



The IEEE

Newsletter

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

North Jersey Section PACE: **Using The Bulletin Board Systems**

At the October 14, 1993, meeting of the North Jersey Section's Professional Activities Committee for Engineers the topic will be "How To Use The IEEE North Jersey Section Bulletin Board Services." The speaker will be David Perry.

About The Talk

The IEEE Bulletin Board System (BBS) has been on the air now for over 300 days, operating around the clock with 87 users registered so far. The BBS has undergone a series of revisions and a sufficient break-in period to begin use for serious North Jersey Section applications. The BBS is managed by United Societies of Engineering & Science of New Jersey, Inc., for its member societies.

The Job/Skill Bank: An application of primary concern to Section members is the development of a job bank and skill bank that can be controlled by the members themselves. The BBS job bank has the capability to provide users with home computers to upload their skill inventory into the BBS database and download job bank listings. This feature is provided by the BBS public message handling system. The structure of a management team to operate the job bank and the skill inventory will be discussed. In today's job market, this application is of great interest to the membership.

Ways to run the job bank and skill bank service at no cost to the job hunter or employer will be an objective of the BBS.

User/Member Intercommunication: An important feature of the BBS is the ability to send EMAIL from user to user, multiple address messages, ability to send EMAIL form letters and to respond by EMAIL to a company that has placed an

entry in the job bank. In the planning of technical programs and conferences, committee chairmen can reach committee members using multiple address message feature with assurance that the message can be picked up in text form without the ambiguity of voicemail.

Networking Features: This BBS is a member of VirtualNET, a network of over 1000 other SYSOPS here and in Europe and Asia, each running BBS's with 100 or more users. Using this network, it is possible to exchange EMAIL with a large number of users. Messages can tap into other networks such as INTERNET by routing EMAIL through one of the INTERNET gateways. A feature of the BBS software allows the development of other networks independent of VirtualNET. USEnet and JOBSnet are being created as independent networks for other Sections with their own BBS's around the US to link in.

Announcements: Message handling features can be used to supplement the newsletter with information that was not submitted in time to meet publication deadlines.

About The Speaker

David Perry, a Life Member of IEEE has been active in the computer field since 1949. He is active as Executive Director of United Societies of Engineering & Science of New Jersey, Inc. of which the North Jersey Section is a member. He operates a second BBS out of a second home in West Covina, California.

A! Welcome

You do not need to be a member of IEEE to attend this meeting. Come and bring your friends.

Time: 7:30 PM, Thursday, October 14, 1993.

Place: JCP&L Co., 300 Madison Avenue and Punch Bowl Road, Morristown, N.J.

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



NJ Comm/Comp Chapters: **Innovation Cycle Time In Computers & Communications**

On October 19, 1993, Dr. Andy Salazar, Vice-President of AT&T Paradyne (Largo, FL) and its Chief Technical Officer, will present a talk on "Innovation Cycle Time In Computers And Communications."

About The Talk

Today, a U.S. enterprise knows that its property is dependent on a profitable and timely delivery of value to its customers. For a technology-based company, this means that it must bring products and services to bear on customer needs faster and more efficiently than its competitors.

Many products are the result of incremental enhancements achieved over a period of time. For example, in the auto industry a platform on which yearly en-

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NEWSLETTER STAFF

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Business Manager..... A.M. Beattie

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IEEE North Jersey Bulletin Board System:
0 TO 9600 baud, 8 bits, no parity, 1 stop bit,
BBS phone number: 201 669-8268
(Courtesy of United Societies of Engineering & Science of NJ, Inc.)

REPORT ADDRESS CHANGES TO:

IEEE Service Center
445 Hoes Lane, P.O. Box 1331
Piscataway, N.J. 08854-1331
(908) 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

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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. Information on meeting agenda is available from Art Greenberg, Section Secretary at 633-6129
Elected Section Officers are listed above.

INNOVATION CYCLE (Con't From P.1)

hancements were released lasted about eight years during the 1960's and 1970's. Today, that platform interval has shrunk, but it still remains several years in length.

Innovation is the result of both a "breakthrough" invention and time. An invention not delivered in a timely manner to the marketplace can lose great value. Hence, innovation connotes delivery of value to a customer in a novel and creative way that has not been effectively used before.

This talk will focus on the process and cycle time of technology innovation in the fields of computers and communications. Examples of breakthrough inventions in these fields will be given along with a review of their ultimate developments.

The rate at which technology conversion occurs is directly related to how quickly products can be created. Other segments of the value chain to the customer include the presentation, support and servicing of the product. Although new ways in which the value is delivered to the customer can result in innovation. Dr. Salazar will concentrate on the technology stages in which innovation can occur.

The definition of innovation in computers and communications will be reviewed from both a business and technology perspective. Metrics will be presented which can be used to track the level of innovation in such technology-based companies.

About The Speaker

Dr. Andres C. Salazar joined AT&T Paradyne in 1991, where he has served as Vice-President Digital Network Services Development and Product Management, General Manager of Network Connectivity Products and more recently as Chief Technical Officer.

Prior to AT&T he was with Avanti Communications Corp., a private T-1 networking company in Norwood, MA. Dr. Salazar received a PhD in electrical engineering from Michigan State University in 1967. He is also a graduate of the AEA Advancement Management Institute at Stanford University. Author of numerous technical articles, Dr. Salazar was also the editor of "Digital Signal Computers and Processors."

Optional Pre-Meeting Dinner

Come meet the speaker at Pero's New Bridge Inn, 105 Old New Bridge Road, New Milford, N.J. 5:30 PM. Restaurant directions (201) 836-6394. **Reservations for dinner required, (908) 388-5110.**

All Welcome

You do not need to be an IEEE member to attend. Come and bring your friends.

Time: 7:30 PM, Tuesday, Oct. 19, 1993.
Place: Room M-207, Muscarelle Bldg., Fairleigh Dickinson Univ., ~~Teaneck~~, N.J.
Information: Richard G. Estock (908) 388-5110; D. Dietsche (201) 628-3264.

North Jersey PES/IAS:
Talk On World Trade Center Bombing

On October 21, 1993 the North Jersey Power Engineering/Industry Applications Society Chapters will present a talk on "The World Trade Center Bombing." The speaker will be Jack A. Buchsbaum, Chief Electrical Engineer of the Port Authority of New York and New Jersey.

About The Talk

A blast occurred in the B2 level at the south side of the World Trade Center in New York City on Friday, February 26, 1993. The powerful bomb ripped out sections of three structural slabs and their columns in the basement levels under the Vista Hotel, and under the space between the hotel and the two towers.

This explosion raised important questions about the vulnerability of attack on public buildings. And since the blast knocked out most power and emergency systems trapping occupants for several hours, it also raised questions about the design of electrical power systems and vital life safety systems.

Don't miss the opportunity to hear Mr. Buchsbaum report on how the restoration of the World Trade Center was accomplished so fast. See his fascinating slides and video of the disaster. Listen to his amazing story of the cooperation that existed among suppliers, law enforcement authorities, manufacturers, utilities, and departments within the Authority.

Hear Mr. Buchsbaum tell his miraculous story and pick up a few hints and ideas for your own implementation, should you ever be faced with having to "get back up" quickly.

About The Speaker

Jack A. Buchsbaum, P.E., directs a staff of 100+ Electrical and Electronics Engineers in the design of capital projects for all of the Port Authority facilities including Kennedy, LaGuardia and Newark Airports, the Lincoln and Holland Tunnels, the George Washington, Bayonne, Outerbridge and Goethals Bridges and the World Trade Center. A Professional Engineer in New York, New Jersey and Maryland, Mr. Buchsbaum is a graduate of the CCNY School of Engineering and has over 24 years of experience in the public and private sectors. He is a senior member of the IEEE and a member of the NSPE.

All Welcome

Free Pre-Meeting Buffet

Members and guests interested in the meeting topic are invited. Reservations are required for the complimentary pre-meeting buffet which starts at 6:00 PM followed by the meeting at 7:00 PM.

Time: 7:00 PM, Thursday, October 21, 1993.

Place: JCP&L, Punch Bowl Room, 300 Madison Ave., Morristown, N.J.

