

Reka Solymosi

Senior Lecturer in Quantitative Methods

Curriculum Vitae

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Education and Qualifications

2012-2016 **PhD in Crime and Security Science**
University College London
2011-2012 **MRes in Crime and Security Science**
University College London
2010-2011 **MRes Criminology & Socio-Legal Studies**
University of Manchester
2005-2010 **Bachelor of Arts: Major in Sociology & Spanish**
University of British Columbia

Present and previous appointments

Sep 2021-present **Senior Lecturer in Quantitative Methods**
Department of Criminology, University of Manchester
Sep 2016-Aug 2021 **Lecturer in Quantitative Methods**
Department of Criminology, University of Manchester
Aug 2015-Aug 2016 **Data Analyst**
Transport Policing, Enforcement and On Street Operations, Transport for London
Oct 2010-May 2015 **Teaching Assistant**
Department of Geography, Department of Civil, Environmental, and Geomatic Engineering, University College London
Aug 2014-Oct 2014 **Data Analyst**
Transport and Street Planning Team, London Borough of Camden
Oct 2011-Aug 2014 **Research Administrator: Pedestrian Accessibility and Movement Environment Laboratory**
Department of Civil, Environmental, and Geomatic Engineering, University College London
Oct 2011-May 2014 **Research Assistant on Community-based Open Mapping to Engage Travel project**
Department of Civil, Environmental, and Geomatic Engineering, University College London

Visiting appointments and memberships

2020-2020 **Visiting Scholar: Griffith University**
Spent my research leave visiting Griffith Criminology Institute to work on collaborative research
2020-2020 **Visiting Scholar: Queensland University of Technology**
Spent my research leave visiting QUT Centre for Justice to work on collaborative research
2020-present **Carpentries Instructor: The Carpentries Global**
Achieved certification as instructor for Data Carpentry
2019-present **Fellow: Higher Education Academy**
Fellowship awarded to professionals who meet the criteria of Descriptor 2 of the UK Professional Standards Framework for teaching and supporting learning in higher education.
2017-present **Fellow: Software Sustainability Institute**
Working to promote open research and credit for research software
2017-present **Board member: Economic and Social Research Council Business and Local Government Data Research Centre**
Data Acquisition Board
2016-present **Honorary Lecturer: University College London**
Research and teaching activities based in Department of Civil, Environmental, and Geomatic Engineering

Research and academic/professional standing

Publications

My research areas include perception of crime and place, spatial crime analysis, environmental criminology, social data science, transport crime, crowdsourcing, and geographical information analysis.

ORCID: 0000-0001-8689-1526

Books

1. Ariza, J. M., & Solymosi, R. (2023). *Crime mapping and spatial data analysis using r*. CRC Press.
2. Wooditch, A., Johnson, N. J., Solymosi, R., Medina, J. J., & Langton, S. (2020). *A beginner's guide to statistics for criminology and criminal justice using r*. Springer.

