1884-2009

Celebrating 125 Years of Engineering the Future

1912-1963
IRE

1884-1963
AIEE

1907—1912
1909 —1912
SWTE
TWI
January 2009 Chair Column - Changing Times in Engineering

The New York Section, like any small business, needs to keep up with the times and remain relevant for our members and readers. As you can see we have just taken a major step. The Monitor has gone electronic. This is very fitting since we are the Institute of Electrical and Electronics Engineers. [Although in recognition of the profusion and hybridization of disciplines, we will soon be formally just the IEEE.]

As is the case for so many other publications that are going on-line this decision is driven by three factors:

1/ Nearly all our members are on-line. We’ll send a hard copy to those who are not.
2/ We can provide better service using on-line publishing technologies. We will be incorporating more of them in the coming months.
3/ As is the case with any organization that wants to stay in business, we keep an eye on costs.

Warner W. Johnston SM, the Chair of the NY Section, is serving as Acting Monitor Editor. We are searching for a volunteer who would like to carry the ball. You will get a chance to enhance your written and oral communications skills and to put out a great newspaper. So don’t wait to apply. In the meantime I volunteered to write this column.

Change is in the air here too. Not just in Washington D.C. Our Section is fortunate to have many active, capable people to guide and help us in responding to change. They come from a wide variety of backgrounds: researchers at the cutting edge of advanced technology and operators of systems decades old; educators, practitioners, and suppliers; public and private; young and old; and independent consultants. We are serious about attracting new blood or as Casey Stengel called them “The Youth of America.”

We have added one new chapter in 2008. Professor John Kymissis chairs the joint Electronic Devices Society /Solid State Circuits Society [EDS/SSCS] chapter. Stan Karoly, our liaison for establishing new chapters, will be happy to help. Contact us to help us serve our community better. You can write, attend to a meeting, or come to one of our popular Signals Mixers.

What’s in it for you?

1/ Better networking will keep you up to date on new developments in your field.
2/ You’ll meet some people worth meeting
3/ You can arrange or attend very interesting events. I wrote earlier about our Region 1 Conference and the Sections Congress. There are lots more!

Let us hear from you.

I thank David for contributing this column, I do have one later in the Monitor simply introducing myself.
Notes from the Editor

Hopefully this is an interim position and we will find a volunteer replacement.

The Cover

2009 is the 125th year since the founding of the amalgam that is now the IEEE. The original logo of the oldest of bodies that joined to form IEEE was the left item above AIEE (American Institute of Electrical Engineers on the cover, it is Franklin’s kite. Appropriate, as the first meeting) was held at the Franklyn Institute October 7-8, 1884 in Philadelphia.

The IRE, Institute of Radio Engineers, the other body that joined with AIEE, was not as old, having been founded in 1912, however at the time of the merger was not only truly international is scope but was the larger of the two groups. The Proceedings of the IRE were renamed The Proceedings of the IEEE as was the Gold Medal of the IRE. The IRE also has a unit of measure, used as the measure of amplitude in North American Television, named after it. The IRE unit.

The IRE in turn had been formed from two other bodies, the SWTE, Society of Wireless Telegraph Engineers, 1907-1912 and TWI, The Wireless Institute, 1909-1912.

However people should not worry about the other major New York institution, and we are a New York corporation, The Metropolitan Opera. This is their 125th season now. When Oct. 7th roles around they will be in their 126th season. The Fat Lady will have sung out their 125th.

Printless

This Issue, Volume 57 Number 1, is the first we have not printed. The issue if financial, if we wish to maintain the section in financial health, not easy at this time, some things must change.

Volunteer

IEEE-NY is looking for a few good women, not to mention men. The Section, the Monitor, the Chapters, the Affinity Groups, the Students, all could use help. If you can’t figure out who to contact, contact your Editor at monitor@wwjohnston.com or any other way you can. Put Volunteer in the subject.
The IEEE Monitor

The IEEE MONITOR is the official news publication of the New York Section of the IEEE. Reaching over 5,000 Electrical Engineers and Computer Engineers across New York City (Brooklyn, Bronx, Manhattan, Queens and Staten Island), Rockland and Westchester Counties. The publication reports on events and activities of interest to the general membership and carries the monthly IEEE society chapter calendar of events as a service to its readers.

