

# Feb. 13-14, 2025 E-Week Seminar Descriptions

**Introductory** = New to the engineering field, with little or no experience such as students.  
**Intermediate** = A few years of experience in the field of engineering with a desire to build on it.  
**Advanced** = A “seasoned” engineering professional with many years of experience.

**T** = Thursday Seminar and **F** = Friday Seminar

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*Note: Some of these seminars might have been offered at other locations. It is your responsibility to determine what seminars you want to attend.*

## BRIDGES:

### **T - Saving New York’s Historic Truss Bridges** – Intermediate

**By: Peter Melewski, PE, F. ASCE; Peter Melewski, LLC - [melewski@gmail.com](mailto:melewski@gmail.com)**

Following up on the 2021 “Save the Bridges” E-Week Presentation, this seminar provides new information on the 12 bridges, plus an overview of other recently threatened historic steel trusses over rivers, streams and railroads in Eastern New York. Technical, contractual, and budgetary challenges will be discussed. Several bridges are currently in the design or construction phase. Input from key bridge stakeholders will be included. If you love truss bridges, this seminar is for you.

### **T - Pulling Bridges Back from the Brink** – Intermediate

**By: Peter Melewski, PE, F. ASCE; Peter Melewski, LLC - [melewski@gmail.com](mailto:melewski@gmail.com)**

Several historically significant truss bridges are currently on the brink of being lost forever if corrective action does not occur in 2025. Using up to the minute information, the historical and engineering significance of each bridge will be discussed. What factors (design details, maintenance, etc.) drove these beloved bridges to the brink? Current safety concerns, as well as potential technical, safety, and management mgt. solutions to pull them back from the brink will be discussed.

### **T - Emergency Replacement of the Annsville Culvert** – Intermediate

**By: Troy Soka, PE; NYSDOT – Structures - [troy.soka@dot.ny.gov](mailto:troy.soka@dot.ny.gov)**

This presentation will describe the emergency replacement of US 6 over the Annsville tidal marsh, part of the Hudson River Estuary, in Peekskill, NY. We will explain the design challenges and the resulting compromise that allowed for the expedited replacement of the existing structure while still meeting the long-term objectives of the future overlapping Annsville Flood Mitigation Project. Additionally, we will explore the numerous site constraints that made this small bridge replacement very challenging.

### **T - Post Fire Evaluation of Route 14 over Chemung River** – Intermediate

**By: Bradley Gates; NYSDOT - [bradley.gates@dot.ny.gov](mailto:bradley.gates@dot.ny.gov)**

The presentation covers that chain of events and evaluation techniques used to determine the post fire strength and safety of NY 14 over Chemung River. The presentation will cover the inspection methods, data documentation, non-destructive and destructive testing methods to evaluate the bridge. The criteria to establish the required repairs including some baseline data will be discussed. Additionally, some construction sequencing will be discussed in order to open the bridge to traffic in a timely manner.

## **BUILDINGS:**

### **F - TRM029: Roof Preservation: A Sustainable Option** – Introductory

**By:** *Brad Farris; Tremco CPG* - [bfarris@tremcoinc.com](mailto:bfarris@tremcoinc.com)

This course is a discussion about extending the service life of an existing roof through restoration. We will explore the options and materials available and identify which types of roofing systems are best candidates for roof restoration. This course also delves into the economics and environmental benefits of roof restoration. Project photos will be reviewed and discussed.

### **F - Cracked Masonry Adhesive Anchor Design: Are you ready?** – Intermediate

**By:** *Derek Gilbert, PE; Simpson Strong-Tie* - [degilbert@strongtie.com](mailto:degilbert@strongtie.com)

This seminar reviews the recent changes to the ICC acceptance criteria document AC-58. It highlights the new design provisions for the qualification and design of post-installed adhesive anchors in hollow and grout-filled cracked concrete masonry unit (CMU). A complete design example is presented, along with helpful, time-saving design resources and tools.

### **F - Post-Installed Anchor Special Inspections and Field Testing** – Intermediate

**By:** *Derek Gilbert, PE; Simpson Strong-Tie* - [degilbert@strongtie.com](mailto:degilbert@strongtie.com)

This webinar reviews post-installed anchor installation procedures, special inspection requirements, field inspection methods, field testing types, and proof load determination in masonry and concrete base materials. The presentation is especially useful for building officials and engineering firms actively engaged in field inspection and testing.

