



The IEEE

Newsletter

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NEWSLETTER STAFF

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REPORT ALL ADDRESS CHANGES TO:

IEEE Service Center
445 Hoes Lane
Piscataway, N. J. 08854
(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.

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621-7500, X-727
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Engineering Managers Role In Enhancing Engineering Careers

What is the role of the engineering manager in developing and enhancing engineering careers? In a three person panel discussion presented by the New York/North Jersey chapter of the Engineering Management Society on Thursday, December 4, 1980, the EMS will present three stages of the engineering career.

How do you successfully effect the transition from classroom to laboratory? What are the techniques for proper selection, recruiting and placement of entry level engineers? This topic will be expanded by Mr. Walt Keating, Program Manager of Edison Engineering Program, General Electric Corporation.

Mr. Eugene P. Damm, Director of Technical Personnel Programs for IBM Corporation will discuss the engineer in mid-career. Mr. Damm will review methods for evaluating competency as well as job content, motivating for increased creativity and productivity and programs to keep engineers current in the state of the art.

Dr. Harold G. Kaufman, Associate Professor of Management and Director of the graduate program in Organizational Behavior at Polytechnic Institute of New York will share the results of his extensive research on the problem of obsolescence of knowledge and skills in large companies. Dr. Kaufman will specifically

address this issue as it relates to engineers in their late careers.

Time: 7:30 PM, Thursday, December 4, 1980.

Place: ITT Defense Communications Division, 492 River Road, 3rd Floor, Nutley, N.J.

Pre-Meeting Dinner: 6 PM, Jade Fountain Restaurant, River Road, Nutley, N.J.

Reservations or Additional Information: Tom Morrison (212) 575-1400; Igal Sharett (201) 284-3757; Harry Stokes (914) 686-3077.

Cardiovascular Monitors In The OR And ICU

The Metropolitan New York Chapter of the IEEE Engineering in Medicine and Biology Society program for January will cover: "Application of Instrumentation to Cardiovascular Monitoring in the OR and ICU." The speaker will be Louis Guercio, MD; with responding discussion by Frank Castellano and Yasu Oka.

This is a joint meeting with New York Academy of Medicine.

Time: 8 PM, Tuesday, January 13, 1981.

Place: New York Academy of Medicine, 2 East 103 Street, New York, NY.

Pre-Meeting Dinner: 6:00 PM, Kleine Konditore, 234 East 86 Street, NYC (Between 2nd and 3rd Avenues).

NOTE: New day and place for January meeting only!

PAC Meet On BET

The North Jersey Section Professional Activities Committee (PAC) will present a talk on the Bachelor of Engineering Technology program as perceived by an accredited degree-granting institution. This presentation is timely in view of the resolution passed unanimously on September 7, 1980 at the National PAC Conference urging the elimination of the word "Engineering" from the degree "Bachelor of Engineering Technology" conferred by many of these programs.

Dean of Technology Joseph Kopf of the New Jersey Institute of Technology will be the speaker. An open discussion will follow his talk.

All engineers, members and non-members alike, are urged to attend.

Time: 7:30 PM, Thursday, December 18, 1980.

Place: ITT Laboratories Conference Center, 500 Washington Avenue, Nutley, N.J.

Pre-Meeting Dinner: 6 PM, Jade Fountain, River Road, Clifton, N.J.

Additional Information: Call Meyer Rosenthal, (201) 731-4812, evenings.

Tell Us How We Can Help

We need feedback from you so that we can help you. Fewer than 300 of 5000 North Jersey members are active; attending one or more meetings each year.

Please answer the following questions so we can help to improve our service.

Why are you a member of the IEEE?

Both technically and professionally:

- What do you want the local section to do for you?
- What do you want the national IEEE to do for you?

Send your reply to Meyer S. Rosenthal, 12 Colonial Woods Drive, W. Orange, N.J. 07052.

FUTURE MEETINGS:

The Control Systems Society will sponsor a meeting on March 19, 1981 on "Dynamic Simulation of Control Systems." The speaker will be Dr. Charles D. Kahn of Exxon. At BTL, Whippany, 8 PM. Pre-Meeting Dinner at the AFTON, Florham Park, N.J. 6 PM.

