



Applied Geography Commission: Activity Report for 2020 and 2021

Membership

Committee Chair (2020 – 2024):

Nik Lomax, School of Geography, University of Leeds, Leeds, LS2 9JT, UK,
n.m.lomax@leeds.ac.uk

Steering committee members (2020-2024):

John R. Lombard, School of Public Service, Old Dominion University, 2092 Constant Hall, CBPA, Norfolk, VA 23529, USA, jlombard@ODU.EDU

Michael Mann, Department of Geography, Columbian College of Arts and Sciences, George Washington University, mmann1123@gwu.edu

Jonathan Corcoran, School of Earth and Environmental Sciences, Faculty of Science, University of Queensland, Australia, ji.corcoran@uq.edu.au

Minh Kieu, Faculty of Engineering, University of Auckland, New Zealand,
minh.kieu@auckland.ac.nz

Yan Liu, School of Earth and Environmental Sciences, The University of Queensland, Australia, yan.liu@uq.edu.au

Our group is comprised of 138 members from 27 countries:

Country	Number of members
Australia	5
Canada	2
Switzerland	1
Chile	1
China	4
Estonia	2
Finland	1
France	8
Greece	1
Ireland	2
Israel	22
Japan	2
Italy	2
South Korea	1
Netherlands	3
Norway	1
New Zealand	1
Poland	2
Portugal	1
Romania	1
Russia	1
Sweden	1
Tunisia	1
UK	39
USA	17
South Africa	1
Unknown	15
Total	138

Meetings

Sessions at the 34th IGC Congress, 16-20 August 2021

The Commission organised two sessions at the 34th IGC Congress, 16-20 August 2021, Istanbul. The papers submitted covered a rich variety of applied geography topics:

- Geotrauma Versus Social Pathology In Geographical Applied Research, Tomasz Wites (University Of Warsaw)
- Excessive Use Of Ground Water And Its Impact On Water Level, Anil Kumar (M.U., Bodh Gaya)
- Spatial Aspects Of The Supply–Demand Gap In Childcare Services Following The Implementation Of A Comprehensive Support System For Children And Child-Rearing

In Japan, Yoshiki Wakabayashi (Tokyo Metropolitan University), Yoshimichi Yui (Hiroshima University), Mikoto Kukimoto (Oita University)

- Energy Vulnerability Of The City Of São Paulo, Gabriel José Mendonça De Azevedo (University Of São Paulo), Luis Antonio Bittar Venturi (University Of São Paulo)
- Familiar Strangers In Public Transport Networks: Detection, Measurement And Characterisation, Jonathan Corcoran (The University Of Queensland), Renee Zahnow (The University Of Queensland), Min Zhang (The University Of Queensland)

Sessions at the UGI-IGU Centennial Congress in Paris, 18-22 July 2022

The AGC is organising two sessions at the UGI-IGU Centennial Congress in Paris, 18-22 July 2022 with the theme of **Modelling Individual Behaviour In An Applied Geography Context**

Abstract

Individual level data is becoming increasingly available for research purposes. This takes the form of more traditional datasets such as surveys and census microdata as well as emerging 'digital footprint' data such as those produced by mobile phones, wearable technology (e.g. accelerometers), store card transactions and travel cards. Alongside this plethora of data, there also exist established and emerging methods for creating representative synthetic data which can be used for research purposes.

In order to utilize these datasets, a range of methods exist which can be used to undertake analysis and provide insight. These include, but are not limited to Agent Based Models (ABMs), Microsimulation Models, survey data analysis methods and GIS based methods. Methods also exist for creating spatially representative synthetic data based on these datasets, for example spatial microsimulation models are often used to reweight non-spatial survey microdata.

This session is focused on the modelling of individual behavior and the use of individual level data to provide broader insights in to societal outcomes. Individual level in this context is broadly defined, it could be people, households or any other entity which can be modelled as a single unit of analysis. Submissions are welcome which articulate how these methods and models are utilized to provide insight in an applied context. The application areas of research concerned with individual level modelling are broad, spanning transport, health, employment, education and beyond so this session seeks to capture this breadth. Submissions which clearly articulate how methods are applied to these datasets to provide insight in to behavior or societal outcomes are particularly welcome.

The session format will consist of presentations with time for questions and answers. Submissions are encouraged to make use of innovative visual methods and as such video exemplars, demonstrations of models in action and other interactive forms of presentation are welcome. This session will be delivered in a face-to-face setting where possible.

