Curriculum Vitae

SAEED ESFANDI

Ph.D., LEED Green Associate, Research Fellow

Sustainable Urban, Energy and Environmental Planner

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

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Education

Ph.D. Fellow, 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 Development Engineering **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

- Energy and climate justice
- Smart cities
- 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

Tayebi, S., Ali Alavi, S., **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., Ali Alavi, S., 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. (In Persian)

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. (In Persian)

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. (In Persian)

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. (In Persian)

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. (In Persian)

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. (In Persian)

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. (In Persian)

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

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. (In Persian)

Honors and Awards

- Awarded a 4-year Fellowship by 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 (DOI) 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

Researcher (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 city, smart city, 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.

Independent Researcher **2018 - Present**

- Participate in multi-disciplinary, international research projects on energy-resilient, energy-efficient, and low-emission buildings, neighborhoods, and cities.

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.

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

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

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

The following were my responsibilities:

- Instructed a 5-credit course, “urban planning studio 1,” for undergraduate students.
- Provided guidance and support to students in the preparation and presentation of their final projects.

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

Iranian Architecture Center, Tehran, Iran.

The following were my responsibilities:

- Instructed 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.
- Prepared course materials and mock test to enhance students' preparedness for the exams.

Professional Experience

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:

- Conducted feasibility studies and impact assessments to inform urban planning decisions.
- Supervised and managed urban planning projects for the development of Tehran's District 5.
- Proposed urban planning guidelines and action plans for District 5 Master Plan.
- Analyzed spatial data and adjusted zoning regulations to optimize District 5 Master Plan.

Urban Planner (Part-time) **Apr. 2013 - Mar. 2016**

Part Consulting Architects, Planners and Engineers, Tehran, Iran.

The following were my responsibilities:

- Assisted in the preparation of Tehran's District 11 Master Plan.
- Conducted site analysis for regeneration projects in Tehran's District 11.
- Carried out field investigations, surveys, and impact assessment studies to inform urban planning decisions.
- Analyzed and visualized spatial and demographic data to support planning decisions.

Editorial and Review Activities

- Special Issue Guest Editor, Special Issue Title: " The Energy and Environmental Implications of Smart Cities," MDPI Journal of Energies.
- Reviewer, MDPI Journals of Sustainability, Systems, Buildings, and Land.
- Reviewer, Elsevier Journal of Sustainable Cities and Society.
- Reviewer, Frontiers Journal of Frontiers in Sustainable Cities.
- Reviewer, Springer Journal of Clean Technologies and Environmental Policy.
- Reviewer, SAGE Journal of Urban Affairs Review.

Technical Skills

GIS and Spatial Analysis

- ArcGIS ★★★★☆
- ArcGIS Pro ★★★☆☆

Data analysis and visualization

- SPSS ★★★★☆
- Microsoft Excell ★★★☆☆
- KNIME ★★★☆☆

3D Modeling and Design

- SketchUp ★★★☆☆
- CityEngine ★★★☆☆

Programming Languages

- Python ★★☆☆☆
- R ★☆☆☆☆

Other skills and techniques:

- Adobe Creative Suite (InDesign)
- Multi-Criteria Decision-Making (MCDM) methods
- Quantitative and qualitative data analysis methods

Selected Courses and Certifications

- Inflation Reduction Act & Housing - Benefits & Concerns, USGBC, Jun. 2023
- Prioritizing Nature for Equity and Resilience, USGBC, May. 2023
- GBES Sustainability Challenge Spring 2023, Green Building Education Services, Apr. 2023.
- Renewable Energy and Green Building Entrepreneurship, Coursera, Jul. 2021.
- Incorporating Renewable Energy in Electricity Grids, Edx, Jul. 2021.
- Smart grid, Microgrid and Energy Storage, Udemy, Jun. 2021.
- Nature-based Solutions for Disaster and Climate Resilience, SDG Academy, Jun. 2021.
- Solar Energy Design (With SketchUp & PVSYST), Udemy, Jun. 2021.

- Shared Experiences in Advancing Inclusive and Equitable Climate Adaptation, APA, Jun. 2021.
- Passive Urban Cooling Solutions, World Bank Group, Apr. 2021.
- International Winter School on Energy Systems, Resilience and Climate Change, Sharif University of Technology, Credential ID: AT-00-ME-19571, Feb. 2021.
- Advanced Course in Smart and Sustainable Low Energy Buildings, Stockholm School of Energy, 7.5 Credits Course, Credential ID: SSE-ASE20211006, Oct. 2020 -Jan. 2021.
- Climate Change and Health, World Bank Group, Jan. 2021.
- Economics of Climate-Resilient Development, World Bank Group, Jan. 2021.

Professional Memberships

- LEED Green Associate, Green Business Certification Inc. (GBCI), Credential ID: 11526606-GREEN-ASSOCIATE
- Foundation for Renewable Energy and Environment (FREE).
- American Planning Association (APA), ID: 287303.
- Association for Public Policy Analysis & Management (APPAM).
- Resilient Cities Network.
- Congress for the New Urbanism (CNU).
- Asian Cities Climate Change Resilience Network (ACCCRN).
- The American Association for Science and Technology (AASCIT).
- Universal Researchers in Civil and Architecture Engineering (URCAE).
- Global Association for Humanities and Social Science Research (GAHSSR).

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.

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Dr. Job Taminiau, Research Director

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

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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.

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