



- 2020 “Probabilistic Performance Modeling and Optimum Maintenance Planning of Plastic Pipeline Piezoelectric-Based NDE Updating” DOT-PHMSA
- 2019 “Multi-Modal NDE Assisted Probabilistic Pipeline Performance Evaluation under Interactive Anomalies”, DOT-PHMSA
- 2017 “Evaluation of Effective Bridge Deck Repair Maintenance Methods (Phase II)”, Department of Transportation (ODO)
- 2016 “Probabilistic Characterization of Bond Behavior at Reinforced Concrete Interface in Corroded RC Structures: Experiment, Modeling, and Implementation”, National Science Foundation (NSF)
- 2016 “Surface Applied Corrosion Inhibitors Testing”, BASF.
- 2016 “Reliability-based life cycle cost analysis of corroded reinforced concrete substructures considering patch repair”, NCERCAMP Project Development Grant, The University of Akron
- 2015 “Exp

- Zaker Esteghamati, M., Banazadeh, M., and Huang, Q. (2018). "The effect of design drift limit on the seismic performance of RC dual high buildings." *The Structural Design of Tall and Special Buildings* 27(8): e1464.
- Nikellis, A., Eshun, K. O., Dyanati, M., Roke, D. A., Huang, Q., Chandra, A., & Sett, K. (2018). "Effect of site-specific soil nonlinearities and uncertainties on ground motion intensity measures and structural demand parameters." *Georisk: Assessment and Management of Risk for Engineered Systems and Geohazards*.
- 2017 Dyanati, M., Huang, Q., and Roke, D. (2017). "Sensitivity analysis of seismic performance and loss evaluation" *Bulletin of Earthquake Engineering* DOI: 10.1007/s10518-017-01506.
- Chandra, A., Huang, Q., Roke, D., and Sett, K. (2017). "Improving precision in earthquake loss estimation," *Sustainable and Resilient Infrastructure* DOI: 10.1080/23789689.2017.1365231.
- Sajedi, S., Huang, Q. (2017). "Seismic performance of RC dual high buildings under near-fault ground motions." *Journal of Earthquake Engineering and Structural Dynamics* DOI: 10.1002/eqe.2400.

Huang, Q., Gardoni, P., and Hurlebaus, S. (2015). "Adaptive Reliability Analysis of Reinforced Concrete Bridges Subject to Seismic Loading Using Nondestructive Testing." *Journal of Risk & Uncertainty in Engineering Systems, Part A: Civil Engineering*, 1(4): 04015014.

2014 Fan, H., Huang, Q., and Liang, R. (2014). "Reliability and Importance Analysis of Piles in Spatially Varying Soils Considering Multiple Failure Modes," *Computers and Geotechnics* 97-104.

Huang, Q., Gardoni, P., Pagnotta, A., and Trejo, D. (2014). "Probabilistic Model of Steel-concrete Bond Behavior of Bridge Columns Considering the Effect of ASR." *Engineering Structures* 71: 1-11.

2013 Pagnotta, A., Trejo, D., Gardoni, P., and Huang, Q. (2013). "Effects on Impact Echo signals caused by adjacent steel reinforcing bars and voids in slab regions: Experimental study," *ACI Special Publication*, 292: 14.

2012 Huang, Q., Gardoni, P., and Hurlebaus, S. (2012). "Adaptive Reliability Analysis of Reinforced Concrete Bridges Subject to Seismic Loading Using Nondestructive Testing." *Journal of Risk & Uncertainty in Engineering Systems, Part A: Civil Engineering*, 1(4): 04015014.

- Dyanati, M., Huang, Q., and Roke, D. (2015) "Life Cycle Cost-Benefit Evaluation of Self-centering and Conventional Concentrically Braced Frames," 12th International Conference on Applications of Statistics and Probability in Civil Engineering, ICASP12, Vancouver, Canada.
- 2014 Dyanati, M., and Huang, Q. (2014). "Seismic Reliability of a Fixed Offshore Platform Against Collapse," Proceedings of the ASME 2014 33rd International Conference on Ocean, Offshore and Arctic Engineering San Francisco, CA.
- Dyanati, M., Huang, Q., and Roke, D. (2015) "Life Cycle Cost-Benefit Evaluation of Self-centering and Conventional Concentrically Braced Frames," 12th International Conference on Applications of Statistics and Probability in Civil Engineering, ICASP12, Vancouver, Canada.

