



Building Bridges *into* The Next Century



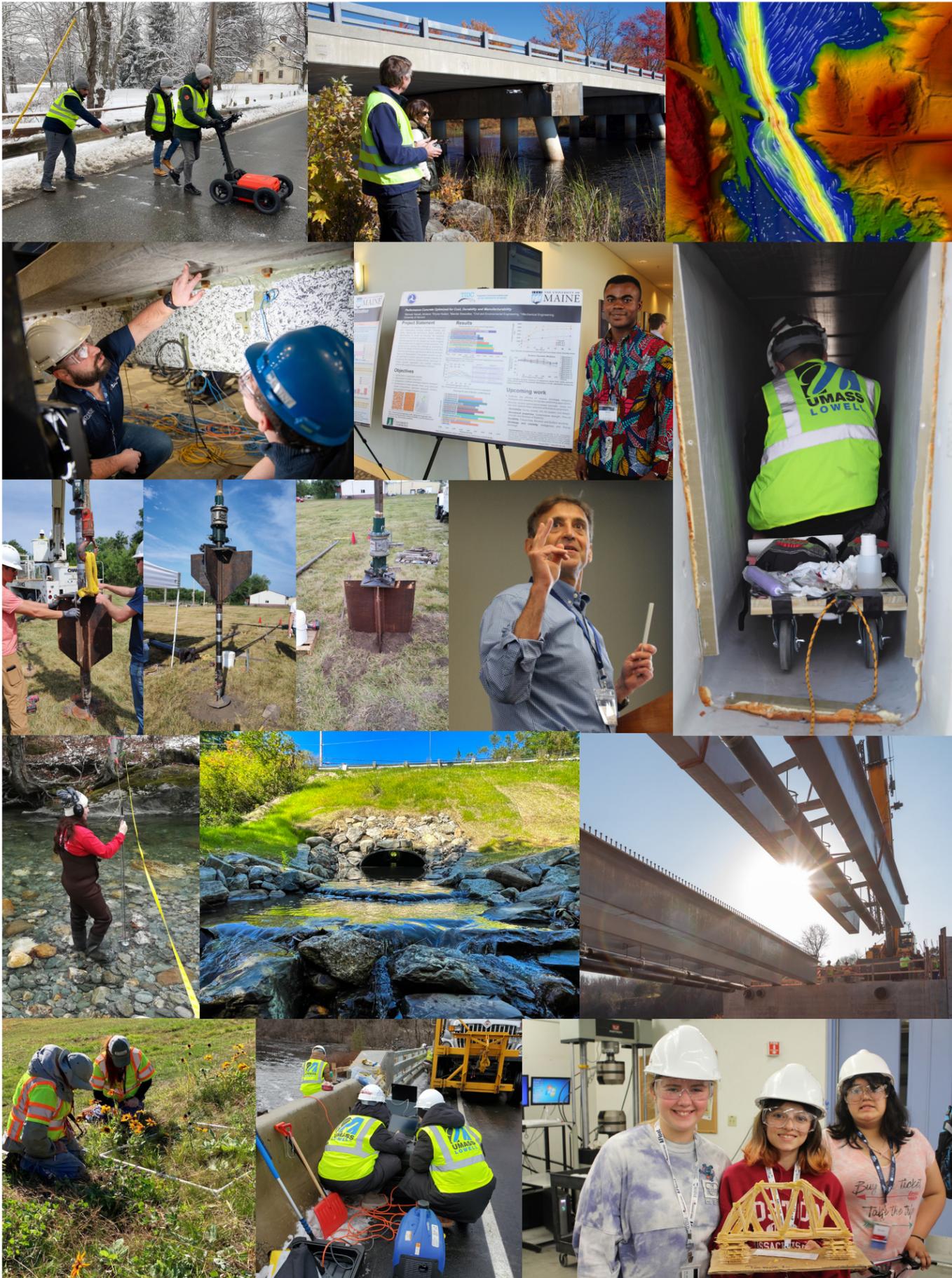
**TRANSPORTATION INFRASTRUCTURE
DURABILITY CONFERENCE**

August 6th – 8th, 2024

**Wells Conference Center
The University of Maine**



Transportation Infrastructure Durability Center
AT THE UNIVERSITY OF MAINE



Thank You to Our Sponsors & Exhibitors



AGC MAINE
THE CONSTRUCTION ASSOCIATION



Hosting Sponsors



Welcome to the 6th Annual TRANSPORTATION INFRASTRUCTURE DURABILITY CONFERENCE

“This Year’s Conference Will Continue To
Showcase All of Our Collaborative Efforts
to Build a More Durable Infrastructure
That Will Take Us

