



The IEEE

Newsletter

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

Volume 23 January 1977 No. 6

Published monthly except June and July by the North Jersey Section of the Institute of Electrical & Electronics Engineers, Inc. Office of Publications: 399 Howard Boulevard, Mount Arlington, N. J. 07856.

NEWSLETTER STAFF

Editor Ray Vaccari
Managing Editor. B. Blair
Business Manager M. M. Perugini
Staff: Joe Winston
John Zeiss
George Fen
Publications Chairman Joe Winston

Deadline for receipt of material is the 1st of the month preceding the month of publication. All communications concerning editorial matter should be addressed to: Ray Vaccari, Editor, 236 Summit Road, Mountain-side, N. J. 07092. All communications concerning business matters, including advertising, should be addressed to: The Newsletter, c/o Girard Associates, Inc., 399 Howard Boulevard, Mt. Arlington, N. J. 07856.

Subscription: \$0.75 per year through dues for members: \$1.50 per year for non-members.

REPORT ALL ADDRESS CHANGES TO:
IEEE Service Center
445 Hoes Lane
Piscataway, N. J. 08854
(201) 981-0060

It is not necessary to inform the North Jersey Section when you change your mailing address. The NEWSLETTER and other section mailings use a list provided by IEEE's national 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.

SECTION OFFICERS

Chairman. Frank Gialanella
Vice Chairman. Donald G. Bathke
Treasurer. Ken Oexle
Secretary. Alan H. Stolpen
Member-At-Large Alex Brown
Member-At-Large Alex McPhee
Member-At-Large Jerry Uhrig
Jr. Past Chairman Robert E. McMillan

Second Class Postage Paid
at Mount Arlington, N. J.

Activities Reminder: Clip To Calendar

January 5 — Exec. Committee, 7:30 PM, ITT, 500 Washington Ave., Nutley
January 5 — Effects of FDA Medical Device Regulations
January 12 — EMI/EMC Seminar
January 19 — Operation Of A Synthetic Natural Gas Plant
January 19 — Microprocessor Arrays
January 19 — Load Management Using Demand Controllers
January 19 — "Plastic Money"
January 25 — Patents & The Engineer
January 27 — Socio-Economics Committee Meeting
February 23 — World Trade Center Tour
March 2 — Annual Fellows Awards Banquet
April 19-21 — ELECTRO/77

10 Good Reasons To Attend ELECTRO '77

1. Electro puts 1977 electronics all together for you, at one time, in one place. (You can see all the new logic analyzers in action in the same afternoon, for example.)

2. Electro presents a tough, realistic professional program "live"—and backs it up with full manuscript preprints and audio tapes, both available on-the-spot at the convention.

3. Electro departmentalizes exhibits by product category. You don't have to hunt-and-peck for the companies you want to see—nine times out of 10, you'll find them side-by-side in the same "department."

4. Electro programs are designed to help engineers in their professional assignments now! If it won't be relevant in the next 18 months, Electro won't present it.

5. Electro takes you out of line and into the exhibits quickly, with a computerized registration system that gives you an embossed plastic "credit card" for requesting technical information on the show floor.

6. Electro presents the 20 best new technical films available anywhere, shown every day in our Film Theater at no charge.

7. With 27 hours of live product demonstration, 100 hours of good technical programming, and 18 hours of new technical motion pictures, Electro is your best information-transfer vehicle of the year in the eastern United States.

8. When you ask questions about a new system at Electro, your answer comes from the engineers who designed the system, and who are there to discuss the performance capabilities with you.

9. Electro is a show and convention system that aims to serve the working engineer-visitor—from the pre-published manuscripts to the cross-referenced directory to the carpeted aisles. Electro is a non-profit presentation of regional elements of IEEE and ERA, and its only business is to promulgate the exchange of software and hardware information.

10. Your Electro/77 registration card gives you a credential for the entire show and convention—all the exhibits, all the sessions, all the films, for all three days of Electro. No extra charges or add-ons.

