



The IEEE

Newsletter

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

PACE Meeting: PATENTS, TRADEMARKS, COPYRIGHTS AND INTELLECTUAL PROPERTY

The North Jersey Section's Professional Activities Committee for Engineers will meet on Thursday, December 14, 1989. The talk will be on "Patents, Trademarks, Copyrights and Intellectual Property." The guest speaker will be Cyrus D. Samuelson, a partner in the law firm of Samuelson and Jacob in Hackensack, N.J.

About The Talk

Some of the subjects of the discussion will include: definition of a patent, trademark and copyright, what can be patented, conditions for obtaining a patent, the patent search, who may apply for a patent, patent application, fees, disclosures, infringements, publications, joint ownership and more. Mr. Samuelson will talk you through the experience of applying for and receiving a patent of your own. He will be available to answer questions from the audience at the end of the presentation.

This meeting is important for any engineer concerned with intellectual property and an interest in their professional and economic future.

About The Speaker

Cyrus D. Samuelson received his BS in Physics from CCNY, a MS in Physics from Polytechnic Institute, Brooklyn, and his LLB at Seton Law School. He worked in the engineering department of WOR Radio Station prior to WWII and for some years after. During WWII he served in the Army Signal Corp as an instructor in the Radio Officers School. He is a member of EIA Audio Facilities Standards Committee. Mr. Samuelson is a partner in the law firm of Samuelson and Jacob and is a registered patent attorney.

All IEEE members and guests are invited to attend. Refreshments will be served.

Time: 7:30 PM, Thursday, December 14, 1989.

Place: ITT Auditorium, 500 Washington Avenue, Nutley, N.J.

Further Information: Richard F. Tax (201) 664-0803.

IAS Officer Election And Talk On Energy Conservation

On December 7, 1989 the North Jersey Section Industrial Application Society will host a presentation on "Energy Management And Conservation Program In Industrial Plants." The speaker will be Mr. Bhwani P. Mukherjee, P.E., Lederle Labs of American Cyanamid, Pearl River, N.Y. There will be an election of officers prior to the start of the technical presentation.

About The Talk

The presentation covers the salient aspects of an energy program, planning energy conservation and implementation to reduce the operating costs of production in industrial plants. The presentation also covers aspects of needed management support and program format which play a crucial role in the successful implementation of the program. As an illustration Mr. Mukherjee will describe the energy management program at the Lederle Labs which has incorporated both steam and electricity conservation.

About The Speaker

Mr. Bhawani P. Mukherjee, has been with American Cyanamid for the past 15 years, and he is presently the Manager of Engineering at the Lederle Labs, Pearl River, New York. He has worked on several projects for American Cyanamid throughout the USA and headed as chairman, the task force on Energy Management. Mr. Mukherjee holds a MSEE from City University of NY and is a licensed professional engineer in the State of New York and New Jersey.

ELECTION

Prior to the technical presentation there will be an election of officers. The North

Jersey Chapter of the Industrial Application Society has been in existence for many years. This is an interactive group with varied interests in power generation, in-plant electrical distribution, lightning protection, grounding, switching surges, alternative energy sources such as Co-Generation, wind and solar power, computers, fiber optics, SCADA, semi-conductors, electric machines, industrial drives, etc. The aim of the Society is to keep members abreast of the developments in the aforementioned areas with quality speakers having detailed background in their respective areas. The North Jersey Chapter has scheduled seven technical sessions in 1989, and is planning even more vigorous programs for the year 1990. This requires active participation by all IEEE members in the Metropolitan area. With this end in view, an executive committee election is scheduled at this meeting. All members with interest in IAS/PES are invited to participate. Please join us and make our program an even greater success.

Pre-Meeting Dinner

The pre-meeting buffet dinner starts at 6:00 PM with the Election taking place prior to the technical presentation.

Time: 7:00 PM, Thursday, December 7, 1989. (6:00 PM, buffet dinner and Election.)

Place: ITT Auditorium, 500 Washington Ave., Nutley, N.J.

Further Information/Reservations: Vittal Rebbapragada, Chairman, IAS Chapter (212) 839-2262, or Max C. Schramm (201) 887-1120.

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NEWSLETTER STAFF

Editor.....M.M. Perugini
Business Manager.....A.M. Beattie

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IEEE Service Center
445 Hoes Lane, P.O. Box 1331
Piscataway, N.J. 08854-1331
(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.....Howard Leach, Jr.
885-3530
Vice-Chairman-1.....Raymond Sears, Jr.
386-2259
Vice-Chairman-2.....George Graul
290-1128
Treasurer.....David Perry
325-8415
Secretary.....Richard Snyder
492-1207
Member-at-Large.....Thomas De Nigris
Member-At-Large.....David A. Dietsche
Member-At-Large.....George Pick
Jr. Past Chairman.....Robert Sinusas

The North Jersey Section Executive Committee meets the first Wednesday (except holidays and December) of each month at 7 PM. These meetings (held at ITT, 500 Washington Ave., Nutley, N.J.) are open to all members. Information on each meeting agenda is available from Richard Snyder, Section Secretary at (201) 492-1207.

