

Mingze Chen

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Academic Positions

Postdoctoral Fellow Massachusetts Institute of Technology Senseable City Lab, Department of Urban Studies and Planning Supervisor: Prof. Carlo Ratti	Boston, USA Sep 2026 – Present
Sessional Lecturer University of British Columbia Lead Instructure, AI in greenspace and public health management (35h) Co-Instructure, AI and big data for sustainable development (8h)	Vancouver, Canada July 2026 - Aug 2026 July 2025 - Aug 2025
Graduate Teaching Assistant University of British Columbia 1321 instructional hours across 13 graduate and undergraduate courses	Vancouver, Canada 2023 – 2025
Instructor Department of Landscape Architecture, University of Nevada, Las Vegas Co-Instructure, LAND 467 GIS for Landscape Architecture (Online)	Las Vegas, USA 2023 – 2024
Research Associate University College London Two research projects on climate resilience and peri-urban development (380h)	London, UK 2022

Education

UNIVERSITY OF BRITISH COLUMBIA Ph.D. in Forestry , Urban Nature Design Research (UNDER) Lab Supervisor: Prof. Keunhyun Park Dissertation: Monitoring and analyzing human-nature interaction through sensor and vision technologies	Vancouver, Canada 2023-2026
MASSACHUSETTS INSTITUTE OF TECHNOLOGY Exchange Ph.D. Student , Senseable City Lab Supervisor: Prof. Fábio Duarte, Prof. Carlo Ratti	Boston, USA 2025 - 2026
UNIVERSITY COLLEGE LONDON Master of Architecture Urban Design (MArch), The Bartlett Faculty of the Built Environment Supervisor: Prof. Roberto Bottazzi	London, UK 2021 - 2022
SICHUAN AGRICULTURAL UNIVERSITY Bachelor of Landscape Architecture (BLA) Bachelor of Landscape Gardening	Chengdu, China 2016 - 2020

Professional Experience

Landscape Architect GN INTERNATIONAL DESIGN LCC - Qiong Lai Landscape Ecological Design Competition, Jiangxi Talent Park etc.	Shanghai, China 2020 - 2021
Intern Landscape Designer SWA GROUP - Shenzhen Bay Competition, Xi'an Huaqiao Commercial Project etc.	Shanghai, China May 2020– Jun 2020
Intern Landscape and Urban Designer HASSELL - Shenzhen Blueway Competition, Tangshan Ape-man Cave Park Landscape Renewal etc.	Shanghai, China Feb 2020– May 2020

Publications

Google Scholar 600+ citations, h-index of 11, and an i10-index of 14.

* Asterisks indicate publications led under my mentorship, where I served as the corresponding author.

Peer-reviewed Articles (Published Selected)

Theme I: AI-driven Human Behaviour Monitoring and Analytics in Urban and Natural Environment

5. **SCI: Chen, Mingze***, Park, Keunhyun. Monitoring human behaviors in natural environments using sensor and vision technologies: A scoping review of analytical approaches and applications. *Environmental Development* 2026 |

<https://doi.org/10.1016/j.envdev.2026.101546>

4. **SCI/SSCI: Chen, Mingze***, Liu, Yuxuan., Liu, Fan., Chadha, Trishla., Park, Keunhyun. Measuring pedestrian-level street greenery visibility through space syntax and crowdsourced imagery: A case study in London, UK. *Urban Forestry & Urban Greening* 2025 | <https://doi.org/10.1016/j.ufug.2025.128725>

3. **SCI: Zhang, Xiamengwei., Chen, Mingze***, Huang, Yongming. Who gets to use the street? Evaluate the utilization and inclusiveness using crowdsourced videos and vision-language models. *Sustainable Cities and Society* 2025 | <https://doi.org/10.1016/j.scs.2025.1069063>

2. **SCI/SSCI: Chen, Mingze^{1*}**, Yuan, Fan¹. A systematic review of measurement tools and senior engagement in urban nature: Health benefits and behavioral patterns analysis. *Health & Place* 2025 | <https://doi.org/10.1016/j.healthplace.2024.103410>

