



The IEEE

Newsletter

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REPORT ALL ADDRESS CHANGES TO:

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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 Ken Oexle
455-8681
Vice Chairman - 1 Alan H. Stolpen
687-9226
Vice Chairman - 2 Alex Brown
696-4695
Treasurer Frank Relotto
278-7759
Secretary Ann Giedlinski
366-1100, X-221
Member-At-Large Joe Fink
Member-At-Large Len Gardner
Member-At-Large Eugene Niemiec
Jr. Past Chairman Donald G. Bathke

Product Liability Meet Open To All

The March meeting of the Reliability Group will be a joint meeting with the North Jersey ASQC. This will be a "Ladies Night" meeting and will feature a talk on "Product Liability" by Shiela Birnbaum, a noted authority on the legal aspects involved in the design, manufacture and sales of product.

Shiela Birnbaum is Professor of Law at the New York University Law School and is practicing attorney in the field of product liability. She is a graduate of Hunter College and NYU and has been a Professor of Law at Fordham University. Ms. Birnbaum is a frequent lecturer and speaker at professional group meetings and seminars, and is the author of numerous books and articles pertaining to product liability litigation.

Time: 7:30 PM, Wednesday, March 19, 1980.

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

This "Ladies Night" meeting is open to all interested engineers and their guests. For further information contact: Rel. Grp. Chairman, Sergei W. Bogaenko, (201) 227-7300 Ext. 208, or Rel. Grp. Secretary, Peter J. Mulvey, (201) 256-4000 Ext 3177.

Fiber Optics Seminar

Purpose of an intensive three-day course on Fiber Optics (F.O.) slated for March 18-20 at Stevens Institute is to present a broad overview of the present

state-of-the-art of Fiber Optic Systems and Components. The course will address F.O. Component Development and theory as well as F.O. system designs and applications. Course participants will learn F.O. system designs and the application areas where Fiber Optics presently offer the most promise.

For additional information about the seminar, contact Bernie Demarinis at 747-9303.

1980 - 81 Officer Slate

The Nominating Committee of the North Jersey Section has announced the following nominations of Section officers for next year:

Chairman. Alan Stolpen
Vice Chairman-1 Alex Brown
Vice Chairman-2 Frank Relotto
Treasurer Anne Giedlinski
Secretary Joe Fink

Candidates for the Member-at-Large position listed alphabetically are:

John Abraham
Robert DeLucia
Ralph Hernandez
Eugene Niemiec

Nominations in addition to those made by the Nominating Committee may be made by petition from the membership. Such nominations must be signed by not fewer than 25 voting members of the North Jersey Section, and transmitted to the Section Secretary for submission to the Executive Committee not later than April 1, 1980. The petition must certify that the person(s) nominated have agreed to serve, if elected.

PES Annual Dinner

The Annual Dinner Meeting of the Power Engineering Society will be held on Wednesday Evening, March 26, 1980, at the Rock Spring Inn, 481 Northfield Avenue, West Orange, New Jersey.

The Committee is looking forward to having members, spouses, guests and solos gathered to honor our past chairman.

The featured speaker for the evening will be Mr. Joseph Antonacci, Guidance Counselor at Randolph High School. Mr. Antonacci will present a program on financing college educations, which will include discussion on the strategy options and source of aid available.

Date: March 26, 1980.

Time: 6:00 PM - "Dutch Treat" Cocktail Hour. 7:00 PM - Boneless Breast of Capon Dinner.

Place: Rock Spring Inn, 481 Northfield Avenue, West Orange, N. J.

Cost: \$8.50 per person.

Reservations: REQUIRED - Please send checks to: John A. Baka - System Planning, Jersey Central Power & Light Co., Madison Ave. @ Punchbowl Rd., Morristown, N. J. 07960.

Additional Information: Gerard Barton, Chairman - (201) 353-7000, Ext. 545; John Baka, Vice Chairman - (201) 455-8534; Ed Griffith, Secretary - (201) 455-8313.