An Event For You And Your Spouse

The ANNUAL BANQUET honoring newly elected Fellows from the North Jersey Section will be held on Wednesday evening, March 2, 1977, at the CHANTICLER in Millburn, New Jersey. The affair begins at 7:00 PM Sharp.

In addition to honoring our new Fellows at the Banquet, we will also be recognizing those members who advanced to the Senior Member Grade in 1976. Section awards will also be presented.

This year we have changed the format of this annual event from a Dinner Dance to a Banquet. And what a Banquet it will be!!! You won't want to miss this affair.

The subscription price of \$15 per person includes a complete Cocktail Hour before dinner. During the Cocktail Hour enjoy — at no charge — unlimited drinks (Whiskey Sour, Martini, Manhattan, Daiquiri, Rye, Scotch, Bourbon, Gin and Vodka) and a taste-tempting assortment of Hot & Cold Hors d'oeuvres featuring Stuffed Mushroom Grahams, Veal Souffles, Quiche Lorraine, Baked Clams Crosettie, Veal Cardinale, Chicken Hawaii and other assorted appetizers.

After the Cocktail/Reception Hour, feast on a complete Prime Rib Dinner.

Following dinner we will hear from our Guest Speaker, Dr. Shepard Bartnoff, President, Jersey Central Power & Light Company.

Do plan to attend and don't forget to invite your spouse! It will be an enjoyable evening out. Reservations are required and must be completed by February 21, 1977. Don't be disappointed. Fill out the reservation form now. Call your colleagues to form a group and reserve a table.

ANNUAL SECTION BANQUET

MARCH 2, 1977

at the

CHANTICLER

Millburn, N. J.

RECEPTION/COCKTAIL HOUR AND DINNER

Guest Speaker:

Dr. Shepard Bartnoff, President
Jersey Central Power & Light Co.

Subscription Price: \$15/Person (Includes Cocktail Hour and Dinner).

Time: 7 PM.

Reservations: Required by February 21, 1977.

Use form or phone K. J. Oexle (201) 539-6111.

Kenneth J. Oexle

Jersey Central Power & Light Company

Madison Avenue at Punch Bowl Rd.

Morristown, N. J. 07960

Please forward _____ tickets at \$15 each (make checks payable to North Jersey Section IEEE) to:

Name _____

Address _____

_____ Zip: _____

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

North Jersey IEEE Meeting:

Socio-Economic Committee Meeting

The Socio-Economic Committee will meet to discuss professional activities. Among the subjects discussed will be student recruiting, ethics, the job market, the organization, the IEEE constitution, and our goals.

You will be our guest speakers. We want your inputs, your assistance, your priorities, and your solutions. You will be given an opportunity to be heard.

In return, you must provide the support. Only you can make these meetings a success by your attendance. Bring your wives and your engineering friends. E.E.s that are not members of IEEE are also welcome.

Coffee and refreshments will be served.

Contact George Fenn at 667-4637, or Richard Tax at 391-9075 for further information.

Time: 7:30 PM, Thursday, January 27, 1977.

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

"Plastic Money"

"Plastic Money" — Technical, Economic, and Personal Considerations" will be the topic covered by E.E. Moore, Jr., Bell Labs, Murray Hill, N. J., at the meeting of the Magnetics Chapter of the Princeton Section of IEEE on Wednesday, January 19, 1977.

Credit cards — "Plastic Money" in some circles — will be essential to any large-scale electronic funds transfer system (EFTS). At present, credit cards function much as a personal check and are equally cumbersome to process. In the future, however, the economic transactions generated by the use of a credit card will be processed electronically, thus virtually eliminating all physical handling. For this reason banks and other economic institutions are eagerly awaiting the advent of a true EFTS.