Into the Next Century”



Building Bridges *into* The Next Century

- Sponsors Page 3
- Welcome Address Page 4
- About TIDC Page 6
- Program at a Glance Page 8
- Program Page 9
- Speakers Page 14
- Wells Conference Center Map Page 22

Conference Contact

Aaron Schanck

TIDC Communications Specialist

(207) 699-7258

email: tidc@maine.edu



Transportation Infrastructure
Durability Center



@TIDCatUMaine



@tidcatumaine



TIDC at UMaine



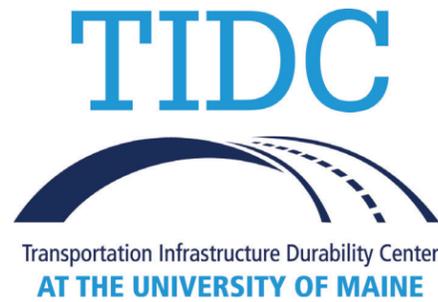
tidc@maine.edu



Events: tidc-utc.org
Research: tidc.umaine.edu



www.tidc.umaine.edu



The Transportation Infrastructure Durability Center is the 2018 US DOT Region 1 (New England) University Transportation Center located at the University of Maine Advanced Structures and Composites Center. TIDC's focus is on extending the life and improving the durability of transportation assets.

