SC ENGINEERING
CONFERENCE & TRADE SHOW

AGENDA

Kingston Resorts Embassy Suites
Myrtle Beach, SC

June 4-6, 2026

JUNE 4, 2026 THURSDAY

1:00 PM

SC State Board of Professional Engineers and Surveyors

Gene Dinkins, PLS, PE, Angela Mussel White, Jimmy Chao, PE, Kent Stair, ESQ, Tim Rickborn, Peter Strub, SC State Board of Registration for Professional Engineers and Surveyors

2:00 PM

SCDES Update

Jill Stewart, Kristy E. Ellenberg, SC Department of Environmental Services

3:00 PM

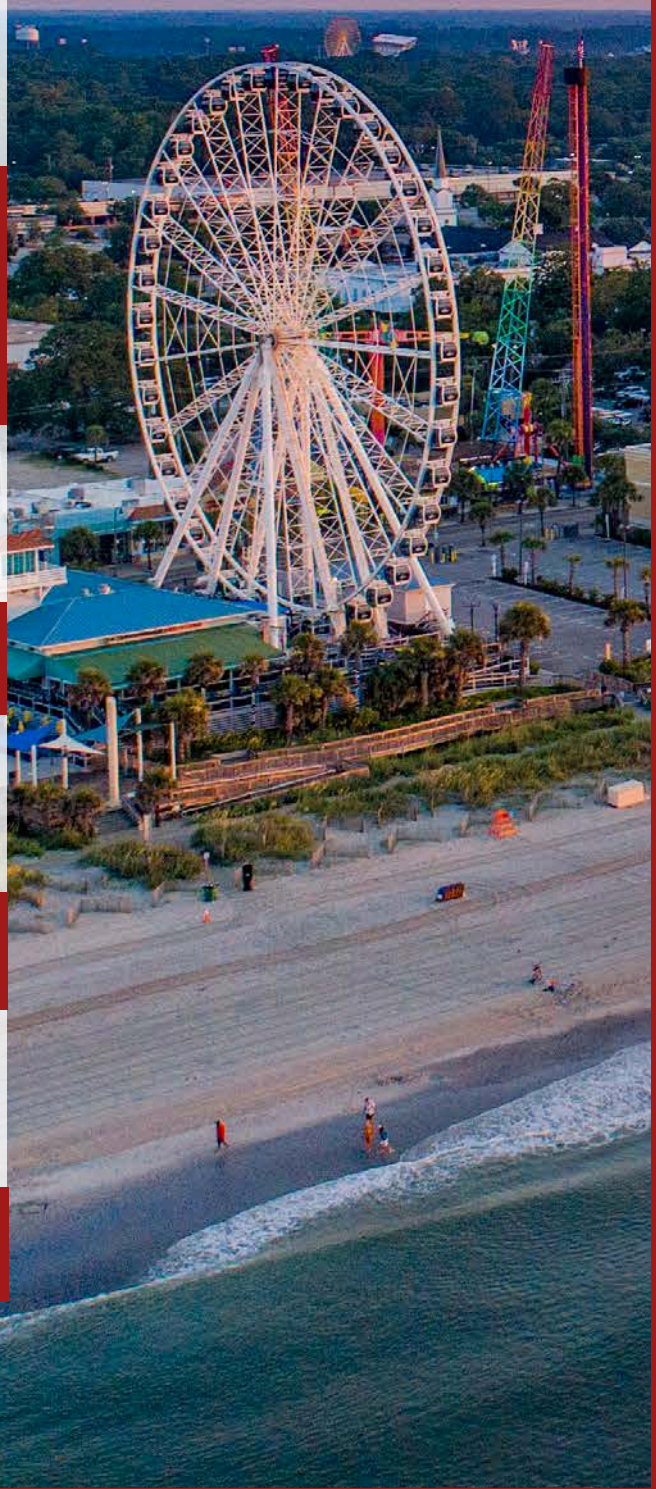
SCDOT Update

John D. Boylston, PE, Chief Engineer for project delivery, SCDOT

4:00 PM

Legislative Update

Rep. Carla Schuessler, Rep. William Bailey, Rep. Gary Brewer, Senator Russell Ott



JUNE 5, 2026 FRIDAY

KEYNOTE

Horry County - RIDE IV

The RIDE IV program in Horry County is a major road improvement initiative funded by a 1% sales tax, aimed at enhancing local infrastructure through various projects over the next 25 years.