The large-scale use of credit cards for electronic funds transfers, however, poses a variety of problems. The technical considerations range from designing readers to sense and decode the information contained on the cards to devising methods to avoid tampering with or counterfeiting the cards. Economically,

5178264 M
ALAN H STOLPEN
2037 BALMORAL AVE
UNION

G10
DEC 10
NJ 07083

EFTS promises large savings to financial institutions and businesses because of reduced processing costs, better inventory control, etc. Large economic benefits will also accrue to the companies which can supply the large numbers of credit verifications, cash-dispensing, and point-of-sale terminals and equipment required to implement an EFTS.

What does EFTS mean to the individual? The economic impact on the credit card holder is fairly obvious (instant crediting or debiting of each account after any transaction, for example). Much more serious may be the impact on his privacy. Do you want someone to know the details (location, cost, detailed description of the item, etc.) of every economic transaction you make?

For further information call: G. P. Vella-Coleiro at (201) 582-3381 or P. F. Tumelty at (201) 455-4984. For dinner reservations, call Mrs. Pauline Chrenko at (201) 455-4575.

Time: 8:15 PM, Wednesday, January 19, 1977.

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

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

North Jersey IEEE Meeting: Operating A Synthetic Natural Gas Plant

The January meeting of the North Jersey Section of the Power Engineering Society will feature Mr. Joseph N. De Vito of Public Service Electric & Gas on the operation of their synthetic natural gas plant.

The presentation will cover the basic steps of synthetic natural gas production using the Catalytic Rich Gas method of the British Gas Council. PSE&G constructed the world's first SNG plant at their Harrison gas plant in 1973 with the combined efforts of Foster Wheeler Corp. and Woodhall Duckham Ltd. The total plant capacity is 20 million standard cubic feet per day. This gas is 100% interchangeable with natural gas. The plant operates as a peak-shaving facility during the winter months.

Mr. De Vito started his career at PSE&G in 1974 after graduating from

Stevens Institute of Tech
Bachelor of Engineering. Af

the Cadet course, he was assigned to the Harrison gas plant. He is currently responsible for the maintenance and operation of the SNG unit in the Harrison plant.

Time: 7:30 PM, Wednesday, January 19, 1977.

Place: Jersey Central Power & Light Co., Madison Ave. (Rt. 24) at Punchbowl Rd., Morristown, N. J.

North Jersey IEEE Meeting: Microprocessor Arrays

The North Jersey Computer Society will hold it's meeting on January 19, 1977, 7:30 PM at the ITT Conference Center, 500 Washington Avenue, Nutley, N. J.

Prof. T. R. Bashkow will present the results of his research on "CHOPP" (Columbia Homogeneous Parallel Processor). Some of the programming and operating system aspects will also be discussed.

There are certain classes of problems which are entirely beyond the capabilities of the largest present day computers, for example, advanced data base management systems, large scale network problems, modeling of large scale physical phenomena, etc. CHOPP is the first general purpose fully parallel (MIMD) computer concept applicable to these classes of problems.

Prof. Bashkow has a B.S. from Washington University, St. Louis and both an M.S. and a Ph.D. from Stanford University and is past chairman of the Dept. of E.E. and Computer Science at Columbia University. He is currently performing research in data communications and computer architecture.

Call Frank Kruglinski at 261-4100 if you have any questions.

Time: 7:30 PM, Wednesday, January 19, 1977.

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

Pre-Meeting Dinner: 5:30 PM, West's Sea Cove, Rt. 46, Little Falls, N. J.

