



A One-Day IEEE Seminar on SHORT CIRCUIT ANALYSIS

presented by the IAS and PES Chapters,
North Jersey Section

Thursday, November 21, 1996
8:30 AM to 3:30 PM
GPU Energy
300 Madison Ave., Morristown, NJ 07962

Topics

- Introduction
 - Seminar overview
 - Reasons for a short circuit study
 - Basic concepts
 - Types and causes of short circuits
 - Per-unit system
 - Equivalent circuits
 - Symmetrical components
 - Network analysis methods
- How to do a short circuit study
 - Single-line diagram
 - Defining study requirements
 - Impedance diagram
 - Determining system impedances
 - Typical impedance data
- Calculations
 - Manual
 - Computer
- Interpreting and applying results
 - Interrupter evaluation
 - Circuit breaker application
 - Fuse application
 - Protection coordination
 - Specifying bus bracing
 - Inputs to other studies
 - Voltage regulation
 - Motor starting
 - Harmonics analysis
- Case studies
- Review of key concepts
- Questions and answers

Seminar Leaders

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

Kenneth J. Oexle, P.E., Senior Member, IEEE. Director of T&D Engineering, Jersey Central Power and Light Company

R. Vittal Rebbapragada, P.E., Senior Member, IEEE. Senior Consulting Engineer

Cost - including materials, morning refreshments, and luncheon:

IEEE members	\$100.00
Non-members	\$150.00
Students with valid ID	\$50.00

Reserve your place by mailing a check payable to "IEEE North Jersey Section" to R.H. McFadden, SAIC, 7 West 36th St., New York, NY 10018.

\$25.00 discount on full (non-student) registrations received by November 1!

For information or late registration, call Vittal Rebbapragada, (201) 568-5849; Ken Oexle, (201) 455-8481; or Dick McFadden, (212) 239-8510.



The IEEE

Newsletter

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

No. Jersey SMC Society: Migrating To Windows® '95

The November 12, 1996 meeting of the IEEE NJ Section Systems, Man & Cybernetics Society will feature a talk and demonstrations by Mike Liechenstein, Mel Lewis, and the Microsoft Corporation's "WIN 95 Traincast #1" on making the transition to Windows® '95.

About The Topic

The video presentation and discussion should be of interest to information systems managers and consultants, as well as to PC users currently employing older or alternative operating systems. Those contemplating the change to Windows® '95, but seeking sufficient justification, will benefit from learning about migration issues such as hardware and software compatibility, reliability ("crash" resistance), enhanced graphical user interface, open networking architecture, plug-and-play features, increased desktop control, improved context sensitive help, expanded multitasking/threading capability, etc.

All Welcome

You need not be a member of IEEE to attend and there is no charge for admission. Light refreshments will be served.

Time: 7:00 PM, Tuesday, November 12, 1996.

Place: Fairleigh Dickinson University, Teaneck campus (1000 River Rd., just off Route 4). Call for information regarding final room and building assignment—probably, Muscarelle Bldg., M-207.

Information:

Dr. Mike Liechenstein (201) 471-0721,
E-mail ITSMIKESJU@AOL.COM;
Melvin Lewis (914) 968-2500, ext. 2304,
E-mail M.LEWIS@IEEE.ORG.

Signal Processing Chapter: Space-Frequency Methods In Image Coding

The IEEE NJ Signal Processing Chapter and NJIT Communications and Signal Processing Center will host a talk November 26th on "Space-Frequency Methods In Image Coding." The speaker will be Michael T. Orchard, Department of Electrical Engineering at Princeton University.

About The Talk

In the past several years, two disjoint clusters of researchers have been exploring the application of time-frequency ("space-frequency" when applied to imagery) analysis tools to image coding. On one hand, image coding researchers have been developing increasingly powerful "wavelet-based" image coding algorithms that currently far outperform non-wavelet methods. On the other hand, a growing community of mathematicians and statisticians have been studying the approximation of spaces of functions using "nonlinear approximation" methods with wavelet basis. Results in this direction have established some fundamental advantages of the wavelet basis compared with the Fourier basis for approximating certain classes of functions.

This talk attempts to bridge the gap between these two communities by sketching out some recent mathematical results in nonlinear approximation, and describing their relevance to the design of today's state-of-the-art wavelet coding algorithms. While the mathematical results character-

ize asymptotic coding performance, we describe how to identify realistic coding regimes for which the mathematical results provide good qualitative performance characterization.

About The Speaker

Michael Orchard received the BS and MS degrees in electrical engineering from San Diego State University in 1980 and 1986, and the MA and PhD degrees in electrical engineering from Princeton University in 1988 and 1990.

Since 1995 Prof. Orchard has been an Associate Professor with the Department of Electrical Engineering at Princeton University. He has worked at Scientific Atlanta developing passive sonar DSP applications. Since 1988, he has consulted with the Visual Communications Department of AT&T Bell Labs, and from 1990 to 1995, he was an Assistant Professor with the Department of Electrical and Computer Engineering, University of Illinois at Urbana-Champaign.

