CONFERENCE PROGRAM FOR MONDAY, JULY 25, 2011

7:00am

REGISTRATION: Morgan Foyer, Second Floor

8:00-10:00 am
Morgan Room
Second Floor

Chairman's Welcome and Keynote Session: Morgan Room, Second Floor

BRIDGE ENGINEERING ASSOCIATION CHAIRMAN'S WELCOME:
Dr. Khaled M. Mahmoud, PE, President
Bridge Technology Consulting, New York City, USA

KEYNOTE SESSION (I)

Improving Bridge Safety Myint Lwin, Director of the Office of Bridge Technology, Federal Highway Administration, USA

Nondestructive Test (NDT) Methods for Evaluation of Concrete Bridges - Working Beyond International Standards Michael C. Forde, Carillion Professor, School of Engineering, University of Edinburgh, Scotland, United Kingdom

Rehabilitation of the Brooklyn Bridge Henry Perahia, PE, Deputy Commissioner & Chief Bridge Officer, New York City Department of Transportation, USA

Application of Optimized Welding to Bridge Construction Alan Pense, Professor Emeritus, Lehigh University

10:00-10:45 am
Stuyvesant Room

COFFEE BREAK: Stuyvesant Room (First Floor)

10:50-12:35 pm
O'Keefe 1 & 2
Lower Level

SESSION 1A: CABLE-SUPPORTED BRIDGES (I)

Humber Bridge Main Cable Dehumidification and Acoustic Monitoring
C. Cocksedge & M. J Bulmer, AECOM Ltd, London, UK, P. G. Hill & J. R. Cooper, Humber Bridge Board, UK

Influence of Corrosion Pits and Pre-existing Cracks on Suspension Bridge Wire Mechanical Properties K. Mahmoud, Bridge Technology Consulting (BTC), New York City, R. Vecchio, and B. Goldenberg, Lucius Pitkin, Inc., New York City, USA

Characteristics of Hanger for Long Suspension Bridges M. Inoue, IHI Infrastructure System Co., Ltd., Tokyo, JAPAN

Estimates of Combined Axial-Bending Stress in the Anchorage Zones of Bridge Stay Cables C. Papadopoulos & A.R. Figueroa Massanet, University of Puerto-Rico, Mayaguez, and H. Tabatabai, University of Wisconsin, Milwaukee

10:50-12:35 pm
Astor 1 & 2
Lower Level

SESSION 1B: BRIDGE ASSESSMENT, MAINTENANCE & RETROFIT (I)

Bridge Design Verification and Structural Condition Assessment through Digital Image Correlation and Structural Modeling J. Peddle, A. Goudreau, E. Carlson, and E. Santini-Bell, University of New Hampshire, USA

Identifying and Sharing Best Practices in Bridge Maintenance and Management M. Myers and H. Capers, Jr., Arora and Associates, P.C., USA

Asset Management of Earth Retaining Structures O. Brutus, G. Tauber, and K. Gandhi, Gandhi Engineering, Inc., New York, New York

Strategies in Tunnel Design, Construction, Maintenance, Inspection and Operations H. Capers, Jr., L. Jiang, and K. Thompson, Arora and Assoc., USA

10:50-12:35 pm
Vanderbilt Room
Second Floor

SESSION 1C: INNOVATIVE BRIDGE TECHNOLOGY

Embodied Carbon Life-Cycle Assessment of Bridges: A Case Study of a Sea Crossing in Hong Kong A.Wong, Ove Arup and Partners, Hong Kong

An Innovative Energy Storage Bridge C. Wong, Arup and Partners, Hong Kong

Concrete Filled Tubular Flange Girder Bridge R. Bondi, Michael Baker., USA

The Queens Boulevard Bridge - The NEXT Generation D. Tuckman, and M. Deitch, Hardesty & Hanover, USA

12:40-1:55 pm

AWARDS CEREMONY & LUNCH:
Morgan Room, Second Floor

2:10 - 3:55 pm
O'Keefe 1 & 2
Lower Level

SESSION 2A: CABLE-SUPPORTED BRIDGES (II)

