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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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Member-At-Large . . . . . Frank Relotto 785-1297  
Member-At-Large . . . . . Jerry Uhrig 386-6845  
Jr. Past Chairman . . . . . Norman A. Bleshman 430-8091

Shepherd & Weinschel  
Speakers At Area Meet

The North Jersey Section is proud to host a Region I, Area B meeting with James E. Shepherd and Bruno Weinschel as our guest speakers. Both, prominent and long term members of IEEE, are now members of the IEEE's Executive Board.

Dr. Shepherd, just elected, will serve IEEE for a two year term as the Director of Region I. Dr. Weinschel has just been appointed to the position of Vice President of the Professional Activities Board and will now chair the United States Activities Board (USAB). His term is for 1978.

Their subject will be a "REPORT ON ACTIVITIES AND NEW DIRECTIONS IN USAB".

Representatives from Conn., L.I., N.Y.C., North Jersey, Princeton, and the Philadelphia Sections plan to attend.

All IEEE members and their guests are invited to attend and participate.

Time: 7:30 PM, Wednesday, May 10, 1978.

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

Refreshments: Will be served.

Pre-meeting Dinner: For information and reservations call Ralph Hernandez at (201) 935-8205.

For Further Information: Karl Sommer (212) 460-3060.

Simulation Of  
Continuous Process

The North Jersey Controls Society will present a talk on the simulation of a continuous process manufacturing energetic materials. This talk will describe the development of a control strategy

and the optimization of the process by means of a properly designed control system. This work involves the simulation on a digital computer of a large scale chemical process. The program was written in Fortran to run on the CDC 6500/6600 computer. The talk will describe how the simulation was used to design the controls for the continuous manufacture of TNT.

The speaker, Mr. Ray Goldstein, began his career as a chemical engineer. As his work became involved in process controls, he became interested in computer science. Having received his MA in Chemical Engineering and soon receiving his MS in Computer Science, coupled with his practical experience, places him in a unique position of being able to describe to electronic engineers the practical aspects of automated controls for continuous processes. Mr. Goldstein is presently employed at the Army Armament Research and Development Command at Picatinny where he is developing a control system for the high explosive pilot plant.

The talk will be presented at Bell Laboratories, Whippany, at 7:30 PM on Thursday, May 18. Further information may be obtained from either Gerry Uhrig (Bell Laboratories 386-6845) or Leonard Gardner (ARRADCOM 328-3450 or 6416).

An Executive Committee for the Controls Society is being established to identify subjects for future meetings and symposiums. Please let either Gerry or Len know if you can help in this activity. The Nomination Committee has been formed and will report at the meeting on May 18. Elections will be held at this meeting immediately following nominations from the floor.

SECTION ELECTION

The candidates for NJ Section Members-At-Large for 1978-1979 are listed on the preceding page. Three Members-At-Large will be elected by your ballots.

Candidates for other Section officers are listed on the ballot only. Detailed biographies of these candidates were presented in the May, 1977 issue of "The Newsletter" (pages 5 & 6).

All grades of membership, except students, are eligible to vote. Note that the actual ballot will be separated from the signature and label part before votes are counted to insure a secret ballot.

Change In IEEE:

The New York Section jointly with the Long Island Section, North Jersey Section and Princeton Section is sponsoring a presentation by Robert A. Rivers who will discuss some new ideas on change in the Institute. The IEEE is a middle of the road or centrist organization and as such is resistant to change. In order to produce change in response to the needs of the times great amounts of pressure are required. This involves the development of plans for change and political pressure to bring about that change.

Mr. Rivers, a Graduate of M.I.T. (B.S.E.E., 1953), is organizer and President of Aircom, Inc., a small company designing and manufacturing microwave components. His involvement in IEEE dates back to 1944. He has been a Chapter Chairman of the Microwave Group, served on Microwave Theory and Techniques ADCOM for 17 years and was President of that Society.

He has been active in professional activities since 1971 both in the Microwave Theory & Techniques Society and the USAB. He was on the IEEE Board of Directors in 1975 and 1976, and ran for President of the IEEE as a petition candidate in 1976 for the 1977 term.

Time: 8 PM, Wednesday, June 14, 1978.  
Place: I.T.T. Conference Center, 500 Washington Ave., Nutley, N.J.  
For Further Information: Walter Zloczower, (516) 273-3100.

TO  
VOTE  
FOR SECTION  
OFFICERS  
USE  
THIS BALLOT  
BE SURE TO SIGN ON  
OTHER SIDE BEFORE  
MAILING BY  
MAY 27, 1978

N. J. SECTION BALLOT

All grades of membership, except students, should vote for one candidate for each office (except members-at-large).

