



The IEEE

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NEWSLETTER STAFF

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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

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Vice Chairman - 1 Alan H. Stolpen
687-9226
Vice Chairman - 2 Alex Brown
696-4695
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278-7759
Secretary Ann Giedlinski
366-1100, X-221
Member-At-Large Joe Fink
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Member-At-Large Eugene Niemiec
Jr. Past Chairman Donald G. Bathke



Virginia Edgerton, Chairperson of New York Section's PAC discussing IEEE activities with S. W. Green, Congressman from New York's 18th District.

Award Winner Edgerton To Address Section

Virginia Edgerton, IEEE Member and New York Section PAC Chairperson, will address the North Jersey Section on September 19. Her topic will be "An Engineer Does Not Do a Job Just Because You Tell Him."

"Engineers are treated like small children; overruled and told to shut up and draw. If there is much fuss, they're fired on the spot. The results in some cases are accidents due to malfunctions that had been recognized, analyzed, documented and on file before they ever happened." Clearly, it is time for a change. Ms. Edgerton will discuss these changes.

Virginia Edgerton is the first IEEE Member to receive support under the Institutes new bylaw designed to recognize members placed in jeopardy by their adherence to the IEEE Code of Ethics. She was presented with the second "Award for Outstanding Service in the Public Interest". The award, presented by the Committee on Social Implications of Technology (CSIT),

recognizes members who, in the course of their professional duties, have acted to protect the public interest, particularly where such action was taken despite personal risk. Her actions, in full accord with both the letter and spirit of the Code of Ethics, were carried out despite an implied threat of retaliation, and the fulfillment of that threat.

Virginia has an MBA from Fairleigh Dickinson University with an undergraduate major in Mathematics. She has 15 years of EDP experience and is now consulting with her business name of Intelligence Technology Resources.

Members and guests are invited. PAC meetings are open to all Engineers. Refreshments will be served.

ATTENDANCE URGED

Your attendance is requested. Bring along a fellow engineer.

Time: 7:30 PM, Wednesday, September 19, 1979.

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

Pre-Meeting Dinner: 5:30 PM.

Call: Richard Tax for further information (201) 391-9075.

AT&T Headquarters Tour

The September meeting of the North Jersey Power Engineering Society will feature a tour of the AT&T Headquarters Building in Basking Ridge, New Jersey. The main feature of the tour is the Building Systems Control Center which maintains control of energy use and recovery systems, as well as other functions including security.

Attendance is open to all interested parties. Attendees are to use the main entrance where the necessary instructions will be given.

Time: 7:30 PM, Thursday, September 27, 1979.

Place: AT&T, Maple Avenue, Basking Ridge at Interstate 287.

Further information may be obtained from the following:

Chairman Gerard V. Barton
353-7000 - Ext. 545
Vice Chairman John A. Baka
455-8534
Secretary Edward P. Griffith
455-8313

EGO Update

Funding of Project EGO for 1979 (See PAC News in the August 1979 issue) has been approved.

Externally Powered Artificial Arms

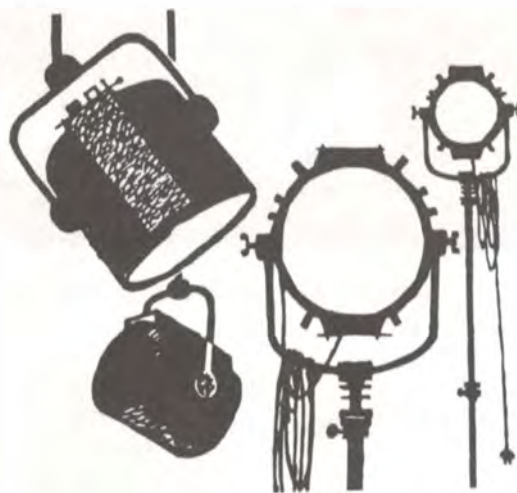
The Metropolitan New York Chapter of EMBS will hold a meeting on "Externally Powered Artificial Arms" on Wednesday October 3. Speaker will be Eugene F. Murphy, Ph.D., Veterans Administration.

