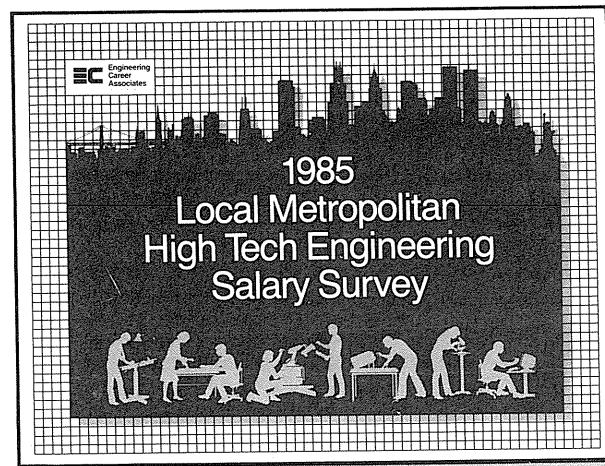


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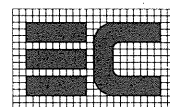
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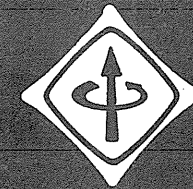
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The IEEE

Newsletter

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

SEPTEMBER, 1985 Volume 32, Number 3

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Business Manager A.M. Beattie

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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.

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CALENDAR OF EVENTS

September 11, 1985--"Reliability Conference"--IEEE NTSAC Committee, NJIT, 323 Martin Luther King Blvd., Newark, NJ. Raj P. Misra (201) 596-3512 3514, 3510.

September 14--"The Truth About Nuclear Power"--New York Social Implications of Technology Society Chapter and NY & LI Joint PES & IAS Chapters, 2:30 PM, HBO Offices, W.R. Grace Building, 9th Floor, W 42nd Street & Avenue of the Americas, NYC. Edward B. Farkas (718) 297-7498.

September 18--"North Jersey Section Social"--NJ PACE Committee, 5:30 PM, ITT Clubhouse, 417 River Road, Nutley, N.J. Richard Tax (201) 391-9075.

September 26--"T-1 Local Bypass"--NJ Computers/Communications Societies Chapter, 8 PM, Holiday Inn, Route 46, Parsippany, N.J. Fred Smith (201) 445-5210 or (212) 695-4269.

October 9--"A Task Oriented Conversational Mode Speech Understanding System"--NJ Acoustics, Speech and Signal Processing Society Chapter, 7:30 PM, Jersey Central Power & Light Co., Madison Ave., Morristown, N.J. Greg Mackintosh (201) 386-4560.

October 9--"Lasers: From Exotic Toys To Practical Tools"--NY/NJ Engineering Management Society Chapter, 8 PM, New York Academy Of Science, 2 E. 63rd St., NYC. Al Botani (212) 319-7444.

October 22--"Seminar—Current Trends In Database Management And Applications"--New York Computer Society Chapter; All Day, United Engineering Center, 345 E. 47th St., NYC. Jim P. Barbera (212) 956-5642.

October 30--"Long-Haul Fiber-Optic Networks"--NJ Computer/Communications Societies Chapter, 8 PM, ITT Auditorium, 500 Washington Avenue, Nutley, N.J. George Parowski (201) 529-6141.

November 21--"Seminar: Network Integration, Private And Public Alternatives"--New York Communications Society Chapter, 9 AM-5 PM, United Engineering Center, 345 E. 47th St., NYC. RESERVATIONS & FEE REQUIRED. Joanne P. Quigley (212) 552-2828 or Peter A. Campanella (212) 395-7473.

Speech Understanding

Dr. Stephen Levinson, a participant in the ASSP Distinguished Society Lecturer Series, will inaugurate the exciting 1985/1986 technical program of the North Jersey Acoustics, Speech and Signal Processing Society chapter on October 9, 1985. His talk is entitled "A Task Oriented Conversational Mode Speech Understanding System."

About The Talk

A conversational mode connected speech understanding system which simulates the function of an airline ticket agent will be described. The system, which allows a complete spoken dialogue over dialed up telephone lines, comprises a syntax directed, dynamic programming, temporal alignment algorithm for acoustic pattern recognition, and a semantic processor that controls a speech synthesizer system, making two way speech communication possible.

