



December 2004  
(VOL 52, NO. 9)

The  **IEEE**

# MONITOR

PUBLISHED BY THE NEW YORK SECTION OF THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS



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# Chairman's Column



## Thanks

The year is quickly coming to an end and my term as New York Section Chair will also be ending.

I want to thank everyone on this year's NY Section Executive Committee and Chapter Chairs for all their hard work and support which they provided me and all of the area IEEE engineers throughout the year!

It's been a difficult and challenging year with the loss of several key members due to personal and professional conflicts and the unfortunate death of our Vice Chair – Bob Noberini.

My wish to our 2005 Chair-elect Paul Sartori is that he enjoy a productive and rewarding

reign and that he, along with the Executive Committee, are able to motivate new people to participate as volunteers in accomplishing the goals of the Section and IEEE. The hard work and dedication of these people must be appreciated and rewarded. The problems and challenges encountered should strengthen our resolve to serve!

If you are interested in getting involved as a volunteer, please contact me or anyone on the New York Section Executive Committee.

I hope to continue to be an active participant on the Executive Committee in the coming years and can utilize some of the 'wisdom' from my term to help others.

Wishing everyone a Happy New Year! --

Sincerely,  
Benjamin Schall

## **RECRUITING AND RETAINING VOLUNTEERS, PART XII**

What volunteers need: "follow up to see that the task is completed\*" and "an opportunity to provide feedback when the task is finished\*."

You can monitor the progress of the volunteer task and provide feedback, but don't hover. Keep in mind that volunteers are colleagues and partners, not subordinates or employees. Be positive, acting as coach and cheerleader, but don't allow yourself to get over-involved by doing the work yourself, even if it sometimes seems easier. If, despite your best efforts, a volunteer does not perform, you can release him or her from the commitment.

When the task is completed, or even if the volunteer is released from the commitment, it is a good idea to solicit feedback. Volunteers appreciate the opportunity to share their opinions. In addition, the Section will learn about problems encountered and may be able to prevent potential difficulties in the future and possible loss of volunteers.

(\*from "Volunteers: How to Get Them, How to Keep Them" by Helen Little; page 61-71, Panacea Press, Inc. Naperville IL.. 1999)

## **Help Wanted – Managing Editor – IEEE Monitor, New York Section**

Contract: Robert Pellegrino, Nominating Committee: Phone: 212 780-3758 or by

Email: PellegrinoR@ConEd.Com

The  **IEEE**  
**MONITOR**

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**The IEEE New York Section election was held on Wednesday, November 10, 2004 in Pete's Tavern, 129 East 18<sup>th</sup> Street on Irving Place, Manhattan, New York.**

**The following slate of IEEE members of the New York Section were elected to the Executive Committee for terms beginning on January 1, 2005 and ending on December 31, 2005.**

**Officers**

Chairman -	Paul J. Sartori
Vice Chair Chapter Operations -	Stanley Karoly
Vice Chair Section Activities -	Ken Vought
Treasurer -	Warner Johnston
Secretary -	David Weiss

**Elected Committee Chairs**

By Laws -	William N. Coyne	Chapter Organization -	Open
Managing Editor -	Open	Historian -	Melvin Olken
L. R. Planning -	William L. Perlman	Publications -	Dr. Frank E. Schink
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Chairman -	Robert M. Pellegrino
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Treasurer -	Open
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**PES / IAS New York & Long Island**

Chairman -	Ralph A. Mazzatto
Vice Chair -	John Michelson
Treasurer -	Bill Montgomery
Secretary -	Sukumar Alampur
Sr. Member at Large –	John Pasco
Jr. Member at Large –	Neil Weisenfeld

# Professional Activities Information Page

*This page dedicated to member professional activities information*

New York Section PACE Calendar of Upcoming Events: The following are proposed Section activities. Please contact me if you plan to attend a meeting.

January 12, 2005 General Meeting

If you have suggestions on areas of professional activities that interest you please contact me.

Peter Greco PACE Chairman  
Tel.: 212-614-3357 Fax: 212-529 5237  
email: [p.j.greco@ieee.org](mailto:p.j.greco@ieee.org)

### IEEE-USA's and IEEE Job Site:

This highly rated job listing service was replaced by a new internet-based job site, and is sponsored by IEEE-USA and IEEE Spectrum. The site allows the active and passive job seeker more control over the recruiting process. For more details go to: [www.ieee.org/jobs](http://www.ieee.org/jobs).