Computer Prediction Of Coronary Artery Disease

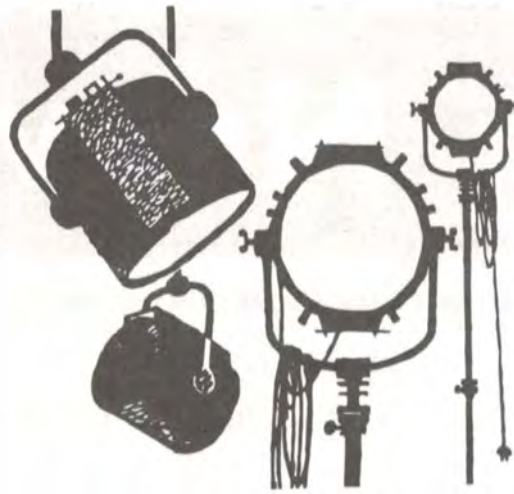
The Metropolitan New York Chapter of EMBS will hold a April 2, 1980 meeting on "Computer Prediction of Coronary Artery Disease from Apparently Normal Electrocardiograms." Prof. Joseph R. Lundy, The Cooper Union School of Engineering will be the speaker.

Time: 7:30 PM, Wednesday, April 2, 1980.

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

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

Further Information: Maryon J. Williams (609) 452-9280.



SPOTLITE ON NORTH JERSEY

In his open letter in the May Spotlight Column, Don Bathke reminded us that our course of action in conducting Section affairs should be directed with one thought in mind — What Can We Do To Serve Our Members Better?

In this regard, the Section recently responded to a survey prepared by the Cleveland Section, IEEE. The objective of the survey was to determine what services IEEE Sections were providing to their members and how successful those endeavors were. As a participant in the survey, we have just received an eighteen-page report prepared by John Donoghue, Chairperson Section Development Committee, Cleveland Section IEEE. Since our own Executive Committee has been wrestling with this concern for some time, we asked Bob Sinusas to review the survey's results, draw some conclusions, and make recommendations for implementation in the North Jersey Section.

We would like to share Bob's thoughts on the matter with you. This month Bob will discuss the survey and its conclusions. In the April Spotlight column Bob will propose a plan for a "Call to Action."

We do hope these articles will stimulate some thought and feedback from the membership in the role we play, don't play, or could play in your professional growth and development. Unfortunately, without your input, the course of action must be navigated by the Executive Committee, alone, perceiving your concerns as best we can. We hope you will shed some light and let your voice be heard. For like a ship entering a harbor, we too need some buoys to mark the channel we should follow. And with that thought, I'll turn the spotlight over to Bob. —KEN OEXLE

As with all surveys, the answers you get depend on the questions you ask. In the main, the questionnaire dealt with what the Cleveland Section is doing now and possible alternatives that they might be considering. The statistical results serve more to compare our section with the others, than to tell us what we should do to increase member participation in section affairs. The results of the survey tell us that our section compares very well in terms of programs, but it also points out that our attendance is lower than the average. This problem can only be solved by you, the concerned members, and to aid you in this task, the pertinent results of the survey are presented rather than my interpretations of the survey. The North Jersey Section answers are either capitalized or in parenthesis depending on the question:

1. How active is your section? Very - 56%, MODERATELY - 44%, Low - 0%
2. Except for summer, do you hold section meetings every month? YES - 75%, No - 25%
3. Do you hold section meetings every month? YES - 12%, No - 88%
4. % of membership attending section meetings? Low - .6% (.2%), High - 3% (1%), Average - 1% (.7%)
5. Do section meetings involve purchase of dinner? Yes - 37%, NO - 63%
6. Do you move meeting location? MOVE - 56%, Same - 44%
7. Section meeting format? Lecture 81% (1), Tour - 6% (2), Lecture/Tour - 6% (3), Panel - 0% (4)

Making Fuel Out Of Refuse

Communities generate tons of solid waste daily, which are most likely dumped in land fills or incinerated in bulk. Community waste, in fact, is a valuable resource. The Bridgeport Resources Recovery System converts garbage and trash into an economical, clean-burning fuel, while recovering metals and glass. The fuel derived, a dry, powdered fuel (ECO-FUEL[™] II), is mixed with oil and used to fuel two boilers at the Bridgeport Harbor Station to generate electricity. The process uses a complicated recirculated hot gas system to dry the refuse and maintain low oxygen concentrations. Due to the high variability of moisture in refuse, a highly responsive control system must be provided. Computer models were developed to demonstrate that the system was controllable and that available damper actuators could respond quickly enough to correct the upsets.

