

**Welcome to Monthly Webinar on
Accelerated Bridge Construction**

**2019 Emergency Partial
Reconstruction of Nebraska
BNSF Bridge 0.95**

Sponsored by

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



**Website: abc-utc.fiu.edu
Email: abc@fiu.edu**

October 22, 2020 – 1:00 p.m. to 2:00 p.m. Eastern



Today's Monthly Webinar



ABC Announcements

(10 minutes)

Featured Presentation

(35 minutes)

2019 Emergency Partial Reconstruction of Nebraska BNSF Bridge 0.95

by

Jose Mares, P.E., Director of Bridge Engineering, BNSF Railway;
Temple Overman, P.E., Bridge Project Engineer, HNTB
Corporation; and **Tyler Schulke**, Deputy Project Manager, Ames
Construction

Question and Answer

(15 minutes)

Please post your questions in the question box

**We are continuing
our plans for
having our Next
ABC Conference**

December 8 – 10, 2021

Miami, Florida

Poll Question

Will you attend the 2021 ABC Conference if the Conference is hybrid? (In the hybrid format, some attendees and speakers will be traveling to Miami, and other speakers and attendees will be joining virtually.)

- Yes
- No

Virtual Symposium on ABCs of ABC

**Friday, December 4, 2020
9:30 a.m. – 6:15 p.m. EST**

The ABC-UTC has developed a 1-day ABCs of ABC symposium, providing the latest and essential information related to ABC.

The symposium will include presentations on safety/mobility, the AASHTO ABC Guide Specifications, decision making, project delivery, bridge bundling, public outreach, optimized risk, heavy-lift equipment, latest research ready for implementation, UHPC applications, seismic details, & case studies.

We are developing a waiting list for topics and interest in future virtual and in-person symposiums. Send an email if you are interested to: aazizina@fiu.edu

Virtual Symposium on ABCs of ABC

Friday, December 4, 2020

9:30 a.m. – 6:15 p.m. EST

Times	Topics	Speakers
9:30 a.m.	Welcome and Perspectives on ABC	Atorod Azizinamini, ABC-UTC Romeo Garcia, FHWA Carmen Swanwick, AASHTO COBS Cheryl Hersh Simmons, AASHTO T-4
9:45 a.m.	ABC and Safety / Mobility	Romeo Garcia, FHWA
10:00 a.m.	Defining ABC	Mary Lou Ralls Newman, ABC-UTC
10:30 a.m.	AASHTO LRFD Guide Specifications for ABC	Mike Culmo, CHA Consulting, Inc.
11:00 a.m.	Decision Making: ABC vs Conventional	Tim Fields, Connecticut DOT
11:30 a.m.	ABC Project Delivery	Kristin Higgins, Vermont AOT
12:00 p.m.	<i>Lunch Break</i>	

Times	Topics	Speakers
1:00 p.m.	Case Studies on ABC Bridge Bundling	Ahmad Abu-Hawash, Iowa DOT
1:30 p.m.	Public Outreach on ABC Projects	Eliza Partington, WGI
2:00 p.m.	Optimized Risk in ABC Projects	Matt Paggioli, Webber LLC Sam Piland, Webber LLC
2 :30 p.m.	<i>Break</i>	
3:00 p.m.	Use of Heavy-Lift Equipment for ABC Projects	John Engberg, Barnhart Crane & Rigging Bob Gunter, Barnhart Crane & Rigging
3:30 p.m.	Latest ABC Research Products Ready for Implementation	Atorod Azizinamini, ABC-UTC
4:00 p.m.	Ultra-High-Performance Concrete (UHPC)	Benjamin Graybeal, FHWA
4:30 p.m.	ABC Solutions and Applications in Seismic Regions	Bijan Khaleghi, Washington State DOT
5:00 p.m.	Case Studies on 2 Weekend Closures for Bridge Replacements	Bala Sivakumar, T.Y. Lin International
6:00 p.m.	Concluding Remarks	Atorod Azizinamini, ABC-UTC
6:15 p.m.	<i>Adjourn</i>	

Available Now!

Workshop on Contractor / Owner Collaboration on ABC Programs

ABC-UTC has organized a half-day regional workshop for contractor/owner collaboration on reasons and purpose surrounding the paradigm shift in State decision-making for implementing ABC as common practice in bridge project delivery and to assist contractors and suppliers in partnering in this effort.

If you would like to have a workshop in your region, please send an email to: aazizina@fiu.edu

Coming Soon!

Training Workshop on Non-Proprietary UHPC

ABC-UTC, in conjunction with other entities that have developed Non-proprietary UHPC, is organizing a workshop to provide ready-mix plants, contractors, and other interested stakeholders with essential information for producing UHPC that is not proprietary.