Elected Section Officers are listed above.

CHAIRMAN'S CORNER

At the last Executive Committee meeting, Tom DeNigris, our Student Activities Chairman and Member-at-Large, introduced three guests from Stevens Institute. They were Clarence Fu, Freshman representative to the IEEE Student Branch, Professor H. Zmuda, Faculty Advisor, and Professor C. Hechtman, Faculty Member. Clarence outlined the Steven's Student Branch activities for the new school year. We were delighted to see them and wish them continued success with their activities.

This is my last column as your chairman. It has been a busy year for your Section. Including our Executive Committee meetings we have held over 80 meetings this year. Take away the Executive Committee, PACE, and a few of the profession programs sponsored by the Young Engineers committee, and we will have held over 50 technical programs for our membership. I think this is a tremendous accomplishment and I want to thank all of you that are responsible. These 50 programs do not include the two educational seminars on the "Programming Language C".

I would just like to briefly highlight some of the significant events during the year in chronological order.

On February 1st and 2nd, we helped sponsor Student Professional Awareness Conferences (SPAC's) at Stevens Institute of Technology and NJIT respectively, thanks to Tom DeNigris and his committee.

On February 15th, March 15th, and April 12th, Optoelectronic Seminars were jointly sponsored with the Graduate Student Association of NJIT. Thanks is due to Dr. Gerald Whitman of NJIT and his committee.

April 11, 12, and 13, Electro/89 was held at the Javits Center in NYC. Many thanks to George Graul, Anne Giedlinski, Bob Sinusas, Dave Perry, and especially to Frank Relotto our Electro Director, for their support.

On April 29th, we sponsored the Region 1 Careers Conference with 97 attending. Thanks to Dick Tax for organizing and presenting "The High Tech Recruitment Index", also thanks to Dave Perry for presenting "On Establishing Your Own Business." Of course we owe a great deal to the main speaker Dr. John Miller, P.E., who presented the career development subjects.

On May 3rd, we held our annual awards banquet with about 200 attending to recognize 12 Fellows and two Region 1 awardees. Thanks to Ray Sears, Vice Chairman 1, for organizing the event and to Professor Gerry Herskowitz, Awards Chairman, and his committee for their work. This number of Fellow awards was an all time high as far as I can remember.

On May 5th, we sponsored three awards at the National Energy Foundation Annual Student Exposition on Energy Resources at the Morristown Armory. Thanks to Ken Oexle, Past Chairman.

On May 20th, the Industrial Application Society Chapter sponsored a seminar on Co-Generation and Resource Recovery where six topics were presented from 9 AM to 3 PM at the Park Ridge Marriott. This was a big success thanks to Vittal Rebbapragada, Chapter Chairman, and his committee.

On August 29th, we jointly sponsored with METSAC a Candidates Night for the IEEE President Elect and Region 1 candidates. Thanks is due to Dick Tax and his committee.

On September 6th, Dr. Richard Snyder, Secretary and Chapter Chairman, MTT/AP, presented two Microwave Engineering scholarships to Satheesh Karra of NJIT and Michael Flanagan of Stevens Institute of Technology.

Also in September, Anne Giedlinski, Chairperson, Student Assistance Committee, announced that six \$1,000.00 scholarships had been awarded to Ms. Wei-Li of FDU, Robert Groschadl and Fu-Ho Lee of NJIT, Michael Flanagan, Michael Tamkutonis, and to Sanjay Jajal of Stevens Institute of Technology. We also named these scholarships after Charlie Coulomb, who was a co-chairperson of this Student Assistance Committee until he passed away on July 11th.

From September 7th thru December 14, two sessions of the seminar "Programming in the Language C" were organized thanks to our Education Chairman John Baka. A second session had to be added due to over subscription on the first.

On November 2nd, the annual MTT-S and AP-S Symposium and Mini Show was well attended. Thanks to Dr. Richard Snyder and his committee, a four to five thousand dollar surplus was generated for microwave engineering scholarships.

On November 11th, the Industrial Application Society held a panel Symposium consisting of four presentations at the Meadowlands Hilton. Thanks to Vittal Rebbapragada and his committee for their work in organizing this event.

I haven't attempted to list all 50 of our technical meetings. I will mention that the Computer/Communication Chapter held ten meetings that I know of including three tutorials. I think that is outstanding and thank Norm Hettinger and committee for their fine work.

