



The IEEE

Newsletter

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

NJ Comp/Comm/LEO Soc: **Programming Data Flow Computers**

On May 10, 1993, the North Jersey Section Computer/Communication/LEO Chapter will present "Programming Dataflow Computers For Parallel Computation." The speaker at this meeting will be IEEE Distinguished Lecturer Dr. Ali R. Hurson of Penn State.

About The Talk

The asynchronous nature of the dataflow model of computation allows exploitation of maximum inherent parallelism in many application programs. However, before the dataflow model of computation can become a viable alternative to the control flow model of computation, one has to find practical solutions to some major and interrelated issues. These include: the efficient handling of large data structures, such as arrays; the partitioning of a program graph and the assignment of subgraphs to the processing units in a multi processing dataflow environment; and the control and support of large amounts of inter-processor communications.

This talk will attempt to clarify these issues. Moreover, it will introduce new schemes for handling the aforementioned issues. Finally, the simulation and performance analysis of the proposed schemes will be presented.

About The Speaker

Dr. Ali R. Hurson is a Computer Engineering Faculty member at the Pennsylvania State University. His research for the past 12 years has been directed toward the design and analysis of general purpose as well as special purpose computer architectures. Professor Hurson has published over 110 technical papers in areas including computer architecture, parallel processing, database machines, dataflow architectures and VLSI algorithms.

He served as the co-guest editor of a special issue of the *IEEE Proceedings on Supercomputer Technology* and a special issue of the *Journal of Parallel and Distributing Computing*. He has served as a member of technical committees for



various IEEE/ACM conferences and is the co-founder of the IEEE Symposium on Parallel and Distributed Processing.

Professor Hurson is co-author of the IEEE Tutorial books on "Parallel Architectures for Database Systems" and "Multidatabase Systems: An advanced Solution for Global Information Sharing" (in press). He has given numerous tutorials in areas of databases, unconventional computer architectures, and supercomputers. He is a member of the IEEE Computer Society Press Editorial Board, and a member of the IEEE Distinguished Visitor program.

Optional Pre-Meeting Dinner

Come meet the speaker. Pero's New Bridge Inn, 105 Old New Bridge Road, New Milford, 5:30 PM. For directions call (201) 836-6394. Reservations required (908) 388-5110.

All Welcome

You do not need to be an IEEE member to attend. Come and bring your friends.

Time: 7:30 PM, Monday, May 10, 1993.

Place: Fairleigh Dickinson Univ., Room M-207, Muscarelle Bldg., Teaneck N.J.
Information: Richard G. Estock (908) 388-5110.

Systems, Man & Cybernetics **Detection Of Gravitational Waves**

On May 12, 1993, the North Jersey Section IEEE Systems, Man & Cybernetics Society, will present a talk on "The Detection Of Gravitational Waves." The speaker will be Mr. Melvin A. Lewis.

About The Talk

Mr. Lewis will review the challenges involved in the detection of gravitational waves, a topic of research at many of the world's leading universities. The talk will cover the objectives, history, some theoretical background info, the mechanisms of detection, first generation apparatus, and current state-of-the-art.

About The Speaker

Melvin A. Lewis is an electronics engineer with 30 years experience designing circuits and systems including sophisticated instrumentation in the defense industry. He holds a BSEE degree from Fairleigh Dickinson University (1961) and has done considerable graduate work (ABT) in engineering and physics at Columbia University. He is a senior member of the IEEE, is currently chairman of the 1993 Vehicular Technology Conference, and is a member of the Astron, Society of the Pacific, the New York Academy of Science, the American Association for the Advancement of Science, and IEEE Computer Society.

All Welcome

You do not need to be a member of the IEEE to attend, and there is no charge for admission.

Time: 7:30 PM, Wednesday, May 12, 1993.

Place: GEC Marconi, 164 Totowa Rd., Totowa, N.J.

Information: Dr. Michael Ljechenstein (201) 471-0721 or Art Greenberg (201) 633-6129.

MAY, 1993 Volume 39, Number 11

Publication No: USPS 580-500

The North Jersey Section's "The IEEE Newsletter" is published monthly except June by The Institute of Electrical and Electronics Engineers, Inc. Headquarters: 345 East 47th Street, New York, N.Y. 10017-2394. \$1.00 per member per year (included in annual dues) for each member of the North Jersey Section. Second-class postage paid at New York, N.Y. and at additional mailing offices. Postmaster send address changes to: "The IEEE Newsletter," 445 Hoes Lane, P.O. Box 1331, Piscataway, N.J. 08855-1331. USPS 580-500.

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Deadline for receipt of material is the 1st of the month preceding the month of publication. All communications concerning editorial and business matters, including advertising, should be addressed to: The Newsletter, c/o Girard Associates, Inc., 6 Robert Terrace, P.O. Box 455, Mt. Arlington, N.J. 07856 (201) 398-5524.

IEEE North Jersey Bulletin Board System:

0 TO 9600 baud, 8 bits, no parity, 1 stopbit, BBS phone number: 201 669-8268.

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

REPORT ADDRESS CHANGES TO:

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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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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 Art Greenberg, Section Secretary at 633-6129.

Elected Section Officers are listed above.

Metro EMBS:

VDT Radiation: Assessing The Science

On May 11, 1993, the IEEE Metropolitan Chapter of the Engineering in Medicine and Biology Society, the New York Academy of Medicine's Sections on Occupational Medicine and Biomedical Engineering, and the New York Occupational Medicine Association, will host a program on "Radiation From Video Display Terminals: Assessing The Science." The speaker will be Dr. Walter E. Baker. He will be joined in the discussion by Dr. W. James Gould.

