



The IEEE

# Newsletter

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

## Performance Management

The November 15, 1989 meeting of the New York/New Jersey Chapter of the Engineering Management Society will feature a talk on "Performance Management: An Update." The speaker will be Dr. Michael Frisch, Consulting Psychologist.

This presentation will cover a variety of issues critical to engineering managers in today's complex professional environment.

**Time:** 7:00 PM, Wednesday, November 15, 1989.

**Place:** Stevens Institute of Technology, Hoboken, N.J.

**Further Information:** Al Messano (201) 784-9289.

## IAS Seminar On Equipment And Systems Protection

On November 11, 1989 the North Jersey Section Industrial Application Society will present a panel symposium consisting of four presentations covering the primary area of concerns to the electrical engineer. The chairman and moderator will be R.V. Rebbapragada, P.E., Chairman, IAS/North Jersey Chapter.

The presentation topics will be given by speakers with extensive design experience having worked on several utility and industrial installations.

1. Nature and source of lightning and switching surges. *Jim Harrison, L.E.A. Dynatech, Santa Fe Springs, California.*
2. Lightning protection design considerations. *Jim Harrison, L.E.A. Dynatech, Santa Fe Springs, California.*
3. Protection of control and instrumentation circuits from switching surges. *Vittal Rebbapragada, EBASCO Services Inc., NYC.*
4. Shielding and grounding of sensitive instrumentation circuits from EMI/RFI. *(Speaker to be announced.)*

These in-depth talks will be presented on Saturday, November 11, 1989 starting at 9:00 AM and ending by 12:30 PM. The location is the Meadowlands Hilton Hotel in Secaucus, N.J.

Cost for this complete technical discussion, including the luncheon is as

follows: \$90 Non-Members; \$60 Members; \$35 Students.

In order to provide the presentation at this price, reservations with a \$30 per person deposit should be made by October 10, 1989. The remainder will be accepted at the door. Check or money order for the deposit should be made payable to "IEEE North Jersey Section" and sent to Mr. David P. Perry, Treasurer, IEEE North Jersey Section, 57 Forest Hill Rd., West Orange, NJ 07052, (201) 325-8415.

Coffee and danish will be served before the talks commence and coffee will be available throughout the morning. A buffet luncheon will be served immediately following the seminar break to offer an opportunity for people to get together to discuss various side issues at length.

**Time:** 9:00 AM-12:30 PM, Saturday, November 11, 1989.

**Place:** Meadowlands Hilton Hotel, Secaucus, N.J.

**Further Information:** Vittal Rebbapragada (212) 839-2262.

## North Jersey ASSP Chapter Election

On November 14, 1989 the North Jersey IEEE Acoustics, Speech and Signal Processing Chapter Election will take place.

All ASSP members are invited for refreshments and to vote for their 1990 officers. Please help us continue our Chapter activities by participating in the election process.

Please note that it is not too late to become a candidate for any of the four chapter positions (Chairperson, Vice-chairperson, Treasurer and Secretary). For information call John Burgess or Steve Laico at phone numbers listed below.

**Time:** 7:00 PM, Tuesday, November 14, 1989.

**Place:** AT&T Bell Laboratories, Whippany, N.J.

**Further Information:** John Burgess (201) 386-2736 or Steve Laico (201) 386-2031.

## Laser Doppler Anemometry

The IEEE North Jersey Section Young Engineers Committee will meet on November 29, 1989 to hear a talk on "Laser Doppler Anemometry: An Interdisciplinary Project For Electrical Engineers." The speaker will be Dr. Dan N. Celenti of Fairleigh Dickinson University.

### About The Talk

In recent years new areas of study have been added to the already long list of disciplines in the electrical engineering field. Optics, electro-optics, electrophysics, plasma physics and quantum electronics are just a few of these disciplines. The speaker will share with the audience some experimental and theoretical results obtained during his involvement in an interdisciplinary project in Laser Velocimetry. The project involved experiments as well as computer simulation and modeling, and was a combination of power electronics, computer engineering, optics and plasma physics. Understanding these new fields, shows to what degree specialization can effect future trends.

### About The Speaker

Dr. Dan N. Celenti received his PhD from the State University of New York at Buffalo and his expertise focuses on control, systems and computer simulation of integrated circuits. He currently teaches undergraduate and graduate courses in Microelectronics/VLSI, systems and digital electronics at Fairleigh Dickinson University.

### All Welcome

Members and guests are invited. A free buffet dinner for attendees will be provided at 6:30 PM. **Reservations are required.**

**Time:** 7:30 PM, Wednesday, November 29, 1989. (Buffet starts at 6:30 PM.)

**Place:** ITT Auditorium (at the Tower), 500 Washington Avenue, Nutley, N.J.

**Further Information/Reservations:** Sam Benzacar (201) 881-1200; Tom DeNigris (201) 575-1300; Maitland McLarin (201) 335-6847; Melaku Mekonnen (201) 435-7805 after 6 PM.

**NOVEMBER, 1989**

**VOTE: USE BALLOT ON BACK PAGE**

**IEEE**



**NORTH  
JERSEY  
SECTION  
ACTIVITIES**

**NOVEMBER**

**November 2, 1989--**"Symposium & Mini-Show"--North Jersey Chapter MTT-S/AP-S, 1:30 to 9:30 PM, ITT-Avionics, Tower & Clubhouse, 417 River Rd., Nutley, N.J. Dick Snyder (201) 492-1207.

**November 8--**"Facets Of Biomedical Engineering"--Metropolitan Chapter of the Engineering In Medicine and Biology Society, 7:30 PM, Rockefeller University, Room 301, York Ave. at 66th St., NYC. Joe Bogovic (212) 241-8032.

**November 9--**"PACE Meeting: Engineering Employment And Career Decisions"--North Jersey Section's Professional Activities Committee for Engineers, 7:30 PM, ITT Auditorium, 500 Washington Ave., Nutley, N.J. Robert Sinusas (201) 228-3941.

**November 9--**"Practical Aspects Of Career Development"--Engineering Management Society Chapter and IEEE Intersociety Committee, 7:30 PM, ITT Clubhouse, Nutley, N.J. **Reservations required for pre-meeting buffet.** David P. Perry (201) 325-8415.

