PRELIMINARY PROGRAM

10th International Bridge and Structure Management Conference

Hyatt Regency Buffalo
Buffalo, New York
October 20-22, 2008

Conducted by

Transportation Research Board
National Research Council

In Cooperation With

Federal Highway Administration
U.S. Department of Transportation

New York State Department of Transportation
New York State Thruway Authority
New York State Bridge Authority
Multidisciplinary Center for Earthquake Engineering Research
University at Buffalo: The State University of New York
The Transportation Research Board (TRB) announces the 10th International Bridge and Structure Management Conference to be held at the Hyatt Regency in Buffalo, New York on October 20-22, 2008. This conference is being sponsored by TRB Committees Bridge Management (AHD35) and Structures Maintenance (AHD30) in cooperation with the Federal Highway Administration, New York State Department of Transportation, New York State Thruway Authority, New York State Bridge Authority, Multidisciplinary Center for Earthquake Engineering Research, and University at Buffalo: The State University of New York.

The ninth conference was held in Orlando, Florida in 2003. Presentations from the 9th Conference were published in *Transportation Research E-Circular 049* in April 2003. The tenth conference provides a 2½ day program with presentations on future directions and challenges in structures management; design and implementation of bridge management systems; application of bridge management in transportation agencies; bridge preservation, maintenance and deterioration rates; application of prioritization and optimization routines; structural performance, monitoring and remaining life; bridge modeling and NBI translator; structure vulnerability and weigh-in-motion; bridge inspection; local, frequency and thermal imaging; bridge decks and stay cable; and, accelerated construction, fiber-reinforced polymers and corrosion evaluation. The conference was developed to aid bridge practitioners, managers and researchers in taking advantage of the characteristics of existing systems from around the world, and identifying new and anticipated enhancements.

**REGISTRATION**

The registration fee is $550 for those who preregister by September 27, 2008 and $600 for those who register after this date or at the conference. The fee covers participation in the conference sessions; breakfast and morning break on Monday, Tuesday, and Wednesday; afternoon break on Monday; lunch on Monday and Tuesday; reception on Monday evening; and a copy of the conference proceedings. Discounts are available for TRB Committee members, TRB Sponsor employees, and individuals listed in the program. The $110.00 spouse/guest fee includes breakfast each morning and the reception on Monday evening.

**Registration Fees**

<table>
<thead>
<tr>
<th>Registration Type</th>
<th>Advance: September 27</th>
<th>Regular: Onsite</th>
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<tbody>
<tr>
<td>Full</td>
<td>$550</td>
<td>$600</td>
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<tr>
<td>TRB Committee Members &amp; Sponsor Employees*</td>
<td>$500</td>
<td>$550</td>
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<tr>
<td>Individuals Listed in Program</td>
<td>$500</td>
<td>$550</td>
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<tr>
<td>Spouse/Guest</td>
<td>$110</td>
<td>$125</td>
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* Includes state DOT and FHWA employees

**ACCOMMODATIONS**

A block of rooms has been reserved for this conference at the Hyatt Regency Buffalo with a Conference rate of $92.00 [changed in compliance with change in Federal Per Diem rate effective October 1, 2008] plus applicable state and local tax (currently 13.75% per room per night) for single/double occupancy. The hotel is located at Two Fountain Plaza in Buffalo, New York 14202. Reservations can be made on-line at the [Hyatt Regency Buffalo’s Reservations Link](#) or by calling the Hotel’s Reservation Department at 800-233-1234 and indicate you will be attending the ‘Transportation Research Board Conference’. The conference rate will be honored 3 days before and after the meeting dates, based on availability.

**TRANSPORTATION**

Information on ground transportation between the Hyatt Regency and Buffalo Niagara International Airport using ITA Shuttle Service (currently $15 one way or $30 round trip) and taxi services (approximately $28 one way) can be found on the [Hyatt Regency Buffalo’s Transportation Link](#).

