



The IEEE

Newsletter

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

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North Jersey Section PACE: Life Long Technical And Professional Development

At the May 11, 1995 meeting of the North Jersey Section's Professional Activities Committee for Engineers, speaker Richard A. Ackley will discuss "The Pursuit Of Life Long Technical And Professional Development."

About The Talk

There is a critical need for engineers to maintain lifelong technical and professional development, specifically in these highly unsettled times for our profession. Specific areas of discussion will be: factors that currently impact engineers in their attempt to maintain their technical vitality; barriers encountered by engineers in pursuit of lifelong learning; the impact of technology on the development of successful approaches to continuing engineering education; and what educational activities our Society, the IEEE, should pursue to assist our members in their quest for lifelong technical and professional development.

There have been several recent developments that have impacted the approaches being pursued by the Education Activities Board (EAB). The EAB Vice-President Ken Laker, has instituted many changes in the EAB which offer great promise in making this Board more responsive to member career needs. A conference, called Industry 2000, was held with industry leaders in the career development and continuing education fields, which is a valuable first step in determining where IEEE should go in these critical areas. An ad-hoc review committee is examining all education products produced by IEEE to determine their potential value to our members. It is hoped that this networking session will encourage lively inputs from the audience.

About The Speaker

Richard A. (Dick) Ackley is a Life-Senior member of the IEEE. He is cur-

rently the Chairman of Region 1; Director of the Institute; Member of the Education Activities Board, and Member of the United States Activity Board (the parent organization of PACE). Dick is also Region 1 Educational Activities Chair, a post he has held for the past nine years; and served as Section PACE Chair in the Mohawk Valley Section from 1980-84. Dick has been an engineer for Government (RADG); Industry (GE); and an adjunct professor at Mohawk Valley Community College, Utica/Rome, New York.

Time: 7:30 PM, Thursday, May 11, 1995.
Place: JCP&L Co., 300 Madison Avenue and Punch Bowl Road, Morristown, N.J.
Information:
Robert Sinusas (201) 228-3941.

No. NJ Consultants' Network: June 3rd Internet Seminar Speaker

On June 3, 1995, the IEEE Consultants' Network of Northern NJ is sponsoring an "Internet Seminar." The featured presenter will be Hal Steiner, founder and President of 21st Century Training Corporation, a national EDP education firm, specializing in instructor-led information systems training.

With over 25 years data processing experience, he is a popular classroom presenter in subject areas such as: Client-Server, the Internet, VSAM, DB2, COBOL II, MicroFocus Cobol/2, EASEL, ENFIN, OS/2, OS/2 Database Manager, MVS/ESA, TSO/ISPF, IMS, UNIX, and Train the Trainer.

He has been the featured speaker at regular meetings of DP training associations in New York, California, Pennsylvania, New Jersey, Michigan, Minnesota, and Georgia. He has written several articles that have appeared in national DP publications, including *COMPUTER-WORLD* and *DATA TRAINING*.

See information elsewhere in this newsletter pertaining to seminar details and registration.

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0 TO 9600 baud, 8 bits, no parity, 1 stop bit, BBS phone number 201 669-8268, or call 908 782-3522.

(Courtesy of United Societies of Engineering & Science of NJ, Inc.)

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It is not necessary to inform the North Jersey Section when you change your mailing address. "The IEEE Newsletter" and other section mailings use a list provided by IEEE's national headquarters in New York. This means the Section has no need to maintain a mailing list or addressing plates. Section membership records are changed when Headquarters notifies us.

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The North Jersey Section Executive Committee usually meets the first Wednesday (except holidays and December) of each month at 7 PM. These meetings are open to all members. Information on meeting agenda is available from Dr. Fred Chichester (201) 744-7340.

NJ MTT/AP Chapter:

RF Power Amplifiers—Design & Manufacture

On May 23, 1995 the IEEE North Jersey Section MTT/AP Chapter will present a talk on "Robust Design And Flexible Manufacture Of RF Power Amplifiers." The speaker at this meeting will be Dr. James A. Benjamin of GEC Marconi, Totowa, N.J.

About The Talk

In today's changing and competitive environment the basic design approach to all projects, whether RF, analogue, or digital must have producibility as a primary goal. Experience has shown that producibility like quality is an attribute that cannot be grafted onto or tested into a unit. It must be an incipient part of the design from its initial stages.

The Robust Design approach, in use at GEC-Marconi, has resulted in very producible designs. This approach seeks to quantify the variation in active devices, components, and board effects and to account for them in the simulation and layout of RF circuits. Microwave Power amplifiers present a particularly difficult design task. The low impedances, high dissipated power and inherent variability of active devices and some components involved require significant attention to component placement and layout. Unless these variations can be understood and accounted for in the simulation and layout, the producibility requirement of high first test yield cannot be achieved.