## **CIVIL:**

### **T - Trenchless Culvert Rehabilitation: Design & Installation Methodologies** – Intermediate

**By:** *Alex Sherrod* - [asherrod@precisionpipe.com](mailto:asherrod@precisionpipe.com) and *Dan Dammann* - [ddammann@precisionpipe.com](mailto:ddammann@precisionpipe.com) - *Precision Pipe & Products, Inc.*

This presentation will provide a review of the common factors that lead to culvert deterioration and failure, and provide a detailed look at the design and installation methodologies that influence the effective use rigid slip-line systems.

### **F - Best Uses and Applications for Plastic Stormwater Chambers** – Intermediate

**By:** *Taylor Abbott; Cultec / ADS* - [Taylor.abbott@cultec.com](mailto:Taylor.abbott@cultec.com)

The presentation will go over stormwater chamber management practices. And is focused on different methods of subsurface water retention/detention methods, and when best to utilize different options. The presentation will pay particular attention to chamber systems and the benefits of designing with chambers for different situations.

## **F - Stormwater Management - Surface Water Drainage and Underground Attenuation Systems** – Intermediate

**By: Michael Fortuna; ACO USA - [Michael.fortuna@aco.com](mailto:Michael.fortuna@aco.com)**

Stormwater Management products for surface water and underground attenuation systems. Design considerations, different types of trench drain products how to determine size of drains, drain grates – load requirements, water intake, aesthetic considerations.

## **F - Large Diameter HDPE Pipe for Water Management** - Intermediate

**By: Adam Sapp, PE; Soleno USA - [Adam.sapp@soleno.com](mailto:Adam.sapp@soleno.com)**

KUSTOMFLO pipe is made from High-density polyethylene (HDPE) using world-renowned KRAH technology, resulting from an adaptive process that allows the optimization of the pipe profile to meet the specific needs of almost any project or applicable standard. This custom manufacturing approach, drawing on over 100 different profiles, lets you build to your unique specifications. It is currently available in diameters from 24” to 136” and manufactured at our facility in Saratoga Springs, NY.

The 1-hour Technical Presentation on the KUSTOMFLO technology will include:

- History of the development of the technology.
- Flexible Pipe Design - How the pipe is designed including all the parameters the Engineer needs to provide to properly design for the intended application.
- KUSTOMFLO product selection process.
- Applications including Storm drainage, CSO/wastewater trucklines, culverts, rainwater harvesting tanks, stormwater detention tanks, accessories, above ground storage tanks, low pressure applications....
- Case Studies

## **F - High Performance Permanent Erosion Control** – Intermediate

**By: Doug McCluskey; EJ Prescott - [Doug.mccluskey@ejprescott.com](mailto:Doug.mccluskey@ejprescott.com)**

For applications where natural vegetation alone will not sustain expected flow conditions and/or provide sufficient long-term erosion protection, a permanent rolled erosion control product may be used. Permanent erosion control products provide the necessary performance properties to effectively control erosion and reinforce vegetation under the expected long-term site conditions. This presentation is designed to walk through the erosion control solutions that are available. We will discuss the importance of soil health and soil testing, turf reinforcement mats, and tied concrete block mat hard and soft hybrid solutions.

## **F - Differing site conditions: when bidding amounts to betting on the unknown** – Intermediate

**By: Ashraf Ghaly, PhD, PE; Union College - [ghalya@union.edu](mailto:ghalya@union.edu)**

Accurately predicting site conditions is almost impossible. Contracts usually contain clauses addressing the possibility of differing site conditions (DSC). Contractors rely on such clauses to seek recovery for changes resulting from DSC. To shield themselves from liability, owners may also include disclaimers alerting bidders that they bear the risk for any encountered DSC. These conflicting provisions create confusion because of their contradictory message. Case studies will illustrate that owners and contractors can avoid lengthy and costly litigation by ensuring a clear understanding of unambiguous language of the contract being signed.