**November 11--**"Symposium: Protection of Equipment And Systems In Utility/Industrial Facilities From Lightning, Switching Surges And EMI"--North Jersey Section, Industry Application Society, 9:00 AM-12:30 PM, Meadowlands Hilton Hotel, Secaucus, N.J. **Reservation/Fee required.** Vittal Rebbapragada (212) 839-2262.

**November 14--**"Officer Election"--North Jersey IEEE Acoustics, Speech and Signal Processing Chapter, 7:00 PM, AT&T Bell Labs, Whippany, N.J. John Burgess (201) 386-2736.

**November 15--**"Performance Management: An Update"--Joint New York/North Jersey Chapter Engineering Management Society, 7:00 PM, Stevens Institute of Technology, Hoboken, N.J. Al Messano (201) 784-9289.

**November 15-16--**"IEEE SONET Two-Day Symposium"--Co-Sponsored by IEEE NJ Coast Section, IEEE NJ Coast Communications Chapter, and IEEE Communications Society Committee on Network Operations & Management, AT&T Bell Labs., Middletown Auditorium, Middletown, N.J. Umesh Amin (201) 949-7391.

**November 21--**Officer Election and Talk - "Risk Assessments Of Aging Military Aircraft"--North Jersey Chapter of the Reliability Society, 7:00 PM, ITT Avionics Auditorium, 500 Washington Ave., Nutley, N.J. Henry Moss (201) 785-6458.

**November 29--**"Laser Doppler Anemometry: An Interdisciplinary Project For Electrical Engineers"--IEEE North Jersey Section Young Engineers Committee, 7:30 PM, ITT Auditorium, 500 Washington Ave., N.J. Sam Benzacar (201) 881-1200.

**DECEMBER**

**December 7--**Officer Election and Talk - "Energy Management And Conservation Program In Industrial Plants"--North Jersey Section Industrial Application Society, 7:00 PM, ITT Auditorium, 500 Washington Ave., Nutley, N.J. Vittal Rebbapragada (212) 839-2262.

**December 7--**"Making US Industry More Competitive"--North Jersey Section IEEE Intersociety Committee, 7:30 PM, ITT Clubhouse, Nutley, N.J. (*Details in December issue.*) David P. Perry (201) 325-8415.

**December 13--**"Seventeenth Semi-Annual Seminar: Multi-Tasking At Your Desk-Top"--New York Chapter IEEE Computer Society, 9:00 AM-4:30 PM, United Engineering Center, 345 E. 47th Street, NYC. **Reservation and fee required.** Jim Barbera (212) 395-8765.

**PLEASE POST**

**Members and Non-Members Welcome**



## IAS Officer Election And Talk On Energy Conservation

On December 7, 1989 the North Jersey Section Industrial Application Society will host a presentation on "Energy Management And Conservation Program In Industrial Plants." The speaker will be Mr. Bhawani P. Mukherjee, P.E., Lederle Labs of American Cyanamid, Pearl River, N.Y. There will be an election of officers prior to the start of the technical presentation.

### About The Talk

The presentation covers the salient aspects of an energy program, planning energy conservation and implementation to reduce the operating costs of production in industrial plants. The presentation also covers aspects of needed management support and program format which play a crucial role in the successful implementation of the program. As an illustration Mr. Mukherjee will describe the energy management program at the Lederle Labs which has incorporated both steam and electricity conservation.

### About The Speaker

Mr. Bhawani P. Mukherjee, has been with American Cyanamid for the past 15 years, and he is presently the Manager of Engineering at the Lederle Labs, Pearl River, New York. He has worked on several projects for American Cyanamid throughout the USA and headed as chairman, the task force on Energy Management. Mr. Mukherjee holds a MSEE from City University of NY and is a licensed professional engineer in the State of New York and New Jersey.

### ELECTION

Prior to the technical presentation there will be an election of officers. The North Jersey Chapter of the Industrial Application Society has been in existence for many years. This is an interactive group with varied interests in power generation, in-plant electrical distribution, lightning protection, grounding, switching surges, alternative energy sources such as Co-Generation, wind and solar power, computers, fiber optics, SCADA, semiconductors, electric machines, industrial drives, etc. The aim of the Society is to keep members abreast of the developments in the aforementioned areas with quality speakers having detailed background in their respective areas. The North Jersey Chapter has scheduled seven technical sessions in 1989, and is planning even more vigorous programs for the year 1990. This requires active participation by all IEEE members in the Metropolitan area. With this end in view, an executive committee election is scheduled at this meeting. All members with interest in IAS/PES are invited to participate. Please join us and make our program an even greater success.

### Pre-Meeting Dinner

The pre-meeting buffet dinner starts at 6:00 PM with the Election taking place prior to the technical presentation.

**Time:** 7:00 PM, Thursday, December 7, 1989. (6:00 PM, buffet dinner and Election.)

**Place:** ITT Auditorium, 500 Washington Ave., Nutley, N.J.

**Further Information/Reservations:** Vittal Rebbapragada, Chairman, IAS Chapter (212) 839-2262, or Max C. Schramm (201) 887-1120.

## Elections And Talk: Risk Assessments Of Aging Military Aircraft

The North Jersey Chapter of the Reliability Society will meet on November 21, 1989 to elect Chapter Officers for 1990, and to hear a talk entitled "Risk Assessments Of Aging Military Aircraft." The speaker will be John W. Lincoln, Director of Flight Systems Engineering at Wright-Patterson Air Force Base.

### About The Talk

The presentation reviews the experience in performing risk assessments of military aircraft over the last fifteen years. These fracture mechanics based risk assessments have been performed for the structure of the C-5, C-141, F-5, T-38 and T-37 aircraft. The C-5 and T-38 risk assessments will be reviewed in detail. The motivation, the mechanics and the significant results of the assessments will be examined. The pros and cons of both the probabilistic and the deterministic approach will be addressed.

### About The Speaker

John W. Lincoln has been a member of the Structures Division at the Aeronautical Systems Division (ASD) of the U.S. Air Force for fifteen years. During that time he has directed the execution of damage tolerance assessments for every major aircraft weapon system in USAF inventory. He has the responsibility for the Aircraft Structural Integrity Program (ASIP) which is the program that is used by the USAF to ensure the structural integrity of aircraft developed or procured by ASD.

### Free Buffet

A free buffet will be provided starting at 6:00 PM, on a first-come-first-served basis.

