THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

In recognition of professional distinction and notable contributions, the Officers and Board of Directors of the Institute certify that


S. J. Buchsbaum


B. C. DeLoach, Jr.


Dawon Kahng


H. S. McDonald


E. D. Reed

have been elected to the grade of

FELLOW

from the North Jersey Section

The IEEE **Newsletter**

ANNUAL DINNER DANCE HONORING NEW FELLOWS AND AWARD WINNERS

Governor Morris Inn, February 19, 1972

Send Reservations ($9.50 per person) to Carl C. Torell, 9 Colony Court, Summit, New Jersey 07901

February, 1972

HOWARD C. BARNES, guest speaker Section Annual Dinner Dance scheduled February 19th at Governor Morris Inn.

Circuit Theory Chapter

The North Jersey, Long Island and New York Sections have formed a Metropolitan New York area chapter of Circuit Theory.

The co-chairmen are A. Glaser and H. Shichman of Bell Telephone Labs, Murray Hill, New Jersey.

For further information contact: Mr. B. D. DeMarinis at (609) 448-3400, Ext. 2494.

LATE NOTICE

The Metropolitan New York Chapter Reliability Group is having a joint meeting with the Long Island Section of the American Society for Quality Control on February 22. The meeting which is scheduled to begin at 8:00 P.M., will be held at Grumman Aerospace Corporation in Plant 12 on New South Road in Bethpage, L. I. A talk will be given on Calibration Systems which will then be followed by a plant tour during which the equipment can be seen and a demonstration will be given. The meeting will be preceded by an optional dinner at 6:00 P.M. at the Astro Restaurant on South Oyster Bay Road.

Time: Tuesday, February 22; 8:00 P.M.
Place: Grumman Aerospace Corp., Plant 12, New South Road, Bethpage, L. I.
Pre-Meeting Dinner: Astro Restaurant, South Oyster Bay Road; 6:00 P.M.

MEETINGS CALENDAR

Wednesday, February 9
NY Group in Engineering in Medicine and Biology—Bio-Dental Engineering, J. Friedman, D.D.S., Speaker. Rockefeller University, South Lab, Room 204, York Ave. and 68th St., NYC, 8:00 P.M. Pre-Meeting Dinner: Tower Building Cafeteria, Rockefeller U., 6:00 P.M.

Thursday, February 17
Joint Microwave Theory and Techniques and Antennas and Propagation Groups—Acoustic Surface Waves, Dr. Robert C. M. Li, Speaker. Arnold Auditorium, Bell Laboratories, Murray Hill, N. J., 8:00 P.M. Pre-Meeting Dinner: Wally's Tavern on the Hill, Watchung, N. J., 6:00 P.M.

Saturday, February 19
North Jersey Section Annual Dinner Dance—Governor Morris Inn, Morristown, N. J. Dutch Treat cocktail hour, 6:00 P.M. Dinner, 7:00 P.M. Dancing until 1:00 A.M.

Tuesday, February 22
Multi Group Chapter—Earthquake Resistance of Structures, Dr. Rudolph F. Drenick, Speaker. Arnold Auditorium, Bell Telephone Laboratory, Murray Hill, N. J., 8:00 P.M. Pre-Meeting Dinner: Wally's Tavern on the Hill, Berkeley Heights, N. J., 6:00 P.M.

Wednesday, February 23
Parts, Hybrids and Packaging Group—Air Traffic Control in 1970's, D. R. Israel, William Carnes and Fred Pogust, Speakers. 3rd Floor Conference Room, ITT Defense Communications Division, 492 River Rd., Nutley, N. J., 7:30 P.M. Pre-Meeting Dinner: Copperhood Restaurant, Lyndhurst, N. J., 6:00 P.M.

Thursday, February 24
Computer Society Chapter—Real-Time Systems Design, Sheldon B. Weinberg, Speaker. Room 1H009, Bell Labs, Whippany, N. J., 8:00 P.M. Pre-Meeting Dinner: De Mario's Restaurant, Rt. 10 at U. S. 287 Junction, Whippany, N. J., 6:00 P.M.

Thursday, February 24
NY Metropolitan Chapter of Electron Devices Group—Semiconductor Memories, Dr. B. T. Murphy, Speaker. ITT Laboratories, Nutley, N. J., 8:00 P.M. Pre-Meeting Dinner: Copperhood Restaurant, south of Rt. 3 at Park Ave. exit, 6:00 P.M.

Thursday, February 24
Industrial and Commercial Power Systems Group—Joseph McPartland, Speaker. Room 1425, Consolidated Edison Co. Building, 4 Irving Place, NYC, 6:30 P.M. to 8:30 P.M.

Thursday, February 24
GM Assembly Plant Tour—General Motors, Linden, N. J., 7:15 P.M. Reservation required.

Wednesday, March 1
Magnetics Chapter-Princeton Section—Rare Earth Permanent Magnet Alloys, Ethan A. Nesbit, Speaker. Murray Hall, Room 217, Rutgers University, New Brunswick, N. J., 8:00 P.M. Pre-Meeting Dinner: Alumni-Faculty Club, 199 College Ave., New Brunswick, N. J., 6:00 P.M. Reservations required. Refreshments will be served after meeting.

Wednesday, March 8
NY Group in Engineering in Medicine and Biology—Pattern Recognition in the Life Sciences, Dr. Murray Eden, Speaker. Rockefeller University, South Lab, Room 204, York Ave. and 68th St., NYC, 8:00 P.M. Pre-Meeting Dinner: Tower Building Cafeteria, Rockefeller University, 6:00 P.M.

Tuesday, April 18
Metropolitan Chapter Instrumentation and Measurement Spring, 1972, Lecture Series—A Survey of Environmental Pollution Instrumentation Problems, first in series. 2nd Floor Conference Room, 30 Evergreen Place, East Orange, N. J., 8:00-10:00 P.M.

The IEEE **Newsletter**

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Institute of Electrical and Electronics Engineers, Inc., 345 East 47th Street 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 1971-1972

Robert G. Sokalski

Carl C. Torell

Chairman ..... Robert G. Sokalski
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Annual Section Dinner & Recognition of New Fellows

The North Jersey Section Annual Dinner Dance honoring the North Jersey Section newly-elected Fellows and recipients of field awards of the Institute will be held on Saturday evening, February 19, 1972, at the Governor Morris Inn, Morristown, New Jersey. Fellow award recipients are listed below.

Dr. S. J. Buchsbaum, Executive Director of the Research, Communications Science Division of Bell Telephone Laboratories in Murray Hill. He was initially engaged in experimental and theoretical research in gaseous and solid state plasmas.

Dr. B. C. DeLoach, Jr., Head of the Electroluminescent Device Department at Bell Telephone Laboratories, Murray Hill. He is responsible for the development of light emitting solid state devices.

Dr. Dawon Kahng, a Member of the Technical Staff of Bell Laboratories in Murray Hill. He is supervising a group concerned with luminescence in visible and charge coupled devices.

Dr. H. S. McDonald, Assistant Director of the Electronic and Computer Systems Research Laboratory at Bell Laboratories. He is responsible for research on new techniques for communications including studies concerning the role of the electronic computer in the communications plant.

