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ELECTRONIC ENGINEERING ASSOCIATE.

AA or equivalent plus 6-8 years applicable experience, for responsibilities including testing

and development of electronic circuitry for industrial and consumer control processes. Knowledge of electronic circuitry, integrated circuits and discrete components plus basic drafting and instrument skills essential.

PHYSICIST/MATERIALS ENGINEER.

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AA to assist a senior member of technical staff in design, building and evaluation of prototype electro-mechanical devices and systems.

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

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NEWLETTER STAFF

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(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 head-quarters 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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Jr. Past Chairman				Robert E. McMillan

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NJ IEEE Meeting: Microprocessors In The New TWX Network

N.J. Chapter of the IEEE Communication Society has arranged a talk to be given at Western Union, Mahwah, N. J., on Thursday, April 28, 1977. The subject will be "Microprocessors in the New TWX Network." The speaker will describe the existing TWX network analog architecture and the new all-digital network architecture, which takes advantage of microprocessor technology at major and minor nodes.

The speaker will be Harold J. Mills, who has been active in communications and computer systems for many years. He is presently engaged in furthering the evolution of the TWX, Telex and other network facilities of the Western Union Telegraph Company toward an all-digital, processor-controlled environment.

Time: 8 PM, Thursday, April 28, 1977. Place: Western Union, 83 McKee Dr., Mahwah, N. J.

For Information: A. Favorito, (201) 529-6422.

NJ IEEE Meeting: Load Management & Remote Metering

On April 20 at 7:30 PM, the Power Engineering Society will host a meeting on "Load Management and Remote Metering." A representative from American Science and Engineering Inc. will conduct a talk on the ASEP System, its operations, applications, and installed performance history. The meeting will be held at the Jersey Central Power & Light Co. on Madison Ave., Morristown, N. J. For further information, contact:

Ann Giedlinski at (201) 366-1100.

Time: 7:30 PM, Wednesday, April 20,

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

Magnetic Bubble Device Testing

"Magnetic Bubble Device Testing" will be the subject of the IEEE Magnetics Chapter of Princeton Section meeting to be held Wednesday, April 13, 1977. F. B. Hagedorn of Bell Laboratories, Murray Hill, will discuss a computer-controlled system developed for testing fieldaccessed magnetic bubble devices.

One version tests bubble chips in wafer form, automatically stepping through the wafer. Another version automatically sets the bias magnets and tests finished packages which contain four bubble device chips.

Hardware and programming for these systems will be described in general terms, and testing strategies will be discussed for two different types of 68k bit chips using 16-micron-period propagation circuits. Representative results will be given to illustrate the flexibility and reliability of these systems, which have tested several thousand five-centimeter-diameter wafers and several hundred of the four-chip packages.

Time: 8:15 PM, Wednesday, April 13, 1977.

Place: Arnold Auditorium, Bell Laboratories, Murray Hill, N. J.

Pre-Meeting Dinner: 6 PM (5:30 for bar), The Roadhouse, Rt. 22 Eastbound (Opposite Channel Lumber), Springfield, N. J.

For Dinner Reservations Call: Mrs. Pauline Chrenko, (201) 455-4575.

For Information Call: G. P. Vella-Coleiro, (201) 582-3381 or M. A. Gilleo, (201) 455-4574.

Applications Of Cardiovascular Models

The Metropolitan New York Chapter of the IEEE Group on Electronics in Medicine and Biology announces the following program at its April 6 meeting: Prof. Walter Welkowitz, Ph.D., director of the biomedical engineering program at Rutgers University, Piscataway, N. J., speaking on "Applications of Cardiovascular Models."

The meeting will be held at 7:30 PM, in Rockefeller University South Lab, Rm. 204.

For further information, call W. H. Buchsbaum, Sc.D., vice-chairperson,

One-Day Seminar On Microprocessors

An all-day seminar on microprocessor technology and applications will be held on Monday, April 18, 1977, from 9AM to 5 PM at the N.Y. Hilton Hotel.

This seminar will provide a tutorial on currently available microprocessor devices and system design concepts used to develop a viable computer system. Hardware and software aspects of microprocessor systems design will be presented from both conceptual and practical viewpoints. Emphasis will be on hardware/software interaction.

Topics which will be covered include: (1) CHIP architecture, (2) Interfacing (bus structure), (3) Parallel microprocessor systems, (4) Software aids and systems, and (5) Programming considerations.