**Time:** 7:00 PM, Tuesday, November 21, 1989. (Buffet starting at 6:00 PM.)

**Place:** ITT Avionics Auditorium, 500 Washington Avenue, Nutley, N.J.

**Further Information:** Henry Moss (201) 785-6458.

## PACE Meeting: ENGINEERING EMPLOYMENT AND CAREER DECISIONS

The North Jersey Section's Professional Activities Committee for Engineers will meet on Thursday, November 9, 1989. The talk will be on "Engineering Employment And Career Decisions." The speaker will be Richard F. Tax, our PACE Chairman, editor of our PACE News column and currently a member of the IEEE-USAB Manpower Committee.

The talk will include; engineering manpower history, present conditions, engineering supply, current events and future activities to enhance engineering opportunities.

This subject is a must for anyone who is concerned about the job market for engineers.

Richard is a graduate of Fairleigh Dickinson University with a BSEE degree, and is a Senior Member of the Institute of Electrical and Electronics Engineers (IEEE). He received the North Jersey Section Award for Leadership in 1979, the Region 1 United States Activities Board (USAB) Award for Leadership in 1981, the IEEE Centennial Medal in 1984, the USAB Citation of Honor in 1984, the USAB Professional Achievement Award in 1988, and the Region 1 Award for Outstanding Contributions to Engineering Professionalism in 1989.

He has been active in the IEEE since 1974. Richard was Chairman of the North Jersey Section from 1985 thru 1986. In 1987 he chaired the 20,000 member Metropolitan Sections Activities Council (METSAC).

In 1977, concerned with Manpower issues, he started the USAB Task Force for the BLS, Occupational Outlook Department. This Task Force made significant corrections to the Occupational Outlook Handbook and is now supported by the USAB Manpower Committee. In 1989 he organized the Region 1 Careers Conference with 110 registered attendees.

Richard is presently the appointed PACE Chairman of METSAC and Area B of Region 1. He is active at the national level on USAB's Manpower Committee and the author of USAB's Entity Position Statement "Enhancing U.S. Productivity Through Improved Utilization of Engineers."

All IEEE members and guests are invited to attend. Refreshments will be served.

**Time:** 7:30 PM, Thursday, November 9, 1989.

**Place:** ITT Auditorium, 500 Washington Avenue, Nutley, N.J.

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

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## NEWSLETTER STAFF

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

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## 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.....Howard Leach, Jr.  
885-3530  
Vice-Chairman-1.....Raymond Sears, Jr.  
386-2259  
Vice-Chairman-2.....George Graul  
290-1128  
Treasurer.....David Perry  
325-8415  
Secretary.....Richard Snyder  
492-1207  
Member-at-Large.....Thomas De Nigris  
Member-At-Large.....David A. Dietsche  
Member-At-Large.....George Pick  
Jr. Past Chairman.....Robert Sinusas

**The North Jersey Section Executive Committee meets the first Wednesday (except holidays and December) of each month at 7 PM. These meetings (held at ITT, 500 Washington Ave., Nutley, N.J.) are open to all members. Information on each meeting agenda is available from Richard Snyder, Section Secretary at (201) 492-1207.**

**Elected Section Officers are listed above.**

# Evaluating Biomedical Engineering

On November 8, 1989, the Metropolitan Chapter of the Engineering in Medicine and Biology Society will present a talk on "Facets Of Biomedical Engineering." The speaker will be Dr. Eric Flamm.

## About The Talk

This presentation will address such activities as evaluation of the performances of medical devices, material and components. The importance of proper experimental design, test method development and analysis of such study will be discussed. A brief survey of the range of activity in Biomaterials and Biomechanics will be included.

## About The Speaker

Dr. Eric Flamm directs NTL Associates Inc., and has 24 years of experience in a number of medical product areas. His capabilities include: research and

development; quality assurance; regulatory affairs; and clinical research and technical support. He is on the faculty at the University of Medicine and Dentistry, Robert Wood Johnson College of Medicine, New Brunswick, N.J. Dr. Flamm received his PhD from New York University in Biomedical Engineering. He has been cited in "USA Men and Women of Science", "Who's Who in the East" and in "Who's Who in Technology Today".

## Optional Pre-Lecture Get Together

There will be an informal pre-lecture get together 6:30 PM in the Tower cafeteria.

**Time:** 7:30 PM, Wednesday, November 8, 1989.

**Place:** Rockefeller University, Room 301, York Ave. at 66th St., NYC.

**Further Information:** Joe Bogovic (212) 241-8032; Robert Heyman (914) 357-1230; Edna Feher (212) 757-0610; Vijay Kowtha (212) 932-4803; Ben Caref (718) 270-1712.

# CHAIRMAN'S CORNER

With November comes our annual election of Section officers for calendar year 1990. I hope you take the time to make your choices and return the ballot on the back of this issue. All of the candidates are well qualified for the offices they seek.

Also, on November 2nd comes the annual MTT-S & AP-S Symposium and Mini-Show, one of the best events we have to offer. Dr. Richard Snyder, MTT/AP Chapter Chairman and Section Secretary, brings in top rated speakers, sets up the ITT Club House with 50 exhibitors, and provides a free buffet from 6:45 to 7:45. If you can't make it during the afternoon, come over right after work, check out the exhibits, the buffet, and last speaker at 7:30.

At the last Executive Committee meeting, Tom De Nigris, our Student Activities Chairman and Member-At-Large, introduced Surender Dayal, the NJIT branch representative to our Section. He outlined the NJIT student branch activities for the new school year (see detailed article in this issue). We were delighted to see Dayal and understand that he has accepted a position with IBM, in January, within Channel Development at the Kingston Lab, Kingston, N.Y. We wish him success and thank him for his IEEE student branch participation.

One of the more controversial topics within the IEEE came up for discussion at our last meeting. The subject matter is whether or not the membership application endorsement/reference requirement should be waived for a proposed pilot membership direct mail campaign. As it has been estimated that the IEEE retains only about ten percent of at least three million electrical engineers and scientists worldwide, the membership development committee is proposing a direct mail campaign to reach these qualified candidates.

Because the proposed pilot of 50,000 candidate non-members will come from selected related profession magazine and journal subscription lists, the Membership Development Committee is requesting that the membership endorsement/reference requirement be waived. And although ten percent of the returns on the pilot would be audited for accuracy before going further with the direct mail campaign, our Section moved to not waive the membership endorsement/reference requirement.

