

Curriculum Vitae **David O'Sullivan**

Address Department of Geography
507 McCone Hall #4740
Berkeley, CA 94720-4740
United States of America

Email dosullivan@berkeley.edu

Employment

2014 – **Associate Professor** Geography, and **Chancellor's Professor**, University of California, Berkeley

2007 – 13 **Associate Professor** Geography, University of Auckland

2004 – 07 **Senior Lecturer** Geography, University of Auckland

2001 – 04 **Assistant Professor** Geography, Pennsylvania State University

1990 – 96 **Product manager** (previously applications engineer) at Image Automation Ltd, a part of the Sira group of companies, Chislehurst, Kent, UK.

1988 – 90 **Electronic design engineer** at STC telecom (now Nortel), North London.

Education

2000 **Ph.D.** University of London, Centre for Advanced Spatial Analysis (CASA), University College London. *Graph-based Cellular Automaton Models of Urban Spatial Processes*.
Examiners: Professor Peter M. Allen, Cranfield University and Professor David Unwin, Birkbeck College, London.
PhD advisor Professor Michael Batty, University College London.

1997 **M.Sc.** Cartography and Geo-information Technology (with distinction) University of Glasgow. *Using GIS to create public transport travel time isochrones for the Glasgow area*.

1990 Certificate in Industrial Relations and Trade Union Studies (distinction), University of Middlesex (formerly Middlesex Polytechnic).

1988 **B.A./M.A.** Engineering, University of Cambridge.

Awards and other recognition

2014 O'Sullivan D 2006 'Geographical information science: critical GIS' included in Virtual Special Issue of *Progress in Human Geography* on Straddling the Fence: Critical GIS and the geoweb, 2014 (ed. Elwood).

2014 – Chancellor's Professorship, University of California, Berkeley

- 2013 – Subsection Editor, American Association of Geographers – Wiley
International Encyclopaedia of Geography
- 2012 O’Sullivan 2004 ‘Complexity science and human geography’ included in Virtual Special Issue of *Transactions of the Institute of British Geographers* on influential papers in Geographical Information Science, 2012 (ed. Haklay).
- 2012 Centre for Spatial Information Science, University of Tokyo Visiting Professor position fully (salary) funded for 7 weeks including support for travel costs, April – June 2012.
- 2008 Spatial Literacy in Teaching (SPLinT) fellowship. A UK HEFCE funded programme at University College London (UCL), Leicester and Nottingham, UK, support for study leave visit to Centre for Advanced Spatial Analysis, and Department of Geography, September – October, 2008 at UCL.
- 1997 Masters Dissertation awarded both the Royal Institute of Chartered Surveyors (RICS) and Association for Geographic Information (AGI) Student of the Year awards.

Publications and other research outputs

Books

- Miller JA, **D O’Sullivan** and Wiegand N eds. 2016. *Geographic Information Science: Proceedings of the 9th International Conference, GIScience 2016* Lecture Notes in Computer Science Vol. 9927 (Springer: Cham, Switzerland).
- O’Sullivan D** and GLW Perry. 2013. *Spatial Simulation: Exploring Pattern and Process* (Wiley: Chichester, UK).
- O’Sullivan D** and DJ Unwin. 2010. *Geographic Information Analysis*, 2nd edn. (Wiley: Hoboken, NJ).
- O’Sullivan D** and DJ Unwin. 2002. *Geographic Information Analysis* (Wiley: Hoboken, NJ).