Dr. E. D. Reed, Executive Director of the Salary and Technical Personnel Administration Division and Chairman of the Bell Labs Committee on Education. He has spent most of his career in component development as Executive Director of the Solid State Components Division of Bell Telephone Laboratories.

A Dutch treat cocktail hour will begin at 6:00 P.M. and will be followed by dinner at 7:00 P.M. Following presentation of the awards there will be dancing until 1:00 A.M. with music furnished by Bill Hofer and his Society orchestra.

The guest speaker will be Mr. Howard C. Barnes, Asst. Vice President of the American Electric Power Service Corporation. He is a Fellow of the IEEE and Past President of the Power Engineering Society of the Institute. Among his accomplishments at AEP is the introduction of 765KV transmission, the first in the U.S.A.

Since joining IEEE in 1947, he has been a member of twenty committees and subcommittees and has served as Chairman on seven of these. He has been Chairman of the Technical Operations Department and Vice Chairman of the Power Group. He has authored numerous papers on a wide range of power subjects including relaying, power generation and EHV and UHV transmission.

Mr. Barnes has been active internationally and is well known for his work in CIGRE (Internations Conference of Large Electrical Systems of High Tension). He is Chairman of the Executive Committee and Vice President of the U. S. National Committee of CIGRE. He also is Director of AEP-ASEA UHV Research Project exploring the upper limits of transmission voltages including voltages exceeding 2 million volts.

Reservations may be sent to:
Carl C. Torell, 9 Colony Court
Summit, N. J. 07901
Phone (201) 273-2849

Please forward _____ tickets at $9.50 each to: (Checks payable to N. J. Section IEEE)*

Name _____

Street _____

Town _____

State _____ ZIP _____

I would like to share a table (seating 10) with the following:

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*Include stamped, addressed envelope. Reservations received after February 12 or without envelope will be held at door along with telephone reservations. (201) 589-7500 or 273-2849.

New North Jersey Section IEEE FELLOWS

SOLOMON J. BUCHSBAUM

Solomon J. Buchsbaum is Executive Director of the Research, Communications Sciences Division at Bell Laboratories in Murray Hill, New Jersey.

Dr. Buchsbaum began his Bell System career with Bell Laboratories in 1958. He initially engaged in experimental and theoretical research in gaseous and solid state plasmas.

He became Head of the Solid State and Plasma Physics Research Department in 1961 and Director of the Electronics Research Laboratory in 1965. In 1968 Dr. Buchsbaum left Bell Laboratories to become Vice President in charge of research at Sandia Laboratories of the Sandia Corporation, a subsidiary of the Western Electric Company. He returned to Bell Laboratories in his present position in May 1971.

Born in Poland, Dr. Buchsbaum received his B.S. and M.S. degrees from McGill University in 1952 and 1953, respectively. He received his Ph.D. degree from the Massachusetts Institute of Technology in 1957. He remained at M.I.T. until 1958 working on research in microwave plasmas in magnetic fields.

He is a Fellow of the Institute of Electrical and Electronics Engineers, a Fellow of the American Physical Society and Associate Editor of *Reviews of Modern Physics.* He is a member of the IEEE Administrative Group on Electron Devices, a member of the Atomic Energy Commission Standing Committee on Controlled Thermonuclear Research, and a member of the President's Science Advisory Committee.

BERNARD C. DeLOACH, JR.

Bernard C. DeLoach is Head of the Electroluminescent Device Department at Bell Telephone Laboratories, Murray Hill, N. J. He is concerned with the development of solid state devices that give off light when an EMF is applied. These devices are in effect solid state "light bulbs."

Dr. DeLoach joined Bell Laboratories in 1956 as a member of the Radio Research Department at the company's Holmdel, New Jersey, location. He has been concerned with the study of microwave filters, microwave parametric devices, and solid state microwave power sources. He assumed his present post in February, 1970.

A native of Birmingham, Alabama, Dr. DeLoach received the B.S. and M.S. degrees in physics from Auburn University in 1951 and 1952 respectively, and the Ph.D. degree in physics from Ohio State University in 1956.

Dr. DeLoach is the author of a number of published technical articles. He has been granted eight patents for his inventions.

He is a member of the Institute of Electrical and Electronics Engineers and the honor societies, Pi Mu Epsilon, Sigma Xi, and Sigma Pi Sigma.

DAWON KAHNG

Dawon Kahng is currently a member of Bell Telephone Laboratories Technical Staff at Murray Hill, N. J.

He was born on May 4, 1931, in Seoul, Korea. He received the B.Sc. degree in physics from Seoul University, Seoul, Korea, in 1955, and the M.Sc. and Ph.D. degrees in electrical engineering from Ohio State University, Columbus, Ohio, in 1956 and 1959, respectively. He became a U. S. citizen in 1964.

He was engaged in teaching as well as in the study of diffusion of impurities into silicon through a growing oxide layer, while at Ohio State University. Upon joining the Bell Laboratories, Murray Hill, New Jersey, in October 1959, he worked on feasibility studies of MOS transistors and hot electron devices, and also, on silicon epitaxial film doping profile studies. Since 1964, he has been supervising a group concerned with the development of surface barrier high frequency diodes, and with studies of large gap and ferroelectric semiconductors, and, more recently, luminescence in the visible and charge coupled devices.

Dr. Kahng is a member of Sigma Xi, Pi Mu Epsilon, AAAS and IEEE and a Fellow of Korean Physical Society. He has authored or coauthored more than 30 technical articles including a book chapter, and holds 17 patents.

HENRY S. McDONALD

Henry S. McDonald is Assistant Director of the Electronic and Computer Systems Research Laboratory at Bell Telephone Laboratories. He is responsible for research on new techniques for communications including studies concerning the role of the electronic computer in the communications plant.

Since joining Bell Telephone Laboratories in 1955, Dr. McDonald has engaged in research work. He was initially concerned with speech and television research and basic studies of vision. For several years he has specialized in computer research including the use of computers to simulate electronic systems, computer graphics and computer design.

Dr. McDonald is presently a consultant for both the Office of Science and Technology in Washington and the Department of Defense on matters of communications and computers.

Dr. McDonald is the author of published articles on speech, encoding and digital instrumentation. He has been granted four patents on speech processing inventions.

He is a member of the Institute of Electrical and Electronic Engineers, the Association of Computing Machinery, the Society for Information Display and Sigma Xi.

Dr. McDonald received the B.E.E. degree from the Catholic University of America in 1950 and the M.S.E.E. and Dr. Eng. degrees from John Hopkins University in 1953 and 1955, respectively.

EUGENE D. REED

Dr. E. D. Reed is currently Executive Director of the Salary and Technical Personnel Administrative Division of Bell Telephone Laboratories.

He received his B.S. degree from the University of London and his M.S. and Ph.D. (EE) degrees from Columbia University. He joined Bell Telephone Laboratories in 1947. Mr. Reed spent most of his career in component development, becoming Executive Director of the Solid State Components Division in 1966. Recently he was appointed Executive Director of the Salary and Technical Personnel Administration Division. He is Chairman of the Bell Labs Committee on Education.