1. **SCI: Luo, Tianze., Chen, Mingze***. Advancements in supervised machine learning for outdoor thermal comfort: A comprehensive systematic review of scales, applications, and data types. *Energy and Building* 2025 | <https://doi.org/10.1016/j.enbuild.2024.115255>

Theme II: Multi-scale Urban Vitality and Environmental Justice

5. **SCI/SSCI: Chen, Mingze***, Cai, Yuxuan., Guo, Shuying., Sun, Ruilin., Song, Yang., Shen, Xiwei. Evaluating implied urban nature vitality in San Francisco: An interdisciplinary approach combining census data, street view images, and social media analysis. *Urban Forestry & Urban Greening* 2024 | <https://doi.org/10.1016/j.ufug.2024.128289>

4. **SSCI: Yang, Jiayi., Chen, Mingze***. Assessing the impact of urban amenities on people with disabilities in London: A Multiscale Geographically Weighted Regression Analysis. *Habitat International* 2025 | <https://doi.org/10.1016/j.habitatint.2025.103426>

3. **SCI/SSCI: Hu, Yequan., Chen, Mingze***, Cai, Yuxuan. Comparative analysis of greenery inequalities in New York and London: Social-economic and spatial dimensions. *Urban Forestry & Urban Greening* 2025 | <https://doi.org/10.1016/j.ufug.2025.128939>

2. **SCI/SSCI: Zhang, Kaiqi., Chen, Mingze***. Multi-method analysis of urban green space accessibility: Influences of land use, greenery types, and individual characteristics factors. *Urban Forestry & Urban Greening* 2024 | <https://doi.org/10.1016/j.ufug.2024.128366>

1. **SSCI: Huang, Yongming., Du Jiani., Chen, Mingze***, Lin, Yuxuan., Huang, Shaopo., Cai, Yuxuan. Evaluating the spatial-temporal impact of urban nature on urban vitality in Vancouver: A social media and GPS data approach. *Land Use Policy* 2025 | <https://doi.org/10.1016/j.landusepol.2025.107824>

Theme III. Computational Design, Mapping, and Visualization

3. **SCI: He, Wei., Chen, Mingze***. Advancing Urban Life: A Systematic Review of Emerging Technologies and AI in Urban Design and Planning. *Buildings* 2024 | <https://doi.org/10.3390/buildings14030835>

2. **SCI/SSCI: Ge, Mengting., Kong, Jie., Yang, Qiuyi., Chen, Mingze***, Wang, Wenji. Examine an Intelligence Education Framework of Landscape Architecture (EFLA) Based on Network Model of Technology in Landscape Architecture (NMTLA). *Sustainability* 2023 | <https://doi.org/10.3390/su151411277>

1. **Chen, Mingze.**, Zhang, Yang., Yang, Yubing., Fang, Zhiguo. Application of data visualization in urban design based on Grasshopper, *Landscape Architecture Academic Journal* 2022, 39(5), 44-51. (in Chinese) | <https://doi.org/10.12193/j.laing.2022.05.0044.006>

Book Chapter

2. Magical Foodscape: A Guidebook For Re-planning The Cities Base On The Culture, Food And The Built Environment. (pp. 010-055). *Advanced Books*, 1, e129204. | [Section Editors](#) | <https://doi.org/10.3897/ab.e129204> (not peer-reviewed)

1. Agro-Matrix. In M.Arch. UD 2021-2022 (pp. 148-159). *Bartlett School of Architecture, UCL*. (not peer-reviewed)

Presentations

Peer-reviewed Conference (Selected)

Chen, Mingze., Park, Keunhyun. Low-cost Bluetooth sensing for monitoring visitor volumes and movements in urban nature | **2026 CELA** (Council of Educators in Landscape Architecture) [Oral Presentation](#) (Cincinnati, OH)

Chen, Mingze., Park, Keunhyun. Urban Human-Nature Interaction: A Deep Learning Approach to Global Social Media Imagery | **2025 ACSP** (Association of Collegiate Schools of Planning) [Oral Presentation](#) (Minneapolis, MN)

Chen, Mingze., Park, Keunhyun. Understanding Human-Nature Interaction through AI and Crowdsourced Imagery: A Case Study of Vancouver | **2025 BCSLA** (British Columbia Society of Landscape Architects) [Oral Presentation](#) (Vancouver, BC)