ANNUAL SECTION BANQUET

MARCH 2, 1977

Engineering/The City College ELECTRICAL ENGINEERING COURSES FOR THE PRACTICING ENGINEER

SPRING SEMESTER 1977

Aperture and Array System Design

Professor G. Eichmann
Wednesday, 6:20 - 8:10 PM

Communications Engineering

Professor D.L. Schilling
Thursday, 6:20 - 8:10 PM

Digital Computers

Professor S.J. Oh
Monday, 6:20 - 8:10 PM

Integrated Circuits:
Design and Fabrication
Professor G. Subak-Sharpe
Monday, 6:20 - 8:10 PM

Nuclear Power
Engineering
Professor S.M. Chen
Tuesday, 6:00 - 8:50 PM

Digital Integrated
Electronics
Professor H. Taub
Wednesday, 6:20 - 8:10 PM

For course descriptions and registration information, mail the coupon or phone

Department of
Electrical Engineering
212/690-6685

On Campus Parking is Available

To: Professor G. Eichmann
Department of
Electrical Engineering
The City College
New York, N.Y. 10031

Name: _____

Address: _____

City: _____

State: _____ Zip: _____

EMI/EMC Seminar

On January 12, 1977, a seminar will be held at the Alumni Center of the New Jersey Institute of Technology on the magnitude of the EMI/EMC problem on military, commercial and industrial equipment and how to design equipment to minimize its effects. It will be sponsored by the New York, North Jersey, and Long Island Joint Chapter Instrumentation & Measurements.

The various regulations and standards pertaining to unwanted electromagnetics, such as the FCC Part 15 and proposed ANSI and the CBEMA Narrow Band Regulations, will be discussed by experts.

Methods and instrumentation for evaluating EMI/EMC will be discussed and demonstrated. Actual measurements of the civilian electromagnetic environment will be reviewed and the effects of these measurements on industrial, commercial and military equipment will be discussed in detail.

The fundamental process of noise coupling due to electromagnetic interference will be discussed and conditions which cause this type of interference will be analyzed.

The Seminar will not only cover the fundamental underlying causes of electromagnetic interference, but will stress the need for electromagnetic capability considerations early in the design of equipment. Speakers will include H. W. Ott, J. F. Ladig of Bell Telephone Laboratories; A. Grinich of U. S. Army Picatinny Arsenal, and William Lamdin of Electrometrics.

For an application form or more information, contact: Bill Reenstra, Bell Telephone Laboratories, Whippany, N. J., at (201) 386-2339, or Daniel Waxler, U. S. Army Picatinny Arsenal, Dover, N. J., at (201) 328-6841.

Time: 9 AM to 4 PM, Wednesday, January 12, 1977.

Place: NJIT Alumni Center, Newark, N. J.

Patents & The Engineer

The NY Chapter of the IEEE Computer Society announces a talk by J. David Dainow, a New York patent attorney, on an introduction to patents and industrial property law.

The talk will focus on how to apply for a patent, what inventions are patentable, and how to use patents for offensive or defensive purposes.

For further information, call: Richard Costello, Chapter Chairman, at (212) 254-6300.

Time: 6 to 8 PM, Tuesday, January 25, 1977.

Place: Engineering Building - Cooper Union Astor place (8th St. and Fourth Ave.) N. Y. C.

Load Management Using Demand Controllers

The New York and Long Island Section of the Joint Power Engineering Society and Industry Application Society will sponsor a general meeting on Load Management Using Demand Controllers.

Mr. Frank Menkin from IBM, who is a specialist in the introduction of electronic products to business and industry and is involved in the marketing of IBM power management systems, will be one of the speakers. The other speaker will be Mr. Steve Choofaian, who is with the data processing group in Lever

Brothers and was involved in developing the power management system for Lever house.

Time: 6 - 8 PM, January 19, 1977.

Place: Stone & Webster, 1 Penn Plaza, New York, N. Y.

Refreshments: 5:15 - 5:45 PM.

LATE NOTICE: World Trade Center Tour

A tour of the World Trade Center power distribution system will be given on Wednesday, February 23, 1977, starting at 2P.M.. The tour, sponsored by the related activities committee of the P&I Society of the New York Section IEEE, will focus on the Trade Center's complex power supply and distribution system, which has some unique features imposed by the extreme vertical nature of the trade center structures.

