

## Keynote Session

Presented Monday, June 13, 2005

Chaired by: Enrico T. Bruschi, PE, DMJM Harris, Pittsburgh, PA

*Not Published in these Proceedings*

John Kulicki, Ph.D., P.E., *Modjeski and Masters, Inc., Harrisburg, PA*

J. Richard Capka, *Deputy Administrator for the Federal Highway Administration, Washington, DC*

David A. Cole, *Commissioner, Maine Department of Transportation, Augusta, ME*

## Featured State Session

Presented Monday, June 13, 2005

Chaired by: James E. Tukey, PE, Maine Department of Transportation, Augusta, ME

### **Maine and its Bridge Community**

James E. Tukey, PE, *Maine DOT, Augusta, ME*

IBC-05-01

### **Unique Bridges, Challenges, and Solutions**

Eric C. Shepherd, PE, *Maine DOT, Augusta, ME*

IBC-05-02

### **Development of Next-Generation Hybrid Composites**

Habib Dagher, PhD, *University of Maine, Orono, ME*

IBC-05-03

### **Lightweight Structures for Bridge Applications**

Edward E. Hansen, *Precision Light Systems, Brunswick, ME* and Stephen P. Abbott, P.E., *Technology Systems, Inc., Wiscasset, ME*

IBC-05-04

### **Cutting-Edge Technology: A Contractor's Perspective**

Peter G. Vigue, *Cianbro Corporation, Pittsfield, ME*

IBC-05-05

### **From Disaster to Opportunity: Story of a Bridge Project in Maine**

Bruce VanNote, *Maine DOT*; Kaven Philbrook, *Cianbro/Reed & Reed LLC*; Jay Rohleder, PE, *Figg Engineering Group, Tallahassee, FL* and Dyab Khazem, PE, *Parsons Engineering*

IBC-05-06

## **Proprietary Session**

Presented Monday, June 13, 2005

Chaired by: Eric S. Kline, KTA-Tator, Inc., Pittsburgh, PA

### **Bridge Deck Condition Assessment using Ground Penetrating Radar**

Robert Parrillo and Roger Roberts, PhD, *Geophysical Survey Systems, Inc., North Salem, NH*; and Allan Haggan, *Maine Dept. of Transportation*

IBC-05-08

### **An Innovative Rehabilitation of the 78-years Old Benjamin Franklin Bridge Approach Structures Without Disrupting Traffic**

Alex Y. Rong, *Delaware River Port Authority, Camden, NJ*, Miki Funahashi, PE, *Corrpro Companies, Inc., West Chester, PA*; and Daniel G. Faust, PE, *Delaware River Port Authority, Camden, NJ*

IBC-05-09

### **Increased Use of MSE Structures for Support of Bridges**

Peter L. Anderson, PE, *The Reinforced Earth Company, North Reading, MA* and Keith Brabant, PE, *The Reinforced Earth Company, Norcross, GA*

IBC-05-10

### **Debris Control Structures: Before and After Bridgeshark Systems Installations**

F. Michael Collier, *Debris Free Inc., Ojai, CA*

IBC-05-11

### **Applying Precast Solutions To “Get in, Get Out, Stay Out”**

Jason V. Philbin, PE, *CON/SPAN Bridge Systems, Charlotte, NC*, and Jeffrey J. Von Handorf, PE, *CON/SPAN Bridge Systems, Dayton, OH*

IBC-05-12

## **Long Span Bridges Session**

Presented Tuesday, June 14, 2005

Chaired by: Arthur W. Hedgren, Jr., PhD, PE, Consultant, Pittsburgh, PA

### **Stainless Steel For Bridge Construction - Materials for the Towers of The Stonecutters Bridge, Hong Kong**

Graham Gedge, *Arup Materials Consulting, Blythe Valley Park, Solihull, UK*

IBC-05-13

### **Earthquake Performance of Long-Span Truss Bridges in New York State**

Arthur L. Wolek, PE, *Lichtenstein Consulting Engineers, New York, NY* and Bala Sivakumar, PE, *Lichtenstein Consulting Engineers, PC, Paramus, NJ*