Time: 7:30 PM, Wednesday, October 3, 1979.

Place: Rockefeller University, Bronx Laboratory, Room 216, 66th Street and York Avenue, New York City.

Pre-Meeting Dinner: 6:00 PM, Tower Cafeteria, 64th and York Avenue, New York City.

Further Information: Maryon J. Williams Jr., Ph.D., P.E. at (609) 452-9280, Biomedical & Engineering Shared Technology.



SPOTLITE ON NORTH JERSEY

In a few weeks each member of the North Jersey Section will be receiving a letter from IEEE Headquarters. The outside of the envelope will probably be marked "Ballot" and you will be requested to cast your vote for the Offices of President and Executive Vice President IEEE, as well as, the Office of Region I Director. The North Jersey Section is part of Region I. Amendments to the IEEE Constitution will also appear on the ballot.

Here is your opportunity to express your opinion on the course of direction that IEEE will pursue in the months ahead. Which of the following actions will you take in the balloting process:

- Take a look at the envelope, note the avery mailing label and bulk postage rate, and disregard the material enclosed without even opening the envelope.
 - Figure your vote will only be one in thousands to be cast, will be of little consequence in the final outcome and decide not to vote.
 - Come to the conclusion you don't know enough information about the candidates or amendments to make a reasonable choice and elect not to cast a ballot.
 - Put the ballot in a place of safe keeping only to discover it after the election is over.
 - Decide not to vote because postage must be affixed to return the ballot to Headquarters.
 - Complain about how cumbersome and complicated the balloting process appears to be and elect not to participate.
 - Evaluate the candidates and make an informed and confident choice.
- Cast your ballot accordingly and return it promptly in the mail.

We are hoping that you're in the last category who is concerned about IEEE and its role in your future. While we will have no way of determining the number of North Jersey Section members casting ballots in this election, we do have statistics on the recent Section elections. They are not encouraging. Of approximately 4000 members eligible to vote, only 100 ballots were cast. That is less than a 3% turnout.

Yes, it is easy to ignore elections. It requires a little effort, thought and expense to vote. What will you do with your ballot? —Ken Oexle

P.S. For those desiring more information about the candidates or the pros and cons of the amendment propositions, complete information about the election appears in the September issue of the Institute.

MAILGRAM FROM IEEE HEADQUARTERS

D G BATHKE, NORTH JERSEY SECTION IEEE

THE BOARD OF DIRECTORS JOINS ME IN SENDING OUR HEARTIEST CONGRATULATIONS TO THE NORTH JERSEY SECTION ON ITS 25TH ANNIVERSARY. FORMED ON MAY 5TH 1954, YOUR SECTIONS RECORD IS ONE OF WHICH YOU CAN BE JUSTIFIABLY PROUD. THE REAL BACKBONE OF ALL OUR EFFORTS IN THE IEEE IS THE VOLUNTARY SERVICE OF OUR MEMBERS, SUCH AS THOSE IN THE NORTH JERSEY SECTION, IN CARRYING FORTH THE WHOLE ARRAY OF ACTIVITIES THAT WE UNDERTAKE. WE SEND TO THE OFFICERS AND MEMBERS OF THE NORTH JERSEY SECTION OUR VERY BEST WISHES FOR YOUR CONTINUED SUCCESS IN EXPANDING THE PREEMINENCE OF IEEE AND THE VALUE OF MEMBERSHIP IN THE TERRITORY SERVED BY THE NORTH JERSEY SECTION.

JEROME J. SURAN, PRESIDENT

How Microprocessors Impact Control Systems Design

Mr. Terry O. Arney, President of Real Time Technology, Inc., Morristown, New Jersey, will speak on the "Impact of Microprocessors on Control Systems Design at a joint meeting of the NJ Control System and Computer Societies on September 20.

