JING CHANG

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My work spans **parametric modelling**, **design knowledge organisation**, and **physical computing**. My research interests focus on how structured design data can support AI-assisted tools for creative work and interactive physical systems.

Education

Harvard Graduate School of Design
Sep 2017 - May 2020

Master in Architecture I with Advanced Placement

The University of Hong Kong
Sep 2011 - Jul 2015

Bachelor of Arts in Architectural Studies; engineering studies

Additional study: Academy of Fine Arts Vienna, architectural exchange (2014-2015); University of Cambridge, arts and architecture summer programme (2012); Zhejiang University, engineering coursework (2010-2011).

Research Experience

Senior Research Assistant
Mar 2025 - Feb 2026

Faculty of Architecture, The University of Hong Kong

Project: Developing the Use of Multi-Scale Generative Design in Built-Environment Disciplines

- Built datasets for comparing digital design discourse and education: **139 literature texts** and curriculum materials including **24 instructor interviews** and **25 course-planning documents**.
- Developed a **term-mapping workflow** combining spaCy, TF-IDF ranking, expert coding, and density heatmaps to compare concepts and technologies across design phases.
- **First-authored the xArch 2026 conference paper**; co-authored an ACADIA 2025 review of **104 publications**.

Research Associate (Part-time)
Aug 2024 - Nov 2024

School of Design, The Hong Kong Polytechnic University

- Developed Grasshopper workflows and led installation setup for Symbiosis with Nature, connecting computational design with the delivery of an interactive installation.

Research Assistant (Part-time)
Oct 2020 - Aug 2021

Harvard Chinese Arts Media Lab

- Contributed spatial and product design to an immersive tea house project.

Publications and Conference Contributions

Chang, J., Jiang, Y., & Crolla, K. (2026). Mapping Digital Design Discourse and Curriculum Amid the AI Surge: An Exploratory Data-Informed Study. *From Inspiration to Solutions, xArch 2026*, pp. 267-277. Springer.

doi:10.1007/978-981-92-3527-8_29

Jiang, Y., **Chang, J.**, & Crolla, K. (2025). Architectural Pedagogy in the Age of Artificial Intelligence: An Integrative Literature Review. *ACADIA 2025.*

Selected Research and Design Projects

Traceable Design Knowledge

2026 - Present

Digital Common(s)

Research and workflow development | In progress

- Developing a workflow to convert youth co-design documentation for biodegradable insect habitats into **structured design knowledge** while retaining links to source evidence.
- Used **OCR** and **Python** for source preparation and ChatGPT to help organise design statements, decision records, and supporting relationships.
- Created two network diagrams and an interactive viewer to support inspection of the records and subsequent human review of the extraction and mapping process.

Drawing Machine Series

2026 - Present

School of Creative Media, City University of Hong Kong

Collaborative teaching and prototyping

- Developed **Grasshopper scripts** for geometric and image-based drawings, adjusting parameters to explore variations in composition, density, and mark arrangement.
- Contributed to **dual-pen plotting**, **hanging pen plotter assembly**, and **robotic drawing on masks**, exploring relationships between digital paths, tool contact, and drawing surfaces.

Tower Design Workflow Toolkit

2022

E Plus Design, Shenzhen

Computational workflow development

- Developed reusable Grasshopper routines for tower massing, building components, and façade design.
- Combined Rhino and Excel templates with a Grasshopper definition and tutorial guidance to organise recurring modelling tasks into a repeatable workflow.

Teaching Experience

Teaching Consultant
Jul 2026 - Present

School of Creative Media, City University of Hong Kong

- Teach Creative Coding through **Rhino and Grasshoppe**r, **Python,** and drawing machines, connecting digital geometry with physical output.
- Develop teaching materials and readiness quizzes for flipped and team-based learning; contribute to research on team-based learning across venues.

Adjunct Instructor
Sep 2025 - Present

The Innovation School of Greater Bay Area, Guangzhou Academy of Fine Arts

- Delivered a six-week course for 60 undergraduates on **kinetic and robotic prototyping** using Arduino, sensors, and actuators; guided teams from initial concepts to working prototypes.

Workshop Instructor
2025 - 2026

The University of Hong Kong; The Chinese University of Hong Kong

- Taught **generative design**, **biomimicry**, **Grasshopper**, and **AI-assisted workflows** in short studios combining algorithmic exploration and design prototyping.

Technical Instructor
Jul 2023

AA Visiting School, Hainan

- Co-developed and delivered a 10-day programme combining generative AI, parametric modelling, and iterative architectural design.

Community Leadership and Engagement

Director of Design Technology
May 2026 - Present

Digital Commons, Hong Kong

Digital Commons is a non-profit start-up advancing technology literacy through community engagement and design education.

- Organise and teach **AI-assisted design** workshops for youth and community participants, including programmes co-organised with The Chinese University of Hong Kong.
- Translate **computational design methods** into hands-on learning activities, helping participants develop ideas through digital tools and prototyping.
- Develop approaches to **documenting community-generated design knowledge** for computational and AI-assisted workflows.

Professional Experience

Digital Design and BIM Architect
2022 - 2024

E Plus Design, Shenzhen

• Developed computational modelling workflows for architectural design, including the Tower Design Workflow Toolkit; investigated generative AI within design workflows.

Junior Architectural Professional
2020 - 2022

Skidmore, Owings & Merrill, San Francisco

• Contributed to urban and architectural projects through collaborative Revit modelling and BIM workflows.

Architectural Graduate
2016 - 2017

WilkinsonEyre Architects

Architectural Graduate
2015 - 2016

Aedas Limited

Awards and Exhibitions

Open Data Challenge Finalist
2026

Hong Kong/Shanghai Co-operation Open Data Challenge. Digital Common(s) team proposal for a machine-readable social design database.

Biomimicry and AI Competition Top 50 Finalist
2023

Biomimicry & AI Worldwide Architecture Competition. Bio-inspired City Revival, combining a slime mould algorithm with generative AI.

Shenzhen Hong Kong Bi City Biennale Exhibitor
2022 - 2023

Bi-City Biennale of Urbanism and Architecture. Home of Ladybugs, a bamboo insect-habitat installation.

Research Methods and Technical Skills

Research methods: Corpus construction, literature and curriculum analysis, NLP-assisted term extraction, term coding, and comparative data visualisation.

Computation and modelling: Python, spaCy, TF-IDF, Rhino, Grasshopper, Revit, and BIM coordination.

Physical computing and fabrication: Arduino, ESP32, sensors, actuators, 3D printing, laser cutting, and robotic prototyping.