SPOTLIGHT ON NORTH JERSEY 1980 End Of Year Membership Drive

The IEEE, with 205,000 members, is the world's largest International professional organization and is growing in size yearly. The IEEE is divided into ten Regions. Regions 1-6 in the U.S.A., Regions 7-10 in other countries. Until this year the largest IEEE Region has been Region 1, our Region, consisting of the North East United States from Maine through New York and most of New Jersey. (Somehow we lost South Jersey to Region 2; Penn. and South). For the past few years Region 6, the West Coast, has been close on our heels; both of us trying to reach an elusive 40,000 membership. In the past few months Region 6 pulled ahead and at last count they had 40,200 members to our 39,700.

Region 1's Director, Hans Cherney, has put out the challenge to all his Sections to boost membership by 4% by year's end, with the dual goal of retaking the lead from Region 6, and surpassing our 40,000 member goal. Since the North Jersey Section is the third largest in the Region, we have our work cut out for us.

Most people join the IEEE, whether as students or working engineers, as a result of talking to an interested member. You, the member of our Section, are our best recruiters, whether based on technical interests, professional interests, insurance programs, or simply fellowship.

As an incentive to you, our spokesmen and recruiters, Region 1 and the North Jersey Section are jointly offering to subsidize your membership to the extent of \$5.00 per new member signed up by you who joins our Section by December 31. This rebate will be in the form of a check made out to the IEEE, usable as part of your membership payment, or if you have already paid your 1981 dues, as \$5.00 towards additional Group/Society membership. If you sign up eleven new members, your basic annual dues will be fully paid.

To take part in this membership drive simply:

1. Use the membership form included in this newsletter.
2. After your proposed applicant fills out his/her requested information, endorse the form, including your membership number.
3. Mail the application, with appropriate fees, to:

Donald Weinstein
Membership Chairman, IEEE
c/o Kulite Semiconductor Products
1039 Hoyt Avenue
Ridgefield, N.J. 07657

4. For additional membership forms, contact Don at (201) 945-3000.
5. Remember, the subsidy program ends December 31. Now is not the time to put off asking your qualified friends and associates. You win, he wins, the Section wins, the Region wins and the Institute wins. Good Luck!

Alan H. Stolpen, Chairman, North Jersey Section, Weston Instruments, 614 Frelinghuysen Ave., Newark, N.J. 07114, (201) 242-2600, Ext. 463.

Schedule of Fees:

Entrance Fee*	\$10.00
Dues & Assessments to Dec. 31, 1981	\$55.00
Total	\$65.00

- * The Entrance Fee must be included with all applications for first time membership. Members who have allowed their dues to lapse for a period of 2 years or more must also pay the Entrance Fee.

MEMBERSHIP APPLICATION

Mail To: Don Weinstein, IEEE
c/o Kulite Semiconductor
Products
1039 Hoyt Ave.
Ridgefield, N.J. 07657

NAME and ADDRESS for IEEE MAIL:

First Name, Middle Initial, Last Name

ADDRESS

ADDRESS

ADDRESS

CITY, STATE/COUNTRY AND POSTAL CODE

PRESENT OCCUPATION

Title or Position

Firm name

Firm address

Street

City

State/Country

Postal Code

Date of birth

Month Day Year

☐ Male

☐ Female

If yes, please furnish (if known):

Were you ever a member of IEEE?

☐ Yes
☐ No

Grade

Membership No.

YEARS OF ACTIVE PROFESSIONAL PRACTICE:

ENDORSEMENT of one IEEE Member, Senior Member or Fellow who knows you professionally.

Print Name

Membership No.

Endorser's Signature

Date

PAYMENT (IN U.S. FUNDS)

☐ Entrance fee and Membership Dues & Assessment \$

☐ Enrollment in Societies (Enter Codes Below)

S Code

PUB.ID

S Code

PUB.ID

☐ Subscription to *Proceedings of the IEEE* (\$12.00) \$

☐ Subscription to *Engineering Management Review* (\$6.00) \$

☐ Subscription to *Communications Magazine* (\$6.00) \$

☐ Subscription to *Micro Magazine* (\$8.00) \$

☐ Subscription to *IEEE Technology and Society* (\$3.00) \$

☐ Subscription to *IEEE Technology and Society* (\$3.00) \$

TOTAL AMOUNT PAID WITH APPLICATION \$

I hereby make application for IEEE membership and, if elected, will be governed by IEEE's Constitution, Bylaws, Statements of Policies and Procedures.

Full signature

Date

FOR OFFICE USE ONLY

Elec. Date
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Member Number	St/Cntry	Zip Code/City	Reg	Coun	Sec
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Subsc	C/S	County	A/C	BPA Code	Grade	Birthdate	S
26	28	29	32	33	39	40	42

To Tour Scale Model Of Breeder Reactor

The December meeting of the Reliability Group will be a field trip through a model of the Clinch River Nuclear Generating Station, currently under development in Oak Ridge, Tennessee. This will be the first Breeder Reactor generating station in the U.S., and Burns & Roe has constructed this novel scale model to facilitate design and check-out of this proposed installation and its control systems.