TIDC Management Team



Dr. Habib Dagher, P.E.
TIDC Director



Dr. Ramesh Malla
UConn Lead



Dr. Mandar Dewoolkar, P.E.
UVM Lead



Dr. TzyYang Yu
UML Lead



Dr. Moochul Shin
WNEU Lead



Dr. Aaron Bradshaw, P.E.
URI Lead



Dr. Bill Davids, P.E.
Thrust Area 1 Lead



Dr. Roberto Lopez-Anido, P.E.
Thrust Area 2 Lead



Dr. Aaron Gallant, P.E.
Thrust Area 3 Lead



Dr. Jonathan Rubin
Thrust Area 4 Lead



Dr. Eric Landis, P.E.
Thrust Area Lead

TIDC Advisory Board & Technical Committee



Dale Peabody, P.E.
Former MaineDOT
Advisory Board Chair



Jeff Pulver, P.E.
MaineDOT
Director of Research & Innovation



Gregory Krikoris, P.E.
MassDOT
Area Bridge Inspection Engineer



Andrew J. Mroczkowski, P.E.
ConnDOT
Transportation Engineer III Research Unit



Dr. Emily Parkany, P.E.
VTrans
Research Manager



Deirdre Nash, P.E.
NHDOT
Assistant Research Engineer



Christos S. Xenophonos
RIDOT
Assistant Director



Loretta Girard Doughty, P.E.
NHDOT
Administrator, Bureau of Bridge Design

Program At A Glance

Program

Tuesday August 6th	Wednesday August 7th	Thursday August 8th
3:00-4:00 pm Speakers Tour of ASCC	8:00-9:30 am Check-in, Breakfast, Exhibits & Poster Session	8:00-9:30 am Check-in & Breakfast
4:00-6:00 pm Check-in, Exhibitors & Networking	9:30-9:45 am Wednesday Welcome	9:30-9:45 am Thursday Welcome
6:00-7:00 pm Welcome Reception Dinner and Opening	9:45-10:15 am Keynote: Building Volpe for the Next Century of Transportation	9:45-10:45 am Session 4: Highway Durability Advances
7:00-8:00 pm Evening Keynote: Searsport Wind Port	10:15-10:45 am Plenary Session: Building Bridges into the Next Century	10:45-11:00 am Break
	10:45-11:00 am Exhibitor & Poster Break	11:00 am-12:00 pm Session 5: Future of AVs in Northern New England
	11:00 am-12:00 pm Session 1: Transportation Structural Composites	12:15-1:15 pm Lunch
	12:15-1:15 pm Lunch	1:15-2:15 pm Session 6: Engaging Future Workforce
	1:15-2:30 pm Session 2: Transportation Resiliency & Impacts to our Coastal Infrastructure	2:15-2:30 pm Closing Remarks
	2:30-3:00pm Exhibitor & Poster Break	2:30 pm ASCC or VEMI Lab Tour
	1:30-3:00 pm Session 3: Bridge Structure Durability Advances	
	4:00 pm Wednesday Closing	

Tuesday, August 6th

4:00 pm: Check in, Networking Exhibitor Booths

6:00 pm: Conference Welcome & Evening Reception Dinner -
Sponsored by AIT Composites

- Dr. Habib Dagher, P.E., *Director, TIDC; Executive Director, ASCC*
- Dr. Bill Davids, P.E., *Research Lead, TIDC; Professor, The University of Maine*

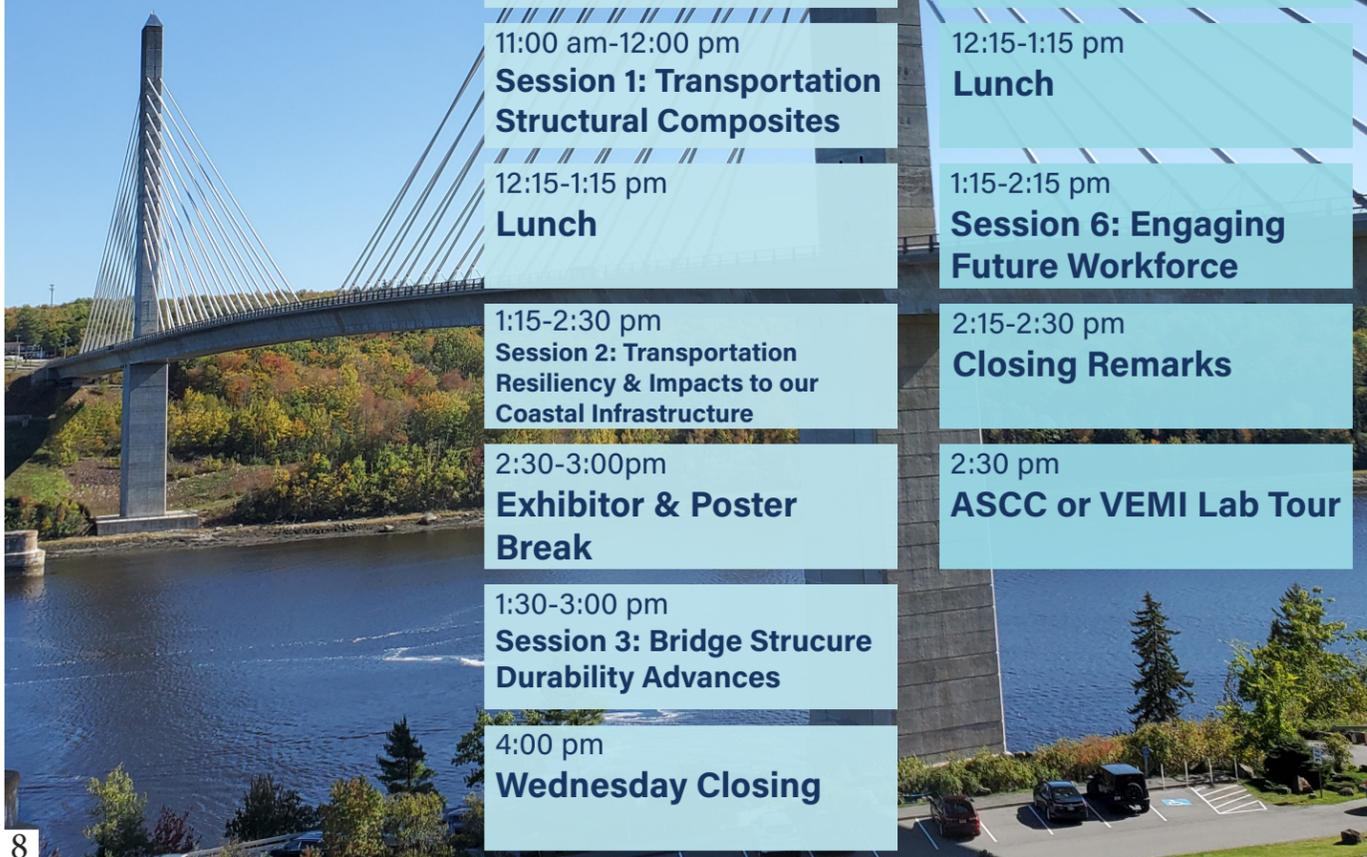
6:30 pm: Evening Reception Presentations