The Cable-Stayed Bridge across the River Sava in Belgrade P. Walser, S. Hopf, Leonhardt, Andrä und Partner GmbH, Stuttgart, Germany, and M. Steinkühler, Porr Technobau und Umwelt Aktiengesellschaft, Vienna, Austria

Portland Milwaukie Light Rail Bridge: First Transit-only Cable-Stayed Bridge M. Jones, M. Van Duyn, S. Treyger, HNTB, & S. L. Barrett, TriMet, USA

Two major stay cables bridges in Vladivostok J. Stubler and E. Millier, Freyssinet, France

Wind study for City Island cable-stayed bridge over Eastchester Bay in the Bronx, New York City J. Raggett, West Wind Laboratory, Inc., Canada,
M. Virlogeux, Designer, France and K. Gandhi, Gandhi Engineering, USA

Indian River Inlet Bridge – A design-build in progress E. Nelson, AECOM

2:10 - 3:55 pm
Astor 1 & 2
Lower Level

SESSION 2B: BRIDGE ANALYSIS & DESIGN (I)

The New Lake Champlain Bridge Design Process T. Potts, & J. Billings, HNTB., J. Bridges & J. Boni, NYSDOT, Region One, Schenectady, New York

Rhine-Rhone High Speed Rail-Eastern Branch, Savoureuse Valley Viaduct
F. Menuel, EGIS JMI, France

The Role of Finite Element Analysis in Bridge Assessment and Design T.J. Cakebread, LUSAS

FHWA Design Criteria for Arch and Cable-Supported Bridges F. Sheikh Ibrahim, Federal Highway Administration, and V. Chandra & J. Tse, Parsons Brinckerhoff, USA

Dead Load and Live Load Combination Factors for Bridges A.S. Nowak, P. Rakoczy, University of Nebraska - Lincoln and F. Sheikh Ibrahim, Federal Highway Administration, USA

Unified Method in Designing Slender Panel Subjected to Bending, Axial Load, and Shear K. Frank, Hirschfeld Industries, E. Bader, and J. Tse, Parson Brinckerhoff, USA

2:10 -3:55 pm
Vanderbilt Room
Second Floor

SESSION 2C: HISTORIC & SIGNATURE BRIDGES

Two Signature Bridges in Abu Dhabi, UAE C. Menn and S. Koeppel, Christian Menn Partners AG, Chur, Switzerland

The St. Louis Bridge, the Brooklyn Bridge, and the feud between Eads and Roebling K. Gandhi, Gandhi Eng. NYC

Site and sight: Examining the forms of Hudson River Bridges P. Draper, Manhattan College, E. Segal, Simpson Gumpertz & Heger, New York, and A. O'Connor, Manhattan College, New York

Rehabilitation of the Historic High Bridge over the Harlem River A. Mallick,. NYC DDC, and J. Pullaro & G. M. Zamiskie, Tran System Corp., New York

A Signature Footbridge for Xinjin, China Q. Ye, J. Zhang, C. Clark and G. Fanjiang, Weidlinger Associates, Inc., New York, New York, USA

3:55 - 4:30 pm
Stuyvessant Room
First Floor

COFFEE BREAK: Stuyvesant Room, First Floor

4:35 - 6:20 pm
O'Keefe 1 & 2
Lower Level

SESSION 3A: BRIDGE ANALYSIS & DESIGN (II)

Experimental Evaluation of GFRP Bars as Reinforcement for Concrete Bridge Decks: Negative Bending Low Cycle Fatigue Study J. Yost, Villanova University, Pennselvania, and A.L. Russo, Dewberry, New York, New York, USA

Proposed New York State Load & Resistance Factor Rating (LRFR) Methodology M. Ghosn, CCNY, B. Sivakumar and Feng Miao, HNTB, USA

4-D Bridges: Flexible Parametric Approach to Bridge Design S. Potapova, Arup, New York, New York, USA

