

# THE MONITOR



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## Chair's Message By Balvinder Blah, Chair New York Section

I wish all our members Happy Holidays as well as a happy, healthy and a prosperous New Year. As I look back at my year as Chair of the NY section, I have to say I got the opportunity to meet so many successful professionals who are also volunteers of IEEE. I was impressed by their hard work and dedication towards IEEE. Some of these professionals are going to be recognized during our 2013 Annual Dinner Dance. This year has also taught me a lot about team dynamics and how smart, hard working individuals who all have good intentions can disagree on certain topics and then they all work together as a team under the guidance of a leader to come to a agreeable solution.

As we approach 2013 and look at all that IEEE-NY has done in 2012, I am proud to say that we had some great events, tours and seminars that our members have benefited from by participating and networking. We as volunteers of IEEE hope to continue organizing such events and I look forward to getting new volunteers in 2013 to help enhance these events. We also had some events that could have had more success. Hence, I would like to encourage our members to come to our monthly meetings or write to us and provide suggestions on how we can improve these events as well as put together more relevant events.

Once again best wishes and Happy Holidays to you and your family!

Sincerely,  
Balvinder Blah  
Chair, New York Section  
[balvinder@ieee.org](mailto:balvinder@ieee.org)

# Calendar of Events

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## December 2012

### December 18th

New York Section Power & Energy Society, Industry Applications  
Society and Life Members Affinity Group meeting

***Hess Bayonne Energy Center Inteconnection to Con Edison***

By James P. Monney, Jr.

Refreshments 5:00pm - Lecture 5:30pm

Con Edison

Edison Room, 19th Floor

4 Irving Place, New York, NY

## January 2013

For more information about these meetings and lectures,  
please visit:

**[http://ewh.ieee.org/r1/new\\_york/](http://ewh.ieee.org/r1/new_york/)**

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**2013 New York Section Executive Committee (EXCOM) Elections**

**Congratulations to the NEW Executive Committee (EXECOM) of the IEEE NY Section  
for calendar year 2013**

**Section Chair:**  
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Neil Weisenfeld

**Section Vice Chair – Section Activities:**  
Arnold Wong

**Section Treasurer:**  
Wilson Milan

**Section Secretary:**  
Kim Smith

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Balvinder Deonarine

**Long Range Planning Committee Chair:**  
Matt Lester

**Operations & Procedures Committee Chair:**  
William Coyne

**Publications Committee Chair:**  
Jean Redmond

**Webmaster Committee Chair:**  
Harold Ruchelman

## December Lectures and Seminars

The NY Section of the IEEE PES and the IAS NY Chapter and the LMAG are presenting a lecture titled:

***Hess Bayonne Energy Center Interconnection to Con Edison***

by James P. Mooney, Jr.

Tuesday, December 18, 2012

Refreshments 5:00pm Lecture 5:30pm

Con Edison - The Edison Room, 19th Floor, 4 Irving Place

*This program will be awarded IEEE Continuing Education Units*

**Abstract:** The Gowanus 345 kV Substation is located in the Borough of Brooklyn, City of New York. The Gowanus 345 kV Substation is an open air outdoor substation. It originally consisted of two separate bus sections and equipment areas. Hess Corporation and its subsidiary Bayonne Energy Center (BEC) constructed a new 500 MW gas turbine power plant in Bayonne, New Jersey. BEC contracted Con Edison to engineer and design the interconnection to the Con Edison system. The BEC Gowanus Interconnect project created a new outdoor 345KV eight breaker open air type ring bus, and new control building at the Gowanus 345kV Substation. The BEC plant electrical output is carried via submarine cable (6.75 miles) under New York harbor and transitions to land cable at the Gowanus Substation. The 345kV feeder continues underground within the Company property and connects to a new ring bus at Gowanus.

**About the speaker:** James P. Mooney, Jr. is employed as a Project Engineer by Consolidated Edison Company of New York, Inc. He has a BS in Nuclear Energy Technology and an MS in Management Science. He is a former Nuclear Energy consultant, and was licensed by the US Nuclear Regulatory Commission as a Nuclear Reactor Operator and Senior Nuclear Reactor Operator. In his current position Mr. Mooney is responsible for managing the engineering of large capital projects for Con Edison.

**Registration:** To register, please e-mail Arnold Wong at [wongar@coned.com](mailto:wongar@coned.com). For security reasons, no walk-ins will be allowed.

## PACE Chapter Meeting

On December 11, 2012 a PACE meeting was held on the topic: "Protecting Your Products & Discoveries – Perspectives from both In-house and Outside Patent Counsels". Twenty-nine people attended (15 IEEE members & 14 guests). The presentation was given by three patent attorneys, was excellent and well received by the attendees. The seminar discussed patent prosecution basics in view of the new regulations enacted in the American Invents Act (AIA) and included strategies for avoiding common pitfalls that may jeopardize intellectual property rights. Overview of topics discussed included: Introduction to Patents, Patentable Subject Matter (What can be patented), Contents of Patent Application, Patentability and the Patent Process, Licenses, Assignments & Other Agreements, and The American Invents Act & Changes to U.S. Patent Law.