## CONCRETE:

### **F - Concrete Pavement for Non-Highway Applications** – Beginner

**By: Heather Steffek; American Concrete Pavement Association – NYS Chapter - [hsteffek@pavement.com](mailto:hsteffek@pavement.com)**

This course will take a historical look at existing non-highway concrete pavements throughout New York State, with some still in service after 100 years. Various types of concrete pavement including Roller Compacted Concrete, Concrete Overlays, and Plain Jointed Concrete Pavements will be discussed. We will take a look at examples of concrete pavement from city and village streets, intersections, airports, and industrial facilities. Thickness design tools for these applications will also be examined.

### **F - Rebar Types, Pros and Cons** – Intermediate

**By Frank Gerace; Hubbell Galvanizing - [geracefp@whyrust.com](mailto:geracefp@whyrust.com)**

Engineers have to make many decisions on material choice. These choices often involve making tradeoffs between various materials. This seminar will discuss various types of concrete reinforcement and the advantages and disadvantages of each type of bar.

### **F - Concrete's Evolution to Sustainability** – Intermediate

**By: Bill Lyons; The Euclid Chemical Co. - [wlyons@euclidchemical.com](mailto:wlyons@euclidchemical.com)**

The concrete industry for many years has had minor changes with their role being sustainable material. With the introduction of new cements, the opportunities to incorporate SCM's (Supplementary Cementitious Materials including Ground Glass), or the injection of carbon or the use of fiber reinforcement including plastic, are all contributing to the "greening" of concrete construction industry. The presentation will briefly highlight all of these phenomenon's.

Learning Objectives:

1. How do current Supplementary Cementitious Materials (SCM's) and the advent Ground Granulated Glass (GGG) play a part of sustainability?
2. The cement industry through the use of the change in manufacturing with Portland Limestone Cement (PLC) is working toward Carbon Neutral. Brief mention on new ACI 323 Low Carbon Concrete Code.
3. The concept of injecting CO2 technology and what does it mean for mix designs
4. The role of fibers reinforcement in the marketplace and how they can reduce the carbon footprint and their value of EPD's.

## ELECTRICAL:

### **T - Offshore Wind Farm EMT Modeling with Grid Forming and Grid Following Converters** - Intermediate

**By: Thomas Ortmeier; Clarkson University - [tortmeye@clarkson.edu](mailto:tortmeye@clarkson.edu)**

This seminar presents an overview of recent and ongoing electromagnetic transient (EMT) simulations of offshore wind farm impacts on the New York bulk power grid. The topics covered will include wind turbine modeling, AC and DC undersea transmission impacts, and power quality, protection, and stability issues associated with offshore wind farms. The nature of grid forming and grid following inverter control will be discussed.

**T - Surge Protection: A Guide to Sizing, Implementation, and Code Requirements** – Intermediate

**By: Robert DiMaggio; Eaton Corporation - [RobertADiMaggio@Eaton.com](mailto:RobertADiMaggio@Eaton.com)**

This presentation will discuss surge protection from the ground up including correct sizing, proper installation and implementation, and an up-to-date review of current code requirements.

**T - Your Test Ended Badly - Can you trust the engineering data?** – Intermediate

**By: James Fogarty, PE; Peregrine Engineering Consulting - [Jimfogarty.4683@gmail.com](mailto:Jimfogarty.4683@gmail.com)**

The commander on the battlefield deals with incomplete and possibly wrong information. Something has just gone wrong. Something failed and you need to decide right now what to do. How good is the information coming to you? What can you trust? Is the system that just failed really what you think it is?

**T - Paralleling Assets for Site Performance** – Intermediate

**By: Christopher Alexopoulos; Milton Cat Inc. - [Chris\\_alexopoulos@miltoncat.com](mailto:Chris_alexopoulos@miltoncat.com)**

This seminar discusses various paralleling strategies for generator sets and selecting best methods for critical sites. The discussion will include different paralleling control systems as well as designing for redundancy (N +1) and (N plus N”).

**T - Optimizing selection of Synchronous Condensers for Utility Applications** – Intermediate

**By: Arthur Depoian, PE; GE Vernova - [Arthur.Depoian@ge.com](mailto:Arthur.Depoian@ge.com)**

The transition of our Electric Grid requires Synchronous Condensers primarily to provide short-circuit strength, inertia, and dynamic voltage recovery. The presentation will explore options for selection and specification of equipment to optimize performance, initial costs, operating costs, and reliability.

