The IEEE

Newsletter

The Magazine of the North Jersey Section

Control of Air Traffic in the New York Metropolitan Area

Bell Telephone Laboratories, Murray Hill, N. J., March 19

Volume 15, Number 7
March, 1969

Education Committee Launches Experimental Series

The Section Education Committee has changed the format of one offering of the Spring Lecture Series with the aim of increasing the effectiveness of the presentation. Introduction to Digital Techniques II, a continuation of the Fall lecture series, will run for 8 weeks, beginning March 19. The series will consist of two lectures and six sessions devoted to problem solving by the registrant, under the close supervision of experienced digital designers. After the initial lectures the class will be broken down into small working groups, each with its own lecturer.

Prerequisites for this lecture series are either Introduction to Digital Techniques I, or a reasonable familiarity with Boolean Algebra and digital building blocks such as gates and flip-flops.

The series will be held in the Nutley High School cafeteria from 7:00 to 9:00 P.M. The fee is $30.00 for IEEE members and $40.00 for non-members. For further information call Alex Richardson at (201) 284-3730. Registrations should be directed to Mr. Richardson at ITTAV, Dept. 622, 390 Washington Avenue, Nutley, N. J. 07110.

Reliability of Power Sources

The New York Power and Industrial Group will present a program entitled "High Reliability of Power Sources." The discussion will feature various ways of providing an acceptable power source for equipment such as computers where the quality requirements are greater than the normal utility power supply. Representatives of the utility company, equipment manufacturer and suppliers of the devices necessary to improve the normal utility power will participate in the presentation of the subject.

A. A. Melusich, Asst. Chief of Electrical Engineering at Con Edison, will be moderator. Also participating will be D. L. Hawkins, Asst. Division Engineer of Con Edison, and C. G. Helmich, Section Engineering Manager of Static Power Supplies, Westinghouse. A representative from IBM and one from General Electric Corporation will take part in the program.

Nominations for the Executive Committee will be accepted at this meeting. *Time:* Wednesday, March 19, 1969; 6:30-8:30 P.M.

Place: Consolidated Edison Co., 4 Irving Place, N. Y. C., 19th Floor Auditorium.

CALENDAR

Wednesday, March 12

Princeton Magnetics — **Magneto-Optics,** Murray Hall, Room 217, Rutgers University, New Brunswick, N. J. 8:00 P.M.

Thursday, March 13

North Jersey Reliability — **Quality and Reliability Assurance Procedures for Microcircuits,** Kearfott Systems Division, Plant 10, 150 Totowa Road, Wayne, N. J. 8:00 P.M.

Tuesday, March 18

New York Computer — **Giant Computers,** IBM, Classroom A, 2 Penn Plaza (32 Street and 7th Avenue) on the 29th Floor, N.Y.C. 7:30 P.M.

Wednesday, March 19

Joint North Jersey Section/Automatic Control — **Control of Air Traffic in the New York Metropolitan Area through Automation,** Arnold Auditorium, Bell Telephone Laboratories, Murray Hill, N. J. 8:00 P.M.

North Jersey Education Committee — **Spring Lecture Series, "Digital Techniques II,** Nutley High School Cafeteria, Nutley, N. J. 7:00 P.M.

North Jersey Power — **Ferroresonance on Distribution Systems,** Punchbowl Room, Jersey Central/New Jersey Power and Light Co., Madison Avenue at Punchbowl Road, Morristown, N. J. 7:30 P.M.

New York P & I — **High Reliability of Power Sources,** Consolidated Edison Co., 4 Irving Place, N.Y.C., 19th Floor Auditorium. 6:30 P.M.

Thursday, March 20

North Jersey Microwave — **Design Techniques for Microwave Integrated Circuits,** Arnold Auditorium, Bell Telephone Laboratories, Murray Hall, N. J. 8:15 P.M.

North Jersey Section — **Spring Lecture Series, "Semi-Conductor Devices and Their Use in Power Applications,"** Punch Bowl Room, Jersey Central/New Jersey Power & Light Co., Madison Avenue at Punch Bowl Road, Morristown, N. J. 6:30-8:30 P.M.

