

# Martin Fleischmann

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## EDUCATION

- Ph.D.     Architecture, University of Strathclyde, Glasgow, 2021  
            *The Urban Atlas: Methodological Foundation of a Morphometric Taxonomy of Urban Form*
- MSc.     Urban Design, University of Strathclyde, Glasgow, 2017  
            *Measuring Urban Form: A Systematisation of Attributes for Quantitative Urban Morphology*
- BSc.     Architecture and Urbanism, Czech Technical University, Prague, 2015

## ACADEMIC APPOINTMENTS

- 2020–     University of Liverpool  
            Postdoctoral Researcher, Department of Geography and Planning  
            *"Learning an urban grammar from satellite data through AI."*  
            Economic and Social Research Council & Alan Turing Institute

## PUBLICATIONS

### Journal Articles

- 2021     Fleischmann, M., Feliciotti, A. and Kerr, W. 'Evolution of urban patterns: urban morphology as an open reproducible data science.' *Geographical Analysis*. doi:10.1111/gean.12302
- 2020     Dal Cin, F., Fleischmann, M., Romice, O. and Costa, J.P. 'Climate Adaptation Plans in the Context of Coastal Settlements: The Case of Portugal.' *Sustainability* 12 (20). doi:10.3390/sui2208559
- 2020     Fleischmann, M., Romice, O. and Porta, S. 'Measuring urban form: overcoming terminological inconsistencies for a quantitative and comprehensive morphologic analysis of cities.' *Environment and Planning B: Urban Analytics and City Science* published online ahead of print. doi:10.1177/2399808320910444
- 2020     Fleischmann, M., Feliciotti, A., Romice, O. and Porta, S. 'Morphological tessellation as a way of partitioning space: Improving consistency in urban morphology at the plot scale' *Computers, Environment and Urban Systems* 80, 101441. doi:10.1016/j.compenvurbsys.2019.101441
- 2019     Fleischmann, M. 'momepy: Urban Morphology Measuring Toolkit' *Journal of Open Source Software* 4 (43), 1807. doi:10.21105/joss.01807

### Manuscripts under Review

- 2021     Fleischmann, M., Feliciotti, A., Romice, O. and Porta, S. 'Methodological Foundation of a Numerical Taxonomy of Urban Form.' Under review.

- 2021 Arribas-Bel, D. and Fleischmann, M. ‘Spatial Signatures: Understanding (urban) spaces through form and function’ Under review.

## RESEARCH SOFTWARE DEVELOPMENT

- 2018– momepy: Urban Morphology Measuring Toolkit (author and maintainer)  
 2019– GeoPandas: an open source project to make working with geospatial data in python easier (core developer)  
 2020– PySAL: Python Spatial Analysis Library (core developer)  
 2020– clustergram: visualization and diagnostics for cluster analysis (author and maintainer)  
 2021– xyzservices: source of XYZ tiles providers. (author and maintainer)

## EDITORIAL APPOINTMENTS

- 2021– Journal of Open Source Software  
 Topic Editor

## RESEARCH INCOME

### Awards

- 2020 *NumFOCUS* - enquoteImprovement and modernization of GeoPandas documentation, \$5,000

## INVITED TALKS

- 2021 ‘Spatial Signatures: Dynamic classification of the built environment.’ Spatial Analytics and Data seminar series by University of Newcastle and University of Bristol. Online. Mar 30.  
 2020 ‘Reading cities as numbers. Where data science meets urbanism.’ Academy of Urbanism (Scotland). Online. Dec 3.

## CONFERENCE ACTIVITY

### Conferences Organized

- 2021 ‘XXVIII International Seminar on Urban Form’ Urban Form and the Sustainable Prosperous City. Glasgow (virtually), UK. Jun 29 – Jul 3.

### Conference Papers Presented

Presenting author *italicized* if other than first author.

- 2021 Fleischmann, M. and Arribas-Bel, D. ‘Classifying urban form at a national scale: The case of Great Britain’ XXVIII International Seminar on Urban Form: Urban Form and the Sustainable Prosperous City. Glasgow/Virtual. Jun 29 – Jul 3.

