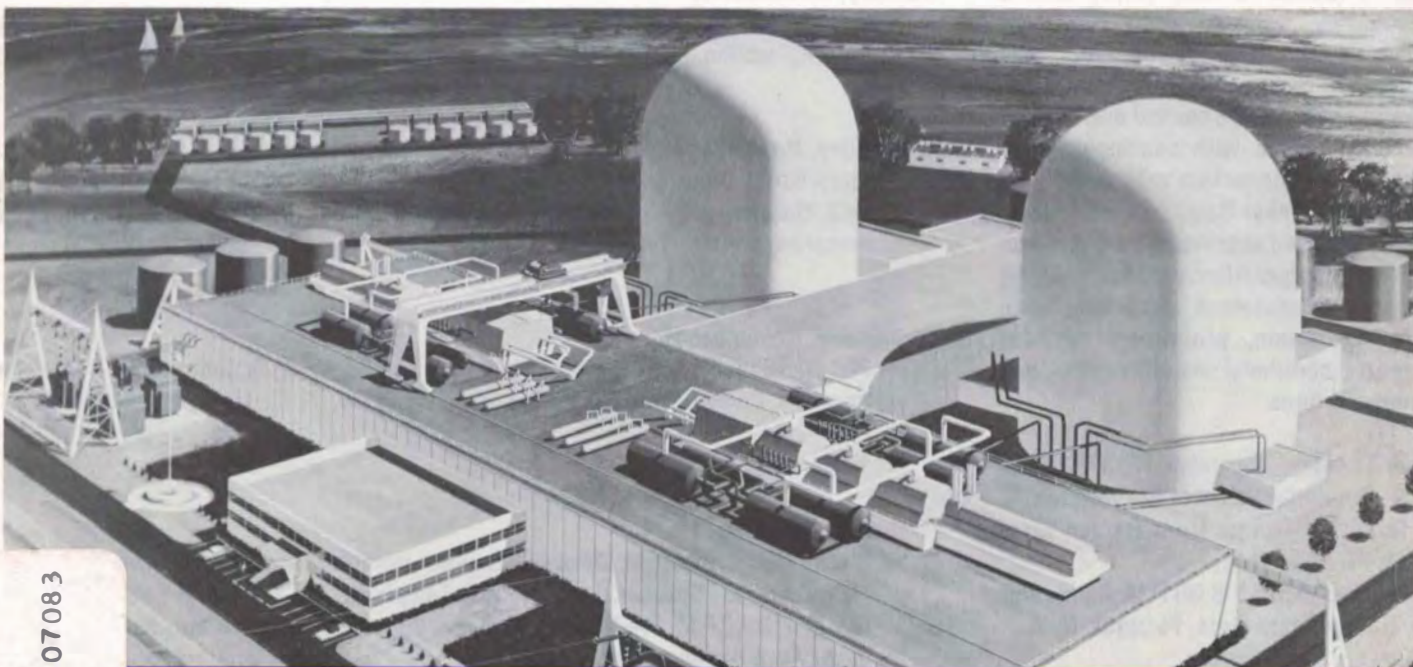




## EITHER OR BOTH?



The IEEE

# Newsletter

The Magazine of the North Jersey Section

## THE ENVIRONMENT AND ELECTRIC POWER GENERATION

Arnold Auditorium

Bell Telephone Laboratories

Murray Hill, New Jersey

Wednesday, November 18, 8:00 P.M.

## THE FOSSIL – NUCLEAR POWER CONTROVERSY

November, 1970

290

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5178264 M  
ALAN H. STOLPEN  
2037 BALMORAL AVE  
UNION



## Time Shared MIS, Fact or Fiction?

At the November meeting of the North Jersey Communications Technology Group Glen R. Holtkamp will discuss some of management's current problems with Management Information Systems.

Many executives are experiencing a period of disillusion with their computer installations. They want to make decisions based on predicted future probabilities rather than approval or disapproval of historical events.

Mr. Holtkamp will discuss not only the hardware and software requirements, but also the communications requirements. Modeling, budgeting, forecasting analysis, and information retrieval represent a necessary beginning, but in many cases more usage is needed to fully justify such a system.

The speaker, Glen R. Holtkamp, was educated in Ohio in Business Administration and Theology. He has had over twenty years' experience with continuous data processing in connection with such firms as IBM and Bunker-Ramo. He is currently directly involved as principal and/or director in seven corporations with such varying industries as education, publishing, computer application, proprietary systems, computer peripheral manufacturing, and communications.