**IEEE EMPLOYMENT  
ASSISTANCE  
WEB SITE: <[www.ieeeusa.org](http://www.ieeeusa.org)>**

The Employment Assistance Web Site brings together dozens of job-search resources in a single location. The site includes the following:

### Entry-Level Employment Assistance Site:

If you are an engineering graduate, recent graduate, of IEEE Student Member looking for the first job this is one of the best places to begin your career.

Special entry-level employment services include job listings, links to company sites

and job-search tips and techniques:  
<[www.ieeeusa.org/EMPLOYMENT/entry.html](http://www.ieeeusa.org/EMPLOYMENT/entry.html)>

### IEEE-USA's New Resume Referral Service:

Put your resume for maximum exposure! IEEE-USA in cooperation with Resume-Link has established a members-only Resume Referral Service which IEEE members may register, FREE of charge via web registration or by hard copy. Your resume will stay on file for six months (with an option to renew the listing up to a year). Make sure you check out this great new service to promote your credentials! For hard copy registration forms, contact Resume-Link at 614-923-0600 or <[socmember@resume-link.com](mailto:socmember@resume-link.com)>.

## **EMPLOYMENT AND CAREER ENHANCEMENT PUBLICATIONS**

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### Engineering Careers into the 21<sup>st</sup> Century

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## Calendar of Upcoming Events

**Election 2004 – The elected slate of officers for the Section and Chapters are posted in this issue.**

**December 8, 2004** (Wednesday) Women In Engineering – Presentation: Career Opportunities for Women. Speaker: Dr. Eleanor Baum, Dean of the School of Engineering at Cooper Union. She is the first female dean at the school of engineering (Pratt) and is known for her efforts in encouraging women in the engineering profession. At Con Edison in the Executive Dining Room, 19<sup>th</sup> floor, 4 Irving Place, New York, NY at 5:30 PM.

**December 14, 2004** (Tuesday) PES/IAS Technical Discussion Group Meeting and the Edison Engineering Society – Presentation: General Electric discussing Parallel Switchgear in the Con Edison Executive Dining Room, 19<sup>th</sup> Floor, 4 Irving Place, New York, NY. For information or Reservation call : Sukumar Alampur [Sukumar@JRLA.comn](mailto:Sukumar@JRLA.comn) or (646) 674-6351 / Jim Nucito [J.R.Nucito@IEEE.org](mailto:J.R.Nucito@IEEE.org) or (732) 380- 1100 Ext. 4149

**December 14, 2004** (Tuesday) IM (Instrumentation & Measurement) and EMBS (Engineering in Medicine and Biology Society) – Presentation: The Impact of Automation on the Healthcare System. Our speaker will be Gordan Silverman, Ph.D. Pre-meeting reception and refreshments, 6:30-7:30 PM., Program 7:30 PM, Manhattan College, Leo Engineering Building, Scala Academy room. For information and reservations contact Joel Levitt, 212 479-7805, email [Jlevitt@Pratt.edu](mailto:Jlevitt@Pratt.edu) or Dr. Gordan Silverman, 718 862-7153, email [Gorden.Silverman@Manhattan.edu](mailto:Gorden.Silverman@Manhattan.edu)

**January 18, 2004** (Tuesday) PES/IAS Program Committee Meeting is scheduled for 5:30 PM at the Con Edison, 19<sup>th</sup> floor, Executive Dining Room, 4 Irving Place, NYC. , Subject: The Medical Examiner on DNA Identification, RSVP to John Michelsen at (914) 968-8400 or by email at [JohnM@GraphAlloy.com](mailto:JohnM@GraphAlloy.com)

**February 12, 2005** (Saturday Evening) 2005 Awards Dinner Dance, Trianon Ballroom, New York Hilton Hotel and Towers at Rockefeller Center, 1335 Avenue of the Americas (between 53<sup>rd</sup> and 54<sup>th</sup> Streets) Contact: William Perlman (908) 810-8555 [W.Perlman@IEEE.Org](mailto:W.Perlman@IEEE.Org) or Ralph Tapino (718) 761-5104 [RalTap@Aol.Com](mailto:RalTap@Aol.Com)

**February 17, 2004** ( Thursday) PES/IAS Technical Discussion Group Meeting and the Edison Engineering Society – Presentation: Mass Electrical Construction Company discussing Seismic Bracing in the Con Edison Executive Dining Room, 4 Irving Place, 19<sup>th</sup> Floor, New York, NY. For information or Reservation call : Sukumar Alampur [Sukumar@JRLA.comn](mailto:Sukumar@JRLA.comn) or (646) 674-6351 / Jim Nucito [J.R.Nucito@IEEE.org](mailto:J.R.Nucito@IEEE.org) or (732) 380- 1100 Ext. 4149

**February 24, 2004** (Thursday) MESC Engineers Week Celebration, New York Academy of Sciences. The speaker will be Dr. James Yardley, Director of Nano-Science, Columbia U., the topic will be Nano-Science and Technology – Past, Present, and Future.