The heterarchical nature of the system allows it intelligent processing, such as the ability to recognize incorrect and incomplete, improbable and or conflicting information in the context of the transaction, and to pose questions which identify the

difficulty, thereby allowing communication to proceed in the natural way.

About The Speaker

Dr. Levinson received the BA degree in engineering sciences from Harvard University, Cambridge, MA in 1966, and the MS and PhD degrees in electrical engineering from the University of Rhode Island, Kingston, in 1972 and 1974, respectively. He is a member of the Technical Staff at Bell Laboratories, Murray Hill, NJ where he is pursuing research in the areas of speech recognition and cybernetics.

Elections Slated

Elections of chapter officers will be held in a brief business meeting preceding the talk. We urge members and non-members alike to actively participate in the North Jersey ASSP chapter, and join us in what will surely be an exciting evening! Time: 7:30 PM, Wednesday, October 9, 1985.

Place: Jersey Central Power & Light Co., Madison Ave. (Rt. 24) at Punch Bowl Rd., Morristown, N.J.

Information: Greg Mackintosh (W) (201) 386-4560 or Marc Beacken (W) (201) 386-3757.

Pre-Meeting Dinner Reservations: 6 PM, Greg Mackintosh (W) (201) 386-4560.

Lasers: From Toys To Practical Tools

Lasers will highlight the Wednesday, October 9, 1985 joint meeting of the Metropolitan Chapter of the Engineering Management Society and the Engineering Section of the New York Academy of Sciences.

At the meeting, Mr. Robert Regina, President of U.S. Laser Corp., Waldwick, N.J. will speak on "Lasers: From Exotic Toys To Practical Tools." The talk will emphasize industrial applications of lasers and will address the processes of welding, heat treating, drilling, cutting, and soldering. The industrial areas of discussion will include computers, hybrid circuits, semiconductors, and packaging.

Time: 8 PM, Wednesday, October 9, 1985.

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

Further Information/Directions: Jay Gilbert (914) 478-2713 or New York Academy of Sciences (212) 838-0230.

"The Institute" that they give the MHTC-Northeastern University report.

North Jersey is the seventh largest section in the IEEE with over 5600 members. Still, IEEE's "The Institute" provides space for two Northeastern University members and shuns North Jersey IEEE. The MHTC-Northeastern University paper was not a scientific study. According to "E.E. TIMES" the author, Paula Leventman, now calls their 22-page document a "talk piece" and admits it was "not a scientific study, nor was it intended to provide new data linking age to engineering obsolescence..." Paul calls the phrasing "unfortunate." We called it a shoddy piece of workmanship that reeks of misinformation.

We have come a long way. A paper once referred to as, "an industry-group study," "Council's findings" and "22-page study" is now referred to by the author as a "talk piece." The North Jersey Section Executive Committee has performed a valuable service to the public and the engineering profession by condemning their paper. Please remember this and encourage your associates to join and support the North Jersey IEEE Section.

RICHARD TAX

Letters On EE Obsolescence

(The following letters are reprinted from IEEE's "IMPACT," August, 1985.)

Anger At "The Institute" is Misdirected

In the April 1985 issue of "IMPACT", Mr. Richard Tax lambasted "The Institute" for its article, "EE Obsolescence is Predicted In Massachusetts," which appeared in the December 1984 issue. Mr. Tax asserted that "IEEE has given credence to this invalid prediction by publishing it without question..." Publication of news in "The Institute" is not an IEEE endorsement of its contents.

Personally, like many other IEEE members, I was appalled by the conclusions of the study. Nevertheless, venting anger on "The Institute" would be unjustified. The newspaper was merely reporting a study supported by the Massachusetts High Technology Council.

It would be desirable for an IEEE committee, such as the USAB Manpower Committee, to analyze the assumptions and conclusions of the study. I am sure that such an analysis would receive coverage in "The Institute." I am pleased to learn that the North Jersey Executive Committee has established an ad hoc committee to evaluate the MHTC report. I look forward to reading about it. In the meantime, the "Letters" column of "The Institute" is available for member comments on the MHTC study.

