



The IEEE

Newsletter

PUBLICATION OF THE NORTH JERSEY SECTION OF THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

North Jersey MTT/AP:

High Temperature Superconductors

On January 23, 1992 the North Jersey IEEE MTT-AP Chapter meeting will take place at the NJIT Alumni Center in Newark, N.J. The topic at this meeting will be "Application Of High Temperature Superconductors To Antenna Systems." The speaker will be Professor Stuart A. Long of the University of Houston.

About The Talk

The recent discovery of high-temperature superconductors has given rise to much speculation concerning their possible application to radiating structures. A general discussion on the efficiency and quality factor of such antennas will be followed by the specific investigation of several possible radiators. These include electrically-short dipoles, electrically-small loops, microstrip antennas, and high-frequency arrays.

The possible impact on the design of the entire radiating system—feed structure, matching network, and the actual antenna—will be investigated. The effect of the use of superconducting material on the radiation and circuit properties will be discussed.

About The Speaker

At the University of Houston, Dr. Long teaches a variety of undergraduate and graduate-level classes in applied electromagnetics. They include electromagnetic waves, antenna engineering, microwave engineering, scattering and diffraction, and electromagnetic theory. He was the recipient of the Halliburton Award of Excellence as the outstanding teacher in engineering at the University of Houston in 1983, and was awarded the University Teaching Excellence Award in 1991. He became a Fellow of the IEEE in 1991.

Members and guests interested in the subject are invited. There will be a free buffet dinner at 6:00 PM. Reservations for the complimentary dinner are requested.

Time: 7:00 PM, Thursday, January 23, 1992.

Place: New Jersey Institute of Technology Alumni Center, Newark, N.J.

Information/Reservations: Dick Snyder (201) 492-1207; Willie Schmidt (201) 284-2255.

North Jersey Section PACE:

How To Succeed In Business ~~Without Even~~ Trying The Old Fashioned Way

The January 9, 1992, meeting of the North Jersey Section's Professional Activities Committee for Engineers will present a talk on "How To Succeed In Business ~~Without Really Trying~~ The Old-Fashioned Way." The speaker will be Dr. Richard V. Snyder.

About The Talk

Succeed or die! Not death in the literal sense, but in the national, corporate and personal economic regimes awaits us if we cannot "succeed in business."

Americans are becoming accustomed to accepting our current lack of international competitiveness as intrinsic. For example, we seem to expect Japanese products to be better or cheaper, German engineering to be the pinnacle, etc. It is the thesis of our speaker that these perceived deficiencies are at least partially actual, but are reversible if we "return to basics," i.e. what made us great. Our major advantage has been the aspirations of our upwardly mobile technologists to "get-ahead" and the hungry approach employed to do so. Work habits, ethics, selflessness, skill enhancement, and cooperation have served us well in the past....they can do so again! Much as we object to the "bean-counter" approach to investment as being short-sighted, we should object to short-sighted approaches in the way we conduct ourselves within our profession. What is good for #1 in the short-run may hurt not only the other cooperating members of the profession and organiza-

tion, but may actually detract from the ultimate worth of #1 as a practicing member of the profession.

This talk will cover those factors that can contribute to personal and corporate success within our profession, with corporate defined in lower case.

Maybe we can re-learn those things which our notably successful imitators have already copied from our earlier selves!

About The Speaker

Dr. Richard V. Snyder is currently Chairman of the North Jersey Section. He is President and founder of RS Microwave, an 11 year-old manufacturer of RF and Microwave filters. He is also Chairman of the North Jersey MTT/AP Societies, a member of the international MTT-8 Committee on Networks, and the Technical Program Committee for many of the MTT Symposia. He has published more than 20 papers, holds 8 U.S. and International patents, has delivered numerous papers. He is an active educator, at the University, IEEE course and high school levels. His degrees are from Loyola University, USC and PINY. He has been a practicing professional engineer for about 30 years.

Time: 7:30 PM, Thursday, January 9, 1992.

Place: Jersey Central Power & Light Co., Madison Avenue and Punch Bowl Rd., Morristown, NJ.

Further Information: Robert Sinusas (201) 228-3941.