Reservations/Information:

Ken Oexle (JCP&L) (201) 455-8481; R.V. Rebbapragada (Ebasco) (201) 804-2011

IEEE Princeton Section High Efficiency Quantum Well Laser Structures

On October 21, 1993 the IEEE Princeton Section LEOS Chapter will present a talk on "High Efficiency Quantum Well Laser Structures for Optical Interconnection." The speaker will be P. Daniel Dapkus, LEOS Distinguished Lecturer.

In this talk, Mr. Dapkus will describe device structure designs and fabrication strategies for lasers emitting at several fiber loss and dispersion windows that achieve very high wall plug efficiencies and that are integrable into individually addressable arrays. A comparison of the performance of these devices to the requirements of selected optical interconnect architectures will be discussed.

Time: 5:30 PM, Thursday, October 21, 1993.

Place: David Sarnoff Research Center, Princeton, N.J.

Registration: **Register ASAP** by calling (609) 734-2196 (IEEE Princeton Section LEOS machine). Leave your name, phone number and meeting date.

Dinner: There will be a happy hour and dinner following the talk with location to be announced at the meeting.

Information: Rich Linke, Chairman (609) 951-2632.

Join The Ranks Of Our Senior Members

For information and an application for Senior Member grade, contact Don Weinstein, Kulite Semiconductor, One Willow Tree Rd., Leonia, NJ., 07605-2239, (201) 461-0900, Ext. 3106.

PES Substations Committee "Call For Members"

Join in the work of the Substations Committee. A brochure describing the scope of each subcommittee and related working groups is now available, free of charge, upon request.

Write to: Alan E. Kollar, Ohio Edison Co., 76 South Main Street, Akron, OH 44308. Phone: (216) 384-5552 or FAX: (216) 384-5791.

Neural Networks In Medicine

On October 21, 1993, there will be a Joint North Jersey Computer and Metro EMBS Chapters presentation on "Biomedical Applications Of Artificial Neural Networks." The speaker will be Dr. Evangelia Micheli-Tzanakou.

About The Talk

Neural Networks have found a wide variety of applications due to their flexibility in recognizing and classifying features in a signal. The recognition of patterns of sensory input is one of the functions that the human brain is very efficient in doing and is accomplished by neuronal circuits, the so-called feature extractors.

In Dr. Tzanakou's research, Neural Networks and optimization techniques are used extensively in many fronts such as brain waveform analysis, pattern recognition, arterial pressure waveforms, ultrasound detection of cardiac infarction and prediction of mortality following such.

The optimization technique used in all of these applications is called ALOPEX. It is a feedback method that uses the past history in looking in to the present and in influencing the future. Dr. Tzanakou has used it successfully in decomposing Visual Evoked Potential waveforms, multi-unit recordings from the brains of animals, in arterial pressure motion artifact rejection, and in two dimensional template matching and pattern recognition.

The ALOPEX method acts on all parameters to be optimized, simultaneously in an interactive way. It usually converges faster and in a more concise way than other Neural Network methods. Several versions of the algorithm will be presented and its applications to bio-signal analysis will be discussed.

About The Speaker

Dr. Tzanakou received a BS degree in physics from the University of Athens, Greece in 1968 and the MS and PhD degrees in 1974 and 1977 respectively from the Physics Department at Syracuse University. From 1977 to 1980 she was a postdoctoral fellow in Biophysics at Syracuse University and a consultant at the Eye Defect and Vision Research Foundation of Central New York.

In 1981, Dr. Tzanakou joined the Department of Electrical Engineering at Rutgers University. In 1990 she became a Professor of Biomedical Engineering, and Chairperson of the Biomedical Engineering Department at Rutgers. She is also the Co-Director of the graduate program in Biomedical Engineering co-sponsored jointly with the University of Medicine and Dentistry of New Jersey, where she is an adjunct member of the faculty of the Medical School.

She is a Founding Fellow of AIMBE, a Fellow of IEEE, and a Fellow of the New Jersey Academy of Medicine. Dr.



Tzanakou coauthored a book with S. Deutsch on "Neuroelectric Systems," published by New York University Press, 1987.

Dr. Tzanakou has published a large number of scientific papers both in journals and proceedings. She has served as an Associate Editor for the IEEE "Transactions on Neural Networks." She currently is a member of the Executive Committee of the IEEE Council on Neural Networks.

Her awards include an Outstanding Advisor Award in 1985 from IEEE and in 1992 the Achievement Award of the Society of Women Engineers for outstanding contributions to the analysis and understanding of the visual system using Neural Networks. Her research interest include Neural Networks, Visual Information Processing, Image Processing and Multimodality Imaging.

All Welcome

You do not need to be an IEEE member to attend. Come and bring your friends.

Optional Pre-Lecture Get-Together

Come meet the speaker. Cafeteria snack area, Tower Building (enter building, turn left).

Time: 7:30 PM, Thursday, October 21, 1993. (Pre-lecture get-together 6:30.)

Place: Rockefeller University, Tower Bldg., Room 305, 1200 York Ave., NYC.

Directions: Entrance gate at 66th Street. Free parking. By subway: #6 Lexington Ave. to 68th Street. By bus: M15, M31, M58 or M66.

Further Information: Richard G. Estock (908) 388-5110; Joel Levitt (718) 891-6460; Sol Manber (516) 585-8200.

IEEE North Jersey Section Seminar TECHNICAL WRITING FOR ENGINEERS

Tuesdays, October 12 - December 14, 1993 - 6:30-9:00 PM
JCP&L Co., 300 Madison Ave., Morristown, N.J.

The North Jersey Section IEEE is offering an evening course entitled "Technical Writing for Engineers." This course is structured as five modules delivered in eight 2.5 hour sessions. The instructional approach adheres strictly to an objective-driven format. Each module is geared to a Terminal Objective and several supporting Enabling Objectives.

An Evaluation exercise is completed by the Participant at the end of each module. Each Evaluation challenges the Terminal Objective of the module.

The course is taught by alternating 20-35 minute lecture segments with hands-on exercises. The exercises are provided on typeset handouts, complete with tables, graphs, illustrations, photos, etc. Work Aids accompany each exercise to provide necessary reference materials, standards, formats, procedures, etc.

Lectures are supported by overhead transparencies. Hardcopies of session overheads will be distributed to the Participants before each session.

Instructor: David S. Greenspan of Montville Data Services, Pine Brook, N.J.

Session 1 & 2 - Module 1

Fundamentals of Technical Writing: Introduction; Elements of a Technical Writing Project; Technical Writing Principles.

Session 3 & 4 - Module 2

Contract Solicitations, Specifications, and Proposals: Writing Contract Solicitations, Work Statements and Requests for Proposals; Writing Technical Specifications; Developing Proposal Strategies; Proposal Writing Principles; Standard Proposal Structures.

Session 5 & 6 - Module 3

Technical and Procedures Manuals: Writing Technical Manuals; Writing Procedures Manuals.

Session 7 - Module 4

Technical Reports and Articles: Writing Technical Reports; Writing Technical Articles.

Session 8 - Module 5

Promotional Technical Writing: Writing Technical Copy for Brochures and Catalogs; Preparing Effective Technical Presentations.

Class size will be limited to a maximum of 15 with a minimum registration of 12. Early registration is recommended. Phone reservations will **NOT** be accepted. Reservations accepted after October 6, 1993 will require an additional late fee of \$25.

Where: JCP&L Co., 300 Madison Ave., Morristown, N.J.

When: 8 sessions, Tuesday evenings, starting October 12, 1993 6:30-9:00 PM.

Cost: IEEE Members \$200; non-IEEE Members \$280.

Contact: Mr. John A. Baka at (201) 455-8534 (Business)

Registration "Technical Writing for Engineers"

To: Mr. John Baka, Distribution Engineering, Jersey Central Power & Light Co.,
300 Madison Ave., Morristown, N.J. 07962-1911.