**IEEE STUDENT ACTIVITIES COMMITTEES  
of the  
NEW YORK SECTION and POWER ENGINEERING  
SOCIETY  
NETWORKING / PLANNING MEETING  
on SEPT 27, 2004**



The Student Activities Committees of the NY Section and the Power Engineering Society met with twelve college branch advisors and their students representing four colleges in the area. Balvinder Blah and David Weiss, SAC chairs, were hosts. The purpose of the meeting was to present benefits of IEEE membership to students and colleges and to see how the IEEE could strengthen its programs. All who attended found the meeting worthwhile. It was requested that we hold two of these meetings a year, one in September and one in January/February.

The meeting began with *introductions* of all present. Then David Weiss *highlighted the benefits* that are mentioned in the Blah/Weiss article in the October 2004 Monitor, which was passed out. To recap, the benefits to students are: participation in student professional activities conferences (S-PACs) and leadership workshops (SLTWs); attending technical society meetings; and making contacts with engineers attending the meetings; eligibility for various awards; and receiving excellent publications. It was noted that many of the local society branches including the NY and Long Island sections, the PES and the VTS are recent recipients of awards for their outstanding events and programs.

IEEE benefits to schools include: setting up joint or regional programs with other schools, using IEEE speakers; and getting funding for programs. Balvinder then reviewed what S-PACs and SLTWs offer.

In turn, we got some great ideas to look into. Students suggested:

- 1/ Sectional conferences with outstanding speakers and sponsoring companies. Students would enjoy the opportunity to discuss current directions in engineering at these companies and employment opportunities. Such a conference could be one or two full days.
- 2/ Awards and stipends that provide remuneration and/or recognition. These could be keyed to filling out appropriate IEEE forms for meetings and lists of officers. Perhaps an IEEE Leader award.
- 3/ Students and advisors attending agreed to forward their addresses to us. Non-attendees who read about the meeting in the Monitor are also requested to send current addresses to Balvinder Blah [blahb@coned.com](mailto:blahb@coned.com) and David Weiss [daweiss@nyct.com](mailto:daweiss@nyct.com).
- 4/ Forward flyers of upcoming IEEE meetings to attendees as well as the NY section website where they can see the calendar.
- 5/ Polytechnic Institute will be celebrating its 150<sup>th</sup> birthday next year and is planning a rich program. Other schools are invited to participate.

As an unannounced special all representatives of all schools attending will be sent a copy of the IEEE distinguished lecturers program cd.

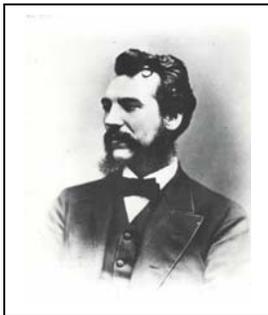
**Respectfully,  
Balvinder Blah, PES SAC Committee Chair  
David Weiss, NY Section SAC Committee Chair**

## To Speak and To Hear The Telephone

*By Melvin I. Olken, P. E. Historian*

In the 1870s Western Union was desperately looking for an invention that would allow a telegraph line to carry several messages simultaneously, in today's words, to multiplex.

Men seeking the rewards offered for a multiplex telegraph system invented the telephone. The telephone was not an invention sought after by either the general public or the inventors. In fact, the two men in the race were not even sure of their objectives until the hectic rush down the homestretch to the US patent Office. There seemed to be no need for person-to-person communication, because the recipient had to be available in person to receive the message. The two inventors, Alexander Graham Bell and Elisha Gray, were looking to become rich by inventing a telegraph multiplexing system.



Alexander G. Bell (1847-1922)

Of the two, Bell was interested in speech as a science and Gray was convinced that transmission of speech was of scientific interest only, and of no commercial importance. These views arose from the different backgrounds of the men, one scientific, and the other practical.