JANUARY 1992

CHAIRMAN'S CORNER

Thanks, (I think) for allowing me to serve as Chairman of the North Jersey Section for 1992. I'll try to live up to the accomplishments of my predecessors. Now down to business! The next meeting of the Executive Committee will be held on January 8, 1992. Our location for this meeting (and perhaps the future meetings—stay tuned), will be the cafeteria in Plant 11 of GEC-Marconi. This building is located at 164 Totowa Road in Wayne, N.J. It is the three-story building with the glass atrium located directly across the street from the Passaic County Golf Course. The pre-meeting buffet will be at 6 PM, with the meeting starting promptly at 7 PM. Please be a few minutes early as we are going to have to get used to the discipline of meeting at a new facility. Also remember that the pre-meeting buffet will be reduced in magnitude because of budgetary constraints.

As discussed during the last EXCOM meeting, if you want to have material considered at the EXCOM meeting, and you plan to either spend or generate money, it will be necessary to submit the agenda items directly to me, or the Section Secretary, at least one week prior to the meeting. This is so the other Executive Committee members can have an opportunity to familiarize themselves with EXCOM business prior to having to deal with it at the meeting. This requirement for early submission will not apply, of course, to emergency items. If you find money on the street and want to donate it to the Section, we will accept it, without notice, at the meeting.

Everyone seems to think that this will be an austere year. However, if we all participate in Section activities, in particular those which tend to generate income (such as shows, classes, job fairs, etc.), we may be able to reduce the budget gap. In any event, our technical activities will be going "full bore." If you have comments or suggestions, I may be reached at phone number (201) 492-1207 or FAX number (201) 492-2471. I look forward to serving you this year.

Yours very truly,

Dr. Richard V. Snyder, Section Chairman

Metro EMBS: Techniques For Identifying Tissue Parameters

On January 22, 1992 the IEEE Metropolitan Sections Engineering in Medicine and Biology Society and the New York Academy of Medicine Sections for Biomedical Engineering and Ophthalmology will present a program on "Recent Advances In And Clinical Applications Of Ultrasonic Signal Processing For Tissue Characterization." The speakers will be Frederic L. Lizzi, ScD.; D. Jackson Coleman, MD; and Donald L. King, MD.

About The Program

Spectral analytic techniques and theoretical acoustic microscopy have been used to develop acoustic signal processing techniques for identification of tissue parameters sensitive to the effective sizes, concentrations, and mechanical properties of internal tissue elements too small to be resolved under conventional ultrasonic imaging techniques. Digital ultrasonic systems incorporating these signal processing schemes have been installed at several centers, and clinical application studies performed. The databases compiled under these studies are being analyzed to establish objective measures for diagnosis, treatment planning and treatment monitoring.

In Ophthalmology, statistical results from a ten year study have shown that tissue spectral parameters can be effectively used to diagnose and subclassify ocular tumors, to monitor their treatment, and predict survival times of melanoma

cases treated with enucleation or radiotherapy. In diagnosis and monitoring of pathologies of the liver, spectral parameters have been used to identify diffuse diseases and differentiate primary and secondary focal tumors. Very promising initial results have also been obtained for diagnosis and monitoring of prostate pathologies, skin diseases, and characterization of vascular thrombi.

About The Speakers

Dr. Frederic L. Lizzi is Director of Biomedical Research at the Riverside Research Institute in New York, and is an Adjunct Professor at Cornell University Medical College.

Dr. D. Jackson Coleman is Professor of Ophthalmology at Cornell Medical College and Chairman of Ophthalmology at New York Hospital.

Dr. Donald L. King is Professor of Radiology at the Columbia University College of Physicians and Surgeons.

Pre-Meeting Reception and Dinner

A reception and subscription dinner prior to the meeting will be held at the NY Academy of Medicine starting at 6.00 PM. Cost of the dinner is \$33. **Reservations are requested prior to 1/12/92, (212) 876-8200, ext. 235.**

Time: 7:30 PM, Wednesday, January 22, 1992.

Place: New York Academy of Medicine, Fifth Ave., at 103rd St., NYC. (Limited free parking in NYAM enclosed lot at 2 E. 103rd Street.)

Information/Reservations: Office of Med. Education, NYAM (212) 876-8200, ext. 235; IEEE EMBS Edna Feher (212) 757-0610; Joel Levitt (718) 891-6460.

