



2023 FES | ACEC Florida ANNUAL CONFERENCE

Thursday, July 27th

Port Infrastructure Adaptation for World's Largest Mobile Boat Hoist *(ACEC Florida Track)*

Jon Cunningham, PE – *Cummins Cederberg, Inc.*

Derecktor Ft. Pierce envisioned plans for adapting an underutilized Port to a shipyard, including expanding infrastructure to accommodate the world's largest mobile boat hoist for the ever-increasing yachts in Florida. The design of the haul-out basin and associated deep foundations within the existing facility allowed Derecktor Ft. Pierce to be home to one of the world's largest mobile boat hoists with a maximum capacity of 1500 US-short-tons. **1 PDH**

Hurricane Ian Sanibel Island Access *(FES Track)*

Kati Sherrard, PE, CPM – *FDOT* | **Katherine Brittian, PE** – *RS&H* | **Jason LaBarbera, PE** – *Kisinger Campo & Associates*

The presentation includes details related to the emergency repairs and challenges faced during construction of the temporary roadway. Design Project Managers working on the project provide an overview of the Hurricane Ian data and design recommendations for permanent repairs regarding resiliency, aesthetics, and functionality of the Sanibel Causeway. The repair plan entails building the roadway to standards and specifications, constructing permanent bridge approaches, and restoring drainage, lighting, pavement markings, as well as providing access for utility service along the causeway islands.

1 PDH

Becoming a Professional Engineer *(FEE Track)*

Steve Kowkabany, PE – *Neptune Fire Protection Engineering*

How does one become a licensed Professional Engineer in Florida? Steve Kowkabany, PE, highlights the benefits of becoming a PE, and discusses the steps — education, exams, and experience — required to earn a PE license in Florida, how to maintain your PE license, and mobility of licensure between states. **0 PDH**

10:30am – 11:30am

	<p>JTA – Ultimate Urban Circulator – Project Update <i>(ACEC Florida Track)</i> Acey Roberts, PE – WGI Angie Williams - JTA Joint presentation with Jacksonville Transit Authority to provide project update on the 10 mile “U2C” project in downtown Jacksonville. This is the largest AV project in America currently under design and has multiple phases of work including, mixed-traffic at-grade transit shuttles, elevated shuttle path structures that modify existing monorail systems and off-shoot phases for neighborhoods, commercial and medical districts. <u>1 PDH</u></p> <p>Coastal Infrastructure Sensitivity to Extreme Events & Design Implication <i>(FES Track)</i> Leonard Barrera Allen, PE, CFM, ENV SP, WEDG – Cummins Cederberg, Inc. This presentation will discuss coastal engineering analyses conducted to evaluate the sensitivity of coastal infrastructure to extreme events and discuss potential design considerations to improve coastal infrastructure performance under extreme events. Numerical model simulations of storm surge and storm waves associated with varying tropical cyclone approach angles were conducted to determine the envelope of coastal forcing at a selected site. <u>1 PDH</u></p> <p>Why Should Students Study Engineering Ethics <i>(FEE Track)</i> Jeff Greenfield, Ph.D., P.E. F. NSPE – Broward County Water & Wastewater Services This presentation will discuss the meaning of ethics and why students should study ethics. Also presented will be notable engineering disasters from 1937 to the present. Examples of engineering codes of ethics will be presented. The most influential western theories of morality will be presented along with methods to solve engineering ethical situations. A list of common unethical practices will be included as well as emerging challenges. <u>0 PDH</u></p>
<p>1:30pm – 2:30pm</p>	<p>Rigid Pavement Rehabilitation <i>(ACEC Florida Track)</i> Sunil Jakhadi, PE Alexander Wilson – Kisinger, Campo & Associates Presentation Outline: Identify the Rehab Limits; Survey: Traditional Survey – LAMP / LIDAR (Existing Joint Layout) & High-Resolution Images - LCMS 2 (2 mm resolution preferred)/Drone Survey (if necessary); Images & Database Organization (GIS); Initial Review (followed by QC); Final Inspection and Rehabilitation (followed by QC); GIS Database Management; Run Queries (to ensure standard rehab dimensions are met); Alternative Rehab Techniques <u>1 PDH</u></p>
<p>2:45pm – 3:45pm</p>	

Agua Viva Serves – Providing Clean Water to the Underserved *(FES Track)*

Rick Baldocchi, PE, FACEC – AVCON, Inc.