Mr. Floyd Hasselriis of Combustion Equipment Associates will lecture on "A

Dynamic Process Control Simulation Used in Bridgeport Refuse to Fuel Process." He will review the Dynamics Model of a Control System and go through the dynamics of an abrupt change of load equations. His talk will center on the computer model used in the drying process, and should be of great interest to both Control Systems and Computer Engineers. All engineering disciplines are urged to attend this timely lecture which deals with resource and energy conservation.

Floyd Hasselriis is the Manager of Corporate Technology at Combustion Equipment Associates, Inc., in New York City, has a Masters degree in Mechanical Engineering, A PE license in New York and Massachusetts and is a member of the ASME. He is active in the ASTM Committee E-38 on Resources Recovery, the ASME Solid Waste Processing Division and is Research Needs Chairman of the ASME Research Committee on Industrial and Municipal Wastes.

Mr. Hasselriis will present his lecture at 8 PM on Thursday, March 27, 1980 at

Bell Laboratories, Whippany Road, Whippany, N.J. For further information please contact John Van Savage, Chairman, Controls System Society, 328-4667, Maitland McLarin, Computer Society, 328-6263 or Gary Uhrig 386-6845.

A pre-meeting dinner at 6:15 PM will be held at the AFTON located at the junction of Columbia Turnpike and Hanover Road, Florham Park, N.J. Those wishing to meet the speaker and socialize with the attendees are cordially welcome. Please contact John Van Savage so that he can make reservations.

Irwin Feerst To Meet North Jersey Members

Irwin Feerst will appear as a guest speaker at the March 26th meeting sponsored by your Professional Activities Committee. Feerst is and has been an outstanding performer and contributor in the effort to increase the engineers status. He has, more than once, been a candidate for the post of IEEE President. He has appeared before Congress to testify on the behalf of the practitioner, and he has published a monthly newsletter entitled the "Committee of Concerned E.E.'s." His newsletter is now in its eighth year.

Mr. Feerst will lead a discussion on; How the IEEE Functions, Distribution of Seats on the Board of Directors, How you are Represented. The new IEEE Patent Agreement will be addressed and used as an example.

This meeting is of particular importance to each member since it provides an opportunity to express their views. Mr. Feerst has specifically requested that this meeting be open and designed to stimulate and encourage member participation. Richard Tax, the chairman of your Professional Activities Committee, has agreed to forward the results of any consensus to Dr. Leo Young, IEEE's President.

PAC meetings are open to all engineers. Members and guests are invited. Refreshments will be served. Your attendance is requested. Bring along a fellow engineer.

Time: 7:30 PM, Wednesday, March 26, 1980.

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

Pre-Meeting Dinner: 5:30 PM.

Call: Meyer Rosenthal (201) 731-4812 (7 - 10 PM) for further information and dinner reservations.

