

Esra Suel

E-mail: e.suel@ucl.ac.uk

Website: esrasuel.github.io

Phone: +41 78 720 20 32.

Google Scholar ID: bit.ly/35zyZeO

Education

2011 – 2016	PhD in Transport and Urban Systems Imperial College London, London, UK
2006 – 2008	MSE in Mechanical Engineering University of Michigan, Ann Arbor, MA, USA
2002 – 2006	BSc in Mechatronics Engineering, Minor in Mathematics Sabanci University, Istanbul, Turkey

Professional History

06/2022 – Present	Lecturer (Assistant Professor) in City Modelling, The Bartlett Centre for Advanced Spatial Analysis (CASA), UCL Co-Lead, CASA Arup City Modelling Lab Departmental Equality, Diversity & Inclusion (EDI) Lead,
02/2018 – 04/2022	Research Fellow , School of Public Health, Imperial College London (ICL) (MRC Fellowship)
10/2016 – 10/2022	Postdoctoral Researcher and Senior Data Scientist , ETH Zurich (part-time) Department of Civil, Environmental and Geomatic Engineering, ETH Zurich Swiss Data Science Centre, ETH Zurich Department of Architecture Future Cities Lab, ETH Zurich
07/2016 – 02/2018	Postdoctoral Researcher , Department of Civil and Environmental Engineering, ICL (Wellcome Trust Funded Pathways to Healthy Equitable Cities Project, 2017-2018) (EPSRC Funded Digital City Exchange Project, 2016-2018)
09/2012 – 02/2016	Research Assistant , Department of Civil and Environmental Engineering, ICL (EPSRC Funded Future FM Project on Building Energy Modelling, 2014-2016) (EPSRC Funded Tell Us When Project on delivery planning, 2012-2014)
08/2010 – 08/2012	Research Analyst and Project Manager , Carbon Disclosure Project, London, UK
09/2009 – 08/2010	Research Analyst , World Resources Institute, Istanbul, Turkey
08/2006 – 08/2009	Graduate Research and Teaching Assistant , University of Michigan, Ann Arbor, USA (NSF Funded Materials Use: Science, Engineering, and Society (MUSES) Project)
08/2004 – 06/2006	Undergraduate Teaching Assistant , Sabanci University, Istanbul, Turkey

Other Appointments and Affiliations

01/2023 – Present	Advisory Board Member , IPUMS International Historical Geographic Information System (IHGIS), USA
01/2023 – Present	Advisory Board Member , Global Healthy and Sustainable City Indicators Collaboration (GHSCIC)
06/2022 – Present	Expert Grant Reviewer , The Belgian Science Policy Office, Research Programme for Earth Observation STEREO IV
05/2022 – Present	Honorary Research Fellow , School of Public Health, Imperial College London, UK
08/2021 – 12/2021	Co-organiser , NeurIPS 2021 MLPH Workshop: Machine Learning in Public Health

06/2018 – Present	Affiliate Fellow , Data Science Institute, Imperial College London UK
02/2018 – 10/2022	Co-Chair , Big Data Working Group, Pathways to Equitable Healthy Cities Project, UK
03/2019 – 06/2019	Visiting Scientist , T.H. Chan School of Public Health, Harvard University, Boston, USA
02/2018 – 04/2022	Rutherford Fellow , UKRI Health Research Data UK
02/2018 – Present	Honorary Researcher , Urban Systems Lab, Imperial College London, UK
12/2016 – 12/2019	Academic Consultant , IDEMA International Development Management (Service obligation for PhD Scholarship from Government of Turkey)
08/2012 – Present	Peer Reviewer for academic journals and conferences Transportation Research Part A: Policy and Practice, Transport Reviews, Journal of Transport and Health, Journal of Retailing and Consumer Services, Remote Sensing of the Environment, Transactions on Mobile Computing, Transportation Research Record, Transportation Research Board Annual Meeting
08/2010 – Present	Member for international academic committees and working groups. Transport Research Board (TRB), International Society for Environmental Epidemiology (ISEE), Transport and Health Science Group (THSG), Housing and Neighbourhoods Working Group, Pathways to Equitable Healthy Cities Project, Transport and Health Science Group (THSG).
08/2010 – 07/2016	Project Consultant , Research and Consultancy Projects for the World Bank, International Finance Cooperation (IFC), World Resource Institute (WRI), Istanbul Stock Exchange, British Council, United Nations, Turkey Corporate Governance Forum.
06/2005 – 09/2005	Visiting Scholar , Robotics Institute, Carnegie Mellon University, Pittsburgh, USA

