

Curriculum vitae

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 course, 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 Jingjiaoyuan Affiliated School**

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

2017 Cycling Center

Project manager, Public building, Huai'an, 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 design, project management, external coordinating

Modeling with Rhino, Maya, Blender, Zbrush, Houdini

Structure optimization using Ameba, Millipede

Image & video editing with AI rendering, Adobe Suite