# Francisco Rowe

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#### **EDUCATION**

- Ph.D. 2013 Economic Geography, University of Queensland, Brisbane, Australia.
- M.S. 2007 MSc in Regional Science, Universidad del Norte, Antofagasta, Chile.
- B.S. 2006 BA in Business Management with specialisation in Economics, *summa cum laude*, Universidad del Norte, Antofagasta, Chile.

# **APPOINTMENTS**

# **Current appointments**

- 2018– Senior Lecturer in Quantitative Human Geography
  Department of Geography and Planning, University of Liverpool, Liverpool, United Kingdom
- 2020 Lead of the Geographic Data Science Lab Department of Geography and Planning, University of Liverpool, Liverpool, United Kingdom
- 2018 Institutional Lead of the Longitudinal Data Analysis Specialised Training Route, ESRC North West Social Science Doctoral Training Partnership.

#### Past appointments

- 2016–18 Lecturer in Quantitative Human Geography
  Department of Geography and Planning, University of Liverpool, Liverpool, United Kingdom
- 2013–16 Postdoctoral Research Fellow School of Geography, Planning and Environmental Management, The University of Queensland, Brisbane, Australia.
- 2014–16 ResTeach Fellow School of Geography, Planning and Environmental Management, The University of Queensland, Brisbane, Australia.
- 2010–13 University Tutor School of Geography, Planning and Environmental Management; The University of Queensland, Brisbane, Australia.
- 2010–13 Research Assistant
  Queensland Centre for Population Research, School of Geography, Planning and
  Environmental Management, The University of Queensland, Brisbane, Australia.
- 2010–11 Research Assistant
  Queensland Centre for Population Research, School of Geography, Planning and
  Environmental Management, The University of Queensland, Brisbane, Australia.

2008-09 Research Officer

Millennium Nucleus for Regional Science and Public Policy. The Chilean Ministry of Planning and Universidad Católica del Norte, Antofagasta, Chile.

2007–08 Research Analyst

CONYMET, Antofagasta, Chile.

2007-08 Lecturer (Part-Time),

Faculty of Business and Economics, Department of Economics, Universidad Católica del Norte, Antofagasta, Chile.

2007 Lecturer (Part-Time),

School of Business Management, Universidad Santo Tómas, Antofagasta, Chile.

#### **EDITORIAL ROLES**

2021– Social Media Editor

Journal of Royal Statistical Society - Series A

2018- Co-Editor

REGION. The Journal of the European Regional Science Association.

2019–20 Special Issue Editor

Special Issue: The Potential of Notebooks for Scientific Publication: Reproducibility, and Dissemination. REGION. The Journal of the European Regional Science Association.

2015-17 Special Issue Editor

Special Issue: Youth and graduate migration, The Annals of Regional Science.

## **COMMITTEE MEMBERSHIPS**

2020 – Spatial Inequality Expert Advisor. Teesside Task Force. The UK2070 Commission.

Use of Administrative Data Expert Advisor. Office of National Statistics (ONS) Government Statistical Service Advisory Committee.

2018–19 Migration Expert Advisor. RECH Contribution Committee. Repayment mechanisms of Chile government's international postgraduate scholarship programme.

#### **FUNDING AND AWARDS**

## Grants

"InequaliTies IN Experiencing uRbAn fuNcTion (ITINERANT)". Engineering and Physical Sciences Research Council (EPSRC) / The Alan Turing Institute 2.0. Co-I. £200,000.

"Supporting evidence-based policy actions". Public Policy QR Strategic Priorities Fund. University of Liverpool. PI. £20,000.

"Generating actionable evidence for containing the spread of misinformation". Liverpool COVID-19 Partnership Strategic Research Fund. Co-I. £20,100.

"Misinformation and COVID-19 in social media in Venezuela." Global Challenges Strategy Group, University of Liverpool. Co-I. £5,000

- "Understanding and Predicting the Long-term Labour Market and Migration Trajectories of Immigrants and Their Children in the United Kingdom". Economic and Social Research Council (ESRC) North West Social Sciences Doctoral Training Partnership (NWSSDTP). PI. £120,000.
- "Past and future of urban structures in Latin American cities". ODA Seed Fund Project, University of Liverpool. Co-I. £8,900.
- "Understanding the declining trend in internal migration in Europe". Regional Studies Association (RSA). PI. £33,490.39.
- "4th Chilean Graduate Conference: Advanced knowledge to enhance Chile's development". Council on Australia Latin America Relations (COALAR) project. PI. AU\$10,000 (maximum amount available).
- "Application of advanced knowledge to enhance Chile's development". ChileGlobal Project. PI. AU\$22,500 (maximum amount available).
- "Doctoral studentship: Modelling the spatial patterns of labour mobility in Chile". National Commission for Scientific and Technological Research (CONICYT). Government of Chile. PI. £140,000.

