

Akbar Vasseghi

Phone: (09821)-22830830

E-mail vasseghi@iiees.ac.ir

Education

- Ph.D. in Structural Engineering** *May, 1989*
The University of Texas at Austin
Advisor: Professor K.H. Frank
Dissertation: *Strength and behavior of composite plate girder bridges*
- Master of Science in Engineering** *May, 1983*
The University of Texas at Austin
Graduate research: *Fatigue strength of tubular joints*
- Bachelors of Science in Civil Engineering** *May 1980*
The University of Texas at Austin
B.S. awarded with highest honors
Engineering Scholar Award *April 1980*

Professional Experience

- Research Faculty** *March 2000 - present*
International Institute of Earthquake Engineering and Seismology, Tehran Iran
- Senior Engineering Consultant** *July 1998 – February 2000*
Pars Oil and Gas Company (subsidiary of National Iranian Oil Company), Tehran, Iran
- Senior Engineering Consultant** *April 1994 – June 1998*
Petroleum Engineering and Development Company (subsidiary of National Iranian Oil Company), Tehran, Iran
- Senior Structural Engineer** *March 1991 – March 1994*
Iranian Offshore Oil Company (subsidiary of National Iranian Oil Company), Tehran, Iran
- Structural Engineer** *June 1989 – October 1990*
Stress Engineering Services, Inc. - Houston, Texas
- Graduate Research Assistant** *September 1980 – May 1987*
Ferguson Structural Engineering Laboratory - Austin, Texas

Publications:

A- Journal Papers

- “A simple model for nonlinear analysis of steel plate shear wall structural systems”, *The Structural Design of Tall and Special Buildings*, 2021.
- “Failure analysis of a natural gas pipeline subjected to landslide”, *Engineering Failure Analysis*, Volume 119, 2021.
- “Effect of Outrigger Panels on Seismic Performance of Steel Plate Shear Wall Structural System”, *International Journal of Steel Structures*, 20(4), 2020.
- “The effect of curvature angle of curved RC box-girder continuous bridges on their transient response and vertical pounding subjected to near-source earthquakes”, *Structures*, Vol. 28, 2020.
- “Development of fragility functions for natural gas transmission pipelines at anchor block interface”, *Engineering Structures*, No. 186, May 2019.
- “Sarpol-e Zahab Earthquake Damages to Roadway Bridges”, *Journal of Seismology and Earthquake Engineering*, Vol. 20, No. 3, 2018.
- “Experimental and Analytical Study on the Proposed Retrofit Method for Concrete Bent in Ordinary Highway Bridges in Iran”, *ASCE Journal of Bridge Engineering*, 22(6), 2017.
- “Seismic retrofit of a typical reinforced concrete bridge bent in Iran”, *Scientia Iranica. Transaction A, Civil Engineering* Vol. 22, No. 4, 2015.
- “Effect of Pier Section Reinforcement on Inelastic Behavior of Steel I-Girder Bridges”, *ASCE Journal of Bridge Engineering*, Vol. 18, No. 1, 2013.
- “Energy Dissipating Shear Key for Precast Concrete Girder Bridges”, *Scientia Iranica*, Vol. 18, NO. 3, 2011.
- “Experimental Study on Seismic Behavior of Conventional Concrete Bridge Bents”, *Journal of Seismology and Earthquake Engineering*, Vol. 12, No. 3, 2010.
- “Stability of Plate Girders in RBS Connections: A Numerical Approach”, *Journal of Seismology and Earthquake Engineering*, 12(1-2), 2010
- “Improving Strength and Ductility of Continuous Composite Plate Girder Bridges”, *Journal of Construction Steel Research*, Vol. 65, No.2, 2009.
- “Analytical and Experimental Study on Using Yielding Steel Shear Keys in Girder-Slab Bridges Supported on Rubber Bearings”, *Journal of Seismology and Earthquake Engineering*, Vol. 10, 2009.
- “Effect of Link Slab on Seismic Response of Two Span Straight and Skew Bridges”, *International Journal of Engineering*, Vol. 21, No. 3, October 2008.
- “Preliminary Seismic Evaluation of the Historic Sultaniyeh Dome”, *Journal of Seismology and Earthquake Engineering*, Vol. 8, No. 4, 2007.
- “Development of Fragility and Reliability Curves and Seismic Vulnerability Evaluation of Talehzang Concrete Bridge”, *Esteghlal-Journal of Eng.*, Vol. 25, No. 1, 2006.
- “Design Requirements for Plate Girders Reinforced by Bolted Transverse Stiffeners”, *International Journal of Engineering*, Vol. 18, No. 1, 2005.