Control Systems Design is a process of reconciling user requirements, available technology, and economic constraints. Microprocessor (Micro) technology is being rapidly integrated into sensors, transmitters, controllers, and display devices. Micros have not changed user requirements, but they have provided significant advances in component technology, and they have had a profound effect on system economics. The most apparent impact of micros is in control system architecture. Micros have allowed more simple, more reliable, and more powerful architectures to be defined. Examples of control system architectural types and how they are chosen, procured, and operated will be presented and discussed.

Mr. Arney is President of Real-Time Technology, Inc., (RTT), a system design and consulting firm in Morristown, N. J. Prior to founding RTT in 1977, Mr. Arney was a manager of the Cities Service Company, Technical Systems. He was also associated with Kennecott Copper and International Minerals and Chemistry. Mr. Arney is a member of the IEEE, and was a past director of the Mining and Metallurgy Division of the Instrument Society of America. He is also a member

of the Association for Computing Machinery, and the Society of Mining Engineers of the American Institute of Mining, Metallurgical and Petroleum Engineers.

Mr. Arney will present his lecture at 8:00 PM on Thursday, September 20 at Bell Laboratories, Whippany Road, Whippany. For further information, please phone Gerry Uhrig 386-6845. This meeting is open to all interested and no charge will be made. A pre-meeting dinner will be held at the AFTON located at Colombia Turnpike and Hanover Road, Florham Park, New Jersey. Those wishing to meet and socialize with other members are cordially welcome.

Please contact John Van Savage, 328-4667 for reservations.

Three Mile Island Plant Rehabilitation

The annual joint meeting of the North Jersey Section IEEE Power Engineering Society and the North Jersey Morris-Sussex Subsection ASME will feature a program on the technical aspects concerning the rehabilitation of the Three Mile Island-2 Nuclear Plant.

Mr. Thomas M. Crimmins, Manager-Generation Engineering, Jersey Central Power and Light Company, will discuss the utility's participation in the rehabilitation program at the nuclear plant while Mr. Harry Kister, Chief of Nuclear Support Section Reactor Operations will

represent the Nuclear Regulatory Commission at the meeting.

Time: 7:30 PM, October 24, 1979.
Place: Jersey Central Power & Light Company, Madison Avenue (Rt. 24) and Punchbowl Road, Morristown, N. J. 07960.

Attendance at the meeting is free and open to all interested parties. Refreshments will be served.

Further information on the meeting may be obtained from the following individuals:

PES Chairman . . . Gerard V. Barton
353-7000 Ext. 545

PES Vice Chairman . . . John A. Baka
455-8534

ASME Contact . . . Joseph A. Schelke
386-4916

The November 28, 1979 Meeting Program will include a tour of McGraw Edison Battery Manufacturing Plant in Bloomfield, N. J.

Presidential Tapes

You have a unique opportunity this year to hear a recorded debate between the Candidates for 1980 IEEE President. On June 6, 1979 the Candidates met in Cleveland, Ohio for one of several scheduled debates. The debate was taped and made available to our Section.

The IEEE Board of Directors, in the interest of increasing membership awareness of the views of the Candidates, authorized that the taped debate be made available to all Sections for their members. Our Section wants you to exercise your vote this year. We want you to hear the men who seek the office of President. We have, therefore, scheduled an interesting meeting where you can hear Presidential Candidates Leo Young and Burkhard Schneider debate and express their views about IEEE and its future.

Come out and join us! Learn about the positions of the two Presidential Candidates. When you vote this year make an informed choice about the future leadership of IEEE. hear their views and express yours. After all IEEE is your organization.

The tape will be played prior to the September 5th and October 3rd Executive Committee meeting at 7:00 PM at the Jersey Central Headquarters building on Madison Avenue (Route 24) Morris Township, New Jersey. We look forward to seeing you.

“MOS CIRCUIT DESIGN”

INSTRUCTOR: Mr. Roger Stewart, RCA Solid State Division
PLACE: Somerset County Vocational High School, Somerville
TIME: Thursday at 7 PM, Starting November 1, 1979

OUTLINE OF COURSE

November 1 — Basic Logic Design - Amplifiers, speed/power products, balanced and unbalanced rise and fall time logic design, loading effects, passive and active loads.