## Consultancy

- "What do 'left behind' areas look like over time?" Let Behind Neighbourhoods Local Trust. https://localtrust.org.uk
- "Analysis of Twitter data to measure anti-migration sentiment during COVID-19".

  International Organization for Migration. Global Migration Data Analysis Centre (GMDAC).

  https://gmdac.iom.int
- "Data science training programme". The Universities and Colleges Admissions Service (UCAS). https://www.ucas.com

#### **Awards**

- "Journal of Geographical Systems Editors' Choice Award". Best article: Projecting the demographic impact of Syrian migration in a rapidly ageing society, Germany. Special Issue "Spatial Demography in Regional Science". doi.org/10.1007/s10109-021-00357-3
- "Best Paper Spatial Economic Analysis". An evolutionary approach to the delimitation of labour market areas: an empirical application for Chile. Regional Studies Association. doi.org/10.1080/17421772.2017.1273541
- "Dean's Award for Research Higher Degree Excellence". University of Queensland. Fewer than 10% of PhD graduates from the University of Queensland are recognised this way each year.
- 2007 "Best educational performance award, 2002 Business Management cohort". Universidad Catolica del Norte.

## **PUBLICATIONS**

#### **Journal Articles**

Arribas-Bel, D., Green, M., Rowe, F., Singleton, A., "Open Data Products. A Framework for Creating Valuable Analysis Ready Data." *Journal of Geographical Systems*, in print. xxx

- Patias, N., Rowe, F., Cavazzi, S. and Arribas-Bel, D., "Sustainable urban development indicators in Great Britain from 2001 to 2016." *Landscape and Urban Planning*, published online ahead of print. doi:10.1016/j.landurbplan.2021.104148
- Riffe, T., Acosta, E., and Rowe, F., et al. "Data Resource Profile: COVerAGE-DB: a global demographic database of COVID-19 cases and deaths." *International Journal of Epidemiology*, 50(2), pp.390-390f. doi.org/10.1093/ije/dyab027
- Graells-Garrido, E., Serra-Burriel, F., Rowe, F., Cucchietti, F.M. and Reyes, P., "A city of cities: Measuring how 15-minutes urban accessibility shapes human mobility in Barcelona". *PloS one*, 16(5), p.e0250080. doi.org/10.1371/journal.pone.0250080
- Dolega, L., Rowe, F. and Branagan, E. "Going digital? The impact of social media marketing on retail website traffic, orders and sales". *Journal of Retailing and Consumer Services*, 60, p.102501. doi.org/10.1016/j.jretconser.2021.102501
- Newsham, N., Rowe, F. "Projecting the demographic impact of Syrian migration in a rapidly ageing society, Germany". *Journal of Geographical Systems*. 23, 231–261. doi.org/10.1007/s10109-018-00290-y
- Gu, H., Rowe, F., Liu, Y. and Shen, T. "Geography of talent in China during 2000–2015: An eigenvector spatial filtering negative binomial approach". *Chinese Geographical Science*, 31(2), pp.297-312. doi.org/10.1007/S11769-021-1191-y
- Green, M., Musi, E., Rowe, F., Charles, D., Pollock, F.D., Kypridemos, C., Morse, A., Rossini, P., Tulloch, J., Davies, A. and Dearden, E. "Identifying how COVID-19-related misinformation reacts to the announcement of the UK national lockdown: An interrupted time-series study". *Big Data & Society*, 8(1), p.20539517211013869. doi.org/10.1177/20539517211013869
- Tang, A., Perales, F., Rowe, F. and Baxter, J. "The going gets rougher: exploring the labour market outcomes of international graduates in Australia". *Life Course Centre Working Paper*, (2021-04). doi.org/10.2139/ssrn.3791715
- Backman, M., Lopez, E. and Rowe, F. "The occupational trajectories and outcomes of forced migrants in Sweden. Entrepreneurship, employment or persistent inactivity?". *Small Business Economics*, 56(3), pp.963-983. doi.org/10.1007/S11187-019-00312-z
- Rowe, F., Maier, G., Arribas-Bel, D. and Rey, S. "The Potential of Notebooks for Scientific Publication, Reproducibility and Dissemination". *Region*, 7(3), pp1-5. doi.org/10.18335/region.v7i3.357
- 2020 Chen, M., Fahrner, D., Arribas-Bel, D. and Rowe, F. "A reproducible notebook to acquire, process and analyse satellite imagery". *Region*, 7(2), pp15-46. doi.org/10.18335/region.v7i2.295
- Rowe, F., Bell, M., Bernard, A., and Charles-Edwards, E. "Internal Migration Intensity and Impact in Europe". *European Demographic Data Sheet 2020. Vienna Institute of Demography*. doi.org/10.31219/osf.io/a6x3q
- Green, M.A. and Rowe, F., 2021. "Explaining the widening distribution of Body Mass Index: A decomposition analysis of trends for England, 2002–2004 and 2012–2014". *Area*, 53(2), pp.362-372. doi.org/10.1111/area.12675
- Rowe, F. and Patias, N., 2020. "Mapping the spatial patterns of internal migration in Europe". Regional Studies, Regional Science, 7(1), pp.390-393. doi.org/10.1080/21681376.2020.1811139
- 2019 Rowe, F., Bell, M., Bernard, A., Charles-Edwards, E. and Ueffing, P. "Impact of Internal