In order to improve the producibility of power amplifiers, this philosophy was applied to a 650 to 850 MHz linear power amplifier used on the JTIDS program. The Robust Design procedure provided a design which eliminated the iterative approach so prevalent in the RF and Microwave area. This design went from the simulator to verification to production in one seamless step.

This presentation will detail the design procedure comparing simulation data with experiential measurements and manufacturing data, both from GEC and an alternate OEM.

About The Speaker

Dr. James Benjamin is a Senior Member of Technical Staff. He received a bachelors degree in Physics from Boston College in 1956. He holds a Doctorate in Electrical Engineering and Computer Science from Marquette which he received in 1984. Prior to GEC, Dr. Benjamin worked at Eaton's Corporate Research Center in Milwaukee, (where he was responsible for the design and fabrication of AC power field effect transistors and the construction of Eaton's Class 10 Microelectronics facility). From 1976 to 1981 he was associated with

Thomson CSF (solid state microwave facility in Montgomeryville, PA. Here Dr. Benjamin was in charge of the engineering pilot line with overall responsibility for new product development of RF and Microwave devices in the 10 to 4000 MHz frequency range).

From 1970 to 1976 Dr. Benjamin worked for Raytheon's Special Microwave Devices Operation and between 1956 and 1976 he was associated with Raytheon, Amerac in Beverly, MA. Dr. Benjamin holds 36 patents.

All Welcome

You do not need to be an IEEE member to attend. All are welcome. Free refreshments will be provided before the meeting starting at 6:15 PM.

Time: 7:00 PM, Tuesday, May 23, 1995.

Place: GEC-Marconi, Plant 11, 164 Totowa Road, Totowa, N.J.

Information: Chandra Gupta (201) 633-4469 (GEC-Marconi).

North Jersey Section PACE: Marketing Yourself For A New Career

A free presentation for prior military officers in career transition will be offered June 14, 1995, as a community service by The IEEE North Jersey Section Chapter of PACE, and The Retired Officers Association (TROA) Northern New Jersey Chapter. While TROA is an organization of retired and former officers, all who are currently or anticipate soon being in a job search mode are welcome to attend.

Learn About:

Your Competition; Perception employers have of the defense industry and how to overcome them; A three-phased plan for your job search; Tips on how to strengthen your resume; How employers read your resume; Networking and penetrating the hidden job market; Preparing for and conducting a successful interview; Negotiating salary and benefits package; Rejection and how to deal with it; The (free) TROA Officer Placement Service (TOPS) only available to prior military officers.

Reservations

Due to space limitations, reservations are suggested. If you are interested call Al Bottani on (201) 265-7797.

Time: 1:30 PM, Wed., June 14, 1995.

Place: Allied Signal, Administration Bldg. Auditorium, Columbia Road, Morris Township, N.J. (exit 2A off New Route 24, West 1/2 mile on Rt. 510).

Information/Reservations: Al Bottani (201) 265-7797; Robert Sinusas (201) 228-3941.

North Jersey Section Activities

May 1995

May 3—"North Jersey Section Executive Committee Meeting"—7:00 PM, Plant 11, GEC-Marconi, 164 Totowa Road Totowa, N.J. Dr. Fred Chichester (201) 744-7340.

May 3—"Global Positioning System Applications"—Joint meeting North Jersey Chapter Systems, Man, and Cybernetics and North Jersey Chapter of the American Institute of Aeronautics and Astronautics. For information/reservations, contact Abe Bernstein (201) 770-3240.

May 11—"Pursuing Lifelong Technical and Professional Development"—North Jersey Section PACE, 7:30 PM, JCP&L Co., 300 Madison Ave. & Punch Bowl Rd., Morristown, N.J. Robert Sinusas (201) 228-3941.

May 18—"Annual Section IEEE Awards Reception"—Birchwood Manor, Whippany, NJ. **See reservation information in this issue.**

May 23—"Robust Design And Flexible Manufacture Of RF Power Amplifiers"—IEEE North Jersey Section MTT/AP Chapter, 7:00 PM, GEC-Marconi, Plant 11, 164 Totowa Road, Totowa, N.J. Chandra Gupta (201) 633-4469 (GEC-Marconi).

May 24—"Seminar: Short Circuit Analysis"—No. Jersey Section IAS & PES Chapters, 9:00 AM-3:00 PM, JCP&L Co., 300 Madison Avenue, Morristown, N.J. Vittal Rebbapragada (212) 839-1473.

May 25—"The Consultative Sale"—IEEE Consultants' Network of Northern NJ, 7:30 PM, AT&T Bell Labs, 67 Whippany Rd., Whippany, N.J. Robert Walker (201) 736-0771.