*Time:* Tuesday, November 17; 8:00 P.M.

*Place:* Computer Sciences Corporation, S. 60 Route 17 (across from Garden State Plaza), Paramus, N. J.

*Pre-Meeting Dinner:* 6:30 P.M. Cambridge Inn, Garden State Plaza, Paramus, N. J.

## MEETINGS CALENDAR

**Tuesday, November 10**

New York, North Jersey and Long Island Joint Chapter on Instrumentation & Measurements—Analog to Digital Conversion Today, NCE, 9:00 A.M.-4:00 P.M.

**Tuesday, November 17**

North Jersey Power Group—Custom Power Supply, Norman C. Grant, Speaker, Public Service Electric & Gas Co., Room 371A, 80 Park Place, Newark, N. J. 6:30 P.M.

**Tuesday, November 17**

North Jersey Communications Technology Group—Time Shared Management Information System, Glen R. Holtkamp, Speaker, Computer Sciences Corp., S. 60 Route 17, Paramus, N. J. 8:00 P.M. Pre-Meeting Dinner, 6:00 P.M., Cambridge Inn, Garden State Plaza, Paramus, N. J.

**Tuesday, November 17**

PMP (G-21)—Interactive Computational Techniques, Robert Sherman, Speaker, United Engineering Center, 345 E. 47th St., N.Y.C., Room 111-112-113, 7:30 P.M.

**Wednesday, November 18**

Multi-Group Joint Chapter—The Environment and Electric Power Generation, Francis J. Haughey and Robert Mittl, Speakers, Arnold Auditorium, Bell Telephone Laboratories, Murray Hill, N. J. 8:00 P.M.

**Wednesday, November 18**

P&I Division—State of the Art in Lighting, Jim Burke, Dick Jung and E. O. Kassman, Speakers, Consolidated Edison Co., 4 Irving Pl., N. Y. C., 19th Floor Cafeteria. 6:30 P.M.

**Thursday, November 19**

Metropolitan Electron Devices Chapter—Recent Innovations in Injection Lasers, Henry Kressel, Speaker, International Telephone and Telegraph Laboratories, Nutley, N. J. 8:00 P.M. Pre-Meeting Dinner at Copperhood Restaurant, South of Route 3 at the Park Avenue Exit.

**Thursday, November 19**


P&I Division—Tour of Pratt & Whitney Plant, Pratt & Whitney Aircraft, East Hartford, Conn. 10:30 A.M.

**Saturday, November 28**

Education Department of Newark Museum—Planetarium Shows at Newark Museum, first of series for IEEE members, Newark Museum, 43-49 Washington Street, Newark, N. J. 3:00 P.M.

**Wednesday, December 2 and Thursday, December 3**

Electron Devices Group—1970 IEEE Conference on Display Devices, United Engineering Center, 345 E. 47th St., N. Y. C.

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**Fellows Night:  
February 13, 1970**



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Volume 17 November 1970 No. 3

## NEWSLETTER STAFF

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### REPORT ALL ADDRESS CHANGES TO:

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New York, N. Y. 10017

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.

## NORTH JERSEY SECTION OFFICERS 1970-1971



H. E. Blaicher, Jr.



Robert G. Sokalski

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## The Environment and Power Generation

The Multi-Group Joint Chapter will present a symposium on "The Environment and Electric Power Generation" on November 18 at Bell Telephone Laboratories in Murray Hill, N. J.

Mr. Robert Mittl, Assistant to the Chief Mechanical Engineer at Public Service E. & G. Co., will speak on "Power Generation and the Environment." Public Service has taken positive action towards protecting the environment for more than one third of a century. Initially, this included the installation of equipment to reduce fly ash discharges from coal-burning plants. Within recent years there has been an expanded use of low sulphur fuel oil. Nuclear power is now available as an energy source providing the least overall impact on the environment. These aspects, along with environmental studies undertaken by Public Service, will be discussed to illustrate that power generating and transmission facilities are being planned, designed and installed in such a manner as to minimize

effects on the air, water and land.

Mr. Mittl has been with Public Service since 1954. He received his M.E. degree from Stevens Institute and his M.S. degree from Carnegie Institute of Technology.

