

RESUME

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PROFESSIONAL PREPARATION

- Virginia Polytechnic and State University, Civil Engineering, BSCE, 1996
- University of Nevada, Reno, Civil Engineering, MSCE, 1999
- University of Nevada, Reno, Civil Engineering, PhD, 2002

APPOINTMENTS

- May 2001 - present: Research Associate Professor and Laboratory Manager
Dept. of Civil & Environmental Engineering, University of Nevada, Reno

MAJOR PROJECTS WITH EMPHASIS ON NON-STRUCTURAL TESTING

- A laboratory manager, actively testing and qualifying non-structural components since 2004 including medical equipment, HVAC systems, piping systems, basic building components, and server systems.
- Installation and Testing of the NEES Grand Challenge non-structural component test bed frame.
- Currently designing complete turn-key 2000 ton capacity tri-axial shake table system for the Department of Energy study on soil structure interaction using a 600 ton soil box.
- Complete design, fabrication and installation of a high performance six degree-of-freedom seismic shake table system for targeting qualification testing in 2008.
- Design and development of a 400 channel IEEE-1451 TEDS plug-and-play instrumentation system
- Design and development of a high-speed reflective memory network using ScramNET
- Development of inverse-shock spectra time history generation software with kinematic shake table verification for qualification testing and codes
- Development of time-integration non-linear dynamic modeling software using C code for sizing shake table specimens
- Development of machine vision imaging acquisition systems for measuring specimen displacements
- Design and development of a stand-alone structural health monitoring system for Nevada Department of Transportation Galena Creek Bridge

PROFESSIONAL SERVICE

Board of Advisors, Dynamic Certification Laboratory (DCL) 2011 – Present

- Site design and shake table system equipment selection

- Software development for data analysis and generating inverse shock spectra
- Data acquisition system development and installation
- Control design and implementation
- Training of DCL staff on data analysis, acquisition hardware and control systems
- Network setup and maintenance
- Technical support for site accreditation

Subcommittee on OSHPD ASCE AC156 code incorporation

Consultant to Dynamic Isolation Systems (DIS) 2011 – Present

- Data acquisition system development and installation
- Actuator controller hardware and software development
- Prototype design of a 2000 ton pendulum friction bearing dynamic test machine

SELECTED CONFERENCE PRESENTATIONS

- An Overview of Shake-Table Characteristics Used for Seismic Qualification Testing, ATC, Sacramento, CA, 2003
- LabVIEW Real-time and Reflective Memory for Real-Time Control of Shaking Tables, NI Technical Symposium, Palo Alto, CA, 2005
- Strategies for Operation of Single and Multiple Shake Tables, EESK, South Korea, 2006
- Strategies for Operation of Single and Multiple Shake Tables, Pusan University, South Korea, 2006
- University of Nevada, Reno Large Scale Structures Laboratory, ASCE Student Chapter, Reno, NV, 2006
- Current Research Methods in Seismic and Structural Engineering, ASCE Reno Chapter, Reno, NV, 2006
- Fundamentals of Data Acquisition, UCSD NEES Workshop, San Diego, CA, 2007
- The Physics of Shake Tables, UCSD NEES Workshop, San Diego, CA, 2007
- User Training on Data Acquisition, 4-Span Bridge Users Group, Reno, NV, 2007
- An Overview of the Large Scale Structures Laboratory at the University of Nevada, Reno, NEES Site Operations, 2007
- Seismic Simulation Test Integration and Automation, Beijing, China, 2010
- The Basic Physics of a Shake Table, Experimental Methods Class, Reno, NV, 2010
- Strategies In Single/Multiple Shake Table Control, for Saclay Nuclear Research Center (CEA), Saclay, France in Minneapolis, MN, 2010
- Strategies In Single/Multiple Shake Table Control, EFAST, Ispra, Italy, 2011
- Infrastructure Development, for Shimizu Japan in Reno, NV, 2011
- Using Structural Testing With PXI Data Acquisition and Reflective Memory, NI-Week, Austin, TX, 2012
- Shake Table Research at The University of Nevada, Reno, Tongji, Shanghai China, 2012