Grants

2023 - 2027	EPCRC CREDS Interdisciplinary Energy Demand Studentship (Co-I, GBP 94,044) <i>Title: Equity assessment of demand-side flexibility technologies in grid-integrated transportation electrification</i>
2023 - 2027	UCL EPSRC DTP (Co-I, GBP 115,218) <i>Title: Generative scenarios for getting Transport to an equitable Net Zero – flipping modelling on its head using Machine Learning</i>
2023 - 2027	ESRC UBEL Co-Funded Studentship (Co-I, GBP 72,792) <i>Title: Pathways to socially equitable net-zero cities and regions</i> Project Partner: Transport East
2022	UCL Partnership Collaboration Awards (PCA), (Co-I, GBP 5,714), UCL, UK University of Sydney-UCL Partnership Collaboration Award [Internal] <i>Title: Micro-Freight Delivery Solutions: A Tale of Two Cities</i>
2022 - 2024	Swiss Data Science Centre (Co-PI, CHF 521,540), ETH Zurich, Switzerland Collaborative Data Science Project in Switzerland, leading the work package relating to change detection from images supervising a senior data scientist on the project. <i>Title: Deep In Africa: Deep statistical learning-based image analysis for measurement of socioeconomic development in Sub-Saharan Africa</i>
2020 – 2025	National Institutes of Health (NIH), (Co-I, USD 863,771), Subaward: UCL Co-I for R01 Grant Awarded to Peter James (PI) based at Harvard University, leading the work package relating to estimating nature exposure from street images in the USA. The subaward was held at ETH and transferred to UCL in 2023. <i>Title: Built Environment Assessment through Computer Vision (BEACON): Applying Deep Learning to Street-Level and Satellite Images to Estimate Built Environment Effects on Cardiovascular Health</i>
2018 – 2022	UKRI MRC Fellowship Grant (PI, GBP 331,573), Imperial College London, UK UKRI Innovation/Rutherford Fund Fellowship in Health Data Science. Initially funded until August 2021, received additional funding for extension due to Covid. <i>Title: Application of deep learning to heterogeneous open data for measuring urban environment and health (MR/S003983/1)</i>

Academic Supervision

PhD

2023 – Present	Maria Wood, full-time PhD student funded by EPSRC CREDS, CASA UCL
2023 – Present	Tom Murat, full-time PhD student funded by EPSRC, CASA UCL
2023 – Present	Claude Lynch, full-time PhD student funded by ESRC and Transport East, CASA UCL

Research assistants funded by project grants

2022 – Present	Steven Stalder, Swiss Data Science Center, ETH Zurich
2018 – 2019	Emily Muller MRC Centre for Environment and Health, Imperial College London

Graduate students

2023	Michael Hathorn, Master's Dissertation, UCL CASA Urban Spatial Science
2023	Yuxin Nie, Master's Dissertation, UCL CASA Urban Spatial Science
2023	Yao Wang, Master's Dissertation, UCL CASA Urban Spatial Science
2023	Beth Solomon, Master's Dissertation, Imperial College London
2022	Sven Ruf, Masters Semester Project, ETH Zurich
2019	Barbara Metzler, Master's Dissertation, Imperial College London
2018	Julien Droin, Master's Dissertation, Imperial College London
2018	Yujia Lui, Master's Dissertation, Imperial College London

Undergraduate students

2018	Marthe Boulleau, Undergraduate Research Project, Imperial College London
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Teaching

