



The IEEE

Newsletter

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

North Jersey Section PACE: **Managing Stress In The '90's.**

At the June 8, 1995 meeting of the North Jersey Section's Professional Activities Committee for Engineers, speaker Mary Jo Buchanan will discuss stress, its effect on individuals and families, the stress response, and coping skills for stress management.

About The Speaker

Mary Jo Buchanan has been the Executive Director of Family Service of Morris County since 1989 and has over 14 years of experience in clinical social work and agency management. Mary Jo has a Master's Degree in Social Work and is a member of the Academy of Certified Social Workers. She has a second Master's degree in Public Administration.

Mary Jo has presented numerous workshops on job stress, time management and trauma recovery at the workplace to companies and organizations throughout Morris County.

Ms. Buchanan is also an Adjunct Professor at Seton Hall University's Center for Public Service. She serves on many local boards and has been cited in "Who's Who Among Human Service Professionals."

Time: 7:30 PM, Thursday, June 8, 1995.
Place: JCP&L Co., 300 Madison Avenue and Punch Bowl Road, Morristown, N.J.
Information:
Robert Sinusas (201) 228-3941.

North Jersey Section PACE: **Marketing Yourself For A New Career**

A free presentation for prior military officers in career transition will be offered June 14, 1995, as a community service by The IEEE North Jersey Section Chapter of PACE, and The Retired Officers Association (TROA) Northern New Jersey Chapter. While TROA is an organization of retired and former officers, all who are currently or anticipate soon being in a job search mode are welcome to attend.

Learn About:

Your Competition; Perception employers have of the defense industry and how to overcome them; A three-phased plan

for your job search; Tips on how to strengthen your resume; How employers read your resume; Networking and penetrating the hidden job market; Preparing for and conducting a successful interview; Negotiating salary and benefits package; Rejection and how to deal with it; The (free) TROA Officer Placement Service (TOPS) only available to prior military officers.

Reservations

Due to space limitations, reservations are suggested. If you are interested call Al Bottani on (201) 265-7797.

Time: 1:30 PM, Wed., June 14, 1995.

Place: Allied Signal, Administration Bldg. Auditorium, Columbia Road, Morris Township, N.J. (exit 2A off New Route 24, West 1/2 mile on Rt. 510).

Information/Reservations: Al Bottani (201) 265-7797; Robert Sinusas (201) 228-3941.

Internet Update

On the InterNet already? You should establish your own IEEE alias for E-mail. Here's how: from your E-mail system, send a message via the InterNet to: aliases@ieee.org and tell them your name, address, member number, and phone number in the message, as well as your current E-mail address. Within 24 hours, you'll have an IEEE alias! What this buys you is automatic forwarding of mail between the IEEE alias and wherever you actually are. If you change how you get to the InterNet (ie: new job, access node, etc.) how people find you doesn't change. You have a truly permanent E-mail address.

Want to get on the InterNet soon? IEEE is now aggressively looking into expanding its access offerings. Keep your eyes open, it's on the way!

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IEEE North Jersey Bulletin Board System:

0 TO 9600 baud, 8 bits, no parity, 1 stop bit, BBS phone number 201 669-8268, or call 908 782-3522.

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

REPORT ADDRESS CHANGES TO:

IEEE Service Center, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08854-1331, (908) 981-0060.

It is not necessary to inform the North Jersey Section when you change your mailing address. "The IEEE 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 Dr. Fred Chichester (201) 744-7340.

No. NJ Consultants' Network: Contracts For Consultants

On June 29, 1995, the IEEE Consultants' Network of Northern NJ will present "Consulting Contracts." The speaker will be Edward J. Trawinski, Esq.

About The Topic

"Contracts for Consultants" will address the following questions:

- Do contracts between consultants and the companies they work for need to be in writing?
- Why do I need a contract? Couldn't I just use a letter of agreement or a proposal?
- Which provisions should be included in the contract?
- What clauses should be avoided?

A sample agreement will be available at the meeting.

