Dr. Onur Tümtürk

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EDUCATION:

PhD.	The University of Melbourne, Victoria, Australia Faculty of Architecture, Building and Planning, 2019-2024 Ph.D. in Architecture, Building and Planning Thesis Title: A Data-driven Investigation on Urban Form Evolution: Methodological and Empirical Support for Unravelling the Relation between Urban Form and Spatial Dynamics Thesis committee: Prof Anna Vernez Moudon (University of Washington) Prof Brent D. Ryan (Massachusetts Institute of Technology) Prof Christiane Herr (SUSTech) Prof Alan March (UniMelb), Dr Elek Pafka (UniMelb), Prof Justyna Karakiewicz (Supervisor, UniMelb), Dr Fjalar de Haan (Co-supervisor, UniMelb)
	The University of Melbourne, Victoria, Australia Melbourne Centre for Data Science Doctoral Academy Fellow, 2022-2023
Masters	Middle East Technical University (METU), Ankara, Turkey Graduate School of Natural and Applied Sciences, 2015 – 2018 (GPA: 4,00/4.00) M.Sc. in Urban Design Thesis Title: Designing (with) Complexity: Improving Adaptive Capacity of Urban Form by Design
Bachelors	Middle East Technical University (METU), Ankara, Turkey Faculty of Architecture, Department of City and Regional Planning, 2011 – 2015 B.C.P in City and Regional Planning, *(GPA: 3,69/4.00 – Ranked 1st)*
Minor-Degree	Middle East Technical University (METU), Ankara, Turkey Faculty of Engineering, Department of Geological Engineering, 2012 – 2015 Minor in Geographic Information Systems and Remote Sensing
Erasmus/Exchange	The University of Manchester, Manchester, United Kingdom School of Environment, Education and Development, 2014 B.A. in Planning and Environmental Management

EMPLOYMENT:

Assistant Professor	Urban Design and Landscape Architecture Bilkent University, Ankara, Turkey 2024 – *ongoing*
Postdoctoral Researcher *Fulbright PF*	MIT Senseable City Lab Massachusetts Institute of Technology, Boston, MA 2025-2026
Instructor	Melbourne School of Design, Faculty of Architecture Building and Planning The University of Melbourne, Victoria, Australia 2020 – 2024
Research Assistant	Walkability Transitions – Volvo Research and Educational Foundations (VREF) Project The University of Melbourne, Victoria, Australia (Project Coordinator: Dr. Derlie Mateo-Babiano) September 2023 – December 2023
Research & Teaching Assistant	Department of City and Regional Planning, Faculty of Architecture, Middle East Technical University, Ankara, Turkey 2015 – 2019

RESEARCH FOCUS: urban morphology, morphometrics, machine learning, urban design, data science, spatial analytics, social-ecological resilience

PUBLICATIONS:

Peer-reviewed journal articles:

Tümtürk, O., Efeoglu, H.E., Akay, M. and Caliskan, O. (2026). Building age diversity and retail patterns: A morphometric exploration of Jacobs' neglected condition through the Temporal Fingerprint Matrix. Urban Studies, 0(0). https://doi.org/10.1177/00420980261462840

Tümtürk, O., Karakiewicz, J., Asensio, V.L., Mah, D. (2025). The grounded projection: A reflective examination of urban design pedagogy at Melbourne School of Design. *Journal of Design for Resilience in Architecture & Planning*, 6, 97-132. https://doi.org/10.47818/DRArch.2025.v6si197

Tümtürk, O. (2025). Multiple pathways to urban density: A comparative diachronic analysis of building type transitions across three city centers. *Cities*, 167, 106308. https://doi.org/10.1016/j.cities.2025.106308

Tümtürk, O. (2025), In pursuit of Whitehand's neighbour effect: Uncovering the hidden principles of plot configuration and urban morphogenesis. *Urban Morphology*, 29(1): 23-43. https://doi.org/10.51347/UM29.0002

Tümtürk, O., Karakiewicz, J., & De Haan, F. J. (2024). Measuring the impact of plot types on physical change: A diachronic analysis of urban form evolution in New York, Melbourne and Barcelona. *Cities*, 154, 105380. https://doi.org/10.1016/j.cities.2024.105380