Published monthly, except for June, July and August, by the New York Section of the Institute of Electrical and Electronics Engineers, Inc., IEEE Corporate Office, 3 Park Avenue, 17th Floor, New York, NY 10016-5997. All communications concerning the NY IEEE MONITOR should be addressed to:

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Annual subscription: $4.00 per member per year (included in annual dues) for each member of the New York Section: $10.00 per year for non-IEEE members. Responsibility for contents of articles, papers, abstracts, etc. published herein rests entirely with the authors, not the editor, Publication committee, IEEE or its members. Periodicals Postage Paid at New York, NY and additional mailing offices.

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Publication trim size is 8 1/2" x 11"; page image size is 7.0" x 9.25"; publication is printed quarterly. Display advertising space is available in full and fractional page sizes. Refer to table below for specific measurements and pricing. To qualify for frequency discounts, advertiser must furnish publisher with a schedule of insertion dates. Schedule may be changed by notifying publisher prior to regular deadline date.

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10% commission allowed to all recognized ad agencies providing payment is received by due date. All ads invoiced on publication closing date. Full payment due 10 days after issue date. Rendering invoice to ad agency does not relieve advertiser of responsibility for contents of articles, papers, abstracts, etc. published herein. The publication reports on events and activities of interest to the general membership and carries the monthly IEEE society chapter calendar of events as a service to its readers.

Events submission checklist

- Contact person name, e-mail address & phone number
- Name of society or group(s) that sponsor the event
- Name of event
- Date of event (indicate tentative or firm)
- Time of event
- Location (FULL address)
- Location directions (subway, etc.)
- Presenter details (if applicable)
- Event abstract (if applicable)
- Registration/RSVP requirement and instructions
- Cost to attendees (if any)
- CEU/PDH credits & cost information (if applicable)
- Refreshments
- Society/group website location for further information
- E-mail information to: nymonitor@ieee.org

Submission deadlines
Nominally, publication date is the last Friday, Thursday one day earlier if Friday is a holiday, of the month. Submissions must be sent to nymonitor@ieee.org one week prior to that. This is firm for editorial.

Note: Announcements that are submitted too late for the print version, and last minute changes to events (please get them to us as soon as possible), will be included in the e-mail notice that is posted at the start of the month of
Calendar of Events

Value Management during the Construction Process
Mon, Jan 12, 2009 (6:00 PM) to (8:00 PM)
The first 2009 joint SAVE/IEEE meeting will be held on Monday January 12, 2009. The meeting will be hosted by Tishman at its ground zero office. Ms. Kate Dwyer will lead the Tishman speakers. ...

2009 Future City Competition
Sat, Jan 24, 2009 (8:00 AM) to (5:00 PM)
2009 Future City Competition ...

Region 1 Southern Area Industry Day
Thu, Feb 05, 2009
http://ewh.ieee.org/r1/princeton-centraljersey/ieee_industry_day.htm

Tappan Zee Subsection
Design/Build Fly
February 12, 2009 7PM @ NYU-Poly
See ad

2009 IEEE-NY Awards Dinner Dance
Sat, Feb 21, 2009 (6:30 PM)

Tappan Zee Subsection
The Application of Wireless Technologies Within Healthcare
March 12, 2009 7PM A NYU-Poly
See ad

2009 Lower Hudson Valley Engineering
Sun, Mar 29, 2009
http://www.beanengineer.org/ Lower Hudson Valley Engineering TBA

PES Fire Alarm Systems Course
March 31 through May 26: 6:00 PM to 8:00 PM
See ad.

2009 Sarnoff Symposium ♦
Mon, Mar 30, 2009 to Wed, Apr 01, 2009

Ethical Issues in Biomedical Engineering
Fri, Apr 03, 2009 to Sun, Apr 05, 2009
Fifth International Conference On Ethical Issues In Biomedical Engineering: April 3 - 5, 2009
http://www.downstate.edu/grad/bioethics2009.html Polytechnic Institute of NYU Five Metrotech Center Brooklyn, NY 11201

The Technical Emmy® I’m beaming at was won by the Consumer Electronics Association for the Documentation of Closed Captioning. I chaired one of the two Working Groups that did the documentation, the Emmy was shared by PBS, who supplied the other chair, who couldn’t come to the ceremony because he was working on Katrina and my then employer ABC Television, who had the next table.