Peer reviewed publications

1. Solymosi, R., Buil-Gil, D., Ceccato, V., Kim, E., & Jansson, U. (2023). Privacy challenges in geodata and open data. *Area*.
2. Skarlatidou, A., Ludwig, L., Solymosi, R., & Bradford, B. (2023). Understanding knife crime and trust in police with young people in east london. *Crime & Delinquency*, 69(5), 943–970.
3. Buil-Gil, D., & Solymosi, R. (2023). TOPIC 4.7 USING CROWDSOURCED DATA TO STUDY CRIME AND PLACE. *Understanding Crime and Place: A Methods Handbook*, 93.
4. Langton, S., & Solymosi, R. (2023). TOPIC 4.6 OPEN DATA FOR CRIME AND PLACE RESEARCH. *Understanding Crime and Place: A Methods Handbook*, 86.
5. Howlings, E., & Solymosi, R. (2023). Exploring facilitators, barriers and concerns of police using social media when investigating missing children. *International Journal of Missing Persons*, 1(1), 104.
6. Šerý, M., Brisudová, L., Buil-Gil, D., Kimic, K., Polko, P., & Solymosi, R. (2023). The perception of personal security in urban parks: A comparative analysis of research methods. In *Placemaking in practice volume 1* (pp. 290–308). Brill.
7. Vergara, C. I., & Solymosi, R. (2022). Correlates of client-perpetrated violence against female sex workers in bogotá. *Violence Against Women*, 10778012221142919.
8. Solymosi, R., Guedes, I., & Vozmediano, L. (2022). Using mobile applications and physiological sensing to measure perception of security in built environments. In *The handbook of security* (pp. 559–580). Springer.
9. Ceccato, V., Solymosi, R., & Müller, O. (2022). The use of twitter by police officers in urban and rural contexts in sweden. *International Criminal Justice Review*, 31(4), 456–476.
10. Solymosi, R., Jackson, J., Pösch, K., Yesberg, J. A., Bradford, B., & Kyprianides, A. (2021). Functional and dysfunctional fear of COVID-19: A classification scheme. *Crime Science*, 10(1), 1–23.
11. Solymosi, R., Buil-Gil, D., Vozmediano, L., & Guedes, I. S. (2020). Towards a place-based measure of fear of crime: A systematic review of app-based and crowdsourcing approaches. *Environment and Behavior*, 13916520947114.
12. Solymosi, R., Petcu, O., & Wilkinson, J. (2020). Exploring public engagement with missing person appeals on twitter. *Policing and Society*, 0(0), 1–24. <https://doi.org/10.1080/10439463.2020.1782409>
13. Langton, S. H., & Solymosi, R. (2019). Cartograms, hexograms and regular grids: Minimising misrepresentation in spatial data visualisations. *Environment and Planning B: Urban Analytics and City Science*.
14. Solymosi, R. (2019). Exploring spatial patterns of guardianship through civic technology platforms. *Criminal Justice Review*, 44(1), 42–59.
15. Solymosi, R., Cella, K., & Newton, A. (2018). Did they report it to stop it? A realist evaluation of the effect of an advertising campaign on victims' willingness to report unwanted sexual behaviour. *Security Journal*, 31(2), 570–590.
16. Solymosi, R., & Bowers, K. (2018). The role of innovative data collection methods in advancing criminological understanding. In *The Oxford Handbook of Environmental Criminology* (Vol. 210, pp. 210–237). Oxford University Press.
17. Solymosi, R., Bowers, K. J., & Fujiyama, T. (2017). Crowdsourcing subjective perceptions of neighbourhood disorder: Interpreting bias in open data. *The British Journal of Criminology*, 58(4), 944–967.
18. Solymosi, R., Bowers, K., & Fujiyama, T. (2015). Mapping fear of crime as a context-dependent everyday experience that varies in space and time. *Legal and Criminological Psychology*, 20(2), 193–211.
19. Solymosi, R., Borrión, H., & Fujiyama, T. (2015). Crowd spatial patterns at bus stops: Security implications and effects of warning messages. In *Safety and security in transit environments* (pp. 156–178). Springer.

Publications accepted or under review (pre-prints available).

OSF profile: osf.io/3nzk2.

1. Buil-Gil, D., Solymosi, R., & Moretti, A. (2019). Non-parametric bootstrap and small area estimation to mitigate bias in crowdsourced data. Simulation study and application to perceived safety. *Accepted in Big Data Meets Survey Science*. Hill, C. A., Biemer, P. P., Buskirk, T., Japek, L., Kirchner, A. And Lyberg, L. E. (Eds.). Wiley. Retrieved from Osf: <https://osf.io/Preprints/Socarxiv/8hgjt/>.

2. Solymosi, R., Ashby, M., Cohen, T., & Sidebottom, A. (2017). Alternative denominators in transport crime rates. *Accepted in European Journal on Criminal Policy and Research*. Retrieved from [Osf: Io/Preprints/Socarxiv/Neaxh](https://osf.io/Preprints/Socarxiv/Neaxh).

Forthcoming publications pending submission.

