Curriculum Vitae

Saeed Esfandi

Ph.D., LEED Green Associate, Research Fellow

Urban, Energy and Environmental Planner
Center for Energy & Environmental Policy, Biden School, University of Delaware, Newark, DE, USA.
Foundation for Renewable Energy and Environment (FREE), New York City, NY, USA.

✉ sesfandi@udel.edu
scholar.google.com
www.researchgate.net
www.linkedin.com

Education

Ph.D., Energy and Environmental Policy   Sept. 2022 - Present

Center for Energy & Environmental Policy, Joseph R. Biden, Jr. School of Public Policy & Administration, University of Delaware, Newark, DE, USA.

Fellowship Resource: Foundation for Renewable Energy and Environment (FREE), New York City, NY, USA.
Supervisor: Prof. John Byrne

Ph.D., Urban Planning   Jan. 2016 - Sept. 2022

School of Urban Planning, College of Fine Arts, University of Tehran, Iran.

Dissertation: "A Study of the Impact of Tehran's District 22 Megaproject-based Development on the Urban Carrying Capacity of Tehran.
Supervisor: Dr. Farshad Nourian, **Advisor:** Prof. Mohammad Mehdi Azizi
GPA: 17.39/20 - 3.67/4.00

M.Sc., Urban Planning   Sept. 2012 - Sept. 2015

School of Urban Planning, College of Fine Arts, University of Tehran, Iran.

Thesis: "A Carrying Capacity-based Decision Support System for the Optimum Spatial Distribution of Mega Malls in Tehran."
Supervisor: Dr. Farshad Nourian
GPA: 17.69/20 - 3.875/4.00 **(Ranked within the top 10%)**

B.A., Urban Planning   Sept. 2008 - Jul. 2012

Faculty of Architecture and Urbanism, Imam Khomeini International University of Qazvin, Iran.

Final Project: "Investigating the Relationship Between Mega Malls and Sustainable Urban Development."
Supervisor: Dr. Rahim Hashempour
GPA: 18.16/20 - 3.879/4.00 **(Top student)**

Research Interests

- Smart solar cities
- Energy and climate justice
- Active and passive integration of renewable energies into urban planning and design practice (Solar city)
- Energy-resilient and energy-efficient urban spatial planning
- Leadership in Energy and Environmental Design for Neighborhood Development (LEED-ND)
- Net-zero energy and carbon-neutral districts
- Nature-based solutions for urban energy and climate resilience
- Climate change mitigation and adaptation
- Urban carrying capacity

Peer-Reviewed Publications

Esfandi, S., Tayebi, S., Byrne, J., Taminiau, J., Giyahchi, G., and Alavi, S. A. (2024). Smart Cities and Urban Energy Planning: An Advanced Review of Promises and Challenges. Smart Cities. 2024; 7(1):414-444. https://doi.org/10.3390/smartcities7010016

Alavi, S.A., **Esfandi, S.**, Khavarian-Garmsir, A.R., Tayebi, S., Shamsipour, A., and Sharifi, A. (2024) Assessing the Connectivity of Urban Green Spaces for Enhanced Environmental Justice and Ecosystem Service Flow: A Study of Tehran Using Graph Theory and Least-Cost Analysis. Urban Science, 8 (1), 14. https://doi.org/10.3390/urbansci8010014

Tayebi, S., Alavi, S. A., **Esfandi, S.**, Meshkani, L., and Shamsipour, A. A. (2023). Evaluation of Land Use Efficiency in Tehran's Expansion between 1986 and 2021: Developing an Assessment Framework Using DEMATEL and Interpretive Structural Modeling Methods. Sustainability. 2023; 15(4):3824. https://doi.org/10.3390/su15043824

Tayebi, S., Feizizadeh, B., **Esfandi, S.**, Aliabbasi, B., Alavi, S. A., and Shamsipour, A. A. (2022). Neighborhood-Based Urban Water Carrying Capacity Assessment: Analysis of the Relationship between Spatial-Demographic Factors and Water Consumption Patterns in Tehran, Iran. Land, 11(12), 2203. https://doi.org/10.3390/land11122203