The Presentation will show how Agua Viva Serves has designed and constructed water systems in remote areas with no support services. It will outline the technical process from drilling a well, installing a water tower, installing pipes and services to the dirt floor homes in the communities we serve. **1 PDH**

Career Fair *(FEE Track)*

Please join us for the first annual FES Career Fair. The future of our profession comes to the FES conference every year hungry to get started in our profession. This recruitment opportunity is in the style of speed/mini-interviews that last around 5 minutes each. Enough time for an introduction, collect their CV and for them to answer a few short questions on skills and interest that you can have for the students. **0 PDH**

FDOT Model-centric Design and Plans Productions *(ACEC Florida Track)*

Vern Danforth, PE – FDOT

To provide updates on FDOT and industry topics including: CADD Modeling Standards; NexGen Plans Development; FDOT Design Manual 900 Series; BIM and Digital Delivery; 3D CEI; Digital As-builts. **1 PDH**

Hood Road Avenue Project LCM Sensor Data Analysis and Design Verification *(FES Track)*

Aneesh Goly, PE – Smart Structures | **Maroun Azzi, PE** – Palm Beach County

EDC technology provides life cycle monitoring of deep foundations behavior. The sensor-measured loads transferred to the tip in real-time are compared with design values. The results assure stakeholders about integrity of structures before and after extreme events. Engineers can quickly plan remedial actions for rehabilitation of structures and people. Smart Structures presents the Hood Road Avenue project in addition to earlier 136 Av. Project. **1 PDH**

Student Presentations & Competition *(FEE Track)* **0 PDH**

Most Active Student Chapter Presentations

The most active Alpha/Beta and Delta Student Chapters will present their student activities and lesson learned from the past year. The students will also discuss their goals for the next year.

4:15pm – 5:15pm

Friday, July 28th

Innovations in Lidar Mapping for Transportation

Infrastructure (ACEC Florida Track)

Mark Topping – *WGI Geospatial*

WGI is one of only a few firms in the world to possess an airborne lidar sensor specifically designed to collect high-density, engineering-grade data from a fixed-wing aircraft rather than a helicopter or UAS. This presentation will examine the sensor as it applies to mapping and maintaining US transportation infrastructure. It will be compared to other WGI sensor platforms such as mobile lidar using a common interstate test site in Alabama. **1 PDH**

8:30am – 9:30am

PeopleMap – A Refresher and Real-World Applications in an AE Firm (FES Track)

Dr. Jillian Heilman, PhD, CRC – *Lilliheil Consulting* | **Michael DelCharco, PE** – *Taylor Engineering, Inc.*

People Map has helped hundreds of engineers gain an insight into their personality type - Leader, People, Free Spirit, or Task. This insight has helped them grow professionally and personally. Each Florida Engineering Leadership Institute (FELI) class spends considerable time learning to apply these timeless principles. Come join Dr. Heilman and Mr. DelCharco as they serve up a refresher course on the People Map way. **0 PDH**

Multi-Plant SCADA System Resiliency (ACEC Florida Track)

Mike Stoup, PE | **Eric Brown** – *McKim & Creed* | **Dave Watson** – *Charlotte County*
Florida's water and wastewater industry serves a continuously increasing population, necessitating the need for stable and resilient SCADA systems. Pair the region's growth with the constant threat and likelihood of severe weather conditions and the design and implementation of a facility's SCADA systems takes on a new level of importance. Effective monitoring and control of systems both locally and through remote access is critical. **1 PDH**

10:00am – 11:00am

How to Significantly Improve Your Elevator Speech (FES Track)

Chuck Roberts – *Performance Management Group, Inc.*

First impressions are powerful and lasting, and when networking with prospective clients, the quality of your elevator speech can make the difference between whether a prospect becomes a client, or not. In this session, you'll learn how to make a positive impression and in less than 30 seconds significantly increase your likelihood of establishing a lasting business relationship with the other party. **1 PDH**

<p>10:30 am – 11:30 am</p>	<p>Legislative Program <i>(ACEC Florida)</i></p> <p>This 1-hr program will include a recap of the 2023 Legislative Session, brief presentation regarding the legislative process and how you can support advocacy through FES ACEC Florida, and a preview of the 2023 Legislative Session including key focus areas. <u>0 PDH</u></p>
<p>1:30pm – 2:30pm</p>	<p>Raising Resiliency of Florida’s Transportation System <i>(ACEC Florida Track)</i></p> <p>Jeff Bowen, PE Clint Smith, PE, CFM Kurt Bialobreski, PE, PTOE – Hanson, Inc.</p> <p>During hurricanes Ian and Nicole, Florida suffered from substantial damage caused by a warmer climate and wetter hurricanes. Florida suffered from tremendous damage to beaches, coastlines and interior areas caused by flooding, beach erosion and increased water levels. Resiliency takes multiple forms and to prepare for future storms and potential sea level rise, Florida must take steps to make our roads and infrastructure resilient and future ready. <u>1 PDH</u></p> <hr/> <p>An Engineer’s Defense Clinic/Contract Management <i>(FES Track)</i></p> <p>Michael Corso – Henderson, Franklin, Starnes & Holt, P.A.</p> <p>To provide engineers with information on their contact with legal system, including claims and the process of civil claims and also contract considerations. Topics Include: The Legal System; who can be sued, Statute of Limitations and of Repose; Tort and Contract Law Elements; Determination of Negligence and Liability; Standard of Care; Expert Witness Testimony; Depositions; Mediation; Insurance Considerations; Case Studies; Contract Management. <u>1 PDH</u></p> <hr/> <p>Peer Review of the NIST Report on the Free Fall of WTC Building 7 <i>(Project Track)</i></p> <p>Jeffrey Bishop, BSCE, PE – Nomos Engineering</p> <p>Over 3600 Architects and Engineers challenge the NIST conclusion that fire caused WTC building 7 to collapse, free fall into its own footprint, in 7 seconds The NIST Report "calls for stronger codes and standards" however; no structural codes or standards have been changed. The U of Alaska's study showed fire did not cause the collapse of building 7. <u>1 PDH</u></p>