About The Speaker

Edward J. Trawinski is a partner and attorney at Schenck, Price, Smith & King, a commercial and business law firm in Morristown, N.J. He is a graduate of Rutgers Law School and has his Master of Law Degree in Taxation from New York University Law School. He has served as Assistant Commissioner of Commerce and New Jersey Economic Development Authority under past Governor Thomas Keane. Mr. Trawinski is a specialist in general business law as well as formation and representation of corporations, partnerships, and limited liability companies.

Featured Consultants

Jim Boyd specializes in custom hardware and software design of microprocessor-based control systems for consumer and industrial applications. Since forming XL Research in 1978, he has delivered real-time control system designs used in such products as cordless telephones, experimental solar homes, high speed printing machinery, fire alarm systems and a multiple processor control system for a U.S. prison.

Alex Richardson P.E. received his BEE and Masters in Engineering from Cornell in 1951, and his Masters degree in Science from Stevens Institute of Technology in 1961. He has spent his career assessing new technologies for government, aerospace, and military design and development projects. He has been involved in the development of bit slice computers from the very beginning. He was also involved in the transition to gate arrays, the use of gallium arsenide, fiber optics and superconductivity. He currently is also a certified paralegal, consulting to the legal profession on intellectual property.

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.

Time: 7:30 PM, Thursday, June 29, 1995.

Place: AT&T Bell Laboratories, 67 Whippany Rd., Whippany, N.J.

Information: For directions or up-to-date meeting status call Robert Walker at (201) 736-0771.

Attendance: Non-Network attendees and member guests must pre-register by 5 PM Wednesday, June 28th. Contact David Greenspan at (201) 8822-8562 (answering machine). Leave your name and citizenship information. Calls will not be returned.

Seminar Prices Reduced For Members

Besser Associates is offering IEEE members a 25% fee discount for each of two Seminars to be held in Morristown, June 26-30.

Daniel Bukofzer, Jack Holtzman and Al Scott will team up in the five-day Wireless RF System Design course, to be presented at the Headquarters Plaza Hotel. This course is a revised version of the West Coast presentations made during the past year. The instructors represent eighty years of industrial, academic, and consulting experience in the field.

An RF circuit design course will offered during the same week. Taught by Les Besser, the course provides an introduction to passive and active RF circuits. It is aimed at circuit and system engineers working in the 100-2,000 MHz frequency range. A shorter video-taped version of Dr. Besser's course was presented by the MTT Chapter of the New Jersey Section in the late 80's, but this is the first time the live course will be given in our region.

Course fee is \$1,495, (reduced to \$1,120 for IEEE members). For further information, course brochure, and registration, contact: phone 415-949-3300, or FAX 415-949-4400.

Get your **FREE** copy of the 1995

Directory of Consultants

published by the IEEE Consultants'
Network of Northern NJ, call:

Alex Richardson
(201) 535 - 3440

Ask about our
FREE Consultant Referral Service

NJ MTT/AP Chapter: Analysis And Optimization of Oscillators

On June 20, 1995 the IEEE North Jersey Section MTT/AP Chapter will present a talk on "Analysis And Optimization Of Oscillators For Low Noise And Low Power Consumption." The speaker at this meeting will be Dr. Ulrich L. Rohde of Compact Software, Paterson, N.J.

About The Talk

Various hand held products for wireless communications require low phase noise oscillators and at the same time low power consumption. Compact Software, Inc. has solved the complex mathematical problem of analyzing SSB in arbitrary oscillator topology. Computer programs readily optimize for phase noise, power consumption and other relevant parameters in oscillator designs. Such analysis is a tradeoff between several design parameters. Optimization is performed by assigning specific weights to the parameters in the analysis. Examples of the oscillator design optimizations will be shown, before and after performance comparisons will be made. Physically performing this type of work on a bench will destroy the printed circuit boards due to the complexity of the frequent component changes and will also be very time consuming. This optimization approach is an important design tool to increase the performance.

About The Speaker

Dr. Ulrich L. Rohde (Senior Member IEEE) is president of Compact Software, Chairman of Synergy Microwave Corp., and a partner of Rohde and Schwartz, Munich, West Germany. Previously he was with Radio Systems of RCA. He holds a PhD (EE) from the University of Munich and ScD (Hon) in radio communications from University of Darmstadt. Dr. Rohde is a member of staff at George Washington University and has several years of experience in microwave design, development and instrumentation. He has published numerous technical papers and four books in the microwave area.