Dr. Francis Haughey, Associate Professor in Environmental Sciences at Rutgers University, will discuss "The Alternatives, Fossil or Nuclear—The Public View." It is well recognized that the generation of electric power has an adverse effect on the environment, resulting from sulphur dioxide or particulate emission from a conventional fuel plant burning coal or oil or radioactive gases and liquids from a nuclear plant. An objective evaluation, within the limits of present-day knowledge, should permit a more rational future choice of the energy source having the least detrimental effect on the environment.

Professor Haughey received his Ph.D. in Environmental Sciences in 1968 from Rutgers University. He is a Certified Health Physicist and has done research in Radiation and Aerosol Physics.

Time: Wednesday, Nov. 18; 8:00 P.M.

Place: Arnold Auditorium, Bell Telephone Labs, Murray Hill, N. J.

## Newark Museum Planetarium Shows

The Education Department of the Newark Museum has reserved fifty seats for Saturday performances at each of their monthly planetarium shows from November, 1970 to June, 1971, inclusive. Children must be at least seven years old. Shows start at 3:00 P.M. but members are advised to be early to receive their reserved tickets which will cost twenty-five cents for adults and fifteen cents for children. The tickets are to be paid for when received at the Museum which is located at 43-49 Washington Street, Newark, N.J. The shows will last approximately one-half hour. After each show, members and their families are invited to enjoy the many free exhibits and demonstrations which are available in the museum. For example, the "Moon Rocks" will be on display at the time of the November Planetarium show. The days reserved for IEEE are: November 28, 1970, December 26, 1970, January 30, 1971, February 27, 1971, March 27, 1971, April 24, 1971, May 29, 1971, and June 26, 1971. The November 28 show is entitled "Invaders from the

Past," and the December 26 show is entitled "Yuletide Stars." Titles of subsequent shows will be published in later issues of *The Newsletter*.

Use the form below to register for any of the above shows. Additional registration forms will appear in future issues of *The Newsletter*. Please include a stamped, self-addressed envelope when mailing in your registration so that we may notify the people who receive reservations which will be allocated on a first come-first serve basis. Registration forms must be received at least one week in advance of "show date."

Please send filled in registration and self-addressed envelope to:

Wm. T. Kelly, Room 8335M  
PSE&G Co., 80 Park Place  
Newark, N. J. 07101

Name.....

Address.....

No. of Adults.....No. of Children.....

Date(s) of Planetarium Show.....



## Applying Interactive Computational Methods

The New York Metropolitan Parts, Materials and Packaging Group (G-21) presents a talk on the use of interactive computing for electronic component design. The speaker is Robert Sherman, Regional Manager of Telcomp Corporation of America, a subsidiary of Bolt-Beranek and Newman. His talk will emphasize specific applications to the design of capacitors, transformers, inductors and resistors over a wide range of frequencies.

*Time:* Tuesday, November 17; 7:30 P.M.  
*Place:* Room 111-112-113 of the United Engineering Center, 345 East 47th Street, New York City.  
For additional information contact R. Feibus, (212) 460-6461.

## Pratt & Whitney Plant Tour

The P&I Division is sponsoring an inspection tour of the engine production and testing facilities at Pratt & Whitney in East Hartford, Connecticut. The tour will cover the production and testing of engines used for power generation in industrial and marine applications.

You must provide your own transportation. Lunch will be provided. No cameras, please.

For tickets and directions, send stamped self-addressed envelope to: Mr. James A. Paterson, Pratt & Whitney Aircraft, Turbo-Power and Marine Dept., New Britain Avenue, Farmington, Conn. 06032. Phone: (203) 677-4081, Ext. 251.

*Time:* Thursday, Nov. 19; 10:30 A.M.  
*Place:* Pratt & Whitney Aircraft, East Hartford, Conn.

## Display Devices Conference

The 1970 IEEE Conference on Display Devices will be held on December 2-3, 1970, in the United Engineering Center Auditorium, 345 East 47th Street, New York City, sponsored by the Electron Devices Group of the IEEE.

The program will cover all of the disciplines relevant to the research, development, and design of electronic display devices. The following device areas are of

preferred interest: Cathode-Ray Tubes; Solid-State Light Emitters; Plasmas; Liquid Crystals; Lasers; Holographs; Light Valves; Projection Displays.

