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

NORTH JERSEY SECTION ACTIVITIES

JANUARY

1. January 10, 1990—“Speech Synthesis” - New York Academy of Medicine's Section on Biomedical Engineering and Otalaryngology with the IEEE New York Section Engineering in Medicine and Biology Society, 6:00 PM, New York Academy of Medicine, 5th Ave. at 103rd St., NYC. Sheldon Ibel, (212) 876-8200.


3. January 31—“New Enforcement Science vs Money Laundering Networks” - North Jersey Section IEEE Industry Conference, 8:00 PM, Bell Labs Auditorium, 600 Mountain Ave., Murray Hill, N.J. David P. Perry (201) 302-8453.

Upcoming Meetings

February 7—“Optoelectronic Seminar Series—first of three seminars” - NJIT Section, IEEE, Graduate Student Chapter, 323 Martin Luther King Jr. Blvd., Newark, N.J. Dick Spector (201) 967-1077.

February 8—“Failure Prediction Of Components And System In Utility/Industrial Plants” - North Jersey Section Industrial Application Society, 7:30 PM, ITT Auditorium, 500 Washington Ave., Nutley, N.J. Vitaly Reppergisberg, (201) 839-3292.


February 20—“NYNJ Engineering Management Society Meeting (tentative date)” - Al Bottani (212) 265-7597.

February 21—“Seminar: Applications Of Neural Networks” - NY Chapter IEEE Computer Society, 9:00 AM-6:30 PM, United Engineering Center, 345 East 47th St., NYC. For details call Andrew Wiesig (212) 440-8533.

February 28—“Industrial/Government Cooperation For Economic Growth” - North Jersey Section IEEE Interchange Committee, 8:00 PM, Bell Labs Auditorium, 600 Mountain Ave., Murray Hill, N.J. David P. Perry (201) 302-8453.

March 20—“Seminar: Design Aspects Of Copagation Plants” - North Jersey Section Industry Application Society, 8:30 AM-4:00 PM, Meadowlands Hilton, Secaucus, N.J. Vittal Reppergisberg (212) 839-3292.
What are the consequences? First, we have and are losing our engineering capabilities. When we have a surplus of engineers, engineers are underutilized. When an engineer does engineering work he or she can do, we are wasting his or her talent. When an engineer has only one year of engineering experience during the boom, the demand for engineers is high, and engineers are utilized. When engineers are underutilized, they lose their engineering capabilities. The demand for our engineering capabilities is low, and we are losing our engineering capabilities.

In conclusion, we must make changes in our educational system and our workforce. We must provide more engineering education and training. We must increase the number of engineering graduates. We must attract more people to engineering. We must provide better training for engineers. We must provide better opportunities for engineers. We must provide better compensation for engineers. We must provide better working conditions for engineers. We must provide better benefits for engineers. We must provide better social security for engineers. We must provide better health care for engineers. We must provide better retirement plans for engineers. We must provide better education for engineers.

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InterSociety News by Steve Perry

The Joint Computer/Communications/LEO Chapter with the InterSociety Committee, invite you to attend a discussion January 31, 1990 on “Law Enforcement And Money Laundering Networks.” The speaker will be Dr. Richard W. Harms. The talk will be held at the auditorium at Bell Labs, 600 Mountain Avenue, Murray Hill, N.J. at 8:00 PM.

The talk is open to the public and the topics covered while general in nature will be of interest to analysts, network designers, law enforcement officers, and policy makers connected with financial institutions.

A meet and greet dinner will be held at September’s, Bonnie Brae Road, Watchung at 6:00 PM for those wishing to have informal discussions with Dr. Harms. For dinner reservations, call Dave Perry, (201) 325-8415 no later than January 19, 1990.

The talk recently, a Colombian economist arrested in Colombia allegedly used some of New York’s most prominent financial institutions such as Citibank, American Express, Bank New York and New York National Bank to help move $1.2 billion in cocaine profits out of the US. More than $100 billion a year in drug money flows through the networks banks publishing the report has exposed in a recent New York Times.

A new center is being established in the Washington area to process information about the money laundering. The organization will operate a computer system called FINESEN. Extracting data from the Federal Wire Transfer System involves processes of large amounts of data. The average daily volume of US transactions is about $700 billion and on one day the Clearing House processed $1.25 trillion. New regulations that require some banks and S&L’s to report cash deposits of less than $10,000 have already gone into effect.

Dr. Harms says that while artificial intelligence and numerical analysis methods are being used, it will not be possible to disclose precise details.

About The Speaker
Dr. Richard Harms has been a supervisor within the Financial Intelligence Branch of the Customs Office of Intelligence for the last four years. He has recently been named as Chief, responsible for the development and implementation of the Customs Financial Intelligence Program. Since late 1984, he has managed the project to use Federal Reserve Cash flow data to surface suspicious currency flows. Recently, he has been project manager for the Customs Artificial Intelligence System, a computerized expert system designed to target suspicious currency activity through analysis of Bank Secrecy Act data. In 1986, he managed a project that resulted in the publication of two base line studies on money laundering for the customs service titled “Money Laundering: Methods and ‘Money Laundering: Geographic Threat.’"