I’ve been working as an EE since 1972, but I was trained as a mathematician. The fine print in the IEEE membership rules of 1973 made me a member not an associate.

When I started tubes were still being designed into new circuits. I’ve have and used The Radiotron Designer’s Handbook, state of the art tube design. The 7400S was the fastest thing around, unless you delved into the mysteries of ECL and ground planes. The 4004 hadn’t been designed yet and a big memory chip had 256 bits, not a typo. 1028 bit serial memory chips with off chip refresh were just coming off the wafers.

My grandfather, also an EE, bought a color TV in 1956, but it didn’t work well and only NBC did much color broadcast. NTSC was thought to stand for Never Twice the Same Color. In a few weeks NTSC broadcast will be shut down for all major broadcast stations. We are going digital, and of course as we all know nothing ever goes wrong there.

I started participating in the digital replacement for analog Television back in 1997, found myself chair of the body producing ATSC A-70 the Standard on Conditional Access and of course on Advanced Captioning. I’ve worked on Captioning since 1976. I even know how it came to exist.

It has been an interesting career, high moments of joy, such as in that picture; moments of sheer panic, such as the time at the Atlanta Convention when both C-band transmission dishes started to move and I watched our signal fade. I urged the Engineer in Charge to switch to a totally unheard of concept called DS-3, 45 Mbit compression and fiber, it was there for testing. The next morning Julie, our President, told me he might have forgiven me if it hadn’t worked, but if I hadn’t tried it I would be dead meat*. I got to watch all seven games of the 77 series, working it, any number of foot ball games, and Peter Jennings knew me by name.

My colleague and just past Chair, David M. Weiss, in a column in this Monitor, speaks of volunteer work. About seven years ago I was approached and asked if I was interested, the first time I had ever been asked for anything by IEEE. I volunteered and now find myself chairing a body that without too much stretching can claim was founded by Edison and chaired by Bell and I wouldn’t be surprised to find Armstrong and Farnsworth in the queue. So give us a call or if we give you one, say yes.

*For anybody who knew Julie, they know what the comment was and it can’t be printed.
From the Editor

As I said elsewhere this is both my first issue of the Monitor and the first where there is no print version.

As a broadcaster, what I feared more than anything was dead air. As an editor, it is white space. And I’m filling a lot of white space. We need more articles, I would like each chapter to deliver at least two articles a year, more if you can. As of today, January 1, 2009 I have two ads, about five pages of boiler plate and not much more.

Articles on technical meetings, short tutorials, perhaps with links to full versions. Articles on non IEEE events where IEEE is involved. Articles that would be of interest to you the IEEE member.

Also, a new service for IEEE Members, Senior Members and Fellows. If you are looking for work and are without full time professional work, The Monitor will publish your business card not at our standard $70, but at a deep discount of 100% off. There are some arcane rules about how long your card will be up (it is a carousel FIFO with a 2 month delay), we will allow about a maximum of 20 per month). Students who have graduated and are looking for a full time position, contact the editor. There is an example on page 14.
Fashion and Technology

The Power & Energy Society, the Industrial Applications Society, and the Life Members’ Affinity Group of the New York Section on October 28 last sponsored a presentation on technology in the fashion industry – software, hardware and automation.

Most people still think that the fashion trade continues to depend only on traditional sewing machines. But such contraptions are now considered almost obsolete by the present industrial standards. Modern technologies play an increasing role in the innovative processes for the production of apparels. Historically, sewing began with bone needles and animal sinew as the thread as far back as 30,000 B.C. Today’s apparel production has come a long way from those practiced in the Stone Age. The industry is rapidly modernizing as new investments in automation and information technology have infused to keep up with the growing international competition.