**DRESS**

All functions will be casual dress.
ACKNOWLEDGMENTS

Program Committee
Richard W. Shepard, chair, Sreenivas Alampalli, Jose L. Aldayuz, Wade F. Casey, Paul F. Jensen, Arunprakash M. Shirolé, and Paul D. Thompson

Committee on Bridge Management, AHD35

Committee on Structures Maintenance, AHD30

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Monday, October 20, 2008

7:00 a.m. - 5:00 p.m. Registration and Information

7:00 a.m. - 8:30 a.m. Continental Breakfast

8:30 a.m. to 9:30 a.m. Opening
Richard W. Shepard, County of El Dorado Department of Transportation, presiding

Welcome
Stanley Gee, Executive Deputy Commissioner, New York State Department of Transportation
Alan Taylor, Regional Director, Region 5, New York State Department of Transportation

TBD
Introductions

9:30 a.m. - 10:00 a.m. Break

10:00 a.m. to 12 noon Future Directions and Challenges in Structures Management
Sreenivas Alampalli, New York State Department of Transportation

Present and Future of Bridges and Structures Management: FHWA Perspective
Myint Lwin, Federal Highway Administration

Structures Management at New York State Department of Transportation
George Christian, New York State Department of Transportation

Bridge Maintenance from a Toll Agency’s Perspective
Bill Moreau, New York State Bridge Authority

Bridge Management Strategies at the NYS Thruway Authority - Maintaining Tappan Zee Bridge, a Critical Lifeline Structure
Ramesh Mehta and Stephen Grabowsk, New York State Thruway Authority

12 noon - 1:00 p.m. Lunch

1:00 p.m. to 3:00 p.m. Application of Bridge Management in Transportation Agencies
Kumares C. Sinha, Purdue University, and Paul F. Jensen, Montana Department of Transportation, presiding

German Approach to Bridge Management: Current Status and Future Development (IBSMC08-008)
Peter Haardt and Ralph Holst, Federal Highway Research Institute, Germany

Progress Report on Oregon’s Efforts to Integrate Its Statewide Transportation Improvement Program (STIP) Project Selection Process with Pontis (IBSMC08-009)
Dawn Mach and Bert Hartman, Oregon Department of Transportation

Use of Bridge Management for Agency Decisions in Planning, Programming and Performance Tracking (IBSMC08-022)
Michael J. Markow, Consultant

3:00 p.m. to 3:30 p.m. Break
3:30 p.m. to 5:00 p.m.  **Design and Implementation of Bridge Management Systems**
Arne H. Henriksen, Danish Road Directorate, and Michael B. Johnson, California Department of Transportation, presiding

**KUBA 4.0 – The Swiss Road Structure Management System** (IBSMC08-027)
Rade Hajdin, Infrastructure Management Consultants GmbH, Switzerland

**Bridge Management System for the Western Cape Provincial Government, South Africa: Implementation and Utilization** (IBSMC08-013)
Anton J. Nell, Provincial Government Western Cape, Cape Town, South Africa; Paul A. Nordengen, CSIR Built Environment, South Africa; Abe Newmark, BKS Engineering and Management, South Africa

**Design and Implementation of a New Bridge Management System for the Ministry of Transport of Québec** (IBSMC08-034)
Reed M. Ellis, Stantec Consulting Ltd.; Paul D. Thompson, Consultant; Rene Gagnon and Guy Richard, Ministère des Transports, Québec, Canada

5:30 p.m. - 6:30 p.m.  **Reception** (cash bar)

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**Tuesday, October 21, 2008**

7:00 a.m. - 4:30 p.m.  **Registration and Information**

7:00 a.m. - 8:00 a.m.  **Continental Breakfast**

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**Track: A**

8:00 a.m. to 10:00 a.m.  **Bridge Preservation, Maintenance and Deterioration Rates**
Bojidar S. Yanev, New York City Department of Transportation, and Jose L. Aldayuz, American Association of State Highway and Transportation Officials, presiding

**Preserving Our Bridge Infrastructure** (IBSMC08-038A)
Peter Weykamp, New York State Department of Transportation

**Bridging Data Voids: Advanced Statistical Methods for Bridge Management in KUBA** (IBSMC08-007)
Rade Hajdin and Leon Peeters, Infrastructure Management Consultants GmbH, Switzerland