Using the Analytic Hierarchy Process to Improve the Rutgers Simple Bridge Security Checklist M. Valeo & H. Capers Jr., Arora and Associates, P.C., and H. Nassif, Rutgers University, New Jersey, USA

Updates on AASHTO-NSBA Collaboration Documents and the Steel Erection Guide Specification B. McEleney, National Steel Bridge Alliance (NSBA), T. Kiener, Collins Engineering

4:35 - 6:05 pm
Astor 1 & 2
Lower Level

SESSION 3B: SEISMIC ANALYSIS & DESIGN

Overview of Geology and Foundations of Bridges in the East Coast of USA S. Nikolaou, and H. Lacy, Mueser Rutledge Consulting Engineers

Guidelines for Post-Seismic Bridge Inspections Alampalli, NYSDOT, and J. O'Connor, University at Buffalo, New York, USA

Comparative of single pendulum and triple pendulum seismic Isolation bearings on the St. Laurent Bridge, Quebec, Canada J. Barbas, P. Matusewitch & M. Williams, Arup,USA

Accelerating bridge construction with prefabricated bridge elements—The latest in new technology for moderate to high seismic regions in the United States. B. Khaleghi, Washington State DOT, K. Thompson, Arora Assoc., and P. Chung, CALTRAN

4:35 - 6:05 pm
Vanderbilt Room
Second Floor

SESSION 3C: BRIDGE INSPECTION AND REHABILITATION (I)

New tools for inspection of gusset plates C. Higgins and O. Turgul Turan, Oregon State University, USA

Sliding Finger Joints of the Audubon Bridge, Louisiana, USA T. Spuler, G. Moor & C. O'Suilleabhain, Mageba SA, Bulach, Switzerland

Replacement of the Hog Island Channel and Powell Creek Bridges L. Fernandez, TranSystems, New York, New York, USA

Replacement of the East 78th Street Bridge over FDR Drive in New York City R. Patel, M. Goldberger & K. Gandhi, Gandhi Engineering, Inc., New York, New York, USA

CONFERENCE PROGRAM FOR TUESDAY, JULY 26, 2011

7:00am

REGISTRATION: Morgan Foyer, Second Floor

8:00-10:00 am
Morgan Room
Second Floor

KEYNOTE SESSION (II)

FHWA Long-Term Bridge Performance Program-Status Update H. Ghasemi, FHWA and A. Maher, Rutgers University, USA

The Terenez Bridge, A Curved Cable-Stayed Bridge in French Brittany Michel Virlogeux, Consulting Engineer and Designer, France

Bridge over The Maine in Angers, France
Jean-Marc Tanis, CEO, EGIS JMI, France

An Analytical Study of Residual Displacements in RC Bridge Columns Subjected to Near-Fault Earthquakes M. Saiidi Saiidi, Professor, Department of Civil & Environmental Engineering, University of Nevada Reno, USA

Developments in Overlay Materials for Orthotropic Bridge Decks
Charles Seim, Consulting Bridge Engineer, California, USA

10:00-10:40 am
Stuyvesant Room

COFFEE BREAK: Stuyvesant Room, First Floor

10:45-12:50 pm
O'Keefe 1 & 2
Lower Level

SESSION 4A: CABLE-SUPPORTED BRIDGES (III)

The Influence of Time-dependent Phenomena in Segmental Construction of Concrete Cable-Stayed Bridges M. Arici & M.F. Granata, Università di Palermo, and A. Recupero, Università di Messina, Italy

Cable Corrosion and Hydrogen Brittleness K. Kobayashi, S. Kikuchi & K. Ogihara, Honshu-Shikoku Bridge Expressway, Kobe, Japan

BTC Method Evaluation of Remaining Strength of Suspension Cables of Mid-Hudson Bridge, USA
K. Mahmoud, Bridge Technology Consulting (BTC), New York City, W.J. Moreau, New York State Bridge Authority & S. Alampalli, NYSDOT, USA

Main Cable Corrosion Protection by Dehumidification: Experience, Optimization and New Developments M. L. Bloomstine, COWI A/S, Denmark