-
8. Most successful format? Lecture - 27%, TOUR - 55%, Lecture/Tour - 18%, Panel - 0%
 9. Meeting Topics? General Interest - 59% (50%), Specialized - 41% (50%)
 10. Meeting topics drawing largest attendance? GENERAL - 73%, Specialized - 41%
 11. Do professional issues attract members to section meetings? YES - 56%, NO - 44%
 12. Methods used to advertise sections meetings? Loose Telephone Network - 25%, Organized Telephone Network - 0%, NEWSLETTER - 100%, Company Bulletin Boards - 69%, Mailed Notices - 44%
 13. Have luncheon meetings been tried for section meetings? Yes - 19%, NO - 81%
 14. Attendance at luncheon meeting versus evening session? Higher - 0%, Same - 67%, Lower - 33%
 15. Do you publish a monthly newsletter? YES - 100%, No - 0%
 16. Publication of yearly schedule of section/group meetings? Yes - 44%, NO - 56%
 17. Tried luncheon meetings for groups/societies? Yes - 60%, NO - 40%
 18. Group/Society attendance at luncheon versus evening session? Higher - 22%, Same - 56%, Lower 22%
 19. Do you hold one day seminars? Yes - 69%, NO - 31%
 20. Average number of seminars held, fee and attendance? 3.9, \$37, 57
 21. Do many young engineers participate in section affairs? Yes - 47%, NO - 53%
 22. PAC chairperson appointed or elected? Elected 20%, APPOINTED - 80%
 23. Purpose for which direct mail used: Section Meetings - 62%, Group/Society Meetings - 69%, Seminars/Short Course - 81%, Elections - 13%

There are certain things we might try in our Section such as luncheon meetings, one-day seminars, and direct mailings, but there is no basis to expect a dramatic improvement in our member participation. There is an old saying to the effect that people come to meetings that promise to make them healthier, wealthier or wiser - promises to reduce ulcers and insure a big bonus by presenting information to help solve problems that you face. Let us be honest about it - is not your decision to attend or skip a meeting based on what benefit you expect to derive if you were to attend? It is the substance and not the format that matters, but that is next month's topic.

—BOB SINUSAS

IEEE NORTH JERSEY SECTION LECTURE SERIES-SPRING, 1980

"HOW TO GET A NEW JOB"

TUESDAYS, 7:00 P.M. to 9:00 P.M., Starting April 1, 1980
I.T.T. Avionics Auditorium (at foot of tower)
500 Washington Avenue
Nutley, New Jersey 07110

Speaker: Mr. J. Keyes Coppola

For Whom Intended: The professional who wants to gain expertise in resume writing, interviews and employment opportunities which are available if they want to find a new position.

- (1) **APRIL 1 — INTRODUCTION**—Placement services, consulting, direct employment, fees, resumes, and interviews.
- (2) **APRIL 8 — RESUME WORKSHOP**—Structure, organization, format, spelling, grammar, group workshop and evaluation.
- (3) **APRIL 15 — INTERVIEW WORKSHOP**—Preparation, appearance, different types of interviews, group workshop and evaluation.

REGISTRATION FORM

Mail to: R. Hernandez, 324B Hackensack Street, Woodridge, N.J. 07075

Make checks payable to "North Jersey IEEE"

Please enroll me in "HOW TO GET A NEW JOB"

Name: _____ Company: _____

Address: _____ City, State, ZIP: _____

Phone: _____ Membership No.: _____

Fee: \$35 IEEE Members \$45 Non-IEEE Members

Enrollment is limited.

MICROPROCESSORS AND MICROCOMPUTERS

THURSDAYS, 7:00 P.M. to 9:00 P.M., Starting April 3, 1980
I.T.T. Avionics Auditorium (at foot of tower)
500 Washington Avenue
Nutley, New Jersey 07110

Speaker: Mr. S. Levy

For Whom Intended: The practicing engineer who wants to acquire or increase understanding of micros, with emphasis on software.

- (1) **APRIL 3 – INTRODUCTION AND OVERVIEW**—Basic definitions, examples of applications, history, and advantages of microprocessors.
- (2) **APRIL 10 – NUMBER SYSTEMS AND CODES**—Computer math: Binary, octal, decimal, hexadecimal, conversions, addition, subtraction, multiplication, and division.
- (3) **APRIL 17 – MICROPROCESSOR ARCHITECTURE**—How computers work, CPU, ALU, ROM, RAM, PROM, and EPROM.
- (4) **APRIL 24 – INSTRUCTION SET**—Mnemonics, OP code, instructions available to programmer, etc.
- (5) **MAY 1 – COMPUTER SOFTWARE AND LOGIC**—Machine language, assembly language, and high level languages.
- (6) **MAY 8 – SIMPLE PROGRAMS**—Add, store, and others.
- (7) **MAY 15 – MORE COMPLICATED PROGRAMS**—Conditional, branch, subroutines, and others.
- (8) **MAY 22 – COMMON I/O**—Printers, keyboards, disks, and tape.