November 8 — Advanced MOS Logic - Dynamic logic, bootstrap circuits, clocked logic, oscillators, bias generators, differential amplifiers.

November 15 — Power Dissipation - Optimum design using passive loads, semi-active loads, power gating, steady state and transient thermal calculations, overload protection circuits.

November 29 — Noise - DC vs transient effects, noise source, types, noise immunity and common mode rejection, power supply decoupling, signal line routing, instabilities, feedback and oscillations.

December 6 — Interface Circuits - PMOS, NMOS, CMOS, TTL, ECL, IIL circuits, review and summary.

Detail information may be obtained from the coordinator, Mr. John Van Savage, (201) 328-4667/4843. One CEU will be awarded upon satisfactory completion.

Attendees will have the opportunity to participate in solving specific problems such as, binary to digital decode and display, 5 to 12 volt bias generator, overload protected power supply, and printed circuit board shift register layout.

Tuition: IEEE members \$30, non-members \$60; IEEE Student members free on a space available basis - contact Mr. Van Savage (see phone above), student non-members on space available basis \$6 per lecture. Payment of tuition reserves a place in the lecture hall, but if there are still seats available tuition may be paid the night of the first lecture. Those desiring to drop out of the lecture series will receive a full refund if the coordinator is informed before the beginning of the second lecture.

REGISTRATION FORM

Mail to: Leonard Gardner, 7 Acorn Place, North Caldwell, N. J. or phone (201) 328-3450/6416
Make checks payable to “North Jersey IEEE”

Please enroll me in “MOS CIRCUIT DESIGN”

Name: _____

Company: _____

Address: _____

City, State, ZIP: _____

Phone: _____

IEEE Member No. _____

Fee: \$30 IEEE Members \$60 Non-IEEE Members

IEEE Grade _____

FIBER OPTICS

INSTRUCTOR: Mr. Peter Steensma, ITT-DCD
PLACE: ITT Auditorium, Nutley
TIME: Tuesdays at 7 PM, Starting September 11, 1979

Outline of Course

- September 11 — Overview, history, and fundamental background.
- September 18 — Optical wave guides, propagation and fabrication.
- September 25 — Optics, fiber cable, mechanical and optical considerations.
- October 2 — Coupling components, injection, splicing, and connectors.
- October 9 — Sources for fiber systems, material structures and characteristics.
- October 16 — Photodetectors, physics of devices.
- October 23 — Terminal and link designs.
- October 30 — Multiterminal systems.
- November 6* — Prospectus and economics.
- November 13 — Review, emphasis upon deciding when to use fiber optics and how to put together practical systems.

*Should the majority of attendees desire, no lecture will be presented on Election Day, November 6, in which case the series would end on November 20 (the Tuesday of Thanksgiving week).

Tuition: IEEE members \$50; IEEE Student grade members free on a space available basis only; Non members \$100; Non member students \$50. Payment of fee reserves a seat for the lecture series but if space is available tuition may be paid on the night of the first lecture.

Those desiring to drop out of the lecture series will receive a full refund if the series coordinator is notified before the beginning of the second lecture. You may attend the first lecture by paying the tuition, think it over a few days, and drop out without obligation and **have your own check promptly returned.**

For those who attend at least eight of the lectures, two CEU of credit will be awarded by the North Jersey Section IEEE. Those desiring this credit who miss more than two lectures must demonstrate to the instructor that they understand the material that they missed.

The North Jersey Section of IEEE reserves the right to cancel the lecture series if fewer than 15 paid registrants remain enrolled.