Tayebi, S., **Esfandi, S.**, Bahraini Moqadam, S., and Sharifi, A. (2022). Investigating the Role of Neighborhood Development Offices (NDOs) in the Resilience of Deteriorated Urban Neighborhoods Against the COVID-19 Pandemic: An Empirical Study of Tehran, Using A Hybrid Balanced-Based Assessment Framework. Urban Science, 6(4), 77. https://doi.org/10.3390/urbansci6040077

Esfandi, S., Rahmdel, L., Nourian, F., and Sharifi, A. (2022). The Role of Urban Spatial Structure in Energy Resilience: An Integrated Assessment Framework Using a Hybrid Factor Analysis and Analytic Network Process Model. Sustainable Cities and Society, 76, 103458. https://doi.org/10.1016/j.scs.2021.103458

Esfandi, S., and Nourian, F. (2021). Urban Carrying Capacity Assessment Framework for Mega Mall Development. A Case Study of Tehran's 22 Municipal Districts, Land Use Policy, 109 (October), 105628. https://doi.org/10.1016/j.landusepol.2021.105628

Bahramian, F., Akbari, A., Nabavi, M., **Esfandi, S.,** Naeiji, E., and Issakhov, A. (2021). Design and Tri-objective Optimization of an Energy Plant Integrated with Near-zero Energy Building Including Energy Storage: An Application of Dynamic Simulation, Sustainable Energy Technologies and Assessments, 47 (October). https://doi.org/10.1016/j.seta.2021.101419

Hamedi, K., Sadeghi, S., **Esfandi, S.,** Azimian, M., and Golmohamadi, H. (2021). Eco-Emission Analysis of Multi-Carrier Microgrid Integrated with Compressed Air and Power-to-Gas Energy Storage Technologies, Sustainability 13(9), 4681. https://doi.org/10.3390/su13094681.

Esfandi, S., Baloochzadeh, S., Asayesh, M., Ehyaei, M.A., Ahmadi, A., Rabanian, A.A, Das, B., F. Costa, V., and Davarpanah, A. (2020). Energy, Exergy, Economic, and Exergoenvironmental Analyses of a Novel Hybrid System to Produce Electricity, Cooling, and Syngas. Energies, 13(23), 6453. https://doi.org/10.3390/en13236453.

Nourian, F., and **Esfandi, S.** (2016). Priority Analysis of Locating the Earthquake Crisis Management Supportive Bases According to Land Based Classification Standards (LBCS) using TOPSIS Technique (Case Study: District 1, Region 6 of Tehran). Journal of Emergency Management, 4(2), 55-72. 20.1001.1.23453915.1394.4.2.5.5.

Technical Reports

Taminiau, J., Byrne, J., Grover, D., and **Esfandi, S**. (2023). The Social Geography of the Solar Renewable Energy Credits (SREC) Market. FREE Report 2023, Available at SSRN: https://ssrn.com/abstract=4749039 or http://dx.doi.org/10.2139/ssrn.4749039

Taminiau, J., Byrne, J., Grover, D., and **Esfandi, S.** (2023). Strategies to Broaden Employment Opportunities in the Green Energy Economy: Estimated Job and Public Health Impacts of the Inflation Reduction Act and Bipartisan Infrastructure Law. FREE Report 2023, Available at SSRN: https://ssrn.com/abstract=4749282 or http://dx.doi.org/10.2139/ssrn.4749282.

Conference Papers and Presentations

Esfandi, S. (2020). Is Tehran a Fragmented City? A Structural Analysis based on Marcello Balbo's Viewpoint. 3rd International Congress of Science, Engineering, and Technology, Hamburg, Germany.

Esfandi, S., and Mehraie, P. (2017). Rasht Comprehensive Plan Assessment based on SEA Approach. 4th International Conference on the Environmental Planning and Management, University of Tehran, Iran.

Esfandi, S. (2017). Evaluation of Traffic Capacity of Tehran's 22 Districts for Optimal Locating of Mega Malls. 16th International Conference on Traffic & Transportation Engineering, Tehran Traffic & Transportation Organization, Iran.

Esfandi, S. (2016). Application of Infill Development Approach in Housing Planning of Qazvin City over the years to 2017. 16th Conference of the Housing Development Policy in Iran, Ministry of Roads and Urban Development, Tehran, Iran.