About The Program

The National Research Council has developed a model for defining health risk assessment. Under this model, assessment of possible human occupational health hazards associated with electromagnetic radiation (EMR) from electronic visual display terminals (VDTs) requires scientific investigations in three areas: (1) epidemiological experiments demonstrating a cause and effect relationship between VDT EMR and adverse human physiological effects; (2) biological and etiological modelling of possible adverse interactions between VDT EMR and human health; and (3) animal and other biological studies supporting the epidemiological findings, and validating the biological and etiological models. The scientific work performed to date in each of these areas will be discussed, and in particular the scientific data available on health and safety assessment with respect to VDT EMR and human reproductive tissues and organs will be considered. In addition, health and safety issues relating to low frequency electromagnetic fields (ELF and commercial power frequencies) will be mentioned.

About The Speaker

Dr. Walter E. Baker received his Doctorate in Applied Psychology from the Pace University in New York, and a Master of Science Degree from Oxford University in England. Dr. Baker worked for IBM Corporation for 30 years as Corporate Director of Human Factors and Ergonomics, and as Manager of Environmental Health and Safety. Dr. Baker is a private consultant in human factors, ergonomics, and environmental health and safety. He is currently president of Ergonomic Environments, Inc., and a member of the Human Factors and Ergonomic Society, the American Psychological Association, and the American Physical Society. Dr. W. James Gould (Otolaryngologist to Pavarotti and other opera and movie stars) will participate in the discussion.

Post-Meeting Reception

A subscription reception with cocktails and hors d'oeuvres will be held at the New

York Academy of Medicine after the meeting at 7:00 PM. Cost will be \$22.00. Reservations are requested prior to May 7, 1993.

Time: 6:00 PM, Tuesday, May 11, 1993. (7:00 post-meeting reception.)

Place: New York Academy of Medicine, 5th Ave. at 103rd Street, NYC. (Limited free parking in NYAM enclosed lot at 2 East 103rd Street.)

Further Information/Reservations: Office of Medical Education, New York Academy of Medicine (212) 876-8200, ext. 235; Joel Levitt (718) 891-6460 or Edna Feher (212) 757-0610.

North Jersey Section PACE: Effective Technical Writing For Engineers

At the May 13, 1993, meeting of the North Jersey Section's Professional Activities Committee for Engineers the topic will be "Proven Paths To Effective Technical Writing For Engineers." The speaker will be David S. Greenspan.

About The Talk

This workshop is for engineering professionals who are not trained writers. Topics focus on four writing assignments engineers frequently encounter: reports, proposals, manuals, and articles. Useful writing principles and practical tips from writing professionals will be presented. Representative examples from each assignment category will be offered for group evaluation, and the audience will participate in interactive problem-solving exercises. Emphasis will be place on "how-to" instructions for improving your writing efficiency and effectiveness.

About The Speaker

David Greenspan is a documentation contractor and instructional designer. He operates Montville Data Services in Pine Brook, New Jersey which specializes in equipment documentation, course development, and presentation graphics. Greenspan is an officer in the local chapter of the American Society for Training and Development. Before becoming a technical writer, Mr. Greenspan spent over twenty-five years as a satellite communication system engineer and engineering manager.

All IEEE members and guests are invited to attend.

Time: 7:30 PM, Thursday, May 13, 1993.
Place: JCP&L Co., 300 Madison Ave., Punch Bowl Room, Morristown, N.J.
Further Information: Robert Sinusas (201) 228-3941.

Section Asks Members Help To Land National Symposium 2000

The North Jersey Executive Committee is asking Section members to help in acquiring the MTT National Symposium for the year 2000.

Atlantic City, Philadelphia and Boston are in the running for the location of the Symposium in the year 2000.

The Executive Committee feels we are in a position to land the Symposium in 2000, by offering the Site Negotiation Committee of MTT either of two well-qualified sites, with each offering somewhat different amenities. We will let MTT ADCOM choose either on the basis of 1993 economics (probably Atlantic City) or on the basis of a prosperous future (probably Philadelphia).

Members can help by sending letters, telephoning, Fax'ing, sending e-mail (for many of the ADCOM members e-mail addresses of the form F.Last@ieee.org are available, where F. is the first initial, Last is the last name). A suggested letter follows:

"I am one of the approximately 35,000 IEEE members in the New Jersey-Philadelphia metropolitan area who have waited since 1976 for the chance to again host the MTT Symposium. I am within one tank of gas of either Atlantic City or Philadelphia, and can then have the opportunity to visit the Technical Conference and Exhibits without the need to fly in, or even to stay overnight. Under the current and predictable future economic climate, this is about the only way that most of us will have the chance to attend. I know that our members will actively support the Steering Committee in its 7 year mission, and that an MTT Symposium sited either in A.C. or Philadelphia will be the heaviest attended in the history of the Symposium. Please vote for either A.C. or Philadelphia during your deliberations in June during The Global Reach of Microwaves."

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No. NJ Consultants' Network: Essentials Of The Well Drafted Legal Contract

At the May 27th meeting of the IEEE Consultants' Network of Northern NJ, Anne E. Aronovitch, an attorney and partner at the firm of Schenck, Price, Smith and King in Morristown, will discuss "Essentials Of An Independent Contractor Agreement."

About The Talk

The focus of this talk will be on the components of a well drafted contract and the legal implication of various provisions in a typical work contract. Using a form of an independent contractor agreement as a general outline, special attention will be paid to the variants on particular provisions, including compensation and payment issues. The discussion will also review contract clauses that may be requested by businesses for whom work is being rendered, as well as a general discussion of the use of a letter of intent in lieu of a formal contract.

About The Speaker

Anne E. Aronovitch specializes in the areas of business and real estate law and has worked with independent contractors in a variety of business areas.

About The Consultants' Network

The IEEE Consultants' Network of Northern NJ was founded in April 1992 to encourage and promote the use of independent technical consultants by business and industry. Meetings are held on the last Thursday of each month at GEC-Marconi. The Network distributed its first Directory of Consultants in March '93. For a complimentary copy, call Alex Richardson (201) 992-0448.