Related topics, such as the following are to be included: Phosphors; Fiber Optics; Electron Optics; Photochromics and electrochromics; Recording Media directly applicable to Displays; New Phenomena; Pertinent Operational Characteristics; Measurement Techniques.

For further information, contact: Mr. I. Reingold, Conference Chairman, U. S. Army Electronics Command, Fort Monmouth, New Jersey.

*Time:* Wednesday and Thursday, December 2-3.  
*Place:* United Engineering Center Auditorium, 345 East 47th St., N. Y. C.

## Report From: The North Jersey Automatic Control Group

I am pleased to introduce the members of the N.J. G-A.C. Executive Committee for the 1970-71 year: Chairman - *G. A. Ford (Gerry)*, Bell Telephone Laboratories (386-5103); Vice-Chairman - *J. J. Strano (Joe)*, Newark College of Engineering (645-5482); and Secretary - *F. J. Lupo (Frank)*, New York University (212-584-0700.)

We look forward to meeting you at our meetings this year.

Our first meeting was held on Monday evening, October 19, at Bell Telephone Laboratories, Whippany, N. J. The topic for the evening was "Analysis and Control of the Flow of Air Traffic." The featured speakers were Drs. S. Horing, L. Forys, H. Heffes, J. M. Holtzman and E. Messerli, all of Bell Labs. A dinner preceded the meeting at Rod's 1890's Ranch House in Convent Station. I hope you were there.

We are currently attempting to set up a meeting for December. It may possibly be a joint meeting with the Section. Watch for details in the December *Newsletter*.

It is hoped that there will be at least two more meetings before June although nothing specific has been set thus far. If any group member has a suggestion for a topic or a speaker for one of our meetings or a recommendation for any activity that you would like to see the group sponsor, please call me at the above telephone number or write to me at Room 1L-218, Bell Telephone Laboratories, Whippany, New Jersey. We on the Executive Committee can best serve you if we know what it is that you seek as a member of the local Automatic Control Group. Therefore, I strongly urge you all to call or write.

Executive Committee meetings will be held throughout the year. The first meeting of the season was held in October. If anyone would like to participate directly in the activities of the group, attending an Executive Committee meeting is an excellent way to begin. Please let me know if you are interested and I will be very happy to provide you with advance notice of all future meetings. The meetings are generally held at 6:00 P.M. on a week-day evening at a restaurant in the North Jersey area.

Please let me hear from you.

*G. A. Ford, Chairman, North Jersey Automatic Control Group*

## Illinois Alumni Honors Millar

Col. Julian Z. Millar, Chairman of the North Jersey Section Awards Committee, was honored by his Alma Mater at a dinner on October 3. At that time the Electrical Engineering Alumni Association of the University of Illinois presented Millar with the **E2A2** Distinguished Alumnus Award in recognition of his outstanding contributions to the Electrical Engineering profession and for his long-standing support of Electrical Engineering at the University of Illinois.

Col. Millar is also Chairman of the Awards Committee of the Communications Technology Professional Group.

## Custom Power Supply

The North Jersey Power Group will sponsor a meeting on a subject of extreme interest to all members of IEEE and other technical groups. The speaker will be Mr. Norman C. Grant, Senior Sales and Application Specialist, Custom Power Equipment Department, General Electric Company, Philadelphia, Pennsylvania.

Mr. Grant will discuss static power conversion in industrial applications, covering the types of loads, 3 to 3000 hertz equipment, effects of outages on various industrial loads and will also discuss future requirements of this market.

### About the Speaker

Mr. Grant is a graduate of Duke University with a degree in electrical engineering and has been associated with the industrial sales and power transformer industry during his career with General Electric Company.

*Time:* Tuesday, November 17; 6:30 P.M.  
*Place:* PSE&G Co., Room 371A, (Front Entrance on 80 Park Place) 80 Park Place, Newark, N. J.

## IEEE Tapes for Continuing Education

The Institute of Electrical and Electronics Engineers has two distinct types

of programs now available for education on an individual basis. The most recent addition is the I.E.E.E. Soundings (report service). These tapes are reportorial in nature and are issued four times per year with a subscription price of \$26.00 for a member or \$42.00 for a non-member. Each tape will be two track monaural, sixty minutes duration. It is expected that these tapes will also be available on an individual basis. One such is available now: "Systems Engineering—Art, Science, Politics." The price of this tape is \$7.00 for members.

