

Nastaran Tebyanian

Education

- 2016–Present **PhD in Architecture**, *Pennsylvania State University*.
- 2016–2019 **Master of Applied Statistics (MAS)**, *Pennsylvania State University*.
- 2019 **Summer School on Sustainable Climate Risk Management (SCRiM network)**, *Pennsylvania State University*.
- 2013–2016 **Master of Science in Landscape Architecture (MSLA)**, *Pennsylvania State University*.
- 2009–2012 **Master of Landscape Architecture (MLA)**, *Shahid Beheshti University*.
- 2003–2008 **Bachelor of Architectural Engineering**, *Isfahan University of Art*.

Research Experience

- 2021–Present **Adjunct Researcher**, The RAND Frederick S. Pardee Center for Longer Range Global Policy and the Future Human Condition, RAND Corporation.
- 2021 **Summer Associate**, The RAND Frederick S. Pardee Center for Longer Range Global Policy and the Future Human Condition, Mid-Atlantic Regional Integrated Sciences and Assessments (MARISA), RAND Corporation.
- 2019–Present **Fellow**, *Landscape U (A National Science Foundation Research Traineeship in Regenerative Landscape Science)*, Pennsylvania State University.
- 2019–Present **Researcher**, *The Penn State Initiative for Resilient Communities (PSIRC)*, Pennsylvania State University.
- 2016–2019 **Researcher**, *Hamer Center for Community Design*, Pennsylvania State University.

Professional Experience

- 2013 **Registered Architect**, Self-employed, Residential design, Semnan, Iran.
- 2009–2012 **Urban Designer**, Designing historical streetscape, Semnan Municipality, Iran.

Awards

- 2020 **Scientific Merit**, *The Journal of Digital Landscape Architecture*.
- 2019 **Travel Award**, *Mansueto Institute for Urban Innovation*, Attended Global Symposium on Sustainable Cities and Neighborhoods.
- 2016 **Scientific Excellence**, *The Journal of Digital Landscape Architecture*.
- 2016,2020 **Travel Award**, *Stuckeman Center for Design Computing (SCDC)*, Attended Digital Landscape Architecture Conference.

Grants

Flohr, Travis (PI), Miller, Doug (Co-PI), Wu, Hong (Co-PI), and **Tebyanian, Nastaran (Co-PI)**. (2018). Developing a computational planting design and decision-making tool for assessing and predicting pollinator habitat resilience. The Stuckeman Center for Design Computing Interdisciplinary Project Support. (funded - \$13,200).

Tebyanian, Nastaran (PI). (2016). Developing an Online Platform for Participatory Resilient Urban Landscape Design, Michael Brill Research Grant, Urban Communication Foundation, (funded \$2500)

Publications

Accepted **Tebyanian, N.**, Wu, H., Iulo, L., Keller, K. (2022). Uncertainty Considerations in Green Infrastructure Optimization: A Review. *Journal of Digital Landscape Architecture (JoDLA)*, 7.

Peer-Reviewed **Tebyanian, N.** (2020). Application of Machine Learning for Urban Landscape Design: A Primer for Landscape Architects. *Journal of Digital Landscape Architecture (JoDLA)*, 5, 217–226. <https://doi.org/10.14627/537690023>

Flohr, T., Wu, H., & **Tebyanian, N.** (2020). A Web App For Urban Pollinator Site Assessment. *Landscape Research Record*, 9, 177–191. https://thecela.org/wp-content/uploads/LRR_v.9_FINAL_2020_Reduced-1.pdf

Tebyanian, N. (2016). Reflecting Time in Computer-aided Landscape Design and Analysis: Developing an Application for Modelling Seasonality and Resiliency in Small Scale Landscapes. *Journal of Digital Landscape Architecture (JoDLA)*, 1, 214–221. <https://doi.org/10.14627/537612025>

Other Iulo, L., Arora, A., Fowler, L., Goldberg, L., Casey Helgeson, Keller, K., Nicholas, R., Sharma, S., **Tebyanian, N.**, Tuana, N., & Mahkameh, Z. (2020). *Establishing Priorities for Pennsylvania Community Flood Resilience* [White Paper].

Tebyanian, N., & Iulo, L. (2019, September). Food-Energy-Water Nexus and Green Infrastructure: A Theoretical Connection. *International Conference on Sustainable Development*. ICSD 2019, Columbia University, New York, USA. https://ic-sd.org/wp-content/uploads/2019/11/nastaran_tebyanian.pdf

Presentations

Conference **Tebyanian, N.** & Iulo, L. & Wu, H. (2021, June 10). *Green Infrastructure Placement Under Deep Uncertainty*. Computational Urban Planning and Urban Management Conference (CUPUM 2021), Helsinki (Virtual).