Time: 7:30 PM, Thursday, May 27, 1993.

Place: GEC-Marconi Facility, 150 Parish Drive, Wayne, NJ.

Directions: From Intersection of Rte. 23 and Rte. 46, approx 1 mile east to Riverview Drive. North on Riverview for 1.5 miles to traffic light at golf course. Go straight on Valley Road to next light; turn left onto Parish Drive. Follow to "T"; left turn for 2 short blocks to Dey Rd. Left on Dey Rd. GEC entrance approx. 100 ft. on right side.

Information: For alternate directions and up-to-date meeting status call (201) 736-0771 (Walker Elec. Services VOICE MAIL - 24 hrs). For other questions regarding the meeting or the Consultants Network, call Jim Boyd (201) 584-0329.

North Jersey Section PACE: Engineering To A New World Order

At the June 10, 1993, meeting of the North Jersey Section's Professional Activities Committee for Engineers the topic will be "Engineering To A New World Order (NWO)." The speaker will be Allan Boschen.

About The Talk

Mr. Boschen says "Perhaps we need to bring a little *political engineering* and *economics engineering* to bear, or maybe some basic *thought engineering* is needed in the centers of power of the world—not only the political centers, but also industrial, commercial, and financial, centers, among others." As one of his sources on this he cites a book of essays by Dr. Albert Einstein. He also makes key references to Dr. Steinmetz and to Andrew Carnegie. A neutral and *easy-to-learn* language, such as Esperanto, will have a key role in the NWO as the "universal *second* language", of course, as will also the essential improvement of the basic underpinnings for good education.

Allan Boschen's talk on Esperanto at a previous meeting cited the unique potential of Esperanto for the enhancement of education, among other features. In his second pitch to us he featured the difficulties that so many youngsters have in learning to read "...one of the principal roots of today's overall problems in education", he says. He gave us an in-depth analytical appraisal in both of those presentations—"Education Engineering," he says, "much needed for the nature of today's problems in education." (Allan also worked as a high school teacher for seven years, where one of his subjects was Esperanto.)

About The Speaker

Allan Boschen received his BSEE degree from Newark College of Engineering in 1953. He worked for GE Defense Systems in Pittsfield, Massachusetts as a digital systems engineer in various capacities from 1959 until his retirement in 1989. He is a member of the Berkshire Section of IEEE and has been active in the Section's EXCOM and in PACE since 1980.

All IEEE members and guests are invited to attend.

Time: 7:30 PM, Thursday, June 10, 1993.

Place: JCP&L Co., 300 Madison Ave., Punch Bowl Room, Morristown, N.J.

Further Information: Robert Sinusas (201) 228-3941.

NY/North Jersey-EMS: Documentation For Safe Software

On May 18, 1993 the Engineering Management Society will present a talk on "Documentation For Safe Software." The speaker will be Stan Wiley.

About The Topic

The focus of this talk will be on software development documentation for possible audit by the U.S. Food and Drug Administration (FDA). An example of the development of software embedded in a medical device will be used.

Software is pervasive in medical devices and the FDA seeks to assure that computer-controlled systems behave safely and in the manner intended. To accomplish this the FDA regulates and inspects firms that produce medical devices. Inspections may include audit of software development documentation to verify that controls are in-place and are being used to assure safety and functionality. FDA inspections can occur before market distribution of a product and while it is in the field. Thus not only development but field support and follow through must be documented.

The topic relates to applying ISO 9000-3, which is the ISO 9000 standard on quality in software development, supply, and maintenance. Embedded systems software developers and managers, will find insights that may be applied prior to seeking ISO 9001 certification.

About The Speaker

Stan Wiley is Director of Cardiac-Assist Instrumentation Engineering for Datascope Corp., Paramus, New Jersey. He has been in electronic product development and embedded systems software engineering for 20 years. His current responsibilities include research and development, product support, and FDA compliance for life sustaining and life supporting medical devices. Before joining Datascope, Stan held engineering and technical management positions in the communications industry with Extel Corporation, Timeplex, Inc., and Motorola, Inc. Stan holds a BSEE from MIT, MSEE from IIT, and an MBA from New York University. Stan is a member of AAMI, IEEE, ACM, and ISA.

Time: 7:00 PM, Tuesday, May 18, 1993. No reservations are required.

Place: GEC Marconi, 164 Totowa Rd., Wayne, N.J. This is off River View Road and across the street from the Passaic County Golf Course.

Information/Reservations: Al Connelly, (201) 831-8171.

NJ Comp/Comm/LEO Soc: **Understanding Knowledge-Based Systems**

On June 10, 1993, Dr. Y.T. Chien, of the National Science Foundation, Washington, D.C., a Fellow of the IEEE and a Distinguished Lecturer, will present a talk on "Understanding Knowledge-Based Systems."

About The Talk

Within the context of Artificial Intelligence, Knowledge-Based Systems (computers or programs which attempt to capture knowledge or human expertise to assist in problem solving tasks) were clearly an expression of successful technology transfer (from research to applications) in the 1980's. A brief summary of NSF's programs in support of research, both basic and strategic, in this and related areas will also be discussed.

This talk will discuss the principles of these systems and raise some issues that will help us understand them in a larger context: what goes into and comes out of them; how to measure their performance; how they evolve, change and improve; what are the new roles they might plan in our information-oriented society; and how this technology is influenced by the behavior of economy, the forces of the society, and the global business environment.