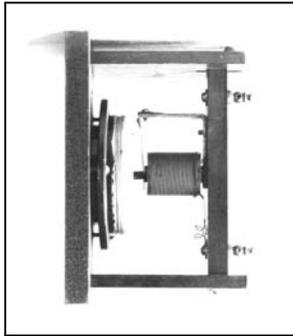
Alexander Graham Bell was the son of a professor of elocution at the University

of Edinburgh in Scotland. Bell, after university work at Edinburgh and London, came to Boston in 1871 to teach at the School for Deaf Mutes. In 1872 he read of the patent awarded to Joseph Stearns for the duplex telegraph and saw an opportunity to make a fortune. He understood Helmholtz's work with vibrating reeds to generate frequencies and concluded that each frequency could be made to carry an individual telegraph message. He began his experiments after talking to members of the Boston scientific community.

Elisha Gray was the superintendent of the Western Electrical Manufacturing Company in Chicago (later to become the Western Electric Company). In 1874 he discovered that an induction coil could produce musical tones from currents created by a rubbing contact on a wire. Like Bell, Gray saw the possibilities for a multiplex telegraph using different frequencies, and he resigned his position to become a full time inventor. He used magnets connected to a diaphragm and located near an induction coil as transmitters and receivers. Gray demonstrated some of his equipment to Joseph Henry in 1874 and Henry wrote after the demonstration that Gray was "one of the most ingenious practical electricians in the country."

Bell too had a meeting with Henry, in which he impressed Henry with his understanding of acoustical science. Henry encouraged Bell to continue his work; when Bell protested that he did not have sufficient electrical knowledge, Henry firmly told him to "get it." The multiplex telegraph ideas of Bell and Gray were essentially parallel, although by 1875 Gray's equipment was further developed. However, Bell with his scientific background, was willing to attempt the transmission of speech. Gray, the practical man, saw only the

rewards of multiplex telegraphy. To him, the telephone was only of passing scientific interest.



Early telephone (courtesy of Smithsonian Institute)

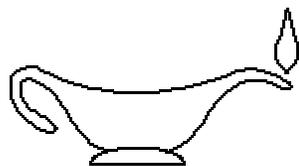
At that time neither had actually transmitted speech. Although doubting telephony as a practical business, Gray protected his flank by writing a description of a telephone transmitter and receiver. On February 14, 1876, his lawyer filed a "caveat" in the US Patent Office. A caveat is no longer in use; it was a priority declaration, not an application for a patent. A few hours earlier on that same day, Bell's lawyers

had filed a patent application on Bell's telephone. This was done at the urging of Bell's primary financial backer who was aroused by rumors of Gray's progress.

Gray decided to drop the caveat in hopes of defeating Bell in the multiplex telegraphy area, so Bell was given the telephone priority. On March 10, 1876, at his laboratory in Boston, Bell transmitted the human voice with the famous quotation, "Mr. Watson, come here. I want you," addressed to his assistant.

Bell developed instruments for exhibition at the Centennial Exhibition held that summer in Philadelphia, and these attracted great interest. The first commercial installations were made in 1877 and the first switchboard was placed in operation in New Haven, Connecticut in January 1878 with 22 subscriber lines. Bell had been right; people do want, and need, to talk to other people. The age of the telephone had arrived!

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For further Information, contact Jim Robinson at:

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[percinc@earthlink.net](mailto:percinc@earthlink.net)

## The Impact of Automation on the Healthcare System

On Tuesday, December 14 2004 , the New York Chapters of IM (Instrumentation & Measurement Society) and EMBS (Engineering in Medicine and Biology Society) of the Institute of Electrical and Electronic Engineers , New York Section will present a lecture on “The Impact of Automation on the Healthcare System.”

### About the Presentation –

With healthcare assuming an ever-growing share of GNP, rationing of medical services has become the way we have been meeting this challenge. However, instrumentation and automation provide an opportunity to address our needs, provide more effective care, and reduce costs. A review of the current status of instrument uses will be provided and a system for reeducating patients with neuromotor disorders such as stroke will be discussed in more detail. This system provides distance capabilities with numerous advantages including a significant reduction in the cost of delivery of rehabilitation services

### About the Speaker –

Gordon Silverman, Ph.D.