**F - Evaluating Harmonic Performance of Inverter-Based Resources** – Advanced

**By: Reigh Walling; Walling Energy Systems Consulting, LLC - [rwalling@wesconsult.com](mailto:rwalling@wesconsult.com)**

A substantial portion of new generating capacity added to the electric power grid is inverter based. Traditional approaches to evaluating harmonic performance, which have evolved from industrial applications, are inadequate in the case of large wind, solar, and energy storage plants using numerous voltage-source inverters. This presentation describes the harmonic evaluation procedure for IBR plants that will be recommended in the upcoming IEEE Standard 2800.2.

**F - Measurement Data-Driven Power Plant Oscillation Monitoring and Damping Control Re-Design under Ambient Conditions** – Intermediate - **By: Luigi Vanfretti, PhD; Rensselaer Polytechnic Institute - [luigi.vanfretti@gmail.com](mailto:luigi.vanfretti@gmail.com)**

Using prediction-error identification methods, this talk introduces a measurement data-driven approach to monitor power system oscillations at a power plant, identify a data-based model using an input signal and redesign the plant's power system stabilizer damping controller to mitigate the observed oscillations under ambient conditions and multiple operating points. The advantage of the proposed methodology is that it only requires measurements and knowledge of the controller's structure, which are known by the power plant operator.

**F - Secondary Systems – HVAC products that help Heat Pump Performance** – Intermediate

***By: Rob Zerrillo; Liberty Electric Products - [rzerrillo@libertyelectricproducts.com](mailto:rzerrillo@libertyelectricproducts.com)***

Defining Primary and Secondary systems, adding comfort, Increasing Efficiency. Some types of secondary applications: Electric Comfort Heat, Portables, Duct Heaters, Electric Radiant Infrared heating, Electric Radiant Floor Warming, Thermal Mass Heating, Air De-stratification, HVLS / Open ceiling fans, Air Curtains.

## **ENVIRONMENTAL:**

**T - Falling Trees: an Underreported Hazard that will Worsen with Climate Change** – Intermediate

***By: Joseph Englot, PE; HNTB – [jenglot@hntb.com](mailto:jenglot@hntb.com)***

The seminar is for engineers, landscape architects and managers of developed properties who are responsible for the design, operation and state of good repair of private and public property, community streets, sidewalks and public utilities, to better protect both the public and building occupants from the hazard of falling trees through safe planning and maintenance.

**T - Pressure Sewer For New Sewer or Sewer Repair** – Intermediate

***By: Jerry Connolly; Siewert Equipment – [jconnolly@siewertequipment.com](mailto:jconnolly@siewertequipment.com) and Will Stradling; Siewert Equipment - [wstradling@siewertequipment.com](mailto:wstradling@siewertequipment.com)***

This presentation will equip municipalities with the tools to make informed decisions when reviewing all alternatives for new sewers and sewer repairs. We will cover sewer feasibility, system improvements, and other pressure sewer applications, each supported by case studies. The session will provide a comprehensive one-hour overview for engineers, operators, and owners, enabling them to evaluate all available options for sewer projects.

**T - An Engineer's Guide to Successful Vegetation Establishment** – Intermediate

***By: Peter Hanrahan, CPESC - Hanrahan Environmental, LLC - [hanrahanenvironmental@yahoo.com](mailto:hanrahanenvironmental@yahoo.com)***

As construction activities wind down on construction sites, one the most powerful tools for consulting engineers is a solid understanding of the basics of establishing a solid stand of vegetation on the site. Many options are available, and this course will focus on the key factors that impact the development of a solid plan. Among the many considerations are site contours, soil analysis, seed selection, seed protection and more. The goal of this session will be to convey the key components to a successful plan.

**T - No Square Pegs: Sustainable Stormwater Solutions for Complex Sites per NYSDEC Regulations** – Intermediate

***By: Mallory Wright, PE; Advanced Drainage Systems - [mallory.wright@adspipe.com](mailto:mallory.wright@adspipe.com)***

NYSDEC recently introduced a revised Stormwater Design Manual with increased focus on Redevelopment Sites and Urban Areas, noting the interplay of Stormwater Design in CSO systems. This presentation will address stormwater management design and solutions for these difficult sites and advise designers of new ways to achieve resilient systems with a focus on capture, detention, infiltration, and pollutant removal.