About The Speaker

Y.T. Chien is Director of the Division of Information, Robotics, and Intelligent Systems at the National Science Foundation (NSF). From 1967 to 1982, Dr. Chien was on the faculty of the University of Connecticut, where he taught and did research in the Electrical Engineering and Computer Science Department. For four years, he served as chairman of that department and subsequently became Assistant Dean of Engineering for Computer Research. Prior to his current position at NSF, he spent two years as a Researcher and Group Leader at the Artificial Intelligence Center, Naval Research Laboratory in Washington, D.C.

Dr. Chien has authored or co-authored three books: "Fundamentals of Computing" (John Wiley); "Interactive Pattern Recognition" (Mercel Dekker); and "Knowledge-Based Systems—A Tutorial" (IEEE CS Press). He is a member of the Assoc. for Computing Machinery (ACM) and American Association for Artificial Intelligence (AAAI); and a Fellow of the IEEE.

Optional Pre-Meeting Dinner

Come meet the speaker. Fireside Inn, 70 W. Passaic St., Rochelle Park, 5:15 PM. For directions (201) 845-8333. Reservations required, (908) 388-5110.



All Welcome

You do not need to be an IEEE member to attend. Come and bring your friends.

Time: 7:30 PM, Thursday, June 10, 1993.

Place: Fairleigh Dickinson Univ., Room M-207, Muscarelle Bldg., Teaneck N.J.

Information: Richard G. Estock (908) 388-5110.

North Jersey Section: **Delivering Software Products To The Global Marketplace**

Delivering Software Products to the Global Marketplace is the topic of the third of seven 1993 IEEE videoconferences being offered by the North Jersey Section. This live and interactive event will occur Thursday, May 20, 1993. Attendance is limited to IEEE members only.

From human-machine interfaces and product documentation conformance to international standards and worldwide manufacturing and design, this videoconference is perfect for anyone competing in our dynamic global marketplace. It will lead you through the intricacies of foreign markets and each country's standards in light of the drastic changes in world order over just the past few years.

Attendees will be shown how to design products which can be brought to the global marketplace quickly and easily. Serving the need to be able to understand and interpret the changing world market, this videoconference will help the viewer overcome human and technical obstacles in foreign markets.

Topics include an overview of technological issues with a concrete

example; optimization of the product life cycle; and improving the software development process. The agenda for this videoconference includes two interactive panel discussions.

Presenters include David L. Stone, President, AT&T Operating Systems; Samuel J. Keene, Founder of Quality Innovations; and David Herron, Vice-President, Software Productivity Research.

The next video conference in the 1993 series will occur June 17 on "Maintaining The Technical Currency Of The Engineering Workforce", which confronts the challenges of continuing education for engineers and scientists. The lead presenter will be Shakil Ahmed, Development Staff Director of IBM.

Admission FREE to IEEE Members

Admission is free to IEEE members; others may attend by completing an application form for membership with payment of 1993 dues—\$102 for regular members, \$28 for students. Mail check payable to "IEEE" to Richard G. Estock, c/o EDP Consultants Inc., 77 Meredith Rd., Colonia, NJ 07067-3198. Include your name, address and telephone number on the check.

A set of conference notes and copies of the viewgraphs will be available for \$10 at the videoconference for those who order and pay for them ten (10) days in advance. For \$14, these notes will be mailed to the recipient in advance of the videoconference.

These course notes are highly recommended for those desiring to obtain maximum benefit from the presentation. To reserve a set of notes, mail a check payable to "IEEE North Jersey Section" to Richard G. Estock, c/o EDP Consultants Inc., 77 Meredith Road, Colonia, NJ 07067-3198. Include your name, address and telephone number on the check, along with the name of the videoconference whose notes you seek.

Videoconference Playback

Playback of taped "Delivering Software Products to the Global Marketplace" videoconference for those unable to attend the live, interactive session will take place the same day at 6:00 - 9:00 PM, Room M-207, Muscarelle Bldg., Fairleigh Dickinson University, Teaneck. For a copy of conference notes, follow instructions above.

Time: 12 noon - 3:00 PM, Thursday, May 20, 1993. (Playback 6:00-9:00 PM at a different location shown above.)

Place: Edward Williams College, Lecture Hall (FDU Hackensack Campus), 150 Kotte Place, Hackensack, N.J.

Directions: Route 4 to Hackensack Ave. south, then 1st left onto Kotte Place.

Information: Richard G. Estock (908) 388-5110.



North Jersey Section Activities MAY

May 5—"North Jersey Section Executive Committee Meeting"—7:00 PM, Plant 11, GEC-Marconi, 164 Totowa Rd., Totowa, N.J. Art Greenberg (201) 633-6129.

May 10—"Programming Data Flow Computers For Parallel Computation"—North Jersey Section COMP/COMM/LEO Chapter, 7:30 PM, Room M-207, Muscarelle Bldg., Fairleigh Dickinson University, Teaneck, N.J. Richard G. Estock (908) 388-5110.

May 11—"VDT Radiation: Assessing The Science"—IEEE Metropolitan Chapter EMBS, NY Academy of Medicine's Sections on Occupational Medicine and Biomedical Engineering, and NY Occupational Medicine Assoc., 6:00 PM, NY Academy of Medicine, 5th Ave. at 103rd St., NY. Office of Medical Education, NY Academy of Medicine (212) 876-8200, ext. 235.

May 11-13—"28th Biennial Electrical Industrial Exposition"—Metropolitan Electrical League, Garden State Convention & Exhibition Center, Somerset N.J. For information (201) 783-8822.

May 12—"Detection Of Gravitational Waves"—North Jersey Section IEEE Systems, Man & Cybernetics Society, 7:30 PM, GEC Marconi, 164 Totowa Rd., Totowa, N.J. Dr. Michael Liechenstein (201) 471-0721.

May 13—"Effective Technical Writing For Engineers"—IEEE North Jersey Section PACE, 7:30 PM, JCP&L Co., 300 Madison Ave., Morristown, N.J. Robert Sinusas (201) 228-3941.