Tebyanian, N. & Iulo, L. & Wu, H. (2021, March 19). *Application of Many Objective Robust Decision Making (MORDM) for Green Infrastructure Planning*. Council of Educators in Landscape Architecture Conference (CELA 2021), Virtual.

Tebyanian, N. (2020, June 3). *Application of Machine Learning for Urban Landscape Design: A Primer for Landscape Architects*. Digital Landscape Architecture Conference (DLA 2020), Harvard University (Virtual).

Tebyanian, N., & Iulo, L. (2019, September 24). *Food-Energy-Water Nexus and Green Infrastructure: A Theoretical Connection*. International Conference on Sustainable Development (ICSD 2019), Columbia University, New York.

Tebyanian, N. (2016, June). *Reflecting Time in Computer-aided Landscape Analysis and Design: Developing an Application for Modeling Seasonality and Resilience in Small-scale Landscapes*. Digital Landscape Architecture Conference (DLA 2016), Istanbul, Turkey.

Tebyanian, N., Memar, M., & Henderson, R. (2015, June 24). *The Historical Water Division Network of Semnan, Iran*. Water History 2015 Conference, Delft, Netherlands.

Tebyanian, N. (2015, June 4). *Collaborative Modelling in Urban Design: Parametric Design Games*. Innovations in Collaborative Modeling Conference, East Lansing, MI.

Tebyanian, N., & Memar, M. (2014, March 22). *Implementing Traditional and Modern Potentials in Participatory Urban Landscape Design*. Council of Educators in Landscape Architecture Conference, Baltimore, Maryland.

Tebyanian, N., & Memar, M. (2012, June 11). *Green Infrastructure as a Basis for Social Cohesion: A Case Study from Iran*. European Foundation for Landscape Architecture Conference, Uppsala, Sweden.

Poster **Tebyanian, N.** (2019, October). *National Flood Insurance Program (NFIP) Dataset: Insights For PA*. 14th Susquehanna River Symposium, Healthy Rivers, Healthy Communities, Bucknell University, Lewisburg, PA.

Flohr, T., Wu, H., Miller, D., & **Tebyanian, N.** (2019, September 23). *Computationally assessing pollinator habitat resiliency*. SCDC VR/AR Flash Symposium, The Pennsylvania State University.

Tebyanian, N. (2015, May 27). *A Geodesign Experience for Development of Vacant Properties in Philadelphia*. Environmental Design Research Association Conference, EDRA 46, Los Angeles, CA.

Invited Talks Turner, S., Lempert, R., & **Tebyanian, N.** (2021, December 7). *Opportunities for Machine Learning to Advance Interpretable DMDU Visualizations*. Center for Scalable Computing and Analysis, RAND Corporation, Virtual.

Tebyanian, N. (2021, October 14). *Distributed Green Infrastructure Planning In Pittsburgh's Negley Run Watershed: A Case Study of Spatial Multi-Objective Robust Decision Making*. Mid-Atlantic Regional Integrated Sciences and Assessments (MARISA) meeting, Virtual.

Fowler, L., Iulo, L., Helgeson, C., **Tebyanian, N.**, Keller, K., Sharma, S., & Leininger, S. (2020, October 22). *Flood Resilience in Riverine Communities: Understanding Risk and Facilitating Values-Informed Decision Making* . Susquehanna River Basin Commission Meeting, Virtual.

Flohr, T., Hong, W., & **Tebyanian, N.** (2019, April 12). *Addressing “The Challenge of Place in Time” with Geodesign: Example of pollinator habitat resiliency* . Pennsylvania/Delaware Chapter of the American Society of Landscape Architects Annual Conference, Cranberry Township, PA.

Teaching

Instructor Landscape Systems Studio (LARCH 216) (Penn State, 2018-2019)

- Teaching introductory GIS, spatial data analysis and regional planning
- Cultivating systems thinking for approaching social-ecological challenges

Introduction to Design Visualization (LARCH 155) (Penn State, 2016)

Environmental Communication Studio (Azad University, Iran, 2012)

TA Design Implementation (Penn State, 2013-2015)

- Stormwater management and grading courses

Service

Reviewer Council of Educators in Landscape Architecture conference (CELA) abstracts (2018, 2019)

EPA modules on “Integrating Water Planning and Hazard Mitigation Planning” (2019-2020)

Co-organizer First virtual Digital Landscape Architecture conference (DLA)(2020)
Moderator

Board Member Graduate Research and Innovative Design (GRID), Stuckeman School, Penn State (2018-2019)

Judge Graduate Exhibition, Pennsylvania State University (Spring 2019)

Skills

Statistical Analysis Python, R, SAS, Minitab

Spatial Analysis ArcGIS, ESRI storymaps, QGIS, R, Python

Data Visualization Tableau, R, Python, Processing

Network Analysis Gephi

Design and Planning AutoCAD, Revit, Rhino, Grasshopper, Sketch-up, ArcGIS, Adobe Creative Suite, JustInMind