JANUARY 1992 Volume 38, Number 7

Publication No: USPS 580-500

The North Jersey Section's "The IEEE Newsletter" is published monthly except June by The Institute of Electrical and Electronics Engineers, Inc. Headquarters: 345 East 47th Street, New York, N.Y. 10017-2394. \$1.00 per member per year (included in annual dues) for each member of the North Jersey Section. Second-class postage paid at New York, N.Y. and at additional mailing offices. Postmaster send address changes to: "The IEEE Newsletter," 445 Hoes Lane, P.O. Box 1331, Piscataway, N.J. 08855-1331. USPS 580-500.

NEWSLETTER STAFF

Editor M.M. Perugini
Business Manager..... A.M. Beattie

Deadline for receipt of material is the 1st of the month preceding the month of publication. All communications concerning editorial and business matters, including advertising, should be addressed to: The Newsletter, c/o Girard Associates, Inc., 6 Robert Terrace, P.O. Box 455, Mt. Arlington, N.J. 07856 (201) 398-5524.

REPORT ADDRESS CHANGES TO:

IEEE Service Center
445 Hoes Lane, P.O. Box 1331
Piscataway, N.J. 08854-1331
(201) 981-0060

It is not necessary to inform the North Jersey Section when you change your mailing address. The NEWSLETTER and other section mailings use a list provided by IEEE's national headquarters in New York. This means the Section has no need to maintain a mailing list or addressing plates. Section membership records are changed when Headquarters notifies us.

SECTION OFFICERS

Chairman Richard V. Snyder
492-1207
Vice-Chairman-1 M.I. Liechenstein
471-0721
Vice-Chairman-2 Tom De Nigris
533-9325
Treasurer..... Sergei Bogaenko
785-3673
Secretary Al Connelly
Member-at-Large Al Bottani
Member-at-Large Joe Nelson
Member-At-Large..... Vittal Rebapragada
Jr. Past Chairman George Gaul

The North Jersey Section Executive Committee usually meets the first Wednesday (except holidays and December) of each month at 7 PM. These meetings are open to all members.

Elected Section Officers are listed above.

No. Jersey/Princeton IAS: Harmonics In Power Systems

On March 5, 1992, the Joint North Jersey-Princeton Chapter of Industrial Applications Society will present a one-day seminar on "Harmonics In AC Power Systems." The speaker will be Nicholas W. Miller. The seminar will take place in Morristown, N.J.

The increasing use of power electronic equipment is impacting upon the operation of industrial systems. Resulting problems often cited include, overheating of transformers, motor failures and misoperation of electronic controls. Changes to the power system, such as power factor correction capacitors, can cause voltage distortion exceeding limits recommended by IEEE Standards.

This seminar will provide a comprehensive overview of harmonics including their sources, effects, measurement, and remediation.

About The Speaker

Nicholas W. Miller is a senior member of the Power Engineering Society of IEEE, Tau Beta Pi, and is on the IEEE Working Groups on Harmonics in Power Systems and on Voltage Stability. He is employed by the General Electrical Co., Industrial and Power Systems Engineering Department.

Registration

IEEE Members \$125; Non-Members \$175; Student Members No Charge (Pre-registration required - Attendance Limited). Fee includes lunch, coffee breaks and course reference material.

Time: 8:30 AM - 4:30 PM, Thursday, March 5, 1992.

Place: Jersey Central Power & Light Co., 300 Madison Ave., Morristown, N.J.

Information/Registration: Edward Griffith, Sr., (201) 455-8313.

Happy 1992

Members and Associates, make this the year you will advance to Senior Member grade. Senior Member is the highest grade for which you may apply.

You may be qualified if you have been in active professional practice for at least ten years.

Degrees are credited as part of your experience:

Bachelors	3 years
Masters	1 year additional
Doctors	1 year additional

Dues are the same for all three grades.

For information and an application, contact Don Weinstein, Kulite Semiconductor, One Willow Tree Rd., Leonia, N.J. 07605-2239, (201) 461-0900, ext. 3106.



North Jersey Section Activities JANUARY

Jan. 8, 1992--"North Jersey Section Executive Committee Meeting"--7:00 PM, **Note New Location**, Plant 11, GEC-Marconi, 164 Totowa Road, Totowa, N.J.

Jan. 8--"Thirty-Five Years In The Metro Area: The Implantable Cardiac Pacemaker"--Metropolitan Engineering Council & New York Academy of Sciences, 7:30 PM, NY Academy of Science, 2 E. 63rd St., NYC. Reservations for optional pre-lecture dinner at 6 PM are required. Matthew Katz (212) 838-0230.

