**TECHNICAL SKILLS**

**Structural Analysis and Design Skillset**

* Knowledge of steel design according to AISC-LRFD and concrete design based on ACI-318.
* Familiar with structure analysis using software such as Sap 2000® and STAAD.Pro®.
* Capable of performing design hand calculations using Mathcad® and theoretically derivation using Maple® and Mathematics®.
* Structural drafting using AutoCAD 2011®, in both 2D and 3D.

**Finite Element Analysis Skillset**

* Familiar with fundamental finite element analysis knowledge and meshing methods.
* Familiar with nonlinear material constitutive models for structural steel, aluminum, concrete, and FRP.
* Frequent user of MSC.Patran®/Nastran®/Marc® software package, have experience on Ansys® and Abaqus® CAE.
* Parametric model building using programing language such as Python and APDL.
* 2D and 3D seismic analysis using OpenSees with real world earthquake records.

**Structural Experiment Skillset**

* General knowledge on strain gauges, displacement, and load transducers.
* Hands on experience on static and fatigue load tests using 200 kip Instron® UTM and 100 kip MTS®  machines. Data acquisition using Nation Instrument equipment and self-made Labview® program.

**EXPERIENCE**

Adjunct Lecturer (2011.5 – 2011.8, and 2010.1-2010.5) at UCF

* Teach the senior undergraduate class CES 4100 structural analysis and coordinate the corresponding structural lab session. Guest Lecturer on advanced materials of mechanics.

Research Assistant (2007 - 2011) at UCF

* Work on project “Alternatives to moveable bridge decks. Phase I & II”.
* Design and test deck joints and connections. Investigate system level bridge responses.
* Characterized the structural responses of ultra-high performance concrete and high strength steel by experimental and analytical approaches.

Summer Intern (2006, May – 2006, July) at Shenzhen Architecture Design Institute–China

* Participated in the building evaluation and strengthening projects on a six-story, 25 years old frame structure served as office building. Performed the destructive and non-destructive evaluation of concrete and masonry material from the beams, columns, and slabs.
* Created the building models using structure analysis software and evaluated the structure response based on the actual material properties. Proposed the strengthen plans based on the evaluations.

**EDUCATION**

* *Ph.D. Civil Engineering*

University of Central Florida, GPA: 3.9/4.0

**–** Dissertation title: *Structural analysis of Ultra-high performance concrete decks for*

*moveable bridge.*

* *M.S. Civil Engineering,* May 2006

Zhejiang University, graduate GPA: 3.6/4.0

**–** Research topics: *Steel and concrete composite beam, flexural stiffness and stabilities*.

* *B.S. Civil Engineering,* June 2003

Zhejiang University, undergraduate GPA: 3.8/4.0

**–** Graduate with honors

**RESEARCH**

**Conference and Seminar Presentations**

* Tube-based composite deck system for moveable bridges, In CBC 2010, Feb 24-26, 2010, Phoenix, Arizona.
* System level finite element analysis of two moveable bridge deck systems, In FHWA Bridge Engineering Conference 2010, April 8-9, 2010, Orlando, Florida.
* Introduction on the ultra-high performance concrete. Research group seminar, Aug 2009.
* Parametric finite element analysis using MSC.Patran® and MSC.Marc®. Research group seminar, March 2010.

**Selected Journal Papers and Technique Reports**

* J. Xia, and K. Mackie, M.A. Saleem, A. Mirmiran. Shear failure analysis on ultra-high performance concrete beams reinforced with high strength steel Engineering Structures. Elsevier Engineering Structures. 2011.
* M.A. Saleem, A. Mirmiran, J. Xia, K. Mackie and M.H. Ansley. Ultra-high performance concrete bridge deck reinforced with high strength steel. ACI Structural Journal. To be published, Vol. 108 No. 05, 2011.
* G.S. Tong, J. Xia.(2007). Buckling of I-Sectional Steel Beams Loaded by Negative Moments, Progress in steel building structures, 9(1).

**Professional Membership, Services, and Awards**

* Excellent research assistant of the year award 2010, department of civil and environmental engineering.
* Provost’s Graduate Fellowship, in University of Central Florida.
* Scholarship for Academic Excellent Student, Zhejiang University.
* Member of American Society of Civil Engineers (ASCE), American Concrete Institute (ACI), and Prestressed Concrete Institute (PCI).