



Engineers Joint Committee of Long Island

Anthony Cacioppo, P.E., Co-Chair

Paul Lanzillotta, P.E., Co-Chair

ENGINEERS WEEK SEMINAR SERIES

Thursday, February 12, 2015

Place: *Holiday Inn Plainview - 215 Sunnyside Boulevard, Plainview, NY 11803
516-349-7400 (Front Desk)*

Program:	8:00 am – 9:00 am	Registration & Continental Breakfast
	9:00 am – 10:00 am	Morning Seminars
	10:00 am – 10:15 am	Break
	10:15 am – 12:15 pm	Morning Seminars Cont'd.
	12:15 pm – 1:15 pm	Lunch
	1:15 pm – 2:15 pm	Afternoon Seminars
	2:15 pm – 2:30 pm	Break
	2:30 pm – 4:30 pm	Afternoon Seminars Cont'd.

Seminars & Descriptions

“Security & Privacy of the Internet of Things” (1 PDH) 9:00 am – 10:00 am
Presented by: Nazrul Islam, Associate Professor, Farmingdale State College

The Internet of Things (IoT) can enhance the internet performance by ensuring reliable connection, remote control capability and extended data sharing. Security and privacy of communication as well as data are the great challenges for the researchers and developers. This presentation will discuss the vulnerability issues in IoT and propose security techniques to make the future IoT a reliable, secure and efficient system.

“Helical Piers and Anchors in Soil” (2 PDH) 10:15 am – 12:15 pm
Presented by: Pat Haffert, Seminar and Training Manager
DANBRO Distributors - Chance™ Helical Piles

The Seminar is an overview on all aspects of the helical pile industry. It takes you from the basic components to the engineering equations and design. Topics include helical pile history, components and terminology, general engineering, tieback anchors, installation, lateral loading and corrosion. The goal is to improve the understanding of the helical pile world and assist professionals in viewing them as a strong deep foundation system. Using many case histories and pictorial examples, we can demonstrate the industries future in feasibility, engineering design and overall advantages.

“Estimating the Effects of Energy Codes on Indoor Air Quality” (1 PDH) 1:15 pm – 2:15 pm

Presented by: Todd R. Crawford, Research Scientist

NYSDOH Bureau of Toxic Substance Assessment

This seminar will discuss the energy efficiency requirements in the 2010 Codes of NYS, and will present some general calculations to estimate energy use and changes in indoor air quality. The major energy conservation requirements in the 2010 Codes of NYS are to improve insulation and minimize air leakage. However, these two requirements have significant effects on temperature and relative humidity. We will estimate the energy efficiency effects of some requirements of 2010 NY Energy Conservation Construction Code, and from that data we will discuss the effects on indoor air quality for some typical building systems. By understanding and estimating the changes that may occur when energy efficiency changes are made, the design professional can anticipate and respond to consumer concerns and complaints processes about indoor air quality.

“Flexible Fire Sprinkler Hoses” {2PDH} 2:30 pm – 4:30 pm

Presented by: Eric McWhirter, Product Engineer, Victaulic Company

This course will present the history of flexible drop technology and the various designs of flexible hoses, explaining the important differences in how they perform. Attendees will learn to recognize and inspect properly installed flexible hoses, comprehend their hydraulic performance, and learn why flexible hoses are an important component in fire safety.

“Inspecting & Assessing Indoor Air Quality and Mold” (1 PDH) 9:00 am – 10:00 am

Presented by: Todd R. Crawford, Research Scientist

NYSDOH Bureau of Toxic Substance Assessment

Factors affecting indoor environmental quality and principles of indoor environmental investigations are presented in terms of "4 Ps"; Pollutant, Pathway, Pressure, People. There is a discussion of inspection procedures that are classified as 'Routine', 'Spot', and 'Complaint'. Complaints of Indoor environmental conditions may be assessed by severity in terms of 'Hazard', 'Functionality', 'Comfort Conditions', and 'Procedures. Effective response procedures are described. Complaint investigation strategies are based on using four senses: vision, odor, touch, and hearing. The use of sampling and analysis is presented and discussed. Inspection checklists required for schools by NYSED or used in EPA Tools for Schools are presented briefly. A couple of principles of indoor air dynamics that affect moisture accumulation on building materials are summarized. A learning assessment of the principles of moisture accumulation is presented in two exercises. References and Resources are presented and time is allotted for Questions and Answers.