Saturday, March 22

New York P & I — **Tour of Opera House,** Metropolitan Opera, N. Y. 11 A.M.

Monday, March 24 through 27

IEEE International Convention and Exhibition, New York City.

Saturday, March 29

New York P & I — **Tour of Opera House,** Metropolitan Opera, N.Y.C. 11 A.M.

Thursday, April 3

New York Comm Tech — **Lecture Series, "Fundamentals of Applied Mathematics for Engineers,** New York Telephone Co., 140 West Street, N.Y.C. 6:30 P.M.

Wednesday, April 9

IEEE New Technical and Scientific Activities/N.Y. Section/IEEE Subcommittee on Materials/Stevens Institute of Technology, **Sixth Annual Integrated Circuits Seminar,** Stevens Institute of Technology, Hoboken, N. J. 8:30 A.M.

Wednesday, April 16

North Jersey Automatic Control — **A Predictive Entry Guidance Program for Apollo,** Arnold Auditorium, Bell Telephone Laboratories, Murray Hill, N. J. 8:00 P.M. (Details Next Month)

FM Systems — Engineering Advances

Four of the six tutorial lectures on FM applications and theory, sponsored by the New York Section of the Communications Technology group, remain to be presented. The talks will cover the broad range of the frequency modulation field. The stress will be on advance in the art, as well as simplifications and insight gained during the past decade. The coordinator of the series is Dr. Jacob Klapper of the Newark College of Engineering. The lectures are sponsored by the Study Group Committee. They will be held once weekly, on Thursday evenings, between March 6 and March 27, and can be attended on an individual basis at $5 per lecture. All those who find their interest confined to one lecture are welcome to attend that lecture. Payment by check or money order can be made at the door. Cash will not be accepted.

For the schedule and the lecturers see the February issue of The Newsletter.

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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.

NORTH JERSEY SECTION OFFICERS 1968-1969

J. G. O'Grady

M. M. Irvine

Chairman ..... Joseph G. O'Grady
Vice Chairman ..... Merle M. Irvine
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Air Traffic Control Through Automation

The Joint North Jersey Section/Automatic Control Group will hold a meeting on March 19, at 8:00 P.M. at Arnold Auditorium, Bell Telephone Laboratories, Murray Hill, N. J. Speaker will be Melvin Morrison, Chief, Airway Facilities Branch New York Area Office, F.A.A. whose topic will be "Control of Air Traffic in the New York Metropolitan Area Through Automation."

A pre-meeting dinner will be held at Wally's Tavern on the Hill, Watchung, N. J. at 6:00 P.M.

About the Talk

With the tremendous increase in aviation the Federal Aviation Administration has embarked on an automation program to increase air safety while handling an increasing volume of air traffic. The first major step in implementing this program is called "NAS En Route Stage A" which is designed to automate Air Route Traffic Control Centers. It will provide the air traffic controller with more accurate data and handle the data more rapidly, electronically. Some of the features of NAS En Route Stage A are computer processing of flight information, automation aids for identifying aircraft, automatic display of altitude information, and automated hand-off to radar targets between controllers. En Route automation will not only increase air traffic control capacity but will increase safety due to greater accuracy and timeliness of data acquisition. Mr. Morrison's talk will discuss present air traffic problems, interim solutions, and future automation plans for the New York Metropolitan Airports.

About the Speaker

Mr. Melvin Morrison received a B.S. degree in Science and Mathematics from Trenton State College and pursued graduate engineering studies at Harvard and MIT. During World War II, he was an Air Force Electronics Officer where he installed and operated GCA radar facilities in Japan and Korea. Mr. Morrison joined the FAA in 1946. He has held the following positions: Sector Chief at La Guardia, N. Y.; Chief, Radar Section, Eastern Region; Chief, Operations Branch; and Chief, Engineering Branch. At present, his position is Chief, Airway Facilities Branch, New York Area.

Time: Wednesday, March 19, 1969; 8:00 P.M.

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

Pre-Meeting Dinner: 6:00 P.M.; Wally's Tavern on the Hill, Watchung, N. J.