Plans for 2023-2024 standalone conference and events

The AGC are currently consulting with members about a standalone conference in 2023, with a number of options for location being considered. A second objective is to actively engage with at least one other IGU Commission to sponsor a joint meeting in the 2023-2024 period.

Publications

Journal Special Issue

The AGC has compiled a Special Issue for the journal *Applied Spatial Analysis and Policy*, published by Springer, entitled “Contemporary applications for spatially integrated social science”, published in September 2021. The Special Issue comprises six original research articles and an editorial from members of the AGC steering committee.

The editorial (Corcoran *et al.* 2021) sets out the aim of the special issue, “*to bring together recent scholarship that serve to highlight the breadth of research undertaken at the interface of the social and spatial sciences.*”

The range of papers published in the special issue represents the breadth of contemporary Applied Geography topics currently being researched by group members. Mulligan (2021) examines how the pattern of patents issued in urban areas across the United States have changed over a 25-year period. Kimpton (2021) examines urban mobility at park and ride facilities for the car dependent city of Brisbane. Murray *et al.* (2021) use a spatial analytic approach to examine geographic variation in risk of flooding, flash floods, mudslides and debris flows in Santa Barbara, California. Borsellino *et al.* (2021) examine the visitation dynamics of third places across a large metropolitan university campus. James *et al.* (2021) use geodemographic analysis to understand the patterns and trends of meat expenditure and consumption in the United Kingdom. Wang *et al.* (2021) examine settlement pathways and residential migration patterns of mainland-China born migrants in Australia using WeChat data.

Paper references

Borsellino, R., Charles-Edwards, E. & Corcoran, J. A Toolkit for Measuring Visitation in Third Places. *Appl. Spatial Analysis* **14**, 547–562 (2021). <https://doi.org/10.1007/s12061-020-09372-1>

Corcoran, J., Lomax, N. & Lombard, J. Contemporary Applications For Spatially Integrated Social Science. *Appl. Spatial Analysis* **14**, 445–447 (2021). <https://doi.org/10.1007/s12061-021-09425-z>

James, W.H., Lomax, N., Birkin, M. *et al.* Geodemographic Patterns of Meat Expenditure in Great Britain. *Appl. Spatial Analysis* **14**, 563–590 (2021). <https://doi.org/10.1007/s12061-020-09344-5>

Kimpton, A. Explaining the Railheading Travel Behaviour with Home Location, Park 'N' Ride Characteristics, and the Built Environment to Strengthen Multimodalism. *Appl. Spatial Analysis* **14**, 525–546 (2021). <https://doi.org/10.1007/s12061-020-09361-4>

Mulligan, G.F. Revisiting Patent Generation in U.S. Metropolitan Areas: 1990–2015. *Appl. Spatial Analysis* **14**, 473–496 (2021). <https://doi.org/10.1007/s12061-020-09354-3>

Murray, A.T., Carvalho, L., Church, R.L. *et al.* Coastal Vulnerability under Extreme Weather. *Appl. Spatial Analysis* **14**, 497–523 (2021). <https://doi.org/10.1007/s12061-020-09357-0>

Wang, S., Liu, Y., Sigler, T. *et al.* Using WeChat Data to Understand Residential Mobility of Mainland China-Born Migrants in Australia: A Segmented Assimilation Perspective. *Appl. Spatial Analysis* **14**, 703–729 (2021). <https://doi.org/10.1007/s12061-020-09368-x>

Edited Book

The Commission led on an edited book entitled, 'Big Data Applications in Geography and Planning: An Essential Companion,' published in May 2021.

Birkin, M., Clarke, G., Corcoran, J. and Stimson, R. eds., 2021. *Big Data Applications in Geography and Planning: An Essential Companion*. Edward Elgar Publishing.

The book, through a collection of case studies, demonstrates the utility of utility of big data approaches in human geography and planning.

The up-to-date committee website can be found here: <https://agcigu.wordpress.com/>

Productive Use of previous IGU grant

The last time that the Commission utilised the IGU grant was to offset the cost of attendance for four young scholars at the annual meeting in L'Aquila, Italy on June 17-19, 2019. We intend to utilise the grant for similar purposes for the UGI-IGU Centennial Congress in Paris and in the organisation of a standalone meeting for the AGC in 2023.