- Dr. Joan Ferrini-Mundi, *President, The University of Maine & UMaine Machias*
- Ken Sweeney, P.E., *President & Chief Engineer, AIT Composites*

7:00 pm: Evening Keynote: Searsport Wind Port

- Nate Benoit, P.E., *Assistant Multimodal Program Manager, MaineDOT*
- Dr. Habib Dagher, P.E., *Director, TIDC; Executive Director, ASCC*
- Dr. Anthony Viselli, *Chief Engineer - Ocean Energy and Engineering, UMaine*

8:00 pm: Evening Reception Closing



Wednesday, August 7th

8:00 am: Check-in, Student Posters, Exhibitors, Breakfast - *Sponsored By GZA Geoenvironmental*

9:30 am: Morning Welcome

- Dr. Bill Davids, P.E., *Research Lead, TIDC; Professor, The University of Maine*

9:45 am: Morning Keynote: Building Volpe for the Next Century of Transportation Infrastructure Durability

- Luisa Paiewonsky, *Director of Infrastructure Systems & Technology, US DOT Volpe Center*

10:15 am: Building Bridges into the Next Century Panel

- **Moderated by,** Jeff Pulver, P.E., *Director of Research & Innovation, MaineDOT*
- Luisa Paiewonsky, *Director of Infrastructure Systems & Technology, USDOT Volpe Center*
- Joyce Taylor, P.E., *Chief Engineer, MaineDOT*
- Dr. Bill Davids, P.E., *Research Lead, TIDC; Professor, The University of Maine*

10:45 am: Exhibitors & Student Poster Break - *Sponsored by SPIRE*

11:00 am: Session 1: Composites - The Greener Alternative

- **Moderated and Introduced by,** Dr. Roberto Lopez-Anido, P.E., *Research Lead, TIDC; Professor, The University of Maine*
- **Life Cycle Assessment and its Application to Composite Technologies:** Dr. Reed Miller, *Assistant Professor, The University of Maine*
- **An Important Equation for Decarbonization in Infrastructure & Construction:** Dr. Joe Fox, *President, FX Consulting LLC*

12:15 pm: Lunch - *Sponsored by Avient, Student Posters*

1:15 pm: Session 2: Transportation Resiliency & Impacts to our Coastal Infrastructure

- **Moderated by:** Dr. Kimberly Huguenard, *Associate Professor of Civil & Environmental Engineering, The University of Maine*
- **Probabilistic Modeling under Changing Climate Conditions: Compound Pluvial, Fluvial, and Coastal Flood Risk:** Kirk Bosma, P.E., *Vice President & Senior Coastal Engineer, Woods Hole Group*
- **Incorporating Resilience into MaineDOT Project Design and Planning:** Eric Ham, *Senior Environmental Manager, MaineDOT Environmental Office*
- **Lessons and Observations on Coastal and Island Infrastructure Resilience:** Jeff Frank, *Senior Community Development Officer, Island Institute*