Microcircuit Reliability

The North Jersey Reliability Group of the North Jersey Section will hold a meeting on March 13, 1969 at 8:00 P.M. at Kearfott Systems Division, Plant 10, 150 Totowa Road, Wayne, New Jersey.

The speakers will be Mr. Edward P. O'Connell and Mr. John P. Farrell of the Solid State Application Section at Rome Air Development Center, Rome, New York. The topic will be "Quality and Reliability Assurance Procedures for Microcircuits." Mr. O'Connell was the prime mover of MIL-STD-883 (Test Method and Procedures for Microelectronics) and will discuss its origin, history, and future. The discussion will also cover what MIL-STD-883 intended to accomplish, where the problem areas are, industry's criticisms, and the answers to these criticisms.

Again we are fortunate to have the country's leading authority on the subject. Most new military and large scale commercial and industrial programs using integrated circuits are referencing MIL-STD-883. Therefore, a complete understanding of it should be of vital interest to both reliability and parts engineers.

Time: Thursday, March 13, 1969; 8:00 P.M.

Place: Kearfott Systems Division, Plant 10, 150 Totowa Road, Wayne, N. J.

Additional Information: Call G. Ebel at 226-7777, or R. Haiken at 256-4000, Ext. 2959.

Minnesota Alumni Meeting

The Annual IEEE Minnesota Alumni Meeting will be held at 12:00 noon, Wednesday, March 26, at the Holiday Inn, 440 West 57th Street (two blocks from the Coliseum) in New York City.

Lloyd A. Russ, '29 BEE, is in charge of arrangements and reservations may be sent to him at Room 2536, 200 Park Avenue, New York, N. Y. 10017. Reservations also may be made by phone at (212) 692-5146.

LECTURE SERIES – SPRING, 1969

SEMI-CONDUCTOR DEVICES AND THEIR USE IN POWER APPLICATIONS

This seven-session study group is intended to give a broad background on the range of power type semi-conductors available today and their capabilities in relation to present day industrial control technology. The presentation will be oriented toward updating and broadening the basic knowledge of engineers, technicians, sales, plant and maintenance personnel. Coverage will also include operation and application of those devices that will be available in the near future.

The instructors will be some of the top expert's from leading manufacturers of semi-conductor devices and control systems.

March 20, 1969 — Introduction

Evolution of power semi-conductors, variety of power devices in use today and a glance at what is just beyond the horizon.

H. A. Steinbruegge, Sr. Appl. Engr.
Semi-Conductor Group, Westinghouse

April 3, 1969 — Basic Circuitry

Rectifiers and SCR circuits, Basic A.C. phase control, including theory of operation, capabilities, and application to such products as pumps, fans, and hoists.

R. W. Fox, Appl. Engr.
Semi-Cond. Products Dept., General Electric

April 10, 1969 — D.C. Motor Control Applications

Variable speed D.C. controls for D.C. drive systems including special industrial requirements, regulators, systems and system protection.

B. G. Wheeler, Mgr.
Drive Systems Div., Cutler Hammer

April 17, 1969 — A.C. Motor Control Applications

A.C. variable frequency drives, theory of operation, application and use in industry today, and future developments.

D. L. Schoen, Manager
Variable Frequency Drives, Reliance Electric Co.

April 24, 1969 — Transportation Power and Control

1st Hour — Solid state control for ignition systems, switching circuits, and propulsion.

J. McCartney, Ch. Engr.
Wagner-Tung-Sol

2nd Hour — Electric powered vehicles.

Dr. Victor Wouk, Mgr.
Electronic Research, Gulton Ind.

May 1, 1969 — Heating and Air Conditioning

Both industrial and residential applications for automatic sensing and control of burners, fans and heating cycles; fan modulation for air conditioning and condenser units; spark ignition systems; automatic sequencing of electric heaters; and future humidity and overall comfort index control.

Ted Ballard, Program Manager
Klixon Div. Texas Instruments

May 8, 1969 — Lighting, Appliance, & Power Tool Control

Application of solid state controls to universal and small a-c motors, dimming and high-frequency lighting, and future developments, featuring RFI effects, system protection, and interference effects on solid state devices.

