

## Academic Appointments

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2025 – now  
Madison, US

### University of Wisconsin-Madison

Assistant Professor

Department of Design Studies, School of Human Ecology

## Education

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2020 - 2025  
Ithaca, US

### Cornell University

Ph.D. in Human Behavior and Design

Department of Human Centered Design, College of Human Ecology

Minor in Psychology

Minor in System Engineering

Committee: Saleh Kalantari (Chair), Adam Anderson, Patrick Reed

2017 - 2020  
New York, US

### Columbia University

Master of Architecture

Graduate School of Architecture, Planning and Preservation

Graduation Honor Award for Design and Visualization

2012 - 2015  
Hong Kong, China

### University of Hong Kong

Bachelor of Arts in Architectural Studies

Department of Architecture

## Refereed Journal Publications

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2025

**Yang, Q.**, Dubey, R. K., & Kalantari, S. (2025). PATH-U: A data-driven agent-based wayfinding model incorporating perceived path uncertainty and cognitive strategies in unfamiliar indoor environments. In Building Simulation (IF: 5.9). Beijing: Tsinghua University Press.

2024

**Yang, Q.**, Feng, S., Zhao, T., & Kalantari, S. (2024). Design with myself: A brain-computer interface design tool that predicts live emotion to enhance metacognitive monitoring of designers. International Journal of Human-Computer Studies (IF: 5.4), 185, 103229. <https://doi.org/10.1016/j.ijhcs.2024.103229>

2024

Kalantari, S., Mostafavi, A., Xu, T. B., Lee, A. S., & **Yang, Q.** (2024). Comparing spatial navigation in a virtual environment vs. an identical real environment across the adult lifespan. Computers in Human Behavior (IF: 9.9), 108210. <https://doi.org/10.1016/j.chb.2024.108210>

2024

**Yang, Q.**, & Kalantari, S. (2024). Real-time continuous perceived uncertainty annotation for spatial navigation studies in buildings. Journal of Building Engineering (IF: 6.4), 82, 108250. <https://doi.org/https://doi.org/10.1016/j.jobbe.2023.108250>

- 2023 **Yang, Q.**, Cruz-Garza, J. G., & Kalantari, S. (2023). Brain-computer interfaces as an architectural design tool: Feasibility and usability study. *Automation in Construction* (IF: 10.3), 154, 105011.  
<https://doi.org/10.1016/j.autcon.2023.105011>
- 2022 Zhu, B., Cruz-Garza, J. G., **Yang, Q.**, Shoaran, M., & Kalantari, S. (2022). Identifying uncertainty states during wayfinding in indoor environments: An EEG classification study. *Advanced Engineering Informatics* (IF: 8.8), 54, 101718.  
<https://doi.org/10.1016/j.aei.2022.101718>

## Refereed Conference Proceedings

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- 2025 Guo, G., **Yang, Q.**, Yan, Y., Yang, X., Hoffman, G., Leshed, G., & Green, K. E. (2025, April). MirrorBot: Exploring Socio-Spatial Interactions that Foster Serendipitous Human Connections Through Robotic Mirrors. In *Proceedings of the Extended Abstracts of the CHI Conference on Human Factors in Computing Systems* (pp. 1-6).
- 2025 Guo, G. S., **Yang, Q.**, Hu, R., & Hoffman, G. (2025, March). Facilitating Synchronized Movement during Ice-Breaking Scenarios through a Real-World Reinforcement Learning Agent Using Non-Verbal Behaviors. In 2025 20th ACM/IEEE International Conference on Human-Robot Interaction (HRI) (pp. 1324-1328). IEEE.
- 2023 **Yang, Q.**, Feng, S., Zhao, T., & Kalantari, S. (2023). Co-Design with Myself: A Brain-Computer Interface Design Tool that Predicts Live Emotion to Enhance Metacognitive Monitoring of Designers. In *Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems* (pp. 1-8).  
<https://doi.org/10.1145/3544549.3585701>
- 2021 **Yang, Q.**, Cruz-Garza, J. G., & Kalantari, S. (2021). MindSculpt: Using a Brain-Computer Interface to Enable Designers to Create Diverse Geometries by Thinking. In *Proceedings of 2021 ACADIA Conference, the Association of Computer Aided Design in Architecture*, pp. 182-193. 2021.  
<https://doi.org/10.52842/conf.acadia.2021.182>

## Presentations

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- 2025  
8.22 Seminar Speaker “Yes, AI generates, but what’s next?” at the the Hong Kong Institute of Architects (HKIA) CPD Seminar
- 2024  
2.29 Speaker “Enhancing data-driven architectural design by integrating human experience” at the Academy of Neuroscience for Architecture (ANFA) Doctoral Platform
- 2023  
6.22 Abstract “Cognitive Agent Modeling for the Simulation of Spatial Navigation Behaviors in Indoor Environments” at the EDRA 54 Environmental Design Research Association, Mexico City, Mexico
- 2023  
6.22 Symposia “Two Novel Methods of Measuring Research Participant Uncertainty during Wayfinding Tasks” at the EDRA 54 Environmental Design Research Association, Mexico City, Mexico

2023 6.22	Symposia “WayFind: An Open-Source Tool for Wayfinding Research in Indoor Environments” at the EDRA 54 Environmental Design Research Association, Mexico City, Mexico
2022 6.16	Poster “BCI-VR Design Tool” at Cornell XR Retreat at the Cornell Tech Campus, New York City, US
2022 4.21	Speaker “VR&AR in Wayfinding Research” at the Western New York Augmented and Virtual Reality (AR/VR) Mini-Conference, Rochester University, US
2021 6.7	Abstract “MindOpen-Prototyping Realtime BCI for Designers in Virtual Reality based on Self-Chosen Motor Imagery” at the BCI Society

