

Welcome to Monthly Webinar on Accelerated Bridge Construction

East 138th Street Bridge Replacement Project: A Marriage of ABC and Digital Delivery at NYSDOT

Sponsored by

*Accelerated Bridge Construction University Transportation Center
(ABC-UTC) at Florida International University*



Website: abc-utc.fiu.edu

Email: abc@fiu.edu

November 17, 2022 – 1:00 p.m. to 2:15 p.m. Eastern



Today's Monthly Webinar



ABC Announcements (10 minutes)

Featured Presentation (35 minutes)

East 138th Street Bridge Replacement Project: A Marriage of ABC and Digital Delivery at NYSDOT

by

James H. Flynn, P.E., Director, Office of Structures, New York State DOT;
Brenda Crudele, P.E., Director, Structures Design Bureau and Structures
Specialty Engineering Bureau, NYSDOT; and **Julianne M. Fuda, P.E.**, Assistant
Director, Structures Design Bureau, NYSDOT

Question and Answer (15+ minutes)

Please post your questions in the question box

2022 International Accelerated Bridge Construction Conference
December 7-9, 2022, Miami FL

**Through funds generated by Travel Scholarships
and DOTs using their own resources, more than
120 State DOT professionals have already
registered to attend the conference**

Travel Scholarship includes: 4 nights at Hyatt Regency Hotel, registration to attend 2-day conference, & registration to attend pre-conference workshops

**Thanks are extended to
Travel Scholarship & Other Sponsors!**





2022 International Accelerated Bridge Construction Conference

Fully In-Person Conference

December 7-9, 2022, Miami FL

Continuing Education Credit

- Conference and Workshop attendees will receive Certificates of Attendance
- FIU is an official sponsor of continuing education in Florida (FBPE) and New York State (NYS)

Pre-Conference Workshops

December 7, 2022

8:00 a.m. – 12:00 p.m. Eastern

1 – Steel Bridge Design Workshop

2 – FRP Composites Bridge Design Workshop

1:00 – 5:00 p.m. Eastern

3 – Prestressed Concrete Bridge Design Workshop

4 – Non-Proprietary UHPC Workshop

For details, see: <https://abc-utc.fiu.edu/workshops/>

The background of the slide is a photograph of a city skyline, likely San Francisco, viewed from across a body of water. The sky is blue with some light clouds, and the water is a light blue-green color. The buildings are tall and modern, with some having distinctive architectural features.

Workshop #4: Non-Proprietary ABC-UTC UHPC Workshop

Workshop Objectives

The objective of this workshop is to familiarize the attendees with history of development of Non-Proprietary ABC-UHPC mix, its background, where it started and how it could be utilized in the field, as well as its comparison with other Non-Proprietary UHPC mixes available.

The workshop will be taught by researchers affiliated with the ABC-UTC, but tailored to be useful for a broad audience. The workshop material is developed for state DOT officials, bridge design engineers, and contractors who would like to have an introduction to the possibilities available for non-proprietary UHPC, as well as those who wish to have a deeper understanding of how to develop a mix design, use UHPC in structural design, or apply non-proprietary UHPC in projects in the field. Finally, the workshop is aimed at providing the attendees with the state of the art in UHPC applications for ABC and non-proprietary UHPC research from across the United States.

Non-Proprietary ABC-UTC UHPC Workshop

- 1. History and Background for Development of Non-Proprietary ABC-UTC UHPC Mix (Atorod Azizinamini, Ph.D., P.E. – *10 Minutes*)**
- 2. Introduction and Mix Development (Royce Floyd, Ph.D., P.E. - *30 minutes*)**

This portion of the workshop will provide an introduction to UHPC and description of mix design development using the ABC-UTC mix design as an example. This discussion will include considerations for constituent material selection and mix proportioning methods.
- 3. Mixing, Placement, and Curing (David Garber, Ph.D., P.E - *30 minutes*)**

Requirements for mixers used to mix UHPC, mixing methods, placement methods and considerations, and curing methods and effects will be discussed.
- 4. Material Properties (Royce Floyd, Ph.D., P.E. - *45 minutes*)**

Material and durability properties of the non-proprietary UHPC mixes examined by ABC-UTC researchers will be discussed. This will include compressive strength, flexural strength, modulus of elasticity, creep, shrinkage, bond behavior with reinforcement and concrete, freeze-thaw, and corrosion behavior, and will include effects of changing fiber type and content.

5. Considerations for Local Materials (David Garber, Ph.D., P.E. - 30 minutes)

The experience of ABC-UTC researchers examining the same non-proprietary mix design at different locations and with different constituent materials will be discussed. This discussion will include considerations for modifying the mix design for local conditions and lessons learned.

6. Applications for ABC (Mohamed Moustafa, Ph.D., P.E. - 30 minutes)

Proven and potential structural applications of non-proprietary UHPC will be discussed. This will include results of laboratory testing on connections and repairs, field implementations, and potential issues related to implementation of non-proprietary UHPC.

