



**Thursday, April 6, 2023**

<b>8:45am – 9:45am</b>	<p><b>Performance Evaluation of Flooded Pavement Infrastructure with Use of a Falling Weight Deflectometer</b></p> <p><b>Dr. Geoffrey Rowe, PE, CEng, PhD – President, Abatech, Inc.   Christopher De la Cruz, EIT - Ardaman</b></p> <p>The performance of pavement infrastructure depends on a sound foundation upon which the pavement rests. The stiffness provided by certain granular and bound bases can vary considerably with water intrusion, which can also result in localized washout of base materials and be more prevalent around structures, culverts, pipes, bridges, etc. Methods exist for rapid testing of pavements to assess the foundation issues in terms of stiffness of support. Stiffness is generally related to the outer geophones of an FWD, and voids can be detected via deflection versus stress level analysis. The use of the FWD deflection data combined with information from GPS information enables risk assessment.</p> <p><b><u>1 PDH</u></b></p>
<b>10:00am – 11:00am</b>	<p><b>Structural Integrity Assessment Methods of Deep Foundation</b></p> <p><b>Mohamad Hussein, PE – Vice President, GRL Engineers, Inc.</b></p> <p>Driven piles, auger-cast piles, and drilled shafts are typically utilized as deep foundations. They derive their support from geotechnical resistance and structural strength. This presentation discusses methods (e.g., various tests, extraction, coring) for structural integrity assessments. Basic principles, capabilities, limitations, and application of commonly used test methods are presented and illustrated with data from actual projects where damage was confirmed by concrete and steel-driven piles and auger-cast pile extractions or by coring of shafts. High-strain, low-strain, cross-hole sonic logging, and thermal integrity profiling testing methods are discussed and demonstrated.</p> <p><b><u>1 PDH</u></b></p>



<p><b>1:45pm – 2:45pm</b></p>	<p><b>Lees Approach to Applied Mechanical Stabilization (LAAMS) for Unpaved Roads</b></p> <p><b>David Fuqua, PE</b> – Area Engineer, <i>Tensar Corporation</i></p> <p>Over the last 5 decades, various methodologies have been employed for the design of mechanically stabilized unpaved roads. The currently accepted design methodology for unpaved roads, the Giroud-Han methodology, was adopted by the FHWA in 2008. This design methodology utilizes a limit equilibrium bearing capacity analysis procedure. As an improvement to the Giroud-Han method, the Lees Approach to Applied Mechanical Stabilization (aka LAAMS method) has recently been introduced. The new design methodology addresses deficiencies in existing design methods and is based on more rigorous geotechnical information.</p> <p><b><u>1 PDH</u></b></p>
<p><b>3:00pm – 4:00pm</b></p>	<p><b>Engineering Evaluation Tools to Determine “What Caused the Cracks”</b></p> <p><b>Kurt Heinrichs, PE</b> – Manager Forensic Engineering Services, <i>NOVA Engineering and Environmental LLC</i></p> <p>Attendees will learn about the approach to forensic failure analysis and how the implementation of technology tools, testing, and methods provides key data that will assist in determining the root cause of the failure. Attendees will review the capabilities of the tools and case studies using Ground Penetrating Radar, Ultrasonic Pulse Velocity, Impact Echo, Bond Testing, Adhesive Anchor and Safety Tie Back Testing, Core Sampling, Electronic Leak Detection, Water Infiltration Testing, Infrared, and Nuclear Surveys, Wind Uplift, Relative Humidity, Moisture Content Testing, to assist in the determination of the failures root cause and in the development of the repair plan.</p> <p><b><u>1 PDH</u></b></p>



## Friday, April 7, 2023

<b>8:30am – 9:30am</b>	<p><b>GRIP Update &amp; Progress on MWD For Site Investigation Drilling</b></p> <p><b>David Horhota, Ph.D., PE – FDOT (D7)</b></p> <p>An update of the Florida Department of Transportation’s (FDOTs) geotechnical research program will be provided. A summary of current and recently completed projects will be covered. In addition, references will be made to the FDOT’s annual Geotechnical Research in Progress (GRIP) meeting in which projects discussed in this presentation will be presented by the researchers in much greater detail. Also, an expanded update will be provided on the current project underway utilizing Measuring While Drilling (MWD) techniques for rotary drilling used for traditional geotechnical site investigations, to allow for more information to be collected from a typical soil boring regarding soil/rock characteristics and a more defined stratification of soil/rock profiles.</p> <p><b><u>1 PDH</u></b></p> <p><b>Sanibel Causeway Bridge Failure during Hurricane Ian and Response</b></p> <p><b>Kisan Patel, PE – District Geotechnical Materials Engineer, FDOT (D1)</b></p> <p>This presentation will provide Hurricane Ian facts and how the hurricane impacted Sanibel Causeway. Areas of failures and theories for modes of failure will focus on bridge approaches, MSE walls, seawalls, and islands. The presentation will also discuss the Department’s response to temporarily fix the causeway to gain access Sanibel Island.</p> <p><b><u>1 PDH</u></b></p>
<b>9:45am – 11:45am</b>	<p><b>FDOT Geotechnical &amp; District Engineering Panel</b></p> <p><b><u>Panelists:</u> FDOT District Panel</b></p> <p>This session will consist of a Panel of Geotechnical Engineers from the FDOT Central Office, State Materials Office, Construction Office, and District Materials Offices, and will provide an FDOT perspective on several geotechnical issues requested for discussion by the GMEC membership.</p> <p><b><u>2 PDHs</u></b></p>



**2023 GMEC  
Conference**

April 5-7, 2023  
Rosen Plaza Orlando

*Emergency Response*