

MONDAY, AUGUST 21ST, 2017

7:00 am **REGISTRATION: Morgan Foyer, Second Floor**

8:00 am-8:50 am Chairman's Welcome and Keynote Session:  
Stuyvesant Room, First Floor

Stuyvesant  
Room  
First Floor

**BRIDGE ENGINEERING ASSOCIATION  
CHAIRMAN'S WELCOME:**

Dr. Khaled M. Mahmoud, PE, Chief Bridge Engineer  
BTC, New York City, USA

**KEYNOTE SESSION (I)**

**Maintenance on New York City Bridges** Robert  
O. Collyer, PE, Deputy Commissioner, Chief Bridge  
Officer, New York City Department of Transportation,  
USA

**An International Multi-Country Living Bridge  
Laboratory** Michael C Forde, Carillion Professor,  
School of Engineering, The University of Edinburgh,  
Scotland, UK

8:55 am-9:25 am **COFFEE BREAK: Morgan A, B, C & Foyer  
Second Floor**

9:30 am-11:25 am **SESSION 1A: ENGINEERING FOR 3rd  
BOSPHORUS BRIDGE IN TURKEY**

Morgan D  
Second  
Floor

**Fracture-based Analysis for the Cable Bands of  
Yavuz Sultan Selim Bridge in Turkey** K. Mahmoud,  
BTC, USA

**Fabrication and Transportation of Steel  
Deck Segments of Yavuz Sulan Selim (Third  
Bosphorus) Bridge** B. Uner, Gemak, Turkey

**Yavuz Sultan Selim Bridge: latest stay cable  
technology developments for long span cable  
stayed bridge** J. E. Erdogan, M. Guesdon, N. Fabry,  
I. Zivanovic, Freyssinet, France

**Seismic Isolation of the Yavuz Sultan Selim (3rd  
Bosphorus) Hybrid Suspension/Cable-Stayed  
Bridge:** C. Mendez-Galindo, G. Moor & M.  
Brüninghold, Mageba, Switzerland

**Instrumentation of the 3rd Bosphorus Bridge** S.  
Schorn, G. Hovhannessian and N. Cortes, Sixense,  
USA

9:30 am-11:30 am **SESSION 1B: BRIDGE ANALYSIS &  
DESIGN I**

**Cross-Frame and Connection Design for Ensuring  
Brace Effectiveness in Skewed Steel Bridges**

J. Zhou, C. Bennett & A. Matamoros, University of  
Kansas, USA

Astor 1&2  
Lower Level

**Finite element modeling of the influence of  
residual weld stresses on buckling** A. Outtier & H.  
De Backer, Ghent University, Belgium

**Development of AASHTO Wind Load Provisions**

W. Wassef, AECOM, & J. Raggett, West Wind Laboratory, USA

**The Effect of New Interchange Solutions on Structure Type Selection**

H. Sinson & S. Heimburg, Hardesty & Hanover, USA

**Reshaping the Kew Gardens Interchange**

M. Liona, Hardesty & Hanover, USA

9:30 am-  
11:25 am

**SESSION 1C: BRIDGE REHABILITATION**

**Weekend Replacement and Widening of Simple Span Superstructures for an Interchange using Prefabricated Superstructure Units and Micropiles**

G. Ricks & H. Jovani, HNTB, USA

O'Keefe 1&2  
Lower Level

**Modern non-bituminous flexible plug expansion joints – minimizing noise, maximizing driver comfort and accelerating bridge maintenance**