In my opinion, the problem of engineering manpower obsolescence can be alleviated by employers through an improvement in the professional environment of the engineering work place. More technical and administrative support personnel to allow engineering professionals to do more creative engineering, challenging assignments, incentives for incorporating cutting-edge technologies in projects, and employer support for engineers to keep up to date with new methodologies and new technologies on company time, will go a long way toward maintaining and improving the technical viability of engineers. This will lead to an enhancement of total productivity in the long run. IEEE should stimulate the development of such an industrial environment.

Jose B. Cruz, Jr.

IEEE Vice President
Publication Activities

One of the strengths of the IEEE is its support of free and open discussion and its corollary refusal to engage in censorship of unpopular findings or viewpoints.

Mr. Tax's commentary is a classic case of wishing to kill the messenger who bears unhappy tidings or news with which one disagrees. The study in question was conducted by the Massachusetts High Technology Council. Its results were reported, along with conclusions drawn by the Council. It was our determination that readers ought to have the opportunity to know about the study. Individual readers clearly have several options, including taking issue with the study's conclusions or with the methodology by which it was conducted.

Donald Christiansen

Editor-in-Chief, "The Institute"

REBUTTAL

Although I didn't get the chance to rebut these letter in "IMPACT," I thought I would at least let our readers in on some of the highlights.

Professor Cruz says, "Publication of news in "The Institute is not an IEEE endorsement..." Cruz is playing a game. Here, the whisper is that IEEE does not endorse what it prints. On the other hand, "The Institute" and "SPECTRUM" shout "here it is, believe it." Unfortunately, the naive believe what they read in IEEE publications. These same readers believe the reports that are written by University researchers but, after the Northeastern University report, we do know better.

Cruz writes "...I was appalled by the conclusions of the study." I guess he has been appalled since December, 1984 when the article appeared in "The Institute." Two academics performed a literary mugging on the engineers and Cruz is appalled. Why didn't Cruz, as VP of Publications, help the victims. As Publications VP, he can get half a page to bestow the virtues of "The Institute" but not one column for the mugEes.

Since he looks forward to reading about the North Jersey IEEE report, I hope some of you will send him a copy of this "NEWS-LETTER" or "E.E. TIMES." "The Institute" is still in committee.

Last May, Jose Cruz wrote a letter that appeared in our April issue. In referring to publishing alternate views and the "Institute" staff he wrote: "Effective immediately, they will try even harder." It was probably just a campaign promise.

While he has all the good words, we can still look at Christiansen's letter sentence by sentence.

1. I have already discussed censorship of North Jersey by "The Institute."

2. "...unhappy tidings or news with which one disagrees," is much different than the distortions he defends.

3. The study in question was written by Paula Leventman and Glenn Pierce, two "researchers" from Northeastern University and not MHTC.

