# ZIHENG ZHOU (周子恒)

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Nationality: Chinese | Date of Birth: 1999.09

## EDUCATION

### MArch, Bartlett School of Architecture, UCL, London 2022.09 –2023.09

- One-year of Architecture Design program in Living Architecture Lab and graduated with **Distinction** Award.
- Focused on **Agent-Based Autonomous Architecture** with an adaptive lifecycle. Developed a **force feedback system in Unity & C#**, enabling modular buildings to be adaptable to various terrains.
- Applied **Reinforcement Learning and Graph-Neural-Network** to make appropriate connecting decisions for structural configuration and reconfiguration process.
- Analyzed and visualized large amount of data through graphs. Established a **User Interface** for personalized spatial assemble and disassemble process in Unity3D.

### BArch, Qingdao University of Technology, China 2017.09 – 2022.07

- Achieved a GPA of 88.89/100, Rank 2/81, with a strong focus on architecture design (90/100) and proficiency in Computer-Aided Architecture (93/100).
- Parameter awareness developed through study of Computer-Aided Architecture and Digital Fabrication.

## RESEARCH EXPERIENCE

### Junior Architect, Studio X+, London 2023.10 – 2024.04

- Contributed to competitions for Athletic Center, Residential, Teaching Building Design.
- Conducted studies on condition and characteristics of site, taking into account surrounding buildings, drainage, trees, and roads. Subsequently, drew diagrams in terms of Area Calculation, Accessibility, City Context, and Concept., as well as organizing high-quality presentation panel.
- High proficiency in 3D modeling works using Rhino + Grasshopper. Focusing on placing functional layout and parametric design of the façade, ensuring precisely integration with overall design.

### Research on Autonomous and Interactive Building System 2022.09 –2023.09

- Introduced Cloud Domesticity, an adaptive living concept, merging an interactive platform, generative space planning algorithm, and robotic material system. Prioritizing human-nature coexistence, it crafts an adaptive, sustainable, and coexist living environment.
- Competent and reliable in teamwork: Balanced individual tasks and collaborative teamwork, efficiently managing all aspects of the exhibition, including 1:1 scale prototype assembly, booth construction, and online digital exhibitions.

### DigitalFUTURES Shanghai 2022 – Conformations 2022.07 – 2022.08

- Took the initiative to approach newness and keep up to date with the latest developments in digitalization.
- Worked with simulation as a material to manifest architecture form in nature. Traced conditions of comfort in a series of geomorphological models, mountainous formations from different locations across the planet, that have latent formal traits capable to activate architecturalization processes via the simulation of irradiation (heat), illuminance (lux), and ventilation (wind) in Ladybug and Butterfly within Grasshopper.

**Research Assistant, Digital Architecture& Manufacture Laboratory** 2019.04 – 2020.06

- Collaborated closely with the tutor and peers to program and fabricate parametric brick columns composed of numerous modules with set angles.
- Programmed the printing path of spatial 3D printing in Grasshopper. Effectively managed the physical printing process and optimized the process by analyzing and comparing key factors, such as temperature, material, and printing speed.

**Research on Digital Robotic Hot-Wire Cutting** 2019.09 –2020.01

- Published a paper collected by JAILCD (Asian Institute of Low Carbon Design) as first author: Zhou, Z., Wan, D. and Shi, X. (2020). *Digital Robotic Double-Curved Hot-Wire Cutting*. ISSN2189-1400, p595-600
- /Individual Work/ Performed data collection and experimentation involving an adapted approach to double-curved cutting. Analyzed sources of errors and presented well-conceived, logical solutions to effectively reduce errors.

## SKILLS

### Software

- Modeling: Rhino & Grasshopper (Advanced), Revit, Maya, CAD(Intermediate).
- Simulation & Analysis: Unity3D & C#, Python (Seaborn, Matplotlib) (Intermediate)
- Machine Learning: GNN, Reinforcement Learning (Anaconda, Pytorch, TensorFlow) (Intermediate)
- Graphic Design: Adobe Suite (Photoshop, Illustrator, InDesign, AfterEffects, Premiere) (Advanced)
- Visualization: V-ray, Lumion, Enscape(Advanced)
- Manufacture: CNC, Laser Cutter, 3D Printing(Advanced)
- Mechanics: Arduino, Dynamixel, VNC (Intermediate)

### Language

- Professional English (IELTS 7.0), Native Mandarin, Conversational Korean

### Profile

- Problem Finding; Problem Solving; Academic Writing; Time Management; Collaboration.

### Links

- Portfolio: *https://drive.google.com/file/d/1A0qiSOOFeQPkXkaA1m5CFDfZsQyomekx/view?usp=sharing*
- Personal Website: *https://zihengzhouuuu.github.io/*
- Master Project: *https://bpro2023.bartlettarchucl.com/rc3-living-architecture-lab-23/stigmergic-spaces*