If you would like to have a workshop in your region, or State DOT, please send an email to:

aazizina@fiu.edu

ABC-UTC Short Course on The Risk Due to Induced Earthquakes and Accelerated Solutions

Development of ABC Course Module – The Risk Due to Induced Earthquakes and Accelerated Solutions

Link to Latest Report: [Final Report](#)
[Report Modules](#)

The Risk Due to Induced Earthquakes
and Accelerated Solutions
Introduction and Outline of the Course

An ABC-UTC Course Module by:
Philip Scott Carvey, PhD, PE
Muralee Muralidharan, PhD, PE, GE
Sumangali Sivakumaran

School of Civil Engineering and Environmental Science
University of Oklahoma, Norman, OK

ABC
UTC

SCHOOL OF CIVIL ENGINEERING & ENVIRONMENTAL SCIENCE

UNIVERSITY OF OKLAHOMA

[ABC-UTC] The Risk Due to Induced Ea...
6 videos

- [ABC-UTC] Module 1: In... 4:00
- [ABC-UTC] Module 2: In... 6:40
- [ABC-UTC] Module 3: F... 8:25
- [ABC-UTC] Module 4: F... 8:12
- [ABC-UTC] Module 5: F... 8:20
- [ABC-UTC] Module 6: A... 2:08

Now online at: <https://abc-utc.fiu.edu/research-projects/ou-research-projects/development-of-abc-course-module-the-risk-due-to-induced-earthquakes-and-accelerated-solutions/>

Student Spotlight



Sajad Mokhtarimousavi

Graduation: Ph.D., December 2020

Institution: Florida International University

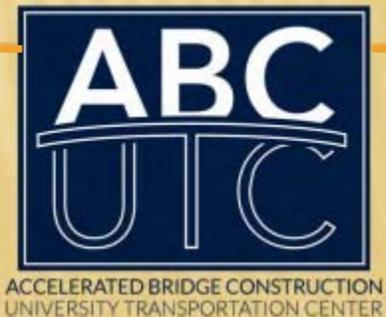
Contact Email: smokh005@fiu.edu

Major Advisors: Dr. Mohammed Hadi

Dr. Atorod Azizinamini

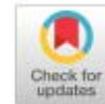
Dissertation Title

Work Zone Safety Analysis, Investigating Benefits from Accelerated Bridge Construction (ABC) on Roadway Safety



ASCE Bridge Engineering Special Collection on ABC is Now Live

Special Collection Announcement



ASCE

Accelerated Bridge Construction

Atorod Azizinamini, Ph.D., P.E., M.ASCE

Vasant Surti Professor of Civil Engineering, Director, Accelerated Bridge Construction Univ. Transportation Center (ABC-UTC), Director, Moss School of Construction, Infrastructure and Sustainability, College of Engineering and Computing, Florida International Univ., Miami, FL 33174.
Email: aazizina@fiu.edu

[https://doi.org/10.1061/\(ASCE\)BE.1943-5592.0001643](https://doi.org/10.1061/(ASCE)BE.1943-5592.0001643)

The Special Collection on Accelerated Bridge Construction is available in the ASCE library (https://ascelibrary.org/page/jbenf2/accelerated_bridge_construction).

A significant portion of the existing roadway system in the United States was built over 50 years ago and is widely showing signs of increasing deterioration. The average age of the nation's bridges is 43 and about 25% of 607,000 bridges in the US inventory are structurally deficient or functionally obsolete and need repair or replacement. Construction activities related to bridge replacement and rehabilitation are important contributors to traffic jams and reduced mobility and, most importantly, to safety hazards. Assuring the

for bridge lateral slide projects based on projects implemented in the State of Michigan and project documentation archived by the Federal Highway Administration (FHWA). The procedure is developed in a series of flowcharts addressing design consideration and suitable components for lateral bridge slides, which can be used to verify a complete design or initiate a new design that is beneficial to bridge designers.

SPMT is another ABC technique, which involves the use of a multiaxial platform that is controlled remotely by a computer. This platform can move, tilt, pivot, and carry preassembled superstructure to its designed position. Dorafshan et al. (2019b), in their paper entitled "Dynamic effects caused by SPMT bridge moves," present the dynamics response of SPMT movements for simulated bridge transport for, to the author's knowledge, the first time. The SPMT unit was loaded using steel weights with different weight capacities of up to 50%. The SPMT unit was instrumented using accelerometers for two types of motion, long run (LR) motion and start-and-stop (SS) motion.