4. The results and conclusion, cover to cover, have the same names and not that of the MHTC.

5. I also agree that the readers should know about the study. When will "The Institute" tell them?

6. The options mentioned are too limited. I hope they don't mind us taking a few more.

RICHARD TAX, Chairman
North Jersey Section

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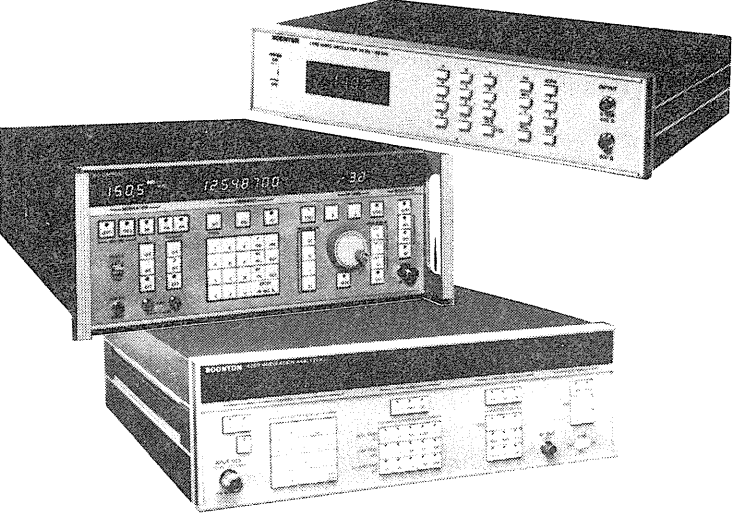
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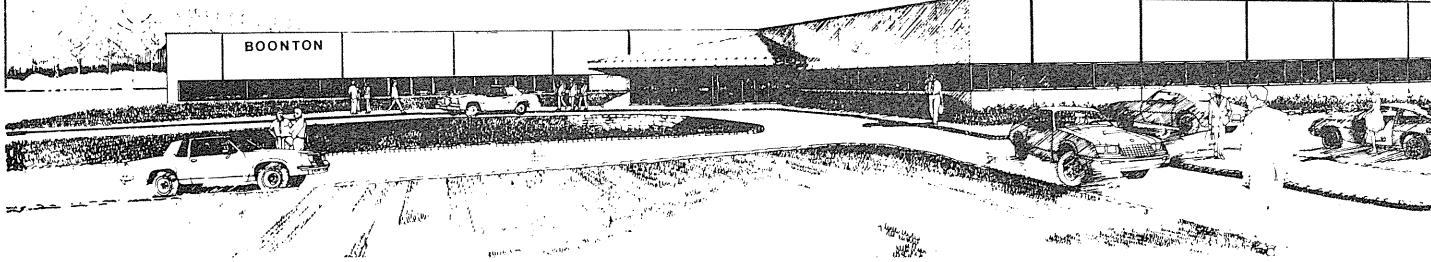
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PACE NEWS

Professional
Activities
Committee for
Engineers

By R. Tax

“The Institute” Ignores North Jersey Section

Last month, in our August issue, we published an article from “Electronic Engineering Times” entitled “IEEE Members Slam Report That Linked Age, Obsolescence.” The news article, by Matthew J. Doherty, was about our North Jersey Committee report entitled “Critique of ALLPNES Report—Assessment of Life-long Learning Program Needs for Engineers and Scientists in Massachusetts High Technology Companies.” (ALLPNES-pronounced all pines.) Doherty’s article told of North Jersey’s Executive Committee condemning the study from Massachusetts High Technology Council (MHTC)-Northeastern University and included some remarks by Paula Leventman, one of the university authors.

We also promised you more about how IEEE’s “The Institute” handled the story. As an additional bonus we have included letters by Donald Christiansen, Editor-in-Chief of “The Institute,” and Jose B. Cruz, Jr., Publications VP. Their letters were published in the August, 1985 issue of “IMPACT,” a PACE publication, and refer to our February Newsletter article “Humbuggery Endorsed By The Institute” which was republished in the April issue of “IMPACT,”

CENSORSHIP

As of September, “The Institute” and its editors are still ignoring the whole issue and have effectively acted to censor the North Jersey Section. Think about it. Censorship-headlines for academia, footnotes for engineers. Headlines for MHTC and Northeastern University and the “Letters” column for engineers. Professor Cruz does suggest this in the third paragraph of his letter.

EVENTS

Let’s review some events. Northeastern University members prepared a report for the Massachusetts High Technology Council (MHTC) that said engieers become obsolete and the “statistically

typical electrical engineer can now expect to face 30 years of declining productivity until retirement.” IEEE’s “The Institute” printed an article “EE obsolescence is predicted in Massachusetts.” The article appeared to be nothing more than a press release showing the results of the university report demeaning the engineer. Three North Jersey IEEE members analyzed the MHTC-Northeastern report and submitted their report to the North Jersey Section executive committee in May. After a one month review period, on June 12 the Executive Committee voted 16:1 to release the “Critique of the ALLPNES...Report.”

A preliminary draft of the Section Report was sent to “The Institute” in April to meet their June deadline. The released North Jersey critique was sent to “The Institute” on June 15. Every consideration was given to “The Institute” to provide them with the opportunity to print the story before or at the same time as the trade press. “E.E. TIMES” reported the story on the front page.