### Earlier Tape Program

The earlier tape program is tutorial in nature, and an up-to-date listing is included herewith:

*Management Principles for Engineers*, 60 plus minutes, \$6.00 members, \$10.00 non-members; *Industrial Programming Languages (panel)*, 60 plus minutes, \$6.00 members, \$10.00 non-members; *Future Air Traffic Control Systems*, 60 plus minutes, (With booklet of visual materials) \$7.00 members, \$12.00 non-members; *Integrated Circuits for Consumer Application*, 60 plus minutes, (Visual materials) \$7.00 members, \$12.00 non-members; *Principles for Programming Process Computers*, 90 minutes, \$6.00 members, \$12.00 non-members.

For future information contact: Continuing Education Services, I.E.E.E., 345 East 47th Street, New York, N. Y. 10017. Phone: (212) 752-6800.

## Report From Your Section Treasurer — You Can Help

Your Executive Committee is continually seeking ways to improve our programs in order to attract more members to Chapter and Section meetings and to increase enrollment in our educational courses.

As a Section member, you can help. How? By attending as many meetings as possible and by inviting non-members to attend with you. Speak to your engineering friends and business associates and extend them an invitation to join. If you know of an interested engineer, submit his name and address to a Section or Chapter officer. Information on the Section and Chapters will be mailed to the prospective new member along with a membership application.

Many interesting meetings are planned for the coming months, details of which can be found in your *Newsletter*.

Your Treasurer's responsibility includes concern for balancing income against outlays but whether or not your Section operates in the black is an indirect responsibility of all Section members to an important degree.

You can help! Come out to the meetings and bring in those new members.

*Carl Torell, Section Treasurer*

## New Injection Lasers

The Electron Devices Group will hold a meeting on November 19 at ITT Labs, Nutley, N. J. Mr. H. Kressel will speak on "Recent Innovations in Injection Lasers."

### About the Speaker

Henry Kressel received the B.A. degree from Yeshiva University in 1955, the M.S. degree in Applied Physics from Harvard University in 1956, and the M.B.A. (1959) from the University of Pennsylvania. He joined RCA in 1959 and is presently Head, Semiconductor Optical Devices Research at the RCA Laboratories, Princeton.

The room temperature performance of diode lasers has been dramatically improved in the past two years as a result of new theoretical insights and improved materials technology. A state of the art review will be presented of the new heterojunction diode laser performance and key theoretical concepts. Some of the major applications of present and potential interest will be discussed.

*Time:* Thursday, November 19; 8:00 P.M.  
*Place:* International Telephone & Telegraph Laboratories, Nutley, N. J.  
*Pre-Meeting Dinner:* Copperhood Restaurant, south of Route 3 at Park Avenue Exit, 6:00 P.M.

## Where Lighting Stands Today

The P&I Division will hold a general meeting on November 18 with a program entitled "State of the Art in Lighting."

Topics covered, and speakers, include: Industrial Lighting Today, Mr. Jim Burke, Manager of Industrial Lighting, The Holograph Co.; Modern area lighting installations and developments in light sources, Mr. Dick Jung, Lighting Engineer, General Electric Co.; and Trends in office building lighting and relationship with HVAC, and other commercial applications, Mr. E. O. Kassman, Lighting Engineer, Westinghouse Electric Corp.

The moderator for this meeting will be Mr. George Flam, The Port of New York Authority.

*Time:* Nov. 18; 6:30 P.M.  
*Place:* Consolidated Edison Co., 4 Irving Place, N.Y.C., 19th Floor Cafeteria.  
Refreshments will be served from 6:00 to 6:30 P.M.



# Analog to Digital Conversion Seminar

The New York Joint Chapter on Instrumentation & Measurements is sponsoring an all-day seminar on analog to digital conversion which will be held at Newark College of Engineering on November 10. The seminar, entitled "Analog to Digital Conversion Today" will be a state of art look at analog to digital conversion with emphasis on specifications, limitations, and technical and economic trade-offs in instrument and system applications. The seminar panel will consist of technical experts representing various facets of analog to digital converter design and application. Each panel member will give a presentation on analog to digital conversion from his particular viewpoint, which will be followed by audience questions and general panel discussion.

Seminar topics and panel speakers will include:

*Digital Instrument Applications of Analog to Digital Converters* - Mr. Austin T. Kelly, Chief Electronics Engineer, Weston Instruments, Inc.