In 1971 Mr. Reed was elected to the National Academy of Engineering.

Fellows Citations:

Solomon J. Buchsbaum, *For contributions to gaseous and solid-state plasma physics and laser applications.*

Bernard C. DeLoach, Jr., *For contributions to solid-state microwave power sources.*

Dawon Kahng, *For his contribution to semiconductor electronics, especially in the development of insulated-gate field-effect transistors and the high-speed Schottky barrier diodes.*

Henry S. McDonald, *For research on the digital processing of speech and television, instrumentation for simulation of digital communication systems, and for work on interactive graphics for computers.*

Eugene D. Reed, *For contributions and leadership in the development of microwave tubes and solid-state components.*

Acoustic Surface Waves

The North Jersey section of IEEE groups on Microwave Theory and Techniques and Antennas and Propagation present a talk on waveguide and waveguide components for acoustic surface waves. The speaker will be Dr. Robert C. M. Li.

Many sophisticated signal processing functions are now possible with the use of unguided Rayleigh-Wave beams in conjunction with interdigital (i.e. interlaced) transducers. In the face of such success, there are nevertheless good reasons for wanting to use waveguides and related components on the substrate surface. Potential applications will be formulated. A survey will be presented of some of the proposed waveguides and components, with comments on their behavior. Some new results on the latter will be presented.

Dr. Li received his B.S. in EE from the University of Washington in 1961 and the Ph.D. in Electrophysics from the Polytechnic Institute of Brooklyn in 1968. He is presently an Assistant Professor in the Department of Electrical Engineering and Electrophysics at PIB.

Time: Thursday, February 17; 8:00 P.M.
Place: Arnold Auditorium, Bell Laboratories, Murray Hill, N. J.
Pre-Meeting Dinner: Wally's Tavern on the Hill, Watchung, N. J.; 6:00 P.M.

Earthquake Resistance Of Structures

In recent weeks much interest has been generated with regard to the San Andreas fault in California. The major cause of death during an earthquake is collapse of structures. It has been pointed out that most public schools have not been built with proper regard to this hazard.

The Multi-Group Chapter of the North Jersey Section will present Dr. Rudolph F. Drenick who will describe a new theoretical approach by which one can assess, or specify, the earthquake resistance of structures. It is an application of one of the concepts of modern system theory and by all present evidence a rather promising application. The talk describes the origin of the idea, the study of its potential usefulness, and the outlook for its actual utilization.

Dr. Drenick is a professor of electrical engineering at the Polytechnic Institute of Brooklyn. His fields of specialization are system theory, probability theory and random processes, information theory and control theory. He has written numerous articles and books in these fields and is presently Associate Editor of the IEEE Transaction of Information Theory.

Time: Tuesday, February 22; 8:00 P.M.
Place: Arnold Auditorium of Bell Telephone Laboratory, Murray Hill, N. J.
Pre-Meeting Dinner: Wally's Tavern on the Hill, Berkeley Heights, N. J.; 6:00 P.M., Dutch treat.

Real-Time System Design

The North Jersey Chapter of IEEE Computer Society features a talk on design techniques for real-time systems. The speaker will be Sheldon B. Weinberg of the IBM Systems Research Institute.

The past few years have witnessed vast changes in computer technology. Nowhere have the results been more spectacular than in the area of real-time systems. Mr. Weinberg will discuss some of the techniques used in designing real-time systems. This discussion will include technical methods, such as queueing analysis, simulation, and prototyping. The presentation shall also include non-technical methods, such as clairvoyance, sincerity, and wishful thinking. Mr. Weinberg will outline some of the advantages and problems associated with each technique. Particular emphasis will be given to those areas reflecting his personal bias, i.e., queueing theory and simulation.

Time: Thursday, February 24; 8:00 P.M.
Place: Room 1H009, Bell Labs at Whippany, N. J.
Pre-Meeting Dinner: DeMario's Restaurant, Rt. 10 at U.S. 287 Junction, Whippany, N. J.; 6:00 P.M.

Air Traffic Control in '70's

The Parts, Hybrids and Packaging Group and the Aerospace and Electronics Systems Group are sponsoring a presentation of Air Traffic Control Systems evolution on February 23 in Nutley, N. J. The three speakers representing key portions of both government and industry are: D. R. Israel, William Carnes and Fred Pogust.

The growing congestion in our airways, the advent of supersonic jets, and the scarcity of land which restricts airport expansion, raise questions regarding the need for compensating improvements in our air traffic control systems.

D. R. Israel is director of the Office of Systems Engineering Management, Federal Aviation Administration, Washington, D. C.

William Carnes is Chairman of the Airlines Electronics Engineering Committee. He is employed at Aeronautical Radio, Incorporated, Annapolis, Maryland.

Fred Pogust is Chief Engineer, Airborne Instruments Laboratories, Melville, Long Island.

Time: Wednesday, February 23; 7:30 P.M.
Place: 3rd Floor Conference Room, ITT Defense Communications Division, 492 River Road, Nutley, N. J.
Pre-Meeting Dinner: Copperhood Restaurant, Lyndhurst, N. J.; 6:00 P.M.

I&M Lecture Series

The Metropolitan chapter of the Instrumentation and Measurement Group has announced a Spring, 1972, lecture series to be held in 2nd Floor Conference Room, 30 Evergreen Place, East Orange, N. J., 8:00 to 10:00 P.M.

April 18: A Survey of Environmental Pollution Instrumentation Problems

April 25: Instrumentation for Water Quality Measurements

May 2: The Measurement of Effects of Pollution on Marine Life

May 9: The Prediction and Measurement of Thermal Pollution

May 16: The Measurement and Monitoring of Air Pollution

May 23: Noise Pollution Instrumentation

Fees: IEEE Members - $20, Non-Members - $30, Student Members - $5. Advance registration is advisable – study group size is limited to 40.

Send check, payable to "Joint Chapter I&M, IEEE," to Mr. Daniel Cotte, RFL Industries, Inc., Powerville Rd., Boonton, N. J. 07005.

For further information: Contact Prof. Harlan J. Perlis, Newark College of Engineering at (201) 645-5492/5472.