Chairman

☐ Donald Bathke

Vice Chairman 1

☐ Ken Oexle

Vice Chairman 2

☐ Alan H. Stolpen

Treasurer

☐ Alex T. Brown

Secretary

☐ Frank Relotto

Members-At-Large  
(Vote for three only)

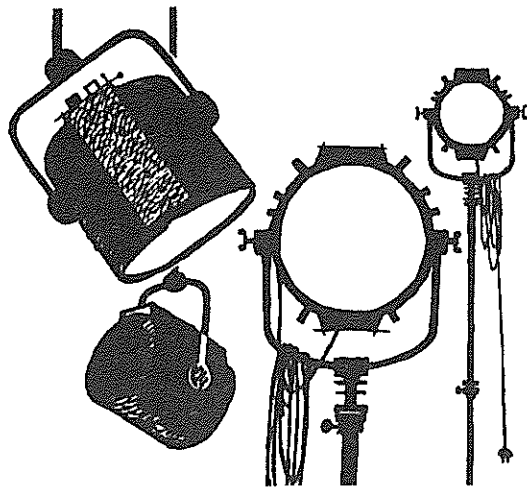
☐ Ann Giedlinski  
☐ Ralph Hernandez  
☐ Mariland McLarin  
☐ Eugene Niemiec  
☐ Jerome L. Uhrig

Please sign on other side in space indicated.



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SPOTLITE ON NORTH JERSEY

Bubble Memories

A joint meeting of the IEEE Princeton Section Magnetics Chapter and the Princeton Section of the IEEE will be held at 8:15 PM on Tuesday, May 16, 1978 in the Convocation Room, Engineering Quadrangle, Princeton University, Princeton, New Jersey.

At the meeting Dr. J. H. Wuorinen of Bell Laboratories will give a talk titled "Bubble Memory." Bubble memory technology, including device structures and bubble phenomena, will be described. Electronic support circuitry required between bubble device and digital system will be briefly explained. A voice announcement system for telephone applications, and a ¼ million-bit digital memory subsystem will be covered. The competitive position of bubbles relative to other memory technologies will also be assessed.

More Pension Answers

We would like to update you briefly at this time on the current response to Question No. 19 of the Questionnaire - Employee Pension Plan, published in the February 1978 Newsletter. Question No. 19 read - Would you prefer that your employer did not provide a pension plan for you?

As of March 31, 1978, 111 members replied: 14 (12.5%) were not certain, 46 (41.5%) voted "no" and 51 (46%) voted "yes". If we do not consider the "cliff-hangers", then 46 (47.4%) voted "no" and 51 (52.6%) voted "yes".

We expect to report more fully in the next regular edition, in July. Call (201) 736-5800 or 672-7940 for further information.

Saul Kozuck  
Pensions Chairman, PAC  
North Jersey Section, IEEE

First, we need to exorcise some gremlins. Those little devils caught up with our column on the Awards Committee and erased some names. So, let the record show that our able and hard-working Awards Committee consists of:

Mr. J. L. Blackburn (Chairman)	Westinghouse
Mr. V. F. Gianola (Secretary)	Bell Labs
Mr. P. S. Christaldi	Celco
Mr. H. A. French (Past Chairman)	I.T.T.
Mr. W. L. Glomb	I.T.T.
Mr. N. A. Blesman	Public Service Electric and Gas
Mr. E. I. Gordon	Bell Labs
Mr. J. B. Minter	Components Corporation
Dr. J. D. Tebo	Retired
Dr. F. A. Russell	N.J.I.T.

Gentlemen, we thank you for your efforts on behalf of the North Jersey Section. Those of you who didn't attend the Annual Awards Dinner at the Chanticleer missed some great chow and a fascinating talk by Dr. John S. Mayo. Dr. Mayo is Vice President, Electronics Technology at Bell Laboratories in Murray Hill. He talked about the Electronics Revolution and compared it to the Industrial Revolution.

Those of us who are power people understand the Industrial Revolution. Its hissing steam, clanking gears and humming motors were very visible and we understood and appreciated their effect on our lives. Sometimes we don't appreciate the relatively invisible products that the Electronics Revolution has brought. We use our telephones, computers, TV sets and radios without a thought about the powerful technology that makes them available.