*New Techniques of Analog to Digital Conversion for Communication Applications* - Dr. Henry S. McDonald, Assistant

Director, Communications Principles Research Laboratory, Bell Telephone Labs.

*Analog to Digital Converters as Applied to Computerized Digital Control Systems*

The panel speaker will be a control engineer from Taylor Instrument Co.

*The Advantages of Monolithic Construction in Analog to Digital Converter Design* - Mr. E. Barry Hilton, Manager of Converter Product Engineering, Analog Devices, Inc.

*Military Applications of Analog to Digital Converters* - Panel speaker to be announced.

*Future Trends of Analog to Digital Converters* - General panel discussion.

**Time:** Tuesday, November 10; 9:00 A.M.-4:00 P.M.

**Place:** Alumni Center, Newark College of Engineering, 323 High St., Newark, N. J.

**Registration Fee:** IEEE Members, \$10.00 Non-Members, \$15.00

**For Further Information:** In New York call: Mr. Karl Sommer, (212) 460-6176. In New Jersey call: Mr. James W. Harte, Jr., (201) 243-4700, Ext. 555.

Early Advanced Registration is suggested using the form below.

Mr. Daniel Cotte  
c/o RFL Industries, Inc.  
Powerville Road  
Boonton, New Jersey 07005

Enclosed please find my check (or money order) made payable to the Joint Chapter, I & M, IEEE in the amount of..... (IEEE member \$10, non-member \$15) for registration for the Analog to Digital Conversion Seminar to be held on November 10, at Newark College of Engineering.

Enclosed is a self-addressed stamped envelope for use in confirmation of my reservation.

Name.....

Address.....

.....Phone.....

## International Wire & Cable Symposium

Sponsored by the U.S. Army Electronics Command, the 19th International Wire and Cable Symposium will be held at the Shelburne Hotel in Atlantic City, N. J. on December 2-4, 1970.

Among the topics will be EMC/RFI shield designs and termination techniques for cable, measurements of crosstalk and shielding effectiveness, equipment requirements, and system evaluation.

The Symposium Committee will institute a New Publication Procedure for this year's symposium. Instead of requiring copies of the papers from each author, the Committee will publish a proceedings.

For additional information, contact: Mr. Jack Spergel, Co-Chairman, International Wire and Cable Symposium, U.S. Army Electronics Command, Attn: AMSEL-KL-EE, Fort Monmouth, N. J. 07703.

**Time:** Wednesday through Friday, December 2-4.

**Place:** Shelburne Hotel, Atlantic City, N.J.

### STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION

(Act of October 23, 1962; Section 4369, Title 39, United States Code)

1. DATE OF FILING: October 1, 1970; 2. TITLE OF PUBLICATION: The IEEE Newsletter; 3. FREQUENCY OF PUBLICATION: Monthly except July and August; 4. LOCATION OF KNOWN OFFICE OF PUBLICATION: 9 Little John Road, Morris Plains, N. J. 07950; 5. LOCATION OF THE HEADQUARTERS OF GENERAL BUSINESS OFFICES OF THE PUBLISHERS: 9 Little John Road, Morris Plains, N. J. 07950; 6. NAMES AND ADDRESSES OF PUBLISHER, EDITOR AND MANAGING EDITOR: Publisher, North Jersey Section, IEEE, 9 Little John Road, Morris Plains, N. J. 07950; Editor, Alan H. Stolpen, 2037 Balmoral Avenue, Union, N. J. 07083; Managing Editor, M. M. Perugini, Box 111, Mt. Arlington, N. J. 07856; 7. OWNER: The North Jersey Section of the Institute of Electrical and Electronics Engineers, 9 Little John Road, Morris Plains, N. J. 07950; 8. KNOWN BONDHOLDERS, MORTGAGEES, AND OTHER SECURITY HOLDERS OWNING OR HOLDING 1 PERCENT OR MORE OF TOTAL AMOUNT OF BONDS, MORTGAGES OR OTHER SECURITIES: None.

### CIRCULATION STATEMENT

	Average Prec. 12 Months	Issue Nearest Filing Date
Total Copies Printed	5930	6000
Paid Circulation		
Other Than Mail Subscriptions	None	None
Mail Subscriptions	5467	5598
Total Paid Circulation	5467	5598
Free Distribution	87	28
Total Distribution	5554	5626
Office Use, Left-Over, Unaccounted, Spoiled	376	374
TOTAL	5930	6000

I certify that the statements made by me are correct and complete.