The tour is limited, so please apply well in advance to assure a place in the tour group. Send stamped, self-addressed envelope to: J.A. Mulligan, Con Edison, Room 1250-s, 4 Irving Place, New York, N.Y. 10003. Your reservation ticket and designated tour meeting place will be mailed to you.

Effects Of Medical Device Law On Hospitals

The Metropolitan New York Chapter of the IEEE Group on Electronics in Medicine and Biology (GEMB) announces the following program for January 5, 1977: "Effects of FDA Medical Device Regulations on Hospitals."

Michael J. Miller, J.D., executive director of AAMI, Arlington, Va., will be the speaker. The meeting will take place at 7:30 PM in Rockefeller University South Lab Room 204.

For further information, contact W.H. Buchsbaum, Sc.D., vice-chairman, Metro N. Y. GEMB, at (212) 240-5594 (Brookdale Hospital).

Time: 7:30 PM, Wednesday, January 5, 1977.

Place: Rockefeller University, South Lab, Room 204, 66th St. & York Ave., N. Y. C.

Pre-Meeting Dinner: 6 PM, Tower Cafeteria, 64th St. & York Ave., N. Y. C.



TALK TO THE
CHRISTIE

for all you ever wanted
to know about **high current**
DC POWER SUPPLIES
BATTERY CHARGERS
Call HERM RUDMAN toll-free
(800) 421-2058

SINCE 1929
CHRISTIE
ELECTRIC CORP
3412-X W 67TH ST. • BOX 80020
LOS ANGELES, CALIFORNIA • 90060
(213) 250-1151 • TWX 910-321-3867

Morris Daniel Hooven

The passing of Morris Daniel Hooven (IEEE M'24 – SM'30 – F'44 – LF'59) on October 18, 1976, has taken from us one of those rare individuals whose contributions to the engineering profession as a whole – and to electrical engineering in particular – reached proportions far exceeding those that might be expected from any one, or several individuals.

In addition to his engineering accomplishments, his organizational abilities led him into extensive economic research concerning water resources, engineering education, community advisory functions, and student guidance. In recognition of his many contributions to engineering science, both Newark College of Engineering (now New Jersey Institute of Technology) and Bucknell University awarded him the honorary degree of Doctor of Science in 1957 and 1958 respectively. Other honors coming to him were his being one of two United States representatives at the 250th Anniversary of Technical Schools in Prague as guests of Czechoslovakia in May, 1957; Distinguished Lecture Medallion, University of Louisville, Kentucky, April, 1958; IEEE Founders Award, 1970; and membership in Eta Kappa Nu and Tau Beta Pi.

Morris was born May 30, 1897 in Weatherly, Pa. At the age of 17, before entering college, he became a chemist with the United States Steel Co., but with the advent of World War I he entered the U.S. Army Signal Corps, where his experience gained in radio led him into electrical engineering. At the end of the war, he completed his education by attending Carnegie Tech, University of Vermont, Yale Sheffield Scientific School, and finally Ducknell University, where he graduated magna cum laude in 1920.

Radio was just beginning its commercial debut at that time, and Morris became a radio engineer at Westinghouse, one of the operational group that started KDKA on the first commercial broadcast in history – the election returns when Warren G. Harding became President of the United States. Working with such pioneers in high-voltage phenomena as Chubb, Fortescue, Slepian, Peters, Conrad, and Conwell, his experience was an asset when he moved to the Public Service Electric & Gas Co. in



Newark, N. J., in 1922, where rapidly expanding power demands were beginning.

In 1942, he was advanced to the position of Electrical Engineer, where, as head of the Electrical Division, he administered the activities of about 50 engineers in the design and construction of millions of dollars worth of utility plant annually. Subsequently, he was appointed Consulting Engineer, with many varied and special assignments for the executives of the Public Service Company. Perhaps the most significant assignment was the comprehensive development of the water resources of the Delaware River Basin. Although he had a primary interest in hydroelectric power, his activities brought within his concern such objectives as water supply, recreation, pollution abatement, and flood control. Close and numerous contacts with many governmental agencies and other electric utility companies were the result. In 1974 he was honored by being elected Director Emeritus of the Water Resources Association of the Delaware River Basin.