R. Bradley, G. Moor & G. Gallai, Mageba, Switzerland

**Widening of I-55 Over I-220 Near Jackson, MS with Shallow Depth Steel Girders**

L. Rolwes Jr., HNTB, USA

**Bridge 19 Vessel Impact Analysis and Repairs**

D. Marcic, Hardesty & Hanover, USA and M. R. Palumbo, St. Lawrence Seaway Management Corporation, Ontario, Canada

**An Overview of the Behavior of Concrete Bridges Strengthened with CFRP Laminates**

C. A. Issa, Lebanese American University, Lebanon

11:30 am-  
11:50 am

**AWARD CEREMONY**

Stuyvessant Room, First Floor

11:50 am-  
12:45 pm

**LUNCH**

Stuyvessant Room, First Floor and Morgan A, B & C, Second Floor

1:05 pm-  
2:35 pm

**SESSION 2A: ANALYSIS & MONITORING FOR RAIL BRIDGES**

Morgan D  
Second Floor

**Rail-Structure Interaction in Freight and High-Speed Rail Viaducts**

G. Wollmann, HNTB

**Fatigue Damage Assessment of Stay Cables for the Light Rail Transit Bridges**

J. Jiang WSP, Canada, and R. Coughlin, City of Vancouver, Canada

**Data-to-Decision Framework for Monitoring Railroad Bridges**

S. Alampalli, S. Alampalli, Prospect Solutions, LLC, M. Ettouney, Mohammed Ettouney, LLC, and J. Lynch, University of Michigan, USA

**Design of Bridges for High Speed Rail Loads and Requirements**

A. Ranasinghe, E Honarvar, S. Albhaisi, and P. Banibayat, JACOBS, USA

1:05 pm-  
2:35 pm

**SESSION 2B: BRIDGE BEARINGS, JOINTS  
& REINFORCED SOIL**

Astor 1&2  
Lower Level

**Geosynthetic Reinforced Soil Integrated Bridge Systems and Retaining Walls** B. Maguire, GSI, USA

**When bearing is not enough – Uplift Bearings**

A. Kutumbale, G. Moor & O. Maass, Mageba, Switzerland

**High Load Multirotational Bearings for the New Goethals Bridge** R. Watson, R.J. Watson, Inc., USA

**Testing of long-term performance of bridge expansion joints – a critical factor in minimizing life-cycle costs** B. Baillés, G. Moor & S. Hoffmann, Mageba, Switzerland

1:05 pm-  
2:35 pm

**SESSION 2C: BRIDGE SECURITY**

O’Keefe 1&2  
Lower Level

**Robust Bridge Design to Blast, Fire, and other Extreme Threats** S. Marjanishvili, and F. Fayad, Hinman Consulting Engineers, Inc., USA

**Effects of extreme fire scenarios on bridges I.** Kaundinya, U. Bergerhausen, Federal Highway Research Institute (BAST), Bergisch Gladbach, and J. Schmidt, Leipzig Institute for Materials Research and Testing, Leipzig, Germany

**Instrumentation and Monitoring Metro-North Park Avenue Viaduct after Fire Damage** Jesse D. Sipple, B. Commander, BDI, and M. R. Sheehan, N. Ziegler, Metro-North Railroad, USA

**Investigation of Existing Warning Systems for Overhead Clearance Detection** M. Maghiar, G. Maldonado & M. Jackson, Georgia Southern University, USA

2:35 pm-  
2:55 pm

**OBSERVENCE OF SOLAR ECLIPSE  
(Maximum Eclipse @ 2:44 pm)**

3:00 pm-  
3:35 pm

**COFFEE BREAK: Morgan A, B, C & Foyer Second Floor**

3:45 pm-  
5:15 pm

**SESSION 3A: PEDESTRIAN BRIDGES**

Morgan D  
Second  
Floor

**A Conceptual Design of a Footbridge over Kızılırmak River that Allows Pedestrian Induced Vibrations** Ö. Turan, N. Kesici, M. Ersoylu, İ. Şenol, H. Öztekin, N. Shaban, Middle Eastern Technical University, and A. Yilmaz, SismoLab, Turkey

**Interaction Between Pedestrian Loading and Vibration response of a Laboratory-Scale FRP Composite Footbridge** P. Archbold & B. Mullarney, Materials Research Institute, Athlone Institute of Technology, Ireland

**Case Studies of FRP Composite Pedestrian Bridges in Japan** W. Zatar & H. Nguyen, Marshall University, USA and H. Mutsuyoshi, Saitama University, Japan

**Static and Dynamic Behaviours of Spatial Arch Footbridges** Y. Kuribayashi, Kawada Industries Inc., Japan, & S. Nakamura, Tokai University, Japan

3:45 pm -  
5:15 pm

**SESSION 3B: STRUCTURAL HEALTH MONITORING**

Astor 1&2  
Lower Level

**Key technology of the New Champlain Bridge –its SHM system and modular expansion joints** G. Moor, B. Baillés and S. Rassy, Mageba, Switzerland