All Welcome

You need not be a member of IEEE to attend and there is no charge for admission. Light refreshments will be served.

Time: 6:15 PM, Tuesday, Nov. 26, 1996.

Place: NJIT, ECEC 202 (2nd Floor Conference Room), Newark, NJ.

Information/Reservations: Yun Shi (201) 596-3501, shi@tesla.njit.edu

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NOVEMBER, 1996

NOVEMBER, 1996

Volume 43, Number 5

Publication No: USPS 580-500

"The IEEE Newsletter" (North Jersey Section), is published monthly except July by The Institute of Electrical and Electronics Engineers, Inc. Headquarters: 345 East 47th Street, New York, NY 10017-2394. \$1.00 per member per year (included in annual dues) for each member of the North Jersey Section. Periodicals-class postage paid at New York, NY and at additional mailing offices. Postmaster send address changes to: "The IEEE Newsletter," 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331. USPS 580-500 (ISSN 1076-3732).

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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 IEEE Newsletter, c/o Girard Associates, Inc., 6 Robert Terrace, P.O. Box 455, Mt. Arlington, NJ 07856 (201) 398-5524.

IEEE NJ SECTION HOME PAGE

WWW at <http://hertz.njit.edu/~ieeenj>

REPORT ADDRESS CHANGES TO:

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The North Jersey Section Executive Committee usually meets the first Wednesday (except holidays and December) of each month at 7:00 PM. Meetings are open to all members. For information on meeting agenda call Sergei Bogaenko (201) 785-3673 (H).

NJ PES/IAS:
Flywheel Energy Storage

The November 21, 1996 meeting of the NJ Section Industrial Applications and Power Engineering Society will present a program on the prospects of flywheel energy systems to store electric power. The speaker will be Steven B. Sanders, Product Development Specialist - Emerging Technologies for GPU Energy. About The Talk

The program will focus on the role of large scale economic flywheel energy storage systems in the electric power industry. Due to recent advancements in technology, electro-mechanical flywheel energy storage devices could present exciting opportunities in the way electric power companies provide service in the future.

Time: 7:00 PM, Thursday, November 21, 1996.

Place: GPU Energy, 300 Madison Ave., Morristown, NJ.

Information/Reservation: Ken Oexle (201) 455-8481.

Scout Explorer Posts Stress Engineering

Engineering Explorer Posts give young men and women an opportunity to learn about the requirements of engineering careers. Post programs include a variety of projects, such as hands-on experiments, tours, and speakers. Volunteers make career presentations and conduct pertinent activities or demonstrations at Explorer Post meetings. Contact Engineering Exploring, Boy Scouts of America, PO Box 152079, Irving, TX 75015-2079, or your local Boy Scout Council listed in the white or yellow pages.

IEEE North Jersey Section
The Laser and Electro-Optics Chapter and the MTT Chapter

1996 Optoelectronics Seminars and Industry Show

Wednesday, November 20, 1996, 3-6 PM

"Military Applications for RF and Lightwave Technology: Past and Present"
B. Hendrickson, DARPA

"University/Industry Collaboration"
ECE Faculty

For information call:
Dr. H. Grebel (201) 596-3533

Location:

InfoTech Bldg., Room 3730, New Jersey Institute of Technology

Directions: Garden State Parkway Exit 145, Route 280 East; Take King Blvd. Exit 14A and turn right at the traffic light. Continue straight and after three traffic lights turn right into Central Ave. Take the first left, Summit St. into the campus and ask the police officer for the reserved parking.

Route 280 West take Exit King Blvd. At the end of the ramp make a left. Proceed one block and make a left into King Blvd. After four traffic lights turn right to Central. Take the first left turn to Summit. Ask the police officer to direct you to the reserved parking.

NJ Section PACE:
Engineering: The Business

The November 14, 1996 meeting of PACE will address the subject of Contract Engineering (CE) or job shopping. The guest speaker will be Richard F. Tax, vice president of the American Engineering Association, Inc. and a past chairman of the North Jersey Section IEEE.

About The Talk

Richard will discuss Contract Engineering, the issues to enhance your position, and AEA's activities to assist engineers. Subjects will include: pay structure, billing rates, benefits, contracts and contacts. CE rates can vary by a factor of 2:1 with the uninformed engineer getting half the rate of an associate in the same position.

This meeting is for all engineers who may consider Contract Engineering as a method to market their services.

About The Speaker

Richard Tax is a graduate of Fairleigh Dickinson University with a BSEE degree and is a Senior Member of the IEEE. He has more than 25 years of experience in the engineering field. Richard is the recipient of six IEEE awards for leadership including the IEEE Centennial Medal and the IEEE-USAB Citation of Honor.

He has been active in the IEEE since 1974, was chairman of the North Jersey Section from 1985 through 1986 and our past PACE chairman. He served as a member of the IEEE-USA's Manpower Committee and wrote IEEE's Entity Position Statement "Enhancing U.S. Productivity Through Improved Utilization of Engineers." In 1987 he chaired the 20,000 member, Metropolitan Sections Activities Council (METSAC).