EQUAL PRESS

“Institute” editors Tekla Perry and John Adam suggested that I, as a co-author of the North Jersey Critique, write the story for “The Institute” and the authors of the Northeastern paper could rebut the article. Obviously, there is a difference between an unbiased reporter from “The Institute” writing a story and having the co-author of the critique writing the story. I would have preferred “The Institute” call a spade a spade and identify the MHTC and the Northeastern University authors as the responsible parties and detail their errors. “E.E. TIMES” did this. Why didn’t the IEEE

I refused to write the piece for “The Institute” and suggested they give the North Jersey report the same ten column inches in

Reliability Conference Slated At NJIT

A One-Day Reliability Conference will be held at NJ Institute of Technology, 323 Martin Luther King Blvd., Newark on Wednesday, September 11, 1985.

Six papers will be presented — three on Tantalum Capacitors and three on Microcircuits. The Seminar is being held under the joint auspices of IEEE NTSAC Committee and NJIT.

The papers are by R.J. Millard co-inventor of Ta₂O₅ capacitors and just retired from Sprague; Dr. W.C. Robinson from Kemet; Yorio Hasegawa from NEC Japan; R.P. Misra of NJIT; E.B. Hakim of ERAD-COM and W.H. Becker of AT&T.

The Conference will be useful to both systems designer and the Component Manufacturer.

Additional information is available from Raj P. Misra, NJIT, Newark, N.J. 07102. Phone: (201) 596-3512, 3514, 3510.

T-1 Local Bypass

“T-1 Local Bypass” will be discussed by James R. Kane at the September 26 meeting of the IEEE’s Computer & Communications Societies North Jersey Joint Chapter.

About The Talk

Today 23GHz microwave is the most commonly used short haul bypass medium. How are users optimizing the capacity of this link to shorten payback periods? What equipment and design techniques are involved? What are the economics of the typical bypass network for voice/data/video?

This T-1 presentation will address these questions and focus on applications, capabilities and differences of T1 equipment: 23 GHz & 18 GHz microwave, multiplexers, channel banks, muldems, voice compression, encryption and CSUs. State-of-the-art capabilities of multiplexing and networking equipment such as automatic

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“ The IEEE Newsletter” - September, 1985 - Page 3

channel routing, dynamic bandwidth allocation, alternate routing, network management, and compression for high capacity networks will be reviewed. Special consideration for access to T1 from a digital PBX, LAN, remote IBM front end or high speed CAD/CAM system will also be discussed.

About The Speaker

James R. Kane is president and owner of ISC Communication Systems Corp., a turnkey systems house in Ridgewood, N.J.

Formerly with General Data Comm., Mr. Kane started up that company’s highly successful digital communications product lines and systems division.

Mr. Kane also directed the research and development of major military communication systems, including USAF tropo-scatter backbone systems, missile range timing systems and 10,000-line communication networks with Litton Industries.

Prior to that he was a Systems Engineering Group leader at RCA Global Communications.

Time: 8 PM, Thursday, September 26, 1985.

Place: Holiday Inn, Route 46, Parsippany, N.J.

Travel Information and/or Dinner Reservations: Fred Smith (201) 445-5210 or (212) 695-4269; Fran Stork at (201) 884-6040.

Fiber-Optic Networks For Long Hauls

The North Jersey Section’s Computer/Communications Chapter will hold a October 30, 1985 meeting on “Long-Haul Fiber-Optic Networks.” Charles Siperko of Microtel will discuss the LaserNet system.

About The Talk

The speaker will discuss various aspects of the planning, engineering and construction of Microtel’s LaserNet fiber-optic network, and the present network topology and status of the National Telecommunications Network (NTN).

The talk will cover technology alternatives and the advantages of a fiber-optic

transmission network, considering the operating environment in the Southeastern U.S. and the competitive cost advantage. It will also present a review of LaserNet network objectives, design, and construction techniques.

About The Speaker

Mr. Siperko is presently Vice President of Operations at Microtel Inc., where he is responsible for the engineering, network operations and customer service functions. He had originally joined Microtel as VP Engineering, responsible for the planning, engineering, and construction of the LaserNet network.

Previously, Mr. Siperko was Assistant Vice President for Engineering of Macomnet (division of M/A-Com Corp.), and Director of Earth Station and Satellite Interface Engineering at Western Union Telegraph Co.

Mr. Siperko holds a BSE degree from The Johns Hopkins University and an MBA (finance) from Loyola College of Baltimore.

NON-MEMBERS OF IEEE ARE WELCOME TO ATTEND THIS EVENT.