1. Solymosi, R., Natarajan, M., & Babu, D. (forthcoming). Mapping sexual harassment in public places: A contextual analysis of crowdsourced data. *To Be Submitted in Journal of Research in Crime and Delinquency*.
2. Solymosi, R., & Jordanoska, A. (forthcoming). Companies in trouble': Exploring debt, insolvency and corporate noncompliance in the UK. *To Be Submitted in Journal of Empirical Legal Studies*.
3. Solymosi, R., Teixeira, N., Guedes, I. S., & Vozmediano, L. (forthcoming). Towards understanding situational experiences of insecurity: A feasibility study of capturing real-time physiological and self-report measures. *To Be Submitted in Journal of Experimental Criminology*.

Media and other outputs

1. Solymosi, R., & Chataway, M. (2019). Using mobile applications for social science research. *LSE Impact Blog*. Available: <https://blogs.lse.ac.uk/Impactofsocialsciences/2019/08/14/Using-Mobile-Applications-for-Social-Science-Research/>.
2. Solymosi, R. (2019). How to get a DOI for your teaching materials with zenodo. *Sage Ocean Publications Blog*. Available: <https://ocean.sagepub.com/Blog/How-to-Get-a-Doi-for-Your-Teaching-Materials-with-Zenodo>.
3. Solymosi, R., & Chataway, M. (2019). Webinar: Using app-based and sensing methods for social science research. *UK Data Service*. Available: <https://www.ukdataservice.ac.uk/News-and-Events/Eventsitem/?id=5461>.
4. Solymosi, R. (2018). Women in data science: Mentoring and applying app-based and sensing methods to cognitive and decision sciences. *Software Sustainability Institute Blog*. Available: <https://www.software.ac.uk/Blog/2019-08-13-Women-Data-Science-Mentoring-and-Applying-App-Based-and-Sensing-Methods-Cognitive>.
5. Solymosi, R. (2018). Northwest universities r day event. *Software Sustainability Institute Blog*. Available: <https://www.software.ac.uk/Blog/2019-01-23-Northwest-Universities-r-Day-Event>.
6. Solymosi, R. (2018). Safe places through technological innovation. *Software Sustainability Institute Blog*. Available: <https://www.software.ac.uk/Blog/2018-11-01-Safe-Places-Through-Technological-Innovation>.
7. Solymosi, R. (2018). TICTeC 2018 – an introduction to the world of civic technologies. *Software Sustainability Institute Blog*. Available: <https://www.software.ac.uk/Blog/2018-07-17-Tictec-2018-Introduction-World-Civic-Technologies>.
8. Solymosi, R. (2018). Brexit data challenge part 2: Presentation at GISRUk. *Software Sustainability Institute Blog*. Available: <https://www.software.ac.uk/Blog/2018-06-21-Brexit-Data-Challenge-Part-2-Presentation-Gisruk>.
9. Solymosi, R. (2018). Brexit data challenge event. *Software Sustainability Institute Blog*. Available: <https://www.software.ac.uk/Blog/2018-04-27-Brexit-Data-Challenge-Event>.
10. Solymosi, R. (2016). Confidence in transport and policing. Available: <https://www.ucl.ac.uk/Transport-Institute/Pdfs/ConfidenceWorkshop.pdf>.
11. Solymosi, R. (2014). Mapping fear of crime dynamically on everyday transport. *JDiBrief Series*. London: UCL Jill Dando Institute of Security and Crime Science. ISSN: 2050-4853. Available: <http://www.ucl.ac.uk/Jdibrief/Analysis/Mapping-Fear-of-Crime-Dynamically-on-Everyday-Transport>.
12. Solymosi, R. (2014). Transport streets and crime. Available: <https://www.ucl.ac.uk/Transport-Institute/Pdfs/Transport-Streets-Crime>.