I finally wish to thank all of the Executive Committee and the members that participated to make this an outstanding and eventful year. In case you've forgotten who is on this talented Executive Committee in addition to the eight elected officers and the Jr. Past Chairman, I've listed them below with their phone numbers. If you would like to become involved in next year's activities, please contact them. Have a safe and happy holiday season!

Intersociety Lecture Series

The North Jersey Section of the IEEE, Intersociety Committee, with the cooperation of various Society Chapters is sponsoring lectures on subjects of general interest to members of engineering and scientific societies and the public. The topics for 1990 are:

January 11, 1990 -

"Law Enforcement Science vs Money Laundering Networks"
Rich Harms, Chief, Financial Intelligence Branch, Customs,
7:30 PM, ITT Clubhouse, Nutley, N.J.

February 15 -

"Industrial/Government Cooperation For Economic Growth"
Eric Sumner, Candidate for IEEE President Elect
7:30 PM, ITT Clubhouse, Nutley, N.J.

March 1 -

"Radon In New Jersey"
7:30 PM, ITT Clubhouse, Nutley, N.J.

April 12 - "The Waste Management Crisis"

May 10 - "Industrial Dynamics, Modeling Industry"

Sept. 13 - "Input-Output Economics, Modeling Industry and National Economics"

Oct. 12 - "Skills Assessment And The Career Change"

Nov. 15 - "Engineering In Undeveloped Countries"

If you have questions about any of the above programs, please write or call David P. Perry, 57 Forest Hill Road, West Orange, NJ 07052, Phone (201) 325-8415.

(Chairman's Column continued)

1989 STANDING COMMITTEES

Awards	Prof. Gerry Herskowitz	420-5605
Banquet	Dr. Raymond Sears, Jr.	386-2259
Education	John Baka	455-8534
Group Coordinator	Alan Stolpen	386-3703
History & Procedures	Maitland McLaren	335-6847
Membership	Don Weinstein	461-0900
METSAC	Richard Tax	664-6954
Newsletter	Mike Perugini	398-5524
Nomination	John Van Savage	544-2503
PACE	Richard Tax	664-6945
Program	Sam Benzacar	492-1207
Intersociety Relations	Dave Perry	325-8415
Student Activities	Tom DeNigris	569-8282
Student Assistance	Anne Giedlinski	377-3175
Young Engineers	Sam Benzacar	881-1200

1989 CHAPTER CHAIRMEN

AS&SP (Co-Chairmen)	Steve Laico	386-2031
	John Burgess	386-2736
AP/MTT	Dr. Richard Snyder	492-1207
Computer/Communications	Norman Hettinger	835-6935
Control Systems	Dr. William Bigley	757-1600
Engineering Management	Al Bottani	265-7797
Industrial Applications	Vittal Rebbapragada	265-2000
Power Engineering	Dennis Sobieski	430-6698
Reliability	Mallik Arjunan	386-2259
Systems, Man, & Cybernetics	Dr. Michael Liechenstein	471-0721

HOWARD LEACH

North Jersey Section Chairman

FET And MMIC Low Noise Design

The December 7, 1989 meeting of the North Jersey IEEE MTT-AP Chapter will feature "Design Of, And With, Low Noise Microwave Field Effect Transistors And MMIC's." The speaker will be Dr. Madhu S. Gupta, Hughes Aircraft.

About The Talk

The various noise generating mechanisms in MESFETs and HEMTs, and the spectra of the resulting noise, will be summarized. The noise in microwave and millimeter-wave FETs will then be modeled in terms of a noise equivalent circuit model. The measurement of the devices noise, and the extraction of the model parameters from the measured data, will be discussed in detail. The specification and measurement of noise in FET circuits will then be reviewed briefly. The factors influencing the noise performance of an MMIC employing the FET will be identified, and their relative significance will be estimated. Techniques of low-noise circuit design will be discussed, along with illustrative examples of reported circuits having a low noise performance at the state-of-the-art.

The lecture will emphasize designing for reduced FM noise in FET oscillators, with lesser coverage of the design and performance of MMIC low noise amplifiers. Also covered will be low noise FET design, and the influence of device structure on the noise performance at device terminals.

About The Speaker

Madhu S. Gupta received the Master's and PhD degrees from the University of Michigan in 1968 and 1972 respectively, where he was a member of the Electron Physics Laboratory, and carried out research on the large-signal and noise characteristics of microwave semiconductor devices.