Jan. 9--"How To Succeed In ~~Business Without Really Trying~~ The Old Fashioned Way"--North Jersey Section PACE, 7:30 PM, JCP&L Co., Madison Avenue, and Punch Bowl Road., Morristown, N.J. Robert Sinusas (201) 228-3941.

Jan. 13--"Consultants On Consulting"--NY Section Consultants' Network, 6:00 PM, Con Edison, 16th Floor Press Room, 14th St. & Irving Place. NYC. Jim Wetterau (212) 321-1999.

Jan. 22--"Recent Advances In And Clinical Applications Of Ultrasonic Signal Processing For Tissue Characterization"--Metropolitan Section IEEE EMBS and NY Academy of Medicine, 7:30 PM, New York Academy of Medicine, NYC. NYAM (212) 876-8200, ext. 235.

Jan. 23--"Application Of High Temperature Superconductors To Antenna Systems"--North Jersey IEEE MTT/AP Chapter, 7:00 PM, NJIT Alumni Center, Newark, N.J. Dick Snyder (201) 492-1207.

Jan. 26-30--"PES Winter Meeting 1992"--All day Student-Faculty-Industry Program on Jan. 29th, New York Hilton, NYC. Barney Adler, (215) 841-4741.

Jan. 27-28--"IEEE Technical Career Fair"--Sponsored by the North Jersey Section. See details in this issue.

Upcoming Meetings

Feb. 5--"Ideas For Deuterium/Helium-Three Fusion"--IEEE Nuclear & Plasma Sciences Society, 8:00 PM, Princeton Univ.. Dirk Plummer (908) 219-9553.

Feb. 19, March 11, April 8--"NJIT Optoelectronic Seminar Series & Industry Show"--Center for Microwave and Lightwave Engineering, North Jersey Section IEEE & Graduate Student Association. Dr. Gerald Whitman (201) 596-8396/3232.

Mar. 5--"Harmonics In Power Systems--One Day Seminar"--Joint North Jersey & Princeton Chapter IAS, JCP&L Co., Madison Ave. & Punch Bowl Rd., Morristown, N.J. Edward Griffith, Sr., (201) 455-8313.

Members and Non-Members Welcome PLEASE POST

Metro EMBS: Implantable Cardiac Pacemaker

Casimir Drygas, President of the Metropolitan Engineering Societies Council has invited the New York Section of IEEE to present the first of a series of ten Forums in celebration of the 175th Anniversary of its fellow council member, The New York Academy of Science. James P. Barbera, the IEEE representative, has invited the Engineering in Medicine and Biology Society, NY/NJ/LI Chapter, to inaugurate the series by presenting a lecture "Thirty-Five Years Of Bioengineering In The New York Academy Of Science And The Metropolitan Area: The Implantable Cardiac Pacemaker." This lecture will take place on January 8, 1992 and the lecturer will be Wilson Greatbatch, PE.

About The Program

Much of the early history of the implantable cardiac pacemaker took place in upstate and downstate New York. The first public announcement of a successful animal implant appeared in *The New York Times* under Walter Sullivan's byline in 1958. Much of the early clinical work was reported by Dr. William Chardack in Buffalo, Drs. Seymour Furman and Doris Escher in New York, and Dr. Victor Parsonnet in Newark.

During the next decade the New York Academy of Sciences hosted four key conferences on pacemakers and pacemaker electrodes. These reports, even today, stand as key references to pacemaker progress in the 1950s.

Today pacemaking has progressed from our original two-transistor, fixed-rate, two-year stimulators to ten-year implantable, programmable digital computers with tens of thousands of transistors, and a three-tiered correction of bradycardia, tachycardia, and fibrillation.

The development of the pacemaker will be traced particularly in relation to the New York Metropolitan Area, and the New York Academy of Sciences.

About The Speaker

Wilson Greatbatch holds a BSE degree from Cornell University, a MSEE degree from the University of Buffalo, and four honorary PhD degrees from Clarkson University, the University of Buffalo, Houghton College, and Roberts Wesleyan College.

He was inducted into the National Inventors' Hall of Fame in 1986 for his invention of the implantable cardiac pacemaker. In 1990 he received the National Medal of Technology from President Bush. He has been elected to Fellow Grade in the American College of Cardiology, the British Royal Society of Health, the IEEE, the American College of Angiology and the American Association for the Advancement of Science. He is a licensed professional engineer in New

York State, and a thirty-year member of the New York Academy of Sciences.

