

# **Study on Performance of Bridges**

## **Committee**

### **Mary L. Ralls**

#### **Chair**

Mary Lou Ralls is Principal of Ralls Newman, LLC, a structural engineering consulting firm in Austin, Texas, and Director of Technology Transfer for the Accelerated Bridge Construction University Transportation Center at Florida International University. Ms. Ralls joined the Texas Department of Transportation in 1984. In 1999 she became the State Bridge Engineer and Director of the Bridge Division. She retired from the Department in 2004. In TRB's SHRP2 program, Ms. Ralls was a member of the Renewal Technical Coordinating Committee, a member or chair of several of the Expert Task Groups, and a member of the Committee for the Strategic Highway Research Program 2: Implementation. She holds a MS in structures engineering and a BS in civil engineering from the University of Texas at Austin. She is a registered Professional Engineer in Texas.

### **Ross B. Corotis**

#### **Member**

Ross B. Corotis, NAE, is Denver Business Challenge Professor in the Department of Civil, Environmental & Architectural Engineering at the University of Colorado. From 1994 to 2001, he served as Dean of the College of Engineering and Applied Science at the University of Colorado at Boulder. He was formerly a member of the faculties of Johns Hopkins University and Northwestern University. Dr. Corotis' primary research interests are in the application of probabilistic concepts to civil engineering problems, including stochastic modeling of loads on structures and structural system reliability. He is a past Editor-in-Chief of the ASCE Journal of Engineering Mechanics and of Structural Safety. He was awarded the ASCE Walter L. Huber Civil Engineering Research Prize in 1984 for his work on stochastic modeling of structural loads. Dr. Corotis is a registered professional engineer in Colorado, Maryland, and Illinois and a registered structural engineer in Illinois. He received the PhD, MS, and BS degrees in civil engineering from Massachusetts Institute of Technology.

## **Rebecca Curtis**

### **Member**

Rebecca L. Curtis is Bridge Management Engineer for the Michigan Department of Transportation. In this position she oversees operation of the department's annual bridge inspection program, development of bridge management systems, and development of bridge strategy and performance measures. Before joining the Department of Transportation in 2006, she was an engineer with Orchard, Hiltz, and McCliment, Inc., an architectural, engineering, and planning firm. She is a member of the Technical Review Team for the American Association of State Highway and Transportation Officials' BRIDGEWare bridge management software and a former member of the TRB Long-Term Bridge Performance Committee Expert Task Group for Bridge Evaluation and Monitoring. She is a registered professional engineer in Michigan. She received a MS in civil engineering from The University of Michigan and a BS in civil engineering from Michigan State University.

## **Catherine E. French**

### **Member**

Catherine French is College of Science and Engineering Distinguished Professor in the Department of Civil, Environmental, and Geo- Engineering at the University of Minnesota. She has been a member of the faculty since 1984. Her research involves the experimental investigation of reinforced and prestressed concrete structural systems subjected to earthquake or fatigue loadings. She received the PhD and MS degrees from the University of Illinois at Urbana-Champaign and a BSCE from the University of Minnesota.

## **Raymond P. Giroux**

### **Member**

Raymond Paul Giroux is a Senior Engineer with Kiewit Bridge and Marine, Kiewit Infrastructure West Co., Vancouver, WA. He has been with Kiewit since 1980 and has contributed to major infrastructure construction projects throughout the United States. He was elected as a Distinguished Member of the American Society of Civil Engineers (ASCE) in 2016. He is a recipient of ASCE's Roebling, G. Brooks Earnest, and History and Heritage Awards and the Augustine Award of the American Association of Engineering Societies. Mr. Giroux lectures widely on civil engineering history at universities and professional conferences. He received a BS in construction engineering from Iowa State University.

## **Yidong (Eddie) He**

### **Member**

Yidong (Eddie) He is a Technical Director with Parsons Corporation in Chicago, Illinois. He has extensive experience in the design, analysis, and construction of bridges and buildings. He has been involved in the design and construction of more than 30 complex bridges, including post-tensioned concrete, steel box girder, segmental concrete, arch, truss, cable-stayed, and suspension bridges and transit structures. He is an expert in accelerated bridge construction, mass produced prefabricated bridge elements, erection equipment, and concrete formwork. Before joining Parsons in 1987, Dr. He was in engineering positions at HNTB, Inc. and at J. Muller International. He is a registered professional engineer in Illinois, Indiana, and Wisconsin. He received a PhD in structural engineering and Master of Engineering in structural engineering from West Virginia University and a BS in civil engineering from South China University of Technology.

