Leila Bahrami

ENVIRONMENTAL PLANNER . CLIMATE RESILIENCE RESEARCHER

New Orleans, LA, USA | (+1)215-866-7997 | Lbahrami69@gmail.com | LeilaBahrami | Website

Research Interests

My research combines urban planning, environmental modeling, and climate science to address the challenges of climate resilience, with a focus on mitigating heat exposure and its social and health inequities. I explore the asymmetric impacts of extreme weather events on vulnerable communities and critical infrastructure. Through advanced methodologies in GIS, machine learning, remote sensing, and spatial statistics, I develop actionable, data-driven strategies to tackle complex climate challenges, promote equity, and guide sustainable urban planning and adaptation efforts.

Education

Master of Science

University of Pennsylvania (2020)

- Master of Landscape Architecture and Regional Planning Specialization in Resilient Environmental Design
- **Certificate** in **Geographic Information System (GIS) and Spatial Analysis** | GPA: 3.94 / 4
- **Thesis** : Measuring Impacts of Urban Greening Projects in Philadelphia
- **Independant Research** : Impacts of Land Use and Socioeconomic Patterns on Urban Heat Island in Baltimore City

Master of Landscape Architecture

Shahid Beheshti University (2017)

- **Thesis:** Designing Green Infrastructure for Urban Stormwater Management, Tehran, Iran | GPA: 3.77 / 4

Bachelor of Architecture

University of Tehran (2013)

- **Thesis:** Cultural Complex Ddesign with Ecological Consideration, Tehran, Iran | GPA: 3.84 / 4

Professional Experience

Visiting Assistant Professor

Tulane University | New Orleans, LA | Fall 2024

- GIS Workshop - Urban Design Studio: Lead a comprehensive GIS workshop for undergraduate students in the Urban Design Studio, focusing on geospatial analysis and mapping techniques for urban design projects.

Researcher

Tulane University | 2024

- Research on health and social inequalities in urban heat exposure areas in New Orleans, focusing on identifying vulnerable populations, analyzing disparities, and developing equitable strategies to mitigate heat-related impacts.

Research Assistant / GIS Specialist

Environmental Modeling Lab | University of Pennsylvania | 2020-Present

- Simulate coastal wetlands loss using UAV multi-spectral imaging and GPS field surveys to identify spatial clusters of vulnerable species to inform targeted interventions to enhance ecosystem resilience.
- Developed and automated an unsupervised classification algorithm to analyze land cover changes in coastal areas using multispectral imagery and predicted future changes with regression models, including SVM and Random Forest, to support climate resilience planning.

Senior Urban Environmental Planner / GIS Specialist

CHPlanning | Philadelphia, PA | 2021-Present

- Climate Resilience Effort: Lead the development of climate action plans, flood risk assessments, and vulnerability analyses, focusing on climate adaptation strategies for vulnerable communities. Produce and publish high-quality cartographic products and web-based tools to support resilience efforts.
- Environmental Justice Study: Design a comprehensive methodology to create a social and environmental index by integrating climate data modeling, socioeconomic research, and landuse change analysis.
- Urban Design: Engage in urban design and public realm strategy projects for urban neighborhoods, focusing on integrating blue-green infrastructure and enhancing community well-being.

Landscape Researcher

Julia Watson LLC. - Winter 2021

- Researched seaweed farming on the West Coast as a sustainable solution for major companies. Explored its viability as an eco-friendly material and identified adoption challenges.

Professional Experience

Teaching Assistant

Geospatial Software Design | University of Pennsylvania

- Collaboration with Dr. Dana Tomlin, in co-teaching Google Earth Engine, Java Scripts API, and Python in ArcGIS(Arcpy Module) to +60 students with different background in city planning, environmental studies and landscape design and Provided weekly office hours for assignment support

Ecology and Built Environment | University of Pennsylvania

- Collaborated with Prof. Sally Willing to co-teach the Natural Systems course to 60+ students from non-environmental backgrounds, incorporating practical experiments, outdoor workshops, and training sessions.

Contemporary Urbanism | University of Pennsylvania

- Co-taught Contemporary Urbanism with Prof. David Gouvernour for 40+ urban studies students, focusing on informal settlements and concepts, and developing practical 3D models and proposals.