May 14—"Spring '93 Get-Together"—NY/LI PES & IAS, Chapter Related Activities Committee, Meadowlands Racetrack, Pegasus East Buffet. For information: Wm. Coyne, c/o Con Ed Energy Serv., 708 First Ave., Rm. 515, NY., NY 10017

May 18—"Documentation For Safe Software"—New York/North Jersey Section Engineering Management Society, 7:00 PM, GEC Marconi, 164 Totowa Rd., Wayne, N.J. Al Connelly, (201) 831-8171.

May 18—"The VISION Project—Automated Mapping and Facilities Management"—PES/IAS NY/LI Chapter, 5:30-7:30 PM, Con Edison Bldg., 19th Floor Auditorium, 14th St & Irving Place, NYC. For information: Ray Amara (212) 576-2941.

May 18-20—"1993 Vehicular Technology Conference"—Vehicular Technology Society, Meadowlands Hilton, Secaucus, N.J. Melvin Lewis (914) 968-2500, Ext. 2304.

May 19—"Motor Circuit Protection For The 90's"—PES/IAS NY/LI Chapter, 5:30-7:30 PM, United Engineering, 11 Penn Plaza, 5th Floor, NYC. Hazem Huss, (201) 822-1016.

May 20—"Delivering Software Products For The Global Marketplace"—Videoconference, North Jersey Section, 12 noon-3:00 PM, Edward Williams College Lecture Hall, (FDU Hackensack Campus), 150 Kotte Place, Hackensack, N.J. For playback location see article. Richard Estock (908) 388-5110.

May 26—"Fuzzy Logic And Computational Neural Networks"—North Jersey Section COMP/COMM/LEO Chapter, 7:30 PM, Room M-207, Muscarelle Bldg., Fairleigh Dickinson University, Teaneck, N.J. Richard G. Estock (908) 388-5110.

May 27—"Essentials Of An Independent Contractor Agreement"—NJ Consultants' Network, 7:30 PM, GEC-Marconi Facility, 150 Parish Dr., Wayne, N.J. Jim Boyd (201) 584-0329.

Upcoming Meetings

June 2—"North Jersey Section Executive Committee Meeting"—7:00 PM, Plant 11, GEC-Marconi, 164 Totowa Rd., Totowa, N.J. Art Greenberg (201) 633-6129.

June 10—"Engineering To A New World Order (NWO)"—North Jersey Section PACE, 7:30 PM, JCP&L Co., 300 Madison Ave., Punch Bowl Room, Morristown, N.J. Robert Sinusas (201) 228-3941.

June 10—"Understanding Knowledge-Based Systems"—North Jersey Section COMP/COMM/LEO Chapter, 7:30 PM, Room M-207, Muscarelle Bldg., Fairleigh Dickinson University, Teaneck, N.J. Richard G. Estock (908) 388-5110.

June 15—"Multi-Processor Digital Signal Processing"—North Jersey Section COMP/COMM/LEO Chapter, 7:30 PM, AT&T Bell Labs, Room 6B-101, Murray Hill, N.J. Richard G. Estock (908) 388-5110.

June 17—"Maintaining The Technical Currency Of Our Workforce"—Videoconference, North Jersey Section, 12 noon-3:00 PM, Edward Williams College Lecture Hall, (FDU Hackensack Campus), 150 Kotte Place, Hackensack, N.J. See details in May issue of Newsletter. Richard Estock (908) 388-5110.

Members and Non-Members Welcome
PLEASE POST

Professional Activities Committees for Engineers NEWS

by
Richard F. Tax

Interesting things are happening this month that could help our North Jersey Section members. One issue relates to local networking for jobs and the other presents free CAD training opportunities for laid off defense employees. It's up to you to take advantage of these opportunities. If they don't interest you, please pass the information on to those that may be interested.

PETITION CANDIDATE

Included in this issue is a petition to get Michael Whitelaw on the ballot for the position of President Elect of IEEE for the 1994 term and President of IEEE for the 1995 term. I fully support Michael Whitelaw and I ask that each one of our readers extend their efforts to sign and get additional signatures on the enclosed petition. Copies of the petition are acceptable. Michael has served as the director of Region I and has helped us in many ways. Please do this now. All petitions must be submitted by May 15th.

ENGINEERING JOB SEEKERS NETWORK

Share Quality Leads To Engineering Positions Over \$35,000

Merrill Rutman, a North Jersey Section IEEE Member, has set up a local Engineers Network Association dedicated exclusively to finding *real* jobs that need to be filled *now*. The Engineers Network Association (ENA) meets every Wednesday at 1:30 PM at Le Bistro restaurant in Elmwood Park, N.J. to exchange leads to *real* jobs requiring immediate filling. To participate, try to bring one or more unpublicized job leads that you do not intend to pursue to share with others who might be interested. Questions? Call Merrill Rutman (201) 447-6041.

AMERICAN ENGINEERING ASSOCIATION SEEKS CAD-TRAINING FOR EX-DEFENSE WORKERS

AEA is seeking Labor Department funds to provide CAD-related training to engineering workers who have lost their jobs because of Defense Department cutbacks. These jobs could have been either direct or contract jobs with defense contractors.

Getting a grant from the government is a long process (as it probably should be); one of the things the government wants to know is: are the eligibles interested in the proposed training?

Readers of this article, and others, can help themselves—and AEA—by providing the information needed. First, we cover who is eligible; second, what AEA plans to offer; and third, the information that is needed.

Eligibility:

The Defense Conversion Act enables the Department of Labor (DoL) to provide services to people who have lost Defense-related jobs. The eligibles include those now unemployed because of a defense cutback, or who have received a written notice that they are about to be laid-off. NASA cutbacks do not count.