On September 20th, attended a METSAC meeting where most of the Electro Directors were present to discuss this year's Electro show results and ways to improve the show attendance. The non-audited surplus figures were down 15 to 20 percent from last year. Also, attendance was down significantly from the previous years, particularly on Thursday, the last day of Electro.

Roger Sullivan, METSAC Chairman, asked for recommendations on how we could improve the show for 1991 in NYC. He also asked that this topic be continued at the four Sections within METSAC. We did continue that discussion and concluded that Electro will have to offer attendees free tutorials and excellent programs on current hot topics within the profession.

If you have some ideas or strong feelings on how we can improve the Electro show tutorials/programs, please convey them to Roger Sullivan, METSAC Chairman, (212) 460-3069, or myself at (201) 885-3530.

**HOWARD LEACH**

**North Jersey Section Chairman**



**IEEE North Jersey Chapter**

**MTT-S & AP-S  
SYMPOSIUM AND MINI-SHOW**

**TWO LECTURES & BOOTH EXHIBITS**

**Thursday - NOVEMBER 2, 1989  
1:30 PM to 9:30 PM**



**TOWER & CLUBHOUSE  
ITT-AVIONICS  
417 River Road  
NUTLEY, NJ**

**DOOR PRIZE  
WIN A CD PLAYER!**

**DISTINGUISHED INTERNATIONAL LECTURERS**

**1:30-2:45 - Dr. U. Mishra and Dr. April Brown:**

**"Gallium Indium Arsenide Heterostructures For Low Noise Amplification, High Speed Logic Circuits, And Lightwave Detection"**

**7:30-9:30 - Dr. Kurt Weingarten:**

**"Testing of High Speed ICs With Ultrashort Optical Pulses"**

**BOOTH EXHIBITS: 2:30 to 7:00 PM**

**BIGGER AND BETTER**

**FREE BUFFET 6:45 TO 7:45 PM**

**ENGINEERS, TECHNICIANS, AND PURCHASING PEOPLE WELCOME!**

**For Details Call:**

**Dick Snyder (201) 492-1207—Willie Schmidt (201) 284-2255**

# IEEE SONET SYMPOSIUM

November 15-16, 1989  
AT&T Bell Laboratories, Middletown Auditorium  
Middletown, NJ

## Congratulations New Senior Members

Joshua Alspector  
John R. Brews  
Rakesh Chadha  
Bruce G. Douglas  
Hossein Izadpanah  
Felix P. Kapron  
W.T. Lynch  
Robert L. Martin  
Leonard Sokoloff  
Ephraim Suhir  
Chia-Jeng Tseng  
Kenneth C. Young

Are you qualified for Senior Member Grade? For information and an application contact Don Weinstein, Kulite Semiconductor, One Willow Tree Road, Leonia, N.J. 07605 (201) 461-0900, ext. 238.

## Renew Yourself!!

It's time to renew your IEEE membership for 1990. You should have already received the information and forms.

Credit cards may be used to pay your dues. See page 36 of the brochure you received from the IEEE with the renewal forms.

For further information call toll-free 1-800-678-IEEE and request Member Services.

This is a good time to advance to the highest grade for which you are qualified.

For Member and Senior Member upgrade applications or any membership information, contact Don Weinstein, Kulite Semiconductor, One Willow Tree Road, Leonia, N.J. 07605 (201) 461-0900, ext. 238.

### Co-Sponsored By:

IEEE New Jersey Coast Section  
IEEE New Jersey Coast Communications Chapter, and  
IEEE Communications Society Committee on Network Operations & Management

## YOU ARE INVITED TO ATTEND

The emerging standards on Synchronous Optical Networks (SONET) will usher in a new era of fiber optics-based products and services. Presentations at this two-day Symposium will feature issues related to standards, network elements, operations & management, and applications of SONET technologies. Technical presentations will be given from the perspectives of vendors, service providers and end-users.

### Technical Program Outline

Chair: Veli Sahin, Bellcore

#### Wednesday, November 15, 1989

##### Session 1:

SONET Standards  
Chair: John Eaves  
Bellcore

##### Session 2:

Network Elements & Transport Architecture  
Chair: Sabit Say  
Bellcore

#### Thursday, November 16, 1989

##### Session 3:

SONET Operations & Management  
Chair: Myron Allen  
Northern Telecom Inc.

##### Session 4:

SONET Applications  
Chair: Bruce Nelson  
AT&T Bell Laboratories

	(Circle One)	(Before Nov. 1)	(After Nov. 1)
<b>Fee:</b>	IEEE Member	\$150.00	\$190.00
	Non-Member	\$180.00	\$225.00

— Registration fee includes technical sessions, conference record, luncheons & coffee breaks.

**\*Registration must be received on or before Nov. 1 to qualify for Regular registration.**

For Additional Information, please contact:

Umesh Amin (201) 949-7391

Gary McElvany (201) 615-5232

Veli Sahin (201) 758-5673

### Registration "IEEE SONET Symposium"

To: Gary McElvany, AT&T Bell Labs., Rm. 2B-240, 480 Red Hill Rd., Middletown, NJ 07748 (201) 615-5232. Make checks payable (in US dollars) to: "IEEE NJ Coast Section". (A written request for refund must be received no later than Nov. 1. No refunds after Nov. 1.)

Name \_\_\_\_\_ Title \_\_\_\_\_

IEEE Member No. \_\_\_\_\_

Affiliation \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_

# REGION 1 Conference Report

The August 18-19, 1989 meeting of Region 1, was held at Niagara Falls, New York. The following officers from North Jersey Section attended: Howard Leach, Ray Sears, George Gaul, Dave Perry, Mike Perugini, Richard Tax, Tom De Nigris and Bob Sinusas. The primary meeting of Region 1 was attended by our chairperson, Howard Leach. The other meetings were workshops that were attended by the other officers of the North Jersey Section.

## REGION 1 MEETING

The Region 1 meeting was quite long with much to report, but the major points of interest were the following items:

1. The IEEE staff will be reorganized with fourteen major areas under the direction of Eric Herz, Executive Director. As a result of this reorganization, there will be three new officers report to Mr. Herz, who is overseeing the fourteen areas.