Metro GEMB, at (212) 240-5594 (Brookdale Hospital Medical Center).

Time: 7:30 PM, Wednesday, April 6,

Place: Rockefeller University South Lab, Rm. 204, 66th St. & York Ave., N.Y.C. Pre-Meeting Dinner: 6 PM, Tower Cafeteria, Rockefeller University, 64th St. & York Ave.

Lasers In Surgery

The Metropolitan New York Chapter of the IEEE Group on Electronics in

The lectures are designed to give a broad insight into the concepts and trade-offs that dominate current microcomputer design.

Registration fee is: (in advance) \$100 for IEEE members and \$125 for others; (at the door) \$120 for members and \$150 for others.

Speakers will include:

Mel Morris, Application Mgr. — Intersil; Dr. Lee Wu, Application Mgr. — Rockwell; Richard Fabri, Application Eng. — Signetics; Ron Davidson, Application Eng. — Natl. Semi-Conductor; Jay Rogoff, Application Eng. — AMI; Jan LeNier, Application Eng. — Motorola; Dennis Block, Application Eng. — RCA; Mel Kutzin, Dir. of Micro Proc. — Schweber; Jay Berman, Application Eng. — Schweber; and Bob Glassman, Application Eng. — Schweber.

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For more information Call: Mr. Kurt Herzog at (212) 466-4203.					

Medicine and Biology announces that Thomas G. Polanyi, Ph.D., consultant, Boston, Mass., will speak on "Applications Of Lasers To Surgery" at its May 4 meeting.

The meeting will be held at 7:30 PM in Rockefeller University South Lab, Rm. 204.

For further information, call W. H. Buchsbaum, Sc.D., vice-chairperson, Metro GEMB, at (212, 240-5594 (Brookdale Hospital Medical Center).

Time: 7:30 PM, Wednesday, May 4,

Place: Rockefeller University South Lab, Rm. 204, 66th St. & York Ave., N.Y.C. Pre-Meeting Dinner: 6 PM, Tower Cafeteria, Rockefeller University, 64th St. & York Ave.



Microprocessor Short Course

The New York, North Jersey, and Long Island Joint Chapter Instrumentation and Measurements is sponsoring a two-day tutorial short course on microprocessors on May 13 and 14, 1977 (Friday and Saturday) from 9 AM to 4:30 PM at the Holiday Inn in Parsippany at the junction of Rts. 46 and 80.

The Seminar is being offered to introduce engineers, engineering management and students, involved in logic and digital design, to the intricate and flourishing field of microprocessors.

Registration for IEEE members is \$105, non-members \$140 and Students \$50, and includes coffee breaks and lunches. Further information can be obtained from Ted Barabutes at (201) 465-2293 or Dave Roberts at (212) 422-4800, ext. 8224. To register, mail check payable to IEEE to: IEEE Educational Activities Board, 445 Hoes Lane, Piscataway, N. J. 08854, Attn: Kathleen Doktorski (201-981-0060, ext. 174). Please state the name of the course you are registering for, your name, address, and telephone number.

7. Do you think continued compliance and support of these standards will benefit our profession?	88.6	9.1 2.3
8. Do you think continued compliance and support of these standards will benefit the industry?	86.4	9.1 4.5
9. Do you think continued compliance and support of these standards will benefit the public?	88.6	6.8 4.6
 10. Which document would you adopt to guide you and the IEEE in your professional goals? () Canons of Ethics for Engineers () IEEE Code of Ethics 	34.1 38.6	Both 11.4 15.9
11. Are you a member of the IEEE?	93.2	4.5 2.3
12. Would you join the IEEE if the Code/Canons were strictly enforced.	4.5	95.5
13. The Socio Economic Committee is the equivalent of the Professional Activities Committee (PAC) of other sections. Their function is to solve professional socio economic problems. Are you interested in attending Socio Economic Committee meetings on a regular monthly schedule?	25	56.8 18.2
14. Welcome to the Socio Economic Committee. Will you check your Section Newsletter for meeting dates?	29.5	70.5

Some of the members that responded made the following comments directed to the questions parenthesized. (1) Yes. This will raise the status of being a member. (4,5) Yes, or why have them? (4,5) Omit. How? (6) Yes. We should request their compliance. (6) Yes. Change the word associations to the word companies. (8) Yes, in the long run. One member indicated the following: (10) Would accept the Canons if (he/his) would be replaced with a non-sexist term. This question should include "neither" as a choice. (11,12) Should ask if a member would quit the IEEE if the Code/Canons were strictly enforced. The questionaire is highly biased towards the acceptance of the Code/Canons and is therefore meaningless. She/He suggested "consulting a professional pollster (like Gallup, Harris, etc)".