REGISTRATION FORM

Mail to: R. Hernandez, 324B Hackensack Street, Woodridge, N.J. 07075

Make checks payable to "North Jersey IEEE"

Please enroll me in "MICROPROCESSORS AND MICROCOMPUTERS"

Name: _____

Company: _____

Address: _____

City, State, ZIP: _____

Phone: _____

Membership No.: _____

Fee: \$80 IEEE Members

\$100 Non-IEEE Members

Enrollment is limited.

JOINT CHAPTER ON INSTRUMENTATION & MEASUREMENT

Measurement Of Transmission Characteristics Of Fiber Optic Communications Cables

A ONE DAY SEMINAR, MARCH 20, 1980, 9:30 AM - 4 PM
At Alumni Center of N. J. Institute of Technology, Newark, N. J.

I. Measurement of Transmission Characteristics of Optical Fibers - Speaker: Peter Kaiser - Bell Laboratories

Peter Kaiser is well known for his work and investigations of the transmission properties of glass fibers as a communications media. He will discuss fiber loss and dispersion phenomena, as well as some of the more important loss, dispersion, band width, numerical aperture and refractive index profile measuring techniques of multi and single mode fibers.

II. Splicing and Connecting Optical Fibers - Speaker: K. Scott Gordon - Thomas and Betts Corporation

K.S. Gordon is currently Manager of Optoelectronics Technology at Thomas and Betts. He will discuss the joining of optical fibers and will review the progress to date and the technical problems yet to be solved.

III. Cable Design Parameters - Speaker: J.B. Masterson - General Cable Corporation

J.B. Masterson is the Assistant Director of Research on Fiber Optics at General Cable Corporation. His presentation will cover cable design parameters as they relate to materials and the environment in which the cable will be placed.

IV. New Directions in Light Measurement Technology - Speaker: Paul Wendland - Photodyne Corporation

Paul Wendland was until 1978, founder and president of United Detector Technology and is now president of Photodyne Corp. He will discuss a number of new optical instrument concepts such as those included in the design of the optical multimeter.

V. A Joint Discussion With All Speakers

PRE-REGISTRATION: Send check payable to "IEEE I&M Joint Chapter"
Al Mindes, 20 Conkling Road, Flanders, N.J. 07836

\$20.00 Members IEEE, \$30.00 Non-Members

Name _____

Address _____

Company _____

Telephone _____

Registration at Door: 8:30 AM \$25.00 Members, \$35.00 Non-Members



PAC NEWS

By R. Tax

Feerst Is Back!

One year after Irwin Feerst had his heart attack he is to speak in New Jersey, on March 26th. Has he lost any stamina, any vigor, or any drive? Not that we can detect. He may have mellowed a bit, but not in his drive to enhance the status of engineers.

During the past year he has continued to publish his "Committee of Concerned E.E.'s" newsletter. This is now in its ninth year of circulation.

Note: Mr. Irwin Feerst has never refused to assist the North Jersey Section when asked to participate. It would be nice if more of our own members had some of his drive.

Check this issue for our PAC meeting with Irwin Feerst.

USAB Announces Awards Recipients

The United States Activities Board and its Awards and Recognition Committee have named the winners of awards for professional activities for 1979.

The top award, for Engineering Professionalism, has been awarded to Bruno O. Weinschel, for "outstanding contributions toward the advancement of the professional goals of the Institute."

The USAB Award for Distinguished Public Service to the Engineering

Profession, for persons outside the profession, was awarded to Congressman Mike McCormack for his advocacy of IEEE goals of professionalism in engineering. Four USAB Citations of Honor have been awarded to George Abraham, Robert D. Briskman, Robert F. Cotellessa, and Joel B. Snyder, for "exemplary effort and dedicated service toward attaining recognition of engineering professionalism."