## **ETHICS:**

### **T - Understanding the Regulated Interface of Professional Engineering and Professional Geology in**

**New York State** – Introductory to Advanced.

**By: Eric Greppo, PE; NYSED - [Eric.greppo@nysed.gov](mailto:Eric.greppo@nysed.gov) and Jean Patota, P.G. - [jmpat9118@gmail.com](mailto:jmpat9118@gmail.com)**

Discussion of the regulated engineering and geological scopes of practice and their overlap and interface in New York State.

Review of the State Education Department PE and PG licensee and business entity rules and regulations as they relate to offering professional design services in New York State.

### **F - Are Engineering Ethics and Generative Artificial Intelligence on a Collision Course?** – Intermediate

**By: Ashraf Ghaly, PhD, PE; Union College - [ghalya@union.edu](mailto:ghalya@union.edu)**

Artificial Intelligence (AI) has matured to the point where users can query a system that uses a large language model (LLM) or a framework for generative content to get responses drawn from an existing large body of data. Both the content of the prompt entered by the user and the pool of available data affect the system's reaction. In Engineering where errors could be costly or even fatal, engineers should be mindful of the ethical and professional implications of employing such systems.

## **GEOLOGY:**

### **T – NYSDEC PFAS Source Investigations** – Intermediate

**By: Anthony Bollasina, P.G.; NYSDEC Division of Environmental Remediation (DER) - [Anthony.Bollasina@dec.ny.gov](mailto:Anthony.Bollasina@dec.ny.gov)**

This training provides an overview of NYSDEC PFAS investigation strategies. The training teaches participants how to scope Site Characterizations and Remedial Investigations with PFAS as primary contaminant of concern. PFAS have been a primary emerging contaminant in environmental investigations over nearly the past decade. The science behind understanding the analysis of PFAS compounds in multiple media and their fate and transport is steadily evolving. NYSDEC's Division of Environmental Remediation is tasked with completing state funded and overseeing responsible party-leading Characterizations and Remedial Investigations with PFAS as the primary contaminant of concern.

### **T – Chemical Characterization of the PFAS – Contaminated Fractured Rock Aquifer (FRA) below the Rutland-Southern Vermont Regional Airport (RSVRA)** - Intermediate

**By: Jonathan Kim, Ph.D., P.G.; Vermont Department of Environmental Conservation - [jon.kim@vermont.gov](mailto:jon.kim@vermont.gov)**

In 2018, many wells and springs near/at the Rutland Airport were found by the Vermont DEC to be contaminated with PFAS. The PFAS point sources are areas where aqueous film-forming foam (AFFF) was used to conduct annual equipment testing and to extinguish aircraft fires. The Vermont Geological Survey and partners used an aquifer characterization approach that integrated physical (geologic mapping, GIS analysis of well driller reports and geophysical logging) and chemical (PFAS, major and trace elements, stable isotopes, and recharge-ages) components to build a robust 3D conceptual site model (CSM) for understanding groundwater flow in the area.

## **T – Geologic Mapping by the NYSGS: History, Modern Processes, and the Future** – Intermediate

**By: Karl Backhaus, P.G. - [Karl.Backhaus@nysed.gov](mailto:Karl.Backhaus@nysed.gov)**

Since its inception in 1836, mapping has been a cornerstone of research for the New York State Geological Survey (NYSGS). The NYSGS was founded to conduct a survey of natural resources across the state with a particular emphasis on coal. Along the way, numerous groundbreaking discoveries were made in subdisciplines including paleontology, stratigraphy, and economic geology, and this has led to continuing research to this day at the geological survey. The first edition of the Geologic Map of New York State was published in 1901 with a second edition in the 1970s. The first surficial geologic map of the state was published in the 1980s. In 1992, the enactment of the National Cooperative Geologic Mapping Act created a funding mechanism within the United States Geological Survey (USGS) called STATEMAP. This program is utilized by the NYSGS to sustain mapping, drilling, and research projects across New York State. More recently, in 2009, the NYSGS joined the Great Lakes Geologic Mapping Coalition (GLGMC), a program similar to STATEMAP with greater emphasis on three-dimensional mapping of Pleistocene deposits in the Great Lakes Region. This new objective for three-dimensional mapping has brought about the first Bedrock Topography and Drift Thickness Maps of New York State. To meet this goal, both the data preparation and map creation processes were generated and standardized and subsequently applied to each county within the state. The resulting county-scale maps were ultimately compiled into a regional sheet that complements the current 1:250,000-scale geologic maps of New York. With funding from STATEMAP and the GLGMC, research has been conducted by multiple geologists from both the NYSGS and outside of the organization. A set of geologic mapping standards was enacted to ensure consistency in the data and materials generated by all researchers, from the field map to the finished map and database. These standards created a workflow that ensures compliance with new digital Geologic Mapping Schema (GeMS) through the USGS for all map deliverables. The NYSGS publishes all maps and cartographic publications on the New York State Museum's Map and Chart Series and the USGS's National Geologic Map Database (NGMDB) for use by the public at large.

