LUO Tianze

Department of Geography & Environ Sustain, University of Oklahoma, Norman, OK, USA

Email:Tianze.luo@ou.edu

Education

The University of Edinburgh (UK) Sep 2022 – Jun 2024
MLA Landscape Architecture

Northwest Agriculture and Forestry University (NWAFU) (China) Sep 2018 – Jun 2022
Landscape Gardening

Research and Publications

Publication 2024

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***
https://doi.org/10.1016/j.enbuild.2024.115255
This paper demonstrates the ability of supervised machine learning to comprehensively solve outdoor thermal comfort problems, refines and summarizes existing workflows and overall applications, and finally makes three propositions for development in this field.

Conference 2023

Luo, Tianze., Chen, Mingze*. Smart Canopies: Optimizing Tree Layouts for Enhanced Thermal Comfort -- An Edinburgh Case Study | ***2024 IUFRO*** (International Union of Forest Research Organizations) Conference Accept

Adjunct Research Position 2025
Research fellow, North America
Nature AI Lab: https://natureailab.com/
We combine Cutting-edge Artificial Intelligence with Environmental Research to address the pressing challenges of our urban and natural landscapes.

Urban Mobility Collaboration Coordinator 2023
London Area, United Kingdom · Research project
As an Urban Mobility Collaboration Coordinator at Meta, I worked on improving pedestrian-centric map data by enhancing the coverage of street-level imagery in walkable areas, with a focus on London. I collaborated with groups and individuals who shared our interests in an open and collaborative approach to map building, using open-source tools and data. Our efforts aimed to improve the density and freshness of Mapillary street-level imagery, identify map features, and experiment with sidewalk line string production.

Wind environment optimization at block scale based on thermal comfort 2021
Advisor: Dr. Hainan Yan
Guangzhou, China · Research project
Using Rhino plug-in “Ladybug” and “Butterfly” to analysis the influence of different block shapes on wind environment, the research goal is to realize a better outdoor thermal comfort. We summarized 5 types of block building distribution and arranged each types into grids for an ideal city model. Then, the wind environment and thermal comfort fluxes of the grid were calculated and displayed in the form of model visualization. In order to screen out the maximum value of wind environment to achieve better thermal comfort, we used genetic algorithm to optimize, and finally get 8 optimal solutions, which are used as the ideal block shape to guide urban design.

Awards and Honors

The 3rd National Forestry Prairie Industry Innovation and Entrepreneurship Competition 2021

Team Leader, shortlisted for the award

- Completed the ecological restoration of one garbage site
- Allocated work to team members effectively and responsible for the final presentation of the proposal

Micro Landscape Design Competition at the 10/30 International Horticultural Exposition 2021

Team Leader, Won the Silver Award

- Took charge of the plant design as well as the on-site construction

Heyang County Poverty Alleviation Team 2020

Team Leader, Won the University-level Excellence Award

- Analyzed the local industry and proposed the innovation plans based on the county's feature
- Prepared promotion materials and published information on social media

Workshops and College Activities

Qianhai Resilient Urban Design (TUD & SZU) Jul 2021

Team Leader, Advisor: Prof. Akesel Ersoy

- Learned and practiced the related theories and concepts of resilient city
- Responsible for the ecological design and the demonstration on the site
- In charge of reporting the project in English
- Won the excellent team among total five teams

Bicycle Association of NWAFU 2019 – 2021

President

- Led members to participated in Qinling bicycle climbing competition; Yanglin competition, etc. and won good results

Sports Club of NWAFU 2019 – 2021

Member of Swimming Team

- Completed Xi'an Marathon and Yangling Marathon

Skills & Languages

Software: Adobe creative, Auto CAD, Rhino, Grasshopper, Lumion, V-ray, Enscape, Python, R, ArcGIS/QGIS, Solweig, Envi-met

Interests: Cycling, Swimming, Triathlon, Electronic bass guitar, Oil painting

Language: English(Fluent), Chinese(Mandarin, native; Cantonese, native)