2. IEEE was formed twenty-five years ago. It was composed of the mergers of IRE and AIEE.

3. The next Region 1 meeting will be on January 20, 1990.

## EDUCATION

We were requested to return the educational tape after making a tape with critique. George Gaul handled the course distribution for the two video courses.

## HISTORY

Roger Sullivan wants section history from the past Chairpersons.

## STATE GOVERNMENT AFFAIRS

Mr. Gabelman will help sections set up government liaison.

## NEW BUSINESS

1. North Jersey moved that: Region 1 of the IEEE Bylaws be changed so that in the absence of a Region Director at the RAB meeting, the subject Region could send a representative in his place. Motion approved.

2. The next annual Region 1 meeting is to be held in August/September of 1990. North Jersey and Mohawk Valley Sections both volunteered to sponsor it.

3. Three North Jersey applications were approved for Region 1 awards: Anne Giedlinski, Richard Tax and John Baka.

## WORKSHOP REPORTS

Ray Sears, Vice Chairman #1, attended the Professional Activities, Headquarter Services, and Membership Upgrade meetings. He picked up information about the professional activities on the Institute and Section level. Ray also obtained useful information about Headquarters and Membership Upgrade. Ray was interested in computer networking, particularly as it may involve Section activities.

George Gaul, Vice Chairman #2, attended the Student Activities and Membership Development meetings. George felt the information discussed was useful as far as the students were concerned. Many topics for discussion were familiar in Membership Development. George felt that many many topics were repeated and nothing was accomplished.

Richard Tax, SPAC and Former Chairperson, spent his entire time in Professional Development meetings. It is an area that has many facets. Currently there is a problem faced by the government and defense industries as Russia becomes more friendly. Defense spending is down and so is defense work. Many engineers are unemployed.

Mike Perugini, Publication Chairperson, attended the Newsletter/Publications and Section Activities/TAB meetings. The Newsletter session had a description of a software program that helps maintain subscriber lists. The Section Activities had topics available on how to run an active Section.

Tom De Nigris, Student Representative and Member-At-Large, attended Student Activities and Field Service meetings. The Student Activities dealt with S-PAC's and other topics. North Jersey was complimented on consistently running successful S-PAC's.

Bob Sinusas, Past Chairman, attended the Field Service, Professional Activities and Senior Upgrade meetings. Bob learned that PC computers were available from Headquarters. Senior Upgrade meeting was interesting in its simplification of the procedure. At the banquet Bob received a plaque from Vic Zourides for service during Vic's term of office.

## More On Student Activities

The officers of the student branch at New Jersey Institute of Technology this year are:

President:	Nestor Voronka
Vice-President:	Robert Groshadl
Secretary:	Bruce Dunn
Treasurer:	Mary Ellen Aleksza
Branch Representative:	Surender Dayal

Class Representatives:

Joanie Pratt
Rindala Saliba
Steven Ficsor

Several technical lectures are planned for the coming year, including talks on digital oscilloscopes and automation of lab equipment through HPIB/GPIB programming. The officers would like to join Eta Kappa Nu, the National Electrical Engineering Honor Society, in tutoring EE students. They also plan to raise money by selling IEEE T-shirts.

Also active this year is the student branch at Fairleigh Dickinson University. The officers are:

President	Wei-Li Yang
Vice-President:	Bill Pollak
Treasure:	Jim Petrecca
Secretary:	Rose Firyani
Representatives to Inter-Club Council:	Ray Serdel

George Eleftheriades

During the week of October 2nd, the officers organized and ran a membership drive. The following week they sponsored a student/faculty volley ball game. Field trips to various companies, as well as lectures throughout the year are planned. The officers are also organizing several fund raising events, including a 50/50 raffle and a T-shirt sale.

All the students are working hard this year, and their determination and ambition is encouraging. We appreciate their efforts and are sure they will be successful.

*Tom De Nigris*  
*Student Activities Chairman*



# PACE NEWS

By R. Tax

## **"....AND BUSINESS FOR ALL"**

*"We believe a company consists of management, its workers, its shareholders, and customers. A key to the success of a company is that those four elements should equally enjoy the maximum benefit."* KONOSUKE MATSUSHITA

The above quotation was gleaned from the July 1989 issue of IEEE's "The Institute" in their profile of Konosuke Matsushita. This quotation relates Mr. Matsushita's philosophy. He was the founder of Matsushita Electric Industrial Company, the company that manufactures products under the names of Panasonic, Technics and Quasar to name a few. The General Electric VCR in my home was made in Japan by the Matsushita company.

Here is an example of one of the most successful electronics manufacturing companies in the world and the founders philosophy dictates that management, its workers, shareholders and customers should all enjoy the maximum benefits. It's inspiring to be able to quote such a successful man who sets an example as a team and industry leader.

I have always thought of the corporate structure as an environment providing many individuals, having a variety of backgrounds and responsibilities, with the opportunity to work together for the productivity and benefit of all. Perhaps we should stress Matsushita's philosophy more often to make it function.

There appears to be a new corporate atmosphere in the U.S. that pits the MBAs and top management against the engineers, and workers that Matsushita mentions. Some people want more for less. Is it survival, greed or just opportunity that encourages a businessman to raid a company or to pick one's pension pocket or treat co-workers poorly?

Meanwhile, the engineers usually get better treatment when demand and utilization are high. During periods of high engineering manpower demand we cultivate better managers and companies since the poor managers lose engineers as their engineers seek the better companies and work environment. It isn't long before top management isolates and replaces the managers that can't keep their staff and improvements do result. Is it possible that engineering manpower supply and demand can also effect the corporate climate?

As engineers, our problems have increased with our present High Tech recession. Demand is down according to our sources and the Deutsch, Shea & Evans High Tech Recruiting Index, and the supply is high. We produce enough EEs to refresh the system every 10 years. We know our new graduates are not getting the engineering jobs for which they were educated. Most of this is influenced by our representatives in the U.S. Senate and Congress. There are a number of Bills passed that have placed our engineering and technical community at a disadvantage. These Bills or controls have increased the supply and reduced the demand of engineers beyond normal economic levels.