Time: 8:00 PM, Wednesday, October 30, 1985.

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

For Further Information: George Parowski (201) 529-6141 or Fran Stork (201) 884-6042.

DONALD W. TAYLOR

Donald W. Taylor of Springfield, 91, died July 12, 1985 in Overlook Hospital. Former head of the engineering department of Public Service Electric & Gas Co. in Newark, he retired 26 years ago. He had joined Public Service in 1918.

Mr. Taylor graduated from Columbia University in 1916 with a degree in electrical engineering. He was past president and a Fellow of the AIEE and served as chairman of the New York section of AIEE.

He had served as chairman of the electrical equipment committee of the Edison Electrical Institute.

Born in Cedar Rapids, Ia., Mr. Taylor lived in Millburn township most of his life before moving to Springfield last year. He is survived by his wife, the former Esther Bodenweiser, and one sister, Ruth of Rye, N.Y.



MERRILL W. BUCKLEY, JR.



EMERSON W. PUGH

MERRILL W. BUCKLEY, JR.
Administrator of Planning and Measurement
RCA's RCA Aerospace and Defense
Moorestown, New Jersey

EMERSON W. PUGH
Research Staff Member
IBM Watson Research Center
Yorktown Heights, New York

Following service in the US Navy as an electronic technician and radar instructor, Mr. Buckley received the BSEE from Villanova University (1949) and the MSEE from the University of Pennsylvania (1954). His early engineering employment included the Naval Air Development Center (Test and Evaluation), ELECTRONICS (Design) and the Frankford Arsenal (Radar R&D). Since joining RCA he has held a variety of positions, e.g., Systems Analyst, Project Director, Manager Logistics, Manager Field Planning, Manager Programming and Manufacturing Coordination, on such projects as TERRIER, TALOS, NIKE, ATLAS, MINUTEMAN, BMEWS, APOLLO and AEGIS.

He teaches within RCA, and is a frequent seminar speaker in the United States and abroad on management and engineering topics. He lectures for Penn State, Drexel, George Washington, Delaware and Alabama Universities and several professional societies including IEEE. He is a Naval Reserve Officer (retired), and participates in the IEEE Distinguished Lecturer and Student Professional Awareness programs.

For Mr. Buckley's IEEE Activities please refer to further information included with your Ballot.

Statement by Merrill W. Buckley, Jr.

The duties of the Executive V.P. are probably the least explicit of any of the IEEE corporate officers. This has been particularly evident since the adoption of the President-Elect concept in 1982. The value of the position therefore depends in large measure on how the person who is elected approaches their term of office.

If elected, I would enthusiastically undertake the usual functions of the office which are to assist the President, to chair the Conference Committee, and to coordinate and report on the activities of the committees assigned to the Executive V.P. But I would also spend a good deal of time on other important Institute issues. The recently completed Centennial Year survey of what our membership thinks should be done to improve the IEEE would be my agenda.

Since our bylaws state that "the Executive V.P. will be responsible for broad corporate matters and may appoint such ad hoc committees as may be required to discharge his/her duties" there is a ready made mechanism available to work on key issues.

I believe we need, and would initiate, ad hoc committees of our best people to address the membership's concerns and to develop specific recommendations for Board of Directors action on such issues as:

- Enhancing our professional image
- Low cost continuing education
- Application oriented publications
- Improving the IEEE/industry relationship
- Worldwide distinguished lecture program
- An affordable dues structure
- Priority review for professional activities
- Continuing support of AAES

October will bring another PACE Social with food and refreshments and give section members the opportunity to meet Henry L. Bachman, candidate for IEEE's President-Elect, 1986.

Russell C. Drew, Chairman of the United States Activities Board and V.P. of Professional Activities will be PACE's guest at the third PACE Social in November.

Dr. Pugh received his BS in 1951 and PhD in 1956 from Carnegie-Mellon University, where he remained as an assistant professor prior to joining IBM in 1957. He managed the development of the high-performance magnetic film memory array shipped on the IBM 360/95 in 1968, and beginning in 1971 he initiated and coordinated the interdivisional magnetic bubble development effort. He has led numerous other R&D projects in laboratories in the USA, Switzerland, and Japan, and has received several IBM patent awards.