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Metropolitan Section

ASME

EDUCATIONAL PROGRAM – SPRING 1972
Special Study Groups

STUDY GROUP NO. 16–ALTERNATE POWER SUPPLIES

MONDAYS, 6:30-8:30 P.M., Starting February 28, 1972
Consolidated Edison Co., Room 1701, 4 Irving Place, N. Y., N. Y.
Group Coordinator: Jalal Gohari, AEP, Tel. (212) 422-4800
Group Sponsor: A. M. Korn, Stone & Webster Engrg. Corp., Tel. (212) 592-9300, ext. 507

STUDY GROUP NO. 17–DESIGN OF UNDERGROUND DISTRIBUTION SYSTEMS

TUESDAYS, 6:30-8:30 P.M., 10 lectures (February 15, 1972)
Consolidated Edison Co., Room 1425, 4 Irving Place, New York, N. Y.
Group Coordinator: Gerard Barton, PSE&G, Tel. (201) 684-7000, ext. 307
Group Sponsor: Roch Cappelli, Consolidated Edison Co., Tel. (212) 460-2848

STUDY GROUP NO. 18–FUNDAMENTALS OF ELECTRICAL DESIGN–PART II

WEDNESDAYS, 6:30-8:30 P.M., Starting February 16, 1972
General Electric Co. Building, Lexington Ave., N. Y., N. Y.
Group Sponsors: J. Domorski, Automatic Switch, Tel. (212) 344-3765
A. Londa, General Electric Co., Tel. (212) 750-3530
Group Coordinator: H. Daugherty, H. O. Penn Machinery, Tel. (212) 895-5400

STUDY GROUP NO. 19–MODERN AUTOMATIC CONTROL AND SUPERVISORY SYSTEMS I

THURSDAYS, 6:30-8:30 P.M., 10 lectures (February 17, 1972)
Consolidated Edison Co., Room 1701, 4 Irving Place, New York, N. Y.
Group Coordinator: William Laib, Consolidated Edison Co., Tel. (212) 460-4295
Jalal Gohari, AEP, Tel. (212) 422-4800, ext. 551
Group Sponsor: Emery Fabri, Consolidated Edison Co., Tel. (212) 460-6954

DETAILED DESCRIPTIONS FOLLOW ON NEXT PAGES

REGISTRATION INFORMATION

GROUPS #	FEES	PAYABLE TO	MAIL TO
1, 3	$30 each for Members, IEEE, ASME, NYSSPE; $40 each for all others	"POWER & IND. GROUP N. Y. SECTION IEEE"	*I. M. Berger,* Vice Chairman Educational Committee, IEEE N.Y.C. Transit Authority, Rm. 1200 370 Jay St., Brooklyn, N. Y. 11201 Phone: (212) 852-5000, Ext. 4495
5	$50 each for Members, IEEE, ASME, NYSSPE; $60 each for all others		
2, 4	$30 each for Members, IEEE, ASME, NYSSPE; $40 each for all others	"ASME METROPOLITAN SECTION"	*Richard Maslow,* Educational Comm. ASME, Metropolitan Section N.Y.C. Health & Hospital Corp. Bureau of Engineering & Maintenance 66 Leonard St., N. Y., N. Y. 10013 Phone: (212) 566-6940
16, 17, 18, 19	$25 each for Members, IEEE, ASME, NYSSPE; $35 each for all others	"POWER & IND. GROUP N. Y. SECTION IEEE"	*J. Tambasco,* Vice Chairman Educational Committee, IEEE 217 78th Street Brooklyn, N. Y. 11209 Phone: (212) 264-4227

Fill out one registration form for each group and mail with payment

NEW YORK SECTION IEEE
POWER & INDUSTRIAL DIV.

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EDUCATIONAL PROGRA

STUDY GROUP NO. 16
ALTERNATE POWER SUPPLIES

MONDAYS, 6:30-8:30 P.M., Starting February 28, 1972

Consolidated Edison Co., Room 1701, 4 Irving Place, N. Y., N. Y.

Group Coordinator: *Jalal Gohari, AEP*
Tel. (212) 422-4800

Group Sponsor: *A. M. Korn, Stone & Webster Engrg. Corp.*
Tel. (212) 592-9300, Ext. 507

1. **February 28 - Batteries I.** Introduction to Batteries - Types, Selecting & Sizing. Maintenance, Inspecting, Testing & Record Keeping. Location, Gassing & Ventilation. Racks & Earthquake Requirements.
   Speaker from Gould, Inc., Battery Systems

2. **March 6 - Batteries II.** Battery Application. Auxiliary Power & Control - Emergency Light & Power. Battery Chargers-SCR, Automatic. Sizing & Selecting. Trickle, Manual Chargers. Initial Charge.
   Speaker to be announced

3. **March 13 - Diesel & Gas Generators.** Emergency & Standby. Code Requirements. Elevator Service. Location-Selecting & Sizing. Fuel. Fuel Tank & Radiator Location. Noise Abatement. Starting Mode, Exercising. Maintenance, Inspection & Record Keeping.
   Speaker to be announced

4. **March 20 - Gas Turbine Generators I.** Operating Principles. Physical Characteristics. Environmental Considerations. Controls-Starting Systems. Fuel, Cooling & Lubrication. Versatility.
   Speaker to be announced

5. **March 27 - Gas Turbine Generators II.** Application & Operation. Preliminary Operating Experience.
   Speaker from Consolidated Edison Co.

6. **April 3 - Uninterruptible Power Supplies.** Description-Operation-Application.
   Speaker from Westinghouse Electric Co.

7. **April 10 - Transfer Controls for Alternate Power Supplies.**
   Mr. Rene Castenschiold, P.E., Chief Customer Engineer
   Automatic Switch Co.

8. **April 17 - Pumped Storage.** Northfield Mountain Pumped Storage Plant.
   Mr. F. L. Brennan and Mr. G. A. St. Onge
   Stone & Webster Engineering Corp.

9. **April 24 - Planning the System.** Code Requirements. Economic Evaluation. Space Consideration.
   Speaker to be announced

10. **May 1 - Alternate Power Supplies & the Future.** Power to Explore Outer Space. Fuel Cells - Electric Cars.
    Speaker from Exide Power Systems

STUDY GROUP NO. 17
DESIGN OF UNDERGROUND DISTRIBUTION SYSTEMS

TUESDAYS, 6:30-8:30 P.M., 10 lectures (February 15, 1972)

Consolidated Edison Co., Room 1425, 4 Irving Place, New York, N. Y.

Group Coordinator: *Gerard Barton, PSE&G*
Tel. (201) 684-7000, Ext. 307

Group Sponsor: *Roch Cappelli, Consolidated Edison Co.*
Tel. (212) 460-2848

1. **February 15 - Introduction** - Emphasis on underground distribution. General discussion of various types of designs.
   Roch R. Cappelli, Con Edison Co.

2. **February 22 - Network System Design I.**
   Dino Granata, Public Service of New Jersey

3. **February 29 - Network System Design II.**
   Dino Granata, Public Service of New Jersey

4. **March 7 - Network System Design III.**
   Dino Granata, Public Service of New Jersey

5. **March 14 - Design of Ducts and Manhole Systems.**
   John Zeller, Con Edison Co.

6. **March 21 - Primary Transfer System in Downtown Areas.**
   Robert C. DeMarco, Philadelphia Electric Co.

7. **March 28 - Corrosion** - General discussion of corrosion principles.
   Stephen Palica, Con Edison Co.

8. **April 4 - URD System Design I.**
   Harry Thomas, Long Island Lighting Co.

9. **April 11 - URD System Design II.**
   Harry Thomas, Long Island Lighting Co.

10. **April 18 - Research and Development in New Design and Equipment.** *Speaker to be announced.*

. GROUPS ARE OPEN TO THE PUBLIC

M — Special Study Groups SPRING 1972

STUDY GROUP NO. 18
FUNDAMENTALS OF ELECTRICAL DESIGN — PART II
Practical Design Principles for Industrial and Commercial Building Low-Voltage Distribution Systems

WEDNESDAYS, 6:30-8:30 P.M., Starting February 16, 1972

General Electric Co. Building, Lexington Ave., N. Y., N. Y.