These innovations have had a widespread effect across the industry. Computers and digital processes, known generally as CAD-CAM technology, became available around 1997 and they replaced many hitherto manual functions such as design, pattern-making and cutting while a host of new technologies such as 3-D body scanning, Web Product Data Management (WebPDM), design of wearable computers, virtual fashion collections and Avatars in computer-generated boutiques have made the apparel industry more dynamic than ever before. The new apparel industry represents a wide range of technological opportunities for engineers and other professionals. The evening’s speaker Professor Leonard Bess gave us a deeper insight into the use of software, computers and the application of automation in today’s apparel industry.

Professor Bess is an expert in fashion-related technologies. He wears many hats at New York’s prestigious Fashion Institute of Technology (F.I.T.), that is affiliated to SUNY. His responsibilities there have included the management of the day-to-day operations and developing the overall strategy for the fashion design department including its strategic partnerships with other institutions and its funding. Prof. Bess first earned a degree in fashion design from the F.I.T. and then his Baccalaureate degree in organizational communications from the
Empire State College, N.Y. Formerly he was the department’s chairperson and the chief fiscal officer. He also occupied the position of the coordinator of the evening programs and is now the department’s chief computer liaison.

Prof. Bess spoke about the digital technologies used in apparel making. Such processes in their entirety, from the initial design concept to the final production of a garment, leaping through various phases of patternmaking, marking, cutting, are all computer-driven, without being touched by human hands. In the industry jargon the processes are said to use a seamless knitwear technology. The driving force behind this is the need for a rapid turn-around time and now this can be reduced to a matter of only a few weeks. Usually, a three-dimensional digital body scan precedes a pattern-making. What is disappointing for us is that much of it is done off-shore.

In the presentation we learned about some esoteric software technologies such as WebPDM, AccuMarkPDS, Lectra, Modaris, Primavision, Photoshop, Illustrator, Design Scope, PDM and PLM, just to name a few. We wonder if these technologies make the industry more competitive and efficient. Also, have the new technologies augmented creativity? Will from now on the 3-D body scanning be an integral part of the technologies used in making common garments? These are just some of the questions that may confront the fashion industry as we move forward. Clothing of the future may conform to perfect size, will be custom-fitted, be seamless and be designed by computers. At some point, fashion and technology will meet head-on and thus create a new wearable art form. That technology will produce radically different though still socially acclaimed fashions with tiny sensors embedded in them. For example, a garment may be able to warn the wearer of a missing accessory; it could instantly let emergency personnel to retrieve the wearer’s medical data stored in embedded memory chips. Imagine a trench coat made with smart fabrics carrying some ten small cameras (to take pictures from various angles), a miniscule GPS locating device and micro-communications transceivers, all embedded in it and worn by a reporter covering an event!

The software developers for the fashion industry are also rapidly creating user-friendly Avatars that reside in a virtual world complete with online fashion shows, and instant online offerings and purchases of garments made to measurements obtained by digital scanning of a potential user’s body.

The evening’s presentation was followed by a lively Q&A period.
IEEE POWER & ENERGY SOCIETY
INDUSTRIAL APPLICATIONS SOCIETY
NEW YORK & LONG ISLAND CHAPTER

Fire Alarm Systems Course

Name of Course: Fire Alarm Systems: Design, Installation and Code Applications
Dates: Tuesdays, March 31st through May 26th, 2009
Place: Parsons Brinckerhoff, One Penn Plaza, New York, NY 10119 Conference Rm # 2E, 2nd Floor
Time: 6:00 PM to 8:00 PM
Contact: Sukumar Alampur, PE: Chairman: Tech Discussion Gr: Salampur100@hotmail.com (914) 714-9206
         Thomas Li, PE: Chairman: Education Committee: LiThomas@pworld.com (212) 465-5429
         William Montgomery: Treasurer: mmontgomery8@avc rr.com, Tel: (718) 229-8292

Cost: Including all printed material: IEEE Member: $400.00;
      Non-Member: $480.00, Two or more: $450.00
Course Duration: 9 weeks Lecture Hours: 2.00 hours/week; 2 PDH/0.2 CEUs; Total 18PDH/1.8CEU
Instructor: Timothy R. Collins, SET
Reserve Now: Class size limited. Please make checks payable to: IEEE PES/IAS NY LI. Chapter,
Mail check for registration to: William Montgomery, 16-49 212th St, Bayside, NY, 11360.