But Morris found time during his busy life to become greatly involved in the American Institute of Electrical Engineers, one of the founding societies of IEEE. In the late 1920's, his organizational work brought about the formation of the Power Division of the New York Section of AIEE. In 1933, his national AIEE activities began in the Technical Program Committee, when the Rich-Hooven Technical Committee Scopes were produced; this established

AIEE procedures for the next decade. Under his direction as head of a Planning and Coordination Subcommittee, studies led to the famous Ashville Resolution in 1947 that enlarged and made more efficient the technical committees that continue today in the Society and Professional Group method of operation of IEEE.

Between 1949 and 1957, Morris served on the AIEE Board of Directors, including two years as Vice President and one year as President. He continued to be active in IEEE as member and Chairman of many committees for the remainder of his life, and received the Founders Award in 1970.

AIEE and IEEE however, were not his only technical society activities. He held memberships in ASME, ASEE, and NSPE; was active in the Edison Electric Institute; was the first chairman (1924) of the Radio Coordination Committee doing pioneer work in radio interference; Chairman of the Inductive Coordination Committee studying problems of communication line-power line and electric railway coordination. Many articles and reports of this period are still in use.

In 1957, he was President of the Engineers Council for Professional Development, Director of the Engineers Joint Council, and had served on many committees of these organizations. In 1974 he completed 20 years as Chairman of the ECPD/EJC joint commission on Survey of the Professions. He was also a member of the engineering advisory committees for ASEE, Bucknell University, Rensselaer Polytechnic Institute, New Jersey Institute of Technology, Polytechnic Institute of Brooklyn, and the Newark Museum.

Even with his heavy national professional schedule, he found time to take part in Boy Scout, PTA, and Church assignments, the Newark Municipal Utilities Authority, and the Advisory Committee of the Montclair Water Department. He was also a member of the New Jersey State Advisory Committee on Scientific and Engineering Personnel.

To those of us who have known Morris Hooven, who had worked with him, and called him our "friend," he will be greatly missed. To those who knew him only as a name and member of the Institute, he will be looked upon as an inspiration and an ideal to be approached.

– Julian D. Tebo (LF'68)



... engineering has provided a great many people with career satisfaction...

"It is, in fact, numerically the largest of all the professions — and the need for engineers is expected to increase in the years ahead. Indeed, the demand for engineers may soon far outstrip the supply."

"In essence, then, engineering is attuned to the times—and will remain so. That is why it is a particularly desirable profession to consider. If you are ready for a career in engineering, engineering is ready and waiting for you."

Socio-Economic News

By Richard Tax, Chairman
Socio-Economic Committee

The Sketch is from the publication EC 68 4/75, "Make Your Career Choice Engineering" and is distributed by the Engineers' Council for Professional Development (ECPD). The additional quotations are also taken from other sections of the same booklet.

The booklet is readily available to any high school student, parent and student counselor. Start at your local public library and refer to the Occupational Outlook Handbook, published by the U. S. Department of Labor, Bureau of Labor Statistics. This will direct you to the ECPD, Engineering Manpower Commission (EMC), Engineers Joint Council (EJC), IEEE and others for further information. They all share the same address at 345 E. 47th St., New York, N. Y. 10017. A note or telephone call to any of these professional societies will provide you with this recruiting booklet and more.

The Handbook, from the Government Printing Office, provides interesting reading, and should be very carefully evaluated by all engineers.

Many sources report not only a surplus of engineers but, existing

conditions that seriously conflict with these publications.

It is the general opinion of this Committee that these booklets are pure biased propaganda and that action must be taken on the local, state and federal levels, to put an end to this public deception. The ECPD is also in violation of its' own "Canons of Ethics for Engineers", Sect. 3.