IBC-05-14

### **Innovative Design for the First Double-deck with Twin PC Girder Cable-Stayed Bridge**

Xu Gongyi, Mei Xinyong and Zhuang Yong, *Major Bridge Reconnaissance & Design Institute Co.,Ltd, Wuhan, P.R.China* and Zhang Min, *Central South University, Changsha, China*

IBC-05-15

### **Ironton Russell Single Tower Cable-Stayed Bridge Configuration – Optimization for Client Engineering Constraints**

Terrence J. Tiberio and Joseph E. Salvadori, *Michael Baker Jr. Inc., Moon Township, PA* and Armin Schemmann, *Buckland & Taylor Ltd, North Vancouver, BC, Canada*

IBC-05-16

## **Design, Part 1 Session**

Presented Tuesday, June 14, 2005

Chaired by: Herbert M. Mandel, PE, GAI Consultants, Inc., Pittsburgh, PA

### **Replacement of Cranston Viaducts Using Spliced Bulb-Tee Girder Technology**

Firooz Panah, PE, *DMJM+HARRIS, Boston, MA* and H. Raymond Palmer *DMJM+HARRIS, Providence, RI*

IBC-05-17

### **Deeply Haunched Spliced Precast Girders meet Architectural Demands of City Historic District**

John C. Shanks, Jr., PE, *Burgess & Niple, Inc., Columbus, OH*

IBC-05-18

### **Context Sensitive Design for the Fulton Road Bridge Replacement**

John C. Dietrick, PE, SE and Jeff W. Broadwater, PE, *Michael Baker Jr. Inc., Cleveland, OH*

IBC-05-19

### **Innovation - Thy Name is Victory Bridge!**

Harry A. Capers, Jr., PE, *NJDOT, Trenton, NJ* and Garrett G. Hoffman, PE and Claudia P. Pulido, Ph.D, P.E., *Figg, Tallahassee, FL*

IBC-05-20

## **Research Session**

Presented Tuesday, June 14, 2005

Chaired by: M. Myint Lwin, Federal Highway Administration, Washington, DC

### **Ironton Russell Bridge – Wind Considerations and Remedial Issues for a Narrow Long Span Single Tower Cable-Stayed Bridge**

Scott Gamble, *Motioneering Inc./Rowan Williams Davies & Irwin Inc. Group, Guelph, Ontario, Canada*, Terrence J. Tiberio and Robert W. Bondi, *Michael Baker Jr., Inc., Moon Township, PA*  
IBC-05-21

### **Development and Verification of a NDE Method for Detection of Flaws in PE Sheathing of Stay Cables**

Christopher A. Ligozio, SE, *Construction Technology Laboratories Group, Skokie, IL* and Armin B. Mehrabi, PhD, PE, *Bridge Engineering Solutions, Lewiston, NY*  
IBC-05-22

### **Effective Flange Width Provisions for Composite Steel Bridges**

Stuart S. Chen, PhD, PE, Amjad J. Aref, PhD, Il-Sang Ahn, and Methee Chiewanichakorn, *University of Buffalo, Buffalo, NY*  
IBC-05-23

### **Fatigue Evaluation and Instrumentation of a Major Truss Bridge**

Thomas Bolte, PE, *Burgess & Niple, Inc., Columbus, OH* and Kirk Grimmelsman, *Drexel Intelligent Infrastructure Institute, Philadelphia, PA*  
IBC-05-24

### **Effects of Unbraced Length on Vertical and Lateral Bending Stress Distribution in a Horizontally Curved, Steel, I-Girder Bridge**

Daniel G. Linzell and Joe M. Fleishman, *The Pennsylvania State University, University Park, PA*  
IBC-05-25