Tümtürk, O., Karakiewicz, J., & De Haan, F. J. (2024). The impact of urban form on physical change: A quantitative and diachronic analysis of urban form evolution in Midtown Manhattan. *Environment and Planning B: Urban Analytics and City Science*, 1–20. https://doi.org/10.1177/23998083241272096

Çalışkan O, **Tümtürk, O**. and Yavuz, I. (2020), Imagineering: a model approach for futuristic design thinking in urbanism. *Urban Design and Planning*, 173(1): 16-33. https://doi.org/10.1680/jurdp.18.00058

Çalışkan, O., Cihanger Ribeiro, D. & **Tümtürk, O**. (2020), Designing the heterotopia: from social ideology to spatial morphology. *Urban Design International,* 25**,** 30–52. https://doi.org/10.1057/s41289-019-00101-w

Book chapters:

Tümtürk, O. (2025), The Impact of Plot Configuration on the Patterns of Spatial Change: A Diachronic Approach to the Urban Redevelopment Processes in New York, Melbourne and Barcelona, In: *Anna Agate Kantarek et al. (eds.), Urban Morphology versus Redevelopment and Revitalisation,* Springer. https://doi.org/10.1007/978-3-031-77752-3_14

Tümtürk, O., (2022), Uyumlanabilir Olanı Tasarlamak, in Mekan ve İnsana Dair (ed. Melis Oğuz), ISBN: 978-605-73315-8-8, İdeal Kent, Ankara, 2022.

Tümtürk, O., (2016), *Envisioning the City: Design Explorations of the Future Urban Forms and Spaces*, at Catalogue.01 METU Master of Urban Design (ed. Olgu Çalışkan), ISBN: 978-975-429-359-3, Pelin Offset: Ankara, 2016, pp. 185-191.

Tümtürk, O., Efeoglu, H.E., Şevik, E., (2016), *Mars City Design: International Design Competition*, at Catalogue.01 METU Master of Urban Design (ed. Olgu Çalışkan), ISBN: 978-975-429-359-3, Pelin Offset: Ankara, 2016, pp. 193-197.

Published Open-access Datasets:

Tümtürk, O. (2023) Longitudinal urban form dataset of Midtown Manhattan: measuring urban form evolution via quantitative descriptions of plots, buildings and streets from 1890 to the present (v1.0) [Dataset] Zenodo. https://zenodo.org/doi/10.5281/zenodo.10072243

Book review:

Tümtürk, O. (2021). The Cities, Security and Poverty: The 2013 Meeting of the World Society for Ekistics, Ankara, Turkey. Ekistics and The New Habitat, 80(1), 94–95. https://doi.org/10.53910/26531313-E2020801461

International proceedings & conference presentations:

Tümtürk, O., Araldi, A. (2026). Mapping form-streetscape relationship: A morphometric analysis of the center-periphery divergence in Ankara, Turkey. Paper presented at AAG2026 Conference, San Francisco, United States, 17-21 March 2026.

Tümtürk, O., Efeoglu, E., Akay, M., Caliskan, O. (2025). Old buildings, new opportunities: Exploring the relationship between building age diversity and retail patterns across Amsterdam, Rotterdam and The Hague. Paper presented at ISUF2025 Conference, Turin, Italy, 17-20 June 2025.

Tümtürk, O. (2025). The neighbour effect and morphological preconditions of urban adaptability: Empirical insights from diachronic analysis of plot patterns across three planned cities. Paper presented at DOKORP2025 Conference, TU Dortmund, Germany, 10-12 February 2025.

Tümtürk, O. (2022), The Impact of Plot Configuration on the Patterns of Spatial Change: A Diachronic Approach to the Urban (Re)Development Processes in New York, Melbourne and Barcelona. *ISUF Annual Conference 2022: Urban Redevelopment and Revitalisation: A Multidisciplinary Perspective*. Lodz-Krakow, Poland, 2022.