R. W. Fox, Appl. Engr.
Semi-Cond. Products Dept., General Electric

TIME . . . . . 6:30-8:30 P.M. Thursday evenings — beginning March 20, 1969.

PLACE . . . . . Punch Bowl Room, Jersey Central - New Jersey Power & Light Co., Madison Ave. at Punch Bowl Road, Morristown, N. J.

FEE . . . . . $30.00 to members of IEEE, ASME, AIME, ASCE, etc.; $35.00 to non-members.

SPECIAL OFFER — A $5.00 savings for advance registrants whose mail registrations are received prior to March 13, 1969.

ADVANCE REGISTRATION FORM

Mail to: Peter A. Drobach, General Electric Company
25 E. Willow Street, Millburn, New Jersey 07041
Phone: (201) 376-9000

Please enroll me in the **SEMI-CONDUCTOR DEVICES AND THEIR USE IN POWER APPLICATIONS** Course, Spring 1969.

Name.....Tech Society.....

Firm.....Position.....

Business Address..... Phone.....

Home Address..... Phone.....

Check or Money Order Enclosed _____Member $25.00 (after March 13, $30.)

_____Non-Member $30.00 (after March 13, $35.)

Make checks payable to: North Jersey Section IEEE

Sixth Annual Integrated Circuits Seminar

The IEEE New Technical and Scientific Activities/New York Section, IEEE Subcommittee on Materials and Stevens Institute of Technology will co-sponsor a one-day seminar on integrated circuits on April 9, 1969 at Stevens Institute of Technology, Hoboken, N. J. at 8:30 A.M.

The introduction will be made by *R. L. Geldmacher,* Stevens Institute of Technology.

Morning session, with *J. J. Golembeski,* Bell Telephone Laboratories, Murray Hill, N. J., as moderator, will cover the following topics: "Relating Material Properties to Semiconductor Device Performance for Computer Simulation," *G. Hachtel,* IBM, Yorktown Heights, N. Y.; "Semiconductor Integrated Circuits Techniques and Capabilities, *M. J. Calahan,* Motorola, Mesa, Arizona; and "Piezoelectric Materials for Monolithic Crystal Filters," *J. L. Hokanson,* Bell Telephone Laboratories, Allentown, Pa.

The afternoon session will have as moderator *W. H. Orr,* Bell Telephone Laboratories, Allentown, Pa. Topics include: "Thin Film Integrated Circuit Technology," *D. Gerstenberg,* Bell Telephone Laboratories, Allentown, Pa.; "Materials Considerations in Microwave Integrated Circuits," *R. B. Schilling,* RCA, Somerville, N. J.; and "State of the Art Materials Capability for Thick Film Technology," *J. J. Cox, Jr.,* E. I. Du Pont de Nemours, Wilmington, Del.

Mail to:

Prof. R. C. Levine
Electrical Engineering Dept.
Stevens Institute of Technology
Castle Point Station
Hoboken, New Jersey 07030

Pre-Registration

IEEE Members $20
Non-IEEE Members $25

Registration at door

IEEE Members $25
Non-IEEE Members $30

Proceedings only, no attendance $10

Registration fee includes Proceedings and Luncheon. Pre-register for maps and directions.

Name .....

Address .....

Make checks payable to: NTSAC

Tantalum Film Technology and Circuit Design Techniques for Microwave Integrated Circuits

Two talks concerning Microwave ICs will highlight the March meeting of the North Jersey Section of the GMTT.

About the Talks

The first talk will describe a particular variation of the Tantalum Film Technology which has been used at Bell Telephone Laboratories to realize many forms of microwave integrated circuits which have stable, reliable, and uniform characteristics. The technology allows integral fabrication of resistors, capacitors, and conductors on a hard substrate. Active devices of silicon or germanium are attached to complete the hybrid integrated circuit.

This talk will consist of a description of the tantalum film process, and performance advantages and limitations of the passive components.