- Migration on Population Redistribution in Europe: Urbanisation, Counterurbanisation or Spatial Equilibrium?". *Comparative Population Studies*. 44. doi.org/10.12765/CPoS-2019-18
- Rodríguez Vignoli, J. and Rowe, F. "Efectos cambiantes de la migración sobre el crecimiento, la estructura demográfica y la segregación residencial en ciudades grandes: el caso de Santiago, Chile, 1977-2017". Serie Población y Desarrollo. United Nations. 125, pp.1-91 hdl.handle.net/11362/44367
- Singer, L., Green, M., Rowe, F., Ben-Shlomo, Y., Kulu, H. and Morrissey, K. "Trends in multimorbidity, complex multimorbidity and multiple functional limitations in the ageing population of England, 2002–2015". *Journal of comorbidity*, 9, p.2235042X19872030. doi.org/10.1177/2235042X19872030
- Singer, L., Green, M., Rowe, F., Ben-Shlomo, Y. and Morrissey, K. "Social determinants of multimorbidity and multiple functional limitations among the ageing population of England, 2002–2015". SSM-population health, 8, p.100413. doi.org/10.1016/j.ssmph.2019.100413
- Patias N., Rowe F., Cavazzi S. "A Scalable Analytical Framework for Spatio-Temporal Analysis of Neighborhood Change: A Sequence Analysis Approach". In: Kyriakidis P., Hadjimitsis D., Skarlatos D., Mansourian A. (eds) Geospatial Technologies for Local and Regional Development. AGILE 2019. Lecture Notes in Geoinformation and Cartography. Springer, Cham. doi.org/10.1007/978-3-030-14745-7\_13
- Rowe, F, Patias, N. and Arribas-Bel, D. "Neighbourhood Change and Trajectories of Inequality in Britain, 1971-2011". Policy Brief. *The UK2070 Commission Paper Series*. uk2070.org.uk/publications/
- Rowe, F.R., Patias, N. and Rodríguez-Vignoli, J. "R Package 'CIM': Compositional Impact of Migration". *CRAN R project*. CRAN.R-project.org/package=CIM
- Koster, S. and Rowe, F. "Fueling research transparency: Computational notebooks and the discussion section". *Region*, 6(3), pp.1-2. doi.org/10.18335/region.v6i4.309
- Stubbings, P., Peskett, J., Rowe, F. and Arribas-Bel, D. "A hierarchical urban forest index using street-level imagery and deep learning". *Remote Sensing*, 11(12), p.1395. doi.org/10.3390/rs11121395
- Rowe, F. "Establishing the extent and pace of the contemporary trend of migration decline in Europe". *Regions E-Zine: Regional Studies Association*. doi.org/10.1080/13673882.2018.00001008
- Rodríguez-Vignoli, J. and Rowe, F. "How is internal migration reshaping metropolitan populations in Latin America? A new method and new evidence". *Population Studies*, 72(2), pp.253-273. doi.org/10.1080/00324728.2017.1416155
- Vignoli, J.R. and Rowe, F. "Internal migration and spatial de-concentration of population in Latin America". *N-IUSSP news magazine*, International Union for the Scientific Study of Population.
- Wilson, T., Brokensha, H., Rowe, F. and Simpson, L. "Insights from the evaluation of past local area population forecasts". *Population Research and Policy Review*, 37(1), pp.137-155. doi.org/10.1007/S11113-017-9450-4
- Tao, S., Corcoran, J., Rowe, F. and Hickman, M. "To travel or not to travel: 'Weather' is the question. Modelling the effect of local weather conditions on bus ridership". *Transportation research part C: emerging technologies*, 86, pp.147-167. doi.org/10.1016/j.trc.2017.11.005

