Road, Deer Park.

**December 11, 6:00 PM — A SOFTWARE PRODUCT MATURITY MODEL** by John Nastro, Staff Engineer at AIL Systems Inc. - Computer Society - in auditorium at AIL Systems Inc. on Commack Road in Deer Park - Please call either Bill Rooney at 595-5960 or Anthony Natoli at 228-8484 if you plan to attend the meeting in order to facilitate arrangements. This presentation addresses the characteristics and metrics for a software Product Maturity Model, which is relevant to various software applications.

**December 18, 7:00 PM ---** Employment Assistance Committee meeting at Polytechnic University. For more information call Victor George, (718) 831-0266.

**December 23, 6:00 PM — EXCOM MEETING. AT AIL.**

**February 10-26, 6:00 - 9:00 PM — PROGRAMMING LANGUAGE SEMINAR C/C++/VC++** by Walt Whipple, Ph.D., P.E. The seminar will be held in Farmingdale. See information on page 5. For more information call Walt Whipple (516) 738-3114 or e-mail at w.whipple@ieee.org.

**March 3-17, 6:00 - 9:00 PM — INTRODUCTORY MICROPROCESSORS AND SOFTWARE SEMINAR.** See information on Page 5. For more details call Babak Beheshti at (516) 686-7437 or e-mail at b.beheshti@ieee.org.

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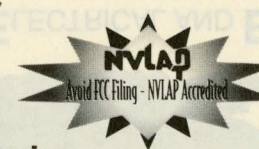
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## **Masters Program in Clinical Engineering**

A Masters degree in Clinical Engineering was approved by the New York State Board of Regents at its September 20th meeting. The program is being offered by the Institute for Biomedical Engineering and Rehabilitation Services [IBMERS] of Touro College. In particular, the program is research oriented, training service-providers in Clinical Engineering on the graduate level. This program has been retraining individuals exsessed from the aerospace/defense industries. Dr. Bernard Lander, President of Touro College, stated that, "Touro College is committed to forging an impact in underserved training areas in the Health Science." Dr. Joseph Weisberg, Dean of the Barry Z. Levine School of Health Science of Touro College stated that, "Touro College is very pleased with this development since technology solutions are expected to significantly impact on the Health Care industry in the next century."

Dr. Gerry Leisman, Associate Dean of the School of Health Science at the Dix Hills campus and Director of the Institute for Biomedical Engineering said that, "IBMERS is uniquely positioned to develop Clinical Engineering as a discipline inasmuch as it is a technology driven, highly productive, Biomedical Engineering 'think tank' with a critical mass of thirty-four interdisciplinary scientist/engineers who have worked together since 1986. The collective experience of the faculty includes Fortune 500 CEO's, physician-engineers, behavioral scientist engineers, rehabilitation specialists, computer scientist-physicians, physicists, among others."

These individuals represent IBMERS Departments of Biomedical Engineering, Neurocybernetics, Neuroscience, Biobehavioral Sciences, Instructional Technology & Applied Bioscience, and Medical Humanities. All the faculty work collectively beyond disciplinary boundaries. The applications areas for employment of graduates include hospital engineering functions such as: Quality Assurance, equipment safety standards, management of the equipment maintenance function, as well as intra-operative equipment monitoring and the support of highly sophisticated functions such as Positron Emission Tomography; industrial environments including: equipment design, manufacturing processes in pharmaceutical and equipment manufacturing environments, FDA regulatory affairs, clinical trials, and beta site testing; government applications including policy making for technology, and product evaluation; rehabilitation environments including: the design for individual patients of orthotics/prosthetics, wheelchairs, and assistive aids. For further information, please contact Ms. Nina Jacobs at (516) 673-3200 ext. 223.

## **30 Years Ago**

*by Rod Lowman, Historian*

In his Comments from the Chairman, Henry Bachman noted that at the 20th Anniversary Dinner 16 of the 19 previous Section Chairmen joined the celebration from as far away as Florida and New Hampshire. As the Dinner Speaker, Preston Bassett a former president of Sperry, recalled how Sperry and other pioneering firms had moved to Long Island from New York City. Henry pointed out that these moves attracted outstanding engineers to the Island as evidenced by the awarding of Fellows status this year to six of our members: Frank Arams, Joseph Chadwick, Richard Emberson, P. Halpert, Joseph Smith and Jesse Taub. He also said that in just 20 years it had increased our Section membership to nearly 4,000 members, about what it is today.

Anniversaries are times when we look back and note significant changes, analyze why they occurred and try to anticipate how this will influence our future. I am sure that next fall when we celebrate our 50th Anniversary we will want to revel in the tremendous accomplishments of our members over the half century in which the epicenter of electronic development has moved from New York to Long Island. Join us in planning such an outstanding anniversary celebration that it will attract a similar percentage of our 47 previous Chairman of the Long Island Section (3 served for 2 terms) as did the 20th that Henry Bachman wrote about 30 years ago.