This is no longer a distant or even a remote problem. It exists in the counties of our North Jersey Section, and is therefore, of prime interest to us.

W. B. Wood, Advisor to Exxon Corporation names RCA, GE, and Stevens' Institute of Technology and others in his letter to the Editor of Electronic Engineering Times. He informs us that they are in strong support for the program at Stevens' which encourages minority students to pursue careers in engineering (EET Nov. 8, '76). He also refers to the Occupational Outlook Handbook to support the shortage predictions. Keep this in mind.

Will engineering provide the same false security with its promised life time career for the minorities as it has for others in the past? Are they the next generation to be fleeced of their educational funds only to find an overcrowded, pseudo profession ready and waiting for them? Is an educator qualified

to promise a life time career in engineering as some educators and institutions have? Is Stevens' qualified to promise a career in engineering or only an engineering education? Is this information fact or conjecture? Are other schools also involved? Are these companies and institutions really interested in minority groups or are they primarily interested in keeping up engineering enrollment and a low priced labor market? Where do they get their information? These are some of the questions that must be answered.

Our next meeting might provide some of the answers.

We are fully aware that this may not be a problem of your primary concern, but it is a professional problem that must be dealt with. There are others. Once we gain additional support and assistance from our membership we will be able to attack more problems simultaneously and in a parallel effort. This is our ultimate goal.

The first meeting of the Socio Economics Committee will be on Thursday, January 27, 1977, 7:30 PM at the ITT Conference Center, 500 Washington Ave. Nutley, N. J.

We will discuss the operation of the Committee, how it will affect IEEE and you directly and what we need to succeed.



EDUCATIONAL PROGRAM— SPRING 1977

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 A should enroll in Study Group No. 1, No. 2 and No. 3. The New York State Board permits graduates of approved schools to take Part A and qualify for Intern Engineer. New York exams will be held in April 1977. Please note that the Spring course will be completed prior to the April exam.

FUNDAMENTALS OF ENGINEERING-PART A: INTERN ENGINEER

BASIC ENGINEERING SCIENCE 1(IEEE)

STUDY GROUP NO. 1

Review for Part A, N.Y. Exam. Course material will cover practical applications of statics, mechanics of materials and mathematics.

TUESDAYS, Starting January 4, 1977, 6-8:00 P.M., 12 sessions. Room 1425, Con Edison Co., 4 Irving Place.

Instructor: B. Koplik, Ph.D., P.E., Professor of Mechanical Engineering, Manhattan College.

BASIC ENGINEERING SCIENCE II (IEEE-ASME)

STUDY GROUP NO. 2

Review for Part A, N.Y. Exam. Course material will cover dynamics, fluid mechanics, thermodynamics and electrical principles.

MONDAYS, Starting January 3, 1977, 6-8:00 P.M., 13 sessions. Room 1425, Con Edison Co., 4 Irving Place.

Instructor: M. Kurtz, P.E., Consulting Engineer.

ENGINEERING ECONOMICS AND PRACTICES (IEEE)

STUDY GROUP NO. 3

Review for Engineering Economics for both 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 January 6, 1977, 6-8:00 P.M., 12 sessions. Room 1425, Con Edison Co., 4 Irving Place.

Instructor: R. E. Mendoza, P.E., Public Service Electric & Gas of New Jersey.

PRINCIPLES & PRACTICES OF ENGINEERING-PART B

MECHANICAL ENGINEERING (ASME)

STUDY GROUP NO. 4

Review for Mechanical Engineering Section of Part B, N.Y. Exam. Course material includes gas dynamics, combustion shock, steam cycles, psychrometrics, air conditioning, heat transfer and heat exchangers, hydraulics, kinematics, balancing of machines, flywheels, gear trains, etc.