Group Sponsors: *J. Domorski, Automatic Switch*
Tel. (212) 344-3765
A. Londa, General Electric Co.
Tel. (212) 750-3530

Group Coordinator: *H. Daugherty, H. O. Penn Machinery*
Tel. (212) 895-5400

The second of a series of ten-session study courses for electrical, consulting and project engineers, contractors, architects and others who are concerned with power distribution systems.
The course will stress practical design and application information for distribution systems, stressing actual experience over abstract theory.
Part II sessions will be presented by Mr. Arthur Freund, Chief Electrical Engineer, Brodsky Hopf & Adler.

1. **February 16 - Medium Voltage (5-15KV) Switchgear** - Construction - Ratings - Application - Relaying-Fusible switches - circuit breakers - motor starters.

2. **February 23 - Transformers** - Dry type - Askarel filled - Oil filled - Ratings - Application-Connections.

3. **March 1 - Service Entrance Equipment** - Large services - small services - code requirements - metering - circuit breakers - service protectors - bolted pressure switches.

4. **March 15 - Low Voltage Switchgear** - Construction - Air Circuit Breakers - Ratings - Application - Selectivity-Magnetic trip units - Static trip units.

5. **March 22 - Low Voltage Switchboards** - Nema Standards - design and construction - bus ratings - bus bracing - circuit breakers - fused switches - hybrid types - application.

6. **April 5 - Panelboards - Circuit Breakers - Switches & Fuses** - Construction - application - standards - special features - circuit breaker ratings - UL fuse classifications.

7. **April 12 - Motor Control and Motor Control Centers** - Starters - Reduced voltage starting - ratings - overcurrent protection - short circuit protection - motor control center construction - application.

8. **April 19 - Ground Fault Protection** - Needs - 1971 Code requirements - practical system design - application - damage limits - coordination - life protection - hospital systems.

9. **April 26 - Grounding - Power Factor Correction - Wire and Cable** - Grounding code requirements - good grounding - power factor - cost savings - calculations - wire and cable types - application.

10. **May 3 - Bus Duct - Summary-Questions** - Bus duct design - types - horizontal systems - vertical risers - code requirements - voltage drop - take-off devices and methods - summary and questions.

STUDY GROUP NO. 19
MODERN AUTOMATIC CONTROL AND SUPERVISORY SYSTEMS I

THURSDAYS, 6:30-8:30 P.M., 10 lectures (February 17, 1972)

Consolidated Edison Co., Room 1701, 4 Irving Place, New York, N. Y.

Group Coordinators: *William Laib, Consolidated Edison Co.*
Tel. (212) 460-4295
Jalal Gohari, AEP
Tel. (212) 422-4800, Ext. 551

Group Sponsor: *Emery Fabri, Consolidated Edison Co.*
Tel. (212) 460-6954

This course will review fundamentals of basic control components and will cover the design and application of modern control and supervisory systems.

1. **February 17 - Fundamentals of Basic Control Components - I.** Solid state devices - (transistors, diodes, SCR's).
Speaker to be announced

2. **February 24 - Fundamentals of Basic Control Components - II.** Detectors, transducers, controllers, amplifiers, integrators.
Speaker to be announced

3. **March 2 - Modern Control Circuitry - I.** Requirements - Design and application problems.
Charles F. Walker, Allen Bradley Co.

4. **March 9 - Modern Control Circuitry - II.** Application - Switchgear and motor control circuitry.
Charles F. Walker, Allen Bradley Co.

5. **March 16 - Process Control - I.** Industrial process control - Design and application problems.
Speaker from Bailey Co.

6. **March 23 - Process Control - II.** Industrial process control - Design and application problems.
Speaker from Bailey Co.

7. **April 6 - Monitoring and Alarm Circuits.** Annunciators and trouble recorders: Design and application problems.
Dan Hollands, Chief Systems Engineer
Rochester Instrument Systems

8. **April 13 - Remote Control and Supervisory Systems - I.** Substation controls and utility practices.
Roger Sullivan, Consolidated Edison Co.

9. **April 20 - Remote Control and Supervisory Systems - II.** Supervisory systems: Design and application problems.
Gerold Bellina, Ass't. to Vice President
Quindar Electronics, Inc.

10. **April 27 - Use of Mini Computers.** Application and future trends.
Speaker to be announced

PLEASE POST ON BULLETIN BOARD — ALL GROUPS ARE OPEN TO THE PUBLIC

N. Y. Section, IEEE

Power and Industrial Div.

ADVANCE ANNOUNCEMENT
EDUCATIONAL PROGRAM – FALL 1972

Metropolitan Section

ASME

REVIEW STUDY GROUPS – FOR PROFESSIONAL ENGINEER EXAMINATIONS

This program is designed to prepare candidates for Professional Engineering License examinations in New York and New Jersey. The material is consistent with the national type of exam used for the New York license examinations. Candidates for Part I and Part II should enroll in Study Group No. 1, No. 2 and No. 3. The New York State Board permits graduates of approved schools to take Parts I and II and qualify for "Engineering-in-Training." New York exams will be held in December 1972 and April 1973. Please note that the fall course will be completed prior to the December exam.

ENDORSED BY NYSSPE

BASIC ENGINEERING SCIENCES I (IEEE-ASME) — **STUDY GROUP NO. 1**

Review for Part I and Part II, N. Y. Exam. Review will cover practical applications of Statics, Mechanics, and Mathematics.

MONDAYS, Starting August 28, 1972, 6:15-8:45 P.M., 12 Sessions
Auditorium, 19th Fl., Consolidated Edison Co., 4 Irving Place, N.Y.C.

Instructor: O. Ondra, P.E., Professor of Civil Engineering
Manhattan College

BASIC ENGINEERING SCIENCES II (ASME-IEEE) — **STUDY GROUP NO. 2**

Review for Part I and Part II, N. Y. Exam. Review will cover practical applications of Dynamics, Fluid Mechanics, Thermodynamics, and Electrical Principles.

TUESDAYS, Starting August 29, 1972, 6:30-9:00 P.M., 12 Sessions
Room 1701, Consolidated Edison Co., 4 Irving Place, N.Y.C.

Instructor: P. Szabados, P.E.
Consolidated Edison Co.

ENGINEERING ECONOMICS AND PRACTICE (IEEE-ASME) — **STUDY GROUP NO. 3**

Review for Engineering Economics for all three sections of the exam. Review will cover economic comparisons, annual cost, present worth, and rate of return. Fixed and operating costs, accounting and cost analysis, depreciation, taxes and valuations will also be reviewed.

THURSDAYS, Starting August 31, 1972, 6:15-8:45 P.M., 12 Sessions
Room 1425, Consolidated Edison Co., 4 Irving Place, N.Y.C.

Instructor: R. E. Mendoza, P.E.
Public Service E. & G. of N. J.

