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Resume/CV

EDUCATION and LICENSURE

- Licensed Professional Engineer, Tennessee
- Ph.D. in Civil Engineering, August, 2013, UT-Knoxville, Dissertation: ***Isolation as a Seismic Design Strategy for Bridges in the New Madrid Seismic Zone***
- M.S. in Mathematics, Tennessee State University, December 2006
- M.S. in Civil Engineering, Tennessee Tech University, August 1985
- B.S. in Civil Engineering, ***Magna Cum Laude***, Tennessee Tech, March 1984
- 2-month practicum in Appropriate Technology for developing countries, May 1997
- Member, Earthquake Engineering Research Institute (EERI)
- Member, Seismological Society of America (SSA)
- Reviewer, ASCE Journals of Bridge Engineering and Practice Periodical

PREVIOUS POSITION DETAILS

- Structural design and project management for TDOT bridge construction
- Interstate 40 over TN State Route 5 – Seismic Isolation System Design
- SR-26 over Center Hill Lake - plate girder with large, deep drilled shafts
- I-55 over Mallory Avenue in Shelby County – curved steel plate girder
- Demonbreun Street Viaduct over CSX Railroad & 11th Avenue
- Seismic pushover analysis of various structures

- Authored and maintain the TDOT Seismic Design Policy
- 2016 Tennessee Government Engineer of the Year, TSPE Nashville

RESEARCH

- NCHRP 12-106, Proposed Guidelines for Performance-Based Seismic Bridge Design
- NCHRP 20-05, Topic 42-03, Site-Specific Evaluation of Earthquake Ground Motions
- NCHRP 20-07 (Task 396), Updating the AASHTO Seismic Hazard Maps
- NCHRP 12-59(01), Seismic Design of GRS Bridge Abutments
- NCHRP 12-105, Seismic Performance of Accelerated Construction Connections
- NCHRP 20-7 (task 262-M2), Project Working Group, Seismic Isolation Design
- Associate Editor, ASCE ***Practice Periodical on Structural Design and Construction***

PUBLICATIONS

- Kidwell, Taylor; Kerley, Rebekah; Henderson, R. Craig; Huff, Tim; ***Elastic and Inelastic Behavior of Precast Concrete Piles and Cast-in-Shell Steel Piles in Reinforced Concrete Caps***, Practice Periodical on Structural Design and Construction, American Society of Civil Engineers (ASCE), Accepted for publication on May 15, 2017.
- Huff, Tim; Shoulders, Jonathan; ***Partial Isolation of a Bridge on Interstate 40 in the New Madrid Seismic Zone***; 34th International Bridge Conference, National Harbor, Maryland, June 4-8, 2017.
- Yarnold, Matt; Alexander, Justin; Huff, Tim; ***Structural Health Monitoring of the Hernando De Soto Bridge***; 34th International Bridge Conference, National Harbor, Maryland, June 4-8, 2017.
- Hajihashemi, Ali; Pezeshk, Shahram; and Huff, Tim, ***A Comparison of Nonlinear Static Procedures and Modeling Assumptions for Seismic Design of Ordinary Bridges***, Practice Periodical on Structural Design and Construction, American Society of Civil Engineers (ASCE); 10.1061/(ASCE)SC.1943-5576.0000309, 04016022, November 2016.
- Huff, Tim, ***Structural Demand on Bridges Subjected to Bidirectional Ground Motions***, Practice Periodical on Structural Design and Construction, American Society of Civil Engineers (ASCE); 10.1061/(ASCE)SC.1943-5576.0000299 , 04016007. August, 2016.
- Huff, Tim; ***Issues in the Prediction of Inelastic Behavior in Bridges during Earthquakes***, Practice Periodical on Structural Design and Construction, American Society of Civil Engineers (ASCE); 10.1061/(ASCE)SC.1943-5576.0000289 , 04016007. February, 2016.
- Huff, Tim; ***Estimating Residual Seismic Displacements in Bi-Linear Oscillators***, Practice Periodical on Structural Design and Construction, American Society of Civil Engineers (ASCE); 10.1061/(ASCE)SC.1943-5576.0000282 , 04016003, January, 2016.
- Pezeshk, S.; Elsayed, A.; Huff, T.; and Pezeshk, S. M.; ***Site Specific Seismic Analysis at the Vicinity of A Bridge Located Within the Mississippi Embayment***, Eastern Section Seismological Society of America, Annual Meeting, 2015.