### **An Analytical Investigation of the After-Fracture Redundancy of the Lehigh River Bridge (SR-33)**

Justin R. McCarthy, *Lehigh University - ATLSS, Bethlehem, PA*  
IBC-05-26

### **A Comparison of Load Ratings for Existing Bridges**

Brian Ranck, PE, *Pennsylvania Turnpike Commission, Harrisburg, PA*, and Y. Frank Chen, PhD, PE, *Penn State Harrisburg, Middletown, PA*  
IBC-05-27

## **Lessons Learned / Construction Session**

Presented Tuesday, June 14, 2005

Chaired by: Gary Runco, PE, Paul C. Rizzo Associates, Monroeville, PA

### **Demonstration of Rapid Bridge Construction in Erie County, NY**

Maria Lehman, PE, F.ASCE, *URS Corporation, Buffalo, NY*, Carl P. Dimmig, *Erie County Dept of Public Works, Buffalo, NY*, Jonathan DePlanche', *TVGA Consultants, Elma, NY*, Neill Wagner, *Wagners Composite Fibre Technologies, Toowoomba, Queensland, Australia*, and Jerome S. O'Connor, *Bridge Composites, LLC, Hornell, NY*

IBC-05-34

### **Lessons from the I-40 Bridge Collision**

George F. Assis, Ph.D., P.E. and Malcolm G. McLaren, PE, *McLaren Engineering Group, West Nyack, NY*

IBC-05-28

### **Lessons Learned from the Construction of a Sharply Skewed, Two-span, Steel Multi-girder Bridge**

Ahmad K. Ahmadi, PhD, PE and Raymond Henney, PE, *SAI Consulting Engineers, Inc., Pittsburgh, PA*, and Doug Thompson, PE, *PennDOT, District 11-0, Bridgeville, PA*

IBC-05-29

### **The Long Term Performance of Three Ontario Bridges Constructed With Galvanized Reinforcement**

Frank Pianca and Hannah Schell *Ontario Ministry of Transportation (MTO), Toronto, Ontario, Canada*

IBC-05-30

### **Fatigue Cracking and Inspection of High-mast Lighting Towers**

Robert J. Connor, Ian C. Hodgson, PE, SE, and Margaret K. Warpinski, *Lehigh University - ATLSS, Bethlehem, PA*, Justin Ocel, *University of Minnesota, Minneapolis, MN*, and Bruce L. Brakke, *Iowa Dept. of Transportation, Ames, IA*

IBC-05-31

### **Demolition and Reconstruction of the Ohio Turnpike Bridges over the Cuyahoga River Valley**

Ray Farcas, PE, *Dick Corporation, Cleveland, OH* and Rob Fleischman, PE, *Ohio Turnpike Commission, Berea, OH*

IBC-05-32

### **Fire Performance of Bridges**

Alp Caner, PE, *Middle East Technical University, Ankara, Turkey*

IBC-05-33

## **Rehabilitation Session**

Presented Wednesday, June 15, 2005

Chaired by: Lisle E. Williams, PE, PLS, DMJM + HARRIS, Pittsburgh, PA

### **Huey P. Long Bridge Widening – Final Design Challenges**

Bruce E. Peterson, William B. Conway, and Gerard P. Doyle, *Modjeski and Masters, Inc., New Orleans, LA*

IBC-05-35

### **Field Testing and Fatigue and Fracture Evaluation of the I-79 Neville Island Bridge**

Hussam Mahmoud, Ian Hodgson, and Carl Bowman, *Lehigh University, Bethlehem, PA*, Lou Ruzzi, *PENNDOT, District 11-0, Pittsburgh, PA*, and Scott Eshenaur, *Modjeski and Masters, Harrisburg, PA*

IBC-05-36

### **Structural Rehabilitation of a Vertical Lift Highway Bridge**

David M. Marcic and Rolan Stamm, *Hardesty & Hanover, LLP, New York, NY*

IBC-05-37

### **Benedict Swing Bridge Rehabilitation - Design/Build**

Paul J. Connolly, PE, *Hardesty & Hanover, LLP, New York, NY* and Douglas Neely, PE, *Hardesty & Hanover, LLP, Annapolis, MD*