## **T – Green and Sustainable Remediation: Expectations at DER Sites** – Intermediate

**By: Mark Domaracki, P.G.; NYSDEC Division of Environmental Remediation (DER) - [mark.domaracki@dec.ny.gov](mailto:mark.domaracki@dec.ny.gov)**

This class will highlight the GSR remediation requirements rolled out by the Department in January 2024. It will identify changes in law and Department guidance documents, GSR implementation strategy and GSR assessment and tracking requirements. Participants will have an enhanced understanding of the GSR requirements for submission at DER sites and what DER project managers are looking for in a submission.

## **T – How Advanced Community Air Monitoring Approaches Support Complex Brownfield Cleanup Programs** - Intermediate

**By: Paul Pickering; Aeroqual – [paul.pickering@aeroqual.com](mailto:paul.pickering@aeroqual.com)**

Community air monitoring is essential to the success of New York's Brownfield Cleanup Program. With increasing compliance requirements and the emergence of new contaminants, there is growing community demand for air quality information. How do we address these complexities while limiting project risk and cost? We explore the challenges of implementing a Community Air Monitoring Plan (CAMP) at a complex brownfield cleanup in New York City. The site was contaminated with mercury, polycyclic aromatic hydrocarbons (PAHs), petroleum-related volatile organic compounds (VOCs), lead, and other heavy metals, which could potentially pose a risk to nearby sensitive receptors. Through a case study, we present an advanced approach for monitoring mercury vapor, VOCs, particulate matter PM10 (dust), and wind speed and direction in real-time and at multiple locations at the site.



perimeter and in the community. We demonstrate how sensor technology and cloud automation advances save project time and costs, minimize exceedances while meeting NYSDEC and NYSDOH compliance requirements, and address community demands for timely air quality information.

## **GEOTECHNICAL:**

**T - Geotechnical Emergencies Over the Years** – Beginner to Intermediate

*By: Mike Novak; NYSDOT – [mike.novak@dot.ny.gov](mailto:mike.novak@dot.ny.gov)*

This presentation will show Geotechnical Emergencies that the NYSDOT Geotechnical Engineering Bureau has responded to over the last 24 years.

**F - Soil and Rock Nail Wall for Construction of Subterranean Auditorium in Central Wisconsin** - Intermediate

*By: William Walton, PE, SE, F.ASCE, BC.GE; GEI – [bwalton@geiconsultants.com](mailto:bwalton@geiconsultants.com)*

A growing technology company needed a 11,000-person auditorium built into a dolomite bedrock hillside. The structure required an 80-foot-deep earth retention system independent of the auditorium foundation and superstructure. Allowable wall movements were limited to 2 inches. A 60-foot-tall permanent reinforced shotcrete soil and rock nail wall was designed for permanent excavation support. The soil and rock nail wall utilized both active (post-tensioned) and passive nails, with capacities and installation angles optimized to address varying soil and rock conditions and to support heavy surcharges. The wall was configured with three two-foot-wide benches to facilitate controlled blasting and removal of more than two million cubic yards of soil, limestone, and dolomite bedrock, and featured a permanent cast-in-place concrete face and a robust waterproofing and drainage system.

## **STRUCTURAL:**

**T - Corrosion and our Infrastructure** – Intermediate

*By: Neville Sachs, PE; Neville W. Sachs, PE, PLLC - [nevsachseng@gmail.com](mailto:nevsachseng@gmail.com)*

We'll look at how and why corrosion occurs, how it affects our infrastructure, and some ways to both monitor it and eliminate it.