Course Description:
This course will be a broad introduction to the components, concepts and design/code applications of
fire alarm systems. The participants will get an overview of various fire alarm systems manufacturers
and types, governing codes and standards, residential / commercial / healthcare applications, design
and application of fire alarm equipment, fire alarm system operations and controls, installation,
inspection and approval, maintenance and testing. The course will also include overview of National
Institute for Certification in Engineering Technology (NICET) testing requirements and approaches for
certification in Fire Alarm Systems Technology.

Who should attend?
- Engineers new to the field or with limited experience.
- Experienced engineers seeking an overview of the contemporary fire alarm systems.
- Managers and supervisors without previous experience in fire alarm systems.
- Electricians, Technicians, Installers and Field Personnel seeking overview of fire alarm systems.
- Engineers seeking to obtain continuing education credits to satisfy New York State’s re-
registration requirements for professional engineers.
- Fire and Building Managers seeking an overview of fire alarm systems.

Requirements:
Quizzes/Tests and home work will be given at the discretion of the instructor. A certificate of
completion will be given to all participants who successfully complete the course. For partial
attendance, a certificate for the attended day-course/s with its PDH/CEU’s will be issued.

NOTE: If any attendee cannot attend, another person can attend from the same company.
Required Reference Book:
Title: NFPA 72, National Fire Alarm Code (2002 and/or 2007 edition)
Author: National Fire Protection Association (NFPA)
Call to Purchase: NFPA (1-800-344-3555, select option 1)
Order on-line at: www.nfpa.org
Cost: NFPA Members ($48.60), Non-member ($54) to be purchased by STUDENT, not included in the course material.

Suggested Text:
Title: Building Code of the City of New York (Present and new NYC/IBC code versions)
Author: Gould Publications (Present code only)
Call to Purchase Present code: 1-800-847-6502

COURSE OUTLINE SCHEDULE

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to Fire Alarm system Types</td>
</tr>
<tr>
<td>2</td>
<td>Systems for Specific Occupancies</td>
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<tr>
<td>3</td>
<td>Governing Codes / Standards / Regulations / Laws / Resolutions</td>
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<td>4</td>
<td>Design / Layout / Application of Equipment</td>
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<td>5</td>
<td>System Operations and Controls</td>
</tr>
<tr>
<td>6</td>
<td>Installation of Systems</td>
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<tr>
<td>7</td>
<td>Contract / Bidding / Filing / Approval</td>
</tr>
<tr>
<td>8</td>
<td>Maintenance / Testing / Service / Training</td>
</tr>
<tr>
<td>9</td>
<td>NICET Testing Requirements and Approaches</td>
</tr>
</tbody>
</table>
Thursday, February 12, 2009

Meeting Poster

Presented by IEEE TZ Subsection, ASME International & SME

Design/Build Fly

By Mr. Christopher Persaud

President
AIAA Student Chapter
The City College of New York
e-mail: vinfiz1911@verizon.net

7:00PM @

NYU-Poly
40 Saw Mill River Road
Hawthorne, NY 10532

ABSTRACT

The fundamental objective of the AIAA Regional Student Chapters is to provide student members with an educational experience that prepares them for their future as practicing engineers in a field regarding aeronautics and astronautics. Although regional chapters vary in character, students attend and present technical work as they would at professional AIAA meetings. The nature of the organization widens the spectrum from which they can establish professional relationships, learn from others, and hone their communication skills.

The student chapter here at the City College of New York is of great importance to those here who eventually choose to pursue a degree in aerospace engineering – a field that is not offered by the Grove School of Engineering. Here, the AIAA is run solely by students and their collaborative efforts with outside sources, as unlike other schools, the AIAA is not a departmental section of the engineering school – where professors would otherwise work around the clock with their students to develop their plane and ensure that principles learned are of education standard. Because of the stark contrast between the AIAA establishments, it is fair to say that our incredible success over the years has been largely due to exceptionally dedicated members and the sponsors for our program at large.