Name _____ IEEE No. _____

Affiliation _____ Phone No. _____

Address _____

Please enclose required fee made payable to "North Jersey Section IEEE"

North Jersey MTT/AP: Review Of Modern Filter Technology

On October 21, 1993 the IEEE North Jersey Section MTT/AP Chapter will present "A Review Of Modern Filter Technology." The speaker will be Dr. Richard V. Snyder of RS Microwave Co. Inc.

About The Talk

"FILTER: a device or material for suppressing or minimizing waves or oscillations of certain frequencies"...per Webster. Such a short definition to describe the myriad of techniques and tricks which pertain! All microwave components or systems exhibiting Q values of greater than 1 are in fact filter networks. Circulators, switches, mixers, amplifiers, etc. include "imbedded" matching and filtering properties which must be incorporated into the design.

At least three fundamental changes have had, are having, or very well could have significant impact on filter design and realization. These impact items are the desktop computer, active implementations of passive designs, and superconductivity. On top of these, a host of smaller developments in efficient network design (generalized cross-coupling, use of three dimensional coupled networks), dielectric resonators and materials, processing capability, machining precision, nanotechnology, surface mount technology and others have emboldened the filter designer to seek better performance, smaller size and reduced manufacturing cost. As digital circuits increase in speed and complexity, a fourth major change area is likely to impact the design of RF filters, which have traditionally been analog in implementation.

About The Speaker

Richard V. Snyder is the President and founder of RS Microwave, a well-known manufacturer of RF and Microwave filters. He is the author of numerous papers on the subject of filters and couplers and the holder of 11 patents. He was 1992 IEEE North Jersey Section Chairman and is Chapter Chairman for the MTT and AP Societies. He is a reviewer for several MTT publications, teaches various filter and network courses and serves MTT-ADCOM on special assignments.

All Welcome

Members and guests interested in the subject are invited. Refreshments will be served. Reservations are not required for this meeting.

Time: 7:00 PM, Thursday, October 21 1993.

Place: ITT Avionics, 100 Kingsland Road, Clifton, N.J. (New auditorium across from Tower.)

Information: Dick Snyder (201) 492-1207; Gary Fontaine (201) 284-3068; Willy Schmidt (201) 492-0371.

No. Jersey Section IAS: Intrinsic Safety

On October 21, 1993, the North Jersey Section Industrial Applications Society will host a presentation on "Intrinsic Safety." The speaker will be Stephen V. Norako.

About The Talk

In the 1990 National Electric Code, Intrinsic Safety was officially recognized as a method of applying certain types of electrical equipment in areas hazardous as defined by article 500 (due to the presence of combustible substances). To date, new article 504, as well as the whole topic of Intrinsic Safety, have lead to much confusion and misunderstanding. This presentation will address this alternate method by:

a) Briefly discussing hazardous areas and other methods currently used to prevent external ignition and explosion

b) Explaining intrinsic safety basics, the circuit components, benefits, design criteria, and some examples.

About The Speaker

Stephen V. Norako of the Crouse-Hinds Division of Cooper Industries, serves on the Executive Advisory Board of the New Jersey chapter of the International Association of Electrical Inspectors (IAEI) where he chairs the codes and standards committee and is also on the Executive Committee of the

Metropolitan Electrical League of New Jersey, chairing the educational program committee. Mr. Norako holds a BSEE from Fairleigh Dickinson University.

Time: 7:00 PM, Thursday, October 21, 1993.

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

Information: Ken Oexle (201) 455-8481.

Vehicular Technology Soc.: Wireless Data Applications

On October 21, 1993, the North Jersey Chapter of the IEEE Vehicular Technology Society will present a talk on "Wireless Data Applications." The speaker will be Mr. Run Ku.

About The Topic

The talk will focus on the technologies and applications of wireless data. Mr. Ku will begin by discussing the current industry wireless data trends, and continue on to the wireless WAN and LAN technologies such as Ardis, Mobitex, Cellular Digital Packet Data (CDPD), IEEE 802.11 standards, and the Hiperlan (a European wireless LAN standard). Then the talk will move on to discussions about how the wireless LAN actually networks with a corporate data network to provide for the mobile computing needs, as well as some associated integration issues.

About The Speaker

Mr. Run Ku is a technical manager at AT&T Wireless Systems and Services Architecture Laboratory, AT&T Bell Laboratories in Whippany, N.J., where he is responsible for defining AT&T's next generation wireless systems including AT&T Cellular, PCN and Wireless Data Corporate Architectures. Mr. Ku has played key roles in development projects at AT&T Digital Cellular Systems for AMPS and GSM standards as well as defining the future PCN service architecture. He currently is developing the next generation wireless data architecture for a mobile computing environment. He received the BE degree from Chung-Yuan University in Taiwan and the MS degree from Stevens Institute of Technology. He joined AT&T Bell Labs in 1985.

All Welcome

You do not need to be an IEEE member to attend. Come, and bring your friends. There is no charge for admission. Light refreshments will be served.

Time: 7:30 PM, Thursday, October 21, 1993.

Place: NJIT, Seminar Room, Alumni Center, Summit St., and Central Ave., Newark, N.J.

Further Information: Mr. Melvin Lewis (914) 968-2500, ext. 2304; or Arthur Greenburg (201) 633-6129.

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PACE NEWS *by Richard F. Tax*

VOTE VOTE VOTE

Of course, we can only do this once in each election, but it does pay off and in some cases it will affect your future. So, if you haven't mailed in your IEEE Ballot, please find it and use it.

Two things are responsible for addressing your opportunity to vote in this issue in our "NEWSLETTER." The first was meeting three of the four candidates on our annual IEEE ballot. The second was because a few people called me and asked for my opinion and choice of candidate.

Voting, for our North Jersey Section members, is really important because there are 5000 of us and we can sway every election affecting our Section, membership and Region I. Someday, when our Section officers have had enough of the IEEE Board of Directors' chicanery we may place issues on the ballot for you to support, but until then just vote and show your support.

Back to the first item. I attended the Region I conference at Lake George on the last weekend in August where I met Luis T. Gandia, candidate for IEEE President-Elect, Richard A. Ackley and Arthur E. Hudson, candidates for Region Delegate/Region Director, Region I, 1994-1995. I have known Richard Ackley and Arthur Hudson for a number of years because of our activities and participation at the Region I level. Both are competent, active people that will serve our

members and the Region very well, so the choice is a tough one. Luis T. Gandia and James T. Cain are candidates for President-Elect of IEEE and the winner will serve as IEEE's president in 1995. I have read the information provided, with the ballot, about these two candidates. I have discussed issues with Mr. Gandia, heard him talk at the Region I meeting. I have discussed the candidates with other knowledgeable members whose opinions I respect. Mr. Gandia and Mr. Cain are so far apart on issues that the selection for me is an easy one. Luis Gandia clearly is interested in the membership, industry and the engineering professional. James Cain sees the global IEEE, education and publications as paramount. I believe the member needs and the Sections come first.

Since my opinion was asked for, you shall have it, but don't waste your time or vote by selecting a "Write-In." You will just be throwing your vote away. Vote, because it doesn't cost you anything and you will make an impression. North Jersey is one of the strongest Sections in IEEE and don't forget it.

Luis Gandia is my choice for President-Elect. Arthur Hudson is my choice for Director of Region I. I hope you will extend yourself not only in your support for these candidates, but in your efforts to get others to support them.

IEEE AWARDS RECEPTION

North Jersey Section

October 22, 1993

Birchwood Manor, Whippany, N.J.

A time to relax, unwind and enjoy—

A time to pay tribute to our New Fellows —

A time to honor our new Senior Members —

YES it's time for the Annual Section Reception

The Annual Section IEEE Awards Reception will be held this year again at the Birchwood Manor in Whippany. The affair is scheduled for Friday evening, 7 - 9 PM, October 22, 1993. Tickets are \$25.00 each and this includes a complete prepaid, two-hour open bar, hors d'oeuvres, buffet, and dessert. Spouses and all guests are welcome.

Reservations required by October 12, 1993. Complete the reservation form below and return it with your payment. If any additional information is required concerning the Reception, contact Anne Giedlinski at 455-8556.