REGISTRATION FORM

Mail to: Leonard Gardner, 7 Acorn Place, North Caldwell, N. J. or phone (201) 328-3450/6416
Make checks payable to "North Jersey IEEE"

Please enroll me in "FIBER OPTICS"

Name: _____ Company: _____

Address: _____ City, State, ZIP: _____

Phone: _____ IEEE Member No. _____

Fee: \$50 IEEE Members \$100 Non-IEEE Members IEEE Grade _____
\$50 Non Member Student

IEEE NORTH JERSEY SECTION LECTURE SERIES-FALL, 1979

IS YOUR BUSINESS IN THE FUTURE

INSTRUCTOR: Various specialists will serve as guest lecturers.
PLACE: ITT Auditorium, Nutley
TIME: Thursdays from 7-9 PM., Starting September 20, 1979

Outline of lecture series:

September 20 — Overview, a general discussion to help each individual decide if their own business is in their future.
September 27 — Aspects of incorporation, proprietorship, partnership, how to do it, licenses required, which state, operating in more than one state, self incorporation, buying another business.
October 4 — Bookkeeping, records for local, state, and federal governments, other advantageous records.
October 11 — Advertising promotion, how to get known, promoting yourself, ethics of advertising.
October 18 — How to put together an attractive copy, art work, textural materials, cards and brochures, proposals, reports.
October 25 — How to obtain jobs, source of information, small business assistance, methods of contracting prospective clients, how to grow.

Tuition: IEEE members \$30; IEEE Student grade members free on a space available basis only; non members \$60; non member students \$30. Payment of fee reserves a seat for the lecture series, but if space is available tuition may be paid on the night of the first lecture.

Those desiring to drop out of the lecture series will receive a full refund if the coordinator is notified before the beginning of the second lecture. See details in the notice for the series on Fiber Optics.

For those who attend at least five of the lectures 1.2 CEU of credit will be awarded. See details in the notice mentioned above.

The North Jersey Section of IEEE reserves the right to cancel the lecture series if fewer than 15 paid registrants remain enrolled in the lecture series.

REGISTRATION FORM

Mail to: Leonard Gardner, 7 Acorn Place, North Caldwell, N. J. or phone (201) 328-3450/6416
Make checks payable to "North Jersey IEEE"

Please enroll me in "IS YOUR BUSINESS IN THE FUTURE"

Name: _____	Company: _____
Address: _____	City, State, ZIP: _____
Phone: _____	IEEE Member No. _____
Fee: \$30 IEEE Members \$60 Non-IEEE Members \$30 Non Member Students	IEEE Grade _____

FOR PRESIDENT, 1980

(Nominated by Board of Directors)



Burkhard H. Schneider

Vice President

The Detroit Edison Company

Detroit, Michigan

Mr. Schneider's engineering career began at Detroit Edison in 1949, upon receiving the B.E.E. degree from Cornell University. Initial work in analog computer design led to extensive experience in power system planning and engineering. As Assistant Vice President for Planning and Research, he was responsible for all corporate power system planning activities, R&D, high technology problem solving, and environmental policies. In 1977-1978, Mr. Schneider was Chairman of the Board of the Michigan Energy and Resource Research Association, a unique consortium of industry, government, and academia, which is leading the way toward development of a comprehensive energy policy for Michigan. In April 1979, he became Vice President of Division Operations. He has published technical papers, in both the Institute and trade journals, and done graduate work at Wayne State University and Columbia University. He is a veteran of WWII with five battle stars, and is a Registered Professional Engineer in Michigan.