Overview of RIDE IV

Purpose

RIDE IV stands for "Road Improvement and Development Effort" and is designed to address transportation needs in Horry County. It follows previous RIDE programs that have successfully funded numerous road projects since 1996.

Funding

The program will be funded through a 1% local sales tax, which was approved by voters in a referendum held during the November 2024 general election. The tax will be in effect for up to 25 years or until the county collects $6.6 billion.

Proposed Projects

RIDE IV includes a list of over 30 proposed projects aimed at improving local roads and infrastructure. Some notable projects include the extension of Highway 22 and various road resurfacing efforts across the county.

The program is expected to address critical transportation issues and enhance connectivity within the county, benefiting both residents and seasonal visitors.

Implementation Timeline

RIDE IV is set to go into effect on May 1, 2025, following the completion of collections from the previous RIDE III program, which is scheduled to expire on April 30, 2025.

Community Involvement

Community meetings and discussions are being held to inform residents about the RIDE IV program and gather feedback. Residents are encouraged to participate and ask questions regarding the projects and funding.

JUNE 5, 2026 FRIDAY

Track 1

8:00 - 8:30 AM

TBD

Description pending...

9:00 - 9:50 AM

Advancements in Stabilization, Modification, and Reclamation using Portland Cement

Andrew Johnson, PE, PhD Southeast Cement Promotion Association

Modification and stabilization of soils and bases with Portland cement have been used in South Carolina for over 90 years. However, recent advancements in both equipment used to apply and mix cement as well as novel processes to liquify the cement are becoming more widely available. This presentation will provide a brief history of cement stabilization in South Carolina and describe these advancements and how they can improve productivity while reducing cost.

10:00 - 10:50 AM

Highway and Rail Applications for Expanded Shale, Clay or Slate Lightweight Aggregate Embankments and Retaining Wall Structures

Jack Moore, Arcosa Lightweight

Slopes, embankments, and retaining wall structures for highway and rail infrastructure projects frequently must be constructed on sites with less-than-ideal soil conditions. When unsuitable soils are encountered the goal of the geotechnical engineer is to provide low risk, cost-effective solutions to remedy issues related to settlement, stability, applied loads and bearing capacity. When these concerns are present, it can be desirable to use fill materials with low densities to reduce the magnitude of the applied loads. Otherwise, the use of natural aggregates or quarried select fill materials may require more costly ground modification techniques to address the project requirements. This presentation will explore the use of expanded shale and clay lightweight aggregates as a cost-effective solution on sites with challenging soil conditions. Research related to lightweight aggregate fill modeling and cyclic testing results for rail applications will be discussed. Considerable interest has emerged about the performance of lightweight fills under heavy rail loading, and appropriate means to protect LW materials to ensure long-term durability.

JUNE 5, 2026 FRIDAY

Track 1

11:00 - 11:50 AM

Evaluation of Soil Liquefaction: Methods, Settlement, and Case Histories

Barnabas Bwambale, Terracon Consultants, Inc.

This presentation provides an overview of recent advances in the evaluation of soil liquefaction. It includes a brief introduction to the fundamentals of liquefaction, followed by a discussion of commonly used liquefaction triggering procedures, methods for estimating liquefaction-induced settlement, and available liquefaction mitigation measures. The presentation also incorporates case histories that illustrate how different types of subsurface data influence liquefaction evaluations and the estimation of associated settlements.

