



The IEEE

Newsletter

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

Volume 24 March 1978 No. 9

"The IEEE Newsletter" is published monthly except June by the North Jersey Section of The Institute of Electrical and Electronics Engineers, Inc., a nonprofit scientific society dedicated to the advancement of electrical and electronic engineering and the allied arts and sciences. Headquarters: 345 E. 47 Street, New York, N.Y. 10017. Sent automatically and without additional cost to each member of the North Jersey Section. Printed in U.S.A. Second-class postage paid at New York, N.Y. and at additional mailing offices.

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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: Sidney Bell, Editor, 162 Mohawk Drive, River Edge, N. J. 07661. 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. (201) 398-5524.

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

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

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PAC Monthly Meeting

A professional activities meeting is held on the second Wednesday of every month at the ITT Conference Center, 500 Washington Ave., Nutley, N. J. Discussions cover professional activities, working conditions, engineering surplus, salary, benefits, pensions, employment, etc.

Call Richard Tax (201) 391-9075 after 7 PM for additional information.

Power Dinner Set For March 22

The Power Engineering Society's Annual Dinner meeting has been moved to Wednesday evening March 22, 1978.

We are fortunate to have Mr. John Krisko of the National Park Service for our speaker, who is Chief of Interpretation at the Sandy Hook Unit of the Gateway National Recreation Area, responsible for the presentation of the park to visitors. His presentation will include slides of the magnificent sights to be seen only in our national parks and of some of the unique treasures they hold.

Mr. Krisko has had Park Service assignments at the Rock Creek Nature Center, Mammoth Cave, and Yosemite National Parks, and Death Valley National Monument. He holds a BS degree in

Geology from the University of Kansas and an MS degree in Environmental Education from George Williams College.

Those members who have visited national parks in the past will find the evening's program reminiscent of the fine campfire talks and other presentations they have experienced. Those who have never witnessed such a program will have a most pleasant revelation in store for them.

The Dinner Committee looks forward to having you and your mate joining us for the evening. However, "come-aloners" are promised a most stimulating evening provided by our guest speaker and the brief salute we will be giving to our past chairpersons.

Time: 6:00 PM, Cocktails; 7:00 PM, Dinner, Wednesday, March 22, 1978.
Place: Rock Spring Inn, 481 Northfield Avenue, West Orange, N. J.

Cost: \$6.50 per person — Roast Beef Dinner.

Door Prizes: Calculator and bottle of wine.

Reservations: Required. Send Checks to: Sy Salowe, Westinghouse Electric Corp., 95 Orange Street, Newark, N. J. 07101.

Further Information: John Langenfeld, Chairman 753-1100, Sy Salowe, Vice-Chairman 465-2938, John Baka, Secretary 539-6111 Ext. 487.



PAUL KULL — President and founder.

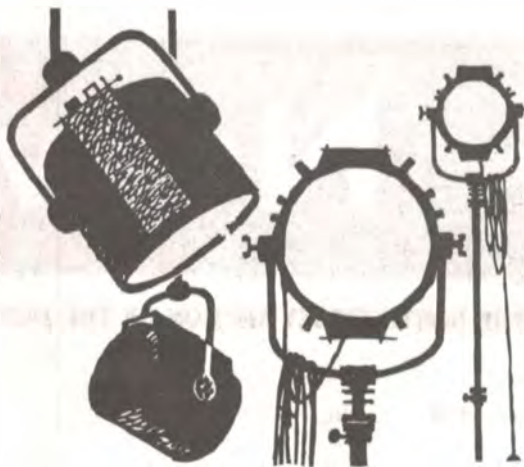
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Optical Communications Components Seminar

"New Components for Optical Communications Systems" is the title of a one-day seminar to be held at Stevens Institute of Technology on April 10, 1978. Topics and speakers are: Optical Sources — Martin Pollack, Bell Labs, Holmdel, N.J.; Optical Modulators — Joe Campbell, Bell Labs, Holmdel, N.J.; Optical Cables — Thomas Eppes, ITT, Roanoke, Va.; Optical Detectors — R.J. McIntyre, RCA Ltd., Quebec, Canada; Optical Transmitters & Receivers — John Copeland, Bell Labs, Crawford Hill, N.J.; Optical Communications Applied to CATV — Ray McDivitt, Harris Corp., Melbourne, Fla.; Fiber Optics Applied to Computer Data Buses — Eric Lean, IBM Watson Labs, Yorktown Hts., N.Y.; and GTE Field Trials of Optical Fiber Systems — Richard Dworak, GTE Labs, Waltham, Mass.