During 1973-1979, he was Assistant Professor and then an Associate Professor of Electrical Engineering at the Massachusetts Institute of Technology in Cambridge, Massachusetts where he was a member of the MIT Research Laboratory of Electronics, conducting research on microwave and millimeter-wave properties and thermal fluctuations. From 1979 to 1987 he was at the University of Illinois at Chicago, where he served as Professor of Electrical Engineering, and worked on the characteristics and limitations of electron devices that are nonlinear, noisy and very small. During 1985-1986, he was a Visiting Professor at the University of California, Santa Barbara. Since 1987, he has been with Hughes Aircraft Company, working at Hughes Research Laboratories, Malibu, California, and at Microwave Products Division, Torrance, California, where he is Senior Staff Engineer and is engaged in

the modeling, design and characterization of GaAs MMIC devices and circuits, and the evaluation of the in-process wafers.

Dr. Gupta is a member of Eta Kappa Nu, Sigma Xi, Phi Kappa Phi, and the American Society of Engineering Education, and is a Professional Engineer. He has served as the chairman of the Boston and Chicago Chapters of the IEEE Microwave Theory and Techniques Society, and of an IEEE Standards Committee. He was a Lilly Fellow during 1984-1985, and was elected Fellow of the IEEE "For contributions to the characterization and modeling of noise in high-frequency semiconductor devices and in microwave integrated circuits." Dr. Gupta has published nearly 100 writings, including journal articles, conference and invited papers, patents, book chapters, and reviews. He is the editor of *Electrical Noise: Fundamentals and Sources*, (IEEE Press, 1977); *Teaching Engineering: A Beginner's Guide*, (IEEE Press, 1987); and *Noise in Circuits and Systems*, (IEEE Press, 1988), and is a member of the Editorial Board of *IEEE Transactions and Microwave Theory and Techniques*.

Free Buffet Dinner

There will be a free buffet dinner for attendees in the lobby at 6 PM. **Reservations for the complimentary dinner are requested.**

Time: 7:30 PM, Thursday, December 7, 1989. (Pre-meeting buffet dinner at 6:00 PM. **Reservations required.**)

Place: ITT Auditorium (at the tower), 500 Washington Ave., Nutley, N.J.

Information/Reservations: Dick Snyder (201) 492-1207; Willie Schmidt (201) 284-2255.

EMBS Meeting: Acoustic Techniques And Cortical Bone Properties

The December 13, 1989 meeting of the Metropolitan Chapter of the Engineering in Medicine and Biology Society will feature a talk on "Acoustic Techniques And Cortical Bone Properties." The speakers will be Mark C. Zimmerman and Alain Meunier.

About The Talk

Cortical bone is a heterogeneous and anisotropic composite material that has elastic property related to a complex hierarchical structure (haversian or lamellar structure). Ultrasonic methods are well suited to measure the local elastic constants of the material. Lang was the

first to use ultrasonic techniques to measure bone properties, and since then the measurement of transverse and longitudinal acoustic wave velocities has become a standard technique for the study of bone anisotropy. However, bulk transmission methods are limited; the size of a bone sample taken from a human tibia or femur is quite large and the gradient of the local elastic constants cannot be investigated. Transmission methods provide average properties on a large scale. Scanning acoustic microscopy is an acoustic technique that complements standard transmission techniques. It is a technique that is used routinely in the aerospace industry for the non-destructive evaluation of composite materials. It offers many advantages in the study of bone and bone remodeling, most important of which is the resolution of the system. Scanning acoustic microscopy provides a resolution approximately 20 to 50 times greater than transmission techniques depending on the frequency of the transducer. Both scanning and transmission studies have been conducted investigating bone remodeling about orthopaedic implants including fracture fixation devices, femoral stems, and a number of potential materials that could replace standard orthopaedic metals. These studies and the basic design of the system will be presented.

About The Speakers

Mark C. Zimmerman received a BS degree from S.U.N.Y. School of Environmental Science and Forestry at Syracuse University in Biology (1979), and a MS and PhD in Biomedical Engineering from Rutgers University (1985). He is currently an Assistant Professor of Orthopaedic Surgery at the University of Medicine and Dentistry of New Jersey -Medical School, and an adjunct professor of Biomedical Engineering at Rutgers University. His research interests are in composite and biomaterial in orthopaedic surgery and biomechanics.

Alain Meunier received a PhD degree in Mechanical Engineering from the University of Paris VI. He is currently Associate Researcher in the Centre National de la Recherche Scientifique. His present work is devoted to the mechanical characterization of cortical bone and the interactions between bone and implanted orthopaedic biomaterials.

Optional Pre-Lecture Get Together

There will be an informal pre-lecture get together 6:30 PM in the Tower cafeteria.

Time: 7:30 PM, Wednesday, December 13, 1989.

Place: Rockefeller University, Room 305, York Ave. at 66th St., NYC.

