

Behrouz Shafei, PhD, PE	
Associate Professor Institute for Transportation Iowa State University 2711 South Loop Dr, Suite 4700 Ames, IA 50010	(515) 294-4058 shafei@iastate.edu IOWA STATE UNIVERSITY Institute for Transportation

BACKGROUND

Dr. Behrouz Shafei is an associate professor of the Department of Civil, Construction and Environmental Engineering at Iowa State University with a professional engineering (PE) license from the State of California, where he finished his PhD and postdoctoral studies. Dr. Shafei has a solid background and extensive experience in the design and assessment of bridge structures subjected to natural and manmade hazards, in addition to the development of condition-based strategies for the inspection and maintenance of aging structural components. He has active research projects sponsored by the Iowa DOT, Minnesota DOT, Midwest Transportation Center, Accelerated Bridge Construction University Transportation Center, and National Science Foundation. He is currently advising master and doctoral students, while teaching concrete design at both undergraduate and graduate levels. His contribution to the field has been recognized by the Public Impact Distinguished Fellowship (2010–2011), James D. Cooper Award (2011), Young Engineer Award (2012), Wiley Award for Innovation in Computing (2014), and Charles W. Schafer Award for Excellence in Teaching, Research, and Service (2020).

EDUCATION

- PhD, Civil Engineering, University of California, Irvine, 2011
- MSc, Structural Engineering, University of Tehran, Iran, 2006
- BSc, Civil Engineering, University of Tehran, Iran, 2004

PROFESSIONAL EXPERIENCE

- Associate Professor (with Tenure), Department of Civil, Construction and Environmental Engineering, Iowa State University, 2020–present
- Assistant Professor, Department of Civil, Construction and Environmental Engineering, Iowa State University, 2014–2020
- Assistant Professor, Department of Civil and Environmental Engineering, University of Massachusetts, Amherst, 2012–2014
- Postdoctoral Scholar, Department of Civil and Environmental Engineering, University of California, Irvine, 2011–2012

SELECTED RESEARCH PROJECTS

- *Next Generation of Life-Cycle Cost Analysis Tool for Bridges in Iowa*, Iowa Department of Transportation and Iowa Highway Research Board (Co-PI, Phase I: 2018–2020; Phase II: 2021–2022)
- *Asset Management, Extreme Weather, and Proxy Indicators*, Iowa Highway Research Board and Iowa Department of Transportation (Co-PI, 2018–2021)

- *Assessment of Bridge Decks with Glass Fiber Reinforced Polymer (GFRP) Reinforcement*, Minnesota Department of Transportation (PI, 2018–2021)
- *Assessing and Enhancing the Transportation Resilience for the State of Iowa*, FHWA State Planning & Research, Iowa Department of Transportation (Co-PI, 2017–2019)
- *Increase Service Life at Bridge Ends through Improved Abutment and Approach Slab Details and Water Management Practices*, Iowa Highway Research Board (PI, 2017–2020)
- *Initiative for Big Data-Driven Prediction of Long-Term Bridge Performance and Management Improvement*, Midwest Transportation Center (Co-PI, 2016–2018)
- *Condition-Based Maintenance and Management of Aging Transportation Infrastructure*, Midwest Transportation Center (PI, 2015–2017)

SELECTED PUBLICATIONS

- Khatami, D. and **Shafei, B.** 2020. Impact of climate conditions on deteriorating reinforced concrete bridges in the U.S. Midwest region. *ASCE Journal of Performance of Constructed Facilities*, In Press.
- Shi, W., Najimi, M., and **Shafei, B.** 2020. Reinforcement corrosion and transport of water and chloride ions in shrinkage-compensating cement concretes. *Journal of Cement and Concrete Research*, Vol. 135, pp. 1–9.
- Kulkarni, A. and **Shafei, B.** 2018. Impact of extreme events on transportation infrastructure in Iowa: A Bayesian network approach. *Transportation Research Record: Journal of the Transportation Research Board*, Vol. 2672, No. 48, pp. 45–57.
- Khatami, D., **Shafei, B.**, and Smadi, O. 2016. Management of bridges under aging mechanisms and extreme events: A risk-based approach. *Transportation Research Record: Journal of the Transportation Research Board*, Vol. 2550, pp. 89–95.
- Alipour, A. and **Shafei, B.** 2016. Assessment of post-earthquake losses in a network of aging bridges. *ASCE Journal of Infrastructure Systems*, Vol. 22, No. 2, pp. 1–12.
- Alipour, A. and **Shafei, B.** 2016. Seismic resilience of transportation networks with deteriorating components. *ASCE Journal of Structural Engineering*, Vol. 142, No. 8, pp. 1–12.
- Khatami, D. and **Shafei, B.** 2016. Effects of environmental stressors and material properties on life-cycle durability of reinforced concrete structures. *Proceedings of the 5th International Symposium on Life-Cycle Civil Engineering*, Delft, Netherlands, October 16–19.
- **Shafei, B.** and Alipour, A. 2015. Application of large-scale non-Gaussian stochastic fields for the study of corrosion-induced structural deterioration. *Journal of Engineering Structures*, Vol. 88, pp. 262–276.

PROFESSIONAL AFFILIATIONS

- Member of ASCE Task Group 2 on Reliability-Based Structural Performance Indicators
- Member of TRB committee AFN10, Basic Research and Emerging Technologies Related to Concrete
- Member of International Association for Bridge Maintenance and Safety (IABMAS)
- Member of International Association for Life-Cycle Civil Engineering (IALCCE)
- Member of American Society of Civil Engineers (ASCE)
- Member of American Concrete Institute (ACI)
- Professional Engineering (PE) License, State of California