All Welcome

You do not need to be an IEEE member to attend. All are welcome. Free refreshments will be provided starting at 6:15 PM and the meeting will start at 7:00 PM.

Time: 7:00 PM, Tuesday, June 20, 1995.

Place: GEC-Marconi, Plant 11, 164 Totowa Road, Totowa, N.J.

Information: Chandra Gupta (201) 633-4469 or Bill Schmidt (201) 492-0371.

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NJ

North Jersey Section Activities June 1995

NJ Computer Chapter:

Modeling Compressed Video Traffic

On June 8, 1995, the IEEE NJ Computer Chapter will present a talk on "Modeling Compressed Video Traffic Using The TES Methodology." The speaker at this meeting will be Dr. Benjamin Melamed.

About The Talk

The talk will focus on the Transform-Expand-Sample (TES) method of modeling variable bit rate (VBR) compressed video which will be a major consumer of band width in emerging communication networks. TES methods are readily implemented on a computer and have a low computational complexity.

Case studies will be described on how TES methods can be used to model entire movies using popular compression (coding) schemes. It will conclude with an overview of a TEX-based modeling software package, entitled TESTool.

About The Speaker

Dr. Benjamin Melamed, a Consultant at Bellcore, is a Visiting Scholar at Rutgers University. He received his B.Sc degree in Mathematics and Statistics from Tel Aviv University and his MS and PhD from University of Michigan and has taught at Northwestern.

While at Bell Labs (1981-1989), he developed what eventually became the Q+ system for visual modeling of networks. For this work he was made an AT&T Bell Labs Fellow in 1988. For contributions as Deputy Director, Department Head of Performance Analysis at NEC, he received a NEC Fellow Award. Further, he was recognized with an IEEE Fellow Award in 1994 'for contributions to performance analysis methodology and practice'.

He has authored or co-authored over 70 papers. His research interests include system modeling and analysis, simulation, stochastic processes and visual modeling environments.

All Welcome

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

Time: 7:30 PM, Thursday, June 8, 1995.

Place: Bell Labs, Room 6B101, Murray Hill, N.J.

Information : Howard Leach (201) 540-1283, or Richard Shively (201) 386-4715.

June 3—"Internet Seminar"—IEEE Consultants' Network of Northern New Jersey, 9:00 AM-4:00 PM, Drew University, Madison, N.J. Ralph Waters (201) 447-9092. (See May issue for details.)

June 7—"North Jersey Section Executive Committee Meeting"—7:00 PM, Plant 11, GEC-Marconi, 164 Totowa Road Totowa, N.J. Dr. Fred Chichester (201) 744-7340.

June 8—"Managing Stress In The '90's"—North Jersey Section PACE, 7:30 PM, JCP&L Co., 300 Madison Avenue & Punch Bowl Road, Morristown, N.J. Robert Sinusas (201) 228-3941.

June 8—"Modeling Compressed Video Traffic Using The TES Methodology"—IEEE NJ Computer Chapter, 7:30 PM, Bell Labs, Room 6B101, Murray Hill, N.J. Howard Leach (201) 540-1283.

June 13—"First Annual North Jersey Section Student Paper Presentation Night"—7:30 PM, ITT, Auditorium, 1001 Kingsland Ave., Clifton, N.J. Amy Bissmeyer (201) 239-5026 (eve).

June 14—"Marketing Yourself For A New Career"—North Jersey Section PACE, 1:30 PM, Allied Signal, Admin. Bldg., Auditorium, Columbia Road, Morris Township, N.J. Al Bottani (201) 265-7797.

June 20—"Analysis And Optimization Of Oscillators For Low Noise And Low Power Consumption"—IEEE North Jersey Section MTT/AP Chapter, 7:00 PM, GEC-Marconi, Plant 11, 164 Totowa Road, Totowa, N.J. Chandra Gupta (201) 633-4469.

June 21-23—"Electro '95"—Hynes Convention Center, Boston, MA. For further information contact Kathryn Piersall at Miller Freeman, Inc., (800) 223-7126.