Chief Scientist and Founding Director, Physmed Systems Inc



Dr. Silverman has close to 50 years of background in the practice engineering including experience in industry, research, teaching, and academic administration. For a number of years, he was Co-Director of the Microprocessor Laboratory at The Rockefeller University which was supported by the National Institutes of Health. While at Rockefeller he pioneered in new computer-based instrument architectures for Biomedical laboratory environments. He has published extensively including four books. His latest endeavor is as co-author of a soon to be published text entitled “Cognitive Science: Theories of the Mind.” He has served on Review Panels for the National Science Foundation and, in addition to his role as Founding Partner in PhysMed Systems Inc., he is currently Chair of Electrical and Computer Engineering at Manhattan College, and of the New York IEEE IM chapter. His immediate interests include instrument systems for Telemedicine as well as automation in the delivery of healthcare.

**Date: Tuesday December 14, 2004**

**Time:** Pre-Meeting Reception with Refreshments 6:30-7:30 PM., Program 7:30 PM.

**Place:** Manhattan College, LEO Engineering Building (Directions below), Scala Academy Room.

### Travel Guide:

By Train: Take the Broadway #1 line to 238th Street. Walk West on 238th Street one (short) block to Corlear Ave. Turn right., LEO Engineering is directly ahead.

By Car: Take Major Deegan to Exit 11 (Van Cortlandt Park So.). Proceed due West on Van Cortlandt Park So. past Broadway to Corlear Avenue. (Van Cortlandt Park will be on your right as you proceed West. Do not follow sign to Manhattan College but proceed directly under the elevated subway line at Broadway.) Just past the elevated subway, turn left onto Corlear Avenue. LEO Engineering is on your right. Parking lot is just beyond the LEO Building.

### Further Information/Reservations:

For easy directions and reservations: 718-862-7153; parking available



**Introducing our** metropolitan regional area Chair: Dr. Gerhard Franz. This is not a new position; but one that encompasses the activities and aspirations of the surrounding Sections: Connecticut, Long Island, New Jersey Coast, North Jersey, Princeton – Central New Jersey, and New York. Gerhard acts the liaison to the Regional Director and relates our concerns, secures assistance when needed, and gives us the benefit of his accumulated knowledge. He regularly attends our executive committee meeting and offers help and advice to the Section.

Dr. Gerhard Franz is president of A. G. Franz Associates, LLC, a management and marketing consulting company focused on development of marketing strategies and international sales channels for high-tech companies. He has over 20 years of global experience in the telecommunications, aerospace and electronics industries and has held management positions in research and development, engineering, business development, marketing and sales for Lockheed Martin and General Electric prior to forming his own company in 2002. He developed new product marketing strategies for Lockheed Martin's space and telecommunications divisions, led numerous proposal teams and won US Air Force and NASA technology development programs including the New Millennium microelectronics program.

At General Electric Dr. Franz managed an engineering team developing analog and power electronics for multiple communication systems and remote sensing spacecraft. His research activities include the development of sub-micrometer semiconductor devices and processes, the design of distributed power systems and the development of radiation-hardened circuits.

Dr. Franz received his PhD in Electrical Engineering from the Technical University of Vienna, Austria, in 1984 and his Executive MBA from Rutgers University, Newark, NJ in 2000. He is a senior member of the Institute of Electrical and Electronics Engineers (IEEE), has held offices on the local and regional level and is presently the chairman of the New York metropolitan regional area. Dr. Franz has been a member of many technical conference committees, most recently as the Technical Program chair for the 2003 IEEE Sarnoff Symposium and the Symposium's General Chair in 2004. He has served as a program evaluator on the Accreditation Board for Engineering and Technology (ABET) from 1996 to 2000. Dr. Franz is the author of several technical papers and business articles and holds two patents. He has been involved in the organization of a number of international conferences and trade shows and is a frequent speaker and panelist.

Dr. Franz is an active member of the Princeton Corridor Rotary Club and the Princeton Regional Chamber of Commerce and is actively involved in local community projects.

Contact information: Dr. Gerhard Franz, A. G. Franz Associates, LLC, 5 Stanton Court, Plainsboro, NJ 08536, USA, +1 (609) 936-1919, [gerhard@agfranz.com](mailto:gerhard@agfranz.com)



POWER ENGINEERING SOCIETY  
AND  
INDUSTRY APPLICATIONS SOCIETY  
NEW YORK & LONG ISLAND



**YOU ARE INVITED TO A JOINT MEETING  
of the IEEE and Edison Engineering Society  
Thursday, February 17<sup>th</sup>, 2005**

**PRESENTING:  
Seismic Bracing for Non-Structural Components**

With the adoption of the 2000 International Building Code, (IBC), comes stricter requirements for seismic bracing. Commercially available support products can be assembled to create seismic restraints from many vendors. Although the catalog offers pre-engineered designs, the products' ease of use and published load data allow structural engineers to design specific restraints on a per-project basis. This presentation will cover a plethora of information regarding seismic bracing when's, where's, why's, and how's.

