Yichen Mo

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School of Architecture, Southeast University
No. 2 Sipailou, Nanjing, China, 210018

Education

Ph.D. Candidate
Nanjing, China

SCHOOL OF ARCHITECTURE, SOUTHEAST UNIVERSITY
2019.9 - now

- Research Focus: Data abstraction in urban architecture, graph representations in the design process, and the development of high-performance algorithms for architectural generation
- Thesis Title: **Web-based Homomorphism for Digital Chain in Early Design Stages** (Advisor: Prof. Biao Li)
- Developed the **ArchiWeb** platform and the corresponding data protocol **ArchiJSON**, integrating algorithmic modules to create a design support tool.

Joint Ph.D. Program
Zurich, Switzerland

DIGITAL ARCHITECTONICS, ITA, DARCH, ETH ZURICH
2022.5 - 2023.4

- Research Project: **Graph Neural Networks for Architectural Case-based Reasoning and Generative Design** (Advisor: Prof. Ludger Hovestadt)
- Developed ArchiGraph, a graph neural network-based architectural case database for graph-input-driven retrieval and generative design.

Bachelor of Engineering (Architecture)
Hangzhou, China

SCHOOL OF ARCHITECTURAL, ZHEJIANG SCI-TECH UNIVERSITY
2014.9 - 2019.6

- Graduation Thesis: **Research on Renewal Strategies for Aging Residential Areas Using Integer Programming** (Advisor: Yan Cui)
- Awards: Outstanding Graduate, Zhejiang Government Scholarship, and Excellent Student Leader.

Bachelor of Engineering (Computer Science)
Hangzhou, China

SCHOOL OF COMPUTER SCIENCE, ZHEJIANG SCI-TECH UNIVERSITY
2016.9 - 2019.6

- Graduation Thesis: **A DNN approach for 3D semantic human body modeling** (Advisor: Yao Jin)
- Extracted local features from 3D mesh surfaces for deep learning, creating semantic inputs for a pre-trained 3D model. Developed a 3D human reconstruction system in Unity for virtual try-on applications.

Honors and Awards

2021.7	China Scholarship Council (CSC) Scholarship
2019.7	2019 DigitalFUTURES Young Award
2019.3	Google Girl Hackathon Season 5 Battle Winner and Best Team (TOP 1)
2018.10	Top Ten College Students Nomination Award
2018.5	Silver Medal, Women Final, China Collegiate Programming Contest
2017.11	National Scholarship
2017.10	Silver Medal, Harbin Site, China Collegiate Programming Contest
2016-2018	Zhejiang Provincial Government Scholarship, for three consecutive years
2016.11	Silver Medal, Hangzhou Site, China Collegiate Programming Contest
2015.12	Silver Medal, EC-Final, The ACM-ICPC Asia Regional Contest
2015.10	Silver Medal, Hefei Site, The ACM-ICPC Asia Regional Contest

