

Daniel Mateo Neira

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INTERESTS

Mateo is a second year PhD student at UCL through the Alan Turing Institute Doctoral Programme. He is interested in modelling, understanding, and predicting innovation, economic growth, and social resilience in urban systems. His research seeks to deepen the quantitative understanding of human behaviour within cities and the coupling and interactions between social, economic, and spatial systems. Particularly, he aims to understand the impact of infrastructural networks on different urban process and dynamics at inter and intra urban systems through a multiplex network framework and stochastic modelling.

EDUCATION

- PhD. Urban modelling and complexity, University College London, (supervised by Dr Elsa Arcaute) 2018-Present
- MSc. Smart Cities and Urban Analytics, University College London, 2017 (Distinction)
- BSc. Architecture and Urbanism, Universidad de Cuenca, 2015

PUBLICATIONS

- 2019 Law, Stephen, and Mateo Neira. “An unsupervised approach to geographical knowledge discovery using street level and street network images.” *Proceedings of the 3rd ACM SIGSPATIAL International Workshop on AI for Geographic Knowledge Discovery*. 2019.
- 2017 Hermida, M.A. Neira, M. Cabrera-Jara, N. Osorio, P. “Resilience in Latin American cities: behaviour vs. space quality in the riverbanks of the Tomebamba River.” *Procedia Engineering*. Vol 198, p.467-481.
<https://doi.org/10.12972/susb.20170012>
- 2016 Osorio, P. Neira, M. Hermida, M.A. “Historic relationship between urban dwellers and the Tomebamba River.” *International Journal of Sustainable Building Technology and Urban Development*, Vol. 8. No. 2, 144-152/
- 2016 Orellana, D. Neira, M. Guerrero, M.L. Samaniego P. Hermida, M.A. “New geotools for urban studies.” *Proceedings of SBE16 Sustainable Urban Communities towards a Nearly Zero Impact Built Environment*, Victória, Brasil. Vol 2. P.857-866. ISBN 978-85-92631-00-0.

RESEARCH EXPERIENCE

- 2018-Pr Doctoral Researcher
Alan Turing Institute
- 2015–16 Research Assistant
llactaLab - Sustainable Cities Research Group, Universidad de Cuenca
Principal Investigator: Daniel Orellana and Maria Augusta Hermida
- 2011–13 Research Assistant
Faculty of Architecture and Urbanism, Universidad de Cuenca
Principal Investigator: Boris Orellana

TEACHING EXPERIENCE

- 2017 Teaching Assistant
Tutorial: Road networks and scaling laws
Oxford Summer School in Economic Networks
- 2011 Teaching Assistant (Spring 2011, Summer 2011)
Mathematics II
Architecture, University of Cuenca, Ecuador.

HONOURS AND AWARDS

- 2018 PhD Full Scholarship by the Alan Turing Doctoral Programme.

PROFESSIONAL EXPERIENCE

- 2017-Pr Foster + Partners
Urban Designer & Spatial Data Scientist
London, United Kingdom
- 2017 Signalbox
Spatial Data Researcher - Tech Lead
London, United Kingdom
- 2014–15 Duran Hermida Arquitectos Asociados
Architectural Assistant
Cuenca, Ecuador

OTHER ACTIVITIES

Voluntary Organizations and Projects

- 2014-16 Colectivo Cuenca Ciudad para Vivir
Active Member
Cuenca, Ecuador

2016 Cuenca Conversa
Co-Founder / Co-Organizer
Cuenca, Ecuador

SKILLS AND METHODS

Statistical and Computational Methods

Multivariate statistics and machine learning, data mining and wrangling, network science, Python (including numpy, scipy, pandas, matplotlib, statsmodels, networkx, and scikit-learn, PyTorch, TensorFlow), web scraping, R, JavaScript, SQL.

Geospatial Methods

GIS, spatial analysis, network analysis, QGIS, ArcGIS, PostGIS, geopandas, Spatial Interaction Models.

Data Visualization and Design

JavaScript (including D3), OpenFrameworks, Processing, Tableau.

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