Further Information: Joe Bogovic (212) 241-8032.

WSS Meeting: Talk On Fiber Optic Networks

On December 7, 1989, the IEEE Westchester Subsection (WSS) has scheduled a technical meeting on "Networking Computers With Fiber Optics." The speaker will be Michael Coden of Codenoll Technology Corporation.

About The Talk

Areas presented will focus on the use of fiber optics in ring, star and bus network technologies. Mr. Coden will site specific Fiber Optic Lan installations from corporate, academic and governmental institutions from around the country, detailing their applications and successes with fiber optic networks.

An economic analysis will be made in performance vs. cost comparisons of fiber optic LANS. Determining factors emphasized include: price reductions of glass fiber optics, introduction of low cost plastic fiber optics products, and improvements made to existing products.

About The Speaker

Michael Coden has been Chairman of the Board, President and Chief Executive Officer of Codenoll Technology Corporation since he founded the organization in 1980. Prior to the opening of his own company, Mr. Coden held the position of Manager of Exxon Enterprise Optical Information Systems, which involved fiber optics products in relation to semiconductor lasers. He has managed the design and marketing of computer hardware and software for Digital Equipment Corporation and Hewlett-Packard.

Mr. Coden received his Bachelor's Degree in Electrical Engineering from MIT, a MBA at Columbia University and his Master's in Mathematics from the Courant Institute of Mathematical Sciences at New York University.

His attributes include thirty published papers on Computer Science, Local Area Networks (LANS), Fiber Optics, Electro-Optical Technology and High Technology Management. He has been awarded several patents and was the recipient of Awards of Merit from the American Chemical Society and the Laser Institute of America.

Mr. Coden's many affiliations include memberships with IEEE, NY Academy of Sciences, AAAS, APIE, and OSA.

Time: 5:45-7:30 PM, Thursday, December 7, 1989.

Place: Polytechnic Graduate Center, 36 Saw Mill River Rd., Route 9A, Hawthorne, N.Y.

Information/Directions: John Chang (914) 766-1471; Denise Carpentier (914) 333-2622.

NORTH JERSEY SECTION ACTIVITIES

DECEMBER

December 7, 1989--Officer Election and Talk - "Energy Management And Conservation Program In Industrial Plants"--North Jersey Section Industrial Application Society, 7:00 PM, ITT Auditorium, 500 Washington Ave., Nutley, N.J. Vittal Rebbapragada (212) 839-2262 .

December 7--"Design Of, And With, Low Noise Microwave Field Effect Transistors And MMIC's"--North Jersey IEEE MTT-AP Chapter, 7:30 PM, ITT Auditorium, 500 Washington Ave., Nutley, N.J. Dick Snyder (201) 492-1207.

December 7--"Networking Computers With Fiber Optics"--Westchester Subsection of the NY Section, 5:45-7:30 PM, Polytechnic Graduate Center, 36 Saw Mill River Rd., Route 9A, Hawthorne, N.Y. John Chang (914) 766-1471.

December 12--"Telemetry In Nuclear Plants"--NY/LI Joint PES&IAS Technical Discussion Group, 5:30-7:30 PM, Gibbs & Hill, Inc. Conf. Rm. 4A, 4th Floor, 11 Penn Plaza, NYC. Harry Blumenthal (212) 566-4139.

December 13--"Acoustic Techniques And Cortical Bone Properties"--Metropolitan Chapter of the Engineering in Medicine and Biology Society, 7:30 PM, Rockefeller University, Room 305, York Ave. at 66th St., NYC. Joe Bogovic (212) 241-8032.

December 13--"Seventeenth Semi-Annual Seminar: Multi-Tasking At Your Desk-Top"--New York Chapter IEEE Computer Society, 9:00 AM-4:30 PM, United Engineering Center, 345 E. 47th Street, NYC. **Reservation and fee required.** Jim Barbera (212) 395-8765.

December 14--"PACE Meeting: Patents, Trademarks, Copyrights and Intellectual Property"--North Jersey Section's Professional Activities Committee for Engineers, 7:30 PM, ITT Auditorium, 500 Washington Ave., Nutley, N.J. Richard Tax (201) 664-0803.

Upcoming In 1990

January 11, 1990--"Law Enforcement Science vs Money Laundering Networks"--North Jersey Section IEEE Intersociety Committee, 7:30 PM, ITT Clubhouse, Nutley, N.J. David P. Perry (201) 325-8415.

January 31--"Millimeter Wave Antennas"--North Jersey IEEE MTT-AP Chapter, 7:30 PM, NJIT Seminar Room at the Alumni Center, Newark, N.J. Dick Snyder (201) 492-1207.