Research Grants

Funding awarded as Principal Investigator

2022-2022	Exploring perceptions of direct and indirect bystander intervention GBP 8,930 funding from School of Social Sciences Research Support Funds 2021-22
2022-2022	Geoprivacy, confidentiality and data sharing in research & practice GBP 4,293 funding from KTH Royal Institute of Technology and Stockholm University Joint Research Seed Fund
2020-2021	Understanding changing demand for police during the coronavirus pandemic GBP 20,000 funding from N8 Policing Research Partnership
2019-2019	Identifying features that affect public engagement with appeals for information about missing persons on Twitter GBP 5,000 funding from Manchester Statistical Society Champion Grant
2018-2019	Using Bayesian Surprise maps to explore debt and insolvency across the UK GBP 10,000 funding from Consumer Data Research Centre, Economic and Social Research Council

2017-2020 **Measuring fear of crime using app-based and sensing methodologies**

GBP 10,000 funding from British Academy and Leverhulme Small Grants

2017-2017 **Building Tools and Training for Crime Analysts using R**

GBP 3,000 funding from N8 Policing Research Partnership

2017-2017 **Data Visualisation in Criminal Courts**

GBP 1,000 funding from Economic Social Research Council, Festival of Social Sciences

Funding awarded as Co Investigator

2019-2020 **Civic Innovation in CommuNITY: safety, policing and trust with young people**

GBP 60,000 funding from EPSRC Network+: Social Justice through the Digital Economy

Supervision of Research Students

2022-2026 **Nicola Fox: Identifying vulnerability, harm, and useful police intelligence in interviews with missing children in England**

Funded by School of Social Sciences, University of Manchester

2019-2023 **Nathan Khadaroo: Citizen Data Science for Public Good**

Funded by Data Analytics and Society Centre for Doctoral Training, University of Manchester

2018-2022 **Sebastian Acevedo: Unequal Distribution of Access to Public Safety: The Case of Local Governments in Chile**

Funded by Capital Humano Avanzado Conicyt - Becas Chile

2017-2020 **Oskar Enghoff: Consumer culture in an illicit digital economy: the production of demand, risk perceptions and trust among digital consumers of illicit drugs**

Funded by Engineering and Physical Research Council

Lectures and Conference Activity

Invited talks

2022 **Hot Routes and Street Profiles**

Netherlands Institute for the Study of Crime and Law Enforcement

2022 **Near Misses in Research on Crime and Fear of Crime**

Crest Advisory Internal Seminar

2022 **Even beautiful maps can be misleading**

Ministry of Defence, Defence Science and Technology Lecture Series

2021 **New forms of data for public safety**

Mexico National Institute of Statistics and Geography (INEGI)

2020 **Understanding people's experiences and perceptions of place, crime, and victimisation using crowd-sourced data**

Monash University, Melbourne, Australia

Exploring the role of crowdsourced data in criminal justice research

Queensland University of Technology, Melbourne, Australia

2019 **Mapping and spatial modelling in R for crime prevention and conservation**

Sheffield R User Group, UK

The role of innovative data collection methods in advancing understanding, and the importance of considering the biases within

Women in Data Science: Zurich, Switzerland

Keynote: Data-driven insights in law: opportunities and cautions

Berlin Legal Tech Conference 2019, Germany

The role of innovative data collection methods in advancing behavioural understanding

Cognitive and Decision Sciences, University of Basel, Switzerland

The role of innovative data collection methods in advancing criminological understanding

Manchester Metropolitan University Big Data Centre Seminar Series, UK

2018 **Crowdsourcing subjective perceptions of neighbourhood disorder: interpreting bias in Open Data**

TicTec 2018, Lisbon, Portugal

Interdisciplinary Alchemy: Data Science + Social Science

Data Kind UK

Everybody Lies but Not Everybody Tweets: Making Sense of the Bias in Your Data

Advances in Data Science conference, Manchester, UK

2017 **Reproducible Crime Analysis using R**

Intelligence Innovation Working Group hosted by West Midlands Police

Building Interactive Data Visualizations

Manchester Methods Fair, UK

Using open data in the social sciences

Her+Data Meetup, Manchester, UK

What is Crowdsourced Data?