Unfortunately, this member checked (NO) to 13, indicating he or she would not attend Socio-Economic Committee meetings. Should she or he attend, I'm sure her/his suggestions could be of value. The invitation is extended to all members.

The response to the Feedback Cards was very poor, but typical of the general response to previous Newsletter Feedback Cards. In this case only 44 responded. This is less than 1% of our total membership of approximately 4700.

The lack of interest is indeed quite unfortunate since it indicates that the Section is very weak and it can therefore be directed by a few who put in a little extra effort. Since we are to engage in **professional** as well as **technical** and **educational** activities it would benefit all members to participate.

In the example of feedback cards each individual carried more than 2% of the total response. This is very significant. Should feedback cards be utilized to effect the decision or direction of the Executive Committee and our Section, our actions could well be left in the hands of a few that respond to a specific question or subject.

The squeaky wheel gets the most oil. You might remember this in the future. There will be many occasions and opportunities for you to present your views, and do some squeaking of your own. Feedback cards, meeting attendence, discussions with IEEE and government representatives, our Newsletter, and local newspapers are a few of the examples. If you don't take advantage of these opportunities, someone else will. Their views may conflict with yours, and one voice can carry a lot of weight. Your active participation may well affect your future, the future of your family and that of your profession.

Engineers Go Operational

Project EGO (Engineers Go Operational) has been approved by Dr. Herbert Bennett, Region I PAC Chairman. Project EGO, initiated by our Section's Socio-Economic Committee, has a budget of \$2300 that will primarily be directed towards our Newsletter. The present Newsletter budget is \$10,000. The additional \$2300 will provide for a significant increase in our ability to communicate with the membership.

The object is to increase Newsletter coverage of USAB/PAC and Socio-Economic Committee events. It will decrease lead time for USAB Legislative Alerts, and provide Section members with Newsletter space to air professional problems and affect their solution.

USAB's financial assistance is an important contribution to the struggle for professionalism, but it cannot replace membership participation. Project EGO (Engineers Go Operational) is a USAB/Socio-Economic Committee funded program, designed to develop the support of American Engineers in creating a more professionally aware and active IEEE membership.

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Join IEEE At

Reduced Rates

E.E.'s are taking advantage of the IEEE's new membership reduced fees starting on March 1, 1977. Normally the E.E. joining the IEEE is faced with a \$45 membership fee plus a \$10 admission fee. Starting on March 1, 1977 the fee is reduced to \$22.50 plus the same \$10 admission charge for a total of only \$32.50. This reduced membership schedule is offered from March 1 to August 31 and covers the new member until December 31.

The membership fee provides the new member with not only technical and educational information, but access to excellent insurance programs, and more important, the opportunity to support the United States Activities Board (USAB) in their professional directions. A portion of the fees of all U. S. members goes directly to the USAB.

Engineers are becoming more aware that the IEEE not only represents its' members, but all E.E.'s. Since it does, it is important to become a member and vote to support the USAB in their struggle for improved engineering professional conditions.

Richard F. Tax Chairman Socio-Economic Activities Committee

Card if you want the IEEE to act, as well as talk.

The President Column

"Robert Briskman and I, in our joint campaign platform last year, expressed the view that the Institute's concepts of contributory standards in technical affairs should be applied to professional affairs as well. A technical standard is developed by a group composed of all interested parties, in short, a standard evolves that takes into account the interests of all who have a stake in the matter.

"If we were to develop professional and human standards in the same fashion, would we not dispel some of the adversary relations now existing in professional affairs? When we develop employment practices without representatives of the employers present, do we not invite adversary relationships between the employers and the Institute? If employment practices were developed by both, wouldn't the standards so developed have more clout than if only one of the interested parties were involved?

"The Institute has never evaluated whether or not a particular company adheres to IEEE technical standards—this is left to other groups, IEEE's

role has been to develop and promulgate the standards, not to enforce them. As recently as two years ago, we backed off from evaluation of adherence to nuclear equipment standards, since it was deemed inappropriate for the Institute to evaluate adherence to any standard.