LUNCH KEYNOTE | 12:00 - 1:50 PM

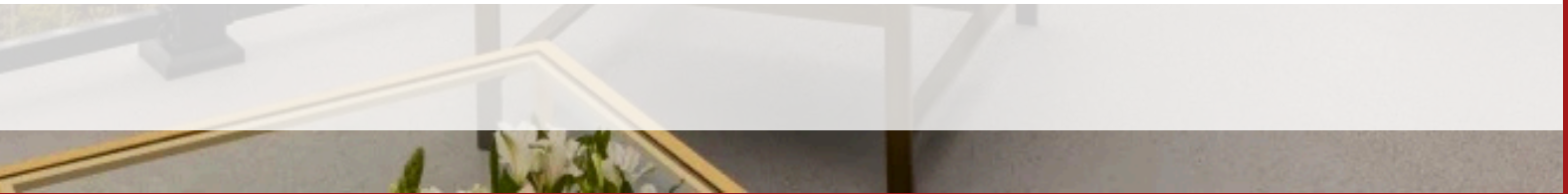
DAVID GILREATH, PE, HORRY COUNTY, ASSISTANT COUNTY ADMINISTRATOR, RIDE PROGRAM

2:00 - 2:50 PM

A Cold-Formed Steel Primer for Material Specifiers, Practicing Engineers, and Building Professionals interested in using CFS in Building Construction

Perry Green, Old Fashioned LLC

Cold-formed steel offers versatility in building construction because of its lightweight and ease of handling and use. Compared to other building products, CFS offers several advantages: it has a high strength to weight ratio, it is noncombustible, and termite resistant. Today, the use of CFS for structural applications represents 30 - 35 percent of the low to mid-rise non-residential construction market and this share is increasing annually, whereas the use of CFS for nonstructural applications is approximately 90 percent. The session will start with an overview of CFS, its manufacturing process, and products. The session will then provide a brief introduction to the fundamental theories of CFS design and how it has been incorporated into our governing building codes and standards. The session will conclude with illustrated examples of CFS uses: structural curtain wall systems, load-bearing and nonstructural wall systems, floor/ceiling and roof/ceiling systems, lateral systems, trusses, and deck.



JUNE 5, 2026 FRIDAY

Track 1

3:00 - 4:50 PM

Stabilization and Restoration of the Historic Bennett Rice Mill Facade

Jonathan Sigman, Greg Jacobs, Landmark Preservation, LLC, GEL Engineering, LLC

The Bennett Rice Mill facade stands at the center of the SC Ports Authority's (SCPA) Union Pier Terminal in downtown Charleston. The Mill, which opened in 1845, is considered one of the finest examples of 19th-century American industrial architecture.

Damage from Hurricane Donna in 1960 all but demolished the mill. SCPA built a steel frame to support the remaining western facade. After Hurricane Hugo in 1989, 90% of the braced facade survived. In the 1990s, a series of restoration projects teamed local master masons with high school students to repoint the facade and repair a cracked brick arch.

By 2024, the façade was in danger of partial/total collapse so SCPA commissioned GEL Engineering, LLC to perform a detailed structural assessment of the ruin and prepare construction documents for its stabilization. Landmark Preservation, LLC was engaged to restore the structure to the appearance shown in historic HABS photos in accordance with Secretary of the Interior standards. GEL and Landmark collaborated to solve the many challenges of stabilization of the façade while addressing myriad unforeseen conditions that arose.

This presentation will discuss the history of the site, the damage that ravaged the structure over the years, the assessment and restoration process, and the challenges that were overcome to perform a stunning restoration.

Track 2

8:00 - 8:50 AM

Innovations in Asphalt Pavements

Cliff Selkinghaus, SCAPA

SCAPA will provide a background on what started here in SC and has become a very popular solution to construct deep sections of asphalt in a single lift across the country. The session will specific cases here on SC and how others are beginning to use this to build even more robust sections using highly modified asphalt binders.

JUNE 5, 2026 FRIDAY

Track 2

9:00 - 9:50 AM

Review of AASHTO Pavement Design Methods for Private Construction

Bob Goehring, P.E., BC.GE, F.ASCE
ECS Southeast, LLC

Presentation will include a brief history of pavement, background of AASHTO design method for highways and parking lots, use of spread sheets to design flexible and rigid pavement sections, and comparison between readily available pavement design software. Program will not cover design of pavements on military bases, port authorities, trailer on flatcar, airport runways, or other specialized facilities.