IBC-05-38

### **Shear Enhancement of Deficient Reinforced Concrete Bridge Piers**

Wael Zatar, *West Virginia University Tech, Montgomery, WV*

IBC-05-39

### **Program to Preserve, Rehabilitate, and Upgrade the Verrazano-Narrows Bridge**

Julius Chang, PE, *MTA Bridges and Tunnels, New York, NY*

IBC-05-40

### **A Unique Bridge with a Unique Problem**

Armin B. Mehrabi, *Bridge Engineering Solutions, Inc., Lewiston, NY*

IBC-05-41

### **Safe Load Carrying Capacity of a Suspension Bridge With Degraded Cables**

Imam Hossain and Peter Sluszka, *Ammann and Whitney, New York, NY*

IBC-05-42

### **Construction Repairs to the Bascule Span of the Tacony-Palmyra Bridge**

Matthew W. Colon and John Q. Wong, PE, *DMJM+HARRIS, Iselin, NJ*

IBC-05-43

## **Design, Part 2 Session**

Presented Wednesday, June 15, 2005

Chaired by: M. Myint Lwin, Federal Highway Administration, Washington, DC

### **Design of Tied Arch Bridge Across Ohio River and Blennerhassett Island**

Gregor Wollmann, PE, *Michael Baker Jr., Inc., Charleston, WV*, Ted Zoli, PE *HNTB, New York, NY*, and James Shook, PE, *WVDOH, Charleston, WV*

IBC-05-44

### **Network Arch Bridge Over The River Luznice**

Ladislav Šašek, PhD, *Mott MacDonald Group, Prague, Czech Republic*

IBC-05-45

### **The Design, and Field Monitoring of a Horizontally Curved Steel Plate Girder Bridge**

Daniel E. Domalik, PE, *HDR Engineering, Inc., Pittsburgh, PA*, Daniel G. Linzell, PhD, PE and Jason F. Shura, *The Pennsylvania State University, University Park, PA, USA*

IBC-05-46

### **Innovative Design for Millennium Park BP Pedestrian Bridge**

Robert Sinn, Hal Iyenjer, Christopher Rockey, and John Zils, *Skidmore, Owings & Merrill LLP, Chicago, IL*

IBC-05-47

### **Conceptual Engineering of Light Rail Transit Bridges**

Robert J. Shulock, PE, *Hatch Mott MacDonald, Seattle, WA*

IBC-05-48

### **New Croton Dam Spillway Bridge**

William E. Nyman, PE, *Hardesty & Hanover, LLP, New York, NY*

IBC-05-49

### **The Main Street Replacement Bridge, Columbus, OH**

David M. Rogowski, PE, *Genesis Structures, Inc., Kansas City, MO*, Greg DeMond, RA, *HNTB Corp, Kansas City, MO*, and Daniel K. O'Rourke, PE, *DLZ Ohio, Inc., Columbus, OH*

IBC-05-50

### **Design Philosophy and Summary Report: The Palm Jumeirah Gateway Bridge, Dubai, UAE**

Thomas Piotrowski, AIA., *SARP* and James Fox, R.A., *H2L2 Architects/Planners, LLP, New York, NY*

IBC-05-51

### **Bridge Aesthetics in Design/Build**

Kenneth C. Saindon, PE and George Skillman, PE, *DMJM+HARRIS, Denver, CO*

IBC-05-52



## **Foundations Session**

Presented Wednesday, June 15, 2005

Chaired by: Thomas G. Leech, PE, Gannett Fleming, Inc., Pittsburgh, PA

### **The Great Crossings Bridge – A Construction Driven Design**

John A. Buchheit, PE, *Gannett Fleming, Inc., Harrisburg, PA*, Leonard C. Bellanca, PE, *G.A. & F.C. Wagman, Inc., York, PA*, and William L. Kovach, PE and William E. Maser, *Pennsylvania Dept of Transportation, District 12-0, Uniontown, PA*