## Edwin Armstrong

### Edwin Armstrong



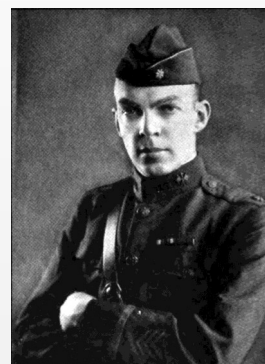
### IEEE Medal of Honor Recipient

By Steve Giavasis, Chapter Chair of NY Section of IEEE Instrumentation & Measurement Society

[sgiaivasis@ieee.org](mailto:sgiaivasis@ieee.org)

Can you name the person who invented FM radio, had 42 patents to his name, received prestigious medals from each of the IEEE's predecessors, and helped drive radio and wireless broadcasting technology into what it is today? Many cannot, despite the fact that Major Edwin Armstrong was one of the most prolific engineers and inventors of the 20th century, producing world-changing innovations throughout his entire life.

Although Edwin Armstrong had shown an inventive slant from an early age, he first entered innovative prominence during the 1910's and 1920's with a string of consecutive, ground-breaking inventions. While an undergraduate at Columbia University and working on his experiments from his parents' attic in Yonkers, NY, he first developed the regenerative circuit, which allowed radio signals to be amplified multiple times via positive feedback. This invention allowed others to enjoy radio broadcasts from further distances, and without the use of specialized headphones, helping to turn radio into a more main stream technology. He obtained a patent for this in 1914, and was soon awarded the Institute of Radio Engineers' (IRE) Medal of Honor for both the invention and the encouraging influence the achievement produced among many of the other independent, aspiring radio engineers of the time (Edwin Armstrong developed his inventions on his own, and never actually worked as a corporate engineering employee). Armstrong was the first recipient of the newly-created award, which continued on as the IEEE Medal of Honor when the IRE and the American Institute of Electrical Engineers (AIEE) merged in 1963 to become the IEEE. In later years, Armstrong would also be awarded another IEEE-affiliated prize – the Edison Medal, presented to him by the AIEE in 1942.



Edwin Armstrong as a  
signal officer in WWI

At roughly the same time as the IRE deliberated on the first recipient of the IRE Medal of Honor, Edwin Armstrong was invited into the US Army Signal Corps just as the United States entered World War I. While serving in France in 1918, Armstrong invented the superheterodyne circuit, making radio far more reliable and easy to use, driving down the rampant amount of signal interference which plagued the technology prior to this invention. This advancement helped drive radio into modernity, with the heterodyning technique still being used widely today in radio and television broadcasting.

After returning home from the war, Armstrong continued his streak of innovation when he introduced his new technique of frequency modulation (FM) transmission, eliminating many challenges radio faced with the more traditional amplitude modulation (AM) transmission method. This latest invention was met with considerable resistance, including a paper published in the Proceedings of the IRE (now the Proceedings of the IEEE) criticizing the new technology and doubting its utility, which was written by the inventor of single-sideband modulation, John Renshaw Carson. Years later, in 1936, Armstrong responded to this paper with his own submission to the Proceedings of the IEEE successfully defending the invention and its significance to radio broadcasting (this paper was reprinted in the August 1984 issue of the Proceedings of the IEEE, which can be viewed in the journal's archives).

## Edwin Armstrong (continued)



The Armstrong/Alpine Tower in Alpine, NJ

In fact, controversy was no stranger to Major Edwin Armstrong, as a considerable number of his patents and inventions had been claimed or contested by several individuals and companies throughout his entire career, most notably including David Sarnoff of RCA (fighting the introduction of FM radio) and Lee De Forest of AT&T (claiming the invention of signal regeneration). With major companies rejecting the move to FM transmission, Armstrong resorted to financing and building a FM transmission tower and station on his own. In 1937 and 1938, this transmission tower was constructed in Alpine, NJ, from which the first large-scale FM transmissions ever took place in history. This tower, named The Armstrong Tower, or The Alpine Tower, still stands to this day and can be seen from many parts of the NY side of the Hudson River, primarily along the Bronx, Yonkers and Hastings-on-Hudson shorelines. It is still in use broadcasting directional radio services, and is currently used as a landmark for aviation due to its unique appearance featuring three cross-bars set on a pylon.

