

Jianing LUO

He/Him/His

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EDUCATION

Oxford Brookes University	Oxford, UK
Ph.D. in Architecture	Sept. 2024 – Present
University College London	London, UK
M.Arch. with Distinction in Architectural Design	Sept. 2020 – Dec. 2021
Chinese Culture University	Taipei, Taiwan
B.Arch. in Architecture and Urban Design	Sept. 2015 – Jun. 2020

RESEARCH INTERESTS

3D Scanning
Artificial Intelligence, Machine Learning and Deep Learning
Augmented Reality and Virtual Reality
Circular Design
Computer-Aided Theory and Application
Digital Fabrication (Robotics)
Material Reclamation
Sustainable Building Design and Construction

PUBLICATIONS

Book

- The Bartlett B-Pro Show Book 2021, The Bartlett School of Architecture, University College London, pp.84-85. ([Link](#))

Journal Articles

- Boyuan Yu, **Jianing Luo***, Yi Shi, Mingming Zhao, Adam Fingrut & Lei Zhang. Framework for sustainable building design and construction using off-cut wood. *npj Materials Sustainability*. 1, 2 (2023). <https://doi.org/10.1038/s44296-023-00002-8> (Nature Index)
- Jianing Luo**, Boyuan Yu, Yangzhi Li, Yi Shi & Adam Fingrut. Voxel-based Modular-Architectural Design Strategy (VMADS) toward Autonomous Architecture. *BioResources*, 19(3) (2024). <https://doi.org/10.15376/biores.19.3.6368-6379>
- Provides Ng, Kiwook Rha, Balsam Al-Hadithi, Zhiyong Li, Seohyeon Kim, Zijun Zhao, Yue Lu, Boyuan Yu, **Jianing Luo***. Between Social and Sustainable: Integrating Mixed Reality and AI-Driven Tools for Wood Upcycling Design. *Frontiers of Architectural Research* (Under Peer Review)
- Boyuan Yu, Yangzhi Li, **Jianing Luo***, Yi Shi & Adam Fingrut. Historic and Heritage Building (HHB) Restoration Using Digital and Automated Workflow (DAW). *Heritage Science* (Under Peer Review)
- Jianing Luo**, Boyuan Yu, Yangzhi Li, Adam Fingrut, Yi Shi & Yuxuan Sun. Research Hotspots and Evolution Trends

of “Reused Brick”: A Bibliometric Analysis based on VOSviewer and Citespace 1977-2022. Available at Research Square: <http://dx.doi.org/10.21203/rs.3.rs-4203966/v1>

- Boyuan Yu, **Jianing Luo***, Yi Shi & Adam Fingrut. Selective De-constructability and Reusability Design and Construction: Upcycling Circular Structure Using Off-cut Wood. *Case Studies in Construction Materials* (Under Peer Review)
- Boyuan Yu, **Jianing Luo***, Yi Shi, Mingming Zhao & Adam Fingrut. Shift Our Priorities - Upcycling Wood in Architecture. *Developments in the Built Environment* (Under Peer Review)
- Yangzhi Li, Jingwei Li, Boyuan Yu, **Jianing Luo** & Fingrut Adam. Machine Learning-Based Urban Densification Strategies by Extending Roof Ridge Lines: A Novel Approach for Sustainable Housing Development. Available at SSRN: <http://dx.doi.org/10.2139/ssrn.4768369>
- **Jianing Luo**, Boyuan Yu & Yi Shi. Upcycling Easy-To-Reconfigure Regular Tree Trunks and Logs In Sustainable Building Design and Construction (SBDC). *Design Studies* (Under Peer Review)

Conference Papers

- **Jianing Luo**, Boyuan Yu, Haohan Peng, Yi Shi, Yangzhi Li & Adam Fingrut. Deep Generative Modeling Tasks: Automatic Generation of Building Facades with Pix2Pix GAN for Hong Kong City Expansion and Renovation. *XXVII SIGraDi Conference: Sociedad Iberoamericana de Gráfica Digital* (2023). https://papers.cumincad.org/cgi-bin/works/paper/sigradi2023_156
- Yuehong Zhou, Lin Li, Boyuan Yu, **Jianing Luo** & Yi Shi. Digital Nomad: An Interactive Spatial Structure using Machine Learning. *XXVIII SIGraDi Conference: Sociedad Iberoamericana de Gráfica Digital* (2024)
- Yi Shi, Yuemin Gong, Boyuan Yu & **Jianing Luo**. Design and Locomotion Analysis of the 'KWK' Robot: A Waterbomb-Kresling Hybrid Origami Structure. *RoboSoft 2025* (Full paper submitted)
- **Jianing Luo**, Boyuan Yu & Provides Ng. From Craft to Culture: Wu-Style Heritage Innovation through Digital Fabrication. *CAAD Futures 2025: Catalytic Interfaces* (Abstract accepted)
- Yi Shi, Yuemin Gong, **Jianing Luo**, Boyuan Yu & Yuehong Zhou. Harnessing the Multistability of Kresling Origami-Inspired Soft Robotic System for Automated Architecture. *CAAD Futures 2025: Catalytic Interfaces* (Abstract accepted)