- 2021 Venerandi, A., Feliciotti, A., Fleischmann, M., Kourtit, K., Romice, O., Nijkamp, P., Porta, S. and Fusco, G. 'Urban form and Airbnb: a study of their spatial relation in Amsterdam (NL)' XXVIII International Seminar on Urban Form: Urban Form and the Sustainable Prosperous City. Glasgow/Virtual. Jun 29 – Jul 3.
- 2021 Porta, S., Venerandi, A., Feliciotti, A., Fleischmann, M. and Romice, O. 'A Numerical Taxonomy of Urban Form in London: an Urban Morphometric Approach' XXVIII International Seminar on Urban Form: Urban Form and the Sustainable Prosperous City. Glasgow/Virtual. Jun 29 – Jul 3.
- 2021 Wang, J., Fleischmann, M., Venerandi, A., Kuffer, M. and Porta, S. 'Earth Observation + Morphometrics: towards a systematic understanding of cities in challenging contexts' XXVIII International Seminar on Urban Form: Urban Form and the Sustainable Prosperous City. Glasgow/Virtual. Jun 29 – Jul 3.
- 2020 Fleischmann, M. 'On the morphological composition of cities and how to measure it.' GeoPython. Virtual. Sep 21–22.
- 2020 Fleischmann, M., Romice, O. and Porta, S. 'The Urban Atlas: Towards a Morphometric Taxonomy of Urban Form' XXVII International Seminar on Urban Form: Cities in the 21st Century. Salt Lake City/Virtual. Sep 1–4.
- 2020 Hořák, D., Fleischmann, M., Romice, O. and Porta, S. 'Just like a bird. A community ecology perspective on urban form evolution' XXVII International Seminar on Urban Form: Cities in the 21st Century. Salt Lake City/Virtual. Sep 1–4.
- 2020 Feliciotti, A., Fleischmann, M., Romice, O., Kerr, W. and Porta, S. 'Morphological Resilience Evaluation (MoRE): a new assessment framework for multi-level assessment of urban form resilience' XXVII International Seminar on Urban Form: Cities in the 21st Century. Salt Lake City/Virtual. Sep 1–4.
- 2020 Dal Cin, F., Fleischmann, M., Romice, O. and Costa, J.P. 'DECODING SEASHORE STREETS: urban morphometrics as a tool for adaptation measures' XXVII International Seminar on Urban Form: Cities in the 21st Century. Salt Lake City/Virtual. Sep 1–4.
- 2020 Fleischmann, M., Dal Cin, F., Romice, O. and Barreiros Proença, S. 'Understanding seashore streets: urban morphometrics as a tool for climate-induced risk assessment' ISUF Italy International Conference: Urban Substrata and City Regeneration. Rome Feb 19–22.
- 2019 Feliciotti, A., Fleischmann, M., Romice, O., and Porta, S. 'Morphological Resilience: from a theory of resilient urban forms to the tools for its implementation' 12th CITTA International Conference on Planning Research: Spatial Planning for Change. Porto. Sep 19–20.
- 2019 Fleischmann, M., Romice, O. and Porta, S. 'Applicability of morphological tessellation and its topological derivatives in the quantitative analysis of urban form' XXVI International Seminar on Urban Form: Cities as Assemblages. Nicosia. Jul 2–6.
- 2019 Fleischmann, M., Hořák, D., Porta, S. et al. 'Ecological and evolutionary perspectives in urban morphology' Ecology and Evolution of Urban Areas, CEE Symposium. London. Jun 13.

## SERVICE

### Academic Journal Peer Review

*Environment and Planning B: Urban Analytics and City Science*

*Geographical Analysis*  
*Journal of Open Source Software*  
*Journal of Statistical Software*  
*Nature Machine Intelligence*  
*Plos ONE*  
*Urban Morphology*

#### **Academic Press Peer Review**

*CRC Press*

#### **Other Peer Review**

*pyOpenSci*  
*FA CTU Doctoral proposals*

#### **Other**

- 2021            Mentor, Google Summer of Code. Project: *Geopandas - Dask bridge to scale geospatial analysis*,  
Student: Thomas Statham (University of Bristol)
- 2019            External reviewer, FA CTU Doctoral workshop

#### **CONSULTING**

- 2021            All-Party Parliamentary Group for 'left behind' neighbourhoods, UK
- 2019–20        Institute for Planning and Development, Prague, Czechia
- 2020            Places Platform, US

#### **MEMBERSHIPS**

- 2021–            Royal Geographical Society (Fellow)
- 2019–            International Seminar on Urban Form (Member)
- 2018–            Academy of Urbanism (Young Urbanist)

Updated September 2021