The second talk will consist of a review of the design techniques employed to realize microwave integrated circuits. Passive elements, both lumped and distributed, will be discussed, including a comparison between two transmission line configurations, microstrip and suspended substrate stripline. The status of semiconductor device development for MIC applications will be reviewed with particular attention given to unencapsulated devices. The talk will be concluded with a discussion of some examples of recent developments in the MIC field.

About the Speakers

Mr. K. F. Sodomsky received the B.S. in Engineering from the University of Manitoba, Winnipeg, Canada, in 1956 and the Ph.D. in Electrical Engineering from the University of London in 1959. He joined Bell Laboratories in 1960 where he has worked on high power microwave tubes, parametric amplifiers and microwave integrated circuits. He is presently supervisor of the Microwave Hybrid Integrated Circuits Group at BTL's Reading, Pennsylvania Laboratory.

Mr. P. D. Stark (S '57 - M '59) was born in Marion, Illinois, on October 12, 1932. He received the BS degree in Electronic Engineering and Mathematics from the California State Polytechnic College, San Luis Obispo, in 1959, and the MEE degree from New York University, New York, in 1961.

He joined Bell Telephone Laboratories Inc., in 1959, and until 1964 was engaged in the exploratory development of millimeter-wave travelling-wave tubes. He is presently a supervisor in the Film Circuit Technology Department in Allentown, Pa. His present interests include development of processes and techniques for thin film integrated circuitry to be used in future telephone sets, microwave radio relay systems, and other communication devices.

Time: Thursday, March 20, 1969; 8:15 P.M.

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

Dinner: 6:15 P.M., Wally's, Watchung, N. J.

Using Ferroresonance on Distribution Systems

The March meeting of the North Jersey Power Group will be a general one at which Alfred E. Kilgour will present the topic Analyzing and Understanding Ferroresonance on Distribution Systems.

Ferroresonance is the same phenomenon on distribution feeders as it is on tranmission lines, but its causes and effects are generally different. An analysis plus simulation helps to explain these differences. Ferroresonance on distribution circuits appears to be occurring more frequently as more and more sections of underground cable are being added to overhead feeders. This analysis plus results obtained using a demonstrator are an aid toward gaining an insight into the nature of ferroresonance encountered on distribution systems.

About the Speaker

Alfred E. Kilgour received his B.S. from Albian College and his BSEE from M.I.T. While at M.I.T., Mr. Kilgour was a Cooperative Student with General Electric Co. Following graduation he spent one year with Hanna Furnace Company (Subsidiary of Great Lakes Steel Corporation). He then worked as an Electrical Engineer, Technical Planning Section Commonwealth and Southern Corporation, in Michigan, for a period of three years. Since 1942, Mr. Kilgour has been associated with Allis-Chalmers in application and engineering concerning switchgear, circuit breakers and systems engineering of Power, Transmission and Distribution Systems.

Some of Mr. Kilgour's Professional Achievements include: Project Coordinator for Field Rebuilding 500 KV Power Transformers; Senior Systems Engineer sponsoring construction and operation of Simulator for EHV-AC/DC Transmission System jointly with Edison Electric Institute and University of Wisconsin; Project Engineer, Extra High Voltage Direct Current Test Facility—(EHV-d.c.) for Bonneville Power Administration—1,000,000 v d.c.; and participation in the development and application and control of electrical equipment for C Stellerator Project at Princeton, New Jersey. The Stellerator is a research device for studying problems associated with producing controlled thermo-nuclear energy. And participation in field test programs related to oil circuit breaker development as applied to overhead lines (23 kv) and gas filled cables (138 kv). Mr. Kilgour is also a Senior Member of the IEEE Power Group, and Industry and General Applications Group. He has a number of technical papers to his credit.

Time: Wednesday, March 19, 1969; 7:30 P.M. Meeting is open to all interested.

Place: Punchbowl Room, Jersey Central/New Jersey Power and Light Company, Madison Avenue at Punchbowl Road, Morristown, New Jersey.

Mathematics Review for Engineers

The Communications Technology Group Chapter of the New York Section of IEEE presents the third part of a three-part course reviewing the fundamentals of applied mathematics for engineers. Mr. D. Gillespie of the New York Telephone Co. will give this lecture.