- Rodríguez-Vignoli, J. and Rowe, F. "The Changing Impacts of Internal Migration on Residential Socio-Economic Segregation in the Greater Santiago". In International Union for the Scientific Study of Population Conference, Cape Town. bit.ly/3hM8HgB
- Faggian, A., Corcoran, J. and Rowe, F. "Special issue on youth and graduate migration". *The Annals of Regional Science*, 59(3), pp.571-575. doi.org/10.1007/s00168-017-0845-2
- Rowe, F., Corcoran, J. and Bell, M., 2017. "The returns to migration and human capital accumulation pathways: non-metropolitan youth in the school-to-work transition". *The Annals of Regional Science*, 59(3), pp.819-845. doi.org/10.1007/s00168-016-0771-8
- Casado-Díaz, J.M., Martínez-Bernabéu, L. and Rowe, F. "An evolutionary approach to the delimitation of labour market areas: an empirical application for Chile". *Spatial economic analysis*, 12(4), pp.379-403. doi.org/10.1080/17421772.2017.1273541
- Rowe, F., Casado-Díaz, J.M. and Martínez-Bernabéu, L. "Functional labour market areas for Chile". *Region*, 4(3), pp.7-9. doi.org/10.18335/region.v4i3.199
- Rowe, F. "The CHilean Internal Migration (CHIM) database: Temporally consistent spatial data for the analysis of human mobility". *Region*, 4(3), pp.1-6. doi.org/10.18335/region.v4i3.198
- Bernard, A., Rowe, F., Bell, M., Ueffing, P. and Charles-Edwards, E. "Comparing internal migration across the countries of Latin America: A multidimensional approach". *PLoS One*, 12(3), p.e0173895. doi.org/10.1371/journal.pone.0173895
- Rodríguez-Vignoli, J. and Rowe, F. "¿Contribuye la migración interna a reducir la segregación residencial?: el caso de Santiago de Chile 1977-2002". *Revista Latino Americana de Población*. livrepository.liverpool.ac.uk/3017221/1/178-382-1-PB.pdf
- Faggian, A., Corcoran, J. and Rowe, F. "Evaluating the effects of Australian policy changes on human capital: the role of a graduate visa scheme". *Environment and Planning C: Government and Policy*, 34(1), pp.151-170. doi.org/10.1177/0263774X15614755
- Ueffing, P., Rowe, F. and Mulder, C.H., "Differences in attitudes towards immigration between Australia and Germany: The role of immigration policy.". *Comparative Population Studies*, 40(4). doi.org/10.12765/CPoS-2015-18
- Tang, A.Z.R., Rowe, F., Corcoran, J. and Sigler, T., "Where are the overseas graduates staying on? Overseas graduate migration and rural attachment in Australia.". *Applied Geography*, 53, pp.66-76. doi.org/10.1016/j.apgeog.2014.06.004
- Rowe, F., Corcoran, J. and Faggian, A., "Mobility patterns of overseas human capital in Australia: the role of a 'new'graduate visa scheme and rural development policy.". *Australian Geographer*, 44(2), pp.177-195. doi.org/10.1080/00049182.2013.789589
- Wilson, T. and Rowe, F. "The forecast accuracy of local government area population projections: a case study of Queensland.". *Australasian Journal of Regional Studies*, 17(2), pp.204-243. https://search.informit.org/doi/10.3316/informit.204542367706271
- Rowe, F, Aroca, P 2008, "Eficiencia de la Migracíon Interregional en Chile para Ajustar el Mercado Laboral" Revista AMERIKA, 1(2), pp. 1-19.

## **Book Chapters**

Rowe, F., Mahony, M., Graells-Garrido, E., Rango, M., and Sievers, N. "Using Twitter Data to Monitor Immigration Sentiment". International Organization for Migration. Practitioner Guide Book *OSF Preprints*. doi.org/10.31219/osf.io/sf7u4 Accepted.

