



2008

Update from the FHWA

Update from MDOT

MDOT's Local Bridge Program

Working Around  
Artesian Ground Water

Lincoln Avenue Bridge  
in Cheboygan

Planning for a Sustainable Bridge

Anti-icing Overlay for Bridge Decks

Conductive Concrete

Inventory of Michigan's  
Historic Bridges

Maintaining the "Mighty Mac"



**Michigan's  
Local Technical  
Assistance Program**

(906) 487-2102 or Fax (906) 487-3409  
[www.MichiganLTAP.org](http://www.MichiganLTAP.org)



MICHIGAN  
**BRIDGE**  
CONFERENCE

March 19, 2008

Mount Pleasant

Pre-conference Workshop  
**Bridge Geotechnical  
Considerations – Designing for Scour**

8:30 AM – 4:00 PM on March 18

Special Presentation  
**A Snow Road Across Antarctica**

7:00 PM on March 18



**Local Technical Assistance Program**  
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# 2008 Michigan Bridge Conference and Workshop

The Michigan Bridge Conference and pre-conference workshop provide information about bridge research, construction, repair, and management. The workshop and conference will be held at the Comfort Inn & Suites Hotel and Conference Center in Mt. Pleasant on March 18 and 19.

## Registration

You must register separately for each event. Seating is limited for both events; please register as early as possible to ensure your participation. To register, call the LTAP office at (906) 487-2102. Visa and MasterCard are accepted. When registering, please let us know if you have any special dietary needs.

## Accommodations

A block of rooms has been reserved at the Comfort Inn & Suites. The rooms are available on a first come, first served basis. The rate is \$82.00 per room. To reserve a room at this rate, call the Comfort Inn & Suites at (989) 772-4000 by February 26, 2008, and mention Michigan Tech - LTAP.

## Advance Check In

To avoid early morning crowds for the conference, you may check in on Tuesday, March 18 from 6:30 to 7:30 P.M.

## Cost

Bridge Geotechnical Considerations – Designing for Scour (March 18)

Employees of Public Agencies . . . . .	\$75
Employees of Private Companies . . . . .	\$95

Michigan Bridge Conference (March 19)

Employees of Public Agencies . . . . .	\$95
Employees of Private Companies . . . . .	\$115

The costs include coffee-break refreshments, lunch, conference materials, and handouts. The registration fee does not include accommodations.

## Driving Directions

**From the North:** Take US 27 to the US-127-BUS exit. Follow Mission Road three miles straight ahead through seven stoplights. Turn right on West Campus Drive. The hotel is on your left.

**From the South:** Take US 27 to the US-127-BUS exit. Turn left at the first stop light onto West Campus Drive. The Hotel is on your left.

**From the East:** Take M-20 West towards Mt. Pleasant. Turn left on Mission Road. Continue through six stoplights. Turn right on West Campus Drive. The hotel is on your left.

**From the West:** Take M-20 East towards Mt. Pleasant. Turn right on Mission Road. Continue through three stoplights. Turn right on West Campus Drive. The hotel is on your left.

# Workshop: Bridge Geotechnical Considerations – Designing for Scour

Tuesday, March 18

The pre-conference workshop will be led by Chris Byrum, P.E., Ph.D. from Soil and Materials Engineers, Inc. (SME), and Brian Barkdoll P.E., Ph.D. from Michigan Technological University’s Department of Civil and Environmental Engineering. Together these experts will demonstrate the role of scour and geotechnical data in bridge design. Using a combination of theoretical discussions and practical examples, Dr. Byrum and Dr. Barkdoll will cover general foundation types, approach embankment stability and scour, ship impact, groundwater control, and more.

## Workshop Agenda

- 8:30 Check-in**
- 9:00 Overview of Scour**
- 9:30 Approaches and Abutments**
- 10:30 Break**
- 10:45 Pier Foundation Designs 1**
- Noon Lunch**
- 1:00 Pier Foundation Designs 2**
- 2:00 Break**
- 2:15 Balancing Engineering Judgement and Design Equations**
- 3:00 Adjustments for Deep Scour**
- 3:45 Q & A**
- 4:00 Adjourn**

## Special Presentation: A Snow Road Across Antarctica

7:00 PM on Tuesday, March 18

All are welcome to join Michigan Tech alumni and friends to enjoy refreshments and listen to a fascinating presentation by Ross Alger (BS ‘81, MS ‘83 Civil Engineering) about building roads at the bottom of the earth. The presentation will be held at the Comfort Inn & Suites, and is co-sponsored by the Michigan Tech Transportation Institute and the Michigan Tech Alumni Association.

For more information visit [www.huskylink.mtu.edu/TechConnectMarch2008](http://www.huskylink.mtu.edu/TechConnectMarch2008). If you plan to attend, please RSVP through the web site or call (906) 487-2400.

# Bridge Conference Agenda

Wednesday, March 19

- 8:00 Check-in**
- 8:25 Opening Remarks**  
Moderator: Devin Harris, Ph.D., Assistant Professor  
*Michigan Technological University*
- 8:30 Update from the Federal Highway Administration**  
Jon Nekritz, P.E., Division Bridge Engineer  
*Federal Highway Administration, Michigan Division*
- 9:00 Update from MDOT**  
David Juntunen, P.E., Engineer of Bridge Operations  
*Michigan Department of Transportation*
- 9:30 Local Bridge Program**  
Mark Harrison P.E., Bridge Program Manager  
*Michigan Department of Transportation*
- 10:00 Q & A for FHWA and MDOT**
- 10:15 Break**
- 10:30 Case Studies: Working Around Artesian Groundwater**  
Chris Byrum, P.E., Ph.D., Project Engineer  
*Soil and Materials Engineers, Inc.*
- 11:15 Lincoln Avenue Bridge – Cheboygan**  
Mario Galindo, P.E., Project Consultant  
*Contech Bridge Solutions, Inc.*  
Eric Johnson, P.E., Civil Engineer  
*Rowe Incorporated*
- 12:00 Lunch**
- 1:15 Planning for a Sustainable Bridge**  
Chris Gilbertson, P.E., Research Engineer  
*Michigan Technological University*
- 2:00 Anti-Icing Overlay for Bridge Decks**  
Russ Alger, Director – Institute of Snow Research  
*Keweenaw Research Center*
- 2:45 Break**
- 3:00 Conductive Concrete**  
Sharif Yehia, P.E., Ph.D.  
*Western Michigan University*
- 3:45 Inventory of Michigan’s Historic Bridges**  
Lloyd Baldwin, Historian/Project Manager  
*Michigan Department of Transportation*  
Joe Pullaro P.E.  
*TranSystems/Lichtenstein*
- 4:30 Maintaining the “Mighty Mac”**  
Kim Nowak, Chief Bridge Engineer  
*Mackinac Bridge Authority*
- 5:00 Adjourn**  
Moderator: Devin Harris, Ph.D., Assistant Professor  
*Michigan Technological University*