## Professional Practice

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2018.9 – 2019.9 NYC, US	<b>Urban Systems Lab, The New School</b> Research Associate Project: Urban Resilience to Extremes Sustainability Research Network. <ul style="list-style-type: none"> <li>Visualized geospatial indicators within an online visualization platform.</li> <li>Analyzed social, technical, and ecological data (GIS, d3).</li> <li>Collaborated with academic institutions from several states across the US and engaged with a community of researchers from a range of disciplinary backgrounds in urban ecology.</li> </ul>
2018.5 – 2018.8 NYC, US	<b>EDG Architecture and Engineering</b> Architectural Designer <ul style="list-style-type: none"> <li>Programmed user-customizable parametric facade systems for project Synthesis 3D.</li> <li>Produced photo-realistic renderings and animations.</li> <li>Designed the clipping system of 3d printed panels.</li> </ul>
2017.3 – 2017.8 Beijing, China	<b>OPEN Architecture</b> Architectural Intern <ul style="list-style-type: none"> <li>Created renderings, diagrams and construction drawings of reflective ceiling plans, ramps, and concrete facades for project Tank Shanghai (built).</li> <li>Created the digital model for UCCA Dune Art Museum (built).</li> <li>Designed the water drainage for 26,000 sqft roof landscape.</li> <li>Contacted material suppliers and manufacturers.</li> </ul>
2015.8 – 2017.1 Beijing, China	<b>Center of Computational Design of Tsinghua Design Institute</b> Architectural Designer <ul style="list-style-type: none"> <li>Devised development strategies with local community and local officials for two 900-people villages (implemented).</li> <li>Designed 36,000 sqft renovation project, procedure the full set of construction documentation, and supervised the construction (built).</li> <li>Developed socio-technical system diagram of local rural villages.</li> </ul>

## Teaching and Mentoring

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2025 Cornell University	<b>Human Computer Interaction Design</b> Instructor Topics <ul style="list-style-type: none"> <li>Human AI Co-creation</li> <li>Design Thinking</li> </ul>
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2020 - 2024  
Cornell University

## **Human Centered Design**

### **Guest Lecturer**

#### **Topics**

- DEA 6406 Generative Design - "Introduction to Space Syntax"
- DEA 2030 Design Portfolio and Communication – "Collage and Visualization"
- DEA 2730 Human Centered Design – "Mood Board", "Rapid Prototyping", "Ideation"
- INFO 3450 Human Computer Interaction and Design – "Design Thinking"

### **Teaching Assistant**

#### **Courses**

- DEA 6520 The Ambient Environment
- DEA 4401 Adaptive Reuse Studio: Recycling the Built Environment
- DEA 4025 Design for Change: Imagining Decolonial Futures
- DEA 2730 Human Centered Design
- DEA 2030 Design Portfolio and Communication
- DEA 1110 Make a Difference by Design
- DEA 1100 Design Generations

#### **Duties**

- Gave advices on concept, research, design strategy, visualization, Arduino, and presentation during desk chats, office hours and reviews.
- Collaborated with the professors to update their syllabus.
- Organized logistics for reviewers, grading, and attendance.

2018 - 2020  
Columbia University  
GSAPP

## **Architectural Design and Representation**

### **Teaching Assistant**

#### **Courses**

- ARCH 4001 Core I Architectural Design Studio
- ARCH 4024 Architectural Drawing & Representation Studio I (ADRI)
- ARCH UN3400 Environmental Visualization

#### **Duties**

- Gave advices on concept, design strategy, visualization, and implementation twice a week.
- Gave tutorials about the visual programming platform, virtual reality, augmented reality, and rendering software.
- Collaborated with professors to organize teaching activities and logistics.

2020 - 2024  
Cornell University

## **Mentoring**

- Ziyang Qin, Cornell DEA B.S student 2024 – research, machine learning
- Debbie Jung, Cornell DEA B.S student 2023 – honor thesis, research
- Tianlin Zhao, Cornell Computer Science M.S – research
- Yibing Lu, Cornell DEA B.S student 2022-2023 – research, career
- Arthur Wayne, Cornell Statistics-Economics B.S student 2022-2023 – app development
- Hira Mirza, Cornell Human Development B.S student 2022-2023 – honor thesis, research
- Angella Lee, Cornell Human Biology, B.S student 2021-2022 – research, EEG
- Yingyi Shu, Cornell Information Science, M.S student 2021-2022 – research, EEG, career

## **Honors, Awards, and Fellowships**

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2023	CHE Alumni Scholarship Graduate Fellowship
2020	Cornell Fellowship
2017-2020	Selected for GSAPP Abstract 2017-2020
2020	William Kinne Fellows Travelling Prize
2020	Honor Award for Design and Visualization
2019	Architecture MasterPrize in Products/Building Envelope
2018	Buell Center Paris Prize Winner
2012-2015	HKU Foundation Scholarship for Outstanding Mainland Students

## Academic Service

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Associate editor	International Journal of Human Computer Studies
reviewer	ACM Conference on Computer-Supported Cooperative Work & Social Computing (CSCW)
reviewer	ACM Designing Interactive System (DIS)
reviewer	SIGCHI The Annual Symposium on Computer-Human Interaction in Play (CHI PLAY)
reviewer	Conference on Human Factors in Computing Systems (CHI)
reviewer	The Creativity & Cognition (C&C) conference
reviewer	HERD: Health Environments Research & Design Journal

## Professional Affiliations

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Member	Academy of Neuroscience for Architecture (ANFA)
Member	XR@Cornell, Cornell University
Member	Environmental Design Research Association (EDRA)
Member	Brain Computer Interface Society