10:00 - 10:50 AM

Settlement Monitoring using Shape Arrays at the Camp Hall Rail Project

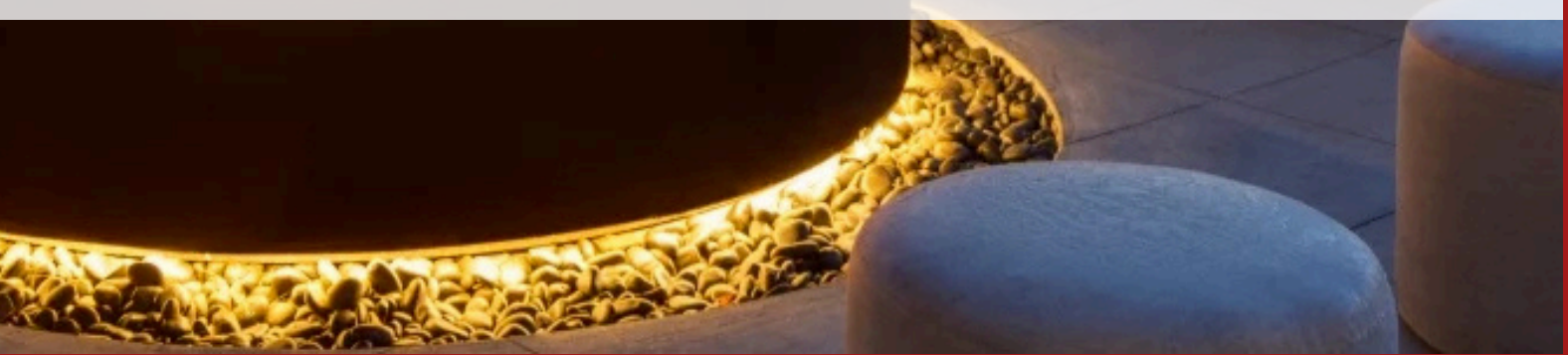
Bryan Shiver, PE
Certerra Insight Group

11:00 - 11:50 AM

Risk Targeted Ground Motions

Abdul Fekrat, Terracon Consultants

This presentation will cover the risk-targeted ground motions as incorporated in the 2018 and 2023 National Seismic Hazard Model (NSHM) and compare them with the uniform ground motions in prior versions of NSHM. The discussion will focus on the Central and Eastern United States (CEUS) and the impact of risk targeted approach on ground motions in the CEUS will be discussed.



JUNE 5, 2026 FRIDAY

Track 2

2:00 - 2:50 PM

Designing for Innovation: Signal Engineering and Controller Testing for the Lowcountry Rapid Transit Project

Tarcisio Muratori, AMT Engineering

The Lowcountry Rapid Transit (LCRT) project—South Carolina's first mass transit system—will establish a 21.3 mile Bus Rapid Transit (BRT) corridor connecting Ladson, North Charleston, and downtown Charleston. This transformative initiative will enhance regional mobility, safety, and access to major destinations along a high demand corridor.

As part of the project design team, signal engineering leads are responsible for developing the traffic signal, equipment, and temporary signal designs, as well as preparing corridor wide signal timing plans for nearly 70 urban intersections. These designs address complex engineering challenges such as railroad preemption, superstreet configurations, constrained rights of way, extensive utility conflicts, and transit signal priority (TSP). The design effort also incorporates multimodal and micromobility considerations to ensure safe, efficient pedestrian and bicycle connectivity throughout the corridor.

To support local agencies during installation and construction, the consultant team will participate in bench testing of signal controller parameters and TSP related equipment. Because the controller platform has not yet been selected for the project, the team elected to evaluate the three most used controllers in South Carolina. This testing effort was particularly complex: in addition to the standard eight phase NEMA configuration, the project includes two additional phases for BRT operations. These phases vary depending on context—running in the roadway center in some segments, operating curbside in others, integrating with mixed traffic in certain locations, and providing queue jump operations at select intersections where BRT phases must run ahead of general traffic movements.

This presentation will provide an overview of the LCRT project, highlight signal design solutions, and summarize the controller programming and testing process.