Chen, Mingze., Park, Keunhyun. Usability of Low-cost Smart Sensors for Monitoring Visitor Volumes and Movements in Urban Parks | **2025 CELA** (Council of Educators in Landscape Architecture) [Oral Presentation](#) (Portland, OR)

Chen, Mingze., Huang, Yongming., Zheng, Yuqiao., Du, Jiani., Park, Keunhyun. Defining Urban Vitality Using Text-based, Image-based, and GPS Data | **2024 ACSP** (Association of Collegiate Schools of Planning) [Oral Presentation](#) (Seattle, WA)

Chen, Mingze., Park, Keunhyun. Sensor-based and vision-based technologies in monitoring human behaviours in natural areas: A scoping review | **2024 CELA** (Council of Educators in Landscape Architecture) [Oral Presentation](#) (St. Louis, MI)

Guest Lecture and Invited Presentation

THE UNIVERSITY OF HONG KONG

Presentation: "Leveraging Crowdsourced Social Media to Understand Urban Nature"
MUDP2020 Values of Urban Design (online)

Hong Kong, China
April 2026

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Presentation: "Make the Invisible Measurable"
Presentation: "A Global Atlas of Human-Nature Interaction and Cultural Ecosystem Services"
Presentation: "Automated visitor monitoring tools for better management of urban nature"
[Senseable City Lab](#), Department of Urban Studies and Planning (in-person)

Boston, USA
June 2026
April 2025
Jan 2024

THE UNIVERSITY OF BRITISH COLUMBIA

UFOR 444 Green Network Planning (in-person)
Guest Lecture: "Data-driven Urban Nature Analytics: Big Data and Machine Learning"
UFOR 100 101 Greening the City (in-person)
Guest Lecture: "What role can AI play in urban forestry planning, research and management?"
UFOR 522 Urban Forest Resources and Benefits Assessment
Guest Lecture: Technologies in Urban Forestry Research (online)

Vancouver, Canada

Nov 2024

Oct 2023

Mar 2023

UNIVERSITY OF NEVADA, LAS VEGAS

LAND 467 Geographic Information Systems for Landscape Architecture (online, co-Instructor)

Las Vegas, USA
2023 - 2024

Guest Lecture: Delivered weekly modules and instructional sessions on ArcGIS Pro (12 weeks)

SHANGHAI JIAO TONG UNIVERSITY

Guest Lecture: “Quantitative Method for Landscape and Urban Planning” (online)

Shanghai, China

Nov 2024

Teaching and Mentoring

UNIVERSITY OF BRITISH COLUMBIA

Graduate Teaching Assistant (1321h)

LARC 504 Landscape Architecture Design Studio IV (20h) Graduate	Aug 2025 – Sep 2025
UFOR 444 Green Network Planning (96h) Undergraduate and Graduate	Sep 2025 – Dec 2025
UFOR 531 Master of Urban Forestry Leadership Capstone Course (160h) Graduate	Jul 2025 – Aug 2025
UFOR 420 Ecology of Urban Green Infrastructure (192h) Undergraduate	Jan 2025 – Apr 2025
UFOR 444 Green Network Planning (160h) Undergraduate and Graduate	Sep 2024 – Dec 2024
UFOR 500 921 Developing Green and Resilient Cities (45h) Graduate	Jul 2024 – Aug 2024
PLAN 341 Smart Cities: Concepts, Methods, and Design (192h) Undergraduate	Jan 2024 – Apr 2024
UFOR 100 101 Greening the City (96h) Undergraduate	Sep 2023 – Dec 2023
LARC 444/553 Green Network Planning (82h) Undergraduate and Graduate	Sep 2023 – Dec 2023
UFOR 500 921 Developing Green and Resilient Cities (96h) Graduate	Jul 2023 – Aug 2023
UDES 509A Urban Design Methods (54h) Graduate	May 2023 – Jun 2023
UFOR522 Urban Forest Resources and Benefits Assessment (128h) Graduate	Jan 2023 – Apr 2023

NATURE AI LAB | natureailab.com

Nov 2021 – Present

Founder & Coordinator (Student-led Research Collective)

Mentored over 20 interdisciplinary student teams, whose projects received peer-reviewed publications or awards

