

KYLE T. WIEGHAUS, Ph.D., P.E.

PUBLICATIONS:

1. Kyle T. Wiegghaus, John B. Mander, and Stefan Hurlbaeus. "Damage avoidance solution to mitigate wind-induced fatigue in steel traffic support structures." Journal of Constructional Steel Research. (November 2017).
2. Joshua B. White, Kyle T. Wiegghaus, Madhu M. Karthik, Parisa Shokouhi, Stefan Hurlbaeus, and Andrew Wimsatt. "Nondestructive testing methods for underwater tunnel linings: Practical application at Chesapeake channel tunnel." ASCE Infrastructure Systems. (September 2017).
3. Kyle T. Wiegghaus, Stefan Hurlbaeus, and John B. Mander. "Post-tensioned traffic signal structure: Experimental natural wind response and fatigue assessment." Proceedings of the 95rd Annual Meeting of the Transportation Research Board. Washington, D.C. (January 2016).
4. Kyle T. Wiegghaus, John B. Mander, and Stefan Hurlbaeus. "Fragility analysis of wind-excited traffic signal structures." Engineering Structures. (Vol. 101, October 2015).
5. Daniel T. Bartilson, Kyle T. Wiegghaus, and Stefan Hurlbaeus. "Target-less computer vision for traffic signal structure vibration studies." Mechanical Systems and Signal Processing. (Vols. 60-61, August 2015).
6. Kyle T. Wiegghaus. "Mitigating wind-induced fatigue in steel traffic support structures." Ph.D. Dissertation. Texas A&M University, College Station, TX. (May 2015).
7. Kyle T. Wiegghaus, Stefan Hurlbaeus, and John B. Mander. "Effectiveness of strake installation for traffic signal structure fatigue mitigation." Structural Monitoring and Maintenance. (Vol. 1, No. 4, December 2014).
8. Kyle T. Wiegghaus, Stefan Hurlbaeus, John B. Mander, and Gary T. Fry. "Wind-induced traffic signal structure response: Experiments and reduction via helical arm strakes." Engineering Structures. (Vol. 76, October 2014).
9. Kyle T. Wiegghaus, Stefan Hurlbaeus, and John B. Mander. "Natural wind response and fatigue assessment of a cantilevered traffic signal structure with helical arm strakes." Proceedings of the 93rd Annual Meeting of the Transportation Research Board. Washington, D.C. (January 2014).
10. Daniel T. Bartilson, Stefan Hurlbaeus, Kyle T. Wiegghaus, and H. Gene Hawkins. "Validation of computer vision for structural vibration studies." Southwest Region University Transportation Center, College Station, TX. (November 2013).
11. Kyle Wiegghaus, Stefan Hurlbaeus, and John B. Mander. "Mitigation of fatigue and fracture of steel supporting traffic structures." Technical Report. Texas A&M Transportation Institute, College Station, TX. (July 2013).
12. Kyle T. Wiegghaus and Rebecca A. Atadero. "Effect of existing structure and FRP uncertainties on the reliability of FRP-based repair." Journal of Composites for Construction. (Vol. 15, No. 4, August 2011).
13. Andrew Wimsatt, Tom Scullion, Stefan Hurlbaeus, Dan Zollinger, Kyle Wiegghaus, Parisa Shokouhi, Herbert Wiggerhauser, Timo Saarenketo, Fulvio Tonon, and Soheil Nazarian. "High-speed nondestructive testing methods for mapping voids, debonding, delaminations, moisture and other defects behind or within tunnel linings." American Society for Nondestructive Testing, NDE/NDT for Highways and Bridges: Structural Materials Technology (SMT). (August 2010).
14. Kyle T. Wiegghaus. "The effect of uncertainties in existing reinforced concrete structures on FRP repair reliability." M.S. Thesis. Colorado State University, Fort Collins, CO. (May 2009).
15. Joshua B. White, Madhu M. Karthik, Kyle T. Wiegghaus, Stefan Hurlbaeus, and Andrew Wimsatt. "Concrete bridge deck condition assessment using multi-method nondestructive testing techniques." Submitted to ASCE Infrastructure Systems.

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TECHNICAL CONFERENCES AND PRESENTATIONS:

1. "Building Envelope Failures." Presenter. Knott Laboratory / Hearn and Fleener Continuing Education Seminar, Fort Collins, CO. April 2018.
2. "Large Loss Water Damage Mitigation." Guest Presenter. All Phase Restoration Tradeshow and Continuing Education, Windsor, CO. March 2018.
3. "Roofing Large Loss." Guest Presenter. All Phase Restoration Tradeshow and Continuing Education, Windsor, CO. March 2018.
4. "Roof Inspection Basics and Case Studies." Presenter. All Phase Restoration Continuing Education Seminar, Windsor, CO. June 2017.
5. "Water Losses and Foundation Movement." Presenter. All Phase Restoration Continuing Education Seminar, Windsor, CO. June 2017.
6. "Nondestructive Testing Methods for Underwater Tunnel Linings." Presenter. Knott Laboratory Continuing Education Seminar, Centennial, CO. November 2016.
7. "Building Envelope Failures." Presenter. Northern Colorado Rental Housing Association, Fort Collins, CO. September 2016.
8. Kyle T. Wiegghaus, Stefan Hurlebaus, and John B. Mander. "Post-tensioned traffic signal structure: Experimental natural wind response and fatigue assessment." Speaker. 95rd Annual Meeting of the Transportation Research Board, Washington, D.C. January 2016.
9. Kyle T. Wiegghaus. "Mitigating wind-induced fatigue in steel traffic support structures." Speaker. Structural Engineers Association of Texas (SEAoT) – Texas A&M Student Chapter. March 2014.
10. Kyle T. Wiegghaus, Stefan Hurlebaus, and Daniel T. Bartilson. "Target-less computer vision for experimental modal analysis." Speaker. 93rd Annual Meeting of the Transportation Research Board, Washington, D.C. January 2014.
11. Kyle T. Wiegghaus, Stefan Hurlebaus, and John B. Mander. "Natural wind response and fatigue assessment of a cantilevered traffic signal structure with helical arm strakes." Speaker. 93rd Annual Meeting of the Transportation Research Board, Washington, D.C. January 2014.