Esfandi, S. (2016). Analysis of Trip Generation Rate of Multipurpose Commercial-Recreational Complexes Using TIPS Software (Case study: Ekbatan Mega Mall). 15th International Conference on Traffic & Transportation Engineering, Tehran Traffic & Transportation Organization, Iran.

Esfandi, S. (2015). A Review of the Literature and an Assessment of the Government Methods of Intervention in the Low Incomes Housing Issue in Iran. 3rd International Congress on Civil Engineering, Architecture & Urban Development, Shahid Beheshti University of Tehran, Iran.

Esfandi, S. (2015). Conceptualization of New Urbanism Paradigm from the Viewpoint of Peter Calthorpe. 1st National Conference of Urban Planning, Urban Management and Sustainable Development, Iran's Ministry of Roads and Urban Development, Tehran, Iran.

Esfandi, S. (2012). Feasibility Study of Implementation of Neighbors Building Neighborhoods (NBN) Model in District 22 of Tehran City. National Congress of Optimum Urban Management, Municipality of Tehran, Iran.

Honors and Awards

- Awarded a 4-year Fellowship by the Foundation for Renewable Energy and Environment (FREE) to pursue a Ph.D. in Energy and Environmental Policy at the University of Delaware, USA, 2022-2026.

- The Best Paper Award, 13th Festival of Research and Innovation in Urban Management, Tehran, Iran, 2021.

- 1st Rank in "Top 100 Urban Planning and Architecture Expert Selection Exam" among 1403 Participants, Municipality of Tehran, Tehran, Iran, 2019.

- Distinguished Staff Award, Tehran Urban Research and Planning Center (TURPC), Tehran, Iran, 2019.

- Top Talented University Students Award, Iranian National Elites Foundation, Tehran, Iran, 2018.

- 1st Rank in National University Entrance Exam in the Field of Urban Planning among 3033 Participants (Master's Degree), 2012.

- 1st Departmental Rank (Top student) with a GPA of 18.16, Imam Khomeini International University of Qazvin (Bachelor's Degree), 2012.

Research Experience

1- Research Fellow (Full-time)   **Sept. 2022 – Present**

- *Foundation for Renewable Energy and Environment (FREE), New York City, NY, USA.*
- *Center for Energy & Environmental Policy (CEEP), Biden School of Public Policy & Administration, University of Delaware, Newark, USA.*

The following are my responsibilities:

- Conduct theoretical and practical research on solar cities, smart cities, and just energy transition concepts.
- Engage in research projects conducted by the Foundation for Renewable Energy and Environment (FREE).
- Write research proposals and progress reports.
- Present research results at conferences and seminars.
- Review papers for journals and conferences.

2- Researcher and Urban Planner (Full-time)   **Mar. 2019 – Jul. 2022**

Department of Architecture and Urban Planning, Tehran Urban Research and Planning Center (TURPC), Municipality of Tehran, Tehran, Iran.

The following were my responsibilities:

- Prepare technical reports for Tehran City Council and Municipality.
- Prepare requests for proposals (RFPs) and supervise executive research teams for the implementation of Department of Architecture and Urban Planning research projects.
- Direct and supervise graduate students' theses and dissertations.
- Assist in organizing workshops, conferences, and seminars.

3- Research Assistant (Part-time)   **Sept. 2016 – Aug. 2022**

Assistant to Dr. Farshad Nourian, School of Urban Planning, University of Tehran, Tehran, Iran.

The following were my responsibilities:

- Monitor and guide the research projects of graduate and undergraduate students.
- Conduct theoretical and practical research on diverse urban issues.
- Write research proposals and progress reports.
- Review papers for journals and conferences.
- Prepare presentations, posters and materials for conferences and seminars.

Teaching Experience

1- University Lecturer (Part-time)   **Sept. 2015 - Feb. 2016**

Department of Urban Planning, Pardis Branch, Islamic Azad University, Tehran, Iran.

The following were my responsibilities:

- Instruct a 5-credit course, "Urban Planning Studio 1," for undergraduate students.
- Provide guidance and support to students in the preparation and presentation of their final projects.