	<p>Leveraging Pump Station Data for I&I Prioritization <i>(ACEC Florida Track)</i> Carlos Espinosa, PE Allyson Mauck – McKim & Creed Many public utilities have conducted flow monitoring activities to determine the severity of I&I impacting their collection systems. Flow monitoring, however, becomes challenging for systems in coastal areas with numerous lift stations. The alternative to flow monitoring is to analyze pump station data which determines how weather impacts the lift stations by comparing daily flows during wet and dry days. <u>1 PDH</u></p>
<p>2:45pm – 3:45pm</p>	<p>Lithium and the War Over Electric Vehicle Domestic Battery Production <i>(FES Track)</i> Nicholas Albergo, PE, DEE, D.WRE, F.ASCE, EWRI – GHD Services, Inc. Lithium is essential for the world’s energy transition. EPA, Administration attempts to ween from foreign dependence and industry concerns regarding environmental, social, and governance costs of acquiring essential electric vehicle materials hang in the balance. The Biden Administration desires to transition the transportation sector to electric vehicles powered by domestic lithium batteries, but China is dominant in the battery supply chain. <u>1 PDH</u></p>
	<p>How Emerging and Disruptive Technologies are Changing the Future of Mobility and Aviation in Florida <i>(Project Track)</i> Kevin Thibault, PE, GOAA CEO – Greater Orlando Aviation Authority Maurice Jenkins, IAP, CM, MDAD – Miami Airport Nina MacPherson, A.A.E., IACE – Broward County L.K. Nandam - FDOT The Aviation industry is experiencing a groundbreaking change with the waves of technological advancements. The Transformation with eclectic ideas is creating wonders in the airport premises and surprising the passengers traveling to their destinations. As such, Airport Owners must upgrade their infrastructure to be future ready so the demands of the airline industry that continues to be challenging and competitive can be met. <u>1 PDH</u></p>
<p>4:15pm – 5:15pm</p>	<p>Design & Construction Practices Incorporating Long-term Maintenance <i>(ACEC Florida Track)</i> Mohamad Hussein, PE – GRL Engineers, Inc. Donald Budnovich, PE – Central Florida Expressway Authority Eugenio Ochoa, PE, VP – BCC Engineering Keith Waugh, VP – Leware Construction Company John Matthews – FDI Services A successful design is typically based on innovative concepts, sound engineering, economical solutions, and efficient construction. Later inspections, maintenance, and repairs are essential for the viable long-term facility management and serviceability of engineering works, and the recent catastrophic failures highlight their importance to assure the continued safety of structures. An important and timely topic for a qualified panel discussion. <u>1 PDH</u></p>

Innovative | Resilient Bridge Rehabilitation Program *(FES Track)*

Ralph Verrastro, PE | Rolando Corsa, PE – *KCI Technologies, Inc.*

This prestation describes a bridge rehabilitation project that incorporated an innovative and resilient design approach using Fiber Reinforced Polymer (FRP) composite tub girders for the replacement of deteriorated prestressed concrete slab beams. The speakers served as the lead engineers for this project providing bridge inspection, evaluation, rehabilitation design and CEI services related to the Sun Island Association community's exit bridge.

1 PDH

Pavement Forensic Evaluation & Full Depth Reclamation Rehab Strategy *(Project Track)*

Rami Chkaiban, PhD | Vladimir Mitchev - *S&ME, Inc.*

You can increase the decision-making value of your reports, strengthen your reputation as a technical expert, and achieve desired outcomes a higher percentage of the time with the practical techniques presented in this 1.5 PDH session. These techniques will help you increase reader receptivity, comprehension, and response to your recommendations, and provide the strong support needed to justify the decisions the client must make. **1 PDH**

Saturday, July 29th

Laws, Rules & Professional Ethics

Edwin Bayo

Licensees are required to obtain one (1) hour of continuing education focusing on Florida's professional engineering laws (F.S. 471) and rules (F.A.C. 61G15). Licensees are required to obtain one (1) hour of continuing education focusing on ethics for professional engineers. These courses are expected to cover the basic engineering canons. **2 PDHs**

8:30am – 10:30am