- Green M., Pollock F.D., Rowe F. "New Forms of Data and New Forms of Opportunities to Monitor and Tackle a Pandemic". In: Andrews G.J., Crooks V.A., Pearce J.R., Messina J.P. (eds) *COVID-19 and Similar Futures. Global Perspectives on Health Geography.* Springer, Cham. doi.org/10.1007/978-3-030-70179-6\_56
- Rowe F., Bell M. "The Drivers of Long-Distance Commuting in Chile: The Role of the Spatial Distribution of Economic Activities". In: Poot J., Roskruge M. (eds) *Population Change and Impacts in Asia and the Pacific.* New Frontiers in Regional Science: Asian Perspectives, vol 30. Springer, Singapore. doi.org/10.1007/978-981-10-0230-4\_6
- Tang A.Z.R., Rowe F., Corcoran J., Faggian A. "The Changing Composition and Fortunes of Overseas Graduates in Australia: The Case of Chinese and Indian Graduates". In: Poot J., Roskruge M. (eds) *Population Change and Impacts in Asia and the Pacific*. New Frontiers in Regional Science: Asian Perspectives, vol 30. Springer, Singapore. doi.org/10.1007/978-981-10-0230-4\_9
- Tang, A.Z.R., Corcoran, J. and Rowe, F. "The role of migration on education—job mismatch: evidence from overseas graduates in Australia". In: Faggian, A., Corcoran, J. *Graduate Migration and Regional Development*. Edward Elgar Publishing. doi.org/10.4337/9781784712167
- Corcoran, J. and Rowe, F. "The impacts of policy changes on overseas human captial in Australia: the implementation of the 485 graduate visa scheme". In Lombard, J., Stern, E., Clarke, G. *Applied Spatial Modelling and Planning* (pp. 57-77). Routledge. doi.org/10.4324/9781315683621
- Tang, A.Z.R., Rowe, F., Corcoran, J. and Sigler, T., "Spatial mobility patterns of overseas graduates in Australia. In Demography for planning and policy: Australian case studies". In Wilson T., Charles-Edwards E., Bell M. *Demography for Planning and Policy: Australian Case Studies. Applied Demography Series* (pp. 57-77). Springer, Cham. doi.org/10.1007/978-3-319-22135-9 10
- Rowe F. "The Geography and Determinants of Regional Human Capital in Eight Latin American and Caribbean Countries.". In Cuadrado-Roura J., Aroca P. Regional Problems and Policies in Latin America. Advances in Spatial Science (The Regional Science Series)

  Springer, Berlin, Heidelberg doi.org/10.1007/978-3-642-39674-8\_17

# **Conference Proceedings**

Rodriguez, J. and Rowe, F., "The Changing Impacts of Internal Migration on Residential Socio-Economic Segregation in the Greater Santiago." *International Union for the Scientific Study of Population<sup>th</sup> International Population Conference*. Cape Town, South Africa. https://iussp.confex.com/iussp/ipc2017/meetingapp.cgi/Paper/5219

#### **Edited Articles and Reviews**

- Rodríguez-Vignoli, J., Rowe, F. "Internal migration and spatial de-concentration of population in Latin America." *N-IUSSP news magazine, International Union for the Scientific Study of Population* https://bit.ly/3xmEyJq
- Corcoran, J., Pojani, D., Rowe, F., Zhou, J., Kim, J., Wei, M., Tao, S., Sigler, T. and Yan, L., "Too wet? Too cold? Too hot? This is how weather affects the trips we make" *The Conversation* https://bit.ly/3lgPCFj

#### **Reports and Other Publications**

- Rowe, F., Mahony, M., Graells-Garrido, E., Rango, M., Sievers, N. "Policy Brief: Tracking Sentiment about Immigration at the Early Stages of the COVID-19 Pandemic". International Organization for Migration.
- Darlington-Pollock, F., Arribas-Bel, D., Fleischman, M., Newsham, N., Rowe, F. "Policy Brief: What do 'left behind' areas look like over time? Developing place-based typologies of left behind areas". Local Trust.
- Robinson, C., Rowe, F., Patias, N., Wray, I. "Socio-economic Inequality and Geographic Spread of the COVID-19 Pandemic in England". *Working paper series of the UK2070 Commission, Series 4*, 12. uk2070.org.uk/wp-content/uploads/2021/06/UK2070-PAPERS-SERIES-4.pdf
- Robinson, C., Rowe, F. and Patias, N. "The Geography of the COVID-19 Pandemic in England". Policy Brief Series: Responding to COVID-19 in the Liverpool City Region. Heseltine Institute for Public Policy, Practice and Place. University of Liverpool https://bit.ly/3fhc1hQ
- Rowe, F. Robinson, C., Patias, N. "Policy Brief: Changes in Neighbourhood Socio-economic Structures in Teesside, 1971-2011". The UK2070 Commission.
- Rowe, F, Patias, N. and Arribas-Bel, D. "Neighbourhood Change and Trajectories of Inequality in Britain, 1971-2011". Policy Brief. *The UK2070 Commission Paper Series*. uk2070.org.uk/publications/
- Rowe, F, Corcoran, J and Bell, M. "Changing post-school pathways and outcomes: Melbourne and regional students." Department of Planning and Community Development. Spatial Analysis and Research Branch. State Government Victoria. Technical report 6. https://bit.ly/2TMUDKD
- Rowe, F, Corcoran, J and Bell, M. "Determinants of post-school choices of young people: The workforce, university or vocational studies?,." Department of Planning and Community Development. Spatial Analysis and Research Branch. State Government Victoria. Technical report 5. https://bit.ly/3jc6lHa
- Rowe, F, Corcoran, J and Bell, M. "Labour market outcomes and educational and occupational pathways of young movers starting off in regional Victoria" Department of Planning and Community Development. Spatial Analysis and Research Branch. State Government Victoria. Technical report 4. https://bit.ly/3rISKem
- Rowe, F, Corcoran, J and Bell, M. "Labour market outcomes and main educational and occupational pathways of young Victorians." Department of Planning and Community Development. Spatial Analysis and Research Branch. State Government Victoria. Technical report 3. https://bit.ly/3rPk9LF
- Rowe, F, Corcoran, J and Bell, M. "Patterns and sequences of mobility." Department of Planning and Community Development. Spatial Analysis and Research Branch. State Government Victoria. Technical report 2. https://bit.ly/3lhX1Ew
- Rowe, F, Corcoran, J and Bell, M. "Analytical approach and data issues: report prepared for State Victoria government" Department of Planning and Community Development. Spatial Analysis and Research Branch. State Government Victoria. Technical report 1. https://bit.ly/3ihW1hP
- Rowe, F, "Spatial labour mobility in a transition economy: Migration and commuting in