Dr. Mayo, using some interesting examples, made us much more aware of this behind-the-scenes technology. Consider this example from the world of large scale integration. A three inch diameter LSI wafer represents the state of the art today. That three inch disc contains ten million components. If integrated circuit technology didn't exist and you needed a circuit equivalent to this little gem, you could always build your own using discrete components on wiring boards. IEEE people are diligent workers so we'll say you could place one component on the board every five seconds. Then you could solder one lead every two seconds, couldn't you? And, you could clip one lead per second. If you work eight hours per day, five days per week and take a little vacation time now and then, you could build your circuit in ten years!

That's the power of the technology on which the Electronics Revolution is based. We thank Dr. Mayo for giving us some insight into what the second "E" in IEEE stands for.

Don Bathke

ANN GIEDLINSKI — NOMINEE FOR MEMBER-AT-LARGE

Ann Giedlinski received her BSEE from Penn State in 1967 and joined Jersey Central Power & Light. She worked in the systems planning, then distribution engineering departments, and in 1976 was promoted to area engineer, distribution engineering.

A registered PE in New Jersey, Ann is Past Chairman (1976-77) of the North Jersey IEEE Power Engineering Society.

RALPH HERNANDEZ — NOMINEE FOR MEMBER-AT-LARGE

Ralph Hernandez received his BSEE from NJIT in 1974 and is presently enrolled there in the MS program majoring in engineering management. He is also supervisor, failure analysis lab, at Bendix Corp., Teterboro.

Ralph is Chairman of the Reliability Chapter, a member of the Section Education Committee, and Past Program Chairman of the Reliability Chapter, and past rep. for NJIT to the IEEE Metro Student Council.

MAITLAND McLARIN — NOMINEE FOR MEMBER-AT-LARGE

Maitland McLarin, who graduated from Bown University, Providence, R.I., in 1950, and did graduate work at five institutions, is an electrical engineer at ARRADCOM.

Mait is Past Chairman, Reliability Group, Huntsville, Ala.; and Past Membership Committeeman, L.A. Section. In the North Jersey Section, he is Past Chairman, Membership Comm.; Past Chairman Computer Group; and current Vice Chairman, Computer Group; and Section Program Chairman.

EUGENE NIEMIEC — NOMINEE FOR MEMBER-AT-LARGE

Eugene Niemiec is a graduate of Newark College of Engineering (1961, BSEE). A senior technical staff member in the Microwave Advanced Development Dept., he has been employed for 16 years at ITT Defense Communication, Nutley, N.J.

Gene is Past Chairman (1976-77) of the North Jersey IEEE MTT/AT Chapter, and is presently Treasurer and Program Chairman of MTT/AP, and representative to the IEEE CSIT Committee.

JEROME L.UHRIG — NOMINEE FOR MEMBER-AT-LARGE

Jerome L. Uhrig received his BSEE from Ohio University and his MSEE and Ph.D. in Systems & Communication Sciences from Carnegie Tech. His technical line of interest is in large systems. He now works as a member of the technical staff of Bell Telephone Laboratories.

Jerry is currently a Member-At-Large for this Section, and also serves as Chairman of the Multigroup Chapter and has been active in the Control Systems Group.

Ballot Signature

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RETURN  
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MAY 23, 1977

NORTH JERSEY SECTION IEEE  
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BOX 455  
MT. ARLINGTON, N.J. 07856

“If we did all the things we are capable of doing, we would literally astound ourselves”

— Thomas A. Edison

Writing to our Congress can be one of the most important things that we are capable of doing. We are in a position to help our Congressional Representatives and they are in a position to help us.

## Powers of Congress

Congress’ legislative powers and organization are defined in Article I of the Constitution. A Senate and a House of Representatives are chosen by direct election. There are two Senators from each state with one-third of them elected every two years for six-year terms. Until the 17th Amendment to the Constitution was ratified in 1913, however, each state legislature selected its two U.S. Senators. The Federal census determines each state’s portion of 435 Representative seats and state legislatures determine Congressional district boundaries. Every state has at least one Representative and Representatives generally are elected every even numbered year. The two-year term for House members begins January 3 of each odd-numbered year and is called a Congress.

### Requirements

A Senator must be at least 30 years old, a U.S. citizen for at least nine years and a resident of the state in which he is elected. A Representative must be at least 25 years old, a U.S. citizen for at least 7 years, and an inhabitant of the state in which he is elected.

The Vice President of the U.S. belongs to no standing committees and his powers are minimal. The Speaker presides over the House which as a body elects him. The majority party as a practical matter, however, selects the Speaker who has great political power.

### Conduct Investigations

Congress not only writes federal laws but has the power to conduct investigations, monitor federal agencies, impeach Federal officials including the President, declare war, approve treaties, raise or lower federal taxes, appropriate money, approve top Federal agency and judicial appointments and all Armed Forces officer appointments.