“Design and Sustainable development for Hot-Dip Galvanizing” (2 PDH)

10:15 am – 12:15 pm

Presented by: Frank Gerace, Hubbell Galvanizing

The purpose of this seminar is to educate engineers about successful specification, design, inspection, and coating (paint/powder) of hot-dip galvanized steel; Topics include: How to conduct proper inspections and testing methods for hot-dip galvanized steel; Identify environmental costs (primary energy demand, global warming potential, etc.) for hot-dip galvanized steel from production through end-of-life; Decipher the environmental differences between painted steel and galvanized steel; and Incorporate life-cycle cost analysis into the evaluation of steel corrosion protection methods.

“Utilizing Rainwater Reuse and Stormwater Control to Improve Water Efficiency” (1 PDH)

1:15 pm – 2:15 pm

Presented by: Richard Gerbe, Co-Founder of HIGHMARK New York

The discussion will examine the environmental impact mechanical systems have on buildings and review the industries response; specifically LEED v4 and ASHRAE/USGBC/ASPE/AWWA Standard 191P. Additionally, a number of re-purposing and conservation strategies will be introduced. The re-purposing of storm water, rainwater, or gray water for usage within a building creates a synergy between water use and water conservation resulting in reduced fresh water usage in our mechanical systems and less impact on municipal sewer systems.

“Grounding & Lightning Protection” (2 PDH) 2:30 am – 4:30 pm

Presented by: Richard L. Rosner, P.E., Director of Engineering

Donald W. Kane, P.E. Sr. Electrical Engineer

Nassau Suffolk Engineering & Architecture, PLLC

This presentation will introduce the theory, methods and materials essential to provide effective grounding and equipotential bonding of electrical equipment to minimize touch and step potentials, and achieve compliance with the latest (2014) National Electrical Code requirement. Basic concepts of lightning protection will be discussed as they relate to grounding and bonding.

“Vacuum Waste Disposal Systems” (1 PDH) 9:00 am – 10:00 am

Presented by: Ron Mims, AcornVac, Inc.

Vacuum Waste systems as a viable option to traditional gravity waste. This presentation will discuss the many benefits vacuum waste systems have to offer in lieu of gravity waste. Vacuum waste offers tremendous water/waste water savings and offers almost unlimited design options for both new construction and retrofit applications.

“Pump Design, Hydraulics” (2 PDH) 10:15 pm – 12:15 pm

Presented by: Mark Koester, President, Koester Associates, Inc.

This presentation will provide a review of basic hydraulic principles including how to read a pump curve and the mechanics of pump design and operation. In addition, the general overall design methodology of pump station design will be discussed. At the conclusion, the audience will have a better understanding of how to select an appropriately sized pump and the required information to achieve a well designed pump system.

“MOVES: Project Level Traffic and Air Quality Analyses” (1 PDH) 1:15pm – 2:15pm

Presented by: Einah Reza Pelaez, P.E., Transportation Engineer, HDR Engineering

Mallory Goff, EIT, Environmental Engineer, HDR Engineering

The session will present a collaborative process developed by the NYCDEP, NYCDOT and the project consultants for calculating emission factors using the Motor Vehicle Emissions Simulator (MOVES) software as mandated by the EPA for project level air quality analyses. The process includes the use of new information sources, traffic analysis tools, sensitivity tests to identify key issues and challenges, and refinements to increase the accuracy of the analysis and calculation of emissions factors. The intent was to streamline the process and guide city agencies and consultants responsible for conducting air quality analyses for discretionary actions subject to environmental review under CEQR, SEQRA, and NEPA processes.

“AC & DC Critical Power Supply Monitoring Systems” (2 PDH) 2:30 pm – 4:30 pm

Presented by: Ed Wirth, Power Service Concepts Inc.

This course will focus on applications and technology of power supply monitoring, with specific AC and DC examples. One case study will focus on AC power risk mitigation – using 7x24 continuous monitoring of potential switchgear arc flash hot spots, including under Low Load conditions (ExerTherm product family). Another case study will focus on DC batteries as a critical link in electronic applications. Topics will include an interactive discussion on higher risk applications within the environments of the attendees. A live webinar demonstration of our Insite Management System (IMS) will be given with a range of solutions.