**Protection of Existing Structures Using Health Monitoring** A. Ramakrishna and R. Mankbadi, Hardesty & Hanover, USA

**Structural health monitoring of a historical suspension bridge** G.W. William, AECOM, S.N. Shoukry, West Virginia University, Morgantown, West Virginia and M.Y. Riad, Sargent and Lundy, LLC, Chicago, Illinois, USA

**Structural Health Monitoring of the Pulaski Skyway** X. Li, and T. Gallagher, HNTB

3:45 pm -  
5:15 pm

**SESSION 3C: BRIDGE ANALYSIS & DESIGN II**

O’Keefe 1&2  
Lower Level

**The Design and Construction of Kemaliye Bridge** S. Caculi and E. Namlı, EMAY, Turkey

**New Littoral Road Precast Box Girder Viaduct on the Coast of la Réunion Island** Jean-Marc Tanis, Consultant, Egis JMI, France

**Bending Stresses in Parallel Wire Suspension Bridge Cables** A. Gjelsvik, Columbia University & B. Yanev, New York City Department of Transportation, USA

**Designing the New NY Bridge: Tappan Zee Hudson River Crossing** Kathleen Caccamo, HDR, Manhattan, New York, USA

3:45 pm -  
5:15 pm

**SESSION 3D: ORTHOTROPIC DECK DESIGN & FABRICATION**

Stuyvessant  
Room  
First Floor

**Innovative fatigue design of orthotropic steel decks** H. De Backer, A. Outtier, W. Nagy & K. Schotte, Ghent University, Belgium

**Riding Surface for the Orthotropic Portion of San Mateo/Hayward Bridge** R. Maggenti, California Department of Transportation & S. Shatnawi, Shatec Engineering Consultants, LLC, USA

**Fabrication of the Orthotropic Deck Panels for the Yavuz Sulan Selim (Third Bosphorus) Bridge** B. Uner, Gemak, Turkey

**Fabricating orthotropic deck panels for the Macdonald Bridge, Halifax, NS, Canada** S. Ross, Cherubini Metal Works Limited, Canada

5:20 pm -  
6:15 pm

**Open Panel Discussion on Orthotropic Bridge Deck “Stuyvessant Room First Floor”**

**TUESDAY, AUGUST 22ND, 2017**

7:00am

**REGISTRATION: Morgan Foyer, Second Floor**

8:00 am-  
9:05 am

**KEYNOTE SESSION II**

**Setting up a Digital Bridge Asset Management System with Data from Robots, Drones & IoT sensors** Lars Fuhr Pedersen, Technical Director, Sund & Baelt Holding A/S, Copenhagen, Denmark

Stuyvesant  
Room  
First Floor

**Bridge Design for the First High Speed Train in Morocco** Jean-Marc Tanis, Consultant, Egis JMI, France

9:05 am-  
9:55 am

**COFFEE BREAK: Morgan A, B, C & Foyer  
Second Floor**

10:00 am-  
11:55 am

**SESSION 4A: MANAGEMENT  
STRATEGIES FOR MAIN CABLES**

Morgan D  
Second Floor

**Dehumidification of the Main Cables of the Delaware Memorial Bridge S. A. Elnahal, S. K.Scindia, Delaware River and Bay Authority (DRBA)**, B. R. Colford & S. R. Beabes, AECOM, USA

**Main Cable Dehumidification – Flow Testing and Other Innovations** M. L. Bloomstine, J. Fredrik Melén, COWI A/S, Denmark

**Application of Dehumidification to Cable Management and Preservation Strategies** S. R. Beabes, B. R. Colford, & J. D. Pudleiner, AECOM, USA

**Management Strategies for Main Suspension Cables** K. Mahmoud, BTC, USA, and W. Hindshaw, Transport Scotland, R. McCulloch, Amey, Scotland

**M48 Severn Bridge – Managing the Main Cables since 2005** C. Cocksedge, AECOM, M. Maynard, Highways England, A. Burt, Severn River Crossing, and B. Urbans, S. A. Baron, AECOM, UK

10:00 am-  
11:55 am

**SESSION 4B: BRIDGE CONSTRUCTION**

Astor 1&2  
Lower Level

**Accelerated Bridge Construction Project and Research Database** D. Garber & M. Lou Ralls, Director of Technology Transfer, ABC University Transportation Center, USA

