

PERSONAL INFORMATION

Wenqian Yang

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EDUCATION AND TRAINING

- 2018 – 2019 [Master of Advanced Study in Architecture and Digital Fabrication](#)  
Institute of Technology in Architecture, ETH, Switzerland
- 2017 – 2018 [Master of Architecture \(Distinction\)](#)  
Bartlett School, University College London, United Kingdom
- 2005 – 2010 [Bachelor of Architecture \(Distinction\)](#)  
Southwest Jiaotong University, China

WORK EXPERIENCE

Research

- 2021 – now [Scientific Assistant](#)  
Digital Building Technologies, ETH Zurich  
*Extended Reality development in Architecture research and teaching*
- 2023 – 2025 [Scientific Assistant](#)  
Concrete Structures and Bridge Design, ETH Zurich  
*Teaching applications in construction and engineering*
- 2019 – 2020 [Intern](#)  
Block Research Group, ETH Zurich  
*Software development for structure design*

Practice

- 2010 – 2017 [Architect](#)  
LAB Architecture Studio, China & Australia  
*Architectural designing*  
*Project managing*  
*External coordinating*

Teaching

- 2021 – 2025 [Advanced Computational Design Course, ETH](#)  
Master selective coourse, Digital Building Technologies, ETH
- 2025 [Architecture in Large Quantities](#)  
Master studio course, Retsin Studio, ETH
- 2025 [Extended Reality in AEC](#)  
Workshop, Design++, ETH
- 2022 – 2023 [Mixed Reality Course](#)

Master selective course, Computer Vision and Geometry Lab, ETH

2022 – 2023 MAS Thesis

Master thesis, Master of Advanced Studies ETH in Architecture and Digital Fabrication

2019 – 2020 Digital Future

Workshop, Tongji University

2017 – 2018 AA summer school

Workshop, Architectural Association School of Architecture

## PUBLICATIONS

2025 Mola-Advancing Generative Design in Architectural Pedagogy: An open-source library and plugins for rule-based mesh subdivision for computational design education

W. Yang, B. Dillenburger

Tokyo, Japan(The University of Tokyo) CAADRIA

<https://doi.org/10.52842/conf.caadria.2025.1.449>

2025 Mixed-Reality Apartment Layout Design Using Scaled 3D-Printed Furniture Models as Interactive Markers

W. Yang, A. Savov, B. Dillenburger

Hong Kong(The University of Hong Kong) CAAD Futures

<https://doi.org/10.25442/hku.29365724>

Submitted for review 3D Textbook and Beyond: Interactive Learning Platforms for Architectural and Structural Education

W. Yang, W. Kaufmann

Taiwan(Ming Chiao Tung University) CAADRIA

2025 Augmented Reality for Structural Inspection of Historic Monuments: The Case of Lausanne Cathedral

R. Maia Avelino, W. Yang, et al.

International Journal of Architectural Heritage

2025 The Lausanne Cathedral seen through XR: Structure and Materials

R. Maia Avelino, Y. Patankar, W. Yang, et al.

Lausanne cathedral SAHC

2025 Heritage ++, a Spatial Computing approach to Heritage Conservation

Y. Patankar, C. Tennenini, W. Yang, R.J. Flatt, et al.

RILEM / Springer Nature

<https://doi.org/10.21809/rilemtechlett.2024.202>

## EXHIBITIONS

2022 Swiss Sustainability Forum

Augmented Tower, Bern, Switzerland

2021 Computational-Design Students Work Exhibition

Students work in augmented reality, HIL lobby, ETH Honggerberg, Zurich, Switzerland

2019 Concrete Choreography

Stage set for Origen Festival, Riom, Switzerland

2019 Hello, Robot - Design Between Human and Machine

Up-Sticks, V&A Museum, Dundee, UK

2018 Barlet Autumn Show

Soft-Core, The bartlett faculty of the built environment, London, UK

## SELECTED PROJECTS

2022 New Campus Building of JInggiaoyuan Affiliated School

Lead designer, Middle school campus and building, Shanghai, China

2017 **Cycling Center**

Project manager, Public building, Huaian, China

2013 **Flower Expo Pavillions and Tourist Center**

Lead designer, Exhibition pavillions, Changzhou, China

## AWARDS

2025 **GenAIChallenge**

Second place, ETH Library

2022 **RICS China Annual Construction Project Excellence Award**

New Campus Building of JIngjiaoyuan Affiliated School, Royal Institution of Chartered Surveyors (RICS) China Summit

2019 **Bartlett School of Architecture Medal**

Silver prize, Bartlett, UCL

2013 **Bentley BIM**

Innovation in Generative Design, with LAB Architecture Studio, Year in Infrastructure conference

2027 **Award for outstanding service as student leader**

Southwest Jiaotong University

## GRANTS

2023 **ETH Innovedum funding, CHF40,000**

Student-centred Immersive Learning of Design and Verification in Structural Concrete using Augmented Reality Environments, Unit for Teaching and Learning, ETH

2020 **ETH Innovedum funding, CHF40,000**

Transdisciplinary molecular design class, Unit for Teaching and Learning, ETH

2008 – 2009 **Scholarship for outstanding achievement, CNY3,000 x 2 years**

Southwest Jiaotong University

2006 – 2007 **Scholarship for Excellence in Ranking, CNY3,000 x 2 years**

Southwest Jiaotong University

## SKILLS

### Robotic Fabrication

In-place robotic fabrication with timber (e.g. Up-Sticks at V&A museum Dundee)

Large scale 3D printing with concrete and polymer (e.g. Concrete Choreography at Origen Festival, Riom)

### Software Developing

XR Application on HoloLens, Android & IOS, WebGL(e.g. Augmented Reality for Structural Inspection of Historic Monuments)

Networked system development for real-time cross platform data communication(e.g. Real-time immersive design with GenAI)

Grasshopper and Rhino Plugins(Ee.g. MolaGH, mesh subdivision plugin for grasshopper)

Website(e.g. Structure Concrete course website)

### Machine Learning and Deep Learning

Image processing, Object recognition (e.g. Reconstruction LiDAR data with Iterative Closest Point)

Generative design

### Architecture Design

Architectural concept deisgn, project mmanagement, external coordinating

Modeling with Rhino, Maya, Blender, Zbrush, Houdini

Structure optimization using Ameba, Millipede

Image & vidio editing with AI rendering, Adobe Suite