"Extending this concept further, I propose that IEEE develop appropriate professional standards and invite all interested parties to contribute to their development. Under this proposal, no "white lists" or "black lists" would be involved. We do not publish information concerning adherence to our technical standards. However, I do feel it would be entirely appropriate to publicize adherence-or nonadherence-to our technical or professional standards, provided it were done anonymously. In a sense, our salary surveys do just that; they bring employee and employer alike up to date on the present salary practices in the field. This information, so useful to both. should advance the cause of the engineering profession.

"If you agree with these concepts, circle 39 on the Reader Service Card in this issue. If you disagree, circle 300 on the Reader Service Card."

Robert M. Saunders

Membership Alert

by Meyer Rosenthal

Ref: Spectrum Feb. 1977, pg. 23 (See Reprint below) and Readers Service Card.

MEMBERSHIP ACTION REQUESTED

Prof. Robert M. Saunders believes that action should not be taken by the IEEE on engineers professional problems and standards such as wage busting, pensions, and student recruiting, other than stating IEEE beliefs and policies.

This committee feels that the IEEE through the United States Activity Board, and appropriate committees such as this, does have an active role to play.

Please let the IEEE and this committee know of your feelings by complying with Dr. Saunders' request.

Circle 39 in the Spectrum Readers Service Card if you agree with Dr. Saunders.

Circle 300 on the Readers Service

Feedback Shows Member Apathy

In the November 1976 issue of this Newsletter we published a Feedback Card, a motion to support the Cannons/Code of Ethics, a copy of the Cannons of Ethics for Engineers and a copy of the IEEE Code of Ethics. The Feedback Card questions, answers, and results follow.

Do you want to Code/Canons to be extended to include all members of the IEEE and not only engineers?	% Yes 75	% No 25	Not Valid or Omit
memoers of the ILLE and not only engineers:	, 3	23	
2. Do you want to Code/Canons to be applicable to all EEs?	88.6	9.1	2.3
3. Do you think that all groups, societies, institutions, organizations, etc. having any relationship with the IEEE should comply to the Code/Canons, when the Code/Canons are applicable?	84.1	15.9	
4. Do you think the Ex Comm should take action to enfore these documents?	65.9	27.3	6.8
5. Do you think the IEEE should take action to enfore these documents?	72.7	22.7	4.6
6. Do you think we should avoid associations that continue to abuse these standards?	77.3	15.9	6.8

SOCIO-ECONOMIC COMMITTEE NEWS

by Richard F. Tax, Chairman Socio Economics Committee

The Socio Economic Committee met for the first time this year on January 27th. The following will introduce you to our philosophy, our responsibilities, our goals, our meeting format, our Committee chairmen and some of the subjects discussed at this meeting.

Philosophy: The theme of this committee is "Truth Thru Engineering". We will, in all cases, try to maintain a 100% Credibility Factor. We will use our Code/Canons of Ethics, and our Constitution and By-Laws as our guides while serving to improve them.

Responsibilities: From our Section By-Laws. "This committee shall be responsible for the activities of the membership. For this purpose it shall be concerned with legislation, lobbying, salaries, working conditions, employment practices, employee benefits, pensions and similar subjects.

"It shall keep informed of such trends and actions of government or other bodies as are likely to affect the Section membership and advise the Executive Committee of them. It shall recommend to the Executive Committee such action as may seem advisable with respect to such matters and shall be responsible for carrying out such action as the Executive Committee may direct."

Goals: Our primary goals are the improvement of our professional lives and our electrical and electronics industry, and the raising of the standards of all E.E.'s, the companies that employ them, and other related societies and institutions.

Meetings: To provide continuity the Committee will meet on the second Wednesday of each month at 7:30 PM at ITT, Conference Center, 500 Washington Ave., Nutley, N.J. The meeting format will be: Committee Reports, New/Old Business, Coffee Break, and Open Discussion. We invite all IEEE members to attend and participate. E.E.'s that are non-IEEE members are also welcome.

SUB-COMMITTEE CHAIRMAN: Secretary: Martin Appel, 320 Slocum

Secretary: Martin Appel, 320 Slocum Way, Fort Lee, N.J.

Constitution: Donald Weinstein, 30-18 Grunstra Pl. Fairlawn, N.J. Mr. Weinstein will advise the Committee on matters concerning the Constitution and By-Laws. He will act to initiate changes to the Constitution as recommended by the Committee.