Our endeavors here strive to one day promote its foster college as a recognized engineering landmark in aerospace, as a demonstration of collective interest being executed to its greatest potential.
Presented by IEEE TZ Subsection

The Application of Wireless Technologies Within Healthcare
By Dr. Paul Frisch

Director
Biomedical Physics and Engineering
Memorial Sloan-Kettering Cancer Center
e-mail: frischp@mskcc.org
7:00PM @
NYU-Poly
40 Saw Mill River Road
Hawthorne, NY 10532

ABSTRACT
The deployment of new wireless and network technologies coupled with advanced clinical applications and devices have significantly increased the quality and the quantity of patient diagnostic and monitoring information. Increasing workloads and reduced staffing have revealed difficulties in effectively prioritizing and handling this information resulting in increased equipment-related errors, patient dissatisfaction, the potential for patient injury, and an increasing overall concern for patient safety. Concerns about this trend have prompted the Joint Commission to established specific patient safety initiatives geared to the patient environment of care. These include establishing methodologies and protocols to reduce the probability of errors, and providing an enhanced level of communications.

April 16, 2009
May 14, 2009
June 11, 2009
IEEE_NY Members, are you a Member, Senior Member or Fellow,? Who is currently not employed at a Professional Level? And Greeter at a big box store is not Professionally employed.

If so contact the Editor of the Monitor for special rates on a advertising card this size.

Warner W. Johnston

Standards  Engineering
Entertainment  Communications

Vox/Fax: 845.517.2307
E-mail: Standards@wwjohnston.com
New Yorker’s DC Plant Milestone Ceremony

New Yorker Hotel is located on Eighth Avenue between 34th and 35th street in the heart of New York City. On September 25, 2008 IEEE celebrated the milestone event at this hotel commemorating its DC generating plant installed in 1929. Being a NY-IEEE volunteer, I also got the opportunity to attend this event. The event was held at the hotel and was attended by many NY section volunteers. The event started with Dr. Alexander B. Magoun, member of IEEE giving an introductory speech. Then Joe Kinney, senior project engineer at The New Yorker Hotel spoke about the details of the plant. Following the speeches, a plaque was presented to the Hotel.

After the ceremony, I got a chance to walk over to see some pieces of the DC plant’s history displayed on the tables in the room. I found an old pressure gauge and a frequency meter that once belonged to the plant.

The ceremony was followed by a luncheon and a tour of the DC plant located in the basement of the hotel. As we started the tour, we first went through the area with the package boilers that are still in service and help provide steam to the hotel.
After taking the tour of the in-service boilers, we walked towards predominantly retired section of the DC plant. Next to the retired switchboard and other panels, there were large DC motors which are still in use.

Our tour guide then took us into a huge mostly empty room where once stood huge generators which were built prior to the construction of the hotel. Our guide told us that the shafts had to be cut to be removed from the basement. There still stood a piece of the old generator, which was extremely difficult for the welders to cut. Thus was retired in place.
In this room, we also saw a 530-hp diesel engine direct-coupled to a dc generator. This engine was so old that it had handles to prime the engine. I also got the opportunity to move that handle to get a hands on feel for how difficult it was to turn all the handles.

Diesel Engine direct coupled to DC generator

This engine was as big as a modern day package boiler. On this engine, there were hatches all around the bottom. These were used by mechanics to enter and perform maintenance on the engine. This was our final stop on the tour. It familiarized me with an important piece of our electrical history and made me appreciate all the advancements our engineers have done in the power industry.
Region 1 Southern Area IEEE-Industry Day
February 5, 2009
444 Hoes Lane
Piscataway NJ, adjacent to IEEE HQ

Engineering your future
How communications is transforming the industry
How Green is Transforming Industry

**Learn new skills and network with executives & engineers from adjacent industries where your skills are applicable**

The program includes:

- Continental Breakfast,
- Talk from IEEE foundation
- Confirmed Keynote Talks from CTO/VPs
- And more talks by leaders that shape the industry
- Lunch provided
- Vertical Tracks on Communications and Green Communications Technologies (IMS, SIP, Wireless, Security)
- Panel: How IEEE Can Best Serve Industry
- Wine and Cheese hour

Contact email: industry-ros@research.telcordia.com

Registration and more information at the following URL:
http://ewh.ieee.org/r1/princeton-centraljersey/ieee_industry_day.htm