IBC-05-53

### **Foundations for the Replacement of the Bushkill Creek Bridge**

Thomas P. Macioce, PE and *Pennsylvania Department of Transportation, Harrisburg, PA*, Kamlesh A. Ashar, PE, *Pennsylvania Department of Transportation, Allentown, PA*, and Jeffery Dipple, *Patel Chen Associates, Grantville, PA*,

IBC-05-54

### **AASHTO LRFD Specifications for Foundation Design**

Scott D. Zang, PE, *Michael Baker Jr. Inc., Beaver, PA* and Jerry A. DiMaggio, PE, *Federal Highway Administration, Washington, DC*

IBC-05-55

### **Four Bears Bridge – Context Sensitive Design/Construction Challenges**

Francis G. Ziegler, PE, *North Dakota Department of Transportation, Bismarck, ND* and Russell D. Call, PE, SE, *Figg Bridge Engineers, Inc., Denver, CO*

IBC-05-56

### **Rock Slope Dictates Expedited Foundation Redesign**

John C. Schirmer, PE, *Bergmann Associates, Rochester, NY* and Louis Recchia, PE, *NYS DOT, Albany, NY*

IBC-05-57

## **Design/Build Session**

Presented Wednesday, June 15, 2005

Chaired by: Victor E. Bertolina, PE, SAI Consulting Engineers., Pittsburgh, PA

### **The New Tacoma Narrows Suspension Bridge**

Thomas Spoth, PE, Joseph Viola, PE, and Seth Condell, PE, *Parsons, New York, NY*

IBC-05-58

### **Cooper River Cable-Stayed Bridge - Optimizing Construction for Design-Build Process**

Armin G. Schemmann, PEng., Peter R. Taylor, PE , and Nedim Alca, PEng., *Buckland & Taylor Ltd.,*

*North Vancouver, BC, Canada*

IBC-05-59

### **Innovations in Program Delivery and Design for Diverse Multi-Structural Projects**

Jeff Stapleton, PE, *Carter & Burgess, Denver, CO*

IBC-05-60

### **Replacement of the Belt Parkway over Ocean Parkway**

Charles Norrish, III, PE, *Gannett Fleming Engineers and Architects, P.C., New York, NY,* Chris

Sklavounakis, PE, *New York City Department of Transportation, New York, NY,* Paul Atkins, PE,

*Granite Halmar Construction Co., Inc., Mount Vernon, NY* and Jerome Liebowitz, PE, *HAKS Engineers and Land Surveyors, PC, New York, NY*

IBC-05-61

### **Replacement of the Hog Back Through Truss Railroad Bridge**

Thomas F. Potts, PE and Alfons E. Minko, PE, *HNTB Corporation, Wayne, NJ,* and Richard A. Olsen,

PE, *New Jersey Transit Corporation, Newark, NJ, USA*

IBC-05-62

Ahmadi, PhD, PE, Ahmad K., *SAI Consulting Engineers, Inc., Pittsburgh, PA* - **Lessons Learned from the Construction of a Sharply Skewed, Two-span, Steel Multi-girder Bridge** (IBC-05-29)

Anderson, PE, Peter L., *The Reinforced Earth Company, North Reading, MA* - **Increased Use of MSE Structures for Support of Bridges** (IBC-05-10)

Assis, PhD, PE, George F., *McLaren Engineering Group, West Nyack, NY* - **Lessons from the I-40 Bridge Collision** (IBC-05-28)

Bergquist, Warren, *Washington University in St. Louis, St. Louis, MO* - **St. Croix River Bridge Project** (IBC-05-U01)

Bolte, PE, Thomas, *Burgess & Niple, Inc., Columbus, OH* - **Fatigue Evaluation and Instrumentation of a Major Truss Bridge** (IBC-05-24)

Buchheit, PE, John A., *Gannett Fleming, Inc., Harrisburg, PA* - **The Great Crossings Bridge – A Construction Driven Design** (IBC-05-53)