Dr. Harms is scheduled to take on the responsibility of Chief, Strategic Analysis in the future organization that will operate FINESEN.

Dr. Harms is a native of Northern California, where he taught at College of the Redwoods for two years after receiving his BSc, MS and PhD at University of California (Berkeley).

Our CALENDAR for 1990:
January 31 - “Law Enforcement Science vs Money Laundering Networks”
Rich Harms, Chief, Financial Intelligence Branch, Customs, 8:00 PM AT&T Bell Labs, Auditorium, 600 Mountain Ave., Murray Hill, N.J.
February 28 - “Industrial/Government Cooperation for Economic Growth”
Eric Summer, IEEE President Elect, 8:00 PM AT&T Bell Labs, Auditorium, 600 Mountain Ave., Murray Hill, N.J.
March 28 - “Fladen in New Jersey” - 8:00 PM
April 25 - “The Waste Management Crisis”
May 30 - “Industrial Dynamics, Modeling Industry”
Sept. 26 - “Input-Output Economics, Modeling Industry And National Economics”
Oct. 31 - “Engineering in Undeveloped Countries”

If you have questions about any of the above programs or suggestions about future programs that would be of general interest to our members, please write or call David P. Perry, 57 Forest Hill Road, West Orange, NJ 07105, Phone (201) 325-8415.

For Further Information Call:
Dr. Gerald Whitman, E.E. Dept., NJIT
(201) 596-3232/3512
Talk On Electrical System Component Protection

On April 19, 1990, the North Jersey Section Industrial Application Society will host a presentation on "Component Protection, Current Limitation And The National Electrical Code." The speakers will be Robert Denis and Stephan Norako, both are District Sales Engineers in the New Jersey area for the Busmann Division of Cooper Industries. About The Talk

The presentation covers proper protection of electrical system components. They will discuss how interlocking and rating ratings have been mis-interpreted and do not in themselves assure proper downstream protection. The topic of withstand rating is discussed. The presentation is concluded with the concept of current limitation as an effective means of assuring proper component protection.

About The Speakers

Robert Denis has been with the Busmann Division of Cooper Industries for the past four years. Prior to that he was an engineer with New Jersey Boveri Electric Inc. He holds a BSEE from the Polytechnic Institute of New York.

Stephan Norako has been with the Busmann Division of Cooper Industries for the past seven years. Prior to that he was a sales engineer with the Electrical Equipment Group of GTE Sylvania, Inc. He holds a BSEE from Fairleigh Dickinson University.

Pre-Meeting Dinner

The pre-meeting buffet dinner starts at 6:00 PM and the presentation begins at 7:00 PM.

Time: 7:00 PM, Thursday, April 19, 1990.

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

Further Information/Reservations:

Vital Rebbagrapha, Chairman, IAS Chapter (212) 829-8262, or Max C. Schramm (212) 887-1120.

IEEE-IAS Chapter (NJ Section) Seminar

Electrical Design Aspects of Cogeneration Plants

Tuesday, March 20, 1990 — 8:30 AM - 4:00 PM

Meadowlands Hilton, Secaucus, New Jersey

On March 20, 1990, the North Jersey Section Industry Application Society, in association with the New Jersey Energy and Facilities Management Exposition, will present a workshop on the electrical design aspects of cogeneration plants. One of eight workshops sponsored by professional organizations at the 15th annual Energy Expo, this day-long panel symposium on cogeneration design will address the primary areas of concern to the electrical engineers.

R.V. Rebbagrapha of Esbasco Services, Inc., Chairman of the IAS/NJ Chapter, will serve as moderator for in-depth presentations by speakers with experience in the field.

Selected speakers and topics include:

8:30 AM Registration, Coffee and Danish

9:00-9:15 Introduction

R.V. Rebbagrapha

Esbasco Services, Inc.

9:15-10:00 Planning Cogen Plants—Licensing and Utility Rates/Tariff Considerations

Harry Kocienkci

Director of Corporate Engrg.

Hoffman-LaRoche

10:00-10:45 Utility Requirements for Cogeneration Plants

E. Griffith

JCP&L

10:45-11:00 Break

11:00-11:45 Plant and Generator Protection—Requirements for Cogen Units

R.V. Rebbagrapha

Esbasco Services, Inc.

11:45-12:30 Electrical Control Panel, Metering, Alarms and Monitoring

Speaker to be announced

Lunch

12:30-2:00 Break

2:00-2:45 Design Considerations of 3kwe-100kwe Cogen Plants Using Reciprocating Gas Engines

Les Gadigan

Tecongen, Inc.

2:45-4:00 Cogen Units: An Operator’s Perspective

Speaker to be announced

The cost for this complete technical discussion—including materials, morning refreshments, luncheon and entrance to the Energy Expo Exhibit Hall—is $10 for non-members, $140 for IEEE members, and $50 for students.