Landform and Grading | University of Pennsylvania

- Collaborate with Prof. Cora Olgay Enhancing student abilities in solving difficult design problems through teaching site engineering for grading and shaping landforms.

Natural Systems | University of Pennsylvania

- Co-teaching ecological systems and native plants community to +40 students.

Landscape Intern

Viridian Landscape Studio - Summer 2019

- Landscape 3D modeling, digital rendering, and construction detail preparations.

Publications / Presentations

2024
- L. Bahrami, et al. Examining Social and Health Disparties in heat Exposure in New Orleans in proceedings of the CELA Annual Conference, Oregon 2025.

2024
- L. Bahrami, K. Armendariz, Equity Factor in Clean Water Fund Distribution: A Study of Wisconsin and Pennsylvania in proceedings of the "Water Resources Research" journal.

2023
- L. Bahrami, et al. Measuring Impacts of Urban Forest on Urban Heat Island: Baltimore City: Oral presentation at Sustainable DC Conference.

2022
- K.VanDerSys, K. M'Closkey .L. Bahrami, et al., Stone Harbor Salt Marsh Grasses Remote Sensing: Environmental Modeling Lab press, University of Pennsylvania

2022
- L. Bahrami, et al., Reinvision Downtown Danburry, Conneticut: newstime magazine.

2022
- L. Bahrami, et al., Campus RainWorks Challenge: EPA Press Releases 2022.

2020
- L.Bahrami, C, Wills, m, Verma, Campus RainWorks Challenge: Oral presentation at ASLA Dream BIG with Design event.

2020
- L. Bahrami, D.Tomlin, Impacts of Land Use and Socioeconomic Patterns on Urban Heat Island in Baltimore, Oran presentation at Geospatila Workshop at Penn.

2020
- L. Bahrami, et al., Designing Green New Deal: The Spatial politic of our response to climate change, 28th edition of Penn Panorama Journal.

2020
- L.Bahrami, et al., Designing Green New Deal: The Spatial politic of our response to climate change, Annual ASLA Awards Book

2016
- L. Bahrami, M. Akbari, Tehran Gardens evolution and their Impact on the City, In International conference on Civil Engineering, Architecture, and Cityscape (ICCACS), Istanbul, Turkey, 2016.

Activities and Honors

2018-2020	**Landscape and Regional Planning Graduate Department Top Scholarship** • Weitzman School of Design, University of Pennsylvania, Philadelphia, PA
2019-2020	**ISF Graduate Scholarship (Iranian Scholarship Foundation)** • Excellence award of Iranian Scholarship Foundation, Menlo Park, CA
2020	**First Place winner in EPA (Environmental protection Agency) 2020 Campus RainWorks Challenge** • Project: Community food forest for stormwater management, Philadelphia, PA
2020	**ASLA Student Award of Excellence in Student Collaboration** • Project: Designing a Green New Deal, University of Pennsylvania
2021	**Resiliency Youth Network** • Officer: Design Chair
2017	**Lindy Institute for Urban Innovation** • Volunteer Planner, School of Design, Drexel University
2014	**Landscape Architecture Graduate Department Full Scholarship** • Shahid Beheshti University, Tehran, Iran
2008	**Architecture Undergraduate Department Full Scholarship** • University of Tehran, Tehran, Iran
2018-Present	**American Society of Landscape Architecture (ASLA) member**

Skills

Geospatial Analytics	Weather Research and Forecasting (WRF) Model, ESRI ArcGIS Software Suite (Raster, Vector, AGOL, ArcGIS Enterprise) , ArcPy, Google Earth Engine, R Studio, Python, JavaScript
Remote Sensing	ENVI, Image processing
Statistical Analysis	Feature Engineering, Machine learning (supervised and unsupervised), Predictive Modeling, Mapbox , Leaflet
Planning & Design	Landscape Design, Urban Planning, Climate Resilience, Adobe Suite, Rhino, Grasshopper, Autocad

REFERENCES

Keith VanDerSys
Senior Lecturer | University of Pennsylvania
kvand@design.upenn.edu

Dana Tomlin
Professor Emeritus | University of Pennsylvania
tomlin.dana@verizon.net

David Gouverneur
Associate Professor of Practice in Landscape Architecture | University of Pennsylvania
dgouverneur@gmail.com