May 25—Annual Officer Election & Talk "Domestic Violence And Sugar Metabolism"—IEEE Metropolitan Section EMBS, 7:30 PM, Rockefeller Univ., Tower Bldg., Room 305, 1200 York Avenue, NYC. Joel Levitt (212) 479-7805.

May 25—"Dynamic Line Rating And Monitoring System"—North Jersey PES/IAS, 7:00 PM, PSE&G's Edison Training Center, Room 131, Edison N.J. Ken Oexle (201) 455-8481 (JCP&L).

Upcoming Meetings

June—(Date to be announced)—"First Annual North Jersey Section Student Paper Presentation Night"—Amy Bissmeyer (201) 239-5026 (eve).

June 3—"Internet Seminar"—IEEE Consultants' Network of Northern New Jersey, 9:00 AM-4:00 PM, Drew University, Madison, N.J. Ralph Waters (201) 447-9092.

June 7—"North Jersey Section Executive Committee Meeting"—7:00 PM, Plant 11, GEC-Marconi, 164 Totowa Road Totowa, N.J. Dr. Fred Chichester (201) 744-7340.

June 14—"Marketing Yourself For A New Career"—North Jersey Section PACE, 1:30 PM, Allied Signal, Administration Building, Auditorium, Columbia Road, Morris Township, N.J. Al Bottani (201) 265-7797.

June 21-23—"Electro '95"—Hynes Convention Center, Boston, MA. For further information contact Kathryn Piersall at Miller Freeman, Inc., (800) 223-7126.

Oct. 25—"Seminar: Getting The Most Out Of Your Electric Power System"—North Jersey Section IAS & PES Chapters, 9:00 AM - 3:00 PM, JCP&L Hq., 300 Madison Ave., Morristown, N.J. Vittal Rebbapragada (201) 804-2011.

Members and Non-Members Welcome
PLEASE POST

Systems, Man & Cybernetics: Global Positioning System Applications

On Wednesday, May 3, 1995, there will be a joint dinner meeting of the North Jersey Systems, Man & Cybernetics Chapter and North Jersey Chapter of the American Institute of Aeronautics and Astronautics (AIAA). This dinner meeting will cover the timely topic, "Global Positioning System: Changing The Fundamentals Of Aviation." The speaker will be Mr. David Watrous, President of RTCA, Inc. RTCA is widely known throughout the U.S. and international aviation communities for setting performance standards and supplying technical guidance on aviation issues.

Members And Guests Welcome

The likely location for this dinner meeting, will be the "Robin Hood Inn" restaurant in Clifton, N.J. Costs for members and guests (spouses are welcome as well!), are expected to be under \$25 which includes a full course dinner.

Plan to join us for what is shaping up to be an enjoyable social as well as a terrific technical meeting.

For information/reservations, contact any of the following people: Abe Bernstein (201) 770-3240; Pete Brodie (201) 284-2453; or Dr. Michael Liechenstein (201) 471-0721. A flyer on this meeting is in preparation and will be sent to those who call.

ELECTRO/95 In Boston June 21-23, 1995

Electro International has announced that it is significantly expanding the scope of its upcoming Electro '95 trade show to include a major emphasis on surface mount technology and contract manufacturing. The show will be held at the Hynes Convention Center in Boston.

Electro '95 is sponsored by Region 1, METSAC and CNEC of the International Electrical and Electronic Engineers (IEEE), and the New York and New England Chapters of the Electronic Representatives Association (ERA).

Electro '95 will feature:

- ° a surface-mount technology and electronic manufacturing services conference track, with sessions covering component standardization, ball grid arrays, and flip chip and chip scale technologies

- ° Electro's first working SMT production line on the show floor, featuring products and equipment from Heller Industries, Mydata Automation, Panasonic, and MPM Inc.

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For further information about Electro International '95, please contact the show manager, Miller Freeman Inc., at (800) 223-7126.

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Electro International is sponsored by IEEE Region 1, METSAC, and CNEC; ERA-New York and New England Chapters

YES!

Join your colleagues and stay ahead of your competitors by attending or exhibiting at ELECTRO International '95.

I'm interested in:

- ☐ Attending the exposition/conference.
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Name: _____

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For more information on the ELECTRO International '95 Exposition and Conference,
fax this coupon to (214) 419-7915 TODAY!

NJ

No. NJ Consultants' Network: The Consultative Sale

On May 25, 1995, the IEEE Consultants' Network of Northern NJ will present "The Consultative Sale." The speaker will be Ilene Wiener who specializes in international marketing, and public relations of high tech companies.