MECHANICAL ENGINEERING (ASME) — **STUDY GROUP NO. 4**

Review for Mechanical Engineering Section of Part III, N. Y. Exam. Application of mechanical engineering principles to combustion, gas dynamics, compression shock, nozzle design, steam power plant cycles, psychrometrics, air conditioning heat transfer, nuclear reactors, Mach cone, Kinetics, gyroscope motion, vibratory motion, balancing of machines, compound shafts, design of gears, hydraulics, pumps and fans, stress and deformation of machine elements, etc.

WEDNESDAYS, Starting August 30, 1972, 6:30-8:30 P.M., 12 Sessions
Room 1701, Consolidated Edison Co., 4 Irving Place, N.Y.C.

Instructor: M. Kurtz, P.E.

ELECTRICAL ENGINEERING AND APPLICATIONS (IEEE) — **STUDY GROUP NO. 5**

Review for Electrical Engineering Section of Part III, N. Y. Exam. Electrical Engineering Principles and Applications of: transformers, a-c and d-c machines, transmission lines, filters, networks, impedance matching, bridges, coupled circuits, resonance, harmonics, transients, three-phase power, amplifiers, electronic circuits. Root locus and Routh Criteria.

WEDNESDAYS, Starting August 30, 1972, 6:30-9:00 P.M., 12 Sessions
Room 1405, Consolidated Edison Co., 4 Irving Place, N.Y.C.

Instructors: L. E. Burnett, P.E., Consolidated Edison Co.
S. Sonsky, P.E., Queensborough Community College

REGISTRATION FORM

Name (printed) .....

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

Business Address .....

..... Phone No. .....

Home Address .....

.....

Study Group .....

Member of:
- ☐ IEEE
- ☐ ASME
- ☐ OTHER .....
- ☐ NON-MEMBER

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(Do Not Write In This Space)
Admission Card No. .....
Refund Certificate No. .....
Fee Paid $..... (Cash, Check, M.O.)
Date ..... By .....

Note: See Registration Information for Checks

REGISTRATION FORM

Name (printed) .....

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

Business Address .....

..... Phone No. .....

Home Address .....

.....

Study Group .....

Member of:
- ☐ IEEE
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(Do Not Write In This Space)
Admission Card No. .....
Refund Certificate No. .....
Fee Paid $..... (Cash, Check, M.O.)
Date ..... By .....

Note: See Registration Information for Checks

Spring Courses Will Be Held at Automatic Switch Co., Florham Park, N. J.

IEEE NORTH JERSEY SECTION
LECTURE SERIES – SPRING, 1972
Effective Business & Technical Communications—Starts March 9, 1972
Fundamentals of Electrical Contacts—Starts March 12, 1972

IEEE NORTH JERSEY SECTION LECTURE SERIES—SPRING, 1972

Effective Business and Technical Communications

This six-session program aims at providing the student with the skills that will enable him to solve his daily problems of effective communications.

The instruction will be headed by *Mr. Robert E. Zange, Promotion Manager-Control, Automatic Switch Company.*

1. **WHAT CAUSES COMMUNICATION GAPS?**
   Knowing what causes communication gaps helps you overcome them and achieve clear understanding.

2. **TECHNIQUES OF CLEAR WRITING**
   Clearing away the fog of unclear writing makes your message clear and concise.

3. **LETTERS AND MEMOS THAT GET RESULTS**
   Creating good tone, discarding gaslight phrases, using good beginnings and endings save you time and make your letters and memos more effective.

4. **HOW TO WRITE EFFECTIVE REPORTS**
   Proper planning, using a format to fit the need, and applying graphics make your reports more readable and effective.

5. **BUSINESS/TECHNICAL PRESENTATIONS**
   When talking to groups of any number of people, knowing the techniques of making a good presentation will help you put your points across and achieve the results you want.

6. **MAKING AND USING VISUAL AIDS FOR PRESENTATIONS**
   Because people remember 20 per cent more of what they hear and see, it pays to use visual aids in your presentations.

TIME: 7:00 - 9:00 P.M., Thursday evenings starting March 9, 1972, and ending April 12, 1972.

PLACE: Automatic Switch Co., 50-56 Hanover Road, Florham Park, N. J. 07932

INFORMATION: For additional information contact: Frank Gialanella, Automatic Switch Co., 6 Watsessing Avenue, Bloomfield, N. J. 07003. Phone: 966-2459.

REGISTRATION FORM — EFFECTIVE BUSINESS AND TECHNICAL COMMUNICATIONS

Send to: Mr. F. B. Gialanella, Automatic Switch Co.
6 Watsessing Ave., Bloomfield, N. J. 07003

Name _____ Tech. Society _____

Firm _____ Position _____

Business Address _____ Phone _____

Home Address _____ Phone _____

Check or Money Order Enclosed:

- ☐ Member — $35.00; Registration Prior to March 3 — $30.00
- ☐ Non-Member — $45.00; Registration Prior to March 3 — $40.00

Please make check or money order payable to: North Jersey Section IEEE.

IEEE NORTH JERSEY SECTION LECTURE SERIES–SPRING, 1972

Fundamentals of Electrical Contacts

This is an intensive and comprehensive course on the "Fundamentals of Electrical Contacts," including basic theory and practical applications. Electrical contacts play a vital role in the successful performance, reliability, and life of many electrical devices. This course is designed for the engineer and/or technical man who wants to learn more about the proper selection and application of contact materials in such devices as switches, relays, circuit breakers, industrial controls, motor starters and controllers, thermostats, etc. Recent advances in materials technology have resulted in hundreds of different compositions for electrical contacts. This course outlines the various factors which must be considered in selecting and specifying the most suitable contact material for specific applications, including the design of the contact, the backing member, method of attachment, and other factors which must be considered to insure required life and reliability. Typical cases which have resulted in failure are included.

The instruction will be headed by: *Dr. V. G. Mooradian, Manager of Engineering, H. A. Wilson Division, Englehard Industries.*

I. Evaluation of Operating Conditions
- A. Electrical: (current, voltage, in-rush, over-load, auxiliary protection)
- B. Mechanical: (frequency, speed, gap, force, bounce, wiping action)
- C. Ambient: (gases, fumes, foreign materials, special atmospheres, temperature and humidity, control contamination)

II. Evaluation of the Life and Reliability Required
- A. Surface Contact Resistance
- B. Arc Erosion
- C. Material Transfer
- D. Sticking or Welding
- E. Energy Dissipation

III. Selection of the Basic Contact Material
- A. Silver and Silver Alloys
- B. Precious Metals and Alloys (Pt, Pd, Au)
- C. Tungsten and Molybdenum
- D. Sintered Materials
  1. Refractor Metals (Ag/W, Ag/Mo, Ag/WC, Ag/TiC)
  2. Semi-Refractor Materials (Ag/CdO, Ag-Graphite, Ag-Iron, Ag-Nickel)

IV. Design of the Contact
- A. Size
- B. Shape and Style
- C. Gap and Opening Speed
- O. Contact Force
- E. Method of Operation
- F. Method of Assembly (Sticking, Welding, Brazing, etc.)
- G. Backing Materials for Terminals

V. Testing and Specifications of Contact Materials

VI. Failure of Electrical Contacts

TIME: 7:00 - 9:00 P.M., Monday evenings starting March 12, 1972, and ending April 16, 1972.