February 21--"Seminar: Applications Of Neural Networks"--NY Chapter IEEE Computer Society, 9:00 AM-4:30 PM, United Engineering Center, 345 East 47th St., NYC. Andrew Weigel (212) 440-8533.

March 26-27--"16th Annual Northeast Bioengineering Conference"--Roger P. Gaumond, Conference Chairman (814) 865-1407.

IEEE



**NORTH
JERSEY
SECTION
ACTIVITIES**

PLEASE POST

Members and Non-Members Welcome

Volunteers Needed For IEEE Admission And Advancement Committee

The IEEE Admission and Advancement Committee is an Institute committee which is appointed by the IEEE Board of Directors. Its function is to review applications for IEEE Member and IEEE Senior Member and make sure applicants meet the IEEE membership grade requirements.

The A & A Committee meets one day each month at various locations in the U.S. Two meetings occur each year in Boston, in New York City, in Piscataway (New Jersey), and in Washington (DC). The other four meetings are held at various locations in conjunction with the IEEE Board of Directors Meeting.

The A & A Committee is actively seeking volunteers to serve on their committee and meet twice per year in one of the above four primary cities listed above. Volunteers must be an IEEE Senior Member or Fellow. Past experience in IEEE activities is highly desired.

The meetings last about 1/2 day, usually from 9:30 AM to about 2:00 PM. Typically, you will have to review about 25 applications per meeting. Training to do the reviews is provided by a booklet and at the meetings. The work is interesting and challenging.

If you are interested in serving on the IEEE Admission & Advancement Committee beginning in January 1990, please send a letter, stating your interest and qualifications, to: Roseann Schulz, Member Services, IEEE Service Center, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331. Your help will be appreciated.

New York Chapter IEEE Computer Society Seventeenth Semi-Annual Seminar Multi-Tasking At Your Desk-Top

Wednesday, December 13, 1989 — 9:00 AM - 4:30 PM
United Engineering Center Auditorium, 345 East 47th Street, NYC

Recent advances in desk-top hardware (PC's and workstations) and software (multi-tasking O/S, windowing facilities) hold out the promise of greatly improved productivity. But while these advances have resulted in many new products, their promise remains simply a potential for most users. This seminar will provide you with the information to utilize these advances to create effective solutions for your business.

Selected speakers and topics include:

"The Ultimate Financial Workstation"	Rick Carney Wang Laboratories
"Solutions With The PC-MOS: A Multi-User, Multi-Tasking Operating System"	Gary Robertson The Software Link

- Speakers from AT&T and Hewlett-Packard will also be making presentations.

Fee: \$125 for IEEE Members; \$150 for non-Members, with \$25 discount for early registration with payment before November 30, 1989. Fee includes seminar proceedings, lunch, and coffee. For special student and group rates, and for further information, call Jim Barbera (212) 395-8765 or Andrew Weigel (212) 440-8533.

Note: above program is subject to change.

Registration for "Multi-Tasking At Your Desk-Top"

To: Andrew Weigel, c/o Eclipse Software, 30 West 15th Street, Suite 5N, New York, NY 10011. Make checks payable to "IEEE Computer Society".

Name _____ IEEE No. _____

Address: _____

Phone: _____

Millimeter Wave Antennas

The January 31, 1990 meeting of the North Jersey IEEE MTT-AP Chapter will take place at the New Jersey Institute of Technology Campus, Alumni Center Seminar Room, Newark, N.J. The talk will be on "Millimeter Wave Antennas." The speaker will be Felix K. Schwering, PhD. Members and guests interested in this subject are invited.

About The Talk

An overview over the area of mm-wave antennas will be presented. For the purposes of the review, two broad classes of mm-wave antennas are distinguished, i.e., antennas of conventional configuration and antennas based on new design concepts.

The first class is composed of well known radiating structures such as reflector, lens, horn and slotted waveguide antennas. The design principles and performance characteristics of these antennas are well established at microwave and lower frequencies, and scaling into the mm-wave region is straightforward in most cases. The small size of mm-wave antennas and their much tighter fabrication tolerances suggest certain modification in their design, and the question as to which antenna type should be used for a given application may be answered differently in the microwave and mm-wave regions. But, in principle, these antennas can be regarded as well understood. Most mm-wave antennas which are currently in use belong to this class of "conventional" antennas.

The second class, consisting of antennas with significant features that are peculiar to the mm-wave region, is still under study, although much interesting work on such antennas has been done in recent years. This class includes radiating structures such as printed circuit mm-wave antennas; traveling wave antennas derived from open mm-waveguide; and integrated antennas. Some of these antennas have microwave counterparts. However, scaling into the mm-wave region usually is not straightforward but leads to new problems and new opportunities. Other antennas of this class are completely new with no microwave heritage.