June 29—"Consulting Contracts"—IEEE Consultants' Network of Northern NJ, 7:30 PM, AT&T Bell Labs, 67 Whippany Rd., Whippany, N.J. Robert Walker (201) 736-0771.

Upcoming Meetings

July 5—"North Jersey Section Executive Committee Meeting"—7:00 PM, Plant 11, GEC-Marconi, 164 Totowa Road Totowa, N.J. Dr. Fred Chichester (201) 744-7340.

July 13—"Topic To Be Announced"—North Jersey Section PACE, 7:30 PM, JCP&L Co., 300 Madison Avenue & Punch Bowl Road, Morristown, N.J. Robert Sinusas (201) 228-3941.

Aug. 2—"North Jersey Section Executive Committee Meeting"—7:00 PM, Plant 11, GEC-Marconi, 164 Totowa Road Totowa, N.J. Dr. Fred Chichester (201) 744-7340.

Aug. 10—"Topic To Be Announced"—North Jersey Section PACE, 7:30 PM, JCP&L Co., 300 Madison Avenue & Punch Bowl Road, Morristown, N.J. Robert Sinusas (201) 228-3941.

Oct. 25—"Seminar: Getting The Most Out Of Your Electric Power System"—North Jersey Section IAS & PES Chapters, 9:00 AM - 3:00 PM, JCP&L Hq., 300 Madison Ave., Morristown, N.J. Vittal Rebbapragada (201) 804-2011.

Members and Non-Members Welcome PLEASE POST



AN IEEE SEMINAR ON GETTING THE MOST OUT OF YOUR ELECTRIC POWER SYSTEM:

**HOW TO OBTAIN HIGHER PRODUCTIVITY, LOWER COSTS,
AND BETTER PROFITABILITY FROM YOUR EXISTING SYSTEM**

Presented by the IAS and PES Chapters, North Jersey Section

Wednesday, October 25, 1995, 9:00AM to 3:00PM

Jersey Central Power and Light HQ

300 Madison Ave., Morristown, NJ 07962

Topics

- Introduction
 - Seminar overview
 - Basic concepts
 - Costs of power problems
 - Factors that affect system productivity
 - Reliability, availability, maintainability
 - Preventive maintenance
 - Life extension
- System productivity evaluation
 - Single-line diagram
 - Walkdown inspection
 - Capacity and expandability evaluation
 - Power quality assessment
 - Energy efficiency evaluation
 - Reliability and availability assessment
 - Techniques and tools
 - FMEA and other hazards analyses
 - Reliability block diagrams
 - Fault trees
 - Computer tools
 - Reliability and availability data
 - Collecting and analyzing plant data
 - Generic data
- System productivity improvement
 - Identifying and upgrading critical items
 - Productivity-centered maintenance
 - The PCM concept
 - Benefits of PCM
 - Database development
 - Procedures review
 - "Smart" databases and AI resources
 - Maintenance tracking and closeout
 - Inspection and testing
 - Trending maintenance and test results
 - Managing a living PCM program
 - Improving energy efficiency
 - Improving power quality
 - System life extension
- Justifying investments In power system hardware or maintenance upgrades
 - Life-cycle costing
 - Investment analysis concepts
 - Probabilistic cost-benefit analysis
- Final overview and discussion

Seminar Leaders

Richard H. McFadden, P.E., Fellow, IEEE. Chief Electrical Engineer, Advanced Technology Division, Science Applications International Corp., New York, NY.

R. Vittal Rebbapragada, P.E., Senior Member, IEEE. Senior Consulting Engineer - Electrical Power Systems, Ebasco Services Division, Raytheon Engineers and Constructors, New York, NY.