IEEE Members - Free!! - A $150 value compared to similar seminars
Non Members - $40 - Subsidized by IEEE as value to community (can be applied towards IEEE membership if registered now)
### REVIEW COURSE FOR THE FE EXAMINATION

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Electrical Circuits</th>
<th>Mechanical Engineering</th>
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<tbody>
<tr>
<td>Statics</td>
<td>1 Class</td>
<td>2 Classes</td>
<td>Thermodynamics</td>
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<td>Chemistry</td>
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<td>Probability &amp; Statistics</td>
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#### Classes Begin
- In Westchester
  - 33 West Main St
  - Elmsford, NY 10523
  - Room 305
  - 1/22/2009
- In New York City
  - 3 West Main St
  - Elmsford, NY 10523
  - Room 305
  - 1/26/2009
- On Long Island
  - Residence Inn by Marriott
  - 9 Gerhard Rd.
  - Plainview NY 11803
  - 1/27/2009

#### Classes End
- 4/22/2009

*Due to security requirements at the Con Edison Building, registration must be completed by 1/23/09.*

Strategy Classes are from 6:00-7:45pm, All others are from 6:00-9:00pm.

The Fundamentals Course is for the General exam and uses the 8th Edition of the NCEES Reference Handbook. To get the handbook please go to www.ncees.org prior to the first class.

### REVIEW COURSE FOR THE PE EXAM-CIVIL ENGINEERING

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Waste Water</th>
<th>Soils</th>
<th>Concrete</th>
<th>Water Treatment</th>
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</tr>
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<tr>
<td>Statics</td>
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<tr>
<td>Fluid Mechanics</td>
<td>1 Class</td>
<td>Economics</td>
<td>2 Classes</td>
<td>1 Class</td>
<td>Surveying</td>
<td>2 Classes</td>
</tr>
<tr>
<td>Dynamics</td>
<td>2 Classes</td>
<td>Material Science</td>
<td>1 Class</td>
<td>2 Classes</td>
<td>Construction</td>
<td>2 Classes</td>
</tr>
<tr>
<td>Mathematics</td>
<td>2 Classes</td>
<td>Probability &amp; Statistics</td>
<td>1 Class</td>
<td>3 Classes</td>
<td>Hydraulics</td>
<td>3 Classes</td>
</tr>
</tbody>
</table>

#### Classes Begin
- In Westchester
  - 33 West Main St
  - Elmsford, NY 10523
  - Room 305
  - 1/12/2009
- In New York City
  - 3 West Main St
  - Elmsford, NY 10523
  - Room 305
  - 1/16/2009
- On Long Island
  - Residence Inn by Marriott
  - 9 Gerhard Rd.
  - Plainview NY 11803
  - 1/17/2009

#### Classes End
- 4/22/2009

*Due to security requirements at the Con Edison Building, registration must be completed by 12/30/08.*

Strategy Classes are from 6:00-7:30pm, all others are from 6:00-9:00pm.

### REVIEW COURSE FOR THE PE EXAM-MECHANICAL ENGINEERING

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Stress Analysis</th>
<th>HVAC</th>
<th>Heat Transfer</th>
<th>Vibrations</th>
<th>Gas Dynamics</th>
<th>Kinematics</th>
<th>Fluid Mechanics</th>
<th>TBA</th>
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<tbody>
<tr>
<td>Statics</td>
<td>1 Class</td>
<td>1 Class</td>
<td>1 Class</td>
<td>1 Class</td>
<td>1 Class</td>
<td>1 Class</td>
<td>2 Classes</td>
<td>TBA</td>
</tr>
<tr>
<td>Mechanics of Materials</td>
<td>1 Class</td>
<td>Machine Design</td>
<td>1 Class</td>
<td>1 Class</td>
<td>1 Class</td>
<td>1 Class</td>
<td>2 Classes</td>
<td>TBA</td>
</tr>
<tr>
<td>Fluid Mechanics</td>
<td>2 Classes</td>
<td>TBA</td>
<td>2 Classes</td>
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</tr>
<tr>
<td>Economics</td>
<td>1 Class</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Classes Begin
- In Westchester
  - 33 West Main St
  - Elmsford, NY 10523
  - Room 305
  - 1/14/2009
- In New York City
  - 3 West Main St
  - Elmsford, NY 10523
  - Room 305
  - 1/18/2009
- On Long Island
  - Residence Inn by Marriott
  - 9 Gerhard Rd.
  - Plainview NY 11803
  - 1/19/2009

#### Classes End
- 4/16/2009

*Due to security requirements at the Con Edison Building, registration must be completed by 12/30/08.*

Strategy Classes are from 6:00-7:30pm, all others are from 6:00-9:00pm.