This meeting is for all engineers who may consider Contract Engineering as a method to market their services. Free sample copies of AEA's publication the *American Engineer* will be available for attendees.

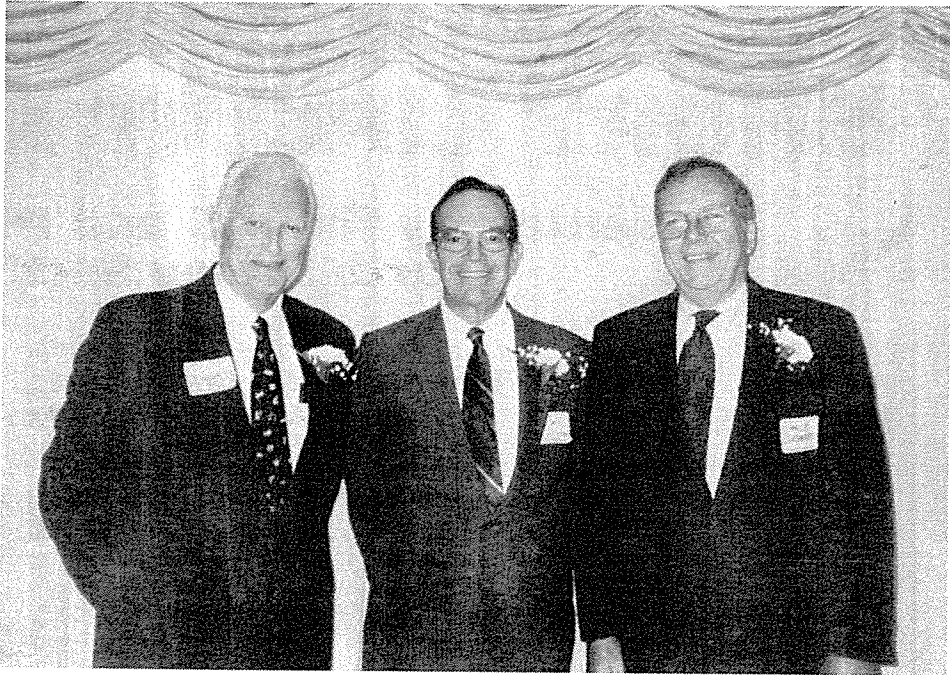
All IEEE members and guests are invited to attend.

Time: 7:30 PM, Thursday, November 14, 1996.

Place: GPU Energy, 300 Madison Ave., Morristown, NJ.

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

New North Jersey IEEE Fellows ...



Attending the recent IEEE North Jersey Awards reception were new Fellows: Alan G. Chynoweth, Donald J. Leonard, Webster E. Howard.

It is not too early to be thinking about Fellow nominations for next year since they are due in March.

North Jersey Section Activities
November 1996

Nov. 6—"NJ Section Executive Committee Meeting"—7:00 PM, Plant 11, GEC-Marconi, 164 Totowa Road, Totowa, NJ. Sergei Bogaenko (201) 785-3673 (H).

Nov. 12—"Migrating To Windows® '95"—NJ Systems, Man & Cybernetics Society, 7:00 PM Fairleigh Dickinson Univ., Teaneck Campus. (Call for room and building.) Dr. Mike Liechenstein (201) 471-0721.

Nov. 14—"Engineering: The Business"—NJ PACE, 7:30 PM, GPU Energy, 300 Madison Ave. & Punch Bowl Rd., Morristown, NJ. Robert Sinusas (201) 228-3941.

Nov. 20—"1996 Optoelectronics Seminar & Industry Show"—NJ LEO and MTT Chapter, 3:00-6:00 PM NJIT, InfoTech Bldg., Room 3730, Newark, NJ. Dr. Haim Grebel (201) 596-3533.

Nov. 21—"One-Day Seminar: Short Circuit Analysis"—NJ IAS/PES Chapters, 8:30 AM - 3:30 PM, GPU Energy, 300 Madison Ave., Morristown, NJ. Dick McFadden, (212) 239-8510.

Nov. 21—"Flywheel Energy Storage"—NJ IAS/PES Chapters, 7:00 PM, GPU Energy, 300 Madison Ave., Morristown, NJ. Ken Oexle (201) 455-8481.

Nov. 21—"Convergence Of Networks And Services"—NY Chapter IEEE Communications Society, 9:00 AM-4:30 PM, United Engineering Center, 345 E 47th Street, NYC. Fee/registration: contact Jim Barbera (718) 816-5222 (voice mail); fax (212) 465-8877; or e-mail j.p.barbera@ieee.org

Nov. 26—"Space-Frequency Methods In Image Coding"—NJ Signal Processing Chapter and NJIT Communications & Signal Processing Center, 6:15 PM, NJIT, ECEC 202 (2nd Floor Conference Room), Newark, NJ. Yun Shi, (201) 596-3501. shi@tesla.njit.edu

Members and Non-Members Welcome
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