2:30 pm: Exhibitors Break - *Sponsored by SPIRE*

3:00 pm: Session 3: Advancing Bridge Structure Durability to the Next Century

- **Moderated and Introduced by,** Dr. Bill Davids, P.E., *Research Lead, TIDC; Professor, The University of Maine*
- **Thermoplastic Composites for Infrastructure Applications:** Dr. Andrew Schanck, P.E., *Research Engineer, Advanced Structures & Composites Center*
- **Evolving Specifications For Modern Concrete:** Michael Praul, P.E., *Sr. Concrete Engineer, FHWA, Office of Preconstruction, Construction, & Pavements*

4:00 pm: Closing Remarks

- Dale Peabody, P.E., *Advisory Board Chair, TIDC*



(Left) Lightweight FRP Composite Tub Girder at AIT Composites facility being moved by a team of 2. (Center) Penobscot Narrows bridge using TIDC monitored carbon fiber cables. (Right) Continuous Forming Machine at ASCC used to produce pultruded thermoplastic rebar.

Thursday, August 8th

8:00 am: Check-in, Student Posters, Breakfast - Sponsored By GZA Geoenvironmental

9:30 am: Morning Welcome

- Dr. Bill Davids, P.E., Research Lead, TIDC; Professor, The University of Maine

9:45 am: Session 4: Advancing Roadway Sustainability

- **Moderated by,** Dr. Aaron Bradshaw, P.E., *Professor, The University of Rhode Island*
- **Southern New England Highway ROWs as Habitat for Grassland Species:** Dr. Rebecca Brown, *Professor and Chair, University of Rhode Island Department of Plant Sciences and Entomology*
- **Carbon Stabilization for Poor Quality Soils:** Dr. Aaron Gallant, P.E., *Research Lead, TIDC; Associate Professor, The University of Maine*
- **Adapting Transportation Decisions Based on Roadway Context:** Jeff Pulver, P.E., *Director of Research & Innovation, MaineDOT*

10:45 am: Break - Sponsored by SPIRE

11:00 am: Session 5: The Future of AV's Across Northern New England

- **Moderated and Introduced by:** Dr. Jonathan Rubin, *Research Lead, TIDC; Director, UMaine MCS Policy Center*
- **AI, Transportation, and Humans:** Dr. Richard Corey, *Director, UMaine VEMI Lab*
- **The AV Revolution - How Rural and Small Urban Communities are Benefitting Today:** Sarah Yager, *Senior Business Development Manager, May Mobility*

12:15 pm: Lunch - Sponsored by Avient

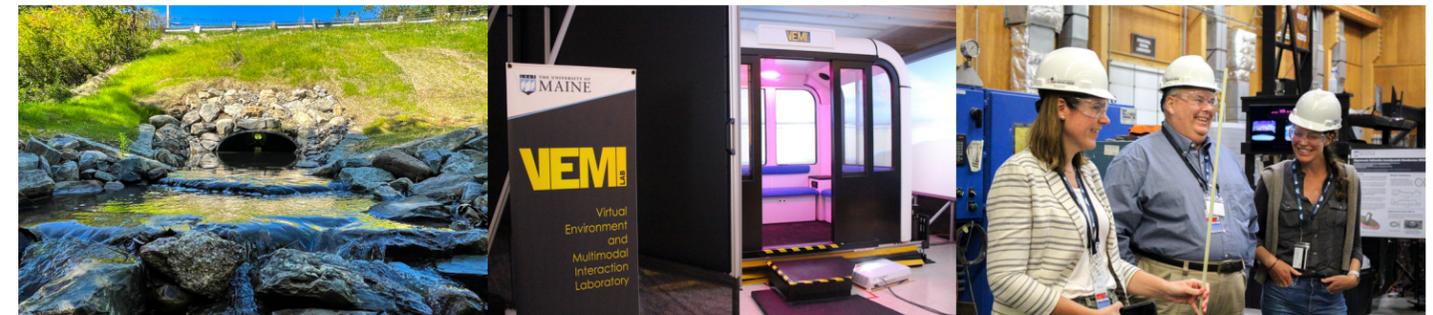
1:15 pm: Session 6: Composites - Engaging our Future Workforce: Real-Life Practice & Implementation