M. M. Perugini

## IEEE DATE Service: First Catalog of Subjects

Twenty-one technical education subjects will be available when IEEE's Dial Access Technical Education (DATE) Service begins in November. As reported in The MONITOR for September, this new continuing education service for the individual engineer will provide:

- Up-to-the-minute status reviews of selected technologies
- Short current bibliographies
- IEEE expertise in compilation and presentation of information
- Convenience of a single 5-8 minute phone call for the user.

The first catalog of tape numbers, subjects, and authors is printed below. IEEE members in the New York area will want to save it for reference. Subjects which have been prepared with the cooperation of IEEE Groups carry the Group initials in parenthesis after the title.

70-1: Display Devices (ED); Irving Reingold, U.S. Army Electronics Command, Ft. Monmouth, N.J.

70-2: Avalanche Diode Microwave Sources (ED); B. C. DeLoach, Jr., Bell Labs, Murray Hill, N.J.

70-3: Bulk Semiconductor Microwave Devices (ED); J. A. Copeland, Bell Labs, Murray Hill, N.J.

70-4: Microwave Integrated Circuits (MT&T); Harold Sobol, RCA, Somerville, N.J.

70-5: Microwave Acoustics (MT&T); Alfred J. Bahr, Stanford Research Institute, Menlo Park, Calif.

70-6: Microwave Measurements (MT&T); R. W. Beatty, Institute for Basic Standards, Boulder, Colo.

70-7: Human Factors Design Concepts (MMS); David Meister, Bunker Ramo Corp., Canoga Park, Calif.

70-8: Infrared: The New Dimension for Electronics & Materials Evaluation (IEC); Riccardo Vanzetti, Vanzetti Infrared and Computer Systems, Inc., Dedham, Mass.

70-9: High Gain/Noise Temperature Antennas for Space Communications (CT); R. W. Kreutel, Jr., COMSAT Labs, Clarksburg, Md.

70-10: Modulation System Theory (CT), Andrew T. Viterbi, Univ. of California, Los Angeles, Calif.

70-11: Threshold Extension Demodulators (CT); Laurence F. Gray, COMSAT Labs, Clarksburg, Md.

70-12: Active Filters (Circuit Theory); S. K. Mitra, Univ. of California, Davis, Calif.

70-13: Distributed Networks (Circuit Theory); M. S. Ghausi, New York University, Bronx, N.Y.

70-14: State-of-the-Art of Thermionics (A&E); Charles E. Backus, Arizona State University, Tempe, Ariz.

70-15: Solar Cells (A&E); S. N. Angrist, Carnegie Mellon University, Pittsburgh, Pa.

70-16: Thermoelectric Generators (A&E); S. N. Angrist

70-17: Magnetohydrodynamic Power Generation (A&E); S. N. Angrist

70-18: Fuel Cells (A&E); S. N. Angrist

70-19: Computer Time-Sharing; Walter R. Beam, W. R. Beam Associates, Chappaqua, N.Y.

70-20: Choosing a Minicomputer, Walter R. Beam

70-21: Thermionic Systems (A&E); S. N. Angrist.

The magic number (telephone number, that is) will be (212) Plaza 2-7290; the tentative starting date is November 15.

## Student Affairs

### IEEE Announces Fortescue Fellowships Available for 1971-72

The Institute of Electrical and Electronics Engineers announces that funds have been made available for one or more Charles LeGeyt Fortescue Fellowships for 1971-72. The \$4,000 awards are made to postgraduate students in the field of electrical engineering who have received an appropriate baccalaureate degree from a duly recognized technical school.

The candidates are selected by an IEEE committee that administers the fund. It is intended that candidates shall pursue their studies at engineering schools and engage in research programs meeting the approval of the Fellowship Committee. To be eligible, the student must have received a bachelor's degree from an engineering college of recognized standing by the time his work under the fellowship would begin and must not hold or subsequently receive another fellowship that carries a stipend greater than the tuition required by the institution at which the graduate work is to be done.