IEEE Activities—(S'43-M'50-SM'55). OFFICES: Board of Directors, 1975-78; Secretary-Treasurer, 1975-76; Director, Region 4, 1977-78. COMMITTEES/BOARDS: Ad Hoc Committee on Registration, 1977-78; Audit, 1975-76; Budget, 1973-74, Chairman, 1974; Executive, 1975-76; Finance, Chairman, 1975-76; Finance Advisory, 1973; IEEE Employee, 1978-79, Chairman, 1979; IEEE Foundation Board, 1977-79, Treasurer, 1977-79; Individual Benefits and Services, 1978-79; Investment, 1975-76; Life Member Fund, 1975-76; RAB Nominating, 1979; Technical Activities Board, 1972; TAB OpCom, 1972; TAB Finance, 1972-73, Chairman, 1972; United States Activities Board, 1977-78; USAB Controller, 1978; USAB OpCom, 1978. REGIONS: Region 4: Regional Committee, 1977-79, Chairman, 1977-78; Operating Committee, 1977-79, Chairman, 1977-78; Advisory Committee, 1979; Nominating Committee, 1979. SECTIONS: Michigan: Director, 1954-57, Vice Chairman, 1957-58, Secretary-Treasurer, 1958-59, Chairman, 1959-60, AIEE/IRE Section Merger Committee, 1962; and various Section committee offices 1949 through 1963. DISTRICTS: AIEE District #11: District Personnel Development Committee, 1960-62; District Executive Committee, 1958-60. CONFERENCES: AIEE Fall General Meeting, Hospitality Committee, 1961; Cement Industry Conference, Treasurer, 1961; Summer Power Meeting, Vice Chairman, 1965. GROUPS/SOCIETIES: Power Engineering Society: Council, 1965-71, AdCom, 1969-71, Finance Chairman, 1969-71, General Meetings Committee, 1965-68. REPRESENTATIVE: World Energy Conference, U. S. National Committee, 1970-74.

FOR PRESIDENT, 1980

(Nominated by Petition)

Leo Young

Staff Consultant

Electronics Technology Division

Naval Research Laboratory

Washington, D.C.



Dr. Young earned his Doctorate in Electrical Engineering from the Johns Hopkins University, Baltimore, where he held the Lamme Scholarship. He also received honors degrees in Physics and in Mathematics from Cambridge University, England. Before joining the Naval Research Laboratory in 1973, he was Staff Scientist and Program Manager at Stanford Research Institute (1960-73), and Advisory Engineer at Westinghouse (1953-60). He has lectured at universities in California, Maryland, New York, Washington, etc., and in several European countries, and plans to visit Japan. He is Navy liaison representative on the U.S. National Committee of URSI. His microwave filter designs are widely used in industry; he has published over 100 papers, 20 patents, and 14 books, won the IEEE Microwave Prize in 1963, and was elected Fellow in 1968. He helped start IEEE Professional Activities, has worked hard for more rational pensions, and received the USAB citation of honor in 1978.

IEEE Activities—(M'54-SM'56-F'68). OFFICES: Board of Directors, 1979, 1971-74; Executive Vice President, 1979; Division IV Director, 1971-74. COMMITTEES: Antennas and Waveguide Standards, 1965-66; Computer Aided Design Analysis and Realizability, 1966-1967; New Technical and Scientific Activities, 1966-67; Technical Activities Board, 1969, 1971-74; Standards Coordinating Committee 14 (Quantities and Units) 1970-79; Committee on Man and Radiation (COMAR), Chairman, 1972; Constitution, 1972; Nominations and Appointments, 1972-73, 1977; Long-Range Planning, 1977-78; United States Activities, 1972-74, Chairman, 1974; Pensions, Chairman, 1975-78; Individual Benefits and Services, Chairman, 1978; Technology Policy Conference, 1978-79; International Activities, 1979, Chairman. SECTIONS: Baltimore, AP/MTT Chapter, Secretary, 1959-60; San Francisco, MTT Chapter, Chairman, 1963-64; Washington, MTT Chapter, Executive Committee, 1973-79. GROUPS/SOCIETIES: Microwave Theory and Techniques: Administrative Committee, 1965-72, Chairman, 1969, Vice Chairman, 1968; Transactions Editorial Board 1959-78; Operations, Chairman, 1970, Microwave Magnetics Standards, Chairman, 1969-70; Microwave Measurements Standards, Chairman 1968-69; Technical Committees Coordinator, 1968-69, National Lecturer, 1968. Circuits and Systems: Optical, Microwave and Acoustical Circuits, 1977-79. CONFERENCE PROGRAM COMMITTEES: IEEE International Convention (now ELECTRO), 1968, 1977; International Microwave Symposium, 1963-80, Chairman, 1966; International Solid State Circuits Conference, 1968; IEEE/DoD Power Tube Conference, 1978; Antennas and Propagation Symposium, 1978. REPRESENTATIVE: European Microwave Conference, 1969-78; Joint Societies Employment Advisory Committee of California, 1971-72; Engineers and Scientists Joint Committee on Pensions, 1976-78.