Call, PE, SE, Russell D., *Figg Bridge Engineers, Inc., Denver, CO* - **Four Bears Bridge – New Town, North Dakota - Context Sensitive Design/Construction Challenges** (IBC-05-56)

Caner, PE, Alp, *Middle East Technical University, Ankara, Turkey, Tivoli, NY* - **Fire Performance of Bridges** (IBC-05-33)

Capers, Jr., PE, Harry A., *New Jersey Department of Transportation, Trenton, NJ* - **Innovation - Thy Name is Victory Bridge!** (IBC-05-20)

Chang, PE, Julius, *MTA Bridges and Tunnels, New York, NY* - **Program to Preserve, Rehabilitate, and Upgrade the Verrazano-Narrows Bridge** (IBC-05-40)

Chen, PhD, PE, Stuart S., *University of Buffalo, State University of New York, Buffalo, NY* - **Effective Flange Width Provisions for Composite Steel Bridges** (IBC-05-23)

Colon, Matthew W., *DMJM HARRIS, Inc., Iselin, NJ* - **Construction Repairs to the Bascule Span of the Tacony-Palmyra Bridge** (IBC-05-43)

Connolly, PE, Paul J., *Hardesty & Hanover, LLP, New York, NY* - **Benedict Swing Bridge Rehabilitation - Design/Build** (IBC-05-38)

Connor, Robert, *Lehigh University - ATLSS, Bethlehem, PA* - **Fatigue Cracking and Inspection of High-mast Lighting Towers** (IBC-05-31)

Dagher, PhD, Habib, *University of Maine, Orono, ME* - **Development of Next-Generation Hybrid Composites** (IBC-05-03)

Dietrick, PE, SE, John C., *Michael Baker Jr., Inc., Cleveland, OH* - **Context Sensitive Design for the Fulton Road Bridge Replacement** (IBC-05-19)

Domalik, PE, Daniel E., *HDR Engineering, Inc., Pittsburgh, PA* - **The Analysis, Design, and Monitoring of a Horizontally Curved Steel Plate Girder Bridge** (IBC-05-46)

Farcas, PE, Ray, *Dick Corporation, Cleveland, OH* - **Demolition and Reconstruction of the Ohio Turnpike Bridges over the Cuyahoga River Valley** (IBC-05-32)

Fox, R.A., James, *H2L2 Architects/Planners, LLP, New York, NY* - **The Palm – Jumeirah Gateway Bridge: The Architect as Prime Bridge Designer** (IBC-05-51)

Gamble, Scott, *Motioneering Inc./RWDI Group, Guelph, Ontario, Canada* - **Ironton Russell Bridge – Wind Consideration and Remedial Issues for a Narrow Long Span Single Tower Cable-Stay Bridge** (IBC-05-21)

Gedge, Graham, *Arup Materials Consulting, Blythe Valley Park, Solihull, UK* - **Stainless steel for bridge construction - Materials for the towers of The Stonecutters Bridge, Hong Kong** (IBC-05-13)

Hansen, Edward E., *Technology Systems, Inc., Wiscasset, ME* - **Lightweight Structures for Bridge Applications** (IBC-05-04)

Hossain, Imam, *Ammann and Whitney, New York, NY* - **Safe Load Carrying Capacity of a Suspension Bridge With Degraded Cables** (IBC-05-42)

Lehman, PE, F.ASCE, Maria, *URS Corporation, Buffalo, NY* - **Demonstration of Rapid Bridge Construction in Erie County, NY** (IBC-05-34)

Ligozio, PE, SE, Christopher A., *Construction Technology Laboratories, Skokie, IL* - **Development and Verification of a NDE Method for Detection of Flaws in PE Sheathing of Stay Cables** (IBC-05-22)

Linzell, PhD, PE, Daniel G., *The Pennsylvania State University, University Park, PA* - **A Study of the Effects of Changes in Unbraced Length on Bending and Warping Stress Distribution in a Horizontally Curved, Steel, I-Girder Bridge** (IBC-05-25)