The tours will move out in small groups, each led by knowledgeable guides who will explain the complete operation, and reservations are required. Directions to Burns & Roe are: G. S. Parkway to Exit 165, Ridgewood Ave. east for 2.8 miles, left on Kinderkamack Road north for approx. ½ mile to plant.

Time: 7:30 PM, Wednesday, December 10, 1980.

Place: Burns & Roe Inc., 700 Kinderkamack Road, Oradell, N.J.

For reservations and further information: Sergei W. Bogaenko, (201) 227-7300 or 785-3673; Frank W. Deininger, (201) 265-2000, Ext. 3365.

Computer Testing Of Microwave

At the December 10, 1980 meeting of the North Jersey MTT/AP Chapter, computer controlled RF and microwave measurements will be demonstrated using a Radio Shack TRS-80 computer as an intelligent GPIB-488 controller.

Rapid, high accuracy gain, loss, mixer conversion loss and return loss measurement suitable for both laboratory and

production testing will be demonstrated. Techniques utilized to achieve high accuracy will be shown, such as: Floating reference, Four part bridge and airline, Hot mixer VSWR, Error correction averaging and Interactive graphics using a light pen.

A technique to adapt a universal RF/microwave test program to a specific test requirement will be shown.

The speakers will be Mickey Miller, President, Scientific Engineering Labs. A graduate of CCNY, he has been in microwave and RF testing since 1956.

Time: 8 PM meeting, Wednesday, December 10, 1980.

Place: ITT-Tower Auditorium, Nutley, N.J.

Pre-Meeting Dinner: 6:00 PM, Ramada Inn, Clifton, N.J.

Further Information: Hyman Goldman, (201) 284-3739.

PROFESSIONAL ACTIVITIES

By Richard Tax

AAES And ABET Serves U.S. Members?

Our November issue discussed AAES and ABET under "U.S. MEMBERS DUES." This article from the "Committee of Concerned E.E.s" newsletter shows another side of the coin.

A. A. E. S. — ANOTHER LAYER OF UNRESPONSIVENESS

"A new organization has been formed that pretends to represent the American working engineer. Called the American Association of Engineering Societies, its officials are also officials of the engineering societies. It is envisioned as an umbrella organization, permitting all American engineers, irrespective of discipline, to address our legislators. We have written about this in the past and we still think it is a bad idea at this time. Why?

Simply put, AAES was born a eunuch. Despite pretensions to legislative clout, it is legally unable to exert any. The reason has to do with the provisions of the Internal Revenue Service that regulate tax-exempt professional societies. Such groups fall into one of two groups, commonly referred to by the applicable paragraph of the statute. A 501-C-(3) organization is forbidden to attempt to influence legislation. The American Red Cross and most of the engineering societies are of this type. But for some years now, IEEE has been, like the American Medical Association, a type 501-C-(6) organization and is thus

permitted to influence legislation. But AAES was chartered as a type 501-C-(3) non-profit organization. So, AAES, despite all its noble press releases, simply cannot (and dares not) engage in lobbying!!

What then will AAES do? Given the composition of the hierarchies of the engineering societies, given the fact that industry contributes, directly, from 10 to 15% of AAES's income, all they will do is to pontificate before various officials about the shortage of engineers. Under the guise of offering "advice" to Congress, they will doubtlessly claim that, in view of the great "shortage" of engineers, foreign engineers should be admitted limitlessly.

Surely IEEE's Board knows of these legal limitations imposed on AAES. Why then did they vote to join (and fund) AAES? Given its past record of subversion of the legitimate professional needs of the American working EE, it is possible to read only the darkest of motives into IEEE's action. Having been uncomfortable from the outset in its mandated role as a professional advocate, IEEE may have found a way to divest itself of some of its responsibilities. Thus, IEEE, when urged to take action to damn the Dr. "degrees" in engineering from diploma mills, will say, "Gee, felias. It's a problem that cuts across engineering disciplines. Let AAES handle it."

American EEs have even more reason to be upset. Without even bothering to poll the membership, IEEE's Board has voted

to turn over more than \$1/member/year directly to AAES. But IEEE's members have already voted that IEEE, not AAES, should represent the American EE before legislators.