Refereed journals

- Liu C, **O’Sullivan, D**. 2016 (Online first). An abstract model of gentrification as a spatially contagious succession process. *Computers, Environment and Urban Systems*. doi:10.1016/j.compenvurbsys.2016.04.004
- Thatcher J, **D O’Sullivan** and D Mahmoudi. 2016. Data colonialism through accumulation by dispossession: new metaphors for everyday data. *Environment and Planning D: Society and Space* **34**(6) 990-1006. doi: 10.1177/0263775816633195
- Cheung AK-L, G Brierley, and **D O’Sullivan**. 2016. Landscape structure and dynamics on the Qinghai-Tibetan Plateau. *Ecological Modelling* **339** 7–22. doi: 10.1016/j.ecolmodel.2016.07.015

- Thatcher J, L Bergmann, B Ricker, R Rose-Redwood, **D O'Sullivan**, TJ Barnes, LR Barnesmoore, L Beltz Imaoka, R Burns, J Cinnamon, CM Dalton, C Davis, S Dunn, F Harvey, J-K Jung, E Kersten, L Knigge, N Lally, W Lin, D Mahmoudi, M Martin, W Payne, A Sheikh, T Shelton, E Sheppard, CW Strother, A Tarr, MW Wilson, and JC Young. 2016. Revisiting critical GIS. *Environment and Planning A* **48**(5), 815–824. doi: 10.1177/0308518X15622208
- O'Sullivan D**, T Evans, SM Manson, S Metcalf, A Ligmann-Zielinska, and C Bone. 2016. Strategic directions for agent-based modeling: avoiding the YAAWN syndrome. *Journal of Land Use Science* **11**(2), 177–187. doi: 10.1080/1747423X.2015.1030463
- O'Sullivan D** and SM Manson. 2015. Do physicists have geography envy? And what can geographers learn from it? *Annals of the Association of American Geographers* **105**(4), 704–722. doi: 10.1080/00045608.2015.1039105
- Cheung AK-L, **D O'Sullivan** and G Brierley. 2015. Graph-assisted landscape monitoring. *International Journal of Geographical Information Science* **29**(4), 580–605. doi:10.1080/13658816.2014.989856
- Etherington TR, EP Holland, and **D O'Sullivan**. 2015. NLMpy: a python software package for the creation of neutral landscape models within a general numerical framework. *Methods in Ecology and Evolution* **6**(2), 164–168. doi:10.1111/2041-210X.12308
- Hong S-Y, **D O'Sullivan** and Y Sadahiro. 2014. Implementing Spatial Segregation Measures in R. *PLoS ONE* **9**(11): e113767. doi:10.1371/journal.pone.0113767
- O'Sullivan D**. 2014. Don't panic! The need for change and for curricular pluralism. *Dialogues in Human Geography* **4**(1), 39–44.
- Millington JDA, **D O'Sullivan** and GLW Perry. 2012. Model histories: Narrative explanation in generative simulation modelling. *Geoforum*, **43**(6), 1025-1034.
- Mueller S, DJ Exeter, H Petousis-Harris, N Turner, **D O'Sullivan** and CD Buck. 2012. Measuring disparities in immunisation coverage among children in New Zealand. *Health and Place*, **18**(6), 1217–1223.
- Hong S-Y and **D O'Sullivan**. 2012. Detecting ethnic residential clusters using an optimisation clustering method. *International Journal of Geographical Information Science*, **26**(8), 1257-1277.
- Xue J, W Friesen and **D O'Sullivan**. 2012. Diversity in Chinese Auckland: Hypothesising multiple ethnoburbs. *Population, Space and Place*, **18**, 579-595.
- Mavoa S, K Witten, T McCreanor, and **D O'Sullivan**. 2012. GIS based destination accessibility via public transit and walking in Auckland, New Zealand. *Journal of Transport Geography*, **20**(1), 15-22.
- Mateos P, PA Longley, and **D O'Sullivan**. 2011. Ethnicity and Population Structure in Personal Naming Networks, *PLoS ONE*, **6**(9) e22943
- Pearson J, R Lay-Yee, P Davis, **D O'Sullivan**, M von Randow, N Kerse and S Pradhan. 2011. Primary care in an aging society: Building and testing a microsimulation model for policy purposes. *Social Science Computer Review*, **29**(1), 21-36.
- O'Sullivan D** 2009. What's critical about critical GIS? *Cartographica*, **44**(1), 7-8