Tümtürk, O., Yousefnia, A.R. (2022), Historical and Morphological (Trans)formation of Laneways in Melbourne and Brisbane: The Encounter of Emergence with Design. Paper presented at *SAHANZ2022, A Joint Conference of Sahanz and The Australasian UHPH Group.* University of Auckland, Auckland, New Zealand.

Tümtürk, O., Karakiewicz, J. & De Haan, F. (2021), Adaptability of Urban Grids: Patterns of Morphological Change and Persistence in Midtown Manhattan, 1884-2011. In: Feliciotti, Alessandra and Fleischmann, Martin, eds. (2022) *ISUF Annual Conference Proceedings of the XXVIII International Seminar on Urban Form: "Urban Form and the Sustainable and Prosperous City".* University of Strathclyde Publishing, Glasgow. ISBN: 9781914241161. DOI: 10.17868/80146.

Tümtürk, O., (2017), Designing with the Uncertainty: Revisiting the Form-Behaviour Approach in the Context of Complexity. Paper presented at *AESOP 2017 (Annual Congress of Association of European Schools of Planning): Spaces of Dialog for Places of Dignity*. Lisbon, Portugal.

Yavuz, I., **Tümtürk, O.,** (2017), Envisioning Future Forms of Urban Spaces Through Speculative Design Explorations: An Urban Design Studio Experience. Paper presented at *DAKAM - II. International Interdisciplinary Conference on Future and Foresight Studies' 17.* Istanbul, Turkey.

Caliskan, O., Cihanger, D., **Tümtürk, O.,** (2017), Designing the Heterotopia. Paper presented at *Rowe Rome 2017 (ColinRoweConference2017): Cities of Good Intentions.* Rome, Italy.

Tümtürk, O., (2016), Collective Form and Space: A Comparative Case of Bahçelievler and German Siedlungen. Paper presented at *International Symposium on Urban Design-Designing Urban Design: Towards a Holistic Perspective (METUDSYMP2016)*, Ankara, Turkey.

National proceedings & conference presentations:

Tümtürk, O., Efeoglu, E., Akay, M., Caliskan, O. (2025). Eski binalar, yeni fırsatlar: Bina yaş çeşitliliği ve ticari kullanım örüntülerinin morfolojik bir incelemesi. TNUM2025, Karadeniz Teknik Üniversitesi, 12-14 Mayıs 2025.

Tümtürk, O., (2019), Designing the Adaptable: An urban design approach responsive to physical and functional change. Paper presented at *27th Urban Design Symposium in Mimar Sinan Fine Arts University (in-Turkish)*, Istanbul, Turkey.

Caliskan, O., **Tümtürk, O.** & Yavuz, I. (2019), Imagineering: A cognitive method proposal for futuristic urbanism. Paper presented at *27th Urban Design Symposium in Mimar Sinan Fine Arts University (in-Turkish),* Istanbul, Turkey.

Tümtürk, O., (2016), Thinking with Hand: Visual Thinking as a Creative and Intellectual Design Methodology, Paper presented at *8th Urbanism Congress of UCTEA Chamber of City Planners (In-Turkish),* Ankara, Turkey.

Çalışkan, O., Cihanger, D., **Tümtürk, O.,** (2016), Designing the Heterotopia: A Pluralist Urban Design Experience from Social Ideology to the Spatial Fiction, Paper presented at *8th Urbanism Congress of UCTEA Chamber of City Planners (In-Turkish),* Ankara, Turkey.

RESEARCH GRANTS:

Fulbright Postdoctoral Research Grant, Fulbright Commission (2025).
Massachusetts Institute of Technology (MIT), Senseable City Laboratory
Fellowship awarded for 9-months research at US research institutions for the 2025-2026 academic year.
Project**:** Cooler Together: How Urban Form and Public Green Spaces Collectively Shape Heat Stress Levels in Ankara, Turkey *(Amount: $48,000.00)*
Supervisor: Prof. Carlo Ratti

Horizon WIDERA Postdoctoral Research Grant, European Commission Horizon Europe (2025)
A seal of excellence and grant awarded for 24-months research at Bilkent University's Department of Urban Design and Landscape Architecture, from June-2026 to June-2028
Project: MorphoPOS–Understanding the Morphology of Public Open Space Accessibility: Towards an integrative framework for objective measures and user perceptions *(Amount: €149,365.20)*