- **Moderated and concluded by,** Amanda Collamore, *Education & Outreach Manager, TIDC*
- **Engaging our Future Workforce with Real-Life Experience:** Kelly Flagg, *Director, AGC Maine*
- **Workforce Development - Engaging our Workforce: Real-Life Practice & Implementation:** Shawn Smith, *Interstate Senior Project Manager, Statewide Construction Manager, Regional & Highway Programs, MaineDOT*

2:15 pm: Closing Remarks

- Amanda Collamore, *Education & Outreach Manager, TIDC*

2:30 pm: UMaine ASCC & VEMI Lab Tours (Add-on during registration)



(Left) 3D printed culvert diffuser installed under heavily utilized roadway in Exeter, NH. (Center) UMaine VEMI Lab's room-sized Autonomous Vehicle Simulator. (Right) TIDC government and industry partners visiting the ASCC to learn about new technologies.

Keynote Presenters



Nate Benoit, P.E.

*Assistant Multimodal Program
Manager
MaineDOT*



Luisa Paiewonsky

*Director of Infrastructure
Systems & Technology
US DOT Volpe Center*



Dr. Habib Dagher, P.E.

*Executive Director, ASCC;
Director, TIDC*



Dr. Anthony Viselli

*Chief Engineer - Ocean Energy
and Engineering
The University of Maine*



Jeff Pulver, P.E.

*Director of Research &
Innovation
MaineDOT*



Luisa Paiewonsky

*Director of Infrastructure
Systems & Technology
US DOT Volpe Center*



Joyce Taylor, P.E.

*Chief Engineer
MaineDOT*



Dr. Bill Davids, P.E.

*Professor of Civil &
Environmental Engineering
The University of Maine;
Research Lead, TIDC*

Building Bridges into the Next Century

Moderator

Composites - The Greener Alternative

Moderator



Dr. Roberto Lopez-Anido, P.E.

Professor of Civil & Environmental Engineering The University of Maine; Research Lead, TIDC



Dr. Reed Miller

Assistant Professor of Civil & Environmental Engineering, The University of Maine; Researcher, TIDC



Dr. Joe Fox

*President
FX Consulting LLC*

Transportation Resiliency & Impacts to our Coastal Infrastructure

Moderator



Dr. Kim Huguenard

*Associate Professor of Civil & Environmental Engineering
The University of Maine*



Kirk Bosma, P.E.

*Vice President & Senior Coastal Engineer
Woods Hole Group*



Eric Ham

*Senior Environmental Manager
Maine DOT Environmental Office*



Jeff Frank

*Senior Community Development Officer
Island Institute*

Advancing Bridge Structure Durability to the Next Century

Moderator



Dr. Bill Davids, P.E.

*Professor of Civil & Environmental Engineering
The University of Maine;
Research Lead, TIDC*



Dr. Andrew Schanck, P.E.

*Research Engineer
The University of Maine*



Michael Praul, P.E.

*Senior Concrete Engineer
FHWA, Office of Preconstruction,
Construction, & Pavements*

Advancing Roadway Sustainability

Moderator



Dr. Aaron Bradshaw, P.E.

*Professor
The University of Rhode Island;
Institutional Lead, TIDC*



Dr. Aaron Gallant, P.E.

*Associate Professor of Civil and Environmental Engineering, UMaine;
Research Lead, TIDC*



Dr. Rebecca Brown

*Professor and Chair, URI
Department of Plant
Sciences and Entomology;
Researcher, TIDC*



Jeff Pulver, P.E.