7. Testing Methods and Quality Control (Royce Floyd, Ph.D., P.E. - 20 minutes)

Methods used for material property and quality control testing will be discussed in the context of modifications to standard methods required for UHPC.

8. Summary of UHPC Work Across the Country (30 minutes)

A summary of research sponsored by various state DOTs and federal agencies on non-proprietary UHPC will be provided. This will include example mix designs and research results from the literature and known implementation projects using non-proprietary UHPC.



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Opportunities To Exhibit

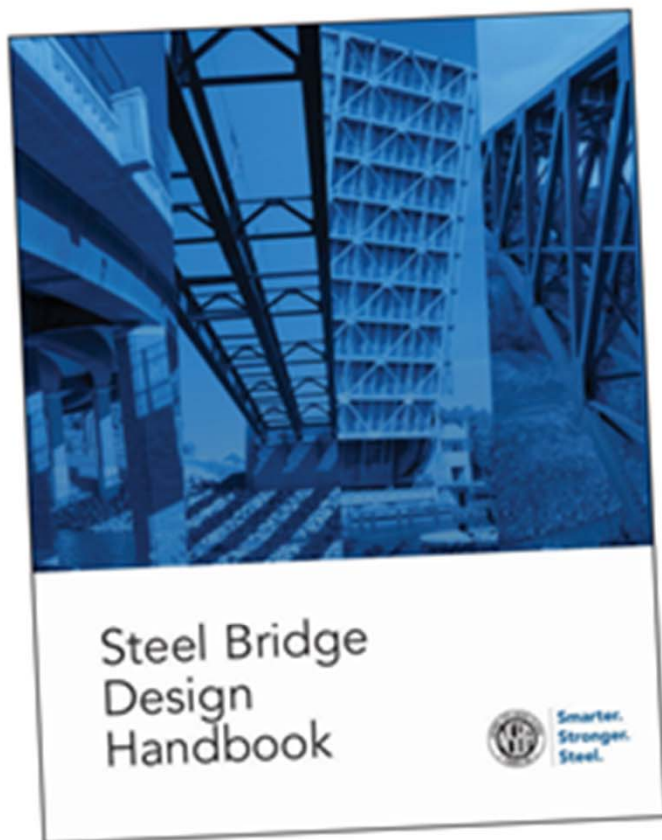
<https://abc-utc.fiu.edu/conference/exhibitors/>





**Hope to see you in person
in December in Miami, FL**

**Visit <https://abc-utc.fiu.edu/conference/>
for detailed information and to register**



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Stronger.
Steel.

Upcoming Events

PTI Chicago Certification Week

Level 1 and Level 2 Multistrand and Grouted Post-Tensioning Specialist certification training

February 15-17, 2023

Hyatt Regency Schaumburg, Chicago, IL

For more information: <https://www.post-tensioning.org/>

Upcoming Events

PCI Convention at The Precast Show

February 21-25, 2023

Hyatt Regency & Convention Center
Columbus, OH

For more information: <https://www.pci.org/convention>

PTI Convention

April 28-May 4, 2023

JW Marriott Marquis Miami
Miami, FL

For more information: <https://www.post-tensioning.org/>

ABC-UTC 2022 In-Depth Web Training Archives

Non-Proprietary Ultra-High Performance Concrete (UHPC)

<https://abc-utc.fiu.edu/webinars/in-depth-web-training-archive/>

Module	Presenters	Presentation Titles
1	Royce Floyd, Ph.D., P.E. University of Oklahoma	Non-Proprietary / Open-Source Mix Design
2	David Garber, Ph.D., P.E. Florida International University	Material Properties
3	Kingsley Lau, Ph.D. Florida International University	Corrosion Durability
4	John Stanton, Ph.D., P.E. University of Washington	Impact of Non-Proprietary UHPC Properties on Structural Design
5	Atorod Azizinamini, Ph.D., P.E. Florida International University	UHPC Based ABC Solutions
6	Benjamin Graybeal, Ph.D., P.E. Federal Highway Administration	The Next Hurdle for UHPC – Structural Design Guidance and Specification Development

Next Monthly Webinar

Thursday, December 15, 2022 – 1:00-2:15 p.m. Eastern

Featured Presentation

UHPC Connections for Accelerated Restoration of Live Load Continuity – Oklahoma's U.S. 183/412 Bridge over Wolf Creek

by

Walter (Walt) Peters, P.E., Assistant Bridge Engineer–Maintenance,
Oklahoma Department of Transportation; **Royce W. Floyd, Ph.D., P.E., S.E.**,
Associate Professor, University of Oklahoma; and **Trevor J. Looney, Ph.D., P.E.**,
Research Civil Engineer, U.S. Army Corps of Engineers

Mark your Calendars!

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