Our House of Representatives plays a major roll in the Engineering Manpower balance and with that roll, the ability to influence the corporate climate, work environment and productivity. We should remember that the worker, technician, and engineer should also enjoy the benefits with management, the shareholder and the customer. Perhaps industry leaders with Mr. Konosuke Matsushita's philosophy could improve the corporate climate. However, I believe we need wiser representatives, in the House and U.S. Senate that are concerned about engineering utilization and U.S. engineering capabilities to set the foundation for this corporate atmosphere to flourish.

## **LEGISLATIVE ALERT**

### **Budget Reconciliation Showdown Will Focus On Individual Retirement Accounts**

IEEE's United States Activities Board and the Engineers and Scientists Joint Committee on Pensions are urging engineers and scientists throughout the United States to communicate their support for the prompt enactment of legislation to expand the availability of tax favored Individual Retirement Accounts to their Senators and Representatives in Washington. Such legislation is needed to boost individual savings for retirement and to reduce the cost of the capital needed for productive investment in the nation's economy. Here's how you can help:

#### **Contact (Write, Call or Visit) Your U.S. Senators And Representatives At Once!**

1. Identify yourself as a constituent and an IEEE or ESJCP member.
2. Urge them to support legislation that will restore the full deduction for IRA contributions for all individuals.

Such legislation would increase national savings and provide greater retirement security for more working Americans by expanding personal savings incentives.

A showdown is brewing in Congress over whether or not to include expanded IRAs in a must-pass budget reconciliation bill (HR 3299) designed to cut the Federal budget deficit by \$16.6 billion in FY1990. The House of Representatives has already acted, but did not include the IRA in its legislation. The Senate Finance Committee has begun drafting a bill of its own which may include an IRA. Differences will be ironed out by a House-Senate conference committee. **Congressmen and Senators need to hear from their constituents on this important issue at once.**

#### **Why Individual Retirement Accounts Are So Important.**

Personal savings are a critically important supplement to Society Security and employer provided pensions as a source of retirement income for each and every working American. Private savings also represent a major source of the investment capital needed to increase industrial productivity and sustain economic growth.

Increasing Congressional concern about national savings rates and the importance of boosting individual savings for retirement is reflected in the recent introduction of several Individual Retirement Account proposals. Rather than saying that one bill is better than another, IEEE-USA and ESJCP recommend that Congress be encouraged to fashion a compromise on IRAs that will restore the full deduction for all individuals, thus boosting personal savings and stimulating productive investment.

Concerned engineers and scientists should call, write or visit their Senators and Representatives at once. Calls should be directed to the Capitol Hill Switchboard at (202) 224-3121. Letters or telegrams to Senators should be posted to the **United States Senate, Washington DC 20510**. House Members can be reached c/o **U.S. House of Representatives, Washington DC 20515**.

Urge them to include tax favored IRAs in the budget reconciliation Bill.

Please send copies of your correspondence to IEEE-USA, attention of Vin O'Neill.

#### **IEEE-USA's WASHINGTON OFFICE IS MOVING**

On or about November 15, 1989, IEEE-USA's Washington Office will relocate to 1828 L Street, N.W., Suite 1202, Washington, DC 20036-5104. Telephone numbers remain the same. Office: (202) 785-0017; Fax: (202) 785-0835; Information Line Recording: (202) 785-2180. Check with the IEEE-USA Office for the specific move date.



(The following information is reprinted from IEEE's September issue of "IMPACT")

### NEW IEEE-USA BROCHURE AVAILABLE

IEEE-USA has released *How to Communicate With Members of Congress*, a brochure designed to help engineers make a difference in resolving issues affecting the profession by communicating their views to their Senators and Representatives. The brochure outlines who to contact; effective ways to voice your concerns; and when to use the different methods, which include meetings, mail, telegrams, and telephone calls. It also provides guidelines to help make your communications more effective. Copies of this brochure are available from the IEEE-USA Office in Washington, DC.

### 1989 SALARY SURVEY AVAILABLE

The 1989 IEEE U.S. Membership Salary and Fringe Benefit Survey is now available. This year's Survey explores more than 50 variables that affect engineers' salaries and fringe benefits. Highlighted are retirement planning, pension practices, early retirement issues, and salary progression. Survey findings include:

- The 1988 mean, pre-tax income of non-student U.S. IEEE members was \$54,700. Survey respondents who were working fulltime in their primary area of technical competence in 1988 earned an average of \$56,000.
- Mean salaries in cities with the highest concentration of electrical and electronics engineers include: \$59,000 (San Francisco); \$58,000 (New York City); and \$56,100 (Washington, D.C.).

According to IEEE-USA Salary Survey Committee Chairman James H. Beall, "electrical, electronics, and computer engineers may fare well in comparison with other professionals when considering inflation, salary compression, and unemployment. Despite large increases in mean nominal income, electrical engineers are staying even with inflation."

The Survey measures income by highest academic degree, experience, age, sex, primary area of technical competence, employment sector, job function, company size, and Metropolitan Statistical Areas. A section on fringe benefits covers employer and employee participation in life, health, and accident insurance, as well as medical plans, pensions, supplementary retirement plans, continuing education, and vacation allowances.

The 1989 Survey is available from the IEEE Service Center for \$59.95 (member) and \$79.95 (nonmember). Shipping and handling charges are additional, and New Jersey residents should add six percent sales tax. To order your copy, call the Service Center at (201) 981-1393. Please specify IEEE Catalog Number UH0183-4.

## PACE Committee Meets Monthly

The PACE Committee meets on the second Thursday of every month at the ITT Auditorium, 500 Washington Avenue, Nutley, N.J. (near the the ITT Tower) at 7:30 PM. Our Section Executive Committee meets there on the first Wednesday of every month (except in December) at 7:00 PM. Any questions or comments will be well received. Contact Richard Tax at (201) 664-0803 (after 7:00 PM) or write to R. Tax, 630 Montview Place, River Vale, N.J. 07675.

## Intersociety Lecture Series Practical Aspects Of Career Development

The Engineering Management Society Chapter and Intersociety Committee invite you to attend an evening with Merrill W. Buckley, Jr. who will present a talk on "Practical Aspects Of Career Development" 7:30 PM, Thursday, November 9, 1989 at the ITT Clubhouse, River Road, Nutley, N.J. A cold buffet (\$6.00) will start at 6:00 PM. **Reservations are required for the buffet.** Call Dave Perry (201) 325-8415.

