

**Welcome to the Quarterly Research Seminar on  
Innovative Bridge Technologies / Accelerated Bridge Construction**

**Comprehensive Decision Support Tool for ABC  
Considering Safety, Social Equity,  
and Environmental Justice**

Sponsored by

*Innovative Bridge Technologies / Accelerated Bridge Construction - University Transportation Center  
(IBT/ABC-UTC) at Florida International University*



**Website: [abc-utc.fiu.edu](http://abc-utc.fiu.edu)**

**Email: [abc@fiu.edu](mailto:abc@fiu.edu)**

**July 26, 2024 – 1:00 p.m. to 2:15 p.m. Eastern**



# Today's Quarterly Research Seminar



**IBT/ABC Announcements**

(5 minutes)

**Featured Presentation**

(35-40 minutes)

## **Comprehensive Decision Support Tool for ABC Considering Safety, Social Equity, and Environmental Justice**

by

**Ali Ebrahimian, Ph.D.**, Assistant Professor, Principle Investigator; **Nasim Mohamadiazar, MS**,  
Graduate Student; **ABC-UTC at Florida International University**

**Question and Answer Session**

(15+ minutes)

**Please post your questions in the question box**



# **2024 World Bridge Engineering Conference**

**Hilton Hotel, December 11, 12 and 13, 2024, Miami FL**

**Registration early bird rate ends  
August 23, 2024**

**Register Today**

**Use link below to register today**

**<https://abc-utc.fiu.edu/registration/>**

# 2024 World Bridge Engineering Conference

## CONFERENCE CO-SPONSORS

### Federal Highway Administration and 33 State Departments of Transportation

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- Washington
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- Wyoming





# 2024 World Bridge Engineering Conference

Hilton Hotel, December 11, 12 and 13, 2024, Miami FL

Use link below to see Conference Program

[https://abc-  
utc.fiu.edu/conference/program/](https://abc-utc.fiu.edu/conference/program/)

(see the next three slides for conference program)

# Conference Program

Session Topic	Accelerated Bridge Construction	Innovative Bridge Concepts	Advances in Bridge Design	Best Practices in Bridge Preservation	UHPC Applications in Bridge Engineering	Upgrade and Rehabilitation of Existing Bridges
Number of 30-Minute Long Technical Presentations	27	19	12	7	12	8
Session Topic	Structural Health Monitoring	AI and Digital Twins	Bridge Asset Management Systems	Bridge Engineering from Military Perspective and UHPC-Based Solutions	DOT Experiences	Case Studies
Number of Technical Presentations	12	8	7	8	8	7

- Nine Keynote talks
- *140, thirty minutes long Technical Presentations*
- Free Workshop- Shotcrete with UHPC



# Keynote Speakers



**Michael Knott, P.E.**  
Senior Vice President  
Emeritus, with  
Moffatt & Nichol

PRESENTATION TITLE:  
*What Bridge Designers Should Know  
About Ships Colliding with Bridges  
and How to Prevent Collapse*



**Changsu Shim, Ph.D.**  
Professor, Chung-Ang  
University,  
South Korea

PRESENTATION TITLE:  
*Digitalized Highway Bridge  
Construction Using Smart  
Technologies in Korea*



**Eugen Brühwiler,  
Prof. em. Ph.D., P.E.**  
Swiss Federal Institute  
of Technology (EPFL)  
Lausanne, Switzerland

PRESENTATION TITLE:  
*Current Developments in Europe in  
Rescuing Existing Bridges with UHPC*



**Atorod Azizinamini, Ph.D.,  
P.E., Professor**

Director, Infrastructure  
Research and Innovation, FIU  
PRESENTATION TITLE:  
*3D Printing with Concrete*



**Mark A. Finlayson,  
Ph.D., Professor**

Computing and  
Information Science, FIU  
PRESENTATION TITLE:  
*What is Artificial  
Intelligence, and Why Should  
Bridge Engineers Care?*



**Benjamin A. Graybeal,  
Ph.D, P.E.**

U.S. Federal Highway  
Administration  
PRESENTATION TITLE:  
*Solutions that Move  
the Needle*



**John R. Hillman, P.E., S.E.**

Structural Engineering  
Director, Kiewit Engineering  
Group, Inc  
PRESENTATION TITLE:  
*Circular Evolution of Bridge  
Project Delivery*



**Frank Jalinoos**

Coating and Corrosion  
Laboratory, (FHWA)  
Turner-Fairbanks Highway  
Research Center  
PRESENTATION TITLE:  
*Foundation Reuse in ABC Projects*



**Danielle Whitlow, Ph.D, P.E.**

U.S. Army Engineer Research and  
Development Center (ERDC)  
PRESENTATION TITLE:  
*Adapt and Overcome: The  
Challenges to Military Engineering*

# 2024 World Bridge Engineering Conference

Hilton Hotel, December 11, 12 and 13, 2024, Miami FL

Wednesday Evening- Reception and Entertainment





# 2024 World Bridge Engineering Conference

Hilton Hotel, December 11, 12 and 13, 2024, Miami FL

Thursday Evening – Free workshop on Shotcrete with UHPC



# 2024 World Bridge Engineering Conference

Hilton Hotel, December 11, 12 and 13, 2024, Miami FL

**Reserve your hotel room while available**

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

**Opportunities are available to Exhibit**

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

**Travel Scholarships are available**

For U.S. State and County Bridge Engineers. Use link below to apply

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



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(5 minutes)

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(15+ minutes)

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# In-Depth Web Training



**Tuesday, September 10, 2024 – 11:00-3:15 p.m. Eastern**

(Certificate of Attendance provided)

## Innovations in Ultra-High Performance Concrete

**Presenters will include:**

**Atorod Azizinamini, Ph.D., P.E., Florida International University;**

**Benjamin Greybeal, Ph.D., P.E., FHWA;**

**Eugen Brühwiler, Ph.D., P.E., Swiss Federal Institute of Technology;**

**Sam Fallaha, P.E., Virginia Department of Transportation;**

**Michael McDonagh, P.E., P.Eng., WSP**