Candidates for the Fortescue Fellowships should file applications on the form provided by IEEE so that they reach the Fellowship Committee by January 15, 1971. Applicants are required to take the Graduate Record Examination and should arrange for the GRE scores to be sent to the Fellowship Committee by January 15, 1971. Awards will be made as soon thereafter as possible. Copies of the application forms are available at accredited colleges or may be obtained from Miss Una B. Lennon, Staff Secretary of the Awards Board, IEEE Headquarters, 345 East 47 Street, New York, N. Y. 10017.

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### FELLOW'S NIGHT

February 13, 1970

Governor Morris Inn, Morristown, N. J.

## Product Liability-- Does it Affect You?

Nearly 200 persons from thirty states and three additional countries attended the 1970 Product Liability Prevention Conference at Newark College of Engineering during August 26 through 28. The conference was particularly attractive to manufacturing and insurance representatives, with some coverage from private label brands. Engineers, lawyers, and businessmen exchanged their views with a resulting important gain of information in this vital area that may well affect every engineer connected with the manufacture of a product.

Court precedence is making it clear that far more than the value of the delivered equipment or part may be at stake. Of crucial importance, of course, are the cases that a failure endangers life or health. Large scale property damage may also bring liability. The old phrase "caveat emptor" (let the buyer beware) is being supplanted by a deep government interest in consumer safety.

Of particular interest to engineers were sessions dealing with engineering judgment, design review procedures, quality control procedures, human engineering, safety engineering, reliability, testing and evaluation procedures, to name a few. There is not room to do justice to any of these topics in depth in this review.

The conference was co-chaired by John L. Latour, of Food and Drug Research Laboratories, Inc. and Prof. Richard M. Jacobs of Newark College of Engineering. The keynote speaker was Harry M. Philo, a specialist plaintiff attorney and author. The banquet speaker was Richard O. Simpson, Deputy Assistant Secretary of Commerce for Product Standard.

Plans are being formulated for another Product Liability Conference in 1971.

Those of you who missed this conference still have an opportunity to purchase the proceedings for \$10.00 from: Prof. Richard M. Jacobs or Prof. John Mihalasky, Industrial Management and Engineering Department, Newark College of Engineering, 323 High Street, Newark, New Jersey 07102.



**NCE's  
Foundation,  
EE Department  
Work  
Together for  
Excellence**



*Dr. Richard G. Griskey*

Newark College of Engineering is winning national recognition for its strong and productive undergraduate programs. Fewer people are aware, however, that the graduate study and research aspects of the College are also on the upsurge.

The force behind the growth in these areas is the Foundation for the Advancement of Graduate Study in Engineering, NCE's privately-supported affiliate.

The Foundation assists faculty in writing proposals, administers grants and contracts awarded to the College, and also provides funds for support of graduate study. Last year the Foundation supported 47 graduate students through its own funds of contracts and grants from government and industry. The Electrical Engineering Department has a goodly share of that total, with 17 concentrating on EE studies.

Richard G. Griskey is director of research at NCE and the chief administrator of the Foundation. Under Dr. Griskey's guidance, funded research last year reached a record high at the College.

On the research side, the Electrical Engineering Department at NCE has experienced consistent growth in receiving contracts and grants by Federal and industrial sources. The department has more than 40 on-going projects at present.

The proof of this program can be seen in the ever-increasing awards of doctoral degrees--a total of 11 in electrical engineering since the program began in 1965. The range of research and graduate activities in electrical engineering encompasses reliable electronic material, hybrid computation, systems, power systems, communications and bio-medical engineering.

The interplay of the Foundation and the EE Department is also shown in the Foundation-sponsored College/Industry Seminar Series which brings outstanding electrical engineers from private industry to the campus for open technical seminars. "A New Approach to Computer-Generated Holography" on October 14, and "Outlook for the Computer Recognition and Generation of Speech" on December 16 are examples.

One aim of the Foundation is to foster better relations with small and medium industry in the state. A State Technical Services project currently being conducted at NCE is aiding small electronics firms, among others, to solve common problems. The College also undertakes specialized research projects for firms which lack the facilities or manpower for such work.

The partnership of the Foundation and the Electrical Engineering Department is building a center of graduate excellence at NCE. The establishment of such a center will benefit not only industry in New Jersey but the State as a whole.

IEEE members interested in additional information on the Foundation, its seminars, or in obtaining a copy of NCE's annual research report should write in care of Newark College of Engineering, 323 High St., Newark, N. J. 07102.