**Presentation Specifics:**

- 1 PDH of credit for New York State licensed PE's
- Overview of seismic bracing for non-structural building components
- Overview of the multi-step submittal process for brace sizing and selection
- Definition of a Seismic Force Level, (aka:  $F_p$ , or "g-value")
- Requirements of building codes on how to calculate  $F_p$
- Discussion from a licensed, Structural PE, over:
  - Current and upcoming NYC Building Code requirements
  - Liability concerns of insurance companies, project owners, contractors, and designers

Thursday, February 17<sup>th</sup>, 2005

**NO WALK-INS allowed for security reasons**

Refreshments will be served: 5:15 PM

Program: 5:45 – 7:00 PM

Location: Con Edison Executive Dining Room, 19<sup>th</sup> Floor  
4 Irving Place, NY 10003

Nearest Subway: Union Square

Call for Advance Reservation to :  
Sukumar Alampur @ 212-563-7400  
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J.R.Nucito@IEEE.org

Please Post

Please Post

**All Invited !**

 **IEEE** THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.



## William L. Perlman receives the IEEE New York Section Distinguished Service Award for 2005

At its November 10 meeting, the New York Section Executive Committee confirmed the recommendation of the Section's Special Awards Subcommittee to give the

Mr. Perlman received Region 1 Awards in 1979 and 1989 and, in 2000, the Institute's Third Millennium Award.

Recipients of the New York Section Distinguished Service Award:

- 2005 William L. Perlman
- 2004 Michael A. Miller
- 2003 Harold Ruchelman
- 2002 Kenneth E. Vought
- 2001 William N. Coyne
- 2000 George Gilmore
- 1999 Jalal Gohari
- 1998 Frank P. Farinella
- 1997 Frank E. Shink
- 1996 Roger K. Sullivan
- 1995 Amos E. Joel
- 1994 Philip M. Paterno
- 1993 William Terry
- 1992 Robert W. Gillette
- 1991 Anthony B. Giordano
- 1990 Jack L. Jatlow

Section's 2005 Distinguished Service Award to William L. Perlman.

His award is "For leadership, professionalism, and distinguished and dedicated service to the New York Section of the IEEE and the IEEE Power Engineering Society."

Mr. Perlman has served on the IEEE New York Section Executive Committee since 1994. He has been Special Events Committee Chairman, Audit Committee Chairman, Secretary, Treasurer, Vice Chairman – Section Activities, Vice Chairman – Chapter Operations, and Chairman (1998). He is currently the Chairman of the Long-Range Planning Committee.

Mr. Perlman has also served as Chairman of the New York Chapter of the IEEE Power Engineering Society – Industry Applications Society, Region 1 METSAC Vice-Chairman, and Chairman of the Institute's Tellers Committee.



### Life After Engineering School By PAT JANOWSKI

"In school, you learn the science and apply the equations," says **Carl Selinger**. But there's plenty more to a successful engineering career than that.

Selinger is most concerned about the so-called "soft skills" that he finds are not taught in the typical engineering school and are not always part of early career experiences. These include such skills as decision-making, negotiating, running meetings, setting priorities, and working as part of a team. "Nobody is talking to young engineers about these kinds of things," he says.

"Too many times I've seen people 10 to 15 years into their career, and they've been pigeonholed," he says. "They're nervous about being laid off and starting somewhere new because they worry that they don't have skills for dealing with people, setting priorities, and managing difficult situations." Each chapter opens with a compelling anecdote and goes on to discuss techniques for solving workplace issues. In the chapter on decision-making, Selinger presents an easy four-step process for making decisions. Then he gets to the heart of why many are not comfortable making decisions—they fear making a bad one. He notes further that Western culture offers no immediate rewards for being decisive, despite this quality being a prized attribute in managerial and professional realms.

Setting priorities can be particularly difficult for young engineers. "Engineers are less equipped than the average professional to deal with their lives," says Selinger. "When engineering students finish school, their lives have been so ordered with courses, they've been, in effect, buried alive in the "boot camp" of engineering school. They must be weaned from having professors set their priorities, to a world where they need to know how to sort their tasks."

