



Hao ZHENG

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EDUCATION

PhD in Architecture

August 2018 — May 2023

University of Pennsylvania

Advised by Masoud Akbarzadeh
Fully-funded as a PennDesign Fellow

Master of Architecture

August 2016 — May 2017

University of California, Berkeley

Advised by Simon Schleicher
GPA: 3.98/4

Bachelor of Architecture

September 2011 — June 2016

Shanghai Jiao Tong University

Advised by Shixing Liu
GPA: 3.43/4

RESEARCH INTERESTS

Smart Building, 3D Printing, Robotic Arm Construction; Smart Design, Artificial Intelligence, Machine Learning, Genetic Algorithm; Computer-Aided Design, Parametric Design, Bio-inspired Design; Mixed Reality (MR), Virtual Reality (VR), Augmented Reality (AR); Smart City; Drone Mapping; Building Information Modeling (BIM).

PUBLICATIONS

Hao Zheng, Simon Schleicher, 2018. Bio-inspired 3D Printing Experiments. *Learning, Prototyping and Adapting, Short Paper Proceedings of the 23rd International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA) 2018*, Beijing, China.

Hao Zheng, Weixin Huang, 2018. Understanding and Visualizing Generative Adversarial Networks in Architectural Drawings. *Learning, Prototyping and Adapting, Short Paper Proceedings of the 23rd International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA) 2018*, Beijing, China.

Hao Zheng, 2018. Digital Fabrication Using Mixed Reality Technology. *Learning, Prototyping and Adapting, Short Paper Proceedings of the 23rd International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA) 2018*, Beijing, China.

Hao Zheng, 2018. Drawing with Bots: Human-computer Collaborative Drawing Experiments. *Learning, Prototyping and Adapting, Short Paper Proceedings of the 23rd International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA) 2018*, Beijing, China.

Hao Zheng, Yuanfang Lu, Yuepeng Li, 2018. Soft Rigidity. *Learning, Prototyping and Adapting, Short Paper Proceedings of the 23rd International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA) 2018*, Beijing, China.

Shixing Liu, Hao Zheng, Chunjiang Wang, 2014. Sleeve roof - Generating a Membrane Structure. *the 16th Shanghai-Seoul Forum on Engineering Sciences*, Shanghai, China.

WORK EXPERIENCE

Tsinghua University

Research Assistant (Prof. Weiguo Xu & Prof. Weixin Huang)
2017.9-2018.4

University of California, Berkeley

Research Assistant (Prof. Maria Paz Gutierrez & Prof. Kyle Steinfeld)
2017.1-2017.8

Shanghai Jiao Tong University Architectural Design

Architect (Intern)
2013.9-2016.6

AWARDS & HONORS

■ **Programming:**

2009.7, National Third Prize, The 26th National Olympiad in Informatics
2009.12, Provincial and National First Prize, The 15th National Olympiad in Informatics in Provinces
2010.5, Bronze Medal, The 4th Asia-Pacific Informatics Olympiad
2010.12, Provincial and National First Prize, The 16th National Olympiad in Informatics in Provinces

■ **Design:**

2012.5, Excellence Award, The 6th Huacheng Cup Design & Construction Competition
2013.8, Finalist Award (Top 10), The 1st DADA Digital Future – Digital Construction Design Competition
2014.9, Finalist Award (Top 30), The 3rd zhulong.com National Student Exhibition of Architectural and Environmental Design
2017.3, Final Student Recognition Award, 2017 Berkeley Circus Exhibition

PROJECT EXPERIENCE

■ **Academic:**

2012.7-2012.8, Member, The 2012 Shanghai Jiao Tong University Summer Social Practice: Survey of Xiamen tourism culture and environment protection
2012.9-2013.9, Member, The 6th Undergraduate Innovation Program of SJTU: Learning from nature: method and material of construction of mimicry pattern
2013.9-2014.9, Leader, The 8th Undergraduate Innovation Program of SJTU: Study for the possibility of construction of the bubble puzzle
2013.9-2014.9, Member, The 8th Undergraduate Innovation Program of SJTU: From center to suburb - innovation of Shanghai historical cultural district protection system
2014.8-2014.9, Member, Survey and Drawing of Dahu Village in Guangxi Province
2014.10-2014.11, Member, Same-Same Workshop and Exhibition: Investigations and analysis of the village characters in Dinghai Qiao Area in Shanghai
2015.3-2016.6, Leader, The 8th Shanghai Undergraduate Innovation Program: Experiment of the construction of the bubble puzzle
2015.6-2015.7, Member, 2015 DADA Digital Future Shanghai Summer Events - Robot Team Fabrication (Instructor: Roland Snooks)
2017.3, Member, Soft Rigidity - 2017 Berkeley Circus Exhibition
2017.5, Leader, Research Installation - Plant Fiber Enclosure: Origins

■ **Design:**

- 2014.1-2015.2, Main Designer, Membrane structure of the central avenue in Shanghai International Automobile City
- 2014.2-2014.5, Assistant Designer, School of design of Anji Town in Zhejiang Province
- 2014.4-2014.10, Main Designer, The slide of Hebei Institute of Media
- 2014.11-2015.2, Assistant Designer, The reconstruction of the Coal Machine Industrial Park in Handan City
- 2015.4-2015.5, Assistant Designer, Primary school in K04-02 Block of Min Le largescale living community in the Pudong district of Shanghai
- 2015.12, Programmer & Designer, Website Construction for Analyzing Precedents in Architecture (<http://pia.sjtu.edu.cn/>)
- 2015.12-2016.4, Main Designer, TIME CAPSULE for the 120th Anniversary of Shanghai Jiao Tong University
- 2016.3-2016.4, Assistant Designer, Liyang Wedding Restaurant
- 2016.6-2016.7, Main Designer, Exhibition Rooms in Zhongke Xinbao Industrial Park
- 2016.6-2016.7, Main Designer, Office and Bath House in Zhongke Xinbao Industrial Park
- 2017.1-2017.4, Developer, Caterpillar - A GCode Tools Set for Designers
- 2017.9-2017.12, Main Designer, Brick Art Garden at Wu Jia Zhuang

SKILLS

■ **Language:**

- TOEFL IBT: R30 + L29 + S19 + W25 = T103
- GRE: V150 (47%) + Q170 (97%) = G320 + AW4.0 (59%)
- Japanese Language Proficiency Test N2: 141/180 (Advanced)
- Japanese Language Proficiency Test N1: 104/180 (Advanced)
- Chinese: Native

■ **Software:**

- Modeling: Rhinoceros(Grasshopper), AutoCAD, SketchUp,
- Programming: Pascal, Python, VB, C++, Javascript, HTML5, Processing, GCode, KRL,
- Drawing: InDesign, Photoshop, Illustrator,
- Rending: V-Ray, Lumion, 3ds Max, Maxwell Render, Keyshot, Blender,
- Others: Unity 3D, After Effects.