Use this form for Reception reservations enclosing a stamped self-addressed envelope. **Reservations required by October 12, 1993.** Mail reservation request to:

Anne Giedlinski
299 Brooklake Road
Florham Park, NJ 07932

Enclosed is _____ Please forward ____ tickets at \$25.00 each (make checks payable to **North Jersey Section IEEE**) to:

Name: _____

Address: _____

Zip: _____

No. NJ Consultants' Network: How To Promote And Advertise Your Small Business

On October 28, 1993 the IEEE Consultants' Network of Northern NJ will present "How To Promote And Advertise Your Small Business," a talk by Lloyd Feinstein, President of Career Marketing Consultants, and author of the recent book entitled "Career Changing: The Worry-Free Guide", published by Little, Brown & Company.

About The Topic

If you are thinking about starting your own business or are currently operating one, this workshop will present a strategy for achieving your immediate business objectives. Understanding the balance between advertising/promotion and providing your product or service along with time tested techniques will be the main focus. Topics include: the 80/20 rule, writing press releases, principles of advertising and writing direct mail pieces, yellow page advertising, how to plan a promotion campaign, how to track its

effectiveness and much more.

Bring copies of your marketing/promotion pieces for a free evaluation. Also bring your pencil, pad and an open mind...you won't be disappointed!

About The Speaker

Lloyd Feinstein has been president of his own company, Career Marketing Consultants, for the past nine years. Prior to that he was director of human resources for Oppenheimer & Company. Lloyd is a forceful and dynamic speaker who keeps his audience fully involved and enthusiastic. He speaks with substance and illustrates his topics with current pertinent examples.

About The Consultants' Network

The IEEE Consultants' Network of Northern NJ was founded in April 1992 to encourage and promote the use of independent technical consultants by business and industry. Meetings are held on the last Thursday of each month at GEC-Marconi. The Network distributed its first Directory of Consultants in March '93. For a complimentary copy, call Alex Richardson (201) 992-0448.

Optional Pre-Meeting Dinner

Members of the NJ Consultants' Network are invited to come and meet the

speaker at the Steak and Ale Restaurant in the American Way Mall on Rte 46 Eastbound, (right next to Bennigans—after Passaic Ave. and before Willowbrook), in Fairfield, N.J. For directions, call (201) 227-2134. For reservations **(REQUIRED)**, call Frank Scholten (201) 994-9819.

Time: 7:30 PM, Thursday, October 28, 1993.

Place: GEC-Marconi Facility, 150 Parish Drive, Wayne, NJ.

Directions: From Intersection of Rte. 23 and Rte. 46, approx 1 mile east to Riverview Drive. North on Riverview for 1.5 miles to traffic light at golf course. Go straight on Valley Road to next light; turn left onto Parish Drive. Follow to "T"; left turn for 2 short blocks to Dey Rd. Left on Dey Rd. GEC entrance approx. 100 ft. on right side.

Information: For alternate directions and up-to-date meeting status call (201) 736-0771 (Walker Elec. Services VOICE MAIL - 24 hrs). For other questions regarding the meeting or the Consultants Network, call Jim Boyd (201) 584-0329.

Center for Continuing Education WILLIAM PATERSON COLLEGE Wayne, New Jersey

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C for novices (Two days)
C for Programmers (Two days)
C++ for C Programmers (Four days)
C++ for Programmers (15 weeks)
BASIC (Two days)
Novell Netware (Two days)
Computer Music (Using Performer and Galaxy)
Desktop Video Production (Using Toaster)
PC Hardware

North Jersey Section Activities

OCTOBER

October 6, 1993—"North Jersey Section Executive Committee Meeting"—7:00 PM, Plant 11, GEC-Marconi, 164 Totowa Rd., Totowa, N.J. Art Greenberg (201) 633-6129.

Oct. 12-Dec. 14—"Seminar: Technical Writing For Engineers"—IEEE North Jersey Section, Eight Tuesday Sessions, 6:30-9:00 PM, JCP&L, 300 Madison Ave., Morristown, N.J. John Baka (201) 455-8534.

Oct. 14—"Using The Bulletin Board Systems"—North Jersey Section PACE, 7:30 PM, JCP&L Co., 300 Madison Ave. and Punch Bowl Rd., Morristown, N.J. Robert Sinusas (201) 228-3941.

Oct. 19—"Innovation Cycle Time In Computers And Communications"—Joint NJ Communications & Computer Chapters, 7:30 PM, Fairleigh Dickinson University, Room M-207, Muscarelle Bldg., Teaneck, N.J.

Oct. 21—"The World Trade Center Bombing"—North Jersey PES/IAS, JCP&L, 7:00 PM, Punch Bowl Room, 300 Madison Ave., Morristown, N.J. Ken Oexle (JCP&L) (201) 455-8481.

Oct. 21—"Review Of Modern Filter Technology"—North Jersey Section MTT/AP Chapter, 7:00 PM, ITT Avionics, 100 Kingsland Road, Clifton, N.J. Dick Snyder (201) 492-1207.

Oct. 21—"Intrinsic Safety"—North Jersey Section IAS, 7:00 PM, Jersey Central Power & Light Co., 300 Madison Ave., Morristown, N.J. Ken Oexle (201) 455-8481.

Oct. 21—"Neural Networks In Medicine"—Joint North Jersey Computer and Metro EMBS Chapters, 7:30 PM, Rockefeller University, Tower Building, Room 305, 1200 York Ave., NYC. Joel Levit (718) 891-6460

Oct. 21—"Wireless Data Applications"—North Jersey Chapter Vehicular Technology Society, 7:30 PM, NJIT, Seminar Rm., Alumni Ctr., Summit St. and Central Ave., Newark, N.J. Melvin Lewis (014- 968-2500, ext. 2304.

Oct. 21—"High Efficiency Quantum Well Laser Structures For Optical Interconnection"—IEEE Princeton Section LEOS Chapter, 5:30 PM, David Sarnoff Res. Ctr, Princeton N.J. Rich Linke, Chairman (609) 951-2632.

Oct. 22—"Annual IEEE North Jersey Section Awards Reception—Friday Evening 7:00-9:00 PM, Birchwood Manor, Whippany, N.J.

Oct. 23—"Seminar: Reliability Assessment—An Essential Ingredient Of Managing Quality And Cost"—IEEE NJ Section IAS/PES Chapters, Saturday, 9:00 AM-2:00 PM, Meadowlands Hilton, Secaucus, N.J. V. Rebbapragada (201) 804-2011.



Oct. 25—"If Not The Big Bang, Then What?"—NJ Systems, Man & Cybernetics Chapter and NJIT Student Chapter, 7:30 PM, Room 202, Electrical & Computer Engineering Bldg., NJIT, Newark, N.J.

Oct 28—"Videoconference: '2020 Vision: The Information Era' "—North Jersey Section and NJIT Student Chapter, 11:45-3 PM, Guttenburg InfoTech Building, NJIT, Newark, N.J.

Oct. 28—"How To Promote And Advertise Your Small Business"—Consultants' Network of Northern NJ, 7:30 PM, GEC-Marconi Facility, 150 Parish Drive, Wayne, N.J.

Upcoming Meetings

Nov. 3—"North Jersey Section Executive Committee Meeting"—7:00 PM, Plant 11, GEC-Marconi, 164 Totowa Rd., Totowa, N.J. Art Greenberg (201) 633-6129.

Nov. 4—"9th Annual Symposium And Mini-Show"—No. Jersey & Princeton Sections MTTAP-S/LEOS/COMM., 1:00-8:30 PM, David Sarnoff Research Labs., Princeton, N.J. Dick Snyder (201) 492-1207.

Nov. 9—"Seminar: Communication, Diversity and Creativity"—Engineering Management Society NY/NJ Joint Chapter Seminar, 6:30-9:30 PM, The Williams Club (Chandler Room), 24 E. 39th St., NYC. Al Connelly FAX (201) 831-8171.

Nov. 16—"The Use Of Name Spaces In Plan 9"—NJ Computer and NJIT Student Chapters, 7:30 PM, Room 202, ECE Bldg., NJIT, Newark, N.J.

Nov. 16—"Fall 1993 Special Study Group No. 73: Principles And Practices Of Grounding Systems"—NY/LI PES&IAS, 5 Sessions, 6:00-8:00 PM, Raytheon Engineers & Constructors, 11 Penn Plaza, NYC. See article for contact.