Fees are: IEEE members \$40; non-members \$45, including luncheon and Conference Preprints, \$5 additional for registration after April 1, 1978. Contact: Gerald Herskowitz, Stevens Institute of Technology, Hoboken, N.J. 07030; (201) 792-2700, Ext. 295 or 361.



SPOTLIGHT ON NORTH JERSEY

It's Award Time again! Once a year the North Jersey Section gathers at a local oasis to honor several of our outstanding members. This year:

Joseph A. Giordmaine
Robert M. Lauver
Gentaro Miyazaki
Neil J. A. Sloane

have achieved the exalted rank of IEEE fellow. In addition, John B. MacChesney won the Morris N. Liebmann Memorial Award and John S. Mayo and Eric E. Sumner have been awarded the Alexander Graham Bell Medal for 1978.

It might be interesting to take a look at the awards process and how it works in North Jersey.

Before we consider the mechanics of the process, let's philosophize a little. Why do we have awards? For two important reasons:

1. To honor those people who have done outstanding work in our profession.
2. To inspire others to strive for similar standards of excellence.

Isn't it interesting that we could use those two statements to answer the question "What is one of IEEE's functions?" I'll bet you never thought of that last time someone asked you "What does IEEE do?" Here's another one of those Institute activities that we take for granted but that has a subtle influence on our profession and our society.

Now let's consider the grade of Fellow. According to IEEE by-laws, the fellow grade is one of "unusual professional distinction to be conferred upon a person of outstanding and extraordinary qualifications and experience in the fields of electrical engineering, electronics, radio, allied branches of engineering, or the related arts and sciences, who has made important individual contributions to one or more of these fields." The by-laws also provide certain ceilings on the number of fellows to be elected in any one year. In practice, the worldwide total works out to be about 130 per year. We should be proud that our North Jersey Section has had more than its share of Fellows over the years.

What does this mean to you? First of all you may know someone you think deserves to be a Fellow. Second, maybe you deserve to be a Fellow. So what do you do about it? You call on our North Jersey Section Awards Committee for help, that's what. They can supply the necessary forms and can help steer a nomination through the bureaucratic thickets. The National Fellow Committee (16 members plus a chairman) makes the final decision but our local guys can help you write a good resume'.

Lou Blackburn is the North Jersey Section Awards Committee Chairman. He is also National Secretary for the Power Engineering Society, an IEEE Fellow, the teacher of the Symmetrical Components and Relay courses we offer in the Section from time to time, the Treasurer and Director of both the China Stamp Association and the American Society of Polar Philatelists, editor of "Applied Protective Relaying" and world traveler. In real life he works for Westinghouse. And you thought you were busy! Members of his committee are: E. I. Gordon, Jerry B. Minter, Dr. J. D. Tebo and Dr. F. A. Russell. Don't hide your accomplishments. If you or any of your acquaintances deserve to be a Fellow, speak up. Contact our Awards Committee for advice and counsel and let's keep up a fine tradition in North Jersey.

Don Bathke

Home Computers

The North Jersey Computer Society will sponsor a talk on March 23 on Computers for home use. The speaker will be Mr. Frank J. Relotto.

Topics to be discussed will include home applications and a comparison of four manufacturers that offer units specifically for home use, those that are offered for industrial use and units designed and assembled by the user from the assortment of off-the-shelf industrial components. Also to be discussed is the compatibility and quality of the hardware and software available. One or more units will be demonstrated after the discussion.