Cost - including materials, morning refreshments, and luncheon:

IEEE members	\$150.00
Non-members	\$195.00
Students with valid ID	\$50.00

Reserve your place by mailing a check payable to "IEEE Jersey Section" to R.H. McFadden, SAIC, 7 West 36th St., New York, NY 10018 by **October 16, 1995. \$50.00 DISCOUNT ON FULL (NON-STUDENT) REGISTRATIONS RECEIVED BY OCT. 1!**

For information or late registration, call Vittal Rebbapragada, (201) 804-2011; Ken Oexle, (201) 455-8481, or Dick McFadden, (212) 239-8510

North Jersey Section Student Presentation Night

Any paper that you have written that pertains to the field of electrical engineering is eligible. Technical topics may include those from senior projects, Engineer's Week Contests, or thesis papers. Also invited are presentations focusing on professional issues, perhaps from an Engineering Ethics class or the like. The idea is to get some extra mileage out of required coursework. The bonus is that students get the chance to practice presentation skills in front of an astute, supportive audience of local IEEE members from many fields and backgrounds.

Each presentation will be judged on several things, including accuracy, use of visual aids, organization, and audibility, among others. Speakers will have five minutes (+/- 30 seconds) to make their point, and qualify for the prizes. The audience will then briefly critique each presentation. First place earns \$100, second place \$70, and third place \$30. Best of all, everyone gets to take home the comment sheets used to select winners.

For both student presenters, and the local IEEE members, the goal of the evening is to have fun, learn new things, do a little networking ... all in the name of encouraging professional growth!

Students may indicate interest and request more information from North Jersey Section Student Activities Chair, Ms. Amy Bissmeyer, at (201) 742-2381, days, or (201) 239-5026, evenings. Again, the idea is not to add to an already hectic workload, but to recycle something you've already sweated over... we're flexible on topics. However, a *brief* abstract (approximately 100 words) of the topic needs to be submitted for approval no later than Tuesday, June 6 to Amy Bissmeyer. They can be mailed or faxed to: Videx Equipment Corp., 170 Railroad Ave., Paterson, NJ 07501 Attn: Amy Bissmeyer ... Fax number: (201) 742-1452. Be sure to include your name, college, and phone or fax number. You will be contacted about approval.

When: 7:30 PM, Tuesday, June 13, 1995.

Where: ITT, Auditorium, 100 Kingsland Ave., Clifton, NJ.

Directions to ITT:

From Rt. 3, exit Route 21 South. Take first exit off of Rt. 21, which is River Road. Turn right off the exit ramp. Follow River Road roughly a mile, and turn left onto Kingsland Road. (At the intersection of River and Kingsland, ITT will actually be on your far left corner.) Park in Visitor's Lot, and enter the building in the center. A guard will be there to check you in. The Auditorium is off of the lobby.

AT THE SCHOOLS

NJIT Offers New Graduate Programs

Graduate programs in Professional and Technical Communications are being offered by the New Jersey Institute of Technology. Full and part-time courses are available for M.S. and Certificate programs.

These programs provide technologic expertise plus strong communications skills for career growth.

Courses include:

- Communication for the electronic age
- Professional practice-oriented program
- Corporate internships available
- Technical writing and editing
- Graphic design and desktop publishing
- Multimedia presentations and
- Specialized programs, environmental, medical, legal writing.

Information is available by calling (201) 596-3454, or by mail from NJIT at University Heights, Newark, NJ 07102-1982.

WIRELESS SYSTEM AND RF CIRCUIT COURSES

Have you reached the "half-life" of your technical skills? Are you being held back due to insufficient education and training in today's technologies? Do you want to learn state-of-the-art design techniques?

If so, join the over 10,000 professionals who have already participated in our Continuing Education Program. Our internationally recognized instructors are technical experts as well as highly skilled communicators.

We offer two five-day courses at Morristown, NJ on June 26-30, 1995:

Applied RF Techniques

This is our most popular course, tracing its origin back to the RF EXPO short course program. Based on the feedback of our past students, we combined our RF Fundamentals I and II courses into a five-day program. You will learn proven practical design methodologies and will never be intimidated by RF circuit related issues.

Instructor: Les Besser

Wireless RF System Design

A unique program covering both the digital and RF portions of wireless systems, including transmitter, receiver, and propagation related issues. Students learn about the various modulation, coding and spread-spectrum schemes and by the last day participate in a system design project.

Instructors: Bukofzer/Holtzman/Scott

For information, course brochure, or registration (IEEE members receive a 25% fee discount), contact:



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4600 El Camino Real #210

Los Altos CA 94022

E-mail: BesserCourse@delphi.com

Phone # (415) 949-3300

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