**National Database System for Maintenance Actions on Highway Bridges** (IBSMC08-011)
Paul D. Thompson, Consultant; George Hearn, University of Colorado; William A. Hyman, Transportation Research Board

**Deterioration Rates of Typical Bridge Elements in New York** (IBSMC08-040)
Anil K. Agrawal and Akira Kawaguchi, City College of New York; Scott Lagace and Rodney Delisle, New York State Department of Transportation; Chen Zheng, City College of New York

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**Track: B**

8:00 a.m. to 10:00 a.m.  **Bridge Inspection: Local, Frequency and Thermal Imaging**
Thomas D. Everett, Federal Highway Administration, and Jeffrey Anderson, Colorado Department of Transportation, presiding

**Supporting Local Bridge Inspections in Kansas with Web-Based Automation** (IBSMC08-023)
Allen R. Marshall, Cambridge Systematics, Inc.; Michael Smith, Kansas Department of Transportation

**Integrated Management and Inspection System for Maryland Counties and Cities** (IBSMC08-012)
Jeremy Shaffer, InspectTech

**Condition-Based Bridge Inspection Frequency** (IBSMC08-015A)
Waseem Dekelhab, Bobby R. Harris and Adel Al-Wazeer, Science Applications International Corporation (SAIC)

**Thermal Imaging for Bridge Inspection and Maintenance** (IBSMC08-039)
Glenn Washer, Richard Fenwick and Naveen Bolleni, University of Missouri, Columbia; Jennifer Harper, Missouri Department of Transportation; Sreenivas Alampalli, New York State Department of Transportation

10:00 a.m. to 10:30 a.m.  **Break**
Track: A
10:30 a.m. to 12 noon  Application of Prioritization and Optimization Routines
Arunprakash M. Shirolé, Arora and Associates, and Michael C. Brown, Virginia Transportation Research Council, presiding

Multi-Attribute Prioritization Framework for Bridges, Roadside Elements and Traffic Control Devices Maintenance (IBSMC08-024)
Mohammad Mamunur Rashid, Saitama University, Japan; Pannapa Herabat, North Dakota State University

Project Prioritization Using Multi-Objective Utility Functions (IBSMC08-006)
Michael B. Johnson, California Department of Transportation

Multi-Objective Optimization for Bridge Management Systems (IBSMC08-018)
Paul D. Thompson, Consultant; Kumares C. Sinha and Samuel Labi, Purdue University; Vandana Patidar, Jacobs Consultancy

Track: B
10:30 a.m. to 12 noon  Bridge Decks and Stay Cable
George Hearn, University of Colorado, and Jeremy K. Shaffer, InspectTech Systems, presiding

Rapid Concrete Bridge Overlays (IBSMC08-001A)
Michael M. Sprinkel, Virginia Transportation Research Council

Prioritization Strategy for Replacing Florida’s Deck Panel Bridges (IBSMC08-002A)
Rajan Sen, Niranjan Pai and Gary Mullins, University of South Florida; Ivan Gualtero, Ayers and Associates; Atiq Alvi, PB America

Condition Assessment, Rehabilitation Planning and Stay Cable Replacement Design for the Hale Boggs Bridge in Luling, Louisiana (IBSMC08-033)
Armin B. Mehrabi, Christopher A. Ligozio, Adrian T. Ciolkó and Scott T. Wyatt, CTLGroup

12 noon - 1:30 p.m.  Lunch
Luncheon Keynote: Critical Needs and Future Goals of the National Bridge Program
John C. Horsley, Executive Director, American Association of State Highway and Transportation Officials

Track: A
1:30 p.m. to 4:00 p.m.  Structural Performance, Monitoring and Remaining Life
Paul D. Thompson, Consultant, and Wayne J. Seger, Tennessee Department of Transportation, presiding

FHWA Long-Term Bridge Performance Program (IBSMC08-037A)
Hamid Ghasemi, Federal Highway Administration

Long-Term Structural Monitoring for Asset Management (IBSMC08-041)
Glenn Washer, University of Missouri, Columbia; Paul Fuchs, Fuchs Consulting, Inc.; Kathy Masterson and Caleb Philips, University of Missouri, Columbia