Methods@Manchester seminar on research methods in social sciences, Manchester, UK

Eyes and Apps on the Street

Stockholm Royal Institute of Technology (KTH), Sweden

Keynote: Making Sense of Data using Methods

Methods North West Launch Conference, Manchester, UK

Using R for Crime Analysis

Greater Manchester Police, Force HQ, Manchester, UK

Mapping fear of crime as a context-dependent everyday experience that varies in space and time

Horizon 2020 Project MARGIN conference, Budapest, Hungary

Using open data to evaluate current approaches to cabs tasking

11th International Crime Science Conference, London, UK

Fighting Crime (and other bad things) on the transport network

Manchester R User Group meetup

2016 **Practitioner-Academic Seminar on Confidence in Policing**

Transport for London, UK

Policing and Public Confidence - Confidence at TfL and the challenges of a transport environment

Public Confidence in the Police - University of Warwick, UK

2015 **Scheduling student-led learning by enquiry into the curriculum**

Teaching and Learning Conference 2015, UCL, London, UK

Alternative Denominators in Transport Crime Rates

Transport Statistics User Group Meeting, London, UK

Using a smartphone app to measure fear of crime on route 25

Transport for London Route 25 Joint Transport Action Group (JTAG) meeting, London, UK

2014 **Streets, Crime, and Transport**

EPSRC Impact Award Seminar, London, UK

A new approach to mapping perceptions of crime along the door-to-door journey

Transport Geography Research Group Workshop, Leeds, UK

Fear of crime on transport

PopFest, annual Population Studies conference for PhD students, London, UK

Using a smartphone app to report fear of hate crime

Trans London Meetup, London, UK

2013 **Crowd spatial patterns at bus stops**

Stockholm Royal Institute of Technology (KTH), Sweden

Conference presentations2019 **Linking app-based and physiological measures of fear of crime**

Environmental Criminology and Crime Analysis Symposium, Gungzhou China

Mapping Sexual Harassment in Public Places: Open Source Data Driven Contextual Analysis

Environmental Criminology and Crime Analysis Symposium, Gungzhou China

2018 **Victimization and perceived safety among college students: Focus on women's transit safety in London, UK**

Crime and fear in public places: KTH Royal Institute of Technology, Stockholm, Sweden

Measuring fear of crime through app-based and sensing methodologies

Crime and fear in public places: KTH Royal Institute of Technology, Stockholm, Sweden

2017 **Using open data to evaluate current approaches to cabs tasking**

American Society of Criminology Conference, Philadelphia, USA

Using open data to evaluate current approaches to cabs tasking

Environmental Criminology and Crime Analysis Symposium, El Salvador

Active Participant

R Open Science Unconference, Los Angeles, USA

2015 **Using open crowdsourced data to map signal crimes in place and time**

Environmental Criminology and Crime Analysis Symposium, New Zealand

Alternative Denominators in Transport Crime Rate

Stockholm Symposium for Criminology, Sweden

- 2014 **Mapping Fear of Crime Dynamically in Place and Time: Case study of Revenue Protection Inspectors on a London Bus Route**
American Society of Criminology, San Francisco, USA
- 2013 **Participatory mapping of fear of crime using a mobile phone application**
Urban Data Management Symposium, London, UK

Poster presentations

- 2016 **Mapping Fear of crime on the London Bus Network**
Environmental Criminology and Crime Analysis Symposium, Munster, Germany
- 2015 **Mapping fear of crime hotspots as they vary with place, time, and individual characteristics using a mobile phone app**
Home Office International Crime and Policing Conference, London, UK
- 2013 **Mapping Fear of Crime**
European Society of Criminology Conference, Budapest, Hungary
- 2012 **Mapping fear of crime as a dynamic event**
Crime Science Conference, London, UK

Teaching and Learning

My teaching areas include, research methods, quantitative data analysis/ statistical methods, spatial data analysis and GIS, and environmental criminology.

University of Manchester Undergraduate Level Courses

- 2018-present **LAWS31152: Crime Mapping: An introduction to GIS and spatial analysis**
Basics of spatial data visualisation and analysis for 3rd year undergraduate and all graduate students.
- 2017-present **LAWS20452 : Modelling Criminological Data**
Inferential statistics course for 2nd year undergraduates.
- 2017-present **LAWS30620: Short Dissertation**
Lectures and supervision of students on secondary data analysis pathway for their final year dissertation.
- 2016-present **LAWS20441: Making Sense of Criminological Data**
Introduction to quantitative research for 2nd year undergraduates.