JUNE 5, 2026 FRIDAY

Track 2

3:00 - 3:50 PM

Building 100-Year Pavement Foundations: The Role of Moisture Management Geosynthetics
Engineering Business Manager - Carolinas

Brent Huskey, Solmax

The Transportation Research Board has recently published a Research Circular entitled Foundation Design and Construction for 100-Year Pavement Systems. Water is known to be the #1 enemy to civil structures, achieving 100-year pavement foundations requires an in-depth understanding of unsaturated soil behavior. This presentation looks at the influence of geosynthetics on mechanical and hydraulic properties of granular base materials and unsaturated soils in pavement foundations. We will discuss accelerated pavement testing, field studies, laboratory, and long-term project performance of a Moisture Management Geosynthetic. We will look at how it can effectively manage moisture and enhance overall pavement durability, offering a promising approach to achieving resilient, long-lasting pavement foundations. The findings underscore the importance of integrating these considerations into pavement designs to optimize performance and extend service life.

4:00 - 4:50 PM

Ethics for Engineers

Jeff Mulliken, PhD, PE
Partner, Carolina TEA

Track 3

8:00 - 8:50 AM

Do The Right Thing - A Discussion on Engineering Ethics

Leanne Panduren, ROWE PSC

A review of the need for a Code of Ethics, some examples of when things were done correctly and incorrectly and discussion and review of several NSPE Board of Ethical Review case studies.

9:00 - 9:50 AM

Professional Burnout

Monica Wright, PsyD, Lind Psycology Associates

Engaging presentation on how to avoid burnout in high stress professions.

JUNE 5, 2026 FRIDAY

Track 3

10:00 - 10:50 AM

Ethics & AI

Jack Pringle, Nelson Mullins

If approved, he will review the Code of Law for Engineers and Surveyors and cater to the group. He usually makes this presentation to Lawyers, but is intersested in getting infront of other professions.

11:00 - 11:50 AM

South Carolina's Transmission Planning

Connor Hudson, Central Electric Cooperative Power

2:00 - 3:50 PM

Chains, Compasses and Conflict: Revolutionary Surveyors in South Carolina

Brian Bonds, Glenn Associates Surveying

4:00 - 4:50 PM

Using the PAD Framework to Improve Stakeholder Communication in Engineering Projects

Rachelle Beckner, Beckner Communications

Engineering professionals regularly communicate across disciplines—project teams, leadership, clients, regulators, and the public—yet many communication breakdowns stem from a simple issue: messages are created without clearly defining purpose, audience, and design.

This session introduces the PAD framework (Purpose, Audience, Design), a practical communication tool used in professional communication training but largely unfamiliar to engineering practitioners. Drawing on the presenter's experience working with engineers and advising technical and healthcare organizations, the session demonstrates how PAD helps professionals translate complex technical information into messages that are understood, actionable, and trusted. Through real-world examples and applied exercises, attendees will examine how unclear purpose, misidentified audiences, and poorly designed messages undermine collaboration and stakeholder alignment.

Participants will leave with a repeatable framework they can apply immediately to emails, reports, presentations, and project communications— without oversimplifying technical content. This session is designed for engineers, project managers, and firm leaders who want their expertise to be understood across disciplines and their projects to move forward with fewer communication barriers.

JUNE 5, 2026 FRIDAY

Track 4

8:00 - 8:50 AM

Hurricane Helene Emergency Response - Aerial Mapping for US-19 West in Western North Carolina

Paul Badr, GPI Geospatial, Inc.

In late September 2024, Hurricane Helene left more than a dozen Western North Carolina counties devastated by drastic rainfall, floods, and mudslides. Entire communities and the infrastructure that supports them were destroyed, significantly impacting locals and the relief efforts needed to assist them. At the request of NCDOT, GPI Geospatial provided emergency-response surveying and mapping services for 22 miles of US19 West, 60 days after Hurricane Helene. The scope of work required land surveying, aerial lidar, and photogrammetric mapping to support the engineering design for this significant roadway. This project's scale and time-sensitive nature required us to quickly assign and mobilize survey crews, flight crews, and production staff to meet the accelerated schedule. Roadways were damaged or destroyed in many areas, limiting access to viable control point locations, and area communication networks were down, preventing access to the NCGS Real-Time GNSS Network. We developed a solution to provide accurate GPS surveying for ground control points, and our flight team captured aerial lidar and imagery simultaneously to support design-grade surface modeling, orthophotography, and survey-grade mapping. This challenging project was completed and delivered on an expedited schedule to NCDOT and proved to be an effective solution for providing emergency response transportation for progressive design-build projects.