**Five (5) Mile Belt Parkway Reconstruction Project - Six (6) Bridges between Pennsylvania Avenue and Knapp Street, Brooklyn, NY** D. Hom, New York City DOT, W. Ferdinandsen, Greenman Pedersen, Inc., P. Dombrowski, AECOM, USA

**Extending the Structural Life of Concrete Infrastructure** P. S. Rhodes, J. Tuerack, F. Wahab and A. Rhodes, Hycrete Inc., USA

**Garden State Parkway Mainline Bridges over NJ Route 17** D. Hicks, Dewberry, USA

**Design-Build Replacement of the I-278 Kosciuszko Bridge Phase 1- Approaches and Connectors** P. D'Ambrosio, G. Decorges, and B. Sivakumar, HNTB, USA

10:00 am-  
11:55 am

**SESSION 4C: SEISMIC ANALYSIS & GEOTECHNICAL DESIGN**

O'Keefe 1&2  
Lower Level

**Seismic Retrofit Design of Highway-Railway Combined Suspension Bridges** Y. Hirayama, M. Nishitani, and C. Kawatoh, Honshu-Shikoku Bridge Expressway Co., Ltd., Kobe, Japan

**Design-Oriented Seismic Soil-Pile-Superstructure Interaction Analysis using a Dynamic p-y Method** A. Taghavi, A. Patil, M. Davidson, Engineering School of Sustainable Infrastructure & Environment, College of Engineering, University of Florida, USA

**Foundation Reuse in Urban Bridge Projects** F. Jalinoos, FHWA R&D and A. Agrawal, The City College of New York, USA

**A Fresh Start – The New Geotechnical Design Manual for the New Jersey Turnpike Authority** M. Riegel, D. GE, J. DiMaggio, K. Ravishankar, HNTB

12:00 pm-  
12:55 pm

**LUNCH** : Stuyvessant Room, First Floor and Morgan A, B & C, Second Floor

1:10 pm-  
3:10 pm

Morgan D  
Second Floor

**SESSION 5A: CONSTRUCTION, ERECTION & TESTING OF CABLE-SUPPORTED BRIDGES**

**Angus L. Macdonald Bridge Suspended Structure Replacement– An Owner's Perspective** J. Eppell, Halifax Harbour Bridges, Canada

**Superstructure Replacement Works for the Macdonald Suspension Bridge** D. Radoj^vic & K. F.Kirkwood, COWI, Canada

**Non-Destructive Testing, Evaluation and Forensics of Suspender Cables Utilizing Proven Technologies** F. Williams, Bridon-Bekaert, The Ropes Group, Québec, Canada

**Construction of the Ohio River Bridges East End Crossing Cable-stayed Bridge** M. Loizias, JACOBS, USA

**Erection Engineering for the Cable-Stayed Spans of the Kosciuszko Bridge** A. B. Halpern, O. Murat Hamutcuoglu, and J. A. Bryson, HNTB, USA

1:10 pm-  
3:10 pm

Astor 1&2  
Lower Level

**SESSION 5B: MOVABLE BRIDGES**

**Innovative Cable System Designs** T. W. Klein, Wire Co World Group, USA

**The Sarah Mildred Long Bridge** P. Roody, S. Harlacker & F. Sieh, Hardesty & Hanover, USA

**Repairs to 13 Movable Bridges in NYC after Hurricane Sandy** E. Kelly, HNTB, & B. Gusani, New York City Department of Transportation, USA

[The Gut Bridge](#) P. Roody, Hardesty & Hanover, USA

[The New Johnson Street Bridge – A Unique Bridge in a Unique Project](#) K. R. Griesing, Hardesty & Hanover, USA

1:10 pm-  
3:10 pm

**SESSION 5C: FATIGUE ANALYSIS & ASSESSMENT**

O’Keefe 1&2  
Lower Level

[Phased Array Ultrasonic Testing \(PAUT\) performed on Electroslag Weld Specimen Subject to Cyclical Tension Load Testing](#) M. Wahbeh, M. Foerder, and R. Boundouki, Alta Vista Solutions, USA

[Bridge Rating Modification to Incorporate Potential Fatigue Damage from Truck Overloads](#) B. Jang & J. Mohammadi, Illinois Institute of Technology, USA

