Exponent®
Engineering & Scientific Consulting

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

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Professional Profile

Dr. Glassman's expertise includes Software Development, Data Analytics, Civil and Structural Engineering, Reliability Engineering, and Emergency Management. He has years of experience leading cross-functional teams to solve complex data management and analytics problems, including identifying requirements, solution architecting, documentation, business intelligence development, and verification and validation. In his role directing product development, he ensures that software quality, data quality, and satisfying end user requirements are reflected in the product design and release. He uses his multi-disciplinary training to advise public and private sector clients regarding digital transformation. Dr. Glassman also has multiple years of field experience investigating structural damage and collapse due to issues including adjacent construction, wind and seismic loadings, flooding, earth movement, construction defects, and fire.

As a member of the Federal Emergency Management Agency's (FEMA) Urban Search and Rescue, he 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 & Environmental Engineering, Princeton University, 2015

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

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

B.S., Civil & Environmental Engineering, University of California, Irvine, *cum laude*, 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

Licensed Professional Civil Engineer, California, #85448

Certified Reliability Engineer, #35355

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.

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

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.