Nov. 18—"NJ Uniform Construction Code And 1993 NEC Update"—No. Jersey Section IAS, 7:00 PM, JCP&L Co., Punch Bowl Auditorium, 300 Madison Ave., Morristown, N.J. Ken Oexle (201) 455-8481.

Nov. 30—"Intelligent Highways And Vehicular Systems"—NY Section Education Committee, 9:00 AM-5:00 PM, Con Edison Co., Auditorium, 19th Floor, 4 Irving Pl., NYC. Nicole McFarlane (201) 216-6020.

Dec. 2—"Videoconference: Engineering Applications For Monte Carlo And Other Simulation Analyses"—North Jersey Section and FDU Student Chapter, 8:30 AM-3:00 PM, FDU Teaneck and Hackensack Campuses.

Dec. 7—"Use of OO Technologies In Science & Engineering Applications"—North Jersey Computer Chapter, 7:30 PM, Room M-207, Muscarelle Bldg., Fairleigh Dickinson University, Teaneck, N.J.



Members and Non-Members Welcome
PLEASE POST



IEEE-IAS and PES Chapters, NJ Section Seminar on "Reliability Assessment -An Essential Ingredient of Managing Quality and Cost"

Date: Saturday, October 23, 1993 - 9AM - 2PM (Registration 8:30-9:00 AM)

Place: Meadowlands Hilton, Two Harmon Plaza, Secaucus, NJ 07094

Phone: (201) 348-6900

On Saturday, October 23, 1993 the IEEE North Jersey Section Power Engineering and Industry Application Society Chapters will host a panel seminar on the fundamental techniques dealing with Reliability Assessment and its crucial role to manage quality and cost of complex electrical equipment and systems forming an integral part of Industrial/Commercial/Utility power distribution system.

Equipment failures are major causes and contributors to the degradation of electrical plant/system performance leading up to increased product costs and reduction in quality of the process. The symposium will focus on the basic concepts that the engineers need to understand and the various techniques that will be used for making reliability assessment with the objective of improved plant capacity factors, quality of service and maintenance.

WHO SHOULD ATTEND: Electrical Plant Design Engineers, Maintenance Engineers, Electrical Substation/Distribution Engineers and Plant Power System Planners.

The seminar will be given by speakers with in depth knowledge and experience covering reliability analyses, reliability centered maintenance and application of reliability techniques to manage quality and costs. R. V. Rebbapragada, Ebasco Services Inc., Chairman of PES North Jersey Chapter and Ken Oexle, Jersey Central Power & Light are the Co-Chairmen for this symposium.

The Seminar will cover the following topics:

Introduction:	Mr. Ken Oexle, Chairman, Sr. Member - IEEE JCP&L
Electrical Equipment & Systems. Their contribution to Plant Unavailability and Revenue Loss - An IEEE Std. 493 perspective.	Mr. R. V. Rebbapragada, Sr. Member IEEE Ebasco Services Incorporated
Fundamentals and Techniques of Reliability Assessment and Evaluation Benefit	Dr. M. P. Bhavaraju, Fellow - IEEE, PSE&G
Reliability Measurement for Management Decision Making	Dr. M. Liechenstein, Fellow-IEEE Integrated Technology Serv.
Management and Analysis for Reliability Growth	Dr. L. H. Crow, Sr. Member - IEEE, AT&T Bell Labs
Reliability Centered Maintenance, RAM Data Development and Human Reliability Analyses	Dr. R. McFadden Fellow-IEEE, Science Applications International Corporation
Models for Managing Cost of Reliability	Dr. R. W. Sears, Sr. Member - IEEE, AT&T Bell Labs
Case Study/Example: Reliability Analysis of an Industrial Plant Electrical Distribution System	Mr. R. Bucci, Sr. Member IEEE Ebasco Services Incorporated

Registration will take place 8:30-9:00 AM. Coffee and Danish will be available. Seminar Speaker Presentations will commence following a brief introduction by Mr. Ken Oexle.

Cost - including materials, morning refreshments and luncheon: \$195 for Non-Members, \$150 for IEEE Members, and \$50 for students with valid I.D. All registered attendees will receive a complimentary copy of IEEE Std. 493, "Design of Reliable Industrial and Commercial Power Systems."

To reserve your place, make check or money order payable to "IEEE-North Jersey Section" and mail it to Vittal Rebbapragada, Ebasco Services Inc., 1280 Wall Street West, Lyndhurst, NJ 07071, to reach on or before 10/8/93.

For further information and or late registration contact Vittal Rebbapragada (201) 804-2011; Ken Oexle (201) 455-8481. For Directions to Meadowlands Hilton call (201) 348-6900



Systems, Man & Cybernetics & NJIT Student Chapter If Not The Big Bang, Then What?

The NJ Systems, Man & Cybernetics Chapter and NJIT Student Chapter are sponsoring a talk on October 25, 1993. Tom Van Flandern of Meta Research, Washington, DC, will present a talk entitled "If Not The Big Bang, Then What?"

About The Talk

The Big Bang theory has fallen on hard times lately. The smoothness of the microwave radiation is inconsistent with the lumpiness of clusters of galaxies. More invisible "dark matter" than ever is required to explain things; but observations keep failing to detect any of it. Element abundance predictions are now failing. Even the velocity nature of the cosmological redshift of galaxies is being doubted because of the discovery of some quantized redshifts.

Within the past year, several new observations have caused new devastating blows to the Big Bang model. Perhaps the most critical of these concerns quasars. If quasars are at the distances indicated by their redshifts, as the Big Bang model requires, then the angular rate of expansion of jets in about two dozen quasars would correspond to faster-than-light linear motion. That is "explained" by Big Bang proponents as an optical illusion caused by relativity. But that possibility has recently been tested, and it was determined that the relativity illusion was not operating. It therefore seems safe to conclude that quasars are not at such great distances, and the Big Bang is in trouble as a viable model.

The main competitors up to now, the Steady State model and Plasma Cosmology, both have their problems as well. But in a new book, the speaker has described another alternative: the Meta Model—the first cosmology deduced

entirely from first principles. It works in flat space-time, allows faster-than-light travel, explains the "how" and "why" of gravity, and gives new insight into the nature of space, time, and matter.

This talk will suggest some interesting answers to such fundamental questions as "What came before the Big Bang?" and "How can the universe have size limits?"

About The Speaker

Dr. Van Flandern received his PhD degree in Astronomy from Yale University in 1969. He spent 20 years at the U.S. Naval Observatory, where he became the Chief of the Celestial Mechanics Branch. Tom has now formed his own Washington, DC-based company, Meta Research, to foster research into ideas not otherwise supported because they conflict with mainstream theories in Astronomy.

North Atlantic Books has just published his book, "Dark Matter, Missing Planets and New Comets." Like his research papers, the book is critical of many standard models in astronomy, such as the Oort Cloud, the Dirty Snowball, and the Big Bang theory. In the fall of 1994, Tom will lead the Eclipse Edge Expedition to view the November 3 total solar eclipse from northern Chile.

During his career as a professional research astronomer, Tom has been honored by a prize from the Gravity Research Foundation; served on the Council of American Astronomical Society's Division on Dynamical Astronomy; taught astronomy at the University of South Florida; been a consultant for the Jet Propulsion Lab in Pasadena; and done several spots for the "Project Universe" series that continues to air occasionally on public TV.

All Welcome

IEEE members, come and bring your non-member friends.

Time: 7:30 PM, Monday, Oct. 25, 1993.

Place: Room 202 in the Electrical and Computer Engineering (ECE) Bldg., New Jersey Institute of Technology, Newark.

Directions/Parking: The ECE Bldg. is located at the corner of Warren and Summit Streets and is adjacent to Faculty Memorial Hall, Raymond Blvd. to Warren Street. Turn right onto Warren St., then one block to Colden. Turn right and enter Parking Deck for reserved IEEE parking. (Overflow parking at Lots 12, 12A, 12B and 12C on Lock Street between Central and Sussex Avenues. Additional open parking available at Lot 18, corner of Sussex Ave. and Nesbitt St.)