- Huang, Q., Gardoni, P., and Hurlbaeus, S. (2009) "Updating Structural Properties Using Vibration based Nondestructive Testing with Modal Parameters," The 7th International Symposium on Non Destructive Testing in Civil Engineering (NDTCE'09), Nantes, France.
- 2007 Huang, Q. (2007) "Vibration Based Energy Harvesting Technique to Drive Wireless Sensor Networks," The Proceedings of 1st Civil Engineering Student Research Symposium, Texas A&M University, College Station, TX.

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#### INVITED PRESENTATIONS

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- 2017 "Application of Life-cycle Cost Analysis in Civil Engineering," Center for Environmentally Sustainable Transportation in Cold Climate, University of Alaska Fairbanks, Apr. 27, 2017.
- 2016 "Reliability-Based Corrosion Management of Pipelines Using ILI Data," National Corrosion and Materials Reliability 1st Workshop, Texas A&M University College Station, Aug. 9, 2016.
- "Application of Life-cycle Cost Analysis in Civil Engineering," College of Transportation Engineering, Tongji University, Shanghai, Jul. 29, 2016.
- "Cost-Benefit Evaluation of Self-Centering Concentrically Braced Frames," Department of Civil Engineering, Case Western University, Jan. 15, 2016.
- 2015 "Cost-Benefit Evaluation of Self-Centering Concentrically Braced Frames Considering Uncertainties," Research for Lunch, The University of Akron, Nov. 5, 2015.

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#### CONFERENCE PRESENTATIONS (BY RESEARCH TEAM)

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- 2021 "Rebar-Concrete Bond Strength Prediction Considering Corrosion and Bond Failure," Mode N 0d7C [(C)4 (ona.63).011 Tw [(5)-11 (1r003 ( )r)03 45 oen R1a312 0i(e)-1.7sond k oneof- (nd)1nf

- 2014 "Seismic Reliability of a Fixed Offshore Platform against Collapse," ASME 2014 33rd International Conference on Ocean, Offshore and Arctic Engineering, San Francisco, CA.
- "Structural and Nonstructural Performance Evaluation of Self-centering Concentrically Braced Frames Under Seismic Loading," Structures Congress 2014, Boston, MA.
- 2013 "Flexural behavior of corroded RC beams rehabilitated using repair,"

- “Updating Structural Properties using Modal Parameters Considering Measurement Errors,”  
Structures Congress 2009, Apr. 30– May 2, 2009, Austin, TX.
- 2008 “Probabilistic Demand Models and Fragility Estimates for Reinforced Concrete Highway Bridges  
with One Single

- í Investigating potential NDE methods to detect debonding between the rebar and concrete in reinforced concrete (RC) columns subjected to ASR/DEF
- í Evaluating the capacity of the deteriorated RC columns subjected to ASR/DEF

Graduate Research Assistant Texas A&M University College Station, TX 2006 – 2010

Research project Adaptive Reliability Analysis of RC Bridges Using Nondestructive Testing (NDT)

- í Developed probabilistic capacity and seismic demand models for RC bridges
- í Developed a probabilistic damage detection approach using vibration-based NDT
- í Developed an adaptive reliability framework for RC bridges incorporating the information obtained from NDT

Research project Wireless Instrumentation for Railroad Infrastructure Management

- í Investigated damage identification methods that can be programmed in the wireless sensors
- í Clarified the modal parameter extracting method program used in the wireless sensors

Structural Engineer Malcolm Pirnie, Inc., Columbus, OH

2004

- í The State Water Resources Research Institute (WRI) Program 2017
- í National Science Foundation (NSF) Proposal Review Panel 2012, 2016
- í Annual Small Grants program Illinois Water Resources Center 2016
- í Engineering Mechanics