Ethics: Anthony Cerasoli, 242 Kipp Ave., Elmwood Pk., N.J. 07047. Mr. Cerasoli will distribute the Canons/Code, and act as advisor to this Committee on matters relating to professional ETHICS. He will accept verified complaints, in writing, about violations of these standards and bring them to the attention of the Committee. Members can receive a copy of the Canons/Code by sending a self addressed stamped envelope to Ethics c/o Mr. Cerasoli.

Pensions: Saul Kozuck, 320 S. Harison St. E. Orange, N. J. 07018. Members having any information or questions pertaining to Pensions, please bring them to the attention of Mr. Kozuck.

Student Recruiting: Benjamin Fennick, 21 Eastbrook Dr. River Edge, N. J. Mr. Fennick is compiling data from publications, news and magazine articles, as well as information about organizations and societies involved in student recruiting. Please give him your assistance. Sources of information are: local high schools, student councelors, universities, local newspapers, etc. A member's family can be very effective in this effort.

Legislation: Ralph Di Gennaro, 79 Iona Pl. Paramus, N. J. 07652. Mr. Di Gennaro is preparing a list of legislators in the State of N.J. to aid us in our task. Members having any information or articles pertaining to legislation affecting the EE profession and industry can help by assisting Mr. Di Gennaro.

System Analysis: Meyer S. Rosenthal, 12 Colonial Woods Dr. W. Orange, N. J. Obviously there are many groups, societies, etc., that have inputs, both good and bad, that affect both our profession and our industry. It is our business to know each of them, how it functions, who represents it, and nature of its primary interests. Members having any information of this type are requested to send it to Mr. Rosenthal, Example: NSPE opposed IEEEs' support of the Service Contract Act. This Act will affect WAGE BUSTING by unethical companies and provide the ethical companies with a better chance in competitive

bidding, while still maintaining higher professional standards for their employees. Other groups of interest are the ECPD, EJC, EMC, etc.

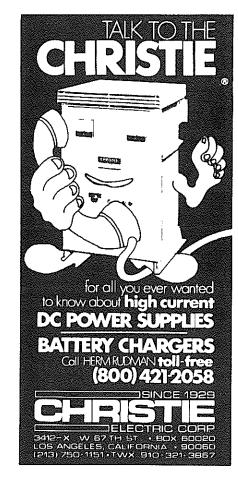
Meeting Review: The previous paragraphs cover the main business of the first meeting. Although, attendance was less than expected, the above seven necessary positions were filled. An estimated 15 more participating members in various catagories was determined necessary for success.

The atmosphere during the meeting changed from "you should do this" to "I will do it". This is the attitude of a Professional and is what made the first meeting a success.

During the coffee break, engineers enjoyed conversations with old acquaintances and met new colleagues.

The break was followed by open discussion. Subjects discussed were: general agitation over the employment situation, lack of government spending for R&D in New Jersey, the unprofessional standing of most engineers, and hiring/firing practices in industry today.

The meeting ended at 10:30 PM.



Ethics Win In Executive Committee

February 2, a motion introduced by the Socio-Economics Committee, providing strong support for the CANONS/CODE of ETHICS, received 100% support by the voting members of the North Jersey Section's Executive Committee. After a brief discussion, resulting in minor revisions to the motion, a roll call vote was taken.

Last fall this same motion, prior to the latest revisions, evenly split the EX. COMM. with 7 For, 7 Against, and 2 Abstentions.

Motion:

The Executive Committee of the North Jersey Section of the IEEE accepts and approves, with the following revisions, and supports the CANONS of ETHICS FOR ENGINEERS (1) and the IEEE CODE OF ETHICS (2). The revisions, in all cases, change the word "engineer" to "engineer/member".

We agree that all members of the IEEE, according to the IEEE Constitution and By-Laws, are not necessarily engineers and these standards shall apply to all members. Further, we will encourage all members of the IEEE and professional groups, societies, institutions, companies, organizations and individuals having any relationship with the IEEE and its members to abide by the contents of these standards.