About The Speaker

Felix Schwering was born in Cologne, Germany. He received the Dipl.Ing. degree in Electrical Engineering and the PhD degree from the Technical University of Aachen, West Germany, in 1954 and 1957, respectively.

From 1956 to 1958, he was Assistant Professor at the Technical University of Aachen. In 1958 he joined the U.S. Army Research and Development Laboratory at Fort Monmouth, N.J., where he performed basic research in free space

and guided propagation of electromagnetic waves. From 1961 to 1964 he worked as a Member of the Research Staff of the Telefunken Company, Ulm, West Germany, on radar propagation studies and missile electronics. In 1964 he returned to the U.S. Army Electronics Command in Fort Monmouth and has since been active in the fields of electromagnetic-wave propagation, diffraction and scatter theory, theoretical optics, and antenna theory. Recently he has been involved, in particular, in mm-wave antenna and propagation studies.

From 1969 to 1978, he was leader of the Antenna Research Team of the Center of Communication Systems at Fort Monmouth and since 1979 has been a member of the Research Council of this Center. During 1984-85, he worked with the U.S. Army Research Office, Research Triangle Park, N.C., under the Visiting Laboratory Associates Program.

Dr. Schwering is a Fellow of the IEEE; he is a member of Sigma Xi and a Visiting Professor at Rutgers University and at New Jersey Institute of Technology. He is a member of URSI, Commission B, and recipient of the 1961 and 1982 Best Paper Awards of the IEEE Antennas and Propagation Society (jointly with G. Goubau).

Free Buffet Dinner

There will be a free buffet dinner for attendees in the Seminar Room, Alumni Center at 6 PM. **Reservations for the complimentary dinner are requested.**

Time: 7:30 PM, Wednesday, January 31, 1990. (Pre-meeting buffet dinner at 6:00 PM. **Reservations required.**)

Place: NJIT Seminar Room at the Alumni Center, Newark, N.J.

Information/Reservations: Dick Snyder (201) 492-1207; Willie Schmidt (201) 284-2255; Gerald Whitman (201) 596-3232.

Renew Yourself!!

It's time to renew your IEEE membership for 1990. You should have already received the information and forms.

Credit cards may be used to pay your dues. See page 36 of the brochure you received from the IEEE with the renewal forms.

For further information call toll-free 1-800-678-IEEE and request Member Services.

This is a good time to advance to the highest grade for which you are qualified.

For Member and Senior Member upgrade applications or any membership information, contact Don Weinstein, Kulite Semiconductor, One Willow Tree Road, Leonia, N.J. 07605 (201) 461-0900, ext. 238.

Telemetry In Nuclear Plants

On December 12, 1989 the Industrial and Commercial Power System Technical Discussion Group of the joint PES & IAS Chapter New York and Long Island will sponsor a talk on "Telemetry In Nuclear Plants." The speaker at this meeting will be Herbert Bardach, principal Nuclear Engineer with Ebasco Services Corporation.

About The Talk

This presentation will cover: Telemetric monitoring - security and radiation monitoring; Transmission methods and modes of interference. Telemetric

radiation monitoring will be discussed from the standpoints of hard-wire vs. radio frequency telemetry, digital vs. analog signal transmission, modes of interference, and on-site and off-site telemetry.

All Welcome

There is no fee required and all are welcome. Refreshments will be served.

Time: 5:30-7:30 PM, Tuesday, December 12, 1989.

Place: Gibbs & Hill Inc., Conference Room 4A, Fourth Floor, 11 Penn Plaza (7th Ave. across from Penn Station, 31st St.), NYC.

Further Information: Harry Blumenthal or George Cambranos (212) 566-4139.

16th Annual Northeast Bioengineering Conference March 26-27, 1990

Call For Papers

The annual Northeast Bioengineering Conference promotes cooperation and excellence in biomedical engineering and computing activities through the exchange of technical information. The conference covers important developments in engineering and science that effect the biomedical field. Authors are invited to submit papers (written in English) of scientific, engineering, or technical interest.

For more information: Rogert P. Gaumond, D.Sc., Conference Chairman, Bioengineering program, 230 Hallowell Building, Pennsylvania State University, University Park, PA 16802. Phone: (814) 865-1407.

New York Chapter IEEE Computer Society Eighteenth Semi-Annual Seminar Applications Of Neural Networks

Wednesday, February 21, 1990 — 9:00 AM - 4:30 PM
United Engineering Center Auditorium, 345 East 47th Street, NYC

There has been considerable publicity given recently to the field of neural networks and neurocomputing. While the promises made have been great, what is the true measure of this technology? What can actually be accomplished, and what is only hyperbole? In this seminar you will learn not only the basic theory of neurocomputing, but also gain understanding of the ways in which it is being successfully applied in real world situations.