"Engineers have very prized technical skills," he notes. But the engineers who do well will know how to handle those soft skills like dealing with budgets, and interacting with lots of different kinds of people.

**Stuff you Don't Learn in Engineering School: Skills for Success in the Real World**, by Carl Selinger (Wiley-IEEE Press), covering the soft nontechnical skills important to engineers and all professionals. © 2004 IEEE. Reprinted, with permission, from THE INSTITUTE, October 2004.



IEEE New York Section  
Women In Engineering (WIE)  
Affinity Group



*You are invited to the December meeting of WIE  
Wednesday, December 8<sup>th</sup>, 2004, 5:30PM  
Presenting as Guest Speaker:*

Dr. Eleanor Baum  
Dean of the Albert Nerken School of Engineering  
The Cooper Union for the Advancement of the  
Arts and Sciences

**Dr. Eleanor Baum is the Dean of Engineering at Cooper Union Engineering School in New York. She was the first female dean of engineering in the U.S. and the first female president of the American Society for Engineering Education.**

**Dr. Baum serves on the Board of Directors of Avnet, Inc., United States Trust Company and Allegheny Power Systems Corporation. She is a director of the National Engineering Deans Council, a commissioner on the Engineering Manpower Commission and serves on the board of governors of the New York Academy of Science. She serves on advisory boards for Duke University, Rice University, SUNY at Buffalo and the U.S. Merchant Marine Academy. She was chair of the Board of Examiners of the Graduate Record Examination, and a trustee for Pratt Institute. She is also president-elect of ABET. Dr. Baum is a Fellow of the Accreditation Board for Engineering and Technology, the Institute of Electrical and Electronics Engineers and the Society of Women Engineers.**

Refreshments: 5:30PM  
Program: 6:00PM

Call for Advanced Registration by December 1<sup>st</sup>, 2004 to:  
Darlene E. Rivera @ 914-967-5800 ext. 250 or e-mail: [DCaprio938@yahoo.com](mailto:DCaprio938@yahoo.com)  
Please provide Name and Company affiliation.  
**No Walk-ins Allowed for Security Reasons**

Location: Con Edison  
4 Irving Place  
Room 2215-S  
New York, New York 10003  
Nearest Subway: Union Square

**ALL ARE INVITED!**



**POWER ENGINEERING SOCIETY  
INDUSTRIAL APPLICATIONS SOCIETY  
NEW YORK & LONG ISLAND CHAPTER  
Syllabus of New Grounding Course**



Name of Course: Principles of Grounding for Industrial and Commercial Power Systems.

Date: Mid January 2005

Place: Parsons Brinkerhoff, One Penn Plaza, New York, NY 10119

Time: 6:30 PM to 8:00 PM

Contact: John Pascu, P. E. 973 565-4847 or email: [Pascu@PBWorld.Com](mailto:Pascu@PBWorld.Com)

Cost: \$ 400. for 12 hours including all printed material plus IEEE Green Book & CEUs.

Instructor: Clement R. Pizzo, E.E.D.

Phone: (914) 698-7843

e-mail: [cpizzo1942@optonline.net](mailto:cpizzo1942@optonline.net)

fax. (914) 698-7843

Course Duration: 8wks      Lecture Hours: 1.5hrs/wk

**Reserve Now:** Class size limited to 30 students - \$ 100. required with registration to John Pascu

**Course Description:**

This course will be a broad introduction to the concepts of grounding. The participants will get an overview of grounding strategies for high voltage applications, industrial and commercial facilities, electronic equipment, and lightning protection techniques. Emphasis will be placed on the avoidance of shock hazards due to poor grounding arrangements.

**Who should Attend:**

- Engineers new to the field or with limited industrial experience.
- Experienced engineers seeking an overview of the contemporary grounding techniques.
- Managers and supervisors without previous experience in grounding power systems.
- Engineers seeking to obtain continuing education credits to satisfy NYS's re-registration requirements for professional engineers.

**Requirements:**

Attendance at all sessions will be required and duly recorded. Quizzes and home works will be given at the discretion of the instructor. A certificate of completion will be given to all participants who successfully completed the course. This course can be used for (pending) continuing education credits.

**Course Objectives:**

- 1) The participants will gain insight into the grounding of high voltage systems.

Expected Learning Outcomes:

There will be a review of the safety hazards due to improper grounding. Emphasis will be placed on the principles of grid design and the use of ground electrodes for high voltage applications to reduce electrical shock hazards.