Hellman Associates Presents—

A Comprehensive Seminar on the Design and Implementation of Data Encryption Systems

Cryptography & Data Security

Washington, D.C., October 29-31—Dallas, November 7-9
New York City, December 10-12—Los Angeles, January 28-30

Data encryption is now the cheapest, most convenient and least disruptive method for guaranteeing the security of data communications and storage. Expertise on this vital new technique is urgently needed by every organization that handles valuable or confidential data. Ensure that **your** organization can intelligently and effectively take advantage of important new data security methods including the National Data Encryption Standard and the Public Key and Trap Door techniques.

Time Magazine: "The code breakers may finally have met their match. As a result of recent work by Stanford University scientists, ciphers that are for all practical purposes unbreakable can be produced easily. Says *Scientific American* Mathematics Columnist Martin Gardner: 'The breakthrough bids fair to revolutionize the entire field of secret communication' . . . **Hellman** overcame this fundamental obstacle with a dazzlingly simple yet ingenious scheme."

Over 400 people have attended this seminar and extremely favorable comments were received from attendees with backgrounds ranging from the military to financial worlds.

"Dr. Hellman did an excellent job in presenting the material which not only met the needs of the conferees that desired some detail, but also kept the interest of those like myself who did not require such a high level of detail. My knowledge of cryptography and data security has increased many fold."

Mr. Wilbur E. Rice, Staff Supervisor, A T & T Long Lines.



MARTIN HELLMAN

This intensive special seminar is presented by Martin Hellman, who more than anyone, has been at the center of the recent whirlwind of developments in cryptography. He has earned an international reputation for his invention of the revolutionary new Public Key and Trap Door encryption methods. In addition, he has played the leading role in proposing improvements to the NBS Data Encryption Standard (DES). His background includes research with IBM, MIT and Stanford University and extensive consulting. Dr. Hellman is also a gifted speaker able to present complex material in an easily understood and readily applied manner. He is currently an Associate Professor at Stanford University.

This Special Seminar is intended for managerial and technical staff working in the communications, data processing, or security areas, with current or potential responsibilities for implementing, specifying, or authorizing security measures for the protection of data. A degree in engineering, science or mathematics (or equivalent background) would be useful to fully benefit from the more technical material.

Topics

Basic Concepts • Commercial Applications
• Capabilities & Limitations of Cryptography
• Vulnerability of Communications
• Privacy Legislation

Cryptographic Systems • IBM Systems and the National Data Encryption Standard (DES)
• Public Key Cryptosystems • Digital Signatures
• Voice Scramblers

Cryptographic Theory • Cryptanalytic Threats
• Stream and Block Systems • Trap Doors
• Shannon Theory Approach

System Implementation • Key Management
• User Authentication • Error Control
• Threat Analysis • Audit Trails
• Testing & Certification

Application Examples • Networks & Distributed Processing • EFTS • Electronic Mail
• Telecommunications & File Encryption

Hotel Reservations

W.D.C., Holiday Inn Nat'l, (703) 521-1600
Dallas, Marriott, (214) 233-4421
N.Y.C., Barbizon Plaza, (212) 247-7000
L.A., Bonaventure, (213) 624-1000

Registration form

NJ9

Space is limited. Reserve your place now at this intensive special seminar.

Name _____

Address _____

Phone _____

- ☐ Reserve space for me for the _____ course
☐ Check enclosed (\$595)
☐ Invoice me
☐ Contact me about group discounts & in-house presentations
☐ Send further information about courses

Return to Hellman Associates, 730 Alvarado Court, Stanford, Calif., 94305 (415) 328-0647