9:00 - 10:50 AM

From Conception to Inspection: "Principles of an Effective Pipe Design and Quality Pipe Installation"

Tiffany Ferrell, Rinker Materials

This presentation will provide principles for an effective pipe design and a quality pipe installation. We will discuss the basic steps in pipe design, including the structural design of RCP. The pipe installation section will be based on the SCDOT SC-M-714 standards. We will also cover both pre-installation inspection and post-installation inspection guidelines to use to confirm a quality installation was achieved

JUNE 5, 2026 FRIDAY

Track 4

11:00 - 11:50 AM

45 Years of Engineer Risk Management "Lessons Learned" in 45 Minutes

Kent Stair,
Copeland Stair Valz & Lovell

2:00 - 2:50 PM

The Town of Lincolnville's (Lincolnville) wastewater system

Jarred Jones, PE North Charleston Sewer District

The Town of Lincolnville's (Lincolnville) wastewater system was installed through a grant in the 1980s. The system was constructed at shallow depths and utilized cheap materials to minimize costs. Vacant parcels were bypassed and existing homeowners whose income was above a certain level were also excluded from service. Existing septic tanks continued to be used and many more were installed after the wastewater system construction. In the 1990s the North Charleston Sewer District (NCSD) assumed ownership of the wastewater collection system. Besides a few small gravity extensions funded, designed, and constructed by NCSD, the system has remained unchanged since the 1980s. At the end of 2023, Lincolnville's Mayor approached NCSD with a list of 22 residents on septic tanks who either had failing systems and/or wanted to connect to the centralized wastewater system. NCSD performed a desktop review and determined which properties were able to be connected immediately or with short sewer extensions. Mayor Dickerson coordinated with Charleston County and secured partial funding for several gravity sewer extensions and septic tank abandonments. NCSD and Ardurra secured an SRF loan to cover most of the costs for four gravity sewer extensions. The SRF funding eventually fell through, but one extension is moving forward with funding contributions from NCSD and Charleston County. NCSD is currently seeking alternate funding options to construct the other sewer extensions along with developing a master plan for the Town of Lincolnville.

3:00 - 3:50 PM

Site design considerations for segmental retaining walls

Matthew Fogleman, PE
ECS Southeast, LLC

JUNE 5, 2026 FRIDAY

Track 4

4:00 - 4:50 PM

"The Importance of Sediment Basins and Skimmers in Effective Stormwater Management"

Lynn Ramsey, RYMAR Waterworks

Sediment basin ponds and skimmers play an essential role in controlling erosion and protecting water quality on construction sites. Sediment basins capture stormwater runoff and allow soils, silt, and debris to settle out before the water leaves the site. This prevents sediment from entering nearby streams, lakes, and drainage systems, where it can cause flooding, clog infrastructure, and harm aquatic ecosystems. Skimmers improve the performance of sediment basins by releasing water from the surface rather than the bottom. Since cleaner water naturally rises to the top, skimmers ensure that the basin slowly discharges the cleanest water first while keeping more sediment trapped inside. This controlled, low-flow release also reduces downstream erosion.

Track 5

8:00 - 8:50 AM

SLAM Technology

Chuck Drouillard, Mike Withers, Duncan-Parnell

SLAM (Simultaneous Localization and Mapping) is a technology that enables autonomous vehicles and robots to build a map of their environment while simultaneously tracking their location within that map. This technology addresses the "chicken or egg" problem by allowing devices to navigate unknown environments without relying on external positioning systems like GPS. Key components of SLAM include: Sensor Fusion: Combining data from various sensors such as cameras, LiDAR, and inertial measurement units (IMUs) to create a comprehensive view of the environment. Algorithms: Utilizing algorithms like Kalman f ilters and particle filters to estimate the robot's position and update the map continuously. Applications: SLAM is widely used in fields such as robotics, autonomous navigation, drone mapping, and even in consumer products like home robots. Overall, SLAM technology has revolutionized how we navigate and map complex environments, enhancing the capabilities of autonomous systems across various industries.

