

# Xiaohu Lei

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## Education

- Northwestern University MEM candidate (Master of Engineering Management) July, 2016-Expected Dec, 2017  
(GPA: 4.0/4.0) with concentration in Managerial Analytics
- Tongji University Master of Science in Structural Engineering Sep, 2008-June, 2011  
(GPA: 86/100; Rank: 9/136)

## Courses in MEM program at Northwestern University

Engineering Management	Leadership and Organizational Behavior
Decision Tools for Managers	Negotiation for Engineers
Statistics	Marketing for Engineers
Stochastic Models	Accounting for Engineers
Managerial Analytics	Finance for Engineers
NUvention Analytics	Simulation for Risk & Operation Analysis

## Working Experiences

Structural Engineer Tongji Architectural Design (Group) Co., Ltd July, 2011-Oct, 2015  
Engaged in the analysis, design, consulting, optimization and reinforcement of all kinds of building structure.

### *Shanghai Tower (632m, Highest building in China)*

- Responsible for the analysis and design of the piled raft foundation of Shanghai Tower with SAP2000, ABAQUS.

### *Shanghai Disneyland*

- Led a team to participate in the design of Shanghai Disneyland; responsible for the analysis, consulting and design of decorative building structure; attended weekly meetings with Disney representative.
- Formulated design criteria which could satisfy the design standard of both China and Disney; formulated project schedule and assigned tasks to team members according to characteristics.
- Integrated the work of team members, in charge of the design quality examining and solved puzzling questions; calculated workload of team members and allocated earnings properly.

### *Copper Ridge Ancient Copper Mine Ruins Museum*

- In charge of the structure design of Museum in mountainous region; analyzed the engineering geological investigation report of karst cave area; conducted site selection research.
- Built model and analyzed the indicators of structure under earthquake action; made anti-sliding and capsizing analyses under mountain thrust; made special analyses about basement and pile foundation;

### *Zhuji Theater (Landmark building with an irregular shape)*

- Issued marketing research report and feasibility research report; built Building Information Modeling (BIM).
- Responsible for the overall design including concrete structure, steel structure design and the cooperation with later construction; reinforcement design of nearby existing buildings which are affected by this new building.
- Used SAP2000 to build the finite element model, inspecting the performance of structure by buckling and dynamic analyses; adopted ABAQUS to make analysis of stress and strain, guaranteeing the reliability of joints.

## Research Experiences

*The whole process analysis of interaction of piled raft foundation of high-rise buildings* 2009-2011

### *Master's Thesis (Research based on Shanghai Tower)*

- Established settlement calculation method based on Mindlin stress solution and compiled corresponding computer program using MATLAB.
- Simulated soil-pile using vertical springs and used ETABS to build finite element model; calculated the value of stiffness of vertical springs adopting iterative method; made interactive and whole erection process analysis.

*Settlement deformation calculation of ultra-high-rise buildings and back analysis of measured results.* 2010-2012

### *Independent research based on Shanghai Tower*

- Simulated foundation deformation of each construction stages and ultimate deformation under gravity load.
- Compared simulated results with measured results; evaluated and improved theoretical calculation method.

*Nonlinear dynamic time-history analysis of China Medical University library* 2009-2010

- Analyzed of building composed of two towers with large-span connective structure by nonlinear FEM method.

## Publications

"The Effect of Stiffness of Ground Spring upon the Plate of Piled-Raft Foundation of Super High-Rise Building under Vertical Loads." Structural Engineers, February, 2011, Vol.27, No.1 57-62.

"Discussion on Tensile Force of Piles Caused by Subsoil Rebound in Soft Soil Area." Structural Engineers, October, 2009, Vol.25, No.5 88-92.

"Structure Design of a Museum." Urbanism and Architecture, 2015(17), 71-74.

## Certificates

Registered Qualification Certificate/Class 1 Registered Structural Engineer/The People's Republic of China

Registered Qualification Certificate/Registered Civil Engineer (Geotechnical)/The People's Republic of China

## Skillset

Computer: ABAQUS\ANSYS\SAP2000\ETABS\YJK\MATLAB\Visual Basic(VBA)\AutoLISP\Python\MS-office