## **The Engineering in Medicine and Biology Society (NY/North J/LI Chapter)**

**Announces: *Microwave Hazards***

A report on the health and environmental impacts of cellular technology including human diseases caused by non-ionizing microwave radiation, impact on endangered species, and effect on global climate.

This report is available without charge from Arthur Firstenberg, P.O. Box 100404, Brooklyn, NY 11210. Arthur Firstenberg is Chairman of the Cellular Phone Task Force, a national group representing electrosensitive and other individuals concerned about the health effects of the wireless revolution.

Please include the name of this publication in your request.

For more information about EMBS, Joel Levitt (212) 479-7805 (24 hour Voice-mail).



## Programming Language Seminar

February 10-26, 1997

Mondays, Wednesdays 6-9 PM

Mark your calendars now for the C/C++/VC++ Seminar offered by the IEEE Long Island Section in February. Taught three times last year, this repeat of the popular seminar is planned to be taught in Farmingdale on Monday and Wednesday evenings during the period Feb. 10-26. Refreshments and registration take place about 5:30 PM and each session ends about 9:00 PM.

The seminar offers an introduction to the C programming language, the basis of most professional programming in the last decade. It then proceeds to C++ covering the currently most used object-oriented programming methodology. C++ includes nearly all of the C language. Finally it covers the C++ graphical user interface (GUI) offered by Microsoft, Visual C++.

The format includes instruction, demonstration, and response to attendees questions in a flexible style. Demonstrations are projected for viewing by all. The presentation assumes some programming knowledge, not necessarily current and not necessarily in the C family of languages. Experienced programmers will also gain much from areas they have not covered.

Many people attending the seminar do so to improve work skills and have their employers reimburse the fees. For companies, the costs are far lower than most other forms of training. Frequently, one person's request for approval leads to coworkers being authorized to attend.

The seminar meets without regard to weather conditions unless the facility is closed, a very rare occurrence.

The fee for the seminar is \$475 for the general public. The early registration discount for payments postmarked by January 11 is \$150. Members receive a \$75 discount and student/life members a \$125 discount. Affiliate members are not eligible for the membership discount. Non-member fees include a half year membership in the IEEE. The seminar may also be available for in-plant training.

Further information may be obtained from Walt Whipple at w.whipple@ieee.org or (516)738-3114. Attendance is limited to 50, so taking advantage of the early registration discount is advised to ensure placement. Full details will appear in publicity in the January issue of *Pulse*.

## Introductory and Advanced Microprocessors and Software Courses in Spring 1997

The Introductory Microprocessors and Software Seminar, previously offered in 1996, will be offered again in March, 1997, Monday and Wednesday evenings, 6:00 to 9:00 PM. This course is for engineers and managers who need a better understanding of the terminology, advantages and pit-falls of today's microprocessor/software technology. It will also serve the needs of the entry level hardware or software engineer. The scheduled dates are 3/3, 3/5, 3/10, 3/12 and 3/17.

The follow up seminar to this course is scheduled for April, 1997. This course is intended for individuals with a basic understanding of microprocessors, or equivalent to material covered to the introductory course. The scheduled dates are: 4/2, 4/7, 4/9, 4/14, 4/16.

Both seminars will be offered in a conveniently accessible location in central Long Island. Watch for upcoming announcements in future issues of *PULSE* for more detail.

Further information is available from Babak Beheshti at (516) 686-7437 or via email at b.beheshti@ieee.org.

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## IEEE LI Section Annual Award Ceremony

by Nader Bolourchi

Once again, award recipients; through their achievement, brought honor to themselves and their families and recognition to the LI section. Over 120 members and guests gathered together at an awards banquet ceremony, held on Sunday, May 5th 1996, at the Huntington Hilton hotel to celebrate the achievements of twelve of our members. Dr. Yacov Shamash, the Dean of Engineering and Applied Science at the State University at Stony Brook, was the banquet keynote speaker. Art Winston, Region 1 Director, and Louis A. Luceri, Region 1 Chairman-elect, were among the distinguished guests. On this page are some photos of the IEEE Section Award recipients at the awards banquet.



Peter J. McVeigh(right) accepting his Charles J. Hirsch Memorial Award from Al Lopez (left) Awards Committee Chairman.



Irwin Weitman (left) accepting his Gruenwald Award from Al Lopez (right) Awards Committee Chairman.



Henry L. Bachman(right) accepting his Harold A. Wheeler Award from Al Lopez (left) Awards Committee Chairman.

The PULSE of Long Island

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December 1996

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