[Prediction of fatigue failure of corroded bridge wires using 3D laser scanner](#) K. Miyachi, Japan Construction Method and Machinery Research Institute, Japan, & S. Nakamura, Tokai University, Japan

[Multiaxial Fatigue Assessment of Welded Connections in Railway Steel Bridge under Constant and Variable Amplitude Loading](#) K. R. Praveen, S. Mishra, National Institute of Technology Patna, India, P. Babu, DB Engineering and Consulting, India, and A. Spagnoli, A. Carpinteri, University of Parma, Italy

1:10 pm-  
3:10 pm

**SESSION 5D: BRIDGE ANALYSIS & DESIGN III**

Stuyvessant  
Room  
First Floor

[Design and Construction of the New Champlain Bridge](#) M. Nader, Z. McGain, S. Demirdjian, J. Rogerson and G. Mailhot, TY Lin, USA

[Analysis and Design of the South Road Double Composite Steel Tub Girder Bridge](#) M. Loureiro, M. Ingram & M. Loizias, JACOBS, USA

[Design of a Short Span Suspension Bridge: Detailing for Success in Rural Kenya](#) J. Smith & M. Bowser, WSP, Oakville, Canada and K. Severns, WSP/PB, Washington, DC, USA

[Design and Construction of a Bus/HOV Ramp at the Verrazano Narrows Bridge](#) P. Blasko, G. Zikely, HNTB and A. Zulinska, MTA Bridges & Tunnels, USA

[Exploration of EUROCODE Live Load Distribution Factors for Multi Girder Bridges](#) M. Çınar, M. Açıklalın Altunlu, BridgeWiz, New York, USA and A. Caner, Middle East Technical University, Turkey

3:15 pm-  
3:45 pm

**COFFEE BREAK: Morgan A, B, C & Foyer  
Second Floor**

4:00 pm-  
5:30 pm

**SESSION 6A: BRIDGE MODELING**

Morgan D  
Second floor

[Numerical modeling of drilled shaft lateral response adjacent to existing caisson foundation Pulaski Skyway](#) L. Wei, D. Ha and S. Patel, JACOBS, USA

**3D Structural Modeling of Stringer-Bent Connections on Gowanus Expressway** X. Wei, A. DeVito & W. S. Najjar, WSP, USA

**Experimental and FEM studies on the new steel/concrete composite bridge using rolled steel H-beams** M. H. Elmy & S. Nakamura, Tokai University, Japan

**FEM and experimental studies on the new concrete filled steel I-girder bridge** W. Safi & S. Nakamura, Tokai University, Japan

4:00 pm-  
5:30 pm

**SESSION 6B: BRIDGE MAINTENANCE**

O'Keefe 1&2  
Lower Level

**Design of John Greenleaf Whittier Memorial Replacement Bridge** G. Wollmann, HNTB, USA

**Design-Build Services for Ellison Avenue Bridge Replacement** J. Stern, Greenman-Pedersen, Inc., USA

**Continuous Galvanized Reinforcement and its Corrosion Resistance** M. Stroia, AZZ Metal Coatings, USA

**Surface Preparation of Hot-Dip Galvanized Iron and Steel and Hardware Surfaces for Painting** K. Irving, AZZ Metal Coatings, USA

4:00 pm-  
5:30 pm

**SESSION 6C: BRIDGE HISTORY & AESTHETICS**

Stuyvesant  
Room  
First Floor

**Painting New York's Bridges** Stuart Rothwell, Stuart Rothwell & Associates, Australia

**The Hell Gate Arch Bridge in New York** K. Gandhi, Gandhi Engineering, USA

**The Impact of Ancient History, Conflict and Globalization on Bridge Aesthetics in Iran** R. Mansour, International Bridge Technologies, Canada

**The Failure and Reconstruction of the Quebec Bridge** K. Gandhi, Gandhi Engineering, USA

5:35 pm-  
6:25 pm  
Stuyvesant  
Room  
First Floor

**Open Discussion on Bridge Aesthetics**

6:25 pm

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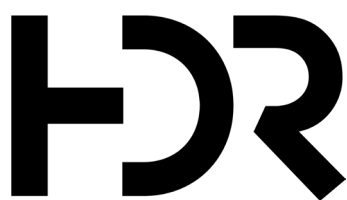


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## **TABLE-TOP DISPLAYS**

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