SCHEDULE

9:00a-10:00a 1 hr	<i>Security & Privacy of The Internet of Things</i>	<i>Inspecting & Assessing Indoor Air Quality and Mold</i>	<i>Vacuum Waste Disposal Systems</i>
10:00 – 10:15	Break		
10:15a-12:15p 2 hr	<i>Helical Piers and Anchors in Soil</i>	<i>Design and Sustainable development for Hot-Dip Galvanizing</i>	<i>Pump Design, Hydraulics</i>
12:15p-1:15p	LUNCH		
1:15p-2:15p 1 hr	<i>Effects of Energy Conservation on Temp & Humidity in Residential Bldg's</i>	<i>Utilizing Rainwater Reuse and Stormwater Control to Improve Water Efficiency</i>	<i>MOVES Project Level Traffic & Air Quality Analysis</i>
2:15 – 2:30	Break		
2:30p-4:30p 2 hr	<i>Flexible Fire Sprinkler Hoses.</i>	<i>Grounding & Lightning Protection</i>	<i>AC & DC Critical Power Supply Monitoring Systems</i>

MEMBER SOCIETIES

New York State Society of Professional Engineers
 -Nassau Chapter
 -Suffolk Chapter
 American Institute of Aeronautics & Astronautics
 Institute of Industrial Engineers
 American Society of Civil Engineers

Institute of Electrical & Electronic Engineers
 American Society of Heating Refrigeration
 & Air Conditioning Engineers
 American Society of Mechanical Engineers
 Society of Women Engineers
 NY Association of Consulting Engineers
 Society of Manufacturing Engineers

Farmingdale State University
 Stony Brook University
 Hofstra University
 Instrument Society of America
 American Society for Engineering Education
 American Society for Quality



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Holiday Inn Plainview - 215 Sunnyside Boulevard, Plainview, NY11803

To register, complete and return this form with payment by February 9, 2015 to:

Andrew S. Haimes, PE, 172 Sherry St, East Islip, NY 11730. Ph: 631-859-5190.

Email questions to: ashaimes@optonline.net

ALL FIELDS MUST BE COMPLETED. PRINT NEATLY. CHECK ALL SEMINARS YOU WISH TO ATTEND.

Fee: _____ **\$125 for full day (6 PDH); includes lunch**
_____ **\$75 for half day (3 or fewer PDH); includes lunch**

- _____ 9:00am – 10:00am “Security & Privacy of the Internet of Things” (1 PDH)
- _____ 10:15am – 12:15pm “Helical Piers and Anchors in Soil“ (2 PDH)
- _____ 1:15pm – 2:15pm “Estimating the Effects of Energy Codes on Indoor Air Quality” (1 PDH)
- _____ 2:30pm – 4:30pm “Flexible Fire Sprinkler Hoses” {2PDH}
- _____ 9:00am – 10:00am “Inspecting & Assessing Indoor Air Quality and Mold” (1 PDH)
- _____ 10:15am – 12:15pm “Design and Sustainable development for Hot-Dip Galvanizing” (2 PDH)
- _____ 1:15pm – 2:15pm “Utilizing Rainwater Reuse and Stormwater Control” (1 PDH)
- _____ 2:30pm – 4:30pm “Grounding & Lightning Protection” (2 PDH)
- _____ 9:00am – 10:00am “Vacuum Waste Disposal Systems” (1 PDH)
- _____ 10:15am – 12:15pm “Pump Design, Hydraulics” (3 PDH)
- _____ 1:15pm – 2:15pm “MOVES: Project Level Traffic and Air Quality Analyses” (1 PDH)
- _____ 2:30pm – 4:30pm “AC & DC Critical Power Supply Monitoring Systems” (2 PDH)

Total PDH _____ **Total Amount Enclosed \$**_____

Make check payable to: Engineers Joint Committee of LI

NOTE: WE NOW ACCEPT CREDIT CARDS. If using a credit card you may e-mail this registration form to ashaimes@optonline.net

Name _____ Phone _____

Company _____ Address _____

E-mail Address _____

Credit Card Number _____ CCV Code _____

Credit Card Type (MC, Visa, AE, Disc.) _____ Expiration Date _____

Zip Code Associated With Credit Card _____