PLACE: Automatic Switch Co., 50-56 Hanover Road, Florham Park, N. J. 07932.

INFORMATION For additional information contact: Frank Gialanella, Automatic Switch Co., 6 Watsessing Avenue, Bloomfield, N. J. 07003. Phone: 966-2459.

REGISTRATION FORM – FUNDAMENTALS OF ELECTRICAL CONTACTS

Send to: Mr. F. B. Gialanella, Automatic Switch Co.
6 Watsessing Ave., Bloomfield, N. J. 07003

Name _____ Tech. Society _____

Firm _____ Position _____

Business Address _____ Phone _____

Home Address _____ Phone _____

Check or Money Order Enclosed:

☐ Member – $45.00; Registration Prior to March 5 – $40.00

☐ Non-Member – $55.00; Registration Prior to March 5 – $50.00

Please make check or money order payable to: North Jersey Section IEEE.

GM Assembly Plant Tour

A tour of the General Motors assembly facilities in Linden, New Jersey, will be held on Thursday, February 24, at 7:15 P.M.

Don't miss your chance to get a close-up look at the materials, the quality of the workmanship and the care that produces your safe cars.

Reservation required. Those who are interested, please fill in the registration slip below and mail it in before February 15, enclosing a self-addressed envelope. The tour is limited to 30 persons. If you would like to come, act now!

General Motors Assembly Plant Tour
February 24, 1972

Mr. John J. Imm
c/o General Electric Co.
25 East Willow St.
Millburn, N. J. 07041

I intend to participate in the General Motors plant tour on February 24, 1972.

Name _____

Company _____

Address _____

_____ Phone _____

Bio-Dental Engineering

The Metropolitan New York Chapter of the Group in Engineering and Medicine has announced a meeting on February 9. The speaker will be Joshua Friedman, D.D.S.

Dr. Friedman, who is an electrical engineer turned dentist, will describe the field of Bio-Dental Engineering, its potentialities and areas where growth can be expected including dentistry areas that show interest for engineers. As examples Dr. Friedman will discuss three areas of current investigation that involve engineering activity: (a) Application of fiber optics in dentistry as a diagnostic tool; (b) Electrosurgery; (c) Dental pulp testing, e.g. electronic stimulation of nerves in the tooth as a diagnostic tool.

Dr. Friedman is an electrical engineering graduate of CCNY, 1960. He has had professional engineering experience in the communications field for five years before returning to dentistry school. At present, Dr. Friedman spends half-time in clinical research at the NYU Institute for Dental Research.

Time: Wednesday, February 9; 8:00 P.M.
Place: Rockefeller University, South Lab, Room 204, York Ave. and 68th St., New York City.
Pre-Meeting Dinner: Tower Building Cafeteria, Rockefeller University; 6:00 P.M.

Semiconductor Memories Subject of Meeting

The New York Metropolitan Area Chapter of Electron Devices Group announces a meeting covering the evolution and development of complex computer memories using both IGFET and bipolar devices. Key factors to be discussed are cost per bit and cycle times.

About the Speaker

The speaker, Dr. B. T. Murphy, received the Ph.D. in Medical Physics at Leeds University in England. Since 1959 he has worked primarily in the integrated circuit field. While with Westinghouse Semiconductor Division he invented the buried collector structure now widely used for bipolar integrated circuits, and was co-inventor of the oxide isolation technique, with M. G. Stickler. In 1962 he helped found Siliconix Incorporated.

Since 1963 he has been with Bell Telephone Laboratories. His work there has been concerned with cost models of integrated circuits, high speed integrated circuits, delta modulation codecs, IMPATT diodes, and most recently, the new bipolar integrated circuit structures which are the subject of this paper. He has 18 patents issued or pending in the semiconductor field, and a number of publications.

Time: Thursday, February 24; 8:00 P.M.
Place: ITT Laboratories, Nutley, N. J.
Pre-Meeting Dinner: Copperhood Restaurant, south of Rt. 3 at Park Ave. exit; 6:00 P.M.

1971 National Code

The Industrial and Commercial Power Systems Group is presenting a study and analysis of the changes in the 1971 Electrical Code. The speaker is Mr. Joseph McPartland, who is Chief Editor of *Electrical Construction and Maintenance.*

Time: Thursday, February 24; 6:30 to 8:30 P.M.
Place: Room 1425, Consolidated Edison Co. Building, 4 Irving Place, NYC.

Permanent Magnet Alloys

The Magnetics Chapter-Princeton Section has announced a meeting for March 1. The topic will be "Rare Earth Permanent Magnet Alloys" presented by Ethan A. Nesbit.

Approximately ten years ago basic properties of hexagonal intermetallic compounds involving the rare earths and 3D transition elements were reported in the literature. In the last four years significant progress has been made in the use of some of the compounds, namely cobalt 5 RE "RARE EARTH" in producing permanent magnetics. These materials have a high combination of magnetic isotrophy and saturation which result in special permanent magnetic properties.

Mr. Nesbit received the B.S. degree from Brooklyn Polytech Institute in 1948. He is the recipient of over 25 patents and has written many books on magnetics.

Time: Wednesday, March 1; 8:00 P.M.
Place: Murray Hall, Room 217, Rutgers University, New Brunswick, N. J.
Pre-Meeting Dinner: Alumni-Faculty Club, 199 College Ave., New Brunswick, N. J.; 6:00 P.M. Reservations should be made with Mrs. Helen Yefko, Dept. of Elect. Eng'g., Rutgers University (201) 247-1766, Ext. 6325.
Refreshments will be served after meeting.

STUDENT NEWS

Annual Students Night

The North Jersey Section held its Seventh Annual Students' Night at Stevens Institute of Technology on December 15, 1971. The theme was Engineering and Society. For the very moderate sum of one dollar, every student attending received a delicious roast beef dinner, five to twenty-five dollars worth of technical books as a door prize, and what is most important, some very interesting information on where the action is in electrical engineering and technology today.

Rueben W. Wasser from the Public Service Electric and Gas Testing Laboratory spoke about his work and the opportunities for young engineers in the field of pollution-detection and control. Calvin O. Smith from the Port of New York Authority explained the extremely important role that urban transportation will play in future planning and rehabilitation of our cities. Roger S. Powell of the National Heart and Lung Institute spoke about the electrical instrumentation and techniques that will be required as more emphasis is placed on automating future health facilities. Finally, Robert S. Steinhard from IBM Corporation ended the presentation with a discussion on how computers will be used as an every day tool in all fields of endeavor. Dr. Smith from Stevens was the moderator.

The present day graduate from an electrical engineering or technology program is not being deluged with job offers as he once was. It, therefore, becomes important for students to very wisely choose areas of specialization so that they coincide with future needs in our society. Instead of passively waiting for campus interviews, a graduating student should be actively making applications to companies that show future promise. One of the ways to find out about these opportunities is to attend IEEE meetings of this type. From now on let's see more students participating in activities that directly benefit students. Why not bring your date to the next IEEE dinner meeting.