University of Manchester Graduate Level Courses

- 2018-2019 **LAWS70542: Evaluating Policy and Practice**
Lecturer on mandatory module for all Masters streams introducing evaluation research beyond academia
- 2016-present **LAWS70311: Designing Criminological Research**
Course director and primary lecturer on compulsory research methods module for all Masters streams
- 2016-2019 **LAWS70821: Data Analysis with R & R Studio**
2016: Course director and sole lecturer, 2018 onwards: ad-hoc lecturer on introductory statistics for MRes students using R

Other teaching, short courses, and guest lecturing

- 2020-2020 **Monash University, AUS: A gentle introduction to data analysis for social scientists using R**
half-day introduction to data analysis for graduate students in social sciences using R.
- 2019-2019 **Research IT: Data analysis using R**
One-day introduction to R, part of University of Manchester's Research IT series of courses for staff and PhD students.
- 2018-2018 **University of Amsterdam: Crowdsourced data and a crime science approach to perception of crime and place**
Crime Science module for masters level students.
- 2017-present **methods@manchester: Getting Started in R: introduction to data analysis & visualisation**
Week-long intensive course introducing students to using R and R Studio for data analysis. Open to all, usually attended by professionals and academics.
- 2017-present **Q-Step internship preparation: Introduction to mapping data with QGIS**
Afternoon short introduction to mapping spatial data for Q-step internship students.
- 2017-2017 **Stockholm Royal Institute of Technology (KTH): Spatial Data Analysis in Practice**
One-day introduction to mapping with QGIS and data collection from APIs as part of weeklong summer school for PhD students.
- 2012-2017 **University College London MSc Transport Studies: Transport Safety and Security**
Guest lecture for graduate module, UCL Department of Civil, Environmental, and Geomatic Engineering.

Academic Enterprise and Knowledge Transfer

- 2020 **Open Data Manchester**
I am actively collaborating with Open Data Manchester, a Community Interest Company interested in open data and promoting data literacy and supporting data analysis for good. We have a joint PhD student (see Nathan Khadaroo in research students).
- 2020 **Wirral Hospitals' School**
One-hour career oriented session about data analysis for students enrolled in a community school, introducing them to crime analysis.
- 2019 **Greater Manchester Police**
Co-supervision of PhD student with Greater Manchester Police's Force Intelligence Bureau and colleagues in University College London working to improve horizon scanning processes within the organisation and wider in policing.
- 2018 **N8 Analyst Training**
Training workshop on data visualisation and GIS as part of the N8 Policing Research Partnership training course for police analysts from across northern police forces.
- Representation of women in data roles**
I consistently give talks and participate in data-related meetups including ones which emphasise representation of women in data roles, such as R-ladies and Her+Data meetups.
- TicTec2018**
The NGO 'MySociety' invited me to present the work I did using their fix my street platform at the international civic technology conference for researchers, practitioners, and all those with an interest in how technology is changing the way we engage with society. TICTeC is known for its unique focus on the impacts of Civic Technologies where funders mix with practitioners, activists converse with researchers, small NGOs get as much attention as the big players. Since then, I have been working with their research team, who have replicated findings in two of my papers, and are in the process of further joint working.

Service and Leadership

- 2017-present **Department of Criminology: Programme Director for Postgraduate Taught Programmes (Masters degrees)**
Strategic oversight of programme direction teaching curriculum for all Masters' streams, alongside day-to-day administrative and pastoral responsibilities.
- 2016-2019 **University of Manchester: Coordinator of the University of Manchester R User Group**
Direction and organisation of user group activities such as monthly meetings, hackathons, and preparation of joint research outputs.
- 2016-Present **Data Carpentry Social Sciences Curriculum: Curriculum Advisory Board Member**
Involvement in oversight and development of the social sciences curriculum within the Carpentries programme.
- 2016-present **University of Manchester: Ad hoc administrative duties**
Undergraduate Open Day, Postgraduate Research (PhD) Open Day, and similar roles assisting colleagues and promoting the university
- 2016-present **University of Manchester: Academic Advising**
Pastoral care and academic advising for undergraduate and postgraduate students enrolled in Criminology degrees.