A two-thirds majority in each Chamber will override a Presidential veto and each Chamber is the sole judge of its members’ qualifications.

A personal visit with a member of Congress is one of the most effective means of presenting your position on an issue. A face-to-face encounter is proof of your sincere interest in a question. On the other hand, it is simply not true that elected government officials don’t care what their morning mail says. That would be poor politics.

In many cases, a letter expressing a given viewpoint can change a legislator’s mind. It is particularly helpful when a Member is wavering on an issue. Don’t be discouraged, however, if, following your literary effort, the Member’s vote still is unfavorable to your position. Remember that other persuasive people probably contacted the Member and next time the vote may go your way.

It’s important, though, that a message be presented as effectively as possible. Here are a few pointers:

1. It’s a good idea to confine yourself to one subject. Otherwise you decrease the force of your argument and complicate your legislator’s efforts to act upon it.

2. Related to this is the need for brevity. Although this should not be achieved at the expense of clearness and completeness, a letter that is more than two pages long is liable to be saved for another day. One page is the best of all.

3. State your purpose at the outset and use the remainder of the letter to expand on your views.

4. It’s true that many of the matters you’ll be writing about will be emotion-laden, but beware of the nonfactual argument. It’ll make your representative less willing to listen next time.

5. Legislators seldom base decisions on mere philosophy. They want to know how votes actually will affect constituents and, therefore, reelection. Give facts and illustrations; don’t just recite barren concepts.

6. And don’t assume that a Member is as well-informed as you about a given problem. A Member can’t keep abreast of everything. Explain the situation.

7. Letters about a particular piece of legislation should include both its number (if you know it) and subject matter, because there are frequently several bills concerned with a given topic.

8. Your attitude is important. An official is just like anyone else. A polite, positive-sounding letter is more likely to impress him than one that starts, “I realize that you probably won’t pay any attention to this . . .,” or even worse, one that is threatening.

9. Be certain that your name and address are on both the envelope and letter.

10. As with everything else, addressing correspondence to legislators has its particular etiquette. Although a lot of people don’t know the correct greeting for a Senator, you can be sure the Senator does. And being “proper” can only gain you points. Any legislator in this country is called “Hon.” (“Hon. John Smith”) on the envelope and inside addresses. The salutation, though, treats representatives and senators differently (either state or U.S.) Representatives are addressed as “Mr.,” “Ms.” or “Mrs.” while senators are called “Sen.”

Despite all these precautions, don’t forget that you’re the boss. You vote those people into office and pay their salaries once they’re in. So whether it’s to laud, or enlighten, write, Tactfully.

## ADVANCES IN DISPLAY TECHNOLOGY AND MEASUREMENT TECHNIQUES

A ONE DAY SEMINAR MAY 16, 1978 9:00 AM - 4:00 PM

At Alumini Center of N.J. Institute of Technology, Newark, N.J.

- I. Overview of Current State of the Art** - Speaker: George Taylor - Princeton Resources, Inc.  
Mr. Taylor who is a well known consultant in displays will review existing devices and discuss emerging technologies with respect to instrument applications and their order of priority.
- II. Liquid Crystal Displays** - Speaker: Gerald Gross - Hamlin Inc.  
Advances in technology with particular emphasis on overcoming slow response time, multiplexing, low temperature operation. Use as large display devices. Advances in polarizers and other appurtenances.
- III. Plasma Devices** - Speaker: Robert Kuntz - Beckman Instruments.  
Developments coming on stream which contribute to increased reliability, reduction in RFI, flexibility in patterns, in terms of screen displays, in addition to the more common cathode displays. Other applications that are still finding the plasma display superior to other types of displays, at the present time will be discussed.
- IV. LED Displays** - Speaker: Ray Brown - Monsanto Co.  
Emphasis will be on new developments and applications. Adaptation of LED’s to light pipe cavities, flexible displays for micro processor interface and other innovative display application important to instrument design.
- V. Measurement of Displays** - Speaker: Ken Miller - Photo Research Division of Kollmorgen  
Recent advances in light emitting devices used in displays have had added confusion to the already confusing area of light measurement. With these new devices have come a whole new list of parameters, terminology and measurement set-ups. Mr. Miller will describe techniques and instrumentation for measurement of brightness, color temperature, chromaticity, polarization, spectral output, goinometric output and contrast ratio. Also, pulsed light measurements will be covered.