Chile." PhD Thesis. Department of Geography, Planning and Environmental Management, University of Queensland, Australia. doi.org/10.14264/uql.2017.427

## Working papers

- Tang, A., Perales, F., Rowe, F. and Baxter, J., From Bad to Worse: Examining the Deteriorating Labour Market Outcomes of International Graduates in Australia. Life Course Centre Working Paper, University of Queensland, Australia.
- Tang, A., Perales, F., Rowe, F. and Baxter, J., *The going gets rougher: exploring the labour market outcomes of international graduates in Australia*. Life Course Centre Working Paper, University of Queensland, Australia.

# Manuscripts under Review

- Rowe, F., Mahony, M., Graells-Garrido, E., Rango, M. and Sievers, N., "Using Twitter to Track Immigration Sentiment During Early Stages of the COVID-19 Pandemic." Under review. 10.31235/osf.io/pc3za
- Rowe, F., Mahony, M., Tao, S., "Machine Learning for Near-Real Time Bus Ridership Prediction During Extreme Weather." Under review.
- Freire-Vidal, Y., Graells-Garrido, E., Rowe, F., "A Framework to Understand Attitudes Towards ImmigrationThrough Twitter." Under review.
- Aparicio-Castro, A., Wiśniowski, A., Rowe, F. "A Bayesian approach to estimate annual bilateral migration flows for South America using census data." Under review.
- Thomas, J., Rowe, F., Williamson, P., Lin, E., "The Effect of Parental Leave Policies on Increasing Fertility: A Systematic Review." Under review.
- Thomas, J., Rowe, F., Lin, E., "Declining Fertility in Taiwan: The Long-Term Deterring Impact of Housework Imbalance." Under review.
- Arribas-Bel, D., Rowe, F., Chen, M., Comber, S. "'An image library" The potential of imagery in Regional Science" Under review.

#### **INVITED TALKS**

- "Machine learning in the Social Sciences." Methods Northwest. North West Social Science Doctoral Training Partnership. 12 Nov. Online. United Kingdom.
- "Using Machine Learning and Twitter To Profile Attitudes Towards Immigration." Economics Seminar ICESI, 30 July, Universidad Icesi. Cali, Colombia.
- "Using Machine Learning and Twitter Data to Profile Attitudes Towards Immigration.", Max Planck Institute for Demographic Research (MPIDR), 10 March, Rostock, Germany.
- "Measuring Urban Forest Using Street-Level Imagery and Deep Learning". Building a future for the urban analytics blueprint. The Alan Turing Institute. 17 Oct. Bristol. United Kingdom.
- "International Migration: Busting Myths!." Roxby Lecture. University of Liverpool. 16 May. Liverpool. United Kingdom.
- "Migration, Cities and Big Data." Population and Development Division, United Nations, 15 April, New York, United States.

- "Migration, Urbanisation and Big Data." University of Toronto, 4 April, Toronto, Canada.
- "The Impact of Internal Migration on Population Redistribution in Europe." University of Manchester Seminar, 11 May, Manchester, United Kingdom.
- "Socioeconomic residential segregation, intrametropolitan spatial inequalities and internal migration in Latin America large cities." Latin American Demographic Centre (CELADE), Economic Commission for Latin America and the Caribbean (CELADE), United Nations (UN), 30 May, Santiago, Chile.
- "The returns to migration and human capital accumulation pathways: Non-metropolitan youth in the school-to-work transition." National Institute of Demographic and Economic Analysis, The University of Waikato, 17 May, 2016, Hamilton, New Zealand.
- "Careers and migration pathways and outcomes of young people." Research Roundtable, educational, employment and migration pathways and outcomes of young people.