USAB Awards for Regional Professional Activities will be presented to Arthur L. Rossoff (Reg. 1), James F. Strother (Reg. 2), John I. Barron (Reg. 3), Marlin Ristenbatt (Reg. 4), David L. Johnson (Reg. 5), and Kenneth L. McGowan (Reg. 6). In addition, 20 Certificates of Appreciation will be awarded.

Future PAC Meetings

"How to Invest Your IRA and Keogh Funds" for greater growth and flexibility slated for April 16. Robert Barden, National PAC Chairman-IEEE, USAB, and "Your Profession" at a later date.

These are meetings of our choice. Please let me know what meetings you would like. We can increase our meeting attendance and your participation if we can provide you with meetings of your choice. Forward suggestions to PAC c/o R. TAX, 51 Hawthorne Ave., Park Ridge, N.J. 07656.

ODDS & ENDS

The North Jersey Executive Committee will meet on April 2nd at the Jersey Central Power and Light building in Morristown. The meeting is always open to members. Call Ken Oexle at 455-8681 and let him know that you want to attend. Never say, you were not invited.

On Monday, February 11th a special meeting was called by our Section Chairman, Ken Oexle. It seems that a dozen or more members responded to our January request to get our Section's activities moving in Computers and Communications. The meeting was the first for this group to kick-off the new season. See! We knew someone was reading this Newsletter. Look for future activity in these groups and make any helpful suggestions. They will be most welcome.

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Engineering Management Candidates Named

The nominating committee of the NY/NJ Chapter of the Engineering Management Society (Jack L. Jatlow, Chairman; Alex Brown; and James Talbert) has nominated the following candidates, each of whom has agreed to serve if elected. The nominations have been approved by the chapter executive committee.

For Chapter Chairman - Thomas R. Morrison. Mr. Morrison is now serving as Vice Chmn. and Chmn. of the meetings and papers committee.

For Chapter Vice Chmn. - Dr. Betty

K. Jensen. Dr. Jensen is now serving as chapter Secretary/Treasurer.

For Chapter Secretary - John Van Savage. John Van Savage is now serving as Chairman of the membership committee.

For Chapter Treasurer - Frank Astorino Jr. Frank Astorino is now serving as chairman of the awards committee, and on the meetings and papers committee.

The names of independent candidates are welcome and must be sent to Jack L. Jatlow, 166 East 61st St., New York, N.Y. 10021, by May 1, 1980. Election of officers will be held during the all member chapter meeting for May 21, 1980. Your attendance is solicited.

Management Group To Hear Expert On Wage - Productivity Gap

On March 20, the Engineering Management Chapter will present a talk by Mr. James A. Skidmore, Jr., President of Science Management Corporation, who will describe what we as managers can do to stop the downward spiral in the value of our spendable funds. He has found this value can be determined from output per hour and compensation per hour. Data on both of these parameters are available from the Bureau of Labor Statistic Doc. He has found the difference of these parameters is inversely related to the value of our spendable funds; as the difference becomes smaller we will have more apparent wealth. This difference may be expressed as

$$\frac{\text{present output/hr} - \text{past output/hr}}{\text{past output/hr}} = \frac{\text{present compensation/hr} - \text{past compensation/hr}}{\text{past compensation/hr}}$$

As we all know, since 1976 compensation/hr has been steadily increasing while productivity/hr has been steadily decreasing. Mr. Skidmore felt this gap must be decreased before inflation will abate. He will tell us about some of the things we as managers can do to narrow the gap by increasing productivity. He feels these improvements should start with the first-line supervisors. He will help us look at different managerial tasks from a productivity point of view.

Mr. Skidmore is well qualified to help us. Before being named President of Science Management Corporation in 1972 and after beginning his career with a BA degree from Muhlenberg College

(1954) and offers from the Green Bay Packers and the New York Giants, he was a commissioned officer in the Marine Corps. He was a manager of New Jersey Bell Telephone and Assistant to the President of Pepsi Co., and President of Handy Associates executive search. He now serves on the Board of Directors of several major corporation as well as being active in political and fund raising organizations.

This talk will be presented on March 20 at the Clam Broth House in Hoboken. Dinner will be at 6:30 with the talk at 8 PM.