Optional Pre-Meeting Dinner: Come meet the speaker. 5 PM. Forno's of Spain Restaurant, 47 Ferry Street, Newark. Free parking in rear of building. Restaurant directions, (201) 589-4767. **Reservations for dinner required** (908) 388-5110.

Information: Dr. Michael Liechenstein (201) 471-0721 or Richard G. Estock (908) 388-5110.

'94 SECTION ELECTION NOTICE

The Nominations Committee has nominated the following to serve as 1994 officers of the North Jersey Section Administrative Committee (ADCOM):

Chairperson:	Vittal Rebbapragada
Vice Chairman-1:	Thomas De Nigris
Vice Chairman-2:	Al Connelly
Treasurer:	Art Greenberg
Secretary:	Mel Lewis
Members-At-Large (3):	Har Dayal
	Dave Dietsche
	Richard Estock

All have indicated that they will serve in the positions nominated.

The official election of officers will take place in the fall. IEEE members in good standing may nominate an IEEE member or themselves for any of these positions. The term of office is: 1 January 1994 to 31 December 1994 (1 year term).

Petition Nominations

Nominations in addition to those made by the Nominating Committee may be made by petition from the membership. Such nominations must be signed by not fewer than 25 voting members of the North Jersey Section and transmitted to the Section Secretary for submission to the Executive Committee not later than October 25, 1993. The petition must certify that the person(s) nominated have agreed to serve, if elected.

NY/LI PES & IAS: Fall 1993 Special Study Groups

The Power Engineering Society and Industry Applications Society NY/LI Chapter will offer their Fall 1993 Special Study Group No. 73 "Principles And Practices Of Grounding Systems" The five sessions will commence Tuesday, November 16, 1993.

Topics include:

Basics and Introduction to Power Grounding; Grounding of Industrial and Commercial Power Systems; Health Care Facilities; Computer Facilities; Substation Grounding, Tolerable Touch and Step Voltages; Physics of Lightning and Grounding Systems Used for Lightning Protection.

All sessions will be held at Raytheon Engineers and Constructors (Formerly Gibbs & Hill), 11 Penn Plaza, NYC.

For registration information contact: John Pascu, Chairman, Education Committee, IEEE NY/LI PE&IAS Chapter, c/o Parsons Brinckerhoff, One Penn Plaza, New York, NY 10119.



IEEE VIDEOCONFERENCES SEMINARS VIA SATELLITE

North Jersey Section & NJIT Student Chapter **2020 Vision: The Information Era**

On October 28, 1993, the sixth videoconference of the year sponsored in conjunction with the NJIT Student Chapter, will be "2020 Vision: The Information Era." The presenters will be Irwin Dorros, Howard N. Miller and Paul Saffo. The three presenters are visionaries from the telecommunications, television and computer industries.

About The Videoconference

This videoconference will take attendees to the engineering future and give them a view of the information era in the year 2020 and beyond. Telecommunications, computing, and entertainment are merging into one "information industry" due to the digital revolution and other enabling technologies. The possibilities brought about by easy access to information will change all facets of our daily lives.

About The Presenters

The lead presenter will be Irwin Dorros of Bell Communications Research (Bellcore). As Vice President of Technical Services, Dr. Dorros is responsible for all technical activities, comprising applied research, systems engineering and software development, on behalf of the seven regional Bell companies. Dr. Dorros has led the creation of the technical services portion of Bellcore and has guided the execution of its programs. Bellcore's role now is recognized as a key technical resource to the Bell exchange carries and to the industry.

The second presenter will be Howard N. Miller, Senior Vice President, Broadcast Operations, Engineering and Computer Services for the Public Broadcasting System (PBS). He is responsible for operating public television's satellite interconnection system, overseeing the computer services department, and directing the satellite replacement project. He is also responsible for pro-

viding technical leadership and support for, as well as sponsoring technical innovations on behalf of the 346 public television stations throughout the US.

The final presenter will be Paul Saffo, Research Fellow of the Institute for the Future. The Institute is a 25 year-old not-for-profit management consulting foundation that provides long-range planning and forecasting services to Fortune 100 companies and government agencies. A specialist in long-term commercial impacts of new information technologies, Paul devotes much of his time to making sense of structural shifts occurring at the intersections of the computer, consumer electronics, and communications industries.

Next Videoconference

The seventh and last videoconference in the 1993 series will take place December 2nd on "Engineering Applications For Monte Carlo And Other Simulation Analyses." Information on this videoconference is shown elsewhere in this newsletter.

New Admission Policy

Due to increased expenses associated with bringing the videoconferences to the membership, a new admission policy is being instituted. The general public is now invited to attend. Admission for non-IEEE members is \$65 with pre-registration, \$75 at the door. IEEE members may attend for \$20 pre-registered, \$30 at the door (**IEEE membership card required**). All participants will receive a set of the conference notes; those planning to walk-in should telephone a day ahead to reserve a set of conference notes.

A special discount is being offered to non-IEEE attendees who are employees of companies who are members of the American Electronics Association: \$45 pre-registered, \$55 at the door (**company employee identification required**).

IEEE student members may continue to attend videoconferences at no charge, except that students will not receive a set of the conference notes. However, any student wishing a set may purchase same for \$10.

To pre-register, mail check payable to "IEEE North Jersey Section" to Richard G. Estock, c/o EDP Consultants Inc., 77 Meredith Road, Colonia, NJ 07067-3198. Important! Please include the following information on the front of your check: name, address, telephone number, IEEE membership number (if applicable) and name of videoconference. Pre-registrations must be **received by the Monday preceding the broadcast date**.

Videoconference Playback

Due to poor participation, the evening playback of the taped videoconference is being discontinued.

Disabled Or Handicapped Members

Any IEEE member who is disabled or handicapped and who is unable to attend the live broadcast may request to borrow the videotape of the conference for viewing on his or her home VCR. Cost will be at the IEEE member pre-registration rate of \$20. **The Guttenburg InfoTech building at NJIT is otherwise fully accessible to the handicapped.**

Time: 11:45 AM - 3:00 PM, Thursday, October 28, 1993. Participants should plan to arrive by 11:30 AM to check-in and pick up their set of conference notes.

Place: Room 1400, Guttenburg InfoTech Bldg., NJIT, Newark, N.J. **The lecture hall and rest rooms are handicapped accessible.**

Parking: Arrangements are being made for attendees to have access to one of the nearby parking lots.

Directions: Raymond Blvd. to Warren Street. Turn right onto Warren St., then one block to Colden. Turn right and enter Parking Deck for reserved IEEE parking. Overflow parking at Lots 12, 12A 12B, and 12 C on Lock Street between Central and Sussex Avenues. Additional open parking available at Lot 18, corner of Sussex Ave. and Nesbitt St. The Guttenburg InfoTech Bldg. is located at the corner of Central Ave. and Lock St., with the main entrance on Bleeker St. (south side of bldg.). Bleeker St. is closed to vehicular traffic.

Further Information: Richard G. Estock (908) 388-5110.

New York Section Education Committee: **Intelligent Highways And Vehicular Systems**

On Tuesday, November 30, 1993 from 9:00 AM to 5:00 PM, the IEEE New York Section Education Committee will present a Seminar on "Intelligent Highways and Vehicular Systems."

This Seminar will be held at the Auditorium on the 19th floor of the Headquarters of the Consolidated Edison Co. of NY, 4 Irving Place, New York City.

Topics will cover the advanced concepts of radar, infrared and optical systems and encrypted communications to provide enhancement of safety of ground mobile vehicles along the highways, bridges, tunnels and streets. Efficiencies of travel in terms of automated tolls, weather information, position notification, speed monitoring and control, collision avoidance, theft deterrence and rapid assistance in case of equipment failure are discussed.

The seminar also provides discussions of the policies of governmental bodies vis-a-vis the intelligent highways and

vehicles. Thus engineers who have a defense background would readily find analogous applications in their own backgrounds. Easy transference of knowledge of systems and technology as well as the guidance of government policies, from the Department of Defense (DOD) to the Department of Transportation (DOT) is indicated.