About The Topic

The Consultative Sale - Taking the "Selling" out of sales. This approach lets you gain clients without using high pressure sales tactics. Under discussion will be straight forward techniques to discover clients' needs and demonstrate how to provide solutions for them. To be successful, all you need is the ability to listen effectively and ask key questions.

About The Speaker

Ilene Wiener has marketed and sold high tech products and services since 1983. Six years ago, she established Sales Tech Int'l., a successful agency which provides public relations and marketing services for high tech companies. Ms. Wiener has been president of RAD Data Communications Inc. and overseas, its director of international marketing. Ms. Wiener received her MBA in marketing and international business from NYU. She is a member of Women in Technology International and American Marketing Association.

Featured Consultants

Frank Scholten is specialized in Analog electronics as well as electro-optical, and electro-mechanical design services. He also specializes in low noise circuits and precision motion. Circuits and systems he has designed are being manufactured by the thousands and sold all over the world. Mr. Scholten has spent many years in the photo-typesetting and medi-

cal imaging fields using CRT's and Lasers. He also holds several patents, most of them are electro-mechanical in nature.

Vikram Sharma of VCOM International, Inc., in Morris Plains, N.J. provides new product development and software consulting services to the U.S. and Far East Markets. He specializes in telephony and voice processing applications.

Time: 7:30 PM, Thursday, May 25, 1995.

Place: AT&T Bell Laboratories, 67 Whippany Rd., Whippany, N.J.

Information: For directions or up-to-date meeting status call Robert Walker at (201) 736-0771.

Attendance: Non-Network attendees and member guests must pre-register by 5 PM Wednesday, May 24th. Contact David Greenspan at (201) 8822-8562 (answering machine). Leave you name and citizenship information. Calls will not be returned.

IEEE AWARDS RECEPTION North Jersey Section May 18, 1995 Birchwood Manor, Whippany, N.J.

**A time to relax, unwind and enjoy—
A time to pay tribute to our New Fellows —
A time to honor our new Senior Members —
YES it's time for the Annual Section Reception**

The Annual Section IEEE Awards Reception will again be held at the Birchwood Manor, 111 North Jefferson Road, Whippany. The affair is scheduled for Thursday, May 18, 1995 from 6:45 to 9:00 PM. Tickets are \$25.00 each and includes a complete prepaid, two-hour open bar, hors d'oeuvres, buffet, and dessert. Spouses and guests are welcome.

Reservations required by May 11, 1995. Complete the reservation form below and return it with your payment. If you would like tickets mailed back to you, please enclose a self-addressed **stamped** envelope. Otherwise, your tickets will be held at the door for you. If any additional information is required concerning the Reception, contact Anne Giedlinski at 455-8556.

Use this form for Reception reservations

ENCLOSE A STAMPED, SELF-ADDRESSED ENVELOPE to receive tickets in advance. Reservations required by May 11, 1995. Mail reservation request to:

Anne Giedlinski, 299 Brooklake Road, Florham Park, NJ 07932

Enclosed is _____ Please forward _____ ticket(s) at \$25.00 each (make check payable to **North Jersey Section IEEE**) for:

Name: _____

Address: _____

Zip _____

New IEEE North Jersey Fellows



Joshua Alspecter



Juin-Hwey Chen



Nim Kwan Cheung



Jack Holtzman



T. Russell Hsing



Ephraim Suhir

1995 Fellow Awardees

Joshua Alspector

"For contributions and leadership in the electronic implementation of neural networks and their application to telecommunications."

Joshua Alspector received a BS in physics from Rensselaer Polytechnical Institute and received his PhD in experimental particle physics from Massachusetts Institute of Technology. Following research work at Rutgers University and Brookhaven National Laboratory, he joined Bell Laboratories where he worked in the field of integrated circuit technology and design. Later he joined Bellcore where he continued research in VLSI.

Beginning in 1986, Dr. Alspector launched a series of investigations into the implementation of learning in VLSI neural networks. In 1988, he became Director of a group doing neural network research. The group he directed also conducted research into telecommunications applications of neural networks.

He has published over fifty papers, holds several patents and has edited three books.

Juin-Hwey Chen

"For contributions to low-delay and backward adaptive linear prediction speech coding and the development of related standards."

Juin-Hwey Chen received a Bachelor of Science degree in Electrical Engineering from National Taiwan University. He received his MS and PhD degrees in Electrical Engineering from the University of California, Santa Barbara.

After his graduation, he worked as a Senior Engineer at Codex Corporation, Mansfield, Massachusetts concentrating on speech coding and packetized voice. He subsequently joined the Signal Processing Research Department of AT&T Bell Laboratories, in Murray Hill, as a Member of the Technical Staff. Since 1992, he has been with the Speech Coding Research Department. He became a Distinguished Member of the Technical Staff in 1994. While working at Bell Labs, he created several speech coding algorithms for use in various AT&T products and services. In addition to speech processing, he is also interested in image processing and digital communications.