*Director of Research & Innovation
MaineDOT*

The Future of AV's across Northern New England

Moderator



Dr. Jonathan Rubin

*Director, UMaine MCS Policy Center;
Research Lead, TIDC*



Dr. Richard Corey

*Director
UMaine VEMI Lab*



Sarah Yager

*Senior Business Development Manager
May Mobility*

Engaging our Future Workforce: Real-Life Practice & Implementation

Moderator



Amanda Collamore

*Education & Outreach Manager
TIDC*



Kelly Flagg

*Director
AGC Maine*

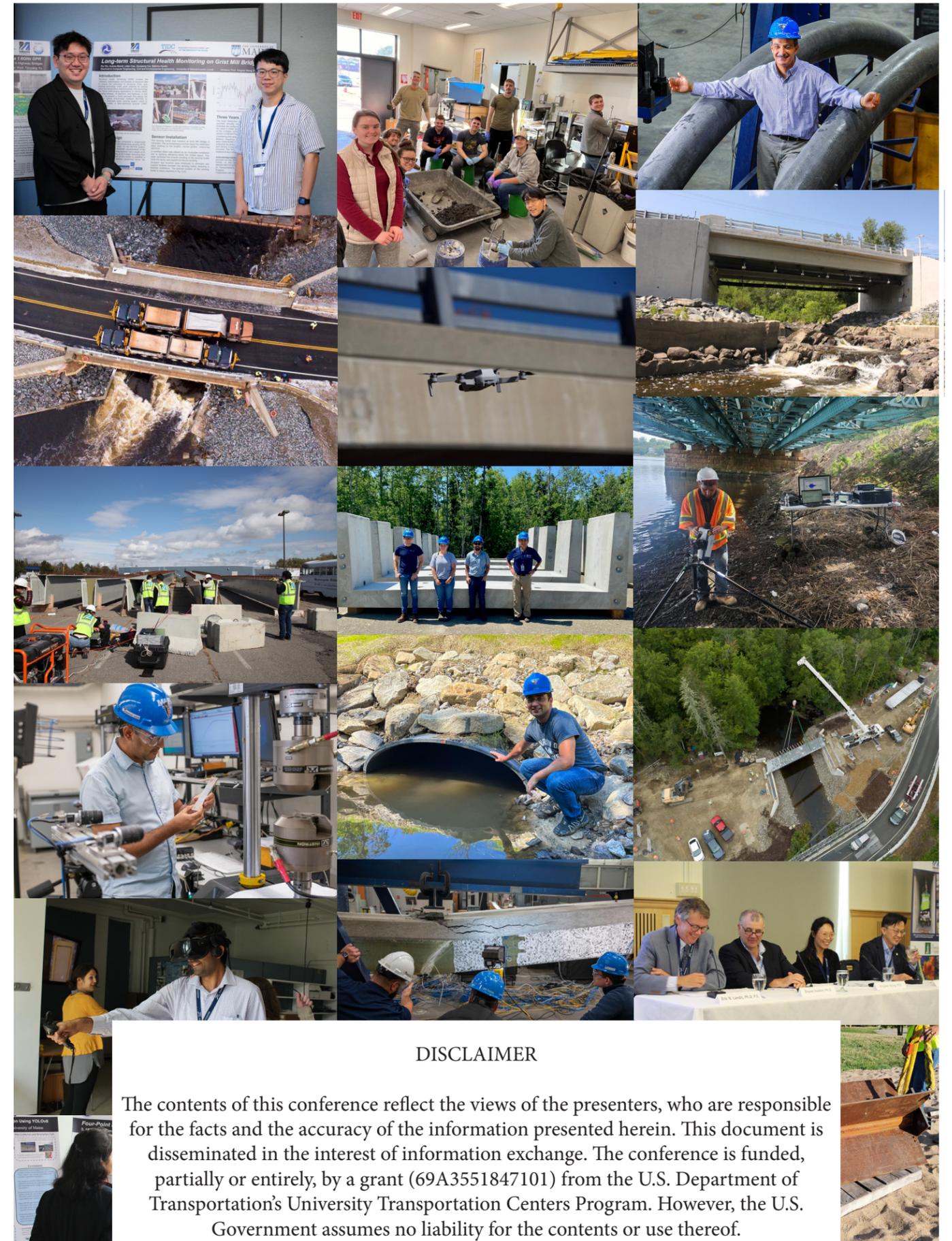
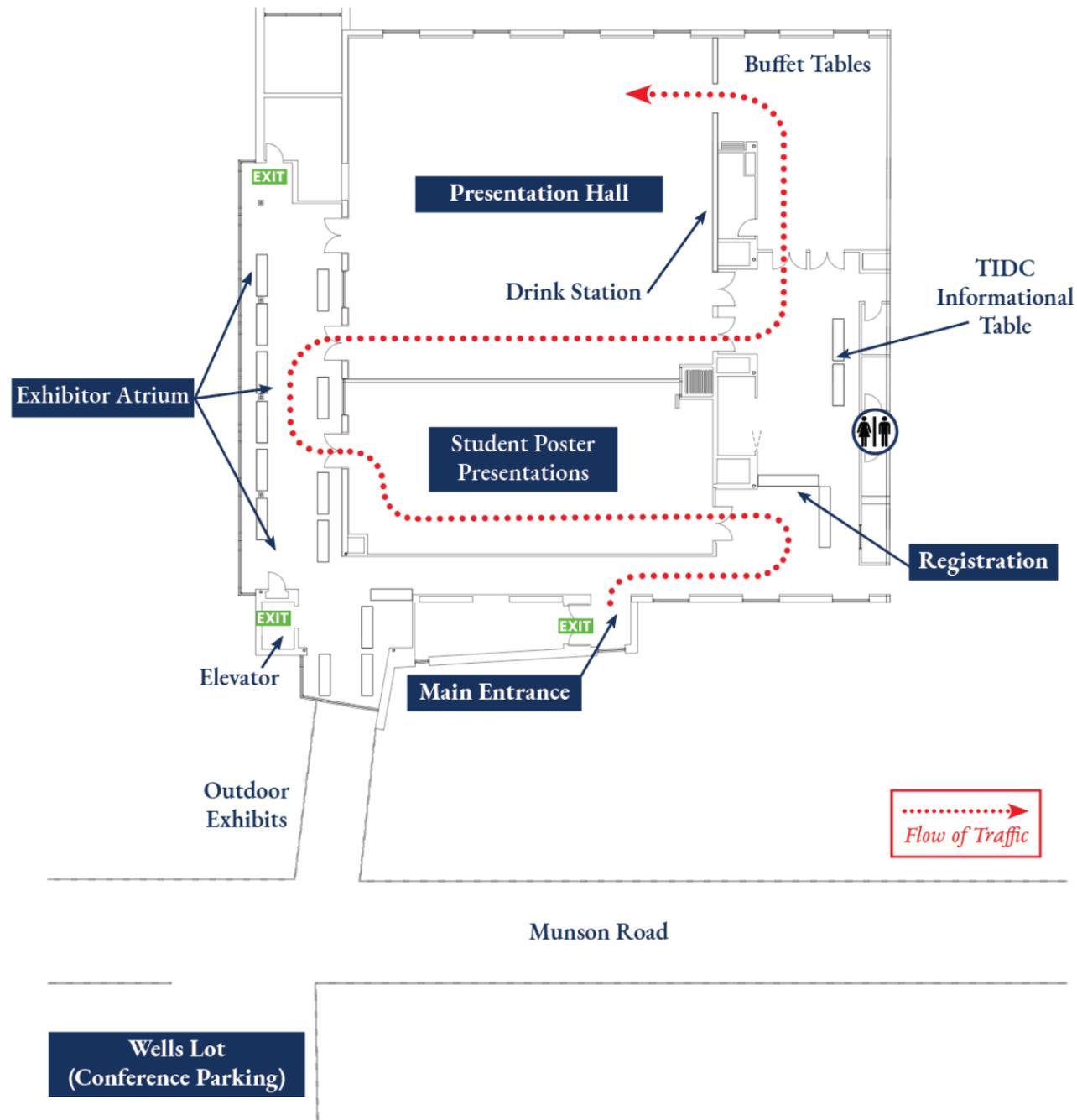


Shawn Smith

*Interstate Senior Project Manager,
Statewide Construction Manager,
Regional & Highway Programs,
MaineDOT*

Conference Map

Wells Conference Center



DISCLAIMER

The contents of this conference reflect the views of the presenters, who are responsible for the facts and the accuracy of the information presented herein. This document is disseminated in the interest of information exchange. The conference is funded, partially or entirely, by a grant (69A3551847101) from the U.S. Department of Transportation's University Transportation Centers Program. However, the U.S. Government assumes no liability for the contents or use thereof.