Non-DOD oriented engineers will also find this seminar useful, because it will provide an important educational adjunct to their background: Transportation development for the next 20 years.

For information on registration, fees required etc. contact Nicole McFarland at PATH, Phone: (201) 216-6020; FAX (201) 216-6305.

No. Jersey Section IAS: NJ Uniform Construction Code 1993 NEC Update

On November 18, 1993, the North Jersey Section Industrial Applications Society will host a presentation on "The NJ Uniform Construction Code And 1993 NEC Update." The speaker will be Won Kim, P.E., Principal Project Engineer with Schering Laboratories.

About The Talk

The program is intended to familiarize engineers who are involved in projects and construction with the requirements of the Uniform Construction Code and the discussion will include some of the major changes in the 1993 National Electric Code.

About The Speaker

Won Kim is a Professional Engineer in New Jersey and is a licensed Electrical Inspector. He is a graduate of the University of Minnesota where he received his degree in Electrical Engineering. He has spent over twenty years in New Jersey as a Facilities Engineer and Consulting Engineer before joining Schering Plough.

Time: 7:00 PM, Thursday, November 18, 1993.

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

Information: Ken Oexle (201) 455-8481.

IEEE AWARDS RECEPTION

**North Jersey
Section
October 22, 1993
Birchwood Manor**

IEEE Engineering Management Society New York — North Jersey Joint Chapter Seminar

Communication, Diversity and Creativity

Tuesday, November 9, 1993 6:30 - 8:30 PM

The Williams Club (Chandler Room)

24 East 39th Street (between Madison & Park Avenues)
New York, N.Y.

With this seminar, our joint chapter will address the following important human aspects of engineering management that we let all too often fall in the cracks: Effective interpersonal communication, understanding people diversity and fostering creativity and innovation.

The seminar will be led by Dr. Sotiris C. Kitsopoulos, Senior Partner of InterConsult, an international management development firm based in Athens, New York and Zurich. The speaker, a senior member of the IEEE, is a veteran of both AT&T Bell Laboratories, Murray Hill, N.J. and IBM Research, Zurich, Switzerland. He has published two books and more than two dozen refereed or invited articles on engineering and management subjects. He also holds twelve US patents and is listed in "Marquis' Who Is Who in Science and Engineering" and "Who Is Who in the World."

During the evening we shall have ample opportunity to get better acquainted with each other and to network in the elegant surroundings of the Williams Club while nibbling at luscious tidbits for a cost of \$18.00 including two drinks. If you do not register in advance, the price at the door will be \$20.00. Please rush the coupon below by mail (including your check payable to "North Jersey Section IEEE") or FAX (with your signature promising to bring the check) to:

**Al Connelly, Treasurer
IEEE North Jersey Section
49 Channing Drive
Ringwood, NJ 07456
Tel./FAX: (201) 831-8171**

Registration Coupon "Communication, Diversity and Creativity" Seminar 11/9/93

**TO: Al Connelly, 49 Channing Drive, Ringwood, NJ 07456." Deadline
for receipt of the coupon is Thursday, November 4, 1993.**

Name _____ Title: _____

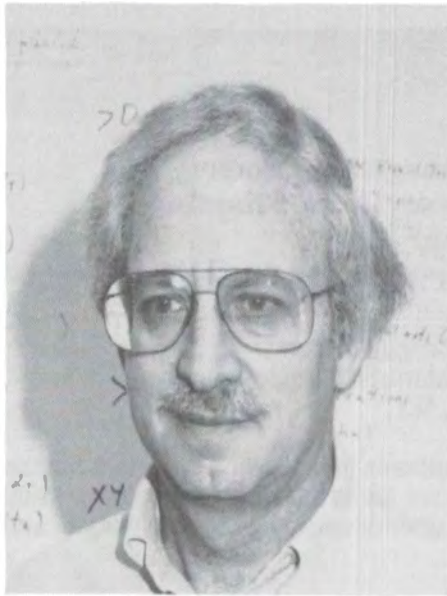
IEEE No.: _____ Tel.: _____ Fax: _____

Company: _____

Address: _____

Please make checks payable to "North Jersey Section IEEE"

Signature (if faxed to (201) 831-8171): _____



NJ Computer Chapter: OO Technology In Climate Prediction, Other Applications

On December 7, 1993 the IEEE NJ Computer Chapter will present a talk on "The Use Of Object-Oriented Technologies In Science And Engineering Applications". The speaker at this meeting will be Dr. Richard L. Peskin of the CAIP Center, Rutgers University, Piscataway.

About The Talk

Object-Oriented software technologies have been promoted recently because of their possible impact on software engineering, primarily in the areas of code organization, control and reuse. Historically, object-oriented programming was developed because of its implications for simulations.

These "behavior-oriented" aspects of OOP may ultimately be more important to the scientist and engineer than its purely software features. OOP provides the simulation creator with a paradigm that clearly relates the components of physical world to their computational abstractions (as modelled by code objects). The dynamics of real world objects are simulated by the "behavior" of code abstractions in response to "messages."

In this talk, Dr. Peskin will discuss the OOP paradigm in the context of a real software system, SCENE (Scientific Computation Environment for Numerical Experimentation). SCENE is implemented as an OO system, and makes use of the OOP environment to allow distributed and/or parallel computing in a manner that is transparent to the user.

SCENE has been used at several university and industrial locations. Its OO features permit a flexibility not usually found in interactive data management tools. SCENE is implemented in

Smalltalk and C, and this talk will discuss some practical issues associated with this OOP implementation. The application of SCENE to the management of climate prediction simulation data will be discussed, and a video illustrating this application shown.

Finally, the experiences encountered in the SCENE development will be discussed in the context of the application of OOP to other scientific and engineering problems. Particular emphasis will be placed on language and environment choices, learning curves, performance issues, and portability.

About The Speaker

Dr. Peskin is Director of the CAIP Computational Engineering Systems Laboratory at Rutgers, and is a professor of Mechanical and Aerospace Engineering, as well as a member of the graduate faculty in Electrical and Computer Engineering.

He is also President of Landgrove Associates, Flemington, N.J., a computer technology consulting firm, specializing in the design and development of OO systems, interactive graphics and visualization, parallel algorithms and distributed systems, among others. He and Landgrove serve as consultants to several industrial and government agencies.

A graduate of MIT, he received his PhD from Princeton in 1960. He was a member of the research staff at the Princeton Plasma Physics Lab and has been at Rutgers since 1961.

His areas of research and publication include computational fluid dynamics, non-linear dynamics and chaos, computer graphics, scientific software, parallel/distributed computing and numeric-symbolic computing. He is a member of the IEEE Computer Society, ASME, SIAM, IMACS, and a Fellow of the American Physical Society.

All Welcome

You do not need to be an IEEE member to attend. Come and bring your friends.

Time: 7:30 PM, Tuesday, December 7, 1993.

Place: Room M-207, Muscarelle Bldg., Fairleigh Dickinson Univ., Teaneck, N.J.

Optional Pre-Meeting Dinner:

5:30 PM. Come meet the speaker. Pero's New Bridge Inn, 105 Old New Bridge Road, New Milford. Restaurant directions (201) 836-6394. **Reservations for dinner required.**

Information/Dinner Reservation: Richard G. Estock (908) 388-5110.



North Jersey Computer & NJIT Student Chapters: The Use Of Name Spaces In Plan 9

On November 16, 1993 the Joint NJ Computer and NJIT Student Chapters will present a talk on "The Use Of Name Spaces In Plan 9." The speaker will be Rob Pike of the Computing Research Sciences Center of AT&T Bell Laboratories.

About The Talk

Plan 9 is a distributed system built at the Computing Sciences Research Center of AT&T Bell Laboratories over the last few years. Its goal is to provide a production-quality system for software development and general computation using heterogeneous hardware and minimal software.

A Plan 9 system comprises CPU and file servers in a central location connected together by fast networks. Slower Networks fan out to workstation-class machines that serve as user terminals. Plan 9 argues that, given a few carefully implemented abstractions, it is possible to produce a small operating system that provides support for the largest systems on a variety of architectures and networks. The foundations of the system are built on two ideas: a per-process name space and a simple message-oriented file system protocol.