Report from: GROUP COORDINATOR

The North Jersey Section of the IEEE is proud to be one of the largest and most active Sections in the Institute. Our total membership as of September 30, 1971, stands at 5437, including a relatively large number of Fellow and Senior Members.

The totals by grade are as follows: Fellow, 156; Senior Member, 831; Member, 3565; Associate Member, 516; Student Member, 369.

Our total group membership of 4122, includes representation on all thirty-one active Groups and Societies.

Groups having autonomous Chapters in North Jersey include:

		Members
G-3	Antennas and Propagation (Joint with G-17)	81
G-5	Nuclear Science (Part of Multi-Group)	47
G-7	Reliability	91
S-16	Computer Society	482
G-17	Microwave Theory and Techniques (Joint with G-3)	175
G-18	Engineering in Medicine and Biology (Part of Multi-Group)	133
G-19	Communication Technology	320
S-23	Control Systems Society	163
G-28	Systems, Man, and Cybernetics (Part of Multi-Group)	115
G-29	Geoscience Electrics (Part of Multi-Group)	29
S-31	Power Engineering Society	409

Groups having Tri-Section Chapters with the New York and Long Island Sections include:

		Members
G-6	Vehicular Technology	68
G-9	Instrumentation and Measurement	143
G-12	Information Theory	128
G-14	Engineering Management	199
G-15	Electron Devices	235
G-21	Parts, Hybrids, and Packaging	70
G-27	Electromagnetic Compatibility	42

Groups having Joint Chapters with the New York Section include:

		Members
G-10	Aerospace and Electronic Systems	197

Groups having no North Jersey Chapter affiliations at present include:

		Members
G-1	Audio and Electroacoustics	108
G-2	Broadcasting	54
G-4	Circuit Theory	241
G-8	Broadcast and Television Receivers	82
G-13	Industrial Electronics and Control Instrumentation	80
G-20	Sonics and Ultrasonics	29
G-25	Education	40
G-26	Engineering Writing and Speech	61
G-32	Electrical Insulation	53
G-33	Magnetics	70
G-34	Industry and General Applications	171
G-36	Manufacturing Technology	6

During the past summer a North Jersey, New York, Long Island tri-section survey was made of the G-1, G-4, and G-13 membership. The members of all three groups have shown interest in starting tri-section chapters. In addition, the membership of group G-28 (presently part of North Jersey Multi-Group) has shown interest in starting a joint New York-North Jersey Chapter.

Committees have already been set up to further investigate and implement the results of these polls.

Any members wishing to join one or more groups can do so by contacting the respective Group Chairmen or the Group Coordinator via the Newsletter, c/o Girard Associates, P. O. Box 111, Mt. Arlington, N. J. 07856.

Allen H. Stolpen
Group Coordinator
North Jersey Section

8 10

Summary of IEEE Awards and Prizes

Name of Award	Distinctive Features	Presentation
Medal of Honor*		
IEEE Medal of Honor	The Medal of Honor shall be awarded for a particular contribution which forms a clearly exceptional addition to the science and technology of concern to the Institute. The award shall normally be given within a few years after the recognition of the exceptional nature of such contribution	When warranted, not necessarily to a member of IEEE. Gold Medal, Certificate and $5000. Date established: 1917
IEEE Major Annual Medals		
Edison Medal	A career of meritorious achievement in electrical science or electrical engineering or the electrical arts	One annually, to a member of IEEE. Gold Medal and Certificate. Date established: 1904
Founders Medal	For major contributions in the leadership, planning, and administration of affairs of great value to the electrical and electronics engineering profession	One annually, to a member of IEEE. Gold Medal and Certificate. Date established: 1952
Lamme Medal	Meritorious achievement in the development of electrical or electronic apparatus or systems	One annually, to a member of IEEE. Gold Medal and Certificate. Date established: 1928
IEEE Education Medal	Excellence in teaching and ability to inspire students; leadership in electrical engineering education through publication of textbooks and writings on engineering education; innovations in curricula and teaching methodology; contributions to the teaching and engineering profession through research, engineering achievements, technical papers, and participation in the education activities of professional societies	One annually, to a member of IEEE. Gold Medal and Certificate. Date established: 1956
IEEE Field Awards†		
Harry Diamond Memorial Award	Outstanding technical contribution by a person in the field of Government service	One annually. Certificate and $1000. Date established: 1949
William M. Habirshaw Award	Outstanding contribution in the field of transmission and distribution of electric power, to an individual or group	One annually. Bronze Medal, $1000, and Certificate. Sponsored by Phelps Dodge Foundation. Date established: 1958
IEEE Award in International Communication in honor of Hernand and Sosthenes Behn	Outstanding contribution in the field of international communication, to an individual or group	One annually. Plaque, Certificate, and $1000. Sponsored by International Telephone and Telegraph Corporation. Date established: 1966
Mervin J. Kelly Award	Outstanding contribution in the field of telecommunication, to an individual or group	One annually. Bronze Medal, $1000, and Certificate. Sponsored by Bell Telephone Laboratories, Inc. Date established: 1959
Morris E. Leeds Award	Outstanding contribution in the field of electrical measurement, to an individual or group. Special consideration given to value of contribution made before candidate reached 36th birthday	One annually. Illuminated Certificate and $1000. Sponsored by Leeds & Northrup Foundation. Date established: 1958
Morris N. Liebmann Memorial Award	Important contribution to emerging technologies recognized during preceding three calendar years	One annually. Certificate and $1000. Date established: 1919
Frederik Philips Award	Outstanding accomplishments in the management of research and development resulting in effective innovation in the electrical and electronics industry	One annually. Gold Medal, Certificate, and $1000. Sponsored by N. V. Philips' Gloeilampenfabrieken. Date established: 1971
David Sarnoff Award	Outstanding contribution in the field of electronics, to an individual or group	One annually. Gold Medal, $1000 and Certificate. Sponsored by RCA Corporation. Date established: 1959
Vladimir K. Zworykin Prize Award	Outstanding technical contribution in the field of electronic television	One annually until 20 awards have been made. Certificate and $1000. Date established: 1952
IEEE Prize Paper Awards‡		
W. R. G. Baker Prize Award	Outstanding paper published in any of the *IEEE Transactions* during the period July 1 through June 30	One annually. $1000 and Certificate. Date established: 1956
Browder J. Thompson Memorial Prize Award	Best paper in any IEEE publication by author(s) under 30 years years of age	One annually. $1000 and Certificate. Date established: 1945

* To be awarded at the IEEE International Convention. Nominations are due at IEEE in New York not later than June 1.
† To be awarded at an IEEE meeting of wide scope and interest upon the recommendation of the Awards Board. Nominations are due at IEEE in New York not later than April 1.
‡ To be awarded at an IEEE meeting of wide scope and interest upon the recommendation of the Awards Board. The Awards Board recommends that nominations be submitted by the specific Groups/Societies or Divisions. Nominations are due at IEEE in New York not later than September 15