- Huff, Tim; Pezeshk, Shahram; ***Inelastic Displacement Spectra for Bridges Using the Substitute-Structure Method***, Practice Periodical on Structural Design and Construction, American Society of Civil Engineers (ASCE); 10.1061/(ASCE)SC.1943-5576.0000279; December 30, 2015.
- Huff, Tim; ***Partial Isolation as a Seismic Design Strategy for Pile Bent Bridges in the New Madrid Seismic Zone***, Practice Periodical on Structural Design and Construction, American Society of Civil Engineers (ASCE); 10.1061/(ASCE)SC.1943-5576.0000277; December 30, 2015.
- Huff, Tim; ***Seismic Displacement Estimates for Bridges in the New Madrid Seismic Zone***, Practice Periodical on Structural Design and Construction, American Society of Civil Engineers (ASCE); 10.1061/(ASCE)SC.1943-5576.0000269; December 30, 2015.
- Huff, Tim; ***Spanning the Wolf River Wetlands***, Aspire - The Concrete Magazine, Fall 2014, pp. 14-17.
- Huff, Timothy; Wayne Seger and Ed Wasserman; ***Tennessee State Route 385 over the Wolf River Wetlands - A Precast Solution***; PCI National Bridge Conference, September 2014.
- Huff, Timothy; ***Isolation of Bridges in the New Madrid Seismic Zone***; 7th National Seismic Conference on Bridges and Highways, May 2013, Oakland, California.
- Huff, Timothy; ***Ground Motion Selection and Modification for Nonlinear Time History Analysis of Isolated Bridges in the NMSZ,*** Poster Session, EERI Annual meeting, April 2012, Memphis, TN.
- Wasserman, E. P., Pate, W. H. and Timothy Huff; ***Evaluation of Best Practices with High Performance Steel for Bridges***, presented at the Third conference on Advanced Materials for Construction of Bridges, Buildings, and other Structures, September 7-12, 2003, Davos, Switzerland.
- Jones, W. D., Fricke, K. E. and Timothy Huff; ***Out-of-Plane Testing of A Hollow Clay Tile Wall Panel in Building 9207 at the Y12 Plant***; Lockheed Martin Energy Systems, 1993.
- Fricke, K. E. and T. E. Huff; ***Test Procedure of the Out-of-Plane Full Scale Air Bag Test of A Hollow Clay Tile Wall Panel at the Y-12 Plant – Building 9207***, HCTP-21; Lockheed Martin Energy Systems, September, 1991.

PREVIOUS EXPERIENCE

June 2001 – August 2017: Tennessee Department of Transportation

- Performed design and project management for both routine and complex bridge projects

May ’00 – January ’07: Engineering Ministries International

- Structural engineering lead and mentor for project teams:
- Serampore College near Calcutta
- Aizawl Institute for Christian Studies in Mizoram

- 4 story offices in Ludhiana, Punjab
- Extension to Landour Community Hospital, Mussoorie, Uttar Pradesh
- Grace International Children's Hospital in Carrefour, Haiti
- Kid's Camp, Recife, Brazil
- Soddo Community Hospital, Ethiopia.

February '97 – August '01, Private consultant, Knoxville, Tennessee

- Industrial, commercial, residential design and evaluation of structures including:
- Drilled pier foundation design for Waxahachie Texas electrostatic precipitator
- Inspection and modeling of Spurlock Power Plant (KY) equipment
- Stack design for Delmar, New York precipitators - wind and earthquake loads

October '99 – February '00: Far East Broadcasting Corporation, Manila, the Philippines

- Design oversight for short wave radio transmission line structures and foundations for hurricane force winds in challenging soil conditions

April '88 – February '97: Lockheed Martin Energy Systems, Oak Ridge, Tennessee

- Dynamic and static structural evaluation and design for earthquake and wind forces using hand calculations and 3-dimensional finite element modeling; use of IMAGES, STAAD, GTSTRUDL; specific projects include:
- Building 9818 Seismic Analysis and Evaluation
- Building 9204-2E Seismic Analysis and Evaluation
- Building 9207 Air Bag Test Design and Analysis