Technical Audits of Rail Infrastructure: Description of Existing Infrastructure and Evaluation of Past Performance (IBSMC08-031)
Bryan T. Adey and Rade Hajdin, Infrastructure Management Consultants GmbH, Switzerland

Benefits and Overview of Instrumentation-Based Structural Health Monitoring for Bridge Management (IBSMC08-032A)
Christopher A. Ligozio and Thomas L. Weinmann, CTLGroup

Estimating the Remaining Life of the GWB Wire Rope Suspenders Using Destructive and Non-Destructive Test Data (IBSMC08-042A)
Robert Kumapley and Stewart Sloan, Port Authority of New York and New Jersey
Track: B

1:30 p.m. to 4:00 p.m.  Accelerated Construction, Fiber-Reinforced Polymers and Corrosion Evaluation
Larry O’Donnell, Federal Highway Administration, and Todd Thompson, South Dakota Department of Transportation, presiding

National Perspective on Accelerated Bridge Construction (IBSMC08-005A)
Vasant C. Mistry, Federal Highway Administration

Use of Carbon Fiber-Reinforced Polymer (CFRP) to Extend the Fatigue Lives of Existing Steel Bridges (IBSMC08-017A)
A. Shafiee Monfared, K. Soudki and S. Walbridge, University of Waterloo, Canada

In-Situ Repair of Steel Bridges Using Advanced Composite Materials (IBSMC08-004)
Dennis Roach, Kirk Rackow and Waylon Delong, Sandia National Laboratories; Earl Franks, New Mexico Department of Transportation

Application of Fiber-Reinforce Polymer Materials in Rehabilitation and Construction of Structures in Colorado (IBSMC08-003A)

Corrosion Evaluation of Post-Tensioned Tendons in a Box Girder Bridge (IBSMC08-035)
Sivaraman Venugopalan, Siva Corrosion Services, Inc.

Buses Depart 4:30 p.m.  Tour of the Structural Engineering and Earthquake Simulation Laboratory at the University at Buffalo
Sponsored by University at Buffalo: The State University of New York, Multidisciplinary Center for Earthquake Engineering Research, and Others

Wednesday, October 22, 2008

7:00 a.m. – 12 noon  Registration and Information

7:00 a.m. - 8:00 a.m.  Continental Breakfast

8:00 a.m. to 9:30 a.m.  Bridge Modeling and NBI Translator
Wade F. Casey, Federal Highway Administration, and Rade Hajdin, Infrastructure Management Consultants GmbH, presiding

Modeling Approach of the National Bridge Investment Analysis System (IBSMC08-029)

Bridge Information Modeling for the Lifecycle: Progress and Challenges (IBSMC08-025)
Arunprakash M. Shirolé, Arora and Associates; Stuart S. Chen, University at Buffalo; Jay Puckett, University of Wyoming

Discussion on the Efficiency of the National Bridge Inventory (NBI) Translator Algorithm (IBSMC08-016)
Basak Aldemir-Bektas and Omar Smadi, Iowa State University

9:30 a.m. to 10:00 a.m.  Break
10:00 a.m. to 11:30 a.m.  **Structure Vulnerability and Weigh-In-Motion**  
Richard Kerr, *Florida Department of Transportation*, and Reed M. Ellis, *Stantec Consulting Ltd.*, presiding  
**Vulnerability Assessment of Individual Infrastructure Objects Subjected to Natural Hazards** (IBSMC08-028)  
James D. Birdsall and Rade Hajdin, *Infrastructure Management Consultants GmbH, Switzerland*  
**Multihazards Applications in Bridge Management** (IBSMC08-036)  
Sreenivas Alampalli, *New York State Department of Transportation*; Mohammed Ettouney, *Weidlinger Associate*  
**Innovative Bridge Weigh-in-Motion System for Bridge Maintenance: A Case Study with Bridge on Highway I-59** (IBSMC08-021)  
Hua Zhao, Nasim Uddin, Wilbur A. Hitchcock, Talat Salama and Ahmed S. Abd-EL-Meguid, *University of Alabama at Birmingham*  

11:30 a.m. to 12 noon  **Closing**  
Richard W. Shepard, *County of El Dorado Department of Transportation*, presiding