Early Career Development Grant and Seed Funding Grant, The University of Melbourne (2024).
Project: Developing urban design typologies for open space networks in Melbourne's suburbs.
Project team: Dr. David Mah, Dr. Leire Asensio-Villoria, Dr. Onur Tümtürk *(Amount: 20,000.00 AUD)*

AWARDS & HONORS:

Melbourne Centre for Data Science Doctoral Academy Fellowship
School of Computing and Information Systems, The University of Melbourne, Australia (2022-2023).

Bharat Dave Scholarship: Research Prize for Novel Approaches in Design Research and Learning
Faculty of Architecture, Building and Planning, The University of Melbourne, Australia (2023).

Dean's Prize for Published Postgraduate Research: Excellence in Peer-reviewed Publication by Sole Author
Faculty of Architecture, Building and Planning, The University of Melbourne, Australia (2023).

Melbourne Research Scholarship: PhD. Scholarship (2019-2023)

The University of Melbourne, Faculty of Architecture, Building and Planning, Australia (2018).

Course Performance Award in Master of Urban Design (CGPA: 4,00/4,00)
METU Graduate School of Natural and Applied Sciences, Turkey (2017).

1st Ranked Student Graduation Award
METU Department of City and Regional Planning, Turkey (2015).

1st Prize: National Graduation Project Competition of UCTEA Chamber of City Planners, Turkey (2015).

Semi-Final Prize: Mars City Design-International Design Competition, USA (2016).
Design Team: Olgu Çalışkan (supervisor), Eren Efeoglu, Ebru Şevik, Irmak Yavuz, Mert Can Yilmaz, Onur Tümtürk, Serdar Özbay, Y. Baver Barut.

TEACHING EXPERIENCE:

Assistant Professor

Bilkent University, Department of Urban Design and Landscape Architecture (2024 – *ongoing*)
Urban Design and Landscape Architecture Studio, *(studio coordinator),* 2024.

Melbourne School of Design, The University of Melbourne (2020-2024)

Studio Coordinator

Master of Urban Design Studio C, 21st Century Grid City Layouts: Speculative Thinking in Short-term World, Designing in the Slow Lane *(with Prof. Justyna Karakiewicz),* 2023.

Master of Urban Design Studio B, Live Locally, Neighborhoods (can) Survive and Thrive in the Pandemic, *(with Marjan Hajjari)*, 2021.

Master of Architecture Studio, Future Cities: from Vertical (2.5D) to Volumetric (4D) *(with Prof. Justyna Karakiewicz)*, 2020.

Studio Instructor

Master of Urban Design Studio A, Future of Streets: Melbourne *(with Leire Asensio Villoria & Dan Hill),* 2023.

Master of Urban Design Studio A+B, *(with Leire Asensio Villoria),* 2021-2023.

Master of Architecture Studio, Hope in Perturbanism: Great Ocean [Road?], *(with Prof. Justyna Karakiewicz)*, 2021.

Cluster Leader

Architectural Design Studio BETA, *(Studio coordinators: Leire Asensio Villoria, David Mah),* 2024.

Tutor

Urban Morphological Mapping, *(with Dr. Elek Pafka),* 2023-2024.

Urban Design for People and Places *(with Dr. Derlie Mateo-Babiano),* 2023.

Architectural Design Studio BETA, *(Studio coordinators: Leire Asensio Villoria, David Mah),* 2021-2023.

Department of City and Regional Planning, METU (2015-2019)

Teaching Assistant

CRP 401 & 402 Urban Planning and Design Studio VII-VIII, 2018 – 2019.

CRP 214 Introduction to Planning: Creative Thinking for Planners *(with Dr. Olgu Caliskan)*, 2015 – 2019.

CRP 135 Graphic Communication for Planners *(with Dr. Yucel Can Severcan)*, 2017-2019.

CRP 101-102 City and Regional Planning Studio I-II, 2015 – 2018.