About The Speaker

Rob Pike is a Member of Technical Staff at AT&T Bell Laboratories in Murray Hill, New Jersey where he has been since 1980. In 1981, he wrote the first bitmap window system for Unix systems, and has since written nine more. With Bart Locanthi, he designed the Blit terminal. With Brian Kernighan, he wrote the book "The Unix Programming Environment." He is a Canadian citizen and claims never to have written a program that uses cursor addressing.

All Welcome

You do not need to be an IEEE member to attend. Come and bring your friends.

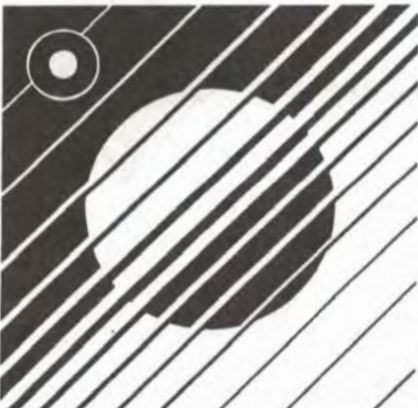
Time: 7:30 PM, Tuesday, Nov. 16, 1993.

Place: Room M-202, ECE Bldg., NJIT, Newark, N.J.

Directions: Raymond Blvd., to Lock St. to Central Ave., turn right onto Central, then next right onto Summit St. then straight ahead to Guard Station and reserved IEEE parking at Parking Lot 4. Overflow parking at Lots 12, 12A, 12B, and 12 C on Lock Street between Central and Sussex Avenues. Additional open parking available at Lot 18, corner of Sussex Ave. and Nesbitt St. The ECE Bldg. is located at the corner of Warren and Summit Streets and is adjacent to Faculty Memorial Hall.

Optional Pre-Meeting Dinner: 5:00 PM. Come meet the speaker. Forno's of Spain Restaurant, 47 Ferry Street, Newark. Free parking in rear of building. **Reservations required for dinner.** Restaurant directions (201) 589-4767.

Information/Dinner Reservation: Richard G. Estock (908) 388-5110.



IEEE VIDEOCONFERENCES SEMINARS VIA SATELLITE

*North Jersey Section &
FDU Student Chapter:*

Computer Simulation Of Complex Systems

The seventh and last videoconference of the year, "Engineering Applications For Monte Carlo And Other Simulation Analyses," will take place on Thursday, December 2, 1993. It will provide a practical introduction to analyzing the effects of uncertainty on complex systems. Simulation modeling can be done before a system is altered or a new one is built, to emulate the risk of unforeseen bottlenecks, cost overruns, or failure to meet specific system requirements.

These techniques work by subjecting computer models to repeated random inputs and monitoring the results. A basic

overview of these techniques will be presented. Also to be shown will be how these techniques may be applied using a wide array of tools ranging from common electronic spreadsheets to highly specialized simulation software. The techniques presented are relevant not only to engineering problems but business and decision support applications as well.

About The Presenters

Dr. Sam L. Savage, Consulting Professor at Stanford Univ., Stanford, CA, who will provide an overview of modeling uncertainty with simulation. The second presenter will be Dr. Averill M. Law, President of Averill M. Law & Associates of Tucson, AZ, a simulation consultant and noted author, who will demonstrate how communication network is simulated. The final presenter will be Peter W. Glynn, Associate Professor at Stanford Univ., who will talk on pushing the limits of simulation.

Simulation Overview Lecture

The North Jersey Section plans to bundle an intensive lecture to both complement and expand upon this videoconference presentation. This 2-hour lecture, now in the planning stages, will be offered in the morning preceding the video conference. The lecture is expected to be an overview of simulation concepts with emphasis placed on experimental design. The lecture will review basic probability and queuing theory, and Monte Carlo techniques as well. Check the November Newsletter for details.

Next Videoconference

The next videoconference will occur in 1994. Details will be announced in the Newsletter when they become available from IEEE headquarters.

New Admission Policy

Due to increased expenses associated with bringing the videoconferences to the membership, a new admission policy is being instituted. The general public is now invited to attend. Admission costs have not yet been set for this videoconference. Check the November Newsletter for additional details.

Videoconference Playback

Due to poor participation, the evening playback of the taped videoconference is being discontinued.

Disabled Or Handicapped Members

Any IEEE member who is disabled or handicapped and who is unable to attend the live broadcast may request to borrow the videotape of the conference for viewing on his or her home VCR. Cost will be at the IEEE member pre-registration rate not yet set for this videoconference. The FDU facilities for this event are not handicapped accessible.

Time: 8:30 AM - 3:00 PM, Thursday, December 2, 1993. Breakfast and lunch not provided.

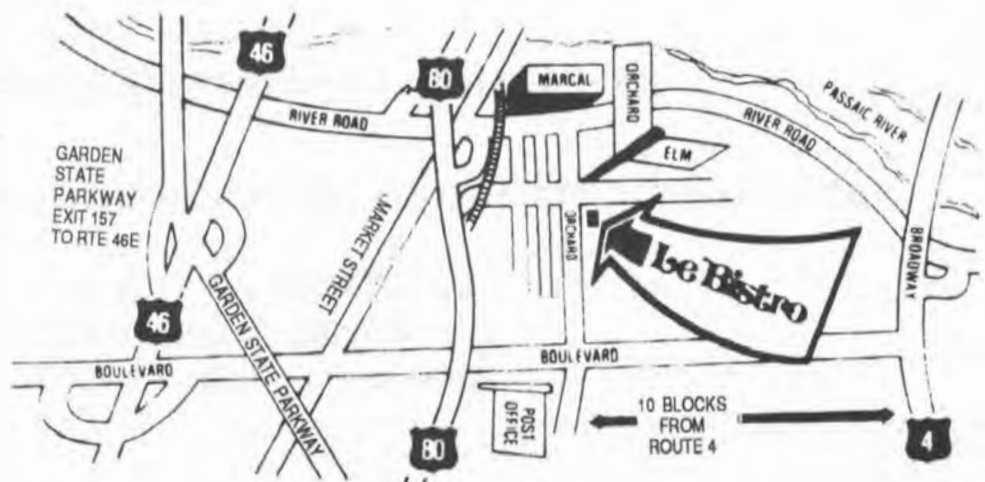
Place: FDU Teaneck and Hackensack Campuses. Lecture halls are not handicapped accessible. Check the November Newsletter for further details.

Further Information: Richard G. Estock (908) 388-5110.

Engineers' Network Association Seeks Participants

All experienced engineers who are actively seeking employment or consulting positions of at least \$35,000 per year are invited to join the Engineers' Network Association, a forum for the exchange of job leads. To participate, bring at least one unpublicized job lead that you do not intend to pursue to share with others who might be interested. The Engineers' Network Association meets every Wednesday at 1:30 PM at Le Bistro Restaurant, corner of Elm and Orchard Streets, Elmwood Park, N.J.

If you would like additional information, call Merrill Rutman (Member, IEEE), at (201) 447-6041.



IEEE
North Jersey and Princeton Sections
MTT/AP-S/LEOS/COMM.
Present
9th ANNUAL SYMPOSIUM AND MINI-SHOW
LECTURES & BOOTH EXHIBITS

Focus: HDTV

Thursday, November 4, 1993

Location: David Sarnoff Research Labs.
Princeton, N.J.

Demonstration of HDTV

SCHEDULE OF EVENTS:

1:00 - 2:00 PM

Dr. Terence Smith, David Sarnoff Research Labs
"HDTV Tutorial"

2:15 - 6:30

MINI-SHOW, 30 EXHIBITORS

3:30 - 4:00

Dr. Glenn Reitmeier, David Sarnoff Research Labs
"HDTV and Communications"

6:30 - 7:30

FREE DINNER to ALL ATTENDING MINI-SHOW

7:30 - 8:30

To be named, David Sarnoff Research Labs

ENGINEERS, TECHNICIANS, AND PURCHASERS WELCOME!

For information and/or directions call:

Dick Snyder (201) 492-1207

Alice Archer (609) 734-2184