DIRECTIONS TO CLAM BROTH HOUSE

From New York - Via Path Train to Hoboken. Stop is ½ block from restaurant. Via Car - from Lincoln Tunnel take first exit "to Hoboken" go left on 14th St. to end. Make right turn go to First St. Make left turn and first right to restaurant.

From New Jersey - Via Route 3 East - Take Pleasant Ave. exit (last exit before Tunnel) bear right to 14th St. Make left to end of 14th St. Make right go to First St. Make left and then first right to restaurant.

Parking - Usually available Street parking, or one block north to Municipal Park.



Cryptography & Data Security



Martin E. Hellman

Washington, DC March 24-26 — Palo Alto, CA April 21-23 — Woburn, MA May 19-21

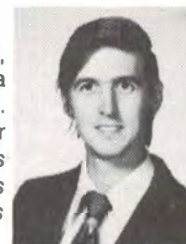
TIME Magazine: "The code breakers may finally have met their match. As a result of recent work by Stanford University scientists, ciphers that are for all practical purposes unbreakable can be produced easily. Says **Scientific American** Mathematics Columnist Martin Gardner: 'The breakthrough bids fair to revolutionize the entire field of secret communication' . . . Hellman overcame this fundamental obstacle with a dazzlingly simple yet ingenious scheme." Prof. Hellman has also played a leading role in suggesting improvements to the National Data Encryption Standard (DES).

Digital Filtering & Control



Palo Alto, CA March 24-26 — Washington, DC April 23-25

Prof. Franklin is best known as the co-author of Ragazzini and Franklin's classic text, **Sampled Data Control Systems**. His new text on digital control promises to make a similar mark, and a prepublication copy will be made available to each attendee. Dr. Treichler is on the technical staff at ARGOSystems and has taught a highly popular course on digital filtering at Stanford University. Student comments include: *Franklin's mode of instruction takes complex topics and makes them appear simple. Content is exceptionally current. Treichler did an excellent job of explaining concepts . . . was always well organized.*



Vulnerability of Anti-Jam

Spread Spectrum Communications



Palo Alto, CA March 31-April 2 — Woburn, MA May 5-7

Dr. David L. Nicholson is Technical Assistant to the Vice President of E-Systems' MELPAR Division. He has been intimately involved with developing jamming equipment and AJ strategies for state-of-the-art military communication systems and has taught at the US Naval Academy. Several agencies and DoD contractors have arranged for special presentations of this highly popular seminar. While it is self contained, previous exposure to spread spectrum concepts would be useful for obtaining full benefit from the more detailed technical material. This seminar goes beyond the basics and is concerned with effective jamming strategies and counter-strategies for AJ.

Error Correcting & Detecting Codes

With Applications to Computer System Design Washington, DC June 23-25



Prof. E. J. Weldon, Jr. is known internationally as the co-author of two authoritative yet readable books: Peterson and Weldon's second edition of the classic text **Error-Correcting Codes** and Lucky, Salz and Weldon's oft referenced **Principles of Data Communications**. He has that rare gift for explaining the extremely complex in plain, everyday language: *Dr. Weldon was able to explain the intricacies of coding in clear, understandable terms. He's truly an outstanding lecturer. Jerry Stockton, NAVSEEACTPAC. Prof. Weldon's knowledge of hardware and microcomputers made his lectures on coding extremely useful to me. Neal Glover, Storage Technology Corp.*

Hotel Reservations

Palo Alto Holiday Inn
(415) 328-2800

Holiday Inn Natl.
(703) 521-1600

Woburn Ramada Inn
(617) 935-8760

Registration Form

NJ 3

Space is limited. Reserve your place now at these intensive special seminars.

Name _____

Address _____

Phone _____

- ☐ Reserve my place at the _____ course
- ☐ Check enclosed (\$595 per seminar)
- ☐ Invoice my company
- ☐ Contact me about in-house presentations
- ☐ Send further information about courses

Return to Hellman Associates,
299 S. California Avenue, Suite 307,
Palo Alto, CA 94306 (415) 328-4091