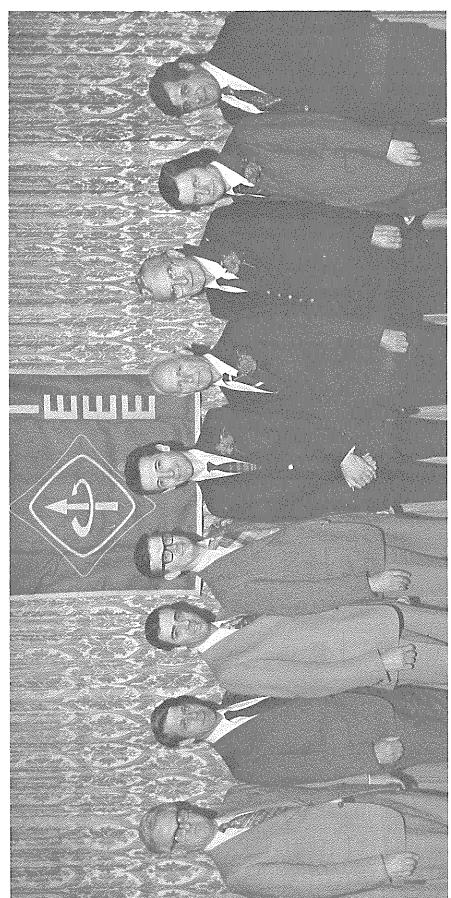
The Executive Committee of the North Jersey Section of the IEEE will make every effort to affect the support of the CANONS/CODE mentioned above and this motion.

The Socio-Economic Committee feels this to be an effective move in the direction of professionalism and that it will provide a strong foundation for the Committee's operation.

Anthony Cerasoli, Ethics sub-committee chairman of the Socio-Economics Committee has copies of the CODE/CANONS of ETHICS for interested members. He encourages members to reproduce these for their colleagues. For your copy, send a self addressed stamped envelope to ETHICS c/o Anthony Cerasoli, 242 Kipp Ave., Elmwood Park, N. J. 07047.

Canons of Ethics for Engineers, The Northern New Jersey Newsletter, January 1961.
 IEEE Code of Ethics, Spectrum, February 1975.

200 ATTEND SECTION BANQUET





Several new Senior Members gather for a group photograph — Ken Oexle, Steve Knight, S. Rao, Ed Thomas, Bob Davidson, Carl Napor.



Eugene Niemiec and his wife arrive at the Chanticler.



Dr. Shepard Bartnoff addresses the gathering after dinner.



Quayne Gennaro and Keith O'Boyle welcome guests at Reception Area.



Ken Oexle assists Mr. & Mrs. Rao in finding their place card.

North Jersey IEEE Meeting:

Microwave Ferrites

The North Jersey MTT/AP chapter will host a discussion on Microwave Ferrites & Applications by Dr. John Pippin, of Electro-magnetic Sciences, Atlanta, Ga. This fifth meeting of the MTT/AP chapter will be held on April 21, 1977 at 8 PM in the ITT auditorium, Nutley, N.J.

For further information, contact E.W. Niemiec, ITT DCD, Nutley, at (201) 284-2323 or (201) 239-4389 (home).

Time: 8 PM, Thursday, April 21, 1977. Place: ITT auditorium, 500 Washington Ave., Nutley, N.J. 07110.

Pre-Meeting Dinner: 6 PM, Ramada Inn, Rt. 3, Clifton, N.J. (eastbound).

METRO NJ-NY LI-CONN-PHILA JOBS

As Technical Search/Member Employment Consultants to IEEE (all Societies) and Marine Technology Society, worldwide, we received 1,200 to 2,500 jobs EVERY MONTH from U.S. and Foreign Co's, all over the world. Obviously we can't list them all. Current heavy LOCAL demand for: Software Dev. Engrs: w/1-15 yrs. exper. Compilers, Comm., Languages, Applications in all fields. \$18K (Trainees) - \$50K (Sm. Comp. GM/Software Div.); Component Engrs.: Design, Prod., QA, Applications. \$18-38K (QA Dir.); Corp. VP Sm. Comp. Op. req. 15+ yrs. exper. \$50K; EDP Proj. Ldrs. & Dir's: for Sys/Analysts/Programmers, \$19-35K; Jr. /Sr. Programmer/Analysts (32 jobs) \$17-24K; Comp/Syst/Mfg/Engrs. \$19-30K; Dir. Purch. Comp/Mfgr. \$45K w/15-20 vrs. exper.: Power/Fossil/Nuclear/Solar a worldwide specialty of our firm (PES Members) Proj. Mgrs. U.S./Foreign \$60K to Sr. Draftsmen \$20K; Reactor Constr. Mgrs. Brazil/Iran. Personal/Employer identities NEVER released to anyone without your OK. Minorities & Women encouraged. To explore call Paul Ware 201 891-5324 before mailing resume w/earnings stated.

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