Urban Soundscape Planning and Design Project	Feb 2023 – May 2023
Urban EchoRing: Soundscapes & Circular Connectivity for Urban Vibrancy	
Python and Computer Vision Workshop	Mar 2022 – May 2022
Street View and Satellite Imagery Segmentation based on Python and ArcGIS	
Data Visualization Workshop	Feb 2022 – Jun 2022
Workshop of data visualization in urban design based on Grasshopper	
Food and Environment Planning and Design Project	Feb 2022 – Jun 2022
Reinventing the High-density Spanish Neighborhoods in Naples, Italy Based on Food and Built Environment	

MAPILLARY, META

London, UK

Co-host

Urban Mobility Workshop	Feb 2023
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DESIGN WORKSHOP TEACHING

Instructor

2025 Digital Future (Tongji), Designing with AI Agents: Landscape Architecture Action	Jul 2025 – Aug 2025
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Teaching Assistant

Parametric Design Workshop - Led by Prof. Enriqueta Llabres-Valls, UCL	Jul 2021 – Aug 2021
Water Infrastructure(s) Workshop - Led by Prof. Andrea Oldani, PoliMi	Jun 2021 – Jul 2021
“Future City & Smart Density” Workshop. - Led by Prof. Aksel Ersoy, TU Delft	Sep 2020 – Oct 2021
Summer School - Led by -Prof. Xiwei Shen & Yang Zhang, Shanghai Jiao Tong University	Jan 2020 – Jun 2021

Research Grants and Experience

Research Grants

Lead Researcher, (Role: Funding application and research in charge.) “An Experience-Centered Framework for Urban Health Equity: Evidence from 300 Parks in 30 Global Cities,” MITACS Plus Accelerate Research (CAD \$ 60,000; 2026)

Research Assistant, (PI: Prof. Keunhyun Park) “Developing automated visitor monitoring tools for better management of urban nature,” Natural Sciences and Engineering Research Council of Canada (NSERC) Discovery Grant (\$147,500 CAD; 2022-2027)

Research Assistant, (PI: Prof. Lakshmi Priya Rajendran) “COPS: A Complex Systems approach to peri-urban development for climate resilience and just futures in the Global South,” Environment Domain and UCL Grand Challenges (£9,967; 2021-2022)

Research Assistant, (PI: Prof. Lakshmi Priya Rajendran) “Emergent spatialities and micro-resilience in the informal public realm of Global South urban peripheries,” ARCHITECTURE RESEARCH FUND (£3,000; 2021-2022)

Research Experience

UNIVERSITY OF BRITISH COLUMBIA

Vancouver, Canada

Graduate Academic Assistant (20h)

Aug 2023 – Sep 2023

LARC 444/553 Green Network Planning (Led by Dr. Keunhyun Park)

UNIVERSITY COLLEGE LONDON

London, UK

Research Associate (380h)

Mar 2022 – Jul 2022

Research Project | Emergent spatialities and micro-resilience in the informal public realm of Global South urban peripheries. (Led by Dr. Lakshmi Priya Rajendran, Prof. Raúl Leal)

Research Project | COPS: A Complex Systems approach to peri-urban development for climate resilience and just futures in the Global South (Led by Dr. Lakshmi Priya Rajendran, Prof. Raúl Leal)

Awards

Research Awards

Outstanding Student Award by China Scholarship Council | USD \$ 6,000

BPOC Graduate Excellence Award (AWD 6848) | CAD \$ 1,500.00

Globalink Research Award (IT49344) | CAD \$6,000.00 | **MITACS**

Mary and David Macaree Fellowship (4848) | CAD \$3,360.00 | University of British Columbia

Conference Fund Tier 1 | CAD \$1000.00 | ReROW, UBC

Graduate Student Travel Award | CAD \$500.00 | University of British Columbia

Design Awards as Supervisor

2023 Architecture Master Prize | **Best of Best** in Public Landscape, Winner in Urban Design, Winner in Urban Planning | **Supervisor** | Urban EchoRing: Soundscapes & Circular Connectivity for Urban Vibrancy