A Technical Report on the "TRILLIZOS" Bidges, La Paz, Bolivia S. Delgado, Fiscal de Diseño, PUENTES TRILLIZOS - GMLP, Bolivia

10:45-12:50 pm
Astor 1 & 2
Lower Level

SESSION 4B: BRIDGE DECK EVALUATION & REHABILITATION

A Review of Alternatives for Orthotropic Bridge Deck Panels W. De Corte, Ghent University College, Ghent, Belgium

Reliability of Bridge Decks in Northern Deicing Environments H. Tabatabai, C.-W. Lee, and M.A. Tabatabai, University of Wisconsin- Milwaukee

An Orthotropic Steel Bridge Deck for Multiple Longitudinal Bridge Girders R. Vincent, Canam Group Inc., Boucherville, Quebec, Canada

Monitoring of Longitudinal Cracks in an Emprically Designed Reinforced Concrete Bridge Deck G. William, S. Shoukry and M. Riad, West Virginia University, Morgantown, USA

Deck Rehabilitation and Drainage Replacement at the Cross Bay Veterans Memorial Bridge P.J. Swanton, Dewberry-Goodkind, and M. Ghaly, Ammann & Whitney, USA

10:45-12:50 pm
Vanderbilt Room
Second Floor

SESSION 4C: BRIDGE ASSESSMENT, MAINTENANCE & RETROFIT (II)

Advancement in the Use of Thermographic Imaging for the Condition Assessment of Bridges G. Washer, University of Missouri, Colombia, USA

Decision Making Tool Incorporating Sensor Data Sharda Alampalli, Prospect Solutions, New York, and M. Ettouney, Weidlinger Associates, New York, New York

Mitigating Bridge Structural Fatigue Cracking using Aerospace Derived Technology
L. Reid, Fatigue Technology, Seattle, Washington,, USA

Structure Inspection and Management System for State of Minnesota. J. K. Shaffer & M.C. Schellhase, InspectTech Systems Inc., Pittsburgh, PA, USA

Laboratory Evaluation of Corrosion Prevention and Control Methods for Reinforced Concrete Bridges
H. Tabatabai, M. Pritzl, and A. Ghorbanpoor, University of Wisconsin, Milwaukee

12:55-1:55 pm

LUNCH: Morgan Room, Second Floor

2:05 - 3:55 pm
O'Keefe 1 & 2
Lower Level

SESSION 5A: BRIDGE ANALYSIS & DESIGN (III)

Bridge Design for Maintenance B. Colford, Forth Road Bridge, Forth Estuary Transport Authority, South Queensferry, Scotland, UK

Lateral Loads Applied by Pedestrians at Normal Walking Velocities P. Archbold & B. Mullarney, Athlone Institute of Technology, Ireland

Low Profile Uplift Bearings for the Atlantic Avenue Viaduct, New York City R. J. Watson, and J. Conklin, R.J. Watson, Amherst, New York, USA

Design of the Forth Replacement Crossing, Scotland, UK S. Kite, Arup, London, UK & M. Carter, Arup, Hong Kong, and B. Minto, Forth Replacement Crossing Project, Transport Scotland, Glasgow, UK

Web Plumb Influence on Skewed I-girder, Steel Bridges During Construction M. Sharafbayani & D.G. Linzel, Pennsylvania State University, USA

2:05 - 3:55 pm
Astor 1 & 2
Lower Level

SESSION 5B: BRIDGE INSPECTION AND REHABILITATION (II)

Replacement of the Bronx-Whitestone Bridge Approaches J. Lorentzson, MTA Bridges & Tunnels , P. Nietzschman, PB/ Sells, G. Maurer – Conti, NY and J. Balinski, GPI/Parsons

Main span hinge elimination and continuity retrofit of the Sandesund Prestressed Box Girder Bridge in Norway S. Fjeldheim, Norwegian Public Roads Admin., & S. Kr. Heggem, Johs Holt AS, Consulting Engineers, Norway