Mr. Relotto has a BEE from the University of Dayton and a MSEE from Newark College of Engineering. He is associated with CM Associates, a computer peripheral supplier, and Computer Mart, a supplier to the home computer hobbyist and industry. His involvement with micro-computers dates from 1973.

Time: 7:30 PM; Thursday, March 23, 1978.

Place: Main Conference Room, International Telephone & Telegraph, 500 Washington Ave., Nutley, N. J.

Pre-Meeting Dinner: West's Sea Cove, 5:30 PM. Contact Frank Kruglinski for further information at Wordstream Corporation, 625-2700.

Digital Transmission Techniques Seminar

The fourth annual Communications Transmission Seminar will be held March 20, 1978 at Princeton University. The theme for this year's Seminar is "High Speed Digital Transmission Techniques and Switching Systems". Supporting this theme the following topics will be discussed by eminently qualified speakers:

"Economic Analysis of Integrated Voice and Data Networks," H. Frank and I. Gitman, Network Analysis Corporation.

"Recent Trends in Cryptography," C. Leung, MIT.

"The Role of the ITU and CCITT in Telecommunications," J.S. Ryan, Bell Laboratories.

"Fiber Optics - An overview and State-of the Art," P. Steensma, ITT/D.C.D.

"Implications of Demand Assignment

for future Satellite Communications Systems," J. Pultz, Booz Allen Applied Research.

"The New Tri-Tac Family of Circuit and Message Switches," R. Halligan, General Telephone and Electronics - Sylvania.

"Digital Switching for Telephony" - Dave Messerschmitt, Univ. of California.

This one-day Seminar is sponsored by the New Technical and Scientific Activities Committee (New York Section IEEE), IEEE Communications Society (Jersey Coast Chapter), Princeton Section IEEE and Princeton University.

For further information contact: M. Carrio (CORADCOM) - Conf. Chairman (201) 544-4944 or B. DeMarinis (Booz Allen Applied Research) (201) 747-9303.

Display Seminar

A seminar on advances and display technology and measurement techniques will be held May 16, 1978 by the New York, North Jersey and Long Island Joint Chapter Instrumentation and Measurements.

The seminar which will be held at the New Jersey Institute of Technology will cover the latest advances in LCD, LED, vacuum fluorescence, and screen form plasma devices. New TV displays, color graphic automatic and outdoor displays will be among the application topics.

Instruments and Measurements of luminous intensity brightness, color temperature, color coordinates, Polairization as well as luminance standards, and the problem of QC correlation will be covered by experts in the field. Certain Mil Spec. requirements and compliance will be touched.

Outlines of papers and reprints of reference material will be made available to the attendees. The seminar will run from 9 AM to 4 PM and will include a round table discussion at the conclusion. Sufficient time will be allocated for questions and answers by all speakers.

Pre-registration by mail is \$20 for IEEE members and \$30 for non-members. Registration at the door will be \$25 for members and \$35 for non-members. Attendance will be limited and it is strongly urged that reservations be made early. For additional information contact: Mr. P. Emile: (201) 242-2600, Ext. 229 and Mr. J. G. Friedman: (201) 673-2500.

Controls For Making Energetic Materials

"Control Systems for Manufacturing Energetic Materials" will be discussed by Carl A. Beaulieu, US Army Armament Research and Development Command, Dover, at the March 16, 1978 meeting of the NJ Control Systems Group.

The Army Armament Research and Development Command located at the old Picatinny Arsenal, Dover, New Jersey is presently modernizing the manufacture of energetic materials. As part of this effort, in-house personnel will be establishing and maintaining functional guidelines specifying control systems used in the automated production of energetic materials. Documentation to aid in the development, management and review of the control system engineering will be described. The methodology used to develop functional guidelines and to process control standards and requirements for interfacing hardware and software used in control systems will also be described. This work includes the establishment of objectives for plant operations definitions of the control system objectives, determination on the process complaints, identification of sources and characteristics of disturbances, and determination of dynamic characteristics of the process. The results of this work are being used in the development of automated production lines.