Nim Kwan Cheung

"For contributions to the understanding and development of high-speed lightwave technology and to the architecture and applications of gigabit networks."

Dr. Nim Cheung is currently Executive Director of the Network Control and Management Systems Research Department at Bellcore. He received his MS and PhD degrees in physics from California Institute of Technology in 1972 and 1976, respectively. Initially, he was a member of the Technical Staff at AT&T Bell Laboratories, Holmdel, where he was a pioneer in early single-mode fiber time division multiplexing and wavelength division multiplexing systems. Later he was District Manager of the Advanced Lightwave Technology Research Group at Bellcore, where he initiated and managed leading edge research programs in high speed, coherent, and subcarrier multiplexed lightwave communication systems. He assumed his present position at Bellcore in 1990, and has served as the architect and principal investigator of several gigabit testbeds sponsored by the U.S. Government, including the 10Gb/s SONET and ATM Self-healing Ring in St. Louis and the Advanced Technology Demonstration Network (ATDNet) in Washington, D.C.

Jack Holtzman

"For fundamental theoretical innovations leading to practical methods of design and evaluation of wireless communication systems and switching systems."

Jack Holtzman received a BEE degree from City College of New York and a MS degree from UCLA. In 1963, he joined AT&T Bell Labs and received his PhD from the Polytechnic Institute of Brooklyn under the Bell Labs Doctoral Support Program.

At Bell Labs, he initially worked on optimal and nonlinear control theory in the Mathematic Analysis and Consulting Group. One of his key contributions to control theory was in showing conditions for the applicability of the discrete-time maximum principle.

Later, he switched research fields to telecommunications and teletraffic theory. One of his contributions to teletraffic theory was an analysis of the widely used teletraffic theory approximation, the equivalent random method.

In 1990, he joined Rutgers University where he is Professor of Electrical and Computer Engineering and Associate Director of WINLAB (Wireless Information Network Laboratory). He has done research and guided research on spread spectrum, handoffs, resource management, propagation and wireless system performance.

T. Russell Hsing

"For leadership in the development of technology to transport video rate data on existing telephone access lines."

T. Russell Hsing received his BS degree from the National Chiao-Tung University, Taiwan, Republic of China, in 1970 and his MS and PhD degrees in Electrical Engineering from the University of Rhode Island, Kingston, in 1974 and 1977, respectively. From September 1971 to August 1972, he studied physics at the Graduate School of the City University of New York.

Currently, Dr. Hsing is a Director of Wireless and Broadband Systems Research Group in Bell Communications Research (Bellcore). He is currently managing the Wireless ATM research program in Bellcore's Applied Research Area. His research interests span the areas of high-speed digital data transmission, real-time DSP implementation, VLSI architecture and video coding and packet video communications. Before joining Bellcore in March 1986, he has been affiliated with industrial research laboratories such as GTE Laboratories, Xerox, Telco Systems Fiber Optic Corporation, and TASC. He was also an Adjunct Research Fellow at the Center for Computer Aids for Industrial Productivity (CAIP) of Rutgers University from March 1990 to 1992.

Dr. Hsing has four patents and has published over 65 journal and conference papers in the areas of digital signal/image processing, fiber optics communication, imaging sensors, medical imaging and telecommunications.

Ephraim Suhir

"For contributions to the application of mechanical and reliability engineering to physical design and analysis of microelectronic and fiber optic systems."

Ephraim Suhir received his MS degree in Mechanical, Ocean, and Materials Engineering from the Polytechnic Institute in Odessa in 1966, and the PhD degree in Applied Mechanics from Moscow University, Moscow, Russia, in 1968.

In 1970, Ephraim accepted a position at the Institute of Ocean Engineering and Naval Architecture, Nikolaev, Ukraine, as Full Professor and Senior Research Officer in the Department of Materials and Mechanics. In 1976, he became Director of a Reliability laboratory in a research institute and lectured, part time, in Kaunas Polytechnic Institute.

In 1984, he joined AT&T Bell Laboratories, Basic Research, in Murray Hill. As a Member of the Technical Staff and a Principal Investigator, Dr. Suhir conducts research in Mechanics, Physics, and the Engineering of Materials used in Microelectronics and Photonics. He has a long list of significant contributions to AT&T, the electronic and fiber-optic industry.

North Jersey PES/IAS: Dynamic Line Rating And Monitoring System

On May 25, 1995, the North Jersey Power Engineering/Industrial Application Society Chapters will present a talk on the dynamic line rating and monitoring system used by Public Service Electric and Gas Company. The speaker will be Sankar Basu of PSE&G's Transmission Department.