2- Instructor and Co-founder of Urban Planning Department (Part-time)   **Apr. 2013 - Mar. 2015**

Iranian Architecture Center, Tehran, Iran.

The following were my responsibilities:

- Instruct several courses and workshops for graduate and undergraduate students preparing for the national university entrance exams in the fields of urban planning and urban design.
- Prepare course materials and mock tests to enhance students' preparedness for the exams.

Professional Experience

1- Urban Planner (Full-time)   **Jul. 2016 - Mar. 2019**
Urban Development and Architecture Deputy, Municipality of Tehran's District 5, Tehran, Iran.

The following were my responsibilities:

- Conduct feasibility studies and impact assessments to inform urban planning decisions.
- Supervise and manage urban planning projects for the development of Tehran's District 5.
- Propose urban planning guidelines and action plans for District 5 Master Plan.
- Analyze spatial data and adjust zoning regulations to optimize the District 5 Master Plan.

2- Urban Planner (Part-time)   **Apr. 2013 - Mar. 2016**
Part Consulting Architects, Planners and Engineers, Tehran, Iran.

The following were my responsibilities:

- Assist in the preparation of Tehran's District 11 Master Plan.
- Conduct site analysis for regeneration projects in Tehran's District 11.
- Carry out field investigations, surveys, and impact assessment studies to inform urban planning decisions.
- Analyze and visualize spatial and demographic data to support planning decisions.

Record of Service Activities

1- Editorial and Review Activities

- Special Issue Guest Editor, Special Issue Title: " The Energy and Environmental Implications of Smart Cities," MDPI Journal of Energies.
- Editorial Board Member, Elsevier Journal of *Social Sciences & Humanities Open.*
- Reviewer, MDPI Journals of *Sustainability, Systems, Buildings, Forests, and Land*.
- Reviewer, Elsevier Journals of *Sustainable Cities and Society, Environmental Impact Assessment Review, and Energy and Buildings.*
- Reviewer, Frontiers Journal of *Frontiers in Sustainable Cities*.
- Reviewer, Taylor & Francis Journal of Geo-Spatial Information Science
- Reviewer, Springer Nature Journal of *Clean Technologies and Environmental Policy*.
- Reviewer, SAGE Journal of *Urban Affairs Review*.
- Reviewer, Greenbuild International Conference and Expo, 2024, Philadelphia, PA, USA.

2- Professional Memberships

- U.S Green Building Council (USGBC)
- American Planning Association (APA)
- Association for Public Policy Analysis & Management (APPAM)
- International City/County Management Association (ICMA)
- Citizens' Climate Lobby (CCL)
- Congress for the New Urbanism (CNU)
- The American Association for Science and Technology (AASCIT).

Selected Certifications

- LEED Green Associate, Green Business Certification Inc. (GBCI), Credential ID: 11526606-GREEN-ASSOCIATE, Since April, 2023.
- International Winter School on Energy Systems, Resilience and Climate Change, Sharif University of Technology, Credential ID: AT-00-ME-19571, February, 2021.
- Advanced Course in Smart and Sustainable Low Energy Buildings, Stockholm School of Energy, 7.5 Credits Course, Credential ID: SSE-ASE20211006, Oct. 2020 -January, 2021.

References

Dr. John Byrne, Distinguished Professor

1. Center for Energy and Environmental Policy, University of Delaware, Newark, DE, USA.
2. Foundation for Renewable Energy and Environment, New York City, NY, USA.

Email: jbnov@yahoo.com

Dr. Job Taminiau, Research Director

Foundation for Renewable Energy and Environment, New York City, NY, USA.

Email: jt@freefutures.org

Dr. Ayyoob Sharifi, Professor

Graduate School of Humanities and Social Sciences, and Network for Education and Research on Peace and Sustainability, Hiroshima University, Higashi-Hiroshima, Japan.

Email: sharifi@hiroshima-u.ac.jp

Dr. Farshad Nourian, Associate Professor[1] and Visiting Scholar[2]

1. School of Urban Planning, College of Fine Arts, University of Tehran, Tehran, Iran.
2. School of Architecture, Design and Planning, University of Sydney, Sydney, Australia.
Email: fnoorian@ut.ac.ir