In addition to this mathematics review, topics in the series will include statistics, linear programming, and Boolean Algebra. Further information may be obtained from Mr. H. J. Haarmann of the New York Telephone Company at (212)-394-1399.

Time: Thursday, April 3, 10, 17, and 24, May 1 and 8; 6:30 to 8:30 P.M.

Place: New York Telephone Company, 140 West Street, New York City.

Magneto-Optics

In magnetic crystals there are a number of optical properties associated with the magnetization which may have interesting applications. At the next meeting of the IEEE Magnetics Chapter, Princeton Section, Dr. J. F. Dillon, Jr. of Bell Telephone Laboratories, Murray Hill, New Jersey, will discuss some of the magneto-optical properties, and compare their magnitudes in various magnetic materials. He will also describe a few applications of these effects.

Time: Wednesday, March 12, 1969; 8:00 P.M.

Place: Murray Hall, Room 217, Rutgers University, New Brunswick, N. J.

Pre-Meeting Dinner: Alumni-Faculty Club, 199 College Avenue, New Brunswick, N. J.; 6:00 P.M. Reservations For Dinner: Mrs. Helen Yefko, Dept. of Electrical Eng., Rutgers U., 247-1766 Ext. 6325.

Additional information about the Magnetics Chapter can be obtained from A. J. Kurtzig, Sec. Treas. Magnetics Chapter, Bell Telephone Laboratories, Murray Hill, N. J.

Problems & Features of Giant Computers

The giant computers can do things smaller ones can't. But they also require a completely different outlook and generate giant problems of their own. At the March meeting of the New York Chapter of the IEEE Computer Group, Dr. Kenneth King, Director of the Computing Center of Columbia University, will discuss some of the hardware and software features and problems unique to the giant computer.

Time: March 18, 1969; 7:30 P.M.

Place: Classroom A, IBM, 2 Penn Plaza (32 Street and 7th Avenue) on the 29th Floor.

Newsletter Staff Openings

There are presently a number of openings on the editorial staff of the Newsletter. The Newsletter is the official publication of the North Jersey Section of the IEEE and is received by approximately 6000 people. The work involves editing material submitted for publication by various IEEE groups and generally takes about 5 hours per month. Additional information on these openings can be obtained by writing to Emil Neu, 18 Kensington Terrace, Maplewood, New Jersey, 07040 or by telephoning 201-762-0188.

Backstage at the Met

The officials of the Metropolitan Opera House have again graciously consented to be the host of members of the IEEE and their wives at a backstage tour of their facilities.

The tours have been arranged for Saturday morning, March 22 and 29, 1969 at 11:00 a.m.

In conjunction with the tour a *very limited* block of tickets has again been reserved for our group for the matinee performances of Turandot on March 22 and Il Trovatore on March 29. Pairs of tickets are $27.00 and check or money order made out to P&I Division, New York Section, IEEE must be received by March 7. Because of the short supply of tickets, requests must necessarily be limited to one pair.

Requests for reservations for either the tour or the Opera performance will be handled on a first come - first served basis. And, please, no phone calls. Only those requests accompanied by a stamped self-addressed envelope (plus the check or money order for Opera tickets if requested) can be honored or acknowledged.

Please fill in completely the form below:

M. Lipinski
80 Park Place, Room 7341
Newark, N. J. 07101

For backstage inspection tour of the Metropolitan Opera House please send to:

Name.....

Address..... Phone.....

Tour — 2 tickets for .....March 22 only .....March 22 or 29 .....March 29 only

Opera — Enclosed is my check or money order for $27.00 made out to P&I Division, New York Section IEEE for two tickets for the Saturday matinee opera performance on .....March 22 only .....March 22 or 29 .....March 29 only.

Priorities for requests for all tickets will be assigned in order of receipt of request, regardless of date selected. No requests can be honored or acknowledged without a stamped self-addressed envelope.

Report From The:

Nominating Committee

Election of Officers

The IEEE North Jersey Section does not have an electoral college. The following officers are elected each year by direct popular vote; all North Jersey Section IEEE members are eligible to vote for: Chairman, Vice-Chairman, Secretary, Treasurer, Member-at-Large-1, Member-at-Large-2.