Student Team: Yixuan Jiang, Xiao Wang, Hongji Zhang, Yiyi Liu, Yilin Wang

<https://architectureprize.com/winners/winner.php?id=6979>

2023 Architecture Master Prize | Honorable Mention in Public Landscape | **Supervisor** | Fishing for Bikes: Architecture Solutions for Homelessness, Managed Parking, and Street Culture in Amsterdam

Student Team: Wanqi Zhou, Jiayu Tao, Xinting Ye, Kangshu Wen, Mingze Chen, Yizhuo Zhang

<https://architectureprize.com/winners/winner.php?id=7684&mode=hm&compID=12802>

2022 “Yuanye Awards” International Competition | Honor Award | **Supervisor** | Reinventing the High-density Spanish Neighborhoods in Naples, Italy Based on Food and Built Environment

Student Team: Quanchujun, Junyan Zhang, Chuwen Zhong, Jiayu Huang, Yuyang Jin

Design Awards as Student

2024 IDA Design Awards | Bronze in Urban Planning / Infrastructure / Sustainable Urban Architecture | **First Author** | Team Project | Urban Heat Island Effects in Desert Cities

<https://www.idesignawards.com/winners/zoom.php?eid=9-58262-24>

2022 Landscape Institute Student Award | Finalists, Innovation and Research Award | **Team Leader** | Magical Foodscape: A Guide- book for Replanning the Cities Base on the Culture, Food, and the Built environment.

<https://awards.landscapeinstitute.org/awards-finalists-2022/>

2022 Architecture Master Prize | Honorable Mention in Landscape Architecture / Educational Landscape | Team Project | Campus Flight! A Guidebook for Campus Transformation

<https://architectureprize.com/winners/winner.php?id=6109&mode=hm&compID=12798>

2021 National ASLA Student Award | Honor Award | **Team Leader** | Magical Foodscape: A Guide- book for Replanning the Cities Base on the Culture, Food, and the Built environment.

<https://www.asla.org/awards-events/honors-awards/pro-student-awards/2021studentawards/3468>

2020 “Yuanye Awards” International Competition | Second Prize | Team Project

Professional Design Awards

“Qionglai Biodiversity Expo” International Competition | Top6 | GN

Jun 2021 | Role: Contributed to concept design, perspective rendering and master plan

Shenzhen Bay International Urban Design Competition | Shortlisted | SWA

Jun 2020 | Role: Contributed to parametric modeling and perspective rendering

“Shenzhen Blueway” International Urban Design Competition | **First Prize** | Hassell

May 2020 | Role: Contributed to the concept design and node modeling

“Henan Talents Innovation Industry Park” Urban Design Competition | Top3 | Hassell

Apr 2020 | Role: Contributed to the modeling and master plan

Service

Reviewer of Journal Manuscripts

Landscape and Urban Planning | Sustainable Cities and Society | npj Urban Sustainability | Habitat International | Land Use Policy | Urban Forestry & Urban Greening | GIScience & Remote Sensing | Landscape Ecology | Scientific Reports | Science of the Total Environment | Humanities and Social Sciences Communications | Scientific Data | Frontiers of Architectural Research | Restoration Ecology | Journal of Asian Architecture and Building Engineering | Land | Sustainability | Heliyon | Buildings | Earth | The Design Journal

University Services

SICHUAN AGRICULTURAL UNIVERSITY

Class Assistant (First year undergraduate student advisor)

Chengdu, China

2018 - 2020

Reviewer of Conferences

Council of Educators in Landscape Architecture (CELA)

Professional Affiliations

Student Member | Association of Collegiate Schools of Planning (ACSP)

Student Member | Council of Educators in Landscape Architecture (CELA)

Student Member | International Federation of Landscape Architects (IFLA)

Student Member | American Society of Landscape Architects (ASLA)

Skills

Computational Design and Landscape Architecture Rhinoceros 3D | Grasshopper | SketchUp | Lumion | CAD
Spatial Data Analytics ArcGIS Pro | ArcPy | ArcGIS Map | QGIS | Mapbox GL JS | GeoPandas
Data Statistics and Visualization Python | R Studio | SPSS | JavaScript | HTML/CSS
Algorithms Python | NumPy | OpenCV | Scikit Learn
Adobe Photoshop | InDesign | Illustrator | After Effects | Premiere