B- Conference Papers

“A Simple Method for Upgrading the Inelastic Performance of Composite Plate Girder Bridges”, Istanbul Bridge Conference (IBridge 2020), Istanbul, Nov. 2020.

“Analytical Modeling of Precast Concrete Grouted Beam-Column Joints under Cyclic Load”, 8th International Conference on Seismology and Earthquake Engineering, Tehran, Iran, Nov. 2019.

“Analytical Modeling of Self-centering Dual Shell Bridge Column”, 8th International Conference on Seismology and Earthquake Engineering, Tehran, Iran, Nov. 2019.

“Analytical Modeling of Cap Beam-Column Joints in Ordinary RC Multicolumn Bridge Bents in Iran”, 8th International Conference on Seismology and Earthquake Engineering, Tehran, Iran, Nov. 2019.

“Evaluation of Concentric Braced Frame Modeling Methods”, 8th International Conference on Seismology and Earthquake Engineering, Tehran, Iran, Nov. 2019.

“Seismic Behavior of Soil-Steel Composite Bridges”, 7th International Conference on Seismology and Earthquake Engineering, Tehran, Iran, May 2015.

“Seismic Behavior of Fixed Offshore Platform Designed for Float-over Installation – Case Study”, 7th International Conference on Seismology and Earthquake Engineering, Tehran, Iran, May 2015.

“On the Performance of a Technique for More Efficient Time Integration When Applied to Bridge Structures Seismic Analysis”, 3rd ECCOMAS thematic conference on computational methods in structural dynamics and earthquake engineering (COMPDYN), Corfu, Greece, 2011

“Seismic Response of Short and Medium Span Bridges Equipped with Energy Dissipating Shear Keys”, 14th World Conference on Earthquake Engineering, Beijing, China, October 2008.

“Seismic Behavior of Jointless Link Slab Bridges”, 1st European Conference on Earthquake Engineering and Seismology, Geneva, Switzerland, Sept. 2006.

“Seismic Retrofitting of Plate Girder Bridges by Bolted Stiffeners”, 1st European Conference on Earthquake Engineering and Seismology, Geneva, Switzerland, Sept. 2006

“Seismic Vulnerability Analysis of the Historic Sultaniya Dome”, 13th World Conference on Earthquake Engineering, Vancouver, Canada, August 2004.

“Bolted Transverse Stiffeners for Plate Girder Bridges”, 4th International Conference on Seismology and Earthquake Engineering, Tehran, Iran, June 2003.

“Guidelines for Seismic Evaluation of Masonry Buildings in Iran”, 4th International Conference on Seismology and Earthquake Engineering, Tehran, Iran, June 2003.

Research and Technical Reports

“Seismic Assessment of a Resilient Self-centering Structural System for Typical Highway Bridges in Iran”, International Institute of Earthquake Engineering and Seismology, 2020.

“Analytical Development of Seismic Vulnerability Functions for Gas Transmission Pipelines in Iran”, International Institute of Earthquake Engineering and Seismology, 2019.

“Seismic Assessment of Outrigger Steel Plate Shear Wall Structural System for Tall Buildings”, International Institute of Earthquake Engineering and Seismology, 2018.

“Study on Effect of Longitudinal Restrainers on Seismic Behavior of Conventional Concrete Girder Bridges”, International Institute of Earthquake Engineering and Seismology, 2015.

