Yao MING

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EDUCATION

Department of Civil Engineering, Tsinghua University | Beijing, China   *2012.08 – 2016.07*

- **B.Eng**. in Civil Engineering.

- Ranking: **1st of 93 students**; Overall GPA: **93.2/100**.

- Selected Core Courses: Calculus (95/100), Linear Algebra (97/100), Probability and Statistics (100/100), Experiments in Mathematics (99/100), Structure Mechanics I & II (100/100).

- Selected Computer Science Courses: Data Structure (91/100), Software Engineering (96), Database (95).

HONORS AND AWARDS

- <u>**Nomination of Tsinghua Top Talent Scholarship**</u>   *2015.10*

  Highest honor in Tsinghua University, only 50 of 12,000 students nominated each year.

- <u>**National Endeavor Scholarship**</u>   *2015.10*

  For the top 2% students for overall performance.

- **Second Prize in the 1st National Geotechnical Engineering Contest**   *2015.07*

  One team of each university were selected to compete; we ranked 5th among over 100 teams.

- **Honorable Mention in 2015 MCM/ICM (Mathematical Contest in Modeling)**   *2015.04*

  Top 31% of over 7,000 teams from over 500 universities were awarded Honorable Mention.

- **Second Prize in the 20th Tsinghua Structure Design Competition**   *2014.10*

  Over 100 teams participated; 10 selected to go to final; 3 teams awarded second prize.

- <u>**National Scholarship**</u> (**Top 2%**)   *2014.09*

  For the top 2% students for overall performance.

- **First class comprehensive scholarship of Tsinghua University**   *2013.09*

  For the top 5% students for overall performance.

RESEARCH EXPERIENCE

Spatiotemporal big data analytics on facility maintenance data   *2015.08 – 2015.09*

Advisor: <u>Prof. Xuesong Liu</u>, Dept. of CEE, Carnegie Mellon Univ.

- Developed data cleaning programs with simple mapping, normalization and correlation analysis.

- Designed a database-like system to integrate work order data, building information models (BIM) and other data sources. Developed query and visualization function for the integration system.

- Developed a clustering approach to reveal inner pattern of the work order data using improved k-modes algorithms, correlation analysis and other machine learning algorithms.

3D mesh decomposition based on saliency detection and solid modeling   *2015.03 – 2015.08*

Advisor: <u>Prof. Yong-Jin Liu</u>, Dept. of Computer Science, Tsinghua Univ.

- Implemented mesh saliency detection algorithms with MATLAB and C++ and improved its efficiency by adding a mesh simplification phase before computation.
- Developed a clustering algorithm based on geometric distance to attain saliency clusters on meshes. Developed an automated fast mesh decomposition approach based on solid computing.
- Reviewed and learned several classic computation geometry algorithms including mesh simplification algorithms, mesh saliency detection algorithms and decomposition methods.

Information system for disaster prevention and earthquake mitigation *2013.09 – 2014.12*

Advisor: <u>Prof. Xinzheng Lu</u>, Dept. of Civil Engineering, Tsinghua Univ.

- Programmed in C++ to analyze structures' dynamic behavior under earthquake waves.
- Developed the simulation module to visualize buildings' behavior under earthquake waves.
- Established the database containing structural information for dynamic analysis.

LEADERSHIP AND ACTIVITIES

Student Union, Department of CEng, THU ｜ Vice President *2013.02 – Present*

- Established a half-year software training (adobe PS/AI) for the enrolled members.
- Responsible for publicity and visual identity design of the student union and its activities.

Structure 21, Department of CEng, THU ｜ Class Monitor *2014.09 – 2015.10*

- Excellent Class in Department of Civil Engineering (honor for my class)
- Excellent Class in Academic Performance in Tsinghua University (honor for my class)
- Excellent Student Leader Award in Tsinghua University (honor for my leadership)

Student Chorus, THU ｜ Bass *2013.01 – Present*

- Leaded in Bass and participated in over twenty performances on campus and publicly.
- Planned and organized publicity activities for performances.

SKILLS

- 5 years' programing experience, Proficient in: C/C++, C#, Java, Python and MATLAB.