### About The Talk

The selection of a career, the necessary preparation prior to entering that profession and enjoying a lifetime of productive rewarding practice, is influenced by a variety of factors. Some of the elements for success are inherent in an individuals capabilities, interests and motivation, but many others relate to external influences that cannot be easily controlled or predicted.

Careers in engineering and science are no exception and in fact include the most difficult to calibrate. Mr. Buckley will present a discussion of this subject, including results of recent studies and accumulated statistics. Observations will be made on such topics as specialization vs. generalization; technical career vs. management; small vs. large organizations; new technology vs. mature products and services; R&D vs. application and engineering support; job stability vs. frequent relocation; advanced degrees vs. job emphasis; MBA vs. MS; position vs. job satisfaction; registration vs. non-registration.

Observations will also be made of the impact of business cycles, the effects of LBO's, political cycles, international competition, salary compression, continuing education, career obsolescence and the image of engineers and technology.

### About The Speaker

Merrill Buckley Jr., received his BSEE degree from Villanova and MSEE from University of Pennsylvania. During his 33 years with RCA he has been a project engineer, system analyst, engineering manager, technical director program manager and manager of program planning. Mr. Buckley has held many offices as volunteer within IEEE. He was elected as IEEE Executive Vice President and is currently a candidate for IEEE President-Elect.

## More About Our Lecture Series

The North Jersey Section of the IEEE, Intersociety Committee, with the cooperation of various Society Chapters is sponsoring other lectures on subjects of general interest to members of engineering and scientific societies and the public. The balance of our calendar for 1989-1990 is:

**December 7** - "Making US Industry More Competitive"

7:30 PM, ITT Clubhouse, Nutley, NJ

**January 11, 1990** - "Law enforcement Science vs. Money Laundering Networks"

Rich Harms, Chief, Financial Intelligence Branch, Customs, 7:30 PM, ITT Clubhouse, Nutley, N.J.

**February 15** - "Industrial/Government Cooperation For Economic Growth"

Eric Sumner, Candidate for IEEE President Elect  
7:30 PM, ITT Clubhouse, Nutley, N.J.

**March 1** - "Radon In New Jersey"

7:30 PM, ITT Clubhouse, Nutley, N.J.

**April 12** - "The Waste Management Crisis"

**May 10** - "Industrial Dynamics, Modeling Industry"

**Sept. 13** - "Input-Output Economics Modeling Industry And National Economics"

**Oct. 12** - "Skills Assessment And The Career Change"

**Nov. 15** - "Engineering In Undeveloped Countries"

Most of our series will be preceded by a cold buffet starting at 6:00 PM.

If you have any questions about any of the above programs, please write to David P. Perry, 57 Forest Hill Road, West Orange, NJ 07052 or call (201) 325-8415.

# 1990 SECTION OFFICERS NOMINATIONS

## RAYMOND W. SEARS, JR. - Chairman

Dr. Raymond W. Sears received the BEE degree from Cornell University in 1958, and the MSE and PhD degrees from the Johns Hopkins University in 1963 and 1967 respectively.

After serving on active duty with the U.S. Naval Security Group from 1958 through 1961, he was employed by the Department of Defense in development of high speed computer systems, pattern recognition systems, and signal processing systems. In 1964 he received a fellowship from the Department of Defense to pursue graduate studies at Johns Hopkins.

In 1967, Dr. Sears joined AT&T Bell Laboratories Ocean Systems Division where he performed ocean acoustic research and sonar systems engineering. In 1975, he transferred to the Business Information Systems Division and was responsible for systems and application engineering of large software systems. In 1981 he joined the Government Systems Area to form a Reliability/Maintainability Engineering Organization for government and military projects. He is currently responsible for Reliability and Maintainability programs for Transmission and Communications programs. He formerly represented AT&T on the EIA G-43 Quality Committee. He is currently Publicity Committee Vice Chairman of RAMS, the Reliability and Maintainability Symposium, and represents the AT&T Government Systems Area in the AT&T Reliability Forum.

Dr. Sears has published articles on high speed computer circuits, pattern recognition, system optimization, ocean acoustics, and sonar system design.

Dr. Sears joined IEEE in 1958 and was elected Senior Member in 1985. He assumed the chairmanship of the Reliability Chapter of the North Jersey Section in 1985, and was responsible for reactivating the chapter. During its first year of reactivation, the Reliability Chapter conducted seven successful technical programs, and has continued a vigorous technical program ever since. He has served as Member-at-Large and Treasurer of the North Jersey Section, and is currently First Vice Chairman.

## GEORGE D. GRAUL - Vice Chairman-1

George D. Graul has served the North Jersey Section as Vice Chairman, Student Activities Chairman, Member-at-Large, and for two terms served as Secretary. In addition he has served for many years as Chairman of the New York Section Vehicular Technology Society. He was Member-at-Large of the New York Section and Chapter Organization Chairman. He is presently Chairman of the Instrumentation & Measurements Society. He has been a delegate to the Sections Congress, and serves as Editor of the RAB publication *INTERFACE*.

A Senior Member of the IEEE, Mr. Graul is a Fellow of the Radio Club of America. He is also a member of the Society of Broadcast Engineers, NARTE and other Professional organizations.

Presently retired from Palisade Engineering (sold in 1978) he has taught at numerous Proprietary schools and served as Chief Engineer of 800 Cellular and, as Director of Training for WHT.

## DAVID P. PERRY - Vice Chairman-2

David P. Perry served as Chapter Chairman for the Joint Computer/Communications Chapter and is presently serving as Section Treasurer. He was responsible for organizing the Computer Chapter in 1960. In 1987, he served as Chairman of a two-day conference titled Small Business R&R Opportunities which was sponsored by the Joint Chapter along with fourteen other organizations.

He is President of Math Research Associates, Inc., a company involved in the development of an operating system for dedicated applications. He has been involved in software development since 1949, beginning with the ERA-1101, the first of the Univac 1100 series. During his early professional years, he was involved in the implementation of algorithms dealing with cryptographic applications, and in the design of several general purpose computers.

Mr. Perry is also President of United Societies of Engineering and Science, a newly created organization developed to provide services to Sections and Chapters of Professional Societies in New Jersey.

He has a BS in Physics and has taken graduate courses in Mathematics and Industrial Engineering.