2022 - Present	Module Leader , CASA0001: Urban Systems Theory, UCL
2022 - Present	Module Tutor , CASA0004: Urban Spatial Science Dissertation, UCL
2021 - 2022	Module Lecturer , Civil and Environmental Engineering, ETH Zurich
2018 - 2021	Module Lecturer , School of Public Health, Imperial College London (ICL)
2014 - 2018	Teaching Assistant , Civil and Environmental Engineering, ICL
2007 - 2008	Teaching Assistant , Mechanical Engineering, University of Michigan
2005	Lab Assistant , Faculty of Engineering, Sabanci University

Prizes, Awards and Other Honours

2020	NeurIPS 2020 MLPH Workshop, Best Lightning Paper Award Awarded best paper at the NeurIPS 2020 MLPH Workshop: Machine Learning in Public Health. <i>Title: Predicting air pollution spatial variation with street-level imagery</i>
2013	Rees Jeffreys Road Fund Bursary Award Transportation Demand Modelling (GBP 30,000)
2008	Graham Environmental Sustainability Institute, University of Michigan Graduate Fellowship Award to cover tuition and stipend for one year
2007	Michigan Engineering, University of Michigan Graduate Teaching Fellowship Award to cover tuition and stipend for six months
2006	The Scientific & Technological Research Council of Turkey (TUBITAK) Graduate Research Fellowship Award (USD 35,000)
2002 – 2006	Sabanci University Merit Scholarship Merit-based tuition provided for a four-year period

Invited Talks

07/2023	AI and Sustainable Cities Workshop, The Alan Turing Institute, London, UK (in-person)
06/2023	Future Cities Lab Global, ETH Zurich, Switzerland (in-person)

04/2022	Roundtable Chair, the Conference on Health, Inference, and Learning (CHIL) (virtual)
03/2022	Kellogg Global Centre on Healthcare and Urbanisation, University of Oxford, UK (in-person)
02/2022	CASA Seminar Series, UCL, UK (virtual)
10/2021	Planet Explore Conference, USA (virtual)
07/2021	Planet Colloquium, Berlin, Germany (virtual)
06/2021	Department of Social Policy and Intervention, University of Oxford, UK (virtual)
05/2021	Canadian Urban Environmental Health Research Consortium (CANUE), Canada (virtual)
05/2021	Earth Observation Network, Imperial College London, UK (virtual)
06/2019	Salzburg Global Seminar, Salzburg, Austria (in-person)
05/2019	NASA AMES Research Centre, Mountain View, USA (in-person)
01/2014	Transforming Transportation, World Bank, Washington DC, USA (in-person)

Media coverage

N. Daina and E. Suel, *Quantify to Rectify: Toward Equity in Vehicle-Grid Integration*, Centre on Global Energy Policy at Columbia SIPA, July 2023

M. Purdy, *Unlocking AI's Potential for Social Good*, Harvard Business Review, October 2020.

M. Bridge and D. Bugler, *AI locates deprived areas using Street View*, The Times, April 2019.

D. Lu, *AI that spots inequality could monitor living conditions in cities*, New Scientist, April 2019.

T. Collins and J. Pinkstone, *Google Maps Street View images can be used to detect signs of social, economic, environmental and health inequality in major UK cities*, Daily Mail, April 2019

I. Aron and G. Goslin, *19 ways AI is changing London*, Time Out, London, May 2019.

Institutional Citizenship

Equality, Diversity & Inclusion (EDI) Lead, CASA, UCL, 2023 – Present.

Personal Tutor, CASA MSc Urban Spatial Science (five students each year), 2022 – Present.

Member, MPhil to PhD upgrade panel. 2023.

Panel Member, Departmental Hiring and Selection Committees. 2022 – Present.

Member, CASA's Departmental Teaching Committee. 2022 – Present.

Member, CASA's Departmental Research Committee. 2022 – Present.

Publication List

Available from: https://esrasuel.github.io/files/Suel_Publications.pdf