WEDNESDAYS, Starting January 5, 1977, 6-8:30 P.M., 14 sessions. Room 1425, Con Edison Co., 4 Irving Place.

Instructor: M. Kurtz, P.E., Consulting Engineer.

ELECTRICAL ENGINEERING AND APPLICATIONS (IEEE)

STUDY GROUP NO. 5

Review for Electrical Engineering Section of Part B, N.Y. Exam. Electrical engineering principles and applications of: transformers a-c and d-c machines, transmission lines, filters, wave guides, networks, impedance matching, bridges, coupled circuits, resonance, harmonics, transients, three-phase power, amplifiers, electronic circuits, root locus and routh criteria.

WEDNESDAYS, Starting January 5, 1977, 6-8:00 P.M., for 12 sessions. 19th floor auditorium-A, Con Edison Co., 4 Irving Place.

Instructors: L.E. Burnett, P.E., P.A.S.N.Y.; S. Sonsky, P.E., Queensborough Community College.

NY&LI Sections, IEEE



Power and Industrial Div.

EDUCATION PROGRAM—SPRING 1977 SPECIAL STUDY GROUPS

Metropolitan Section



ASME

The following Special Study Groups will be presented in the Spring starting mid-February.

MICROPROCESSOR —TECHNOLOGY AND APPLICATIONS BUILDING—AUTOMATION—SYSTEMS APPLICATION LIGHTING COURSE—THEORY AND APPLICATION FINANCIAL MANAGEMENT FOR ENGINEERS

REGISTRATION INFORMATION FOR REVIEW STUDY GROUPS

GROUPS	FEE PER GROUP	PAYABLE TO	MAIL TO
1,2,3,5	\$65 each for Members. IEEE, ASME, NYSSPE; \$80 each for all others For further information contact: I.M. Berger (212) 330-4495 or Kurt Herzog, Chairman—IEEE Educ. Comm. (212) 466-4203	"POWER & IND. GROUP N.Y. SECTION IEEE"	I.M. Berger, Vice Chairman Review Studies Educational Committee, IEEE N.Y.C. Transit Authority, Rm. 1200 370 Jay St., Brooklyn, N.Y. 11201 Phone: (212) 330-4495
4	\$65 each for Members, IEEE, ASME, NYSSPE; \$80 each for all others	"ASME METROPOLITAN SECTION"	Richard Nathan, P.E. Vice Chairman Education Comm., ASME, N.Y.C. Health & Hospital Corp. Bureau of Engineering & Maintenance 66 Leonard St., N.Y., N.Y. 10013

For further information contact: N. D'Antona or J. Masino Phone (212) 566-6940

NOTE

Fill out one registration form for each group and mail with payment
Registrations will be accepted at first and second sessions to the limit of room capacity.

REGISTRATION FORM		REGISTRATION FORM	
Name (printed)	Position	Name (printed)	Position
Firm	Phone No.	Firm	Phone No.
Business Address	Home Address	Business Address	Home Address
Study Group	Member of:	Study Group	Member of:
<input type="checkbox"/> IEEE	<input type="checkbox"/> IEEE	<input type="checkbox"/> IEEE	<input type="checkbox"/> IEEE
<input type="checkbox"/> ASME	<input type="checkbox"/> ASME	<input type="checkbox"/> ASME	<input type="checkbox"/> ASME
<input type="checkbox"/> OTHER	<input type="checkbox"/> OTHER	<input type="checkbox"/> OTHER	<input type="checkbox"/> OTHER
<input type="checkbox"/> NON-MEMBER	<input type="checkbox"/> NON-MEMBER	<input type="checkbox"/> NON-MEMBER	<input type="checkbox"/> NON-MEMBER
Membership	Membership	Membership	Membership
No.	No.	No.	No.

(Do Not Write In This Space)

Admission Card No.

Refund Certificate No.

Fee Paid \$ (Cash, Check, M.O.)

Date By

(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

Note: See Registration Information for Checks