Proposed Program:

AEA is seeking funds to offer services to engineering workers who (1) are eligible under the rules noted above, and (2) who think that

they could improve their work prospects by undergoing CAD-related training. Within this framework trainees need not be: members of AEA or degreed engineers; we are primarily interested in engineering workers whose background is such that CAD-related training is a logical next step in their training.

AEA is currently talking with CATIA and Pro-ENGINEER and probably will talk with other CAD software firms as well. Training probably will be located only in those areas where the software firms have training facilities; at the moment that looks like California, Texas, Illinois, Michigan, New Jersey and Massachusetts. It is not clear at this writing whether the grant will cover travel expenses to and from these locations.

Working with AEA on this project is TransCentury Development Associates in Arlington, VA; TransCentury, a 25-year-old non-profit organization, has managed millions of dollars worth of DoL and other government contracts over the years.

Needed Information:

If you think you are eligible and are interested in this idea, please fill out the coupon included in this issue.

Everyone providing this information should realize that AEA and its subcontractor, TDA, do not have the grant yet, and may not get it. We do know, however, that no other employees' organization has bid for DCA funds set aside for such organizations, so we believe our chances are good.

Send your replies to the address below. Feel free to copy this article and ask other potential trainees to respond as well. No phone calls, please, but if you have questions we will write, or fax back, right away: American Engineering Association, Trans-Century Development Associates, Suite 1017, 1901 N. Fort Myer Drive, Arlington, VA 22209 - Fax (703) 351-5510.

For membership information about the American Engineering Association write to AEA, P.O. Box 820473, Fort Worth, TX 76182-0473.

SPECIAL NOTICE

PEER II, the Professional Engineering Employment Registry program, has been terminated by IEEE-USA. I have just received a last minute letter from Bob Sinusas, our PACE Chairman, stating that the PEER II program has been successfully terminated. Bob had received some formal complaints about PEER II from active North Jersey Members and followed up by reporting the complaints to the IEEE-USA office. I believe Bob helped IEEE's Employment Assistance Committee come to the decision to drop the program. The bottom line follows: cut 300,000 jobs and 300,000 people will be out of work. You don't have to be a rocket scientist to figure that out. Sorry we turned you on to PEER II in our April issue.

ENGINEERING LAYOFFS

Please make copies of all articles on engineering layoffs and send to: Bob Glazer, P.O. Box 342, Whippany, NJ 07981.

NJ Comp/Comm/LEO Soc:

Neural Networks And Fuzzy Logic

On May 26, 1993, the North Jersey Section Computer/Communication/LEO Chapter will present "Fuzzy Logic And Computational Neural Networks." The speaker at this meeting will be Dr. James C. Bezdek of the University of Western Florida, Pensacola, a Fellow of the IEEE and a Distinguished Lecturer. A significant portion of this talk will be tutorial in nature.

About The Talk

This talk considers areas of potential interaction between fuzzy sets, logic and models and computational neural networks (CNNs). Following overviews of the areas of fuzzy sets and neural networks, Dr. Bezdek discusses the use of CNNs in Fuzzy Models (functional approximation, set operations, extension and rule based systems); and then considers the converse problem, the use of fuzzy sets in CNNs (e.g., fuzzy neurons, fuzzy partitions). Finally, he discusses several applications areas in control and pattern recognition where recent developments and results corroborate the idea that these two areas are technologically synergistic.

About The Speaker

James Bezdek has held academic positions at SUC/Oneonta, Marquette University, Utah State University and the University of South Carolina. At the latter, he was Chair of Computer Science. Dr. Bezdek was a visiting research scientist at Boeing Aerospace in 1982, and was Director of the Information Processing Laboratory at the Boeing Electronics High Technology Center from 1987 to 1989.

Dr. Bezdek currently occupies the Nystul Florida Eminent Scholar Chair with the



Division of Computer Science at the University of West Florida. His research interests include pattern recognition algorithms, neural networks, image processing and machine vision, medical diagnosis, and expert systems.

He has authored or co-authored many technical papers, written the book "Pattern Recognition with Fuzzy Objective Function Algorithms" (Plenum, 1981), and edited the three volume series: 1) "The Analysis of Fuzzy Information" (CRC Press, 1985); 2) "Advances in Artificial Intelligence" (World Scientific, 1990); and 3) "Fuzzy Models for Pattern Recognition" (IEEE Press, 1992).

Bezdek is the founding editor of the *Intl. J. of Approximate Reasoning* and the *IEEE Trans. on Fuzzy Systems*, and is an associate editor of the *IEEE Trans. on Systems, Man and Cybernetics*. He is also associate editor of the *Intl. Journals of Man-Machine Studies, Applied Intelligence, General Systems, and Fuzzy Sets and Systems*.

He is a past president of IFSA (Int'l Fuzzy Systems Assoc.) and NAFIPS (North American Fuzzy Information Processing Society), and has been an ACM lecturer for the 1990-93 program years. Dr. Bezdek was the General Chair of the First IEEE International Conference on Fuzzy Systems (FUZZ-IEEE '92), San Diego, in 1992.

Optional Pre-Meeting Dinner

Come meet the speaker. Stoney Hill Inn, 231 Polifly Rd., Hackensack, 5:30 PM. For directions (201) 342-4085. Reservations required, (908) 388-5110.

All Welcome

You do not need to be an IEEE member to attend. Come and bring your friends.

Time: 7:30 PM, Wed., May 26, 1993.

Place: Fairleigh Dickinson Univ., Room M-207, Muscarelle Bldg., Teaneck N.J.

Information:

Richard G. Estock (908) 388-5110.

Electrical Industrial Expo

The Metropolitan Electrical League will sponsor its 28th Biennial Electrical Industrial Exposition on May 11, 12 & 13, 1993. This Exposition will be held in the Garden State Convention & Exhibition Center, 50 Atrium Drive, Somerset New Jersey.