Macioce, PE, Thomas P., *Pennsylvania Department of Transportation, Harrisburg, PA* - **Foundations for the Replacement of the Bushkill Creek Bridge** (IBC-05-54)

Mahmoud, Hussam, *Lehigh University, Bethlehem, PA* - **Field Testing and Fatigue and Fracture Evaluation of the I-79 Neville Island Bridge** (IBC-05-36)

Marcic, David M., *Hardesty & Hanover, Annapolis, MD* - **Structural Rehabilitation of a Vertical Lift Highway Bridge** (IBC-05-37)

McCarthy, Justin R., *Lehigh University - ATLSS, Bethlehem, PA* - **An Analytical Investigation of the After-Fracture Redundancy of the Lehigh River Bridge** (SR-33) (IBC-05-26)

Mehrabi, PhD, PE, Armin B., *Bridge Engineering Solutions, Inc., Lewiston, NY* - **A Unique Bridge with a Unique Problem** (IBC-05-41)

Norrish, III, PE, Charles, *Gannett Fleming Engineers and Architects, P.C., New York, NY* - **Replacement of the Belt Parkway over Ocean Parkway** (IBC-05-61)

Nyman, PE, William E., *Hardesty & Hanover, LLP, New York, NY* - **New Croton Dam Spillway Bridge** (IBC-05-49)

Olsen, PE, Richard A., *New Jersey Transit Corporation, Newark, NJ* - **Replacement of the Hog Back Thru Truss Railroad Bridge** (IBC-05-62)

Panah, Firooz, *DMJM HARRIS, Boston, MA* - **Replacement of Cranston Viaducts Using Spliced Bulb-Tee Girder Technology** (IBC-05-17)

Parrillo, Robert, *Geophysical Survey Systems, Inc., North Salem, NH* - **Bridge Deck Condition Assessment using Ground Penetrating Radar** (IBC-05-08)

Peterson, Bruce E., *Modjeski and Masters, Inc., New Orleans, LA* - **Huey P. Long Bridge Widening – Final Design Challenges** (IBC-05-35)

Philbin, PE, Jason V., *CON/SPAN Bridge Systems, Dayton, OH* - **Get In, Get Out, Stay Out** (IBC-05-12)

Pianca, Frank, *Ministry of Transportation of Ontario (MTO), Toronto, Ontario, Canada* - **The Long Term Performance of Three Ontario Bridges Constructed With Galvanized Reinforcement** (IBC-05-30)

Ranck, PE, Brian, *Pennsylvania Turnpike Commission, Harrisburg, PA* - **A Comparison of Load Ratings for Existing Bridges** (IBC-05-27)

Rogowski, PE, David M., *Genesis Structures, Inc., Kansas City, MO* - **The Main Street Replacement Bridge** (IBC-05-50)

Rong, Alex Y., *Delaware River Port Authority, Camden, NJ* - **An Innovative Rehabilitation of the 78-years Old Benjamin Franklin Bridge Approach Structures Without Disrupting Traffic** (IBC-05-09)

Saindon, PE, Kenneth C., *DMJM HARRIS, Denver, CO* - **Bridge Aesthetics in Design/Build** (IBC-05-52)

Šašek, PhD, Ladislav, *Mott MacDonald Group, Prague, Czech Republic* - **Network Arch Bridge Over The River Luznice** (IBC-05-45)

Schemmann, P.Eng., Armin, *Buckland & Taylor Ltd., North Vancouver, BC, Canada* - **Cooper River Cable-Stayed Bridge - Optimizing Construction for Design/Build Process** (IBC-05-59)

Schirmer, John C., *Bergmann Associates, Rochester, NY* - **Rock Slope Dictates Expedited Foundation Redesign** (IBC-05-57)

Shanks, Jr., PE, John C., *Burgess & Niple, Inc., Columbus, OH* - **Deeply Haunched Spliced Precast Girders meet Architectural Demands of City Historic District** (IBC-05-18)