INVITED TALKS & ENGAGEMENTS:

TU Delft, Lorentz Center Workshops, Invited workshop attendee as an ECR, April 2025
Tracing Sustainable Urban River Space Transformations (Lorentz Workshops are scientific meetings for small groups of 25 senior and junior scientists, stimulating a week long intensive discussions and collaborations)

UCL Bartlett School of Architecture, SSL Seminars, Invited talk, October 2024
Urban form and change: Insights on urban form evolution through configurational morphometrics

TED University, Guest lecturing at Master of Urban Design Studio, October 2024
Urban Design Down Under: Lessons from Melbourne School of Design Studios

Turkish Network of Urban Morphology (TNUM), Invited talk, November 2024
How does urban form shape spatial change and persistence?: A Diachronic, data-driven and comparative investigation on New York, Melbourne and Barcelona

The University of Melbourne, Guest lecturing at Urban Morphological Mapping course at Melbourne School of Design, May 2024
Introduction to quantitative typo-morphology and methods for describing and classifying urban form

EXHIBITIONS:

Curation/Coordination	Jansen ve Ankara: Harita, Plan ve Eskizlerle Başkentin Tasarım Öyküsü *(Jansen and Ankara: Design Story of the Capital with Maps, Plans and Sketches)*, Exhibition Curation and Coordination as part of International Symposium of Jansen and Ankara, Çankaya Municipality Contemporary Arts Center, Ankara, Turkey, 2018.
Designer	Gelecek/Zukunft Ankara *(Future Ankara)*, HyperCity 3D Installation, Goethe Institute Ankara, Turkey, 2017. (Curation/Coordination: Olgu Çalışkan, Duygu Cihanger)

WORKSHOPS:

Workshop Coordinator	Exploring 'What If?' Urban Futures through AI-Assisted Imagination: A Design Thinking Workshop" for Department of Landscape Architecture and Urban Design students, LAUD, Bilkent University, 2024.
Workshop Coordinator	Weaving the City: Can Abstract Art be Used in Urban Design?, Workshop organised for the 6th Summer Training Camp of Planning Students at Izmir *(with Olgu Caliskan, Oruc Cakmakli and Duygu Cihanger),* Turkey, 2017.
Workshop Coordinator	Designing the Heterotopia, Workshop organised for the 5th Summer Training Camp of Planning Students at Muğla *(with Olgu Çalışkan and Duygu Cihanger),* Turkey, 2016.
Workshop Coordinator	Master Class with Tony Hall, Controlling Design, Design Control and Guidance: Towards Generative Communication Between Architects and Planners, Workshop organised as part of the International Symposium on Urban Design *(with Tony Hall, Olgu Çalışkan, Didem Dizdaroglu, Ensar Temizel, Eren Efeoglu, Irmak Yavuz and Neris Parlak)*, METU, Turkey, 2016.

MEMBERSHIPS/ ORGANISATIONS:

Research Group	Melbourne Centre for Data Science, KERNEL Data Bites: EMCR Data Science Research Group, University of Melbourne, Australia, 2023-*ongoing.*
Research Group	Turkish Network of Urban Morphology (TNUM), Local Morphology Research Group of ISUF in Turkey, 2024 –*ongoing.*
Research Committee	MSD Research Students Association, University of Melbourne, Victoria, Australia, 2020-2022.
Organization Committee	International Symposium of Jansen and Ankara, Ankara, Turkey, 2018.
Organization Committee	International Symposium on Urban Design-Designing Urban Design: Towards a Holistic Perspective (METUDSYMP2016), Ankara, Turkey, 2016.
Member	UCTEA Chamber of City Planners, Ankara, Turkey.

TECHNICAL PROFICIENCIES:

Programming, data analysis and visualization *Python, R/R studio*	Spatial analysis, mapping and cartography *QGIS, ArcGIS*
Parametric design and modelling *Rhino, Grasshopper*	Visualization, illustration and graphic design *Adobe Suite (Photoshop, Illustrator, InDesign)*

CERTIFICATES: Melbourne Teaching Certificate in Higher Education, The University of Melbourne, 2023.

LANGUAGES: Turkish (Native)
English (Fluent)