## **Malcolm T. Kerley**

### **Member**

Malcolm T. Kerley is President of NXL Construction Services, Inc., a transportation engineering firm in Richmond Virginia. From 2002 until 2012, he was Chief Engineer of the Virginia Department of Transportation, where he was responsible for all engineering aspects of the department. From 1992 to 2002, he served as State Structure and Bridge Engineer. He is a former chair of the American Association of State Highway and Transportation Officials Subcommittee on Bridges and Structures. Mr. Kerley is a registered professional engineer in Virginia. He received a Master of Engineering in civil engineering from the University of Virginia and BS in civil engineering from Virginia Military Institute.

## **Bijan Khaleghi**

### **Member**

Bijan Khaleghi is State Bridge Design Engineer in the Washington State Department of Transportation. He has been with the department since 1991. He is experienced in the design of prestressed and post-tensioned concrete bridges, tunnel construction and rehabilitation projects, and bridge preservation projects. He is an adjunct professor at Saint Martin University, Olympia, Washington, teaching courses in advanced concrete, earthquake engineering, and bridge design, and has served as a member or chair of numerous NCHRP project panels. Dr. Khaleghi received the Precast/Prestressed Concrete Institute's Martin P. Korn Award in 2005 and the American Society of Civil Engineers' T.Y. Lin Award in 2006 for outstanding research papers. He is a Registered Professional Civil and Structural Engineer in Washington State. He received the degrees of Doctor of Engineering - Concrete Structures and Master of Sciences - Structural Engineering from the National Institute of Applied Sciences in Lyon, France and a MS in civil engineering from Tabriz Technical University, Tabriz, Iran.

## **Norman McDonald**

### **Member**

Norman McDonald retired in 2017 as State Bridge Engineer with the Iowa Department of Transportation. The State Bridge Engineer is responsible for developing structure plans for all interstate and primary highways in Iowa and is also responsible for inspection and coordination of bridge improvement plans for over 4,100 bridges. The Iowa Department of Transportation Bridge Office is recognized as a leading transportation agency in bridge research. Mr. McDonald was with the Bridge Office for 32 years, including 17 as State Bridge Engineer. While with the Iowa Department of Transportation, he served on various technical committees of the American Association of State Highway and Transportation Officials, including recently as Chair of the Structural Steel Design Technical Committee. He has served also as a member or chair of numerous NCHRP project panels on research topics related to steel structures.

## **R. Shankar Nair**

### **Member**

R. Shankar Nair, NAE, is Senior Vice President exp US Services Inc. He has more than 45 years of experience in structural engineering. His work has focused on structural engineering for large architectural and civil engineering projects, including the longest tied-arch bridge span in the world and many high-rise buildings. Dr. Nair has worked for Teng and Associates and its successor firm exp since 1995 in Chicago, and before that was a principal at RTKL Associates in Baltimore and Alfred Benesch and Company in Chicago. His work has received numerous awards, including four American Institute of Steel Construction (AISC) Prize Bridge awards and six annual Most Innovative Structure awards from the Structural Engineers Association of Illinois. Dr. Nair chairs the AISC Committee on Specifications and is a past chairman of the Council on Tall Buildings and Urban Habitat. He was elected to membership in the National Academy of Engineering in 2005. Dr. Nair has a PhD in civil engineering from the University of Illinois at Urbana-Champaign and is licensed to practice engineering in 44 states.

## **Randall W. Poston**

### **Member**

Randall W. Poston, NAE, is Senior Principal with Pivot Engineers in Austin, Texas. The focus of his work has been forensic structural engineering and the rehabilitation and strengthening of civil infrastructure. This work has included the investigation of numerous structural collapses and in-service performance and durability problems with concrete structures. He is a past Chair of the American Concrete Institute (ACI) Structural Building Code Committee and received the ACI Henry L. Kennedy Award for his leadership in the reorganization of the ACI Building Code Requirements for Structural Concrete. Several of his projects have received the International Concrete Repair Institute Award of Excellence. Dr. Poston received a PhD in structural engineering, a MS in structural engineering, and a BS in civil engineering from the University of Texas at Austin.

# **Abdul-Hamid Zureick**

## **Member**

Abdul-Hamid Zureick is Professor of Structural Engineering, Mechanics, and Materials at the School of Civil and Environmental Engineering at Georgia Tech. He is an authority on the use of innovative materials in civil engineering applications. His research has been to develop criteria and specifications for the design, testing, and construction of polymer composite structural systems. Professor Zureick serves on the editorial boards of the Journal of Composites for Construction and of Structural Engineering and Mechanics and chairs the ASTM International Technical Subcommittee on Composites for Civil Engineering and Marine Applications. He received the 1989 ASCE Norman Medal, awarded for a technical paper that makes a definitive contribution to engineering science. He received the PhD and MS degrees in civil engineering from the University of Illinois at Urbana-Champaign and a BS in civil engineering from Tichreen University, Lattakia, Syria.