In 1974, on leave from IBM, he served as Executive Director of the National Academy of Science's study of automobile emissions and fuel economy. He is author of "Principles of Electricity and Magnetism," Addison-Wesley, 1960 (2nd edition 1970), and "Memories That Shaped an Industry," The MIT Press, 1984, and has published widely in solid-state devices and information storage. He is a Fellow of the IEEE, APS, and AAAS.

For Dr. Pugh's IEEE activities please refer to further information included with your Ballot.

Statement by Emerson W. Pugh

It is an honor to be considered for the office of Executive Vice President. If elected, I will devote myself to that position with four primary goals:

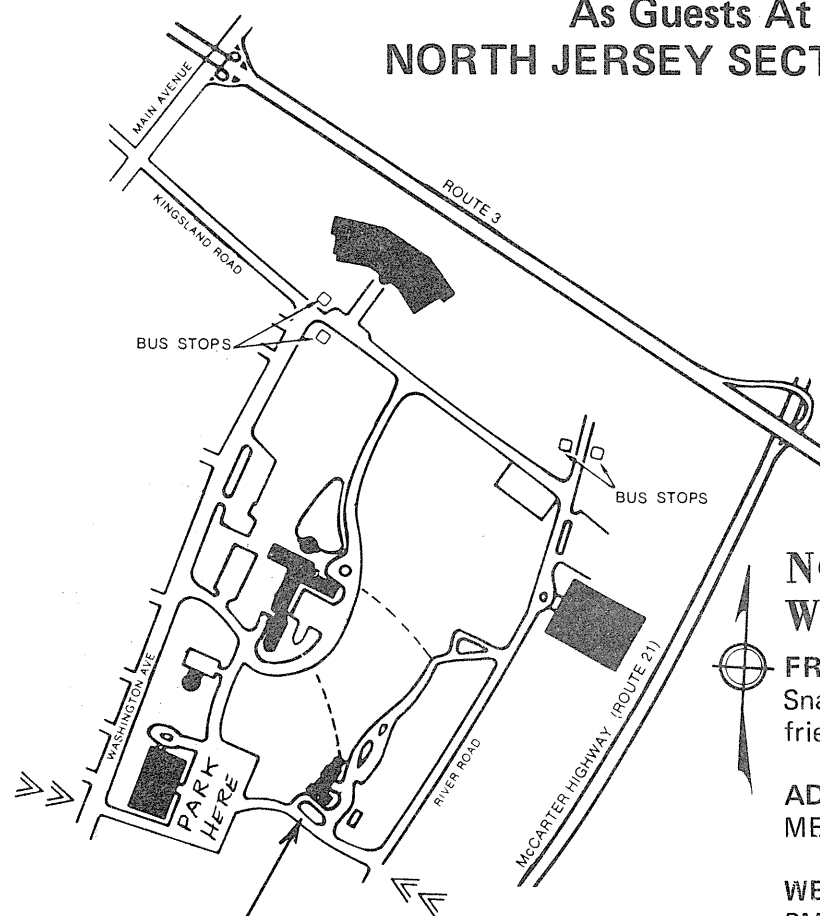
- Improve the volunteer structure of IEEE to attract our best members, to use their services wisely, and to assure that their efforts are applied to the good of all members.
- Help our members increase their technical competence through improved IEEE publications, conferences, and educational programs.
- Increase the monetary rewards and other recognition accorded to engineers through improved public awareness of their contributions and by developing broader opportunities for engineers.
- Make the international engineering community, and IEEE in particular, a force for promoting world peace and a better life for all.

In working to achieve these goals, I will seek the advice and help of as many members as possible; I will draw on my work experience in industry, government, academia, and international technology development and on my fifteen years of experience as an IEEE volunteer—including conference chairman, transactions editor, society president, Publications Board vice chairman, and member of the Board of Directors.

A specific function of the Executive Vice President is to chair the Conference Board, created last year to address a number of specific problems. As a member of that board this year, I am obtaining insights that will help me be more effective during the one-year term of the Executive Vice President.

PACE—Professional Activities Committee for Engineers Presents

Candidates for IEEE Executive Vice President As Guests At Our NORTH JERSEY SECTION SOCIAL



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