**F - Archaic, Low-Carbon Structural Systems – (Offered at E-Week 2024)** – Intermediate

*By: Jim D'Aloisio, PE, LEED AP; Klepper, Hahn & Hyatt - [jad@khhpc.com](mailto:jad@khhpc.com)*

A variety of different types of structural building systems have been used over the years, only to eventually fall out of favor. Today, most building construction is confined to a very narrow range of archetypes that are tried and true and leave little room for innovation. We'll revisit some old structural concepts that are no longer used, and some that are barely remembered. Maybe some of these strategies are worth revisiting, in this era of awareness of the need to reduce embodied carbon from our structures.

## **F - Structural Building Failures in NY** – Intermediate

**By: Jim D'Aloisio, PE; Klepper, Hahn & Hyatt - [jad@khhpc.com](mailto:jad@khhpc.com)**

A compilation of significant and instructive structural building failures, including partial and complete collapses. We'll focus on lessons to be learned for the engineering design, construction, and condition reviews of buildings.

Stories include:

- East Coldenham Elementary School Cafetorium Wall, Valley CSD, 1989
- Smith Road Elementary School Cafetorium Roof, North Syracuse CSD, 1994
- Manufacturing Building Roof, Liverpool, NY, 1999
- Taft Road Elementary School Roof, Washingtonville CSD, 2004
- Marlboro Elementary School Library Ceiling, Marlboro CSD, 2010
- UHS Wilson Hospital Picciano Parking Garage, Johnson City, NY, 2015

## **TRANSPORTATION:**

### **T - Performance Testing: New Criteria for Asphalt Mixtures** – Intermediate

**By: Bruce Barkevich; New York Construction Materials Association - [bruce@nymaterials.com](mailto:bruce@nymaterials.com)**

The asphalt industry is moving quickly towards utilizing Performance Testing to continue to ensure asphalt will meet and exceed its life expectancy. The move toward Performance Testing will allow for continued innovation which has been baked into the industry's DNA.

### **T - Airport and Port Products and their Design** – Intermediate

**By: Craig Coggins; EJ USA, Inc. - [Craig.Coggins@ejco.com](mailto:Craig.Coggins@ejco.com) and Lee Veldboom, PE; ; EJ USA, Inc. – [lee.velboom@ejco.com](mailto:lee.velboom@ejco.com)**

This presentation will offer a comprehensive introduction and overview of the diverse range of products designed for infrastructure coverings, specifically tailored for the demanding conditions of airport and port loading areas.

### **T - Resiliency Planning for Transportation Assets** – Intermediate

**By: Joseph Englot, PE; HNTB Corporation - [jenglot@hntb.com](mailto:jenglot@hntb.com)**

This seminar is for Engineers, Architects and Business Managers who have responsibility for the operation, state of good repair and reliability of transportation system infrastructure assets and who will benefit from knowledge about various resiliency planning strategies to compensate for the long-term effects of global warming and climate change.

### **F - Proper Placement of Asphalt Pavements** – Intermediate

**By: Bruce Barkevich; New York Construction Materials Association - [bruce@nymaterials.com](mailto:bruce@nymaterials.com)**

Since COVID, the asphalt industry, as has all industries, has dealt with worker turnover. With turnover comes the loss of institutional knowledge. We need to make sure the mixtures produced are placed properly to give it the best opportunity to be successful. This program will give you some proper paving principles to help with this success along with tricks of the trade.

**F - Asset Management in Critical Locations** – Introductory

***By: Trygve Hoff, PE; Government Relations & Sustainability of American Concrete Pipe Association – [thoff@concretepipe.org](mailto:thoff@concretepipe.org)***

Asset Management provides agencies/owners both a long-term roadmap toward better supervision of asset inventories, as well as data necessary for logical material placement and usage. This information allows agencies to make sound engineering decisions backed by years of data, which in turn improves resilience of the infrastructure system and maximizes sustainability. In this session we will discuss the current issues and actions that impact such decisions in critical locations such as evacuation routes, flood prone areas, emergency access routes, and others. We will explore how asset management data can be used to help prepare for recovery from major natural disasters, and to determine the most appropriate mitigation planning.