Exponent®
Engineering & Scientific Consulting

Jonathan Glassman, Ph.D., P.E., CRE, CSQE

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Professional Profile

Dr. Glassman's expertise includes Civil and Structural Engineering, Systems Engineering, Reliability Engineering, Software Development, Data Analytics, and Emergency Management. He works closely with cross-functional client teams to solve complex systems engineering problems, including quantifying the reliability of large-scale infrastructure such as utility networks, identifying and mitigating data quality issues in enterprise data management systems, business intelligence development, verification and validation.

In his role directing technology development, Dr. Glassman ensures software quality, data quality, and end user requirements are achieved in the product release by assembling and working with cross-functional client teams. He uses his multi-disciplinary training to help public and private sector clients gain enhanced situational awareness of their operating and planning risks, and to achieve enhanced business intelligence capabilities.

Dr. Glassman is a trusted expert for mission-critical field investigations of civil and structural engineering failures to identify root cause. His field experience includes investigating failures resulting from structural overloads (due to, for example, wind, seismic, fire, flooding, snow, and ice loads), damage due to construction defects, structural distress due to adjacent construction, and earth movement. He assists clients in identifying the applicability of building codes to their cases and projects. Dr. Glassman has been retained repeatedly as an expert witness.

As a member of the Federal Emergency Management Agency's (FEMA) Urban Search and Rescue, Dr. Glassman is a cross-trained resource with field-tested experience responding to catastrophic incidents that overwhelm local, regional, and state resources. His technical specialties include structural collapse response, data analytics, communications, and mission planning and strategy. He is trained to work in accordance with the National Incident Management System (NIMS) Incident Command System (ICS).

Dr. Glassman is a Lecturer in the Civil & Environmental Engineering department at UCLA. His doctoral research focused on the fire performance of steel plate girder bridges, where he used nonlinear finite element analysis to evaluate how heat influenced the web shear buckling mechanism. From his research, he derived a new theory to predict more accurately the postbuckling shear strength of steel girder webs at ambient and elevated temperatures. Additionally, he has researched non-destructive testing methods to assess the protective integrity of military body armor, and conducted a seismic evaluation of a 16th-century, unreinforced masonry church in Almolonga, Mexico.

Prior to joining Exponent, Dr. Glassman was an Assistant Instructor at Princeton University and a field engineer with Caltrans in the Office of Structure Construction.

Academic Credentials & Professional Honors

Ph.D., Civil and Environmental Engineering, Princeton University, 2015

M.A., Civil and Environmental Engineering, Princeton University, 2012

M.S., Civil and Environmental Engineering, Stanford University, 2009

B.S., Civil and Environmental Engineering, University of California, Irvine, 2008

National Defense Science and Engineering Graduate (NDSEG) Fellow 2011-2014

Consulting Engineers and Land Surveyors of California (CELSOC) Scholarship 2008

Member of Tau Beta Pi since 2008

UC Irvine Undergraduate Research Opportunities Program (UROP) Fellow 2007/2008

Licenses and Certifications

Professional Engineer Civil, California, #85448

ASQ Certified Reliability Engineer

Certified Software Quality Engineer (CSQE)

Academic Appointments

Lecturer, University of California, Los Angeles

Professional Affiliations

American Society of Civil Engineers

Publications

Glassman, J. D. & Garlock, M. E. M. Postbuckling shear strength at elevated temperatures using a compression-based approach. Proceedings of the 9th International Conference on Structures in Fire, Princeton, 2016.

Glassman, J. D. & Garlock, M. E. M. A compression model for ultimate postbuckling shear strength. Thin-Walled Structures, 2016; 102:258-272.

Glassman, J. D., Garlock, M. E. M., Aziz, E.,& Kodur, V. Modeling parameters for predicting the postbuckling shear strength of steel plate girders. Journal of Constructional Steel Research, 2016; 121:136-143.

Aziz, E., Kodur, V., Glassman, J. D., Garlock, M. E. M. Experimental behavior of steel bridge girders under fire conditions. Journal of Constructional Steel Research, 2014; 106:11-22.

Garlock, M. E. M., Glassman, J. D. Elevated temperature evaluation of an existing steel web shearbuckling analytical model. Journal of Constructional Steel Research 2014; 101:395-406.

Glassman, J. D. & M. E. M. Garlock. "Models for analyzing web shear buckling response of bridge steel plate girders under fire." Proceedings of the 8th International Conference on Structures in Fire, Shanghai,

2014.

Labbouz, S., Glassman, J. D., Garlock, M. E. M. & J. Ricles. "Evaluating weathering steel performance at elevated temperatures: the I-195 bridge fire case study." Proceedings of the 8th International Conference on Structures in Fire, Shanghai, 2014.

Garlock, M. E. M., Glassman, J. D., Labbouz, S. Elevated temperature properties of A588 weathering steel. Center for Advanced Infrastructure and Transportation, Rutgers University, NJ, February 2014.

Glassman, J. D. & M. E. M. Garlock. "Post-fire strength assessment of steel bridges based on residual out-of-plane web deformations." Proceedings of the Structures Congress, Boston, 2014.

Glassman, J. D. and M. E. M. Garlock, "High temperatures and bridges: transverse stiffeners in steel girder fire performance." Proceedings of the 7th New York City Bridge Conference, New York, 2013.

Glassman, J. D. & M. E. M. Garlock, "Shear buckling behavior of steel plate girders at elevated temperatures." Proceedings of the Structures Congress, Pittsburgh, 2013.

Chaudhuri, S. R., Banerjee, S., Glassman, J., Shinozuka, M. & M. Q. Feng. "Enhancement of Sustainability of Wood Frame Shear Wall Buildings Using Fiber Composites." Proceedings of the 5th International Engineering and Construction Conference, American Society of Civil Engineers, August 2008, pp. 1189-1196.

Reports

Deposition & Trial Testimony

Deposition - January 2024

Deposition - November 2022

Trial Testimony – June 2023