JUNE 5, 2026 FRIDAY

Track 5

9:00 - 9:50 AM

Achieving Collaboration in the Field with OnStation

Ward Zerbe, OnStation

As digital demands in the field increase and the challenges of staffing continue, being able to save time and expense while gathering accurate data is paramount. It is imperative to capture a variety of data-related activities, including contract/payment information, punch lists, paving data, and testing data. What is common to all these needs is the importance of knowing the location and capturing geo-tagged data. OnStation allows everyone on the project to share data effectively and have a common understanding with indisputable documentation. Having this level of collaboration between the owner, consultants, and contractors has proven to achieve a new level of partnering that makes the project go more smoothly while ensuring everyone can be on the same page as to activities on the job.

10:00 - 10:50 AM

Entry-level Engineer Skills

Jonathan Thrasher, S&ME

What skills do entry-level engineers really need to be successful besides technical aptitude? What business skills and so-called 'soft skills' are early-career professionals missing? We may agree on some of the specific skills and qualities, so perhaps a more important question is, how do we develop those skills? In this panel discussion, leaders in the industry will discuss how engineers can start off their careers well and how those of us in leadership positions can foster the development of professionals, guiding them and mentoring them to help advance their careers, the success of our firms, and the engineering profession as a whole.

11:00 - 11:50 AM

Revenue at Risk - P3

Ed Crooks, HNTB Corporation

2:00 - 2:50 PM

The New IEEE Standard for Digital Transformation

Lee Stogner, Vincula Group

This presentation details the new IEEE Standard for Digital Transformation, P2023. Attendees will understand how the Standard can promote design and implementation of Digital Transformation projects.

JUNE 5, 2026 FRIDAY

Track 5

3:00 - 3:50 PM

City of Georgetown: ROWE Projects update and status

Ryan Harvey, PE
ROWE PSC

4:00 - 4:50 PM

Staying Ahead of the Curve: Enforcement Changes and the New Prevention Act

LaDonna Trapp, SC811

JUNE 6, 2026 SATURDAY

8:00 - 8:50 AM

AI Tools for Infrastructure Challenges: What Today's PEs Should Know

James Wanliss, Anderson University

Artificial intelligence is rapidly transforming how engineers approach infrastructure design, monitoring, and maintenance—yet many practicing professional engineers remain uncertain about what AI can realistically accomplish, where it falls short, and how to integrate these tools responsibly into their workflows. This presentation provides a practical overview of AI applications currently reshaping infrastructure engineering, with particular attention to structural health monitoring, climate resilience modeling, project optimization, and regulatory compliance automation. Rather than focusing on theoretical possibilities, this talk examines real-world use cases where AI tools are already delivering measurable value, while candidly addressing their limitations and the critical role of engineering judgment in validating AI-generated outputs. Attendees will learn how to evaluate AI vendor claims, identify appropriate applications within their own practice areas, and understand the validation strategies necessary to maintain professional responsibility when using AI-assisted analysis. The presentation also explores workforce implications: as AI tools become standard in engineering practice, what competencies will the next generation of engineers need? Anderson University's new engineering program, launched with potential for an integrated AI minor and the innovative AI 207 course ("AI Engineering Solutions for the Good of Neighbors"), represents one model for preparing graduates who combine solid engineering fundamentals with practical AI literacy. Students learn to apply AI tools to communityfocused infrastructure challenges while developing the critical thinking skills to assess when AI enhances—and when it undermines—sound engineering practice.

JUNE 6, 2026 SATURDAY

9:00 - 9:50 AM

Defend Your Client Data Fortress

William Dickinson, Mayflower Technologies

10:00 - 10:50 AM

Swarm Intelligence for Engineering Optimization: Practical Decision-Making Beyond Prediction

Frederick Gertz, Collide Technology

Engineering projects often involve complex decision-making under constraints: limited resources, shifting schedules, uncertain demand, equipment availability, routing conflicts, labor constraints, and competing performance goals. While deep learning has become a powerful tool for prediction and pattern recognition, many engineering challenges are not primarily prediction problems.

11:00 - 11:50 AM

Staying Ahead of the Curve: Enforcement Changes and the New Prevention Act

LaDonna Trapp, SC811

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