+16264108867
wsitu@alumni.stanford.edu|www.linkedin.com/in/jimsitu/ **Wenjin (Jim) Situ**

Education

2015-2017 **Stanford University** M.S. in Structural Engineering

- 2016 Global PBL Design Lab: Structural Engineer
- Coursework in PBEE, Earthquake Resistant Design, Nonlinear Structural Analysis, Structural Dynamics, Programming Abstraction, Parametric Design

2011-2015 **UCSD** B.S. in Structural Engineering

- Magna Cum Laude
- Department Rank 1st

Relevant Experience

2017+ **RAD Urban** Oakland

Structural Engineer

Project: 2044 Franklin St, Oakland

- Commercial: 57,000 sf
- Retail: 5,300 sf
- Residential: 26,400 sf
- Modular: 188,000 sf
  - 31 stories mixed used tower
    - Lateral System: steel plate shear-wall supplemented with outrigger, BRB
  - 3 stories residential townhome
    - Lateral System: special moment frame and braced frame

Tasks:

- Developed VBA codes and access database to connect ETABS structural information with spreadsheet to automate structural analysis post-processing such as member strength check.
- ETABS linear analysis for response spectrum analysis, ELF; check for drift, displacement, foundation demand, shear and overturning demand, modal behavior, and irregularity based on ASCE 7-10.
- Gravity steel framing design.
- Mat foundation Design for 30 story tower, single and combined footing with grade beams for 3 story townhome.
- Establish Performance Based Design Process for the high rise structure, which cut down manual modeling work for iteration process from 1 month to 1 week.
- Use Perform 3D for nonlinear time history analysis, extract story acceleration, inter-story drift, roof displacement, story shear, overturning moments, column axial loads, HBE rotation demand, establish performance standard per TBI 2010, ASCE-41.
- Assembled calculation packages for SD and DD submittals for Structural Peer Review Panel.
- Developed auto-clicking tools with Sikuli to extract P3D model time history analysis results.
- Provide detail drawings for in house drafter such as brace frame gusset plate, rebar layout for mat foundation.
- Check vibration acceptance criteria of flooring system per AISC Design Guide 11.

Project: 1433 Webster St, Oakland

- Retail: 9,759 sf
- Modular Residential: 136,679 sf
- 15 stories residential tower
  - Lateral System: BRBF

Tasks:

- ETABS global analysis, check for drift, member strength, irregularity per ASCE 7-10.
- Column elastic shortening per construction sequence.
- Initiate contacts and communicate with third party engineering consultants.
- Assemble SD cal-package submittal.

Project: 5110 Telegraph Ave, Oakland

- 33,000 sf 204 units
- 6 story with 2 basement level residential project

- Lateral System : BRBF

Tasks:

- Construction Administration.

2016 Summer **Little Diversified Architectural Consulting** Charlotte
Structural Intern

- Developed standard typical detail drawings for foundation, steel, concrete, masonry in Revit to replace Autocad detail drawings.
- Schematic Design structural analysis with RAM, ELF hand calculation per ASCE 7-10.
- Update section sizes, relocate column/beam in Revit model per architectural change.

2014 Summer **ARUP** Beijing
Structural Intern

Project: China World Trade Center Towers III B (59 storeys mixed-used tower with 2,430,556 GSF)

- Established ETABS model with preliminary section design, assign load combinations and load set.
- Produced drawings and reports for various design submittals.

Selected Project/Research

Structural Design Optimization Project

- Modified TOP3D Matlab code by Prof. Paulino to optimize a 2-story building that has longer. span on the top story. The optimized result is a tree-like branching structure.

Performance-Based Earthquake Engineering MATLAB GUI

- Created a Matlab GUI that was able to perform the whole performance-based framework. The GUI can inform the user of seismic hazard, probability of exceedance for given engineering parameter, probability of collapse, fragility damage state probability, and calculate expected annual loss.

Nonlinear Structural Analysis Programming Project

- Utilized inheritance in MATLAB Object Oriented Programing to extend the first order analysis code to perform second order elastic nonlinear structural analysis for any 2D frame structures.

Memberships/Awards

- Phi Beta Kappa at Stanford Chapter.
- American Society of Civil Engineers (ASCE).
- Toastmasters Oakland.

Structural Software

- Perform-3D, ETABS, RAM Structural System, SAFE, Revit

Publication

"The Tallest Modular Tower Design Using a Performance-Based Approach"
Structures Congress, 2018