Optional Pre-Lecture Dinner

Optional dinner prior to the meeting. Cocktails 6:00, Dinner 6:30. Cost of the dinner is \$20 for members, \$25 for others. **Reservations are required.** Call Matthew Katz (212) 838-0230.

Time: Meeting starts at 7:30 PM, Wednesday, January 8, 1992.

Place: New York Academy of Science, 2 East 63rd St., NYC.

Information: Robert Heyman (609) 465-7633; Casimir Drygas (212) 345-6198; Edna Feher (212) 757-0610; Joel Levitt (718) 891-6460.

Jobs Wanted — Employment Ads Wanted

Classified Section: Place your advertisement for employees in this Newsletter. Lead time is less than four (4) weeks. Fee is \$30.00 per column inch. Columns are three across. Circulation is greater than 5000 members in the nine (9) northern counties of New Jersey. For further information call or write to "The News-letter" c/o Girard Associates, Inc., P.O. Box 455, Mt. Arlington, NJ 07856, (201) 398-5524. Pass this information along to your company's personnel office.

Unemployed Members

Unemployed members should attend as many IEEE meetings as possible for both moral support and to increase their number of contacts. Members are welcome to attend all meetings mentioned in this publication.

Members need work part-time or full-time and even on a temporary basis. Employers can solve some of their own problems and reduce their backlog of engineering or engineering support tasks by employing another IEEE member on a temporary basis. This will provide their direct staff with the time to address some of their more pressing issues. Please, do not consider any job to be too trivial. Providing someone with the opportunity to be productive can be beneficial for all those involved. Interested members can send me a 3x5 card with their name, address, telephone number and discipline along with a brief resume. Employers can respond with a similar card or call stating their needs. Some members have already expressed an interest in this program. Employers comments are also re-quested. Send your response to Richard F. Tax, P.O. Box 2012, River Vale, NJ 07675, (201) 664-0803.

PES Winter Meeting Student-Faculty-Industry Program

The PES Winter Meeting will take place January 26 through 30 at the New York Hilton Hotel. IEEE members are invited to attend this Technical Conference which will include numerous sessions, tutorials and technical committee meetings.

Student activities begin on Sunday, January 26, and continue through the week. The focal point of the student program however, occurs on Wednesday, January 29. A full day of special sessions is planned to acquaint the engineering student with the exciting technical challenges and career opportunities that await him or her in the power industry.

For more information on the Student-Faculty-Industry Program, and on the availability of industry sponsorship for student travel to the January 29 program, please contact your Branch Counselor, or Barney Adler, Philadelphia Electric Co., (215) 841-4741.

Princeton/NJ Coast NPSS: Fusion

On February 5, 1992 the IEEE Nuclear and Plasma Sciences Society (NPSS), Princeton/New Jersey Coast Chapter, is sponsoring a lecture titled "Ideas For Deuterium/Helium-Three Fusion." The speaker will be Dr. Michael E. Mauel, Associate Professor of Applied Physics at Columbia University.

This lecture will address the physics basis for fusion utilizing an advanced fuel. While the present generation of large tokamak experimental fusion devices (the Tokamak Fusion Test Reactor at PPPL; the Joint European Torus at Culham Laboratory, United Kingdom; the Japan Torus 60 in Naka, Japan) are close to demonstrating the scientific feasibility of fusion energy, a next generation of devices will be required to answer the detailed scientific and engineering questions which must be addressed before a working demonstration fusion reactor can be designed. The use of such an advanced fuel would seem to eliminate or reduce radioactivity.

Time: 8 PM, Wednesday, Feb. 5, 1992.

Place: Princeton University Engineering Quadrangle, Convocation Room. C-217.

For Information/Directions: Dirk Plummer (908) 219-9553.

Professional Activities Committees for Engineers NEWS

By Richard F. Tax

Engineers Oppose IEEE Position

First, an apology is in order. The mail I received about the IEEE-USA efforts to reduce funding of the space station program included current magazine and newspaper articles, excerpts from the *Congressional Record* pertaining to the issue and a five-page copy of IEEE-USA's 1990 testimony on the FY 1991 budget for NASA and the NSF. It was my error to cite the 1990 IEEE-USA testimony on the FY 1991 budget as the 1991 testimony for the FY 1992 NASA and for this, I apologize. I do sincerely hope that this error caused no harm.