About The Talk

Electric transmission lines are rated based on prudent assumption of weather and ambient conditions, load cycle and in the case of underground cables, on the measured soil thermal properties. Traditionally, the "Book Ratings," as they are called, are calculated assuming the worst case scenario, which in real world may not happen at all, or happens only on very rare days. With the advent of new technology it is now possible to measure the variable parameters on a real-time basis, compute the dynamic ratings and make them available to system operators, planners and engineers. Dynamic Rating and Monitoring Systems for Overhead and Underground Transmission Lines will be discussed showing the benefits.

About The Speaker

Sankar Basu received a BSEE degree from the University of Calcutta, India and a MSEE degree from New Jersey Institute of Technology. He joined Public Service Electric and Gas (PSE&G) in 1980 and ever since has been involved with the design, construction and maintenance of electric transmission and fiber optic cable systems. More recently, he has taken a leading role in introducing dynamic rating and monitoring system of transmission lines on PSE&G system. He served as a Utility Advisor in the EPRI Underground Transmission Task Force. He is a member of the Power Engineering Society Insulated Conductors Committee and a Senior Member of IEEE.

Time: 7:00 PM, Thursday, May 25, 1995.

Place: PSE&G's Edison Training Center-Room 131. The Edison Training is in Edison on Route 1 just north of the intersection with Route 287. Enter through the front doors.

Information/Reservations: Tom Piascik (PSE&G) (201) 430-6692; Ken Oexle (JCP&L) (201) 455-8481.

Student & Non- Student Members!

THE FIRST ANNUAL NORTH JERSEY SECTION STUDENT PAPER PRESENTATION NIGHT IS COMING.

All members of IEEE are encouraged to participate. Non-student members come ready to listen, learn, critique and enjoy presentations on a variety of technical and professional topics. Student members come ready to speak, listen and learn.

Any paper that pertains to the field of electrical engineering is acceptable. Technical topics including senior projects, Engineer's Week Contests, and theses are invited as well as those focusing on professional issues, perhaps from an Engineering Ethics course. The idea is to get some extra mileage out of required coursework. The extra benefit is the chance to practice presentation skills in front of a supportive, astute audience.

Students will receive the comment sheets from the audience, as well as **FABULOUS PRIZES!** First place: \$100; Second place: \$70; Third place: \$30.

Presentations will be judged on several factors, including technical accuracy, organization, and use of visual aids, among others. Each speaker has about 5 minutes (+/- 30 seconds).

The date is a yet-to-be announced evening in June. More details are upcoming in the June newsletter.

Students indicate interest by contacting Student Activities Chair, Amy Bissmeyer, evenings at (201) 239-5026.

NY/NJ/LI EMBS: Annual Election Meeting

The IEEE Metropolitan Chapter of the Engineering in Medicine and Biology Society will hold its Annual Election Meeting on May 25, 1995.

Nominations received as of April 1, 1995 are:

| | |
|------------------|----------------|
| Chairman: | Joel H. Levitt |
| Vice-Chairman: | Andrew Baxt |
| Secretary: | Susan Baxt |
| Treasurer: | Joe Bogovic |
| Member-at-Large: | Open |

Nominations for any position may still be made, up to and including the time of the meeting.

Note: This brief meeting will be followed by Prof. J.H. Levitt discussing "Domestic Violence and Sugar Metabolism—What's The Connection?" See detailed notice elsewhere in this issue.

Time: 7:30 PM, Thursday, May 25, 1995.
Place: Rockefeller University, Room 305, Tower Bldg., 1200 York Ave., NYC.
Further Information: Joel Levitt (212) 479-7805; Andrew Baxt (516) 764-2060; Susan Baxt (516) 678-6563.

NY/NJ/LI EMBS: Domestic Violence And Sugar Metabolism

On May 25, 1995, the Metropolitan Section Engineering in Medicine and Biology Society will present "Domestic Violence And Sugar Metabolism—What's The Connection?" The speaker will be Professor Joel H. Levitt.

About The Talk

In this free tutorial session Prof. Levitt will explain the relationship between the common type of hypoglycemia (reactive hypoglycemia—low blood sugar at certain times during the day) and violent behavior. Domestic violence is especially worth examining because where there is a support person or family, positive steps are especially practical.

The relationship has been known for a long time, certainly since June 1977 when Barbara Reed, PhD testified before the Select Committee on Nutrition and Human Needs of the U.S. Senate. (Actually, the connection was known as early as 1935 when Dr. M.S. Jones described the case of a woman who threw things at her husband ... her violent spells were nearly always accompanied by a craving for sweets.)