### VI. A Joint Discussion With All Speakers Participating

**PRE-REGISTRATION:** Send check made payable to “IEEE I&M Joint Chapter”

Al Mindes, 20 Conkling Road, Flanders, N.J. 07836  
\$20.00 Members IEEE, \$30.00 Non-Members

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Address \_\_\_\_\_

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Company \_\_\_\_\_

**REGISTRATION AT DOOR:** 8:30 AM \$25.00 Members \$35.00 Non-Members

For additional Information Call: Phil Emile, Weston Instruments (201) 242-2600; Jerry Friedman - Friedman Associates, Inc. (201) 673-2500; Dave Roberts - American Electric Power (212) 422-4800.

Light In Medicine

Subject for the June 7 meeting of the Metropolitan New York chapter of the IEEE Group on Engineering in Medicine and Biology is Light. Dr. Philip Hughes, Director of Environmental Photobiology, Duro Test Corp., North Bergen, N.J. will focus on "Light: It's Measurement, Biological Effects, and Therapeutic Uses."

**Time:** 7:30 PM, Wednesday, June 7, 1978.  
**Place:** Rockefeller University, South Laboratory, Room 204, 66th Street and York Avenue, N.Y.C.  
**Pre-Meeting Dinner:** 6:00 PM, Tower Cafeteria, 64th Street and York Avenue, N.Y.C.  
**For Further Information:** Harry Rice, (212) 554-7075 (The Roosevelt Hospital).

Power Slates Election

The Power Engineering Society will be holding their annual election of officers at the May 25 meeting.  
The nominating committee for officers is as follows:  
John Redmon - Chairman 430-7675  
Anne Giedlinski 366-1100  
Ken Oexle 539-6111  
If you are interested in serving on any committees or being an officer in the Power Engineering Society, please call anyone of the above members of the committee prior to May 23, 1978.

**Time:** 7:30 PM, May 25, 1978.  
**Place:** Jersey Central Power & Light, Punchbowl Rm., Madison Ave. & Punchbowl Rd., Morristown, N.J.

Charge Coupled Devices

"Advances In Charge Coupled Devices" is the title of the talk to be presented at the May 18, 1978 meeting of the NY Metropolitan area chapter of the IEEE Electron Devices Group. Dr. George Elwood Smith, Department Head of Bell Laboratories MOS Device Department, will be the speaker.  
Since their inception in 1970 Charge Coupled Devices has advanced through the device physics and device feasibility stages to applications. Some principal applications are digital memory, imaging, digital logic and analog signal processing. The analog applications include simple

delay, time compression and expansion, and both transversal and recursive filters. State of the art devices stress the use of digital and analog circuits as well as CCD circuits on the same chip to gain the cost and performance advantages of large scale integration. After a brief review of the basic device, a review of the various types of applications will be given.  
Currently, Dr. Smith is Department Head of the MOS Device Department at Bell Labs. His primary interests are in the areas of new semiconductor devices for logic and memory applications, the

device physics of semiconductor-insulator interfaces and charge-coupled devices.  
In October 1973, he received the Stuart Ballantine Medal. In February 1974, he received the 1974 Morris N. Liebmann Award. He holds 22 Patents and is the author of approximately 40 published articles.  
**Time:** 8 PM, Thursday, May 18, 1978.  
**Place:** Bell Laboratories, Murray Hill Auditorium, Murray Hill, N.J.  
**Pre-Meeting Dinner:** 6 PM, Snuffy's, Route 22.

IEEE - NEW YORK COMMUNICATIONS SOCIETY

FIELD TRIP:  
BROOKHAVEN NATIONAL LABORATORY  
Tour of Major Research Facilities

DATE: JUNE 23, 1978 (FRIDAY)

FEE: NONE (Lunch may be purchased in the cafeteria at Brookhaven)

TRANSPORTATION: Each individual will provide his own transportation to Brookhaven. Follow directions given at Lab. gate to starting point

TOUR SCHEDULE: 10:15 AM to 4:00 PM

TOUR SUMMARY: The tour and briefing will include the High Flux Steam Reactor, the Alternating Gradient Synchrotron, Isabelle, the Tandem Vandergraff, and the Underground Transmission Facilities. An additional briefing will be given on Energy and Environmental research.

Tour size is limited to 40 people. Laboratory regulations prohibit pregnant women and persons under 18 from attending.

Mrs. Lourdes Rey (for additional information, call (212) 395-6965)  
c/o New York Telephone Co.  
1411 Broadway Room 1900  
New York, N.Y. 10018

I will attend the Brookhaven field trip on June 23, 1978.

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

PHONE NO: \_\_\_\_\_

CITIZEN OF: USA \_\_\_\_\_ OTHER (specify) \_\_\_\_\_  
(RETURN ON OR BEFORE JUNE 14, 1978)

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