However, in review, I must also say, that the greatest harm came in reporting this issue a year too late. The current 1991 furor was about the June 1991, IEEE-USA's press release, by Arvid Larson, under the title "Electrical Engineers Call For New NASA Program Priorities." Again in 1991 as in 1990, under the same IEEE-USA (250,000 U.S. member) banner, we (IEEE-USA) publically asked for reduced funding for the NASA space station program. I could also apologize for not writing about this issue in 1990, but it was not brought to my attention at that time.

In our December issue, we published Arvid Larson's letter responding to the November article "IEEE Aggravates Engineers." Arvid Larson accurately pointed out my error of presenting IEEE-USA's 1990 testimony as 1991 testimony. He also insists that the IEEE-USA's testimonies (press statements in the latter case) are representative of the views of the membership and he supports this by citing IEEE policy, representative process and review procedures to guarantee this. Does it work? Does the engineering community want to reduce funding of the NASA space station program? Many IEEE members attending the 1991 PACE Conference in September were upset about this issue and disagreed with the "IEEE-USA" position.

The Galveston Bay IEEE Section members did come forth as representing an official IEEE entity that opposed the IEEE-USA position on cuts to the space station program. According to the July 17, 1991 *Congressional Record* - Senate, S10235, 15 other groups including the American Institute of Aeronautics and Astronautics (AIAA) and the Council of Engineers and Scientists Organizations (CESO) opposed IEEE-USA by supporting the space station program.

CESO's written testimony, quoted in part from the *Congressional Record*, included: "The current attack on the space station is another form of the continuing opposition to a manned program by some in the academic community. They are now trying to create a false dichotomy between theory and practice. We believe that enemies of the space station favor the funding of theoretical science over applied science. Theoretical science funds the research of professors whose focus is scientific theory, whereas applied science utilizes scientists, engineers, and production workers in the actual construction of technological systems."

The testimony also said: "What is most unfortunate, however, is that opponents of the space station are trying to divide the academic community from those scientists and engineers engaged in the practical application of the scientific process. Theory and practice go

hand-in-hand. We believe that there must be a balance between the two. Our goal is to put theory into practice. To do so, we must preserve our aerospace industrial base. We cannot continue to create theoretical models of space stations or national aerospace planes only to see them produced abroad."

In the July 15, 1991 issue of *Aviation Week & Space Technology*, CESO pointed a finger at IEEE citing a grossly exaggerated opposition of a handful of IEEE board members. "Is this enough to assure you that we do not have the support of the engineering community on this IEEE-USA position? Can you believe that IEEE's engineers feel any different?"

We have conflicts. Some of our problems arise because IEEE Position Papers or IEEE Entity Position Statements are in conflict. Only last year, after a committee investigation, Michael Whitelaw, V.P. of USAB, ordered the destruction of a widely disseminated IEEE-USA publication that cited "engineer shortages" as a reason to study engineering. These were blatant recruiting brochures fabricated to satisfy the needs of our college recruiters. They were developed by IEEE-USA's, academic dominated, Pre-College Education Committee under the same system Larson defends. Those brochures also served to discredit the IEEE. Are these mistakes, or are some using IEEE as a credible marketing reference at the expense of the membership?

Larson defends the admitted, unbalanced over representation of academics on IEEE-USA committees because of the "willingness of universities to fund volunteer activities" and stresses the academic members sense of business knowledge. I never questioned the business capabilities of the academic members, but I do believe their business interests conflict with the interests of the engineering community and the IEEE. Apparently, others also agree.

In support of increasing the NSF budget and disregarding their "shortage shouting" by blaming the "news-hungry media" for spreading the NSF false alarm, he credits Presidential Science Advisor, Allan Bromley, and Allan Fechter of the National Research Council, for repudiating their shortage claim as being unsupported. Both Bromley's and Fechter's statements came too late and were too restricted to be of any significant value to the U.S. tax payer and the engineering community.

IEEE, the worlds largest technical professional society, whose nearly 250,000 U.S. members had the most to lose by the NSF deception, stood by and did nothing. Where were these same IEEE-USA volunteers, that Larson lauds in his letter, when NSF disseminated their shoddy fabrication about engineer shortages? Does university funding of its staff in IEEE-USA volunteer activities prevent IEEE-USA from challenging NSF when NSF harms the public and the engineering community? Could NSF's funding of university and academic programs influence the opinions of our academic volunteers? Should this jade IEEE-USA's vision? Who does NSF serve by their fabrication? If IEEE-USA and our members lose credibility in professional activities we will soon lose our credibility in the technical area.