Does this mean that an umbrella organization should never receive the support of the American engineer? Of course not. But a strong umbrella requires strong ribs. Only when the various engineering societies are responsive to the American practitioner (and not to the clique of college professors and corporate executives) should parts of their responsibilities be ceded to an umbrella organization. Until that time, we urge all American engineers to oppose, as strongly as possible, AAES. We dare not permit another organization, funded with our monies, to speak for the opposition."

AAES was, at one time, the Engineers Joint Council (EJC). EJC fathered the Engineering Manpower Commission (EMC). The EMC was notorious for its Engineer Shortage Propaganda. Milton Alpern, a past Director of the NSPE, wrote a booklet based on his studies for the American Society of Civil Engineers. Entitled "Quantity Instead of Quality: A Sabotage of Engineering and Its Education By 'Engineer Shortage' Propaganda?" We still have a few copies left for interested members. Robert Rivers tried to get EMC to change their song but didn't succeed. He did, however, open the doors and make us aware.

The Accreditation Board of Engineering and Technology (ABET) was the Engineers Council for Professional Development (ECPD). They are supported by our two dollar dues hike. In 1977 we had cited ECPD for its publication of Engineer Shortage Student Recruiting Propaganda. Even after engineers were driving taxi cabs EMC and ECPD were selling 'Engineer Shortage' to the naive high school students.

ECPD is also responsible for the very controversial Bachelor of Engineering Technology (BET) degree. At New Jersey Institute of Technology, the BET degree is another route to their Masters Degree program.

The December PAC meeting looks at the BET program.

PAC Spotlight On North Jersey

Primarily, I believe we would all like to see the electrical and electronics industries and those that employ engineers thrive and not just survive. The past decade has been a difficult one for some corporations and their engineers and an impossible one for others. Corporations have spent millions of dollars on proposals and R&D only to find that contracts were not awarded or others were canceled. Some have had manpower reductions of up to eighty percent during the seventys and others have just gone out of business.

The problems seem to be more political and financial than they are of a technical nature. Along with the financial hardships there is a trend to place more demands on the engineer while reducing their incentive, benefits and working conditions. While IEEE members have been working on Task Forces to combat age discrimination and wage-busting, there has been unemployment, underemployment, and salary compression. Eighty percent of today's engineers will retire without a pension and some engineers have been fired for just plain telling the

truth. The thought of "do a good job and another one will be right behind it" has been succeeded by "first one finished is the first one fired." Corporate mugging thrives as scape goats are found to justify exceeding budgets on overly optimistic contract bids.

Our electrical and electronics industries, that had made the U.S. first, have been required to deliver more and more and are rewarded by even less. The pressure has been on for just too damn long!

The time for a change is long overdue. Just as an un-guided aircraft responds to gravity, falls and crashes, so is it that the engineering profession without the guidance of its members will also fall prey to lower standards and destruction. If we are to elevate our profession, provide engineers with a rewarding life time profession and support our industries, then we must make policy changes to do so. Congressional committees have been looking for questions, answers and the direction to recapture our technological position and our productive capability. Our representatives seek and require our guidance, but we must make the effort and do more than just survive.

The IEEE is the catalyst in the solution. The IEEE provides each of us with the opportunity to become effective. Our Section provides us with a voice on the national level. Together, we can influence legislation and solve the political and financial problems that have taken their toll on our industries and our profession. However, the first step is yours.

Richard F. Tax

Chairman, Professional Activities Committee

OPINION: You Ask The Questions!

Your opinion is valuable. I'm sure you are also interested in your associates opinion. One way to get your associates opinion is to ask them and another is via local surveys. However, in a survey, you never get to ask the questions. We would like to survey our membership but we would also like our membership to provide the questions.

During the next few weeks we will accept any questions from our members and we will include them in the survey. Questions in any form will be used. Just jot them down. They do not have to be typed. Ask as many questions as you like. Get a friend to participate.

Early in 1981 the survey, with your questions included, will be published in the Newsletter for all members to answer. We do the work and you get the answers. Questions should require a "Yes," "No," or multiple choice answer.

Sample Questions

How many engineers per secretary?

1 () 2 () 5 () 25 () more ()

Do you believe you should work unpaid overtime?

Yes () No ()

Would you want your son or daughter to be an engineer?

Yes () No ()

Send questions to the "NEWSLETTER," Box 455, Mt. Arlington, N.J. 07856.