About The Speaker

Professor Levitt holds four degrees from Columbia University and has been a member of the faculty of Pratt Institute for over 25 years. He is serving his third year as Chairman of this EMBS chapter. He teaches two health related courses at the Brooklyn College Institute for Retired Professionals. He leads an Anxiety & Hypoglycemia Support Group at the Source of Life Center in NYC. His last two lectures at Rockefeller University were "Fighting Anxiety, Depression, and Fatigue, Without Drugs" (Jan. 20, 1994) and "Panic Attacks and Sugar Metabolism—What's the Connection?" (Oct. 17, 1990).

Reservations

There is no charge but seats must be reserved for this meeting by calling (212) 479-7805 (call as early in May as possible).

Annual Election

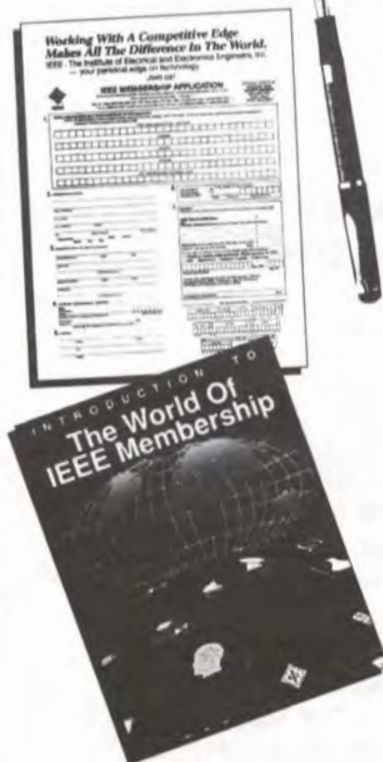
Election of officers will take place at the start of this meeting.

Time: 7:30 PM, Thursday, May 25, 1995.
Place: Rockefeller Univ., Tower Bldg., Room 305, 1200 York Avenue, NYC.

Directions/Parking: Entrance gate at 66th Street. Free parking. By subway—68th on #6 (Lex). By bus—M15, M31, M58, or M66.

Further Information: Joel Levitt (212) 479-7805; Andrew Baxt (516) 764-2060; or Susan Baxt (516) 678-6563.

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Vice-Chairman-2
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Survey On Internet Access For Members

This is a survey by the IEEE North Jersey Section Executive Committee of all Section membership to determine interest in Section-provided FULL INTERNET ACCESS at \$1.00 per connect hour with no phone toll charges (800 number). This service would include "the Web", Archie, Veronica, Gopher, FTP, Telnet, newsgroups and e-mail. Before setting this up, we need to know the extent to which the members would use the Internet.

Please complete this questionnaire by circling the appropriate answers and mail it to:
Mel Lewis

IEEE North Jersey Section EXCOM
18 Walnut Street, Oakland, NJ 07436
(or reply to m. lewis@ieee.org) within two weeks of your receiving this newsletter.

I (do) (do not) have access to a computer with a modem at home or work.

If you answered no, will you be getting a computer with a modem in the next 12 months? (yes) (no)

I (do) (do not) use the IEEE North Jersey Section's "USES-NJ" bulletin board regularly.

I already have Full Internet Access at (home) (work) (both) (neither). The provider is _____

My Internet address is _____

I already have Internet e-mail-only access at (home) (work) (both) (neither).

At \$1 per hour, do you anticipate using the IEEE Internet service more than 5 hours every month (to minimize billing)? (yes) (no)

I would be a (light) (moderate) (heavy) user of the proposed Internet service.

I have (no interest in or need for) e-mail or the Internet at this time.



An IEEE Seminar on SHORT CIRCUIT ANALYSIS

presented by the IAS and PES Chapters,
North Jersey Section

Wednesday, May 24, 1995

9:00AM to 3:00PM

**Jersey Central Power and Light HQ
300 Madison Ave., Morristown, NJ 07962**

Topics

- Introduction
 - Seminar overview
 - Reasons for a short circuit study
 - Basic concepts
 - Types and causes of short circuits
 - Per-unit system
 - Equivalent circuits
 - Symmetrical components
 - Network analysis methods
- How to do a short circuit study
 - Single-line diagram
 - Defining study requirements
 - Impedance diagram
 - Determining system impedances
 - Typical impedance data
- Calculations
 - Manual
 - Computer
- Interpreting and applying results
 - Interrupter evaluation
 - Circuit breaker application
 - Fuse application
 - Protection coordination
 - Specifying bus bracing
 - Inputs to other studies
 - Voltage regulation
 - Motor starting
 - Harmonics analysis
- Case studies
- Review of key concepts

Seminar Leaders

Richard H. McFadden, P.E., Fellow, IEEE. Chief Electrical Engineer, Advanced Technology Division, Science Applications International Corp., New York, NY.