The third ABC technique is associated with prefabricating bridge elements offsite, transporting them to the bridge site, and

The Special Collection on Accelerated Bridge Construction is available in the
ASCE library
(https://ascelibrary.org/page/jbenf2/accelerated_bridge_construction)

Upcoming Events

ASBI 2020 Virtual Convention

Focus on Technology and Innovation

October 27-28, 2020

1:00 p.m. to 4:30 p.m. EDT each day

ASBI Grouting Certification Training

On-Demand Webinar

December 1-15, 2020

Check the ASBI website for details on all this event:

<https://www.asbi-assoc.org/>

Upcoming Events

NSBA Webinar:

*Line Girder Analysis for Skewed Straight Steel I-Girder
Bridges*

Tuesday, November 10, 2020
1:30 p.m. to 3:00 p.m. EST

For more information and to register:

<https://www.aisc.org/webinars/>

Upcoming ABC-Related Activities at Virtual TRB 2021 Annual Meeting

<http://www.trb.org/AnnualMeeting/AnnualMeeting.aspx>

Workshop SMW21-0001: Local/State Bridge Bundling: an ABC Planning and Programming Tool

Thursday, January 21 or Friday, January 22, 2021

Sponsored by:

- *Section - Bridges and Structures (AKB00)*
- *ABC Joint Subcommittee (with AKC00) (AKB00(2))*
- *Innovative Highway Structures and Appurtenances (AKB10)*
- *Steel Bridges (AKB20)*
- *Concrete Bridges (AKB30)*
- *Construction of Bridges and Structures (AKC40)*
- *Low-Volume Roads (AKD30)*
- *Bridge Preservation (AKT60)*



Webinars

Monthly Webinar

Monthly Webinar
Archives

Symposiums

Symposiums Archives

In-Depth Web Training

**In-Depth Web Training
Archives**

Research Seminar

Research Seminar
Archives

Research Day

Research Day Archives

In-Depth Web Training Archives

Building upon the series of 35-minute featured presentations in the monthly webinars hosted by the ABC-UTC, a program of annual in-depth web training was initiated in 2014 to provide more detailed coverage of select projects and topics related to ABC. Each training is four hours in length and consists of six modules, each a 30-minute presentation by an expert in the focus area of the module followed by a 10-minute Q&A session. Below are the archives of the in-depth web training presented to date.

September 8, 2020

[Design and Construction of Common ABC Technologies Using the 2018 AASHTO LRFD Guide Specifications for ABC](#)

September 10, 2019

[Latest Seismic ABC Applications](#)

September 25, 2018

[VTrans' Programmatic Implementation of ABC](#)



Design and Construction of Common ABC Technologies Using the 2018 AASHTO LRFD Guide Specifications for ABC

September 8, 2020

Michael P. Culmo, PE.
Chief Bridge Engineer
CHA Consulting, Inc.
Office: 860-290-4100
Email:
MCulmo@chacompanies.com

Mike is a Bridge Engineer with over 36 years of experience in the design of steel, concrete, prestressed concrete and timber bridges. He has special expertise in the field of accelerated bridge construction technologies and constructability engineering. Mike is the principal author of numerous publications in the field of ABC, including the *2018 AASHTO LRFD Guide Specifications for Accelerated Bridge Construction*. He is a licensed professional engineer.

Reference Documents:

- 01 - [Agenda](#)
- 02 - [Presentation Handout \(2 slides/page\)](#)
- 03 - [FHWA Design Example: 2-Span Steel Girder Including Deck](#)
- 04 - [FHWA Design Example: 2-Span Prestressed Concrete Girder](#)
- 05 - [NCHRP 12-98: Tolerance Guide](#)
- 06 - [NCHRP 12-98: Bridge System Dynamic Guide](#)
- 07 - [PCI State-of-the-Art Report on Full-Depth Precast Concrete Bridge Deck Panels](#)
- 08 - [PCI NE Recommended Guide Details for FDDP](#)
- 09 - [PCI NE NEXT Beam Details](#)
- 10 - [PCI NE Recommended Guide Details for Substructures](#)
- 11 - [PCI NE Camber and Profile Management Guide](#)
- 12 - [PCI NE Guidelines for Resolution of Non-Conformances in Precast Concrete Bridge Elements](#)

In-Depth Web Training Archives

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

**Recordings of
6 modules
now posted!**

ABC-UTC

Quarterly Research Seminar

Friday, October 30, 2020 – 1:00-2:00 p.m. Eastern

ABC and Safety: Work Zone Safety Analysis, Investigating Benefits from ABC on Roadway Safety

by

Mohammed Hadi, Ph.D., P.E., Professor and Advisor;
and **Sajad Mokhtarimousavi, Ph.D. Student**
ABC-UTC / Florida International University

Register online at: www.abc-utc.fiu.edu

ABC-UTC

Semi-Annual Research Day

Friday, November 6, 2020 – 10:00 a.m.-5:00 p.m. EST

2020 Research Day 2



Register online at: www.abc-utc.fiu.edu

Next Monthly Webinar



Thursday, November 12, 2020 – 1:00-2:00 p.m. E

Featured Presentation

Rapid Replacement of CSX's Bayou Sara Bridge Swing Span in Alabama

by

David Knickerbocker, Ph.D., P.E., Movable Bridge Practice Lead, HDR, Inc.; and **Kevin Kane, P.E.**, Project Manager, Brasfield & Gorrie, L.L.C.

Mark your Calendars!

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