The Keynote Address will be given by Casimir C. "Casey" Klimasauskas, the President and founder of Neural Ware, a leading developer of neural network tools.

Fee: \$125 for IEEE Members; \$150 for non-Members, with \$25 discount for early registration with payment before February 7, 1990. Fee includes seminar proceedings, lunch, and coffee. For special student and group rates, and for further information, call Jim Barbera (212) 395-8765 or Andrew Weigel (212) 440-8533.

Note: above program is subject to change.

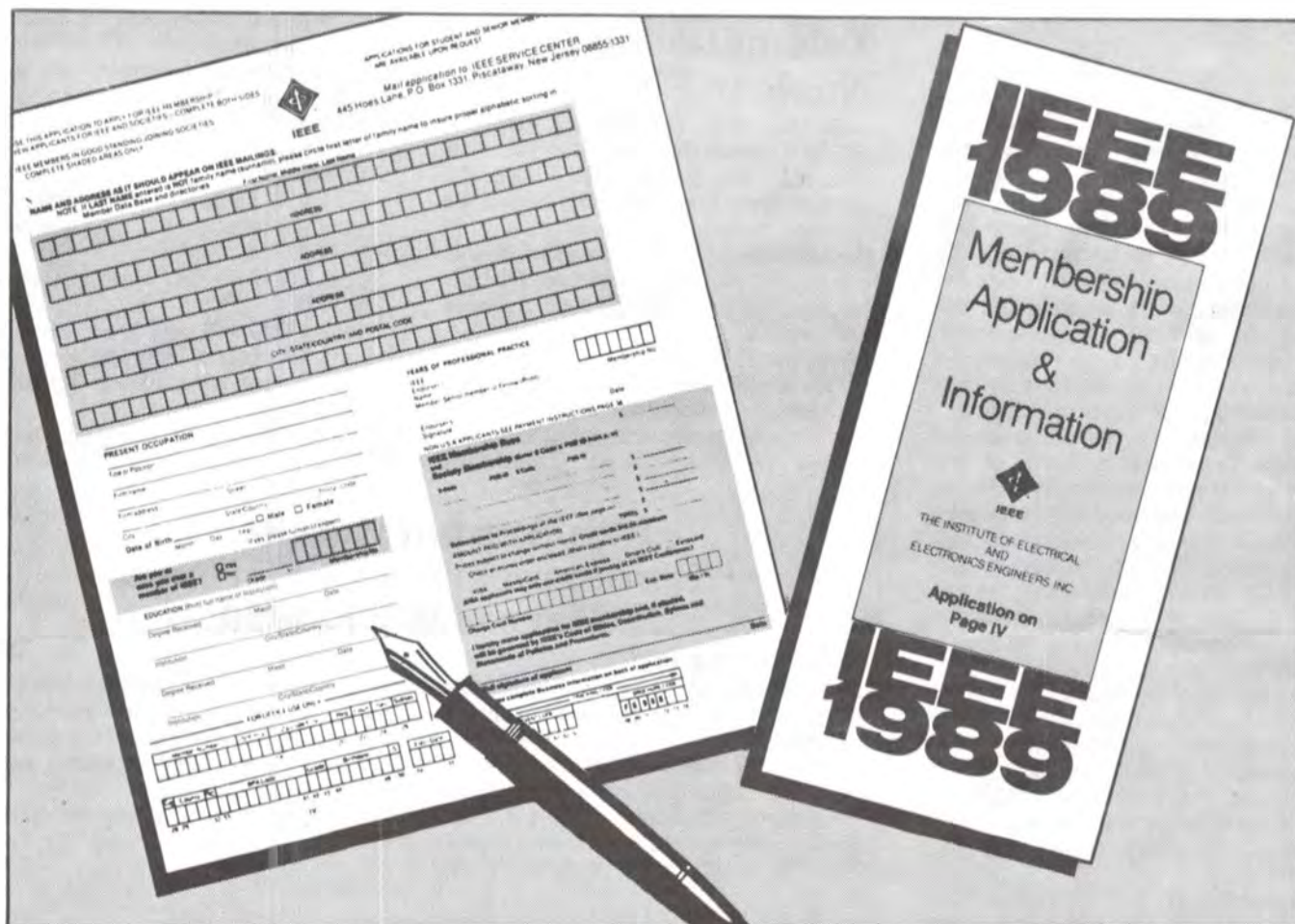
Registration for "Applications of Neural Networks"

To: Andrew Weigel, c/o Eclipse Software, 30 West 15th Street, Suite 5N, New York, NY 10011. Make checks payable to "IEEE Computer Society."

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