Shepherd, PE, Eric C., *Maine DOT, Augusta, ME* - **Unique Bridges, Challenges, and Solutions** (IBC-05-02)

Shulock, PE, Robert J., *Hatch Mott MacDonald, Bainbridge, WA* - **Conceptual Engineering of Light Rail Transit Bridges** (IBC-05-48)

Sinn, Robert, *Skidmore, Owings & Merrill LLP, Chicago, IL* - **Innovative Design for Millennium Park BP Pedestrian Bridge** (IBC-05-47)

Spoth, PE, Thomas, *Parsons, New York, NY* - **The New Tacoma Narrows Suspension Bridge Design/Build** (IBC-05-58)

Stapleton, PE, Jeff, *Carter & Burgess, Inc., Centennial, CO* - **Innovations in Program Delivery and Design for Diverse Multi-Structural Projects** (IBC-05-60)

Tiberio, Terrence J., *Michael Baker Jr. Inc., Moon Township, PA* - **Ironton Russell Single Tower Cable-Stayed Bridge Configuration – Optimization for Client Engineering Constraints** (IBC-05-16)

Tukey, PE, James E., *Maine Department of Transportation, Augusta, ME* - **Maine and its Bridge Community** (IBC-05-01)

VanNote, Bruce, *Maine Department of Transportation, Augusta, ME* - **From Disaster to Opportunity: Story of a Bridge Project in Maine** (IBC-05-06)

Vigue, Peter G., *Cianbro Corporation, Pittsfield, ME* - **Cutting-Edge Technology: A Contractor's Perspective** (IBC-05-05)

Wolek, PE, Arthur L., *Lichtenstein Consulting Engineers, New York, NY* - **Earthquake Performance of Long-Span Truss Bridges in New York State** (IBC-05-14)

Wollmann, PE, Gregor, *Michael Baker Jr., Inc., Charleston, VA* - **Design of Tied Arch Bridge Across Ohio River and Blennerhassett Island** (IBC-05-44)

Xu, Gongyi, *Major Bridge Reconnaissance & Design Institute Co.,Ltd, Wuhan, China* - **Innovative Design for the First Double-deck with Twin PC Girder Cable-Stayed Bridge** (IBC-05-15)

Zang, PE, Scott D., *Michael Baker Jr. Inc., Beaver, PA* - **LRFD AASHTO Specifications for Foundation Design** (IBC-05-55)

Zatar, Wael, *West Virginia University Tech, Montgomery, WV* - **Shear Enhancement of Deficient Reinforced Concrete Bridge Piers** (IBC-05-39)

Rockey, Christopher, *Skidmore, Owings & Merrill LLP, Chicago, IL* - **Innovative Design for Millennium Park BP Pedestrian Bridge** (IBC-05-47)

Zils, John, *Skidmore, Owings & Merrill LLP, Chicago, IL* - **Innovative Design for Millennium Park BP Pedestrian Bridge** (IBC-05-47)

Iyengar, Hal, *Skidmore, Owings & Merrill LLP, Chicago, IL* - **Innovative Design for Millennium Park BP Pedestrian Bridge** (IBC-05-47)

Fleishman, Joe M., *The Pennsylvania State University, University Park, PA* - **A Study of the Effects of Changes in Unbraced Length on Bending and Warping Stress Distribution in a Horizontally Curved, Steel, I-Girder Bridge** (IBC-05-25)

Zhang, Min, *Central South University, Changsha, China* - **Innovative Design for the First Double-deck with Twin PC Girder Cable-Stayed Bridge** (IBC-05-15)

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Chen, PhD, PE, Y. Frank, *Penn State Harrisburg, Middletown, PA* - **A Comparison of Load Ratings for Existing Bridges** (IBC-05-27)

Sklavounakis, PE, Chris, *New York City Department of Transportation, New York, NY* - **Replacement of the Belt Parkway over Ocean Parkway** (IBC-05-61)

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