

Thomas MENG (Xiaochu Meng)

1 JOBS/EXPERIENCES

1.1 Arup - Structural Engineer (Feb 2021 - May 2024)

Brisbane Metro (2022 - 2024)

Assisting with the structural analysis and calculations for structures on Brisbane Metro.

- Setting up, running and checking nonlinear structural models.
- Creating scripts for automatic reporting on structural metrics including tonnage, base reactions, peak utilisations, and natural frequency.
- Coordinating with subcontractors on a range of matters including: geometric/interface alignment, analysis result verification, reviews, and documentation.

Inspect3D Development (2021 - 2024)

Lead developer for Inspect3D, a Unity-based structural and facade inspection application developed for PC, Android and WebGL.

- Developing new custom features in C# based on inspection requirements;
- Manipulating building geometry and structural data in Rhino/Grasshopper and Blender;
- Developed code for the cloud functionality for the WebGL version.

Confidential Museum Design (2021 - 2022)

Assisting with structural calculations for a large-scale museum project.

- Implementing base plate and shear breakout calculations as per ACI318;
- Assisting with developing the Grasshopper and SQL scripts for retrieving and writing data;
- Assisting with writing calculation packages to be submitted for external review.

1.2 University of Queensland

University of Queensland - Academic Tutor (Feb 2020 - Jun 2020)

Tutoring for CIVL3340 (Structural Analysis).

2 EDUCATION

2.1 Doctor of Philosophy

University of New South Wales (2024 -)

Under Professor **Hamid Vali pour Goudarzi**

Thesis: Seismic Resilience of Timber Structures

2.2 Bachelor of Engineering (Hons)

University of Queensland (2017 - 2020)

Honours Class I with an Extended Major in Civil Engineering

GPA: **6.42/7** WGPA: **6.40/7**

Thesis: Object-oriented approach to Structural Modelling

3 TECHNICAL SKILLS

3.1 Software

Unity3D • Rhino/Grasshopper • AutoCAD • Civil 3D • SPACE GASS • ETABS • Strand7 • GSA • MS Office Suite (incl. VBA)

3.2 Programming Languages

C • C# • Java • Python (incl. NumPy, Matplotlib) • SQL • \LaTeX • MATLAB

4 EXTRA CURRICULAR

4.1 Civil Engineering Hohai Study Tour

School of Civil Engineering - UQ (Late 2018)

A study tour in China at Hohai and Tongji Universities as well as a trip to famous civil engineering projects such as the Three Gorges Dam, Shanghai Tower, and the Chinese high-speed rail network.

4.2 Icarus Program

School of Civil Engineering - UQ (2018 - 2019)

Assisting a PhD student with her work in understanding the relationship between the chemical makeup and physical properties of epoxies.

Related publication: Fernando, *TTT cure diagram for an ambient temperature curing epoxy-amine thermoset* (ICCM22 2019)