Mr. Carl Beaulieu is the acting chief of the Control Systems Support Section. ARRADCOM is located at the old Picatinny Arsenal where Mr. Beaulieu began work in 1968 shortly after graduating from Newark College of Engineering with a BS degree in electrical engineering. He is registered as a professional engineer in the state of New Jersey and has made significant contributions to the field of automated manufacturing technology.

Mr. Beaulieu is a very interesting speaker. Don't miss this second opportunity to learn about this application of computerized controls.

Time: 7:30 PM, Thursday, March 16, 1978.

Place: Bell Labs (adjacent to reception room), Whippany Road, Whippany, New Jersey, 07801.

Further Information: Jerry Uhrig, Bell Labs, 386-6845.

MICROPROCESSORS AND MICROCOMPUTERS

MONDAYS, 7:00 P.M. to 9:00 P.M., Starting April 3, 1978
I.T.T. Avionics Auditorium (at foot of tower)
500 Washington Avenue
Nutley, New Jersey 07110
Group Sponsor: Richard Padget, Westinghouse, (201) 465-2512

Speaker: Mr. Frank Relotto, CM Associates

For Whom Intended: The practicing engineer who wants to acquire or increase understanding of micros.

Course Objective: Microprocessor hardware and software will be taught with the aid of working microcomputer development systems for hands on experience. Through the use of working machines the student has the opportunity to observe how hardware and software integrate into a complete system. Laboratory sessions are included to give the student a chance to try his hands at programming a microprocessor. A text is included to supplement lectures. Previous knowledge of micros and programming, although helpful, is not necessary.

- (1) **April 3 – INTRODUCTION & DEMONSTRATIONS** – What is a Microprocessor, history, buzzwords, number systems. We will be disassembling a working system and discussing the hardware parts.
- (2) **April 10–COMPUTER ARITHMETIC**–Decimal, binary, octal, and hexadecimal number systems. Binary arithmetic and boolean algebra will be discussed.
- (3) **April 17–DISCUSSION ON MICROPROCESSOR MEMORY**–Memory and memory organization, memory addressing, static and dynamic memory uses, words, bytes, character and instruction codes.
- (4) **April 24–HARDWARE CONSIDERATIONS ON THE MICROPROCESSOR**–Interfacing the micro to memory, clocks, power requirements, registers, status flags, ALU operation.
- (5) **May 1–LOGIC BEYOND THE CPU**–Instruction timing, ROM's, PROMS, RAM's, DMA, Real Time.
- (6) **May 8–LOGIC BEYOND THE CPU (cont.)–I/O**–Parallel I/O, serial I/O, Synchronous and Asynchronous data transfer, parity, start-stop bits, baud rates, terminals, modems, differences between RS232, TTL, TTY interfacing.
- (7) **May 15–PROGRAMMING THE MICROPROCESSOR**–Flow charting, object programs, monitors, text editors, assemblers, high level languages for the microcomputer.
- (8) **May 22–ADDRESSING THE MICROCOMPUTER**–Memory addressing, implied addressing, direct addressing, the use of the stack.
- (9) **May 30–PROGRAMMING-LAB SESSION**–Three operating computers will be available—each varying in complexity.
(1) Basic unit with operators panel and 1K of memory; (2) Unit with monitor on ROM and text editor and assembler in RAM. This machine has 16K of usable memory. CRT terminal will be used for programming; (3) Microcomputer with floppy disc operating system. Unit has all the above plus OEM Basic hi-level language at instant call. CRT used for programming.
- (10) **June 5–LAB SESSION**–With computers as described above.

REGISTRATION FORM

Mail to: Don Bathke, c/o Westinghouse, 1447 Chestnut Ave., Box 3000, Hillside, N.J. 07205
Make checks payable to "North Jersey IEEE"

Please enroll me in MICROPROCESSORS AND MICROCOMPUTERS

Name: _____

Company: _____

Address: _____

City, State, ZIP: _____

Phone: _____

Fee: \$90 IEEE Members \$100 Non-IEEE Members

Enrollment is limited. Fee includes copy of instructor's notes.