Nominations

The Nominating Committee shall present at least one nomination for each section office. Additional nominations may be made by a petition signed by not fewer than twenty-five voting members of the Section and transmitted to the Secretary for submission to the Executive Committee not later than April 30. The petition must certify that persons nominated have agreed to serve, if elected.

Election of Officers

The election of officers shall take place at the May general meeting of the Section unless the Executive Committee decides that a mail ballot is required. In case a mail ballot is used, it shall be sent out to all voting members not later than May 10 and shall be returnable not later than one month from the date of mailing. In the case of a mail ballot the Chairman shall appoint at least three tellers having the approval of the Executive Committee to count the mail ballot within one week after the closing date for returns.

Terms of Office

The officers of the Section shall take office on July 1st and their term expires on the June 30th following with the exception that the outgoing Treasurer shall be responsible for his records until they are audited and the audit has been approved.

Report of Nominating Committee

The Nominating Committee is proposing the following slate for the term 1969-70:

Chairman ..... M. M. Irvine, Bell Telephone Laboratories
Vice-Chairman ..... H. E. Blaicher, Jr., Jersey Central P&L Co.
Treasurer ..... R. G. Sokalski, Aircraft Radio Corp.
Secretary ..... Carl Torell, Federal Pacific Elec. Co.
Member-at-Large-1 ..... R. P. Misra, NCE
Member-at-Large-2 ..... Paul Watson, Jersey Central P&L Co.

The Nominating Committee

The Nominating Committee consists of a group of individuals who have had varied assignments throughout IEEE. This year's Nominating Committee consists of the following individuals:

S. A. Mallard (Chairman), Public Service Electric and Gas Company
A. R. D'Heedene, Retired (formerly with Bell Labs)
W. L. Glomb, ITT Federal Laboratories
L. J. Lunas, Westinghouse Electric
Bernard Meyer, U. S. Signal Corps
J. K. Redmon, Newark College of Engineering

S. A. Mallard, *Chairman*
Section Nominating Committee

Problems In Manufacturing

An Ad Hoc Committee on manufacturing technology is being sponsored by the IEEE in an effort to determine the extent of interest in manufacturing by IEEE members. The Ad Hoc Committee is concerned with all aspects of manufacturing technology as it relates to the manufacturing of electrical and electronic equipment. The Committee's objective is to determine a need and once a need is established, recommend the proper IEEE organization to best serve the interests of the membership.

The Ad Hoc Committee has sponsored a successful meeting last year at NEREM and a Session on Hybrid Microelectronics is scheduled for Thursday, March 27th to be held in the Trianon Ballroom at 10:00 A.M., at the New York Hilton Hotel.

The titles and authors of the five papers are as follows:

"Computerized Process Control in the Manufacture of Hybrid Electronic Circuits" by A. W. Gellert, RCA, Camden, New Jersey.

"The Impact of Microelectronics on Manufacturing Logistics" by E. F. Shepter, IBM, Endicott, New York.

"Microelectronics Impact on the Manufacture of Telephone Equipment" by C. C. Crain, Western Electric, Indianapolis, Indiana.

"Hybrid Microelectronics as Used in the Manufacture of Special High Reliability Systems" by J. R. Frissora, Space and Tactical Systems Corporation, Burlington, Massachusetts.

"Impact of Microelectronics on Manufacture of Avionic Systems" by J. C. Murtha and J. R. Hudson, Westinghouse Aerospace Division, Baltimore, Maryland.

This session will afford a unique opportunity to engineers involved with the day to day problems of manufacturing. It will present information relative to the impact that microelectronics has had on the manufacture of electronic equipment. The manufacturing engineer has been presented with a whole new set of problems associated with the introduction of microelectronics in all its various forms into equipment manufacture.

Information on this session or future IEEE activities of a similar nature may be obtained by writing to: H. H. Loar, c/o IEEE, 345 East 47th Street, New York, New York 10017 or George Ebel, Conrac Corporation, P.O. Box 32, Caldwell, N. J. 07006, (201) 226-7777.