The Electrical Computer Professional Engineer Exam will change in April of 2009. We do not know what the program will be, but as soon as the new exam specification is known it will appear on www.percinc.com and in future issues of the NY Monitor, published by the NY Section of the IEEE.

### REVIEW COURSE FOR THE PE EXAM-ELECTRICAL ENGINEERING

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Waste Water</th>
<th>Soils</th>
<th>Concrete</th>
<th>Water Treatment</th>
<th>Concrete</th>
<th>Water Treatment</th>
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</thead>
<tbody>
<tr>
<td>Statics</td>
<td>1 Class</td>
<td>2 Classes</td>
<td>2 Classes</td>
<td>1 Class</td>
<td>2 Classes</td>
<td>1 Class</td>
</tr>
<tr>
<td>Mechanics of Materials</td>
<td>1 Class</td>
<td>2 Classes</td>
<td>1 Class</td>
<td>3 Classes</td>
<td>1 Class</td>
<td>3 Classes</td>
</tr>
<tr>
<td>Fluid Mechanics</td>
<td>1 Class</td>
<td>Surveying</td>
<td>2 Classes</td>
<td>1 Class</td>
<td>Construction</td>
<td>2 Classes</td>
</tr>
<tr>
<td>Dynamics</td>
<td>2 Classes</td>
<td>Hydraulics</td>
<td>3 Classes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Classes Begin
- In Westchester
  - 33 West Main St
  - Elmsford, NY 10523
  - Room 305
  - 1/8/2009
- In New York City
  - 3 West Main St
  - Elmsford, NY 10523
  - Room 305
  - 1/12/2009
- On Long Island
  - Residence Inn by Marriott
  - 9 Gerhard Rd.
  - Plainview NY 11803
  - 1/13/2009

#### Classes End
- 4/22/2009

*Due to security requirements at the Con Edison Building, registration must be completed by 12/30/08.*

Strategy Classes are from 6:00-7:30pm, all others are from 6:00-9:00pm.

### Course Location: (Please circle)
- Long Island
- NYC
- Westchester

Tuition (Includes non-refundable $30 registration fee)
- Fundamentals of Engineering Review: $795
- PE Review for Civil Engineering: $695
- PE Review for Mechanical Engineering: $650
- PE Review for Electrical Engineering: $695

Method of Payment:
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- PERC, INC.
  - P.O. Box 123
  - Northport NY 11768
  - 800.682.8448 (Phone)
  - 631.424.8682 (Fax)
  - percinc@earthlink.net
  - www.percinc.com
THE NEW YORK SECTION’S
2009 AWARDS
DINNER DANCE

The 2009 NY Section Awards Dinner Dance honoring the Section’s Awardees will be held on Saturday evening, February 21, 2009.

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 crudités and cocktails in the Petite 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 meat or a delicious fresh fish 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 Dance Fever Orchestra.

For those wishing to spend the night, hotel reservations may be made on-line at various web service providers or directly with the hotel 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, 2009. Corporate supporters: Table of 10 at $1850.00

A special non-transferrable rate of $100 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 Supporters or non-IEEE members may obtain additional information and cost by contacting:
Ralph Tapino (718) 761-5104 / raltap@aol.com
William Perlman (973) 763-9392 / w.perlman@ieee.org

MEMBER RATE RESERVATION FORM

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

Please indicate meal selections:
Meat ______
Fish ______

Name: __________________________________________

Company: _______________________________________

Address: _______________________________________

City: ___________________________ State: ______

Zip Code: __________ Telephone: ___________________

IEEE Member # _________
No. Of Tickets @ $100.00 ______

NON-IEEE Member
No. Of Tables @ $1850.00_________
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