- 2) The participants will gain knowledge of grounding schemes for industrial and commercial facilities.

Expected Learning Outcomes:

There will an introduction of different grounding techniques that will apply to industrial generators, multi-voltage power systems, heavy portable electric machinery, and unit substations and switching centers.

- 3) Participants will be introduced to the grounding techniques and codes for electronic instrumentation.

Expected Learning Outcomes:

There will be a review of the utilization of multi-point and single-point grounding schemes needed to protect susceptible electronic equipment. There will also be a review of codes and standards for grounding electronic power systems.

4) Participants will be exposed to static and lightning grounding techniques.

Expected Learning Outcomes:

There will be discussions on grounds methods and techniques used to protect facilities and installations accidental static discharge and lightning strikes.

Suggested Text:

Title: Grounding of Industrial and Commercial Power Systems

Author: IEEE Staff (IEEE Std. 142-1991)

Publisher: IEEE

ISBN: 1-55937-141-2

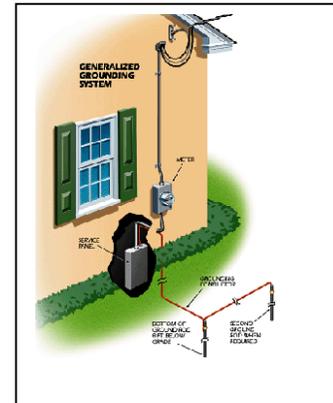
Reference:

Title: National Electrical Code (2005)

Author: National Fire Protection Association (NFPA)

Publisher: NFPA

ISBN: 087766258



**COURSE OUTLINE SCHEDULE**

**Lesson**

**Subject**

- |   |  |
|---|--|
| 1 | Safety in grounding and accidental ground circuits         |
| 2 | Basic aspects of ground grid design                        |
| 3 | Grounding systems for industrial and commercial facilities |
| 4 | Exterior/Interior grounding of substations                 |
| 5 | Guidelines for grounding low voltage electronic systems    |
| 6 | Fundamentals of grounding high voltage electronic systems  |
| 7 | Static and lightning protection grounding                  |
| 8 | Methods and techniques of constructing earthen grounds     |

# THE NEW YORK SECTION'S 2005 AWARDS DINNER DANCE



The 2005 NY Section Awards Dinner Dance honoring the Section's Awardees will be held on Saturday evening, February 12, 2005.

This year, our dinner dance (black tie optional) will be held in the beautiful Trianon Ballroom, located on the third level (coat check is on the second) of the New York Hilton Hotel and Towers at Rockefeller Center, 1335 Avenue of the Americas (between 53rd and 54th Streets).

Festivities will begin at 6:30 P.M. with crudite and cocktails in the Petit Trianon. Here we will have a chance to relax, get acquainted and reacquainted.

You will have the opportunity to pamper your palate with a choice of either a succulent filet mignon or a delicious fresh salmon steak. Each gourmet entree will be accompanied by an appetizer, salad and dessert. There will be a brief awards ceremony after dinner and dancing to the sounds of the New Horizon Orchestra.

For those wishing to spend the night, hotel reservations can be made on-line at any web service provider or directly at 212-586-7000. There are no special arrangements made for parking.

Reservations for the affair may be made by completing the coupon below and forwarding it to William Perlman at the address indicated before February 1, 2005. Corporate Sponsors: Table of 10 at \$ 1,700.00

**\* A special non-transferable rate of \$90 for each ticket is available to IEEE members.  
Note that this rate is for the attending IEEE member and a guest only.**

**Organizations wishing to be Industry Sponsors or non-IEEE members  
may obtain additional information and cost by contacting:  
Ralph Tapino (718) 761-5104  
William Perlman (973) 763-9392**

## RESERVATION FORM

Send to: William Perlman  
267 Richmond Avenue  
South Orange, NJ 07079

Please indicate meal selections:  
Filet Mignon \_\_\_\_\_  
Salmon Steak \_\_\_\_\_

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_

Zip Code: \_\_\_\_\_ Telephone: \_\_\_\_\_

IEEE Member # \_\_\_\_\_ \* No. Of Tickets @ \$90.00 Circle number 1 or 2 Sponsor's Table @ \$ 1,700.00 \_\_\_\_\_

Non - IEEE Member \_\_\_\_\_ No. Of Tickets @ \$170.00 \_\_\_\_\_

Amount Enclosed \$ \_\_\_\_\_

**MAKE CHECK PAYABLE TO: IEEE, NY Section**