Patents

- Jianing Luo, Stool (Chinese Creative Square Stool), CN2021300938126
- Jianing Luo, Column 1, CN202130093759X
- Jianing Luo, Column 2, CN2021300938018
- Jianing Luo, Column 3, CN202130575133.2
- Jianing Luo, Chair (Chinese Creative Chair), CN2021300938022
- Jianing Luo, Coffee Table (Square Creative Coffee Table), CN202130093798X

ACADEMIC & RESEARCH

Research Experiences

Institute of Future Human Habitats, Tsinghua University
Research assistant

Sept. 2023

Research Grants

Principal Investigator; Participator

Apr. 2024

e-Co Architecture: A Cooperative Fab-Lab Exploring Ecological Community Facilities ([Link](#))

This project explores ecological community-building through enhancing public participation in architectural production. In the cooperative process, metaverse and automation technologies are correspondingly used to interface design communication and facility fabrication.

Design Trust, HK\$ 50,000

REVIEW

Journal Reviewer

BioResources

Jun. 2024

Conference Reviewer

CAAD Futures 2025: Catalytic Interfaces

Oct. 2024

TEACHING EXPERIENCE

Program

Oxford Brookes University, School of Architecture

Oxford, UK

Teaching Assistant – MA in Digital Craft in Architecture

Sept. 2024 – Present

Lectures

Southern University of Science and Technology (SUSTech)

Shenzhen, China

Keynote Speaker – Upcycling Wood in Architecture: Today's Methods and Tomorrow's Technologies

Apr. 2024

Northeast Forestry University

Harbin, China

Organizer and Keynote Speaker – AI-assisted Design, AR/VR/HCI in Architectural Design

Mar. 2024

Electives

Chinese Culture University

Taipei, Taiwan

Teaching Assistant – Architecture Photography

Sept. 2018 – Dec. 2019

WORKSHOPS & EXHIBITIONS

Posters

Nature Portfolio. Revolutionizing Construction: Upcycling Irregular Wood Waste ([Link](#))

Nov. 2023

Wood Central. How 3D Scanning & Robotics is Driving Timber Construction Upcycling ([Link](#))

Oct. 2023

2024 International Summer Project Showcase | Upcycling Wood Design and Manufacturing Using XR&AI Techniques

([Link](#))

Oct. 2024

Workshops

The Chinese University of Hong Kong, School of Architecture

Hong Kong, China

HKFYG Jockey Club Jat Min Youth S.P.O.T.

Instructor – e-Co Architecture Workshop

Dec. 2024 – Feb. 2025

AI Design, Community Furniture and Upcycling

Tsinghua University, Academy of Arts & Design

Beijing, China

Junior Technical Mentor – International Summer Program ([Link](#))

Aug. 2024

Architectural Informatics: Upcycling Wood Innovation for Sustainable Design Using AI and XR

Exhibitions

HKFYG Jockey Club Jat Min Youth S.P.O.T., Sha Tin

Hong Kong, China

Curator – e-Co Architecture Exhibition ([Link](#))

Feb. 2025

AWARDS

Excellence Award in Asian Vanguard Art & Design Competition	Oct. 2024
Bronze Prize in The Bartlett Autumn Show and B-Pro Show, “Cornucopia” (Link)	Oct. 2021
The 54th Outstanding Graduate of the Department of Architecture and Urban Studies	Jun. 2020
“Hwa-kang” School Scholarship 1st place	Nov. 2019
“Hwa-kang” School Scholarship 3rd place	Nov. 2016

PROFESSIONAL ASSOCIATION MEMBERSHIPS

Membership – The American Institute of Architects (AIA) Hong Kong Young Architects Group	Feb. 2025
Membership – Chinese Society of Landscape Architecture, CHSLA	Oct. 2022

LEADERSHIP EXPERIENCE

Chinese Culture University	Taipei, Taiwan
Co-Event Organizer – Summer Camp “A Hint of Taiwan”	May. 2019
Organized the camp to promote academic communication in the field of architecture between Austria and Taiwan.	
Presented research and design projects related to the theme of new Chinese style.	
Explored the exhibition and design strategies of architectural spaces in Taiwan.	

SKILLS

Computer: Rhino with Grasshopper, Unreal Engine, Photoshop, Illustrator, InDesign, Premiere Pro, DaVinci Resolve
 Languages: English (Professional Working Proficiency), Chinese (Native / Bilingual Proficiency)

INTERNSHIP

Group of Architects (GOA), Hangzhou	Dec. 2021 – May. 2022
Steinberg Hart, Shanghai	Oct. 2021 – Dec. 2021
Huahui Design Center, Shaoxing	Jul. 2018 – Sept. 2018