“Optimum Design of Anchor Blocks for Gas Transmission Pipelines”, Prepared for Iranian Gas Engineering and Development Company, International Institute of Earthquake Engineering and Seismology, 2014.

“Assessment of Various Methods for Buoyancy Control of Gas Pipelines at River Crossings”, Prepared for Iranian Gas Engineering and Development Company, International Institute of Earthquake Engineering and Seismology, 2013.

“Seismic Retrofit of Cap Beam in Conventional Highway Bridge Bents”, International Institute of Earthquake Engineering and Seismology, 2012.

“Analytical Study on Seismic Behavior of Fixed Offshore Platforms Designed for Float-over Construction”, International Institute of Earthquake Engineering and Seismology, 2012.

“Assessment of Seismic Hazard in Kharg Island and Evaluation of Various Methods to Improve Seismic Performance of Structures and Facilities of Kharg Oil Terminal”, Prepared for Iranian Oil Terminals Comp., International Institute of Earthquake Engineering and Seismology, 2010.

“Analytical Study on Seismic Behavior of Multi-Span Bridges with Link Slabs”, International Institute of Earthquake Engineering and Seismology, 2010.

“Experimental and Analytical Study on Seismic Retrofit of Bridges Using ADAS Shear Keys”, International Institute of Earthquake Engineering and Seismology, 2008.

“Analytical Study on Factors Affecting the Seismic Behavior of Skew Bridges”, International Institute of Earthquake Engineering and Seismology, 2007.

“Seismic Evaluation of Two Tall Buildings in Tehran”, Prepared for Telecommunication Company of Iran, International Institute of Earthquake Engineering and Seismology, 2006.

Research and Technical Reports (cont.)

“Seismic Evaluation of Sweden Chancery Building in Tehran”, Prepared for Sweden embassy in Tehran, International Institute of Earthquake Engineering and Seismology, 2006.

“Seismic Evaluation and Retrofit of School Buildings in District 1 of Tehran”, Prepared for Organization for Development, Renovation and Equipping Schools of Iran, International Institute of Earthquake Engineering and Seismology, 2005.

“Study on Seismic Behavior and Strength of the Historic Sultaniyeh Building”, International Institute of Earthquake Engineering and Seismology, 2004.

“Utilizing Bolted Transverse Stiffeners for Plate Girders in Bridges”. International Institute of Earthquake Engineering and Seismology, 2003.

“Guidelines for Seismic Rehabilitation of Masonry Buildings in Iran”, International Institute of Earthquake Engineering and Seismology, 2002.

“Effect of Buckle Arrestor on Pipeline Failure During Pipelaying Operation”, Prepared For American Gas Association, Stress Engineering Services, Inc., 1990.

“Evaluation of Discoverer 534 Drillship for Drilling in 6000 foot Water Depth”, Prepared For British Petroleum, Stress Engineering Services, Inc., 1990.

“Fatigue Analysis of Amerada Hess Completion Riser in 470 foot Water Depth”, Prepared for National Oilwell, Stress Engineering Services, Inc., 1990.

“Analysis of BHP Petroleum’s Jabiru Phase 3 Completion Riser”, Supplementary Report, Prepared for BHP Petroleum, Stress Engineering Services, Inc., 1990.

“Finite Element Analysis of Interlocking Riser Connector”, Prepared For Equipetrol Corporation, Stress Engineering Services, Inc., 1989.

“Full Scale Tests of Composite Steel and Concrete Bridge Girders”, Prepared For American Iron and Steel Institute, Ferguson Structural Engineering Laboratory, 1987.

“Evaluation of Seven-wire Strands for the Coatzacoalcos Bridge Stay”, Prepared For Mexico Highway Dept., Ferguson Structural Engineering Laboratory, 1985.

“Fatigue and Ultimate Tests of Stay Cables of the Luling Cable Stayed Bridge”, Prepared for Louisiana Highway Dept., Ferguson Structural Engineering Laboratory, 1983.