## RICHARD SNYDER - Vice Chairman-2

Dr. Richard V. Snyder is President of RS Microwave Co. Inc. Prior to founding RS Microwave, he was Chief Engineer or Division Manager for several microwave companies, including Premier Microwave Corp., Frequency Engineering Labs., Lorch Electronics, and Merrimac. He is well known in the filter and IF components business, having authored and presented numerous papers. Dr. Snyder holds eight patents in microwave devices and systems.

Serving the IEEE in several capacities, he is currently Chairman of the North Jersey MTT Society, a Member-At-Large of the North Jersey Section, Instructor for a well-received IEEE course in Microwave Component Design, and a member of the International MTT-S Committees on Network Theory and Microwave Production Techniques.

## MICHAEL I. LIECHENSTEIN - Treasurer

Dr. Michael I. Liechenstein is currently President of Integrated Technology Services Corporation and a tenured professor of Computer Information Systems and Decision Sciences in the College of Business Administration at St. John's University. In the course of his consulting activities, he has received numerous commendations and citations from prestigious international, governmental, and commercial organization. His nearly one hundred research publications have been solicited worldwide.

Dr. Liechenstein is a graduate of MIT and Yale. At Yale he received the Honeywell award for distinguished doctoral research under a Bell Telephone Laboratories fellowship, having also been



a member of the BTL technical staff. Upon completion of his PhD he joined the Engineering Management Sciences Departments of The Rand Corporation where he became a research director during his ten-year affiliation.

Dr. Liechenstein has been a member of the IEEE since 1958. For the past two years, he has served as Chairman of the North Jersey Section of the Systems, Man & Cybernetics Society, and as a member of the North Jersey Section IEEE Executive Committee. Since 1987, when he became an invited member of the Association for World Education USA Committee on Transnational Corporations (UN/NY delegation), he has served as its treasurer. He is an active member of the Institute for Decision Sciences and other professional organizations.

#### **DAVID A. DIETSCH - Secretary**

As a Business Systems Analyst, Mr. Dietsche has interfaced with clients in both the private and public sectors to resolve productivity problems, create business systems, and establish parameters for the development of software products.

Since the early 1980's, he has held key positions that have utilized his intuitive and analytical talents for the design and development of several data management and retention systems.

In 1989, Mr. Dietsche worked with the Federal Government to develop a methodology that would satisfy the requirements of the Lapore Commission Report. This report addressed the quality and timely production of Technical Data Packages for Government procurement.

Mr. Dietsche was a member of the team that, in 1988, developed a unique employee attendance and payroll system for a major telecommunications company.

From 1985 thru 1987, he was involved in the design, development, and integration of a major image storage and retrieval system (DSREDS/EDCARS) for the U.S. Army and Air Force.

During his professional career, Mr. Dietsche has designed several major products including the micrographic subsystem for an optical disk based system and the select broadcast facsimile network for a U.S. Naval Shipyard.

Mr. Dietsche has been an active member of the IEEE since the mid 1970's and has held several elected posts. Most recently he has been the Chairman of the Industry Applications Society and a Member-At-Large for the Executive Committee of the North Jersey Section.

#### **SERGEI BOGAENKO - Member-At-Large**

Sergei Bogaenko received the BSEE degree from NJIT, with additional graduate courses from both NJIT and Rutgers University. He has worked in component design and design assurance of equipments and systems for a variety of military aerospace suppliers. These include RCA, Kearfott, ITT, Conrac, Raytheon and Bendix. Currently he is a consulting contract engineer and has completed assignments at United Technologies/Hamilton Standard and AT&T Bell Laboratories.

Sergei Bogaenko is a long-standing member of the IEEE, having first joined as a student member of the IRE in 1958. He is a member of the Reliability Society, currently serving the North Jersey Reliability Chapter as the Program Chairman. He has previously served as Program Chairman 1976-1977, and Chapter Chairman 1977-1981.

### **THOMAS D. DE NIGRIS - Member-At-Large**

Tom De Nigris graduated NJIT with a BS degree in Electrical Engineering in May, 1986. His field of specialization was Communication Systems. Upon graduation Tom was hired by Lorch Electronics Corp., as a project engineer. He was responsible for design and development of various RF components, such as digitally controlled phase shifters and attenuators, electronic switches and high power electronic switches.

Since January of 1989, he has been with Merrimac Industries Inc., in West Caldwell. His work with Merrimac involves the design, development and manufacturing of passive microwave components, including directional couplers, quadrature hybrids and waveguide circulators.

Tom has been a member of the North Jersey Section Executive Committee since serving as student representative 1985-1986. In 1987 he was appointed Chairman of the Student Activities Committee. He was elected Member-At-Large in 1988, and was also made Vice-Chairman of the newly formed Young Engineers Committee. Tom currently holds all three positions.

### **NORMAN G. HETTINGER - Member-At-Large**

Norman G. Hettinger is a Technical Sales Consultant at MCI International Inc., where he is involved with the specification of and planning for international data communications systems. He also supports the MCI International sales force in special local area network and computer interface applications for MCI mail, facsimile, and telex services.

Mr. Hettinger previously worked for Western Union Telegraph Company, Informatics Inc., Computer Sciences, and Shell Oil Company in communications systems engineering and technical staff positions.

Mr. Hettinger is presently Chapter Chairman North Jersey Joint Computer/Communications/Laser Electro-optics Society. As Chapter Chairman, he has been instrumental in providing a series of tutorials and technical lectures for the society in the area of ISDN and computer communications.

From 1972-1973, Hettinger was Chapter Chairman of the North Jersey Communications Society. He also served on the special study committee on cable television in Pequannock Township.

### **STEPHEN A. LAICO - Member-At-Large**

Stephen A. Laico received the BS and MS degrees in electrical engineering from Northwestern University, Evanston, Illinois in 1985 and 1986 respectively. During the summer of 1986 he performed research in the area of medical image processing at Northwestern Memorial Hospital in Chicago. Since the fall of 1986 he has been with AT&T Bell Laboratories, Whippany, N.J. where he is a Member of the Technical Staff in the Distributed Systems Processing Department involved in various aspects of sonar signal processing and pattern recognition. Steve has been a Co-Chairman for the North Jersey Chapter of the IEEE Acoustics, Speech and Signal Processing (ASSP) society since 1988 and published a paper in 1987, for the Society's International Conference on Acoustics, Speech and Signal Processing (ICASSP).