To reserve your seat, check or money order payable to Energy Expo, Inc., and mail to Energy Expo, Inc., P.O. Box 222, Maplewood, NJ 07040, Deadline: March 10, 1990.

For more information on the IEEE workshop, please call Vital Rebbagrapha at (212) 839-2262 or Max Schramm at (212) 887-1120. For information about the Energy Expo, please call Sally Gambrell at (201) 763-5079.

For Call For Fellow Nominations

The Awards Committee of the North Jersey Section reminds the membership that it’s time to identify potential IEEE Fellows, and to begin work on the preparation of the nomination list of the basis of which the IEEE Board of Directors, upon recommendation of the National Fellow Committee, will award the Fellow Grade.

The requirements are basically these:

1. On April 30, 1990, the candidate must be a Senior Member. In addition, the candidate must have been a member in any grade for at least five years on January 1, 1990. Ten years as a member need not have been continuous, but the aggregate period of mem-

bership cannot be less than five years.

2. The candidate must have made significant individual contributions to his profession. There is an emphasis on individual. Evidence of their contributions, normally based on published papers in the open literature (preferably in refereed journals), patents, or oral presentations.

A “Fellow Grade Nomination Kit” is available for the asking from: Dolores Worton, IEEE Headquarters, 345 East 47th St., New York, NY 10017, (212) 705-7750. This kit contains quite a readable and informative “Guide” together with all the forms which the nominator must complete and distribute.

In order to qualify for consideration in 1990, a nomination, in the proper form, must reach two places no later than the close of business on April 30, 1990. Those two places are: (1) IEEE Headquarters and (2) the cognizant IEEE Technical Society whose speaking referee may have accommodations with that of the candidate. Balladries are provided in the Nomination Kit. No extensions are ever granted. For all practical purposes, the nomination must be complete, and in final form, no later than April 1, 1990, in order to allow some reasonable time for the Fellow references (a minimum of five are required) to prepare their remarks and have them in the hands of IEEE Headquarters no later than April 30, 1990.

The North Jersey Awards Committee, which has the authority to approve the nomination on behalf of the North Jersey Section, is anxious to work with the nominator in preparing the strongest possible case for the candidate. Any member of the Awards Committee, as listed below, can provide additional information.

G.S. Eager, Jr.,

GRU Consulting Services, Inc.

PO Box 43078

Upper Montclair, NJ 07043

1921-783-2281

J.B. Minter

Components Corporation

Six Kinsey Place

Denville, NJ 07834

201-827-8250

H.J. Hebrok, Jr.

PSE&G Co.

T-14A

PO Box 570

Newark, NJ 07101

201-430-6670

J. Van Savage

US Army ANSEL-RD-C3-AC-C

Pl. Monmouth Borough

201-544-2503

K.J. Ocejo

JCP&L Co.

174 Green Street

Woodbridge, NJ 07095

201-634-3405, ext. 294

M.D. Domenico

Belcore

435 South Street

Matawan, NJ 07747

201-829-4325

J.M. Brown

AT&T Bell Labs

1 Whippany Road, Rm. 2E-38

Whippany, NJ 07981

201-456-8814

M.G. Whitman

N.J. Institute of Technology

Dept. of Electrical Engineering

323 Martin Luther King Jr. Blvd.

Newark, NJ 07102

201-568-3522, 3512

H. Rowland

Scribner Institute of Technology

Dept. of EE & Computer Science

Hindelang, High Wycombe, Bucks, England

0044 490 820 6252

A Statistical Approach To Failure Prediction

On February 15, 1990, the North Jersey Section Industrial Application Society will host a presentation on “Failure Prediction Of Components And System In Util-

diyal Plants.”

The speaker will be Dr. Alan J. McElroy, Esbasco Services Inc., Livingston, N.J.

About The Talk

There has traditionally been a lot of uncertainty associated with estimating equipment and structural failure rates from limited data. Yet the importance of such estimates is beyond question when the equipment is expensive or the components are critical. With recent advances in the application of mathematical statistics and in computer hardware capability, failure rate predic-

tions have been improved sufficiently to permit application of optimization strate-

gies. These include assigning automatic equipment replacement intervals even before failure occurs. The basis for improved predictions and for optimizing maintenance will be described and illustrated within the context of industry application.

About The Speaker

Alan McElroy has over thirty years of experience in the electric utility industry, the last ten of which has been spent pioneering a prediction technology based on time series analysis of failure related data. His most recent assignment involves modeling and predicting likelihood of failure of electrical distribution systems and rates of components in bridges and tunnels, operated by New York City’s Triborough Bridge and Tunnel Authority. He is a member of the IEEE and in 1978 was awarded their Standards Medallion for his leadership role in IEEE Standard 500, the Nuclear Plant Reliability Data Manual. He is an electrical engineer by training and most recently received his doctorate from MIT, with a major in statistical physics.

Pre-Meeting Dinner

The light buffet dinner starts at 6:30 PM prior to the technical presentation.


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

Further Information/Reservations:

Vital Rebbagrapha, Chairman, IAS Chapter (212) 829-8262, or Max C. Schramm (212) 887-1120.

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