R. Vittal Rebbapragada, P.E., Senior Member, IEEE. Senior Consulting Engineer - Electrical Power Systems, Ebasco Services Division, Raytheon Engineers and Constructors, New York, NY.

Cost - including materials, morning refreshments, and luncheon:

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| IEEE members | \$150.00 |
| Non-members | \$195.00 |
| Students with valid ID | \$50.00 |

\$50.00 discount on full (non-student) registrations received by May 1

On-site registration opens at 8:30AM

Reserve your place by mailing a check payable to "IEEE North Jersey Section" to R.H. McFadden, SAIC, 7 West 36th St., New York, NY 10018 by **May 15, 1995.**

For information or late registration, call Vittal Rebbapragada, (212) 839-1473, Ken Oexle, (201) 455-8481, or Dick McFadden, (212) 239-8510.

AN IEEE SEMINAR ON GETTING THE MOST OUT OF YOUR ELECTRIC POWER SYSTEM:

**HOW TO OBTAIN HIGHER PRODUCTIVITY, LOWER COSTS,
AND BETTER PROFITABILITY FROM YOUR EXISTING SYSTEM**

Presented by the IAS and PES Chapters, North Jersey Section

**Wednesday, October 25, 1995, 9:00AM to 3:00PM
Jersey Central Power and Light HQ
300 Madison Ave., Morristown, NJ 07962**

Topics

- Introduction
 - Seminar overview
 - Basic concepts
 - Costs of power problems
 - Factors that affect system productivity
 - Reliability, availability, maintainability
 - Preventive maintenance
 - Life extension
- System productivity evaluation
 - Single-line diagram
 - Walkdown inspection
 - Capacity and expandability evaluation
 - Power quality assessment
 - Energy efficiency evaluation
 - Reliability and availability assessment
 - Techniques and tools
 - FMEA and other hazards analyses
 - Reliability block diagrams
 - Fault trees
 - Computer tools
 - Reliability and availability data
 - Collecting and analyzing plant data
 - Generic data
- System productivity improvement
 - Identifying and upgrading critical items
 - Productivity-centered maintenance
 - The PCM concept
 - Benefits of PCM
 - Database development
 - Procedures review
 - "Smart" databases and AI resources
 - Maintenance tracking and closeout
 - Inspection and testing
 - Trending maintenance and test results
 - Managing a living PCM program
 - Improving energy efficiency
 - Improving power quality
 - System life extension
- Justifying investments in power system hardware or maintenance upgrades
 - Life-cycle costing
 - Investment analysis concepts
 - Probabilistic cost-benefit analysis
- Final overview and discussion

Seminar Leaders

Richard H. McFadden, P.E., Fellow, IEEE. Chief Electrical Engineer, Advanced Technology Division, Science Applications International Corp., New York, NY.

R. Vittal Rebbapragada, P.E., Senior Member, IEEE. Senior Consulting Engineer - Electrical Power Systems, Ebasco Services Division, Raytheon Engineers and Constructors, New York, NY.

Cost - including materials, morning refreshments, and luncheon:

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INTERNET SEMINAR
June 3rd, 1995 9 am to 4 pm
Drew University, Madison NJ

Sponsored by the

I.E.E.E. Consultants Network of Northern New Jersey

- Who should ATTEND?** Anyone who needs a working knowledge of the Internet, what services are available, or how to get a personal or company account
- Who will be PRESENTING?** World-class Internet experts will cover the basics of Internet access methods, navigation, searching techniques, access providers, and the World Wide Web
- WHAT will be COVERED?** Origins of the Internet. How to get onto the Internet economically from home or office. The range of services and service providers. Searching for specific information. Spamming, flaming and MUD. Getting a small company or department on the Internet. Equipment requirements. Internet software. Advertising on the Internet
- WHAT IS THE FORMAT?** *Morning.* Internet overview featuring discussions and demonstrations of dial-up access and major services
- Afternoon.* Nearly three hours of hands-on tutorial sessions on:
- E-Mail, Mail lists, Usenet and Newsgroups
 - FTP and Telnet
 - Archie, Gopher, Veronica
 - The World-Wide-Web and browsers
 - Internet service providers, how to search for and evaluate them
- SPECIAL ATTRACTION** Drawing for Internet access software, FREE time on the Internet, books, and other learning materials

| Registration Date | CNNNJ Member | IEEE Member | Non-Member |
|-----------------------------|--------------|-------------|------------|
| Early bird (by May 1, 1995) | 45 | 55 | 65 |
| After May 1 and at the door | 65 | 75 | 85 |

SEATING IS LIMITED. Sign up early to reserve your seat.
For information, call: **Ralph Waters 201 447-9092**

Registration Form

Name: _____
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