The three day event will feature a manufacturer's trade show and educational seminars. More than 250 exhibitors will display their latest lines of products for the electrical industry. Seminars will deal with such topics as Harmonics, 1993 NEC Code Changes and PLC's.

There is no charge for attendance. For exhibition hours and registration information call (201) 783-8822; FAX (201) 783-8767.

CAD TRAINING

FAX to 703/351-5510 Mail to AEA-TDA, Suite 1017, 1901 N. Fort Myer Drive, Arlington, VA 22209

YES. I was laid off by Defense Cutbacks and I want Government-funded, CAD-related Training.

My name _____ My age _____

Address _____

City _____ State _____ Zip Code _____

Phone () _____ Alternate Phone () _____

Professional Training _____

Kind of work I have done _____

I last worked at _____

I was laid off on (or expect to be): Month _____ Date _____ Year _____

The following CAD training would be most helpful _____

I have background on the following CAD _____

North Jersey Section: Maintaining The Technical Currency Of Our Workforce

The fourth videoconference of the year deals with continuing education and is specifically oriented to engineers and technical managers. This live and interactive event will occur on June 17, 1993. In addition to IEEE sponsorship, this program is offered in cooperation with the American Society of Mechanical Engineers (ASME).

As emerging technologies change every day, managers are faced with the increasingly difficult tasks of keeping themselves and their employees up-to-date on new information and its applications. Three experts in this area will explore the challenges of continuing education and provide innovative solutions and resources in this 3-hour broadcast.

Discussing the methodology of industry leaders and illustrating their ideas with real-life examples, the presenters will host an important information session for anyone who is faced with the issue of keeping technically current.

From this broadcast, participants will learn: 1) Why technical obsolescence is occurring; 2) How they can take advantage of future growth opportunities; 3) What leading organizations are doing to educate their employees; and 4) where one can find additional resources.

About The Presenters

The lead presenter is Shakil Ahmed, Director, Development Staff, IBM Corporation. Mr. Ahmed oversees the development of business processes throughout IBM. His interaction with

academia, consultants and consortia allow him to gather insights from many different sources and apply them to his development strategies.

The second presenter is Keith M. Gardiner. Dr. Gardiner is a professor in the Department of Industrial Engineering and Director of the Center for Manufacturing Systems Engineering at Lehigh University. Prior to that, he spent 21 years in a variety of activities at IBM Corporation.

The final presenter is John Barnshaw, Senior Education Requirements Planner, Skill Dynamics (an IBM company). Mr. Barnshaw interacts with corporate executives, high-level technical personnel and universities in his efforts to maintain the high standard of manufacturing expertise and customer solutions at Skill Dynamics in Charlotte, NC.

The next videoconference in the 1993 series will occur September 30 on "2020 Vision: The Future of Engineering Technology", which will examine both the engineering and re-engineering processes and how to improve them through documentation, study, streamlining and innovation. The lead presenter at this videoconference will be Marv Patterson of Hewlett-Packard Company.

Admission FREE to IEEE Members

Admission for all videoconferences is free to IEEE members; others may attend by completing an application form for membership with payment of 1993 half-year dues—\$51 for regular members, \$14 for students. Mail check payable to "IEEE" to Richard G. Estock, c/o EDP Consultants Inc., 77 Meredith Rd., Colonia, NJ 07067-3198. Include your name, address and telephone number on the check.

A set of conference notes and copies of the viewgraphs will be available for \$10 at the videoconference for those who order and pay for them seven (7) days in advance. For \$14, these notes will be mailed to the recipient in advance of the videoconference.

These course notes are highly recommended for those desiring to obtain maximum benefit from the presentation. To reserve a set of notes, mail a check payable to "IEEE North Jersey Section" to Richard G. Estock, c/o EDP Consultants Inc., 77 Meredith Road, Colonia, NJ 07067-3198. Include your name, address, telephone number and the videoconference name on the check.

Videoconference Playback

Playback of taped "Maintaining The Technical Currency Of Our Workforce" videoconference for those unable to attend the live, interactive session will take place the same day at 6:00 - 9:00 PM, Room M-207, Muscarelle Bldg., Fairleigh Dickinson University, Teaneck. For a copy of conference notes, follow instructions above. Attendance at either session is limited to IEEE members only.

Time: 12 noon - 3:00 PM, Thursday, June 17, 1993. (Playback 6:00-9:00 PM at a different location shown above.) Participants should plan to arrive 15 minutes ahead of time.

Place: Edward Williams College, Lecture Hall (FDU Hackensack Campus), 150 Kotte Place, Hackensack, N.J.

Directions: Route 4 to Hackensack Ave. south, then 1st left onto Kotte Place, (Roy Rogers Restaurant on corner.)

Information: Richard G. Estock (908) 388-5110.

WE, THE UNDERSIGNED VOTING MEMBERS OF THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC. (IEEE), NOMINATE MICHAEL J. WHITELAW, 1988/89 VP-REGIONAL AND 1990/91 VP-PROFESSIONAL, FOR THE OFFICE OF PRESIDENT-ELECT OF IEEE FOR THE 1994 TERM AND THE OFFICE OF PRESIDENT FOR THE 1995 TERM.

	Name (Please Print)	Signature	Mailing Address (as in IEEE records)	Memb. # (if known)	Date
1.					
2.					
3.					
4.					
5.					

If elected, I will serve

M. J. Whitelaw

Please return to Michael J. Whitelaw, 556 Maple Hill Ave., Newington, CT 06111-3618, by May 15, 1993.

DON'T MISS

1993 Vehicular Technology Conference

May 18 thru 20, 1993
See Page 12

MAY & JUNE Meetings

See Calendar
Pages 6 & 7

NY/LI PES & IAS: Spring '93 Get-Together

The Chapter Related Activities Committee announces that the Spring Get-Together will be held on Friday evening May 14, 1993 at the Meadowlands Race-track, Pegasus East Buffet.