THE NEW JERSEY INSTITUTE OF TECHNOLOGY

1992 Optoelectronics Seminar Series and Industry Show

sponsored by

The Center for Microwave and Lightwave Engineering
North Jersey Section IEEE & Graduate Student Association

Planning Committee: M. Ettenberg, DSRC; E. Gordon, NJIT; H. Grebel, NJIT; W. Kosonocky, NJIT;
R. Leheny, Bellcore; T. Li, AT&T; S. Nagel, AT&T; E. Niver, NJIT; I. Reingold, Geo-Centers;
G. Whitman, NJIT; J. Yardley, Allied Signal.

I. ERBIUM DOPED FIBER AMPLIFIERS AND THEIR APPLICATIONS

February 19, 1992, Wednesday, 3-5 pm

Guttenberg Information Technologies Center, Room 1400

Technology and Applications of Erbium Doped Amplifiers for Long Haul Communications
Jay R. Simpson, AT&T Bell Laboratories

Applications of Optical Fiber Amplifiers in Broadband Optical Networks
Chinlon Lin, Bellcore

II. PASSIVE OPTICAL COMPONENTS

March 11, 1992, Wednesday, 3-5 pm, Alumni Center

OPTOELECTRONICS INDUSTRY EXHIBIT
2-6 pm, Alumni Center

Silica on Silicon Passive Optical Device Technology
Tadashi Miyashita, Photonic Integration Research, Inc.

Electronically-Tunable Optical Filters
David A. Smith, Bellcore

III. ADVANCES IN IMAGE SENSORS AND DISPLAYS

April 8, 1992, Wednesday, 3-5 pm, Alumni Center

Advances in Image Sensors
Walter F. Kosonocky, NJIT

Thin Film Transistor/Liquid Crystal Flat Panel Displays
Webster E. Howard, IBM

Location:	NJIT Alumni Center, Newark, NJ
Registration:	By mail, telephone, or in-person. Those who register in advance will be sent a map. There is no registration fee. Refreshments will be served.
Directions:	<p>Garden State Parkway to Exit 145, Route 280 East; take King Blvd. Exit 14A and turn right at the traffic light. Continue straight and after three traffic lights, turn right onto Central Avenue. Take the first left, Summit Street, into campus. Proceed to the guardhouse. Reserved parking in lot #7.</p> <p>From Route 280 West; take the King Blvd. exit; make a left at the foot of the ramp, go one block and make a left at the stop sign onto King Blvd. After four traffic lights, turn right onto Central Avenue. Follow directions above.</p>
For Information:	Contact Dr. Gerald Whitman (201) 596-8396/3232.



IEEE USA HOT LINES

IEEE-USA Office, 1828 L Street, N.W., Suite 1202, Washington, DC 20036-5104, USA (202) 785-0017

IEEE-USA telephone hotline recording: (202) 785-2180

James A. Watson, Editor—Georgia C. Stelluto, Associate Editor

USAB Chairman Urges Congressional Action

USAB Chairman Michael J. Whitelaw recently sent letters to the Senate on behalf of several IEEE-USA committees. The letters expressed IEEE-USA's views on nuclear energy, microwave measurements, telecommunications anti-crime legislation, and high-performance computing.

Whitelaw's letter to Senator J. Bennett Johnston (D-Louisiana), Chairman of the Energy and Natural Resources Committee, is written on behalf of IEEE-USA's Energy Policy Committee. Expressing support for nuclear provisions in S. 1220, the *National Energy Security Act of 1991*, the letter said IEEE-USA believes that nuclear reactor licensing reform is necessary for advancing nuclear power development.

Urging restoration of \$1.945 million in the FY 1992 appropriation for a National Institute of Standards and Technology (NIST) microwave measurements initiative, Whitelaw wrote to Congressman Jamie L. Whitten (D-Mississippi), Chairman of the House Appropriations Committee. Letters were also delivered to Congressional Members slated to serve on a House-Senate conference committee on H.R. 2608, the *Department of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriations Bill, 1992*.

Commending the Judiciary Committee Chairman, Senator Joseph R. Biden, Jr. (D-Delaware), on his recent actions concerning S. 1241, the *Cooperation of Telecommunications Providers of Law Enforcement Act*, Whitelaw urged resistance to other floor amendments that would allow Federal law enforcement officials access to computer security codes. Whitelaw expressed IEEE-USA's alarm that legislation of this nature would be a direct threat to national security and harm the international competitiveness of U.S. firms.