Publications

CAADRIA	Zhang B, **Mo Y**, Li B, et al. SIMForms: A Web-based Generative Application Fusing Forms, Metrics, and Visuals for Early-Stage Design[C]//ACCELERATED DESIGN - Proceedings of the 29th CAADRIA Conference, Singapore, 20-26 April 2024, Volume 1. 2024: 373-382.
Journal	Zhang B, **Mo Y**, Li B. Case-Based Reasoning Strategy for Urban Morphological Generative Design: A Case Study of Block Scale[J]. South Architecture, 2023(01):09-18
CDAC	**Mo Y**, Li B. Research on Light Weight JSON based Exchange Format for Architectural Design[C]// In Proceedings of 2022 Computational Design Symposium and the Annual Conference of Computational Design Academic Committee of Architectural Society of China, 2022
CAADRIA	Zhang Q, Li B, **Mo Y**, et al. A Web-based Interactive Tool for Urban Fabric Generation: A Case Study of Chinese Rural Context[C]//Jeroen van Ameijde, Nicole Gardner, Kyung Hoon Hyun, Dan Luo, Urvi Sheth (eds.), POST-CARBON - Proceedings of the 27th CAADRIA Conference, Sydney, 9-15 April 2022, pp. 625-634.
Journal	Wu J, Li B, **Mo Y**. Automatic Generation of High-rise Residential Facades from the Perspective of Building Industrialization[J]. South Architecture, 2022(04):25-31
CAADRIA	**Mo Y**, Li B, Wu J, et al. Archibase:A City-Scale Spatial Database for Architectural Research[C]//A. Globa, J. van Ameijde, A. Fingrut, N. Kim, T.T.S. Lo (eds.), PROJECTIONS - Proceedings of the 26th CAADRIA Conference - Volume 2, The Chinese University of Hong Kong and Online, Hong Kong, 29 March - 1 April 2021, pp. 519-528, 2021.
CDAC	**Mo Y**, Li B, Gu D. A B/S Framework for Generative Design System —— Case Study of Art and Media[C]//In Proceedings of 2021 Computational Design Symposium and the Annual Conference of Computational Design Academic Committee of Architectural Society of China, 2021
CUPUM	**Mo Y**, Zhang B, Li B. ArchIndex : A Web-based and Data-driven Retrieval System for City Blocks[C]. In Proceedings of the 17th International Conference on Computational Urban Planning and Urban Management (CUPUM), 2021
CDAC	Wu J, Li B, **Mo Y**. Data-driven Analysis Approach on Urban Subjective Map: Taking Street View Perception Analysis as an Example[C]//In Proceedings of 2020 International Academic Forum on Computational Design and Annual Conference of Computational Design Academic Committee of Architectural Society of China, pages 256-267, 2020
DADA	**Mo Y**, Li B, Tang P. Implementing Urban Spatial Database——Case Study of Prato,Italy.[C]//In Proceedings of 2020 National Conference on Architecture's Digital Technologies in Education Research, pages 183-189, 2020
DADA	Zhao W, Li B, Wu J, **Mo Y**. Research on Evaluation and Renewal Strategy of Urban Public Space in the Context of Crowd-sourcing Data——A Case Study of Prato,Italy[C]//In Proceedings of 2020 National Conference on Architecture's Digital Technologies in Education Research, pages 177-182, 2020

Teaching Experience

2019.8-2019.9	**Teaching Assistant**, Generative Art Workshop (Processing 3), Southeast University
2020.3-2020.6	**Teaching Assistant**, Advanced Mathematics 2,, Southeast University
2020.6-2020.7	**Teaching Assistant**, City/Data/Search Engine, DigitalFUTURES, Tongji University
2024.11	**Tutor**, Decoding Syntax, CDAC Workshop, Tongji University, Shanghai, China

Public Talks

2024.11.25	Web-based Complexity on Synthesis of Form, Harbin Institute of Technology, Harbin, China
2024.11.24	Bidirectional Topology Encoding for Design Database, Southeast University, Nanjing, China
2024.08.30	Urban Representation Learning for Web-based Applications, Southeast University, Nanjing, China
2024.01.11	Web-based Complexity and Comprehensive Approach, Southeast University, Nanjing, China
2023.02.03	Three types of generative design in architecture, TU Vienna, Austria

2022.11.26	ArchiJSON: A Light Weight Web Data Exchange Format for Architecture Design , Southeast University, Wuxi, China (online)
2022.09.04	Connectivity - ArchiWeb/ArchIndex/ArchiBase, TU Vienna, Austria
2021.06.13	ArchIndex : A Web-based and Data-driven Retrieval System for City Blocks, Helsinki, Finland, CUPUM 2021 (online)
2021.04.05	Exploring Unsupervised Methods for City Blocks Morphology Representation, Southeast University, Nanjing, China
2021.03.30	ArchiBase: A City-scale Spatial Database For Architectural Research, Hongkong, CAADRIA 2021, Online Conference, https://caadria2021.org/session-2C#135
2019.09.12	Data and Representation in Architecture, ETH Zürich, Switzerland
2019.07.01	A DNN Approach for 3D Semantic Human Body Modeling, Tongji University, Shanghai, China