Rehabilitation of the Atlantic Avenue Viaduct, Nw York City G. Decorges, J. Steinhouse, HNTB Corp., USA

Rehabilitation of the 31st Street Arch of Hell Gate Viaduct, New York City M. Abrahams, Parsons Brinckerhoff, New York, New York, USA

Delaware River Turnpike Bridge - Riveted Connection Analysis and Retrofit R. Schaefer & B. Buckman, HNTB and W. Scott Johnsen & J. Laird, New Jersey Turnpike Authority, USA

2:05 -3:55 pm
Vanderbilt Room
Second Floor

SESSION 5C: MOVABLE BRIDGES

Design of Willis Avenue Swing Bridge Replacement, New York City W. E. Nyman, Hardesty & Hanover, USA

Replacement of Willis Avenue Bridge: Highlights of Construction Challenges A. Hedayati, Entech Engineering, New York City, USA

Lift Bridge of Bordeaux, France J-M. Tanis and F. Menuel, EGIS JMI, France

The Advancement of Wire Rope in Movable Bridges T. W. Klein, WireCo WorldGroup, Kansas City, Missouri, USA

New Bascule Bridge for Historic New Bern, North Carolina E. Kelly, HNTB Corp., USA

3:55 - 4:25 pm
Stuyvessant Room
First Floor

COFFEE BREAK: Stuyvesant Room, First Floor

4:30 - 6:10 pm
O'Keefe 1 & 2
Lower Level

SESSION 6A: BRIDGE ASSESSMENT, MAINTENANCE & RETROFIT (III)

Retrofit of MacKay Suspension Bridge, Nova Scotia, Canada K. Kirkwood, P. Buckland, & K. Bal, Buckland & Taylor Ltd, J. Eppell, Halifax Harbour Bridges, and J. Newhook, Dalhousie University, Halifax, NS, Canada

Rapid Replacement of Bridges Using Modular Systems B. Sivakumar and K. Price, HNTB Corp., USA

Remote Structural Monitoring Systems for Long-term Confidence in a Structure's Condition T. Spuler, G. Moor & R. Berger, Mageba SA, Switzerlan, and R. Watson, R.J. Watson, Inc., USA

FRP Retrofit of Deck Cracking at Central Avenue Bridge in Iowa M. Stafford, R.J. Watson Inc., & S. Loeding, Fibrwrap Construction, New York

4:35 - 6:15 pm
Astor 1 & 2
Lower Level

SESSION 6B: BRIDGE INSPECTION AND REHABILITATION (III)

Rehabilitation of the Northbound and Southbound Bruckner Expressway Bridgess, New York City M. Buyson and M. Shams, HDR, USA

Verification of Plant Mix Additive Used to Produce Bridge Deck Waterproofing Materials G.M Rowe, Abatech Inc., Pennsylvania, P. Blankenship, Asphalt Institute, Kentucky, and D. Zuberer, Chase Construction Products, Massachussetts, USA

Suspender Replacement of Albany's Twin Bridges B. Blabac, Modjeski & Masters

Deck Truss Bearing Rehabilitation for the Benjamin Franklin Bridge Q. Ye & Q. V. Nguyen, Weidlinger Associates, Inc., New York,., and E. Montgomery & M. Venuto, Delaware River Port Authority, New Jersey, USA

4:35 - 6:15 pm
Vanderbilt Room
Second Floor

SESSION 6C: BRIDGE HYDRAULICS & SCOUR

Simple Method for Remote Monitoring of Bridge Scour A. Zarafshan, A. Iranmanesh, and F. Ansari, University of Illinois at Chicago

Lessons Learned in Scour Monitoring B.E. Hunt, Consulting Engineer, New York, New York, USA

Ground Penetrating Radar as Investigative Tool for Bridge Scour K. Campbell, CEI COLLINS ENGINEERS LTD., Northern Ireland

Incorporating Climate Change Predictions in the Hydraulic Analysis of Bridges G.M. Shields, The City University of New York, USA

6:15 pm

CONFERENCE ADJOURNS