In his letter to Senator Barbara Mikulski (D-Maryland), Appropriations Committee Member, Whitelaw expressed IEEE-USA's strong support for the High-Performance Computing and Communications (HPCC) initiative. He said HPCC will support U.S. economic development by linking academic and industrial researchers and students with one another and with databases and specialized computer systems needed to access their work.

USAB Presents Awards at 1991 PACE Workshop

The 1991 PACE (Professional Activities Committees for Engineers) Workshop was held over Labor Day Weekend in Philadelphia, Pennsylvania. Approximately 205 IEEE members and others participated in addressing a broad range of issues of concern to IEEE's U.S. members. The presentation of IEEE's United States Activities Board (USAB) awards was a Workshop highlight.

In a ceremony on September 1, Michael J. Whitelaw,

Vice President, Professional Activities, announced that Lawrence P. Grayson was the recipient of USAB's Award for Distinguished Contribution to Engineering Professionalism, USAB's highest award. While unable to attend the ceremony, Grayson was recognized for his outstanding leadership in creating a significant program of activities in precollege mathematics and science education for IEEE and for his role in organizing the National Coalition of Engineering Societies for Precollege Mathematics and Science, the nation's largest volunteer effort in support of education.

D. Allan Bromley, Director of the White House Office of Science and Technology Policy, was named the recipient of USAB's Distinguished Public Service Award for his contributions to the development and implementation of Federal policy on science, engineering, and technology and for enhancing the U.S. technology policy interests of IEEE's U.S. members. IEEE leaders will present Bromley's award to him at a private ceremony in Washington, D.C.

Citations of Honor, given to individuals who have made outstanding contributions toward achieving recognition of national professional activities, were presented to William R. Tackaberry and William D. Whipkey. Richard B. Marsten will receive his citation in Washington, D.C., at a National Capital Area Council awards ceremony.

Journalist Robert K. Bellinger received the Award for Distinguished Literary Contributions Furthering Engineering Professionalism, recognizing those who have made outstanding literary efforts to the advancement of IEEE's professional objectives in the United States. Author Eleanor R. Adair and National Public Radio's Richard F. Harris each received the Award for Distinguished Literary Contributions Furthering Public Understanding of the Profession, which recognizes journalistic or other communication efforts that contribute to the enhancement of public understanding of the profession.

Six members were awarded USAB's Regional/Divisional Professional Leadership Award for outstanding efforts in advancing IEEE's professional aims in the United States. R. Steven Brown (Region 6), Oscar N. Garcia (Divisions V and VIII), Gerald F. Jennings (Region 1), John W. Meredith (Region 5), and Glenn R. Thoren (Region 1) received their awards at the Workshop. George J. Simonis (Division I) will receive his award at a later time.

Andrew C. Knapp and Will Stackhouse each received the Professional Achievement Award, recognizing significant contributions, achievements, and individual efforts in the development and implementation of U.S. professional activities. Not present at the ceremony, David M. Ostfeld and Lawrence R. Knapp were also named Professional Achievement Award recipients.



IEEE

TECHNICAL CAREER FAIR

Sponsored by
**The North Jersey Section of
The Institute of Electrical and Electronics Engineers**

Produced by
The Lendman Group
The Nation's Oldest and Largest Job Fair Producer

IEEE JOB FAIR

Monday, January 27, 1992

11:00 a.m. - 2:00 p.m.

4:00 p.m. - 7:00 p.m.

Embassy Suites Hotel - Piscataway

121 Centennial Avenue

Piscataway, New Jersey 08854

and

Tuesday, January 28, 1992

11:00 a.m. - 2:00 p.m.

4:00 p.m. - 7:00 p.m.

Embassy Suites Hotel - Parsippany

909 Parsippany Blvd. (Route 202)

Parsippany, New Jersey 07054

- No cost • No obligation • Confidentiality assured • No pre-registration
- Interviews on the spot with hiring managers in all technical fields
- Degree and two or more years' experience required by participating firms
- For list of participating companies, see the employment section of
THE STAR-LEDGER on Sunday, January 26, 1992

DON'T MISS THE IEEE JOB FAIR!

The Lendman Group • 5501 Greenwich Road • Virginia Beach, VA 23462