North Jersey Section, IEEE
PROFESSIONAL ENGINEERING REVIEW COURSES
Morristown, New Jersey
JANUARY, 1981

The North Jersey Section IEEE will sponsor review courses for Part "F" (Engineering Fundamentals) and Part "P" (Electrical Engineering) of the Professional Engineer Examination to be administered by the State of N.J. in April and May of 1981.

PE Registration in New Jersey for non-licensed engineers requires successfully passing written examinations in both Engineering Fundamentals and Electrical Engineering (EE Graduates). Members who are just starting the PE registration process should enroll in the Engineering Fundamental Course (Part F). Those who have current Engineering-In-Training (EIT) registration should enroll in the Electrical Engineering Course (Part P). We plan to offer the Part P (Electrical Review) course in the future for the benefit of those only taking the Engineering Fundamental portion of the exam in Spring, 1981.

The Review Courses will be administered by Engineering Enterprises under the direction of John Gregorits, P.E. and will cover subject matter included in the National Council of Engineering Examiners' (NCEE) uniform examination given in New Jersey.

Each course will consist of twelve 3-hour sessions on Thursday Evenings beginning on January 8, 1981. The meeting location will be the Jersey Central Power & Light Headquarters Building, Route 24, Morristown, N.J. Class will begin at 6:30 PM.

Cost of each Review Course is \$135.00 for IEEE members of the North Jersey Section. Non-member rate is \$175.00.

Registration (including tuition payment) is required by December 22, 1980. The Section is subsidizing each member enrollment in either of these courses. Enrollment will be limited to assure maximum student benefit. For additional information about the course, contact **John Baka** at **(201) 455-8534**.

PE REVIEW COURSE REGISTRATION
NORTH JERSEY SECTION IEEE
SPRING - 1981

___ ENGINEERING FUNDAMENTALS (PART F) ___ ELECTRICAL ENGINEERING (PART P)
(CHECK ONE ONLY)

NAME _____ IEEE NO. _____
(See Mailing Label on "Newsletter")
ADDRESS _____ Non-Member _____
_____ PHONE _____

INCLUDE CHECK (\$135.00 - Member North Jersey Section IEEE; \$175.00 - Non-Member) made payable to **NORTH JERSEY SECTION IEEE**. Mail to **JOHN BAKA**, Chairman, Power Engineering Society Chapter, Jersey Central Power & Light Co., Madison Ave. @ Punch Bowl Road, Morristown, N.J. 07960 prior to **December 22, 1980**.



DECEMBER

1980

NOVEMBER							JANUARY						
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30													

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4 METRO EMS-ITT, Nutley; 7:30	5	6
7	8	9	10 NJ REL-Burns&Roe Oradell; 7:30 NJ MTT/AP-ITT, Nutley; 8:00	11	12	13
14	15	16	17	18 NJ PAC-ITT, Nutley; 7:30	19	20
21	22	23	24	25 Christmas Day	26	27
28	29	30	31	FUTURE MEETINGS: January 8 - NJ IEEE, JCP&L, MORRISTOWN January 13- METRO GEMB, NYC March 11 - NORTH JERSEY SECTION DINNER March 19 - NJ CONTROL SOCIETY, BTL, WHIPPANY		

You're looking at the tip of the iceberg

When it comes to jobs in electronics, the help wanted pages only reveal a small percentage of what's available. Only about 20% of the jobs surface in the newspapers and trades. Of the remaining 80%, the best opportunities are listed with professional search consultants.

Major corporations are more likely to call in a specialist agency to fill positions because they feel it is a more direct way of finding engineers and scientists with the unique range of skills and experience necessary to fill the requirements of their most demanding positions.

If you are at present unsatisfied with your work environment and considering a change, you want to be aware of the total range of possibilities. When you review the positions listed in various recruitment media, you are seeing just the tip of the iceberg. The other positions don't make it into print and you ought to be aware of them. Without a knowledge of the wide spectrum of alternatives, how can you make an intelligent choice? Come

in and discuss your skills, talents and expectations with EEA's team of placement professionals. If you're out of town, give us a collect call and/or send us your resume. We have numerous interesting positions available in high visibility, national and international environments. Our IBM 5110 enables us to match your electronics expertise across industry barriers to the best positions in your speciality.

You'll find the most interesting futures don't appear in the back pages of publications. The word is passed from one professional to another. Fortune 500 clients seek our advice and make use of our service because we specialize in the intricacies of the engineering marketplace.

If there's a perfect job out there for you, we're in a perfect position to find it.

Contact: Norbert Norwicki, VP, at: Dept. IE/3,
Eastern Executive Associates, 881
Allwood Rd., Clifton, NJ 07012



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