The cost will be \$34.95 per person. For information on this social event please contact William N. Coyne, c/o Con Edison Energy Services, 708 First Avenue, Room 515, New York, NY 10017.

NY/LI PES & IAS: VISION Project

The Power Engineering Society and Industry Applications Society NY/LI Chapter will meet on Tuesday, May 18, 1993 to hear a talk entitled "VISION—Automated Mapping And Facilities Management." The speaker will be Mr. Mike Casella, Con Edison's Senior Project Specialist, VISION Project.

The VISION Project is an automated mapping and facilities management (AM/FM) vector based system. Utilizing UNIX workstations and Facilities Rule-based Application Model Management Environment (FRAMME), the system's capabilities will include analyses, map generation, work order processing and database management.

The meeting will take place 5:30-7:30 PM at Con Edison Bldg., 14th St. & Irving Place, 19th Floor Auditorium, NYC. Refreshments provided. For information: Ray Amara (212) 576-2941.

NY/LI PES & IAS: Motor Circuit Protection For The 90's

On Wednesday, May 19, 1993, Mr. Joe Pucciarelli from Bussman Division of Cooper Industries will discuss the protection of both NEMA and IEC equipment while explaining the requirements of UL508 as well as the concept of "Type 2" (no damage) protection.

Come and learn how to increase reliability and reduce downtime by employing modern economical solutions to your motor circuits.

The meeting will take place at United Engineering (formerly Gibbs & Hill), 11 Penn Plaza, 5th Floor, NYC 5:30 - 7:30 PM. Refreshments provided. For further information: Hazem Huss (201) 822-1016.

NJ Comp/Comm/LEO Soc: Multi-Processor Digital Signal Processing

On June 15, 1993, Anthony Agnello, President of Ariel Corp., Highland Park, N.J., will present a talk on "Multi-Processor Digital Signal Processing."

About The Talk

Each year sees the introduction of ever more powerful digital signal processing engines. In spite of this trend, applications exist which require more power than is available on even the most advanced DSP chip. Some of these applications require many channels of I/O (e.g., sonar, medical instrumentation) while others simply require raw processing power (e.g., simulation, speech recognition). For all of these applications, a multi-processing solution is required. To address this need, chip manufacturers have recently introduced DSP engines targeted at multi-processing.

This talk will discuss these advanced DSP chips (with a special focus on TI's TMS320C40), multi-processing system architectures and the associated software issues. Development tools designed to enable applications to be written for multi-processing systems will be covered, as well as parallel processing operating systems which handle the task of interprocessor communication.

About The Speaker

Anthony Agnello received a MSEE degree from CUNY in 1973. From 1973-1983, he was at Eventide Inc., designing digital audio processing products based on bit-slice technology. Since 1986, he has served as the President of Ariel Corp., a leader in the development of DSP development systems. Mr. Agnello holds several patents in the field of signal processing and has published numerous articles.

Optional Pre-Meeting Dinner

Come meet the speaker at the Auberge Swiss Restaurant, 331 Springfield Ave., Berkeley Heights, 5:30 PM. For directions (908) 665-2310. Reservations required, (908) 388-5110.

All Welcome

You do not need to be an IEEE member to attend. Come and bring your friends.

Time: 7:30 PM, Tuesday, June 15, 1993.

Place: AT&T Bell Labs, Room 6B-101, Murray Hill, N.J.

Information: Richard G. Estock (908) 388-5110.

IEEE Vehicular Technology Society
1993 Vehicular Technology Conference

**Personal Communication —
Freedom Through Wireless Technology**

Meadowlands Hilton
Secaucus, NJ — May 18-20, 1993

The 1993 Vehicular Technology Conference, sponsored this year by the North Jersey Chapter of the IEEE Vehicular Technology Society, is to be held May 18-20 at the Meadowlands Hilton in Secaucus, N.J. The program will present over 290 papers and attendance is expected to exceed 700.

Each day's program will begin at 8:30 AM with a tutorial session and continue with 21 additional sessions of paper presentations, ending at 5:00 PM, with a one hour break for lunch.

The subject matter includes circuit and systems design, theory, hardware, and applications. Among the session topics scheduled are Modulation/Demodulation, RF Propagation Experiments, Cellular System Planning, Indoor and Outdoor RF Propagation, Hand-off Management, Vehicular Communications Experiments, Satellite Land Mobile Communications, Mobile Communications, Railroad Systems, Signal Processing, Receiver Processing, Channel Processing, Speech Processing, Hardware, Antennas, Amplifier Design, Filtering, Equalization, Hybrid Systems, CDMA, TDMA, Frequency Hopping, Spread Spectrum Techniques/Analyses, Base Stations/Microcells, Frequency Air Interfaces, DECT, Personal Communication Systems, Terminals, Operating Systems, PRMA, Applications, Spectrum Sharing, Wireless Data, and Encryption/Security.

Registration Fees:

IEEE Members \$295.00; Non-Members \$345.00
Students and Life Members \$30.00 **if received by May 1, 1993**
After that date Member and Non-Member fees are \$345.00.

Questions concerning registration should be directed to:

Frank Schink, Registration Chairman
(908) 276-8847

Other inquiries regarding the conference should be directed to:

Mel Lewis, Conference Chairman
Loral Electronic Systems
(914) 968-2500 ext. 2304
FAX (914) 964-2891

1993 Vehicular Technology Conference

To: Frank Schink, Registration Chairman, P.O. Box 326, Garwood, NJ 07027.

Name: _____

IEEE No.: _____ Membership Grade: _____

Affiliation: _____ Phone No.: _____

Address: _____

Please enclose required fee made payable to "IEEE VTC '93"