Due to the exhaustive legal battles with RCA and Sarnoff, Armstrong did not live to see much popular recognition for his work, with some of his patents being re-awarded to him posthumously as a result of legal action taken by his wife, Marion MacInnis. Although significantly helping to bring about modern-day transmission, communication and broadcasting technology, Edwin Armstrong's name remains out of focus of mainstream recognition today; even his Yonkers, NY home and personal workshop was demolished in 1983 despite being listed on the National Register of Historic Places.

Attempting to help change this, a local movement has started in the NY-NJ area with the goal of placing a plaque of recognition in Edwin Armstrong's hometown of Yonkers, NY, within view of the Armstrong Tower just across the Hudson River. A local radio and history enthusiast named Steve Klose petitioned Yonkers administrators hoping to gain acceptance to build this plaque at the chosen site, and succeeded after some initial resistance. Although the city of Yonkers did eventually approve the monument, it requested that it be funded independently.

For those interested in helping, a fundraiser has been started for this purpose, and is currently being hosted on GoFundMe at the following address: <http://www.gofundme.com/1dqf3k>

For questions, updates, or concerns regarding the cause, Steve Klose can be directly contacted at [armstrongplaque@verizon.net](mailto:armstrongplaque@verizon.net). More information can also be found in the article detailing the original effort to gain city acceptance and permission at <http://yonkers.dailyvoice.com/neighbors/nj-man-mission-recognize-yonkers-genius>.

# THE NEW YORK SECTION'S 2013 AWARDS DINNER DANCE

The 2013 NY Section Awards Dinner Dance honoring the Section's Awardees will be held on Saturday evening, February 23, 2013.

This year, our dinner dance (black tie optional) will be held in the Grand Ballroom, located on the second level of the New Yorker Hotel (Ramada Plaza), 481 Eighth Avenue (between 34th and 35th Streets).

Festivities will begin at 6:00 pm with crudités and cocktails in the Crystal Ballroom and Mezzanine area on the second floor. 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 meat, fish, or vegetarian entree. Each gourmet entree will be accompanied by a salad and dessert. There will be a brief awards ceremony after dinner and then we can continue dancing until the last song plays at 11:00 pm.

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 212-971-0101. There are no special arrangements made for parking at this time.

Reservations for the affair may be made by completing the reservation form below and forwarding it to David Horn at the address indicated before January 25, 2013. Corporate supporters: Table of 10 at \$2400.00. Individual tickets are available at \$240.00.

**A special non-transferrable rate of \$120 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:  
David Horn at (516) 729-5806 or at nysectionadd@yahoo.com**

## RESERVATION FORM

Send to: David Horn  
129 Rosemont Avenue  
Farmingville, NY 11738

Please indicate meal selections:

Meat \_\_\_\_\_  
Fish \_\_\_\_\_  
Vegetarian \_\_\_\_\_

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

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

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

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

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

IEEE Member # \_\_\_\_\_ No. Of Tickets @ \$120.00 \_\_\_\_\_

NON-IEEE Member No. Of Tables @ \$2400.00 \_\_\_\_\_

(Circle One) No. Of Tickets @ \$240.00 \_\_\_\_\_

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

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



## IEEE-USA Online Engineering Video Competition for college students

IEEE-USA is challenging U.S. college students to create YouTube videos that reinforce for an 11-to-13-year-old "tweener" audience "How Engineers Make a World of Difference." The organization is seeking to tap the enthusiasm of U.S. college students to spark younger students' creativity and ingenuity and to inspire their interest in learning about engineering. IEEE-USA also seeks to expand broader public understanding of engineering through the wide dissemination of these videos. The competition deadline is January 18, 2013.

[More information and guidelines are available.](#)

## Professional Engineers Review Course

**PERC is pleased to announce Review Courses for the  
Fundamentals of Engineering (FE) Exam on April 13, 2013 and  
Professional Engineering (PE) Exam on April 12, 2013**

PERC's review classes are designed to fully prepare you to pass the FE and PE exams. Their courses teach problem solving methods, strategy and follow a strict adherence to NCEES exam specs. All classes are taught by Professional Engineers who are practitioners in their fields. Enough theory is presented for background, and the focus is on problem solving.

PERC will provide the Michael Lindeburg, PE Manual, Problem/ Solution book, and the Practice Problems book for the exam you are going to take from PPI Publications.

For more information, please visit [www.percinc.com](http://www.percinc.com)

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## The Monitor

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### Let Us Hear From You

The Monitor encourages letters to the editor. Members of the IEEE New York are encouraged to write in about The Monitor articles or about other topics of interest to New York Engineers. While the IEEE New York Section greatly appreciates feedback, we cannot guarantee that all letters will be answered or published. Please direct comments to [ieeenymonitor@ieee.org](mailto:ieeenymonitor@ieee.org) or to a Section officer.

The Monitor is only available online, print editions have been discontinued. For details about the publishing schedule and advertising rates, please contact the Monitor Editor.



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