  Department of Education and Training, 15 October, 2015, Brisbane, Australia.
- "Internal migration and development in Latin America." Latin American Demographic Centre (CELADE), Economic Commission for Latin America and the Caribbean (CELADE), United Nations (UN), 14-15 May, Santiago, Chile.
- "The effects of economic liberalisation on inter-regional labour migration in a transition economy, Chile." Tinbergen Workshop, 19-20 May, Amsterdam, The Netherlands.

# **Campus Talks**

- "Using Twitter to Track Immigration Sentiment During Early Stages of the COVID-19 Pandemic." University of Liverpool. 4 Jun. Liverpool. United Kingdom.
- 2018 "Regional Science." University of Liverpool. 21 Oct. Liverpool. United Kingdom..
- "Totes amaze-balls data opportunity." University of Liverpool. 12 Feb. Liverpool. United Kingdom.
- "Why has the distribution of BMI widened? Evidence for England, 2004-2013" University of Liverpool. 22 Mar. Liverpool. United Kingdom.

# **CONFERENCE ACTIVITY**

#### **Plenary Addresses**

- "The Rise of International Graduates: Contributing to Regional Australia." International Education Association of Australia 8th Mid-Winter Researchers' Seminar, 4 July, Brisbane, Australia.
- "Existing Chilean-Australian relationships: The role of human capital mobility and research/policy implication." Disseminating Knowledge to reinforce Chilean? Australian Networks, 4-5 Sep, Melbourne, Australia.
- "The role of human capital mobility in enhancing science." Strengthening ties between Chile and Australia, First Meeting of Chilean Scientist in Brisbane Australian Networks, 31 July, Brisbane, Australia. Keynote presentation.

## **Sessions Organised**

"Special Session: Human mobility, Migration and Stay-in-Place Patterns and Changes During Pandemic Times." European Regional Science Association Conference. 24-27 Aug. Bolzano,

- Italy. Co-organisers: Alessandra Faggian and Rachel Franklin.
- "Special Session: Doing regional science with new sources of big data." European Regional Science Association Conference. 28-31 Aug. Cork, Ireland.
- "Workshop Session: The Potential of Satellite Imagery for Studying Human Activity." Workshop. 14-15 Jun. Liverpool, United Kingdom.

## Symposium & Workshops

- "AI and data science in the age of COVID-19 Workshops". The Alan Turing Institute. Online, United Kingdom. Nov 25-Dec 9.
  - https://www.turing.ac.uk/events/ai-and-data-science-age-covid-19
- "Second UK2070 Commission National Symposium". Durham, United Kingdom. Nov 18.
- "First UK2070 Commission National Symposium", hosted by Leeds City Council. Leeds, United Kingdom. Jun 13.
- "Spatial Demography Symposium": Spatial mobility patterns of overseas graduates in Australia. Hosted by the University of Queensland, Brisbane, Australia. Jul 2.

#### **TEACHING**

# **Postgraduate**

- 2022 R for Population Science. https://fcorowe.github.io/ps/
- 2020 Spatial Modelling for Data Scientists. https://gdsl-ul.github.io/san
- 2016 Geographic Data Science Dissertation.
- 2016-2017 Population, Health and Mortality.
- 2016-2018 Theorising Human Geography.

# **Undergraduate**

# University of Liverpool, United Kingdom

- 2019–2020 Exploring the Social World.
- 2016 Population and Societies.
- 2021 Virtual Field Class Year 3.
- 2016 Geography undergraduate dissertation supervisions.
- 2016 Geography Year 1 and 2 Tutorials.
- 2018-2019 Toronto Field Class Year 3.
- 2017-2018 Singapore Field Class Year 3.
- 2016–2019 Statistics for Social Scientists.
- 2016–2017 Human Geography through Merseyside.
- 2016–2017 Glasgow Field Class Year 2.

# University of Queensland, Australia

2016 Global Population Issues.

2015 Human Mobility and Migration.

2014 Human Settlements.

# Universidad Catolica del Norte, Chile

2008 Statistics.

2008 Macro-economics.

# Universidad Santo Tomas, Chile

2007 Algebra

2007 Macroeconomics

#### **SUPERVISION**

# **Current PhD supervision**

- Niall Newshaw. "Understanding the extent, causes, consequences and future of population decline in Europe". The University of Liverpool.
- Michael Mahony, "Understanding and Predicting the Long-term Labour Market and Migration Trajectories of Immigrants and Their Children in the United Kingdom". The University of Liverpool.
- 2018– Danial Owen, "Urban sensors: exploiting the opportunities". The University of Liverpool.
- 2018 Melanie Green, "Automating detailed urban data extraction from high resolution aerial imagery". The University of Liverpool.
- Ya-Weng Tseng, "Evaluating Interdisciplinary Learning". National Tsing-Hua University The University of Liverpool.
- 2018 Andrea Apacio. "Modelling and forecasting the spatial and temporal patterns of bilateral international migration flows". The University of Manchester.
- Nikos Patias. "Scalable Analytical Framework for Spatio-temporal Data Analysis". The University of Liverpool.
- Franco Barrera. "Technological change, labor markets and educational system". Universidad de Iberoamerica.

# **Complete PhD supervision**

- Jac Thomas. "Explaining the determinants of fertility decline in Taiwan". National Tsing-Hua University The University of Liverpool.
- 2018-2021 Li-Dan Shang. "How do the foreign spouses impact the quality of learning of the next generation". National Tsing-Hua University The University of Liverpool.
- 2014-2020 Angelina Zhi Rou Tang, "Overseas graduates in Australia: Characteristics, dynamics and change", The University of Queensland.

- 2016-2019 Leo Singer. "Life-course patterns of multimorbidity in its social contexts". The University of Liverpool.
- 2016-2018 Alina Pelikh. "Transition to adulthood in Britain: The analysis of life trajectories of young adults". The University of Liverpool.
- 2013-2015 Wilma Terblance, "Population Estimates and Projections for Australia's Very Elderly Population at State and National Level", The University of Queensland.

#### MSc supervision

- Sultan Alotaibi, "COVID-19 Confirmed Cases and Deaths in United Kingdom and Association with Socio-Demographic Profile: A Spatial and Temporal Analysis", The University of Liverpool.
- Michael Mahony, "Using satellite imagery and machine learning to estimate access to improved water sources: a case study of Malawi", The University of Liverpool.
- Emma Branagan, "The Effects of Social Media on Trading Outcomes: A Company Case Study", The University of Liverpool.
- Niall Newsham, "A Projection of the Demographic Impact of Syrian Migration in Germany". The University of Liverpool. Dissertation awarded the Bob Woods Postgraduate Dissertation Prize in population studies and reworked into a collaborative paper to be published in the Journal of Geographical Systems.

#### **Honours**

- Angelina Zhi Rou Tang, "Spatial mobility patterns of overseas graduates in Australia", The University of Queensland.
- Rachel Ong, "Human capital and migration of international graduates in Australia: Investigating the impact of the graduate visa", The University of Queensland.

# **SERVICE**

#### Journal reviews

Advances in Life Course Research • Applied Geography • Applied Spatial Analysis and Policy • Australian Population Studies • Cities • Comparative Population Studies • Demographic Research • Economic Geography • Environment and Planning C • Forests • Geographical Analysis • Geojournal • Journal of Geographical Systems • The Australian Economic Review • The Australian Journal of Agricultural and Resource Economics • The Australian Economic Review • The Journal of Annals of Regional Science • Journal of Ethnic and Migration Studies • Journal of Regional Science • Journal of Population Research • Journal of Urban Technology • Papers in Regional Studies • PLOS One • Population Research and Policy Review • Population, Space and Place • Regional Studies • Socio-Economic Planning Sciences • The International Journal of Human Resource Management • Transportation Research Part D • UCL Open Environment

## **Grant review**

Australian Research Council (ARC) • Chilean Intelligence National Agency • Chilean National Commission for Scientific and Technological Research (CONICYT).

#### **Book review**

Routledge • Sage.

# **Professional Membership**

- 2017 Member, British Society for Population Studies.
- 2016- Member, Regional Studies Association.
- 2014 Member, Regional Science Association International.
- 2013 Member, Chilean Society of Regional Science.

## **Scientific Software**

- 2021 Patias, N. and Rowe, F., extRatum, R package: https://CRAN.R-project.org/package=extRatum
- 2019 Rowe, F., Patias, N. and Rodríguez-Vignoli, J., Compositional Impact of Migration (CIM), R package: https://CRAN.R-project.org/package=CIM

# Open data products

- Neighbourhood trajectories in Great Britain 1971-2011: https://data.cdrc.ac.uk/dataset/neighbourhood-trajectories-great-britain-1971-2011
- 2017 The Chilean Internal Migration (CHIM) database: https://s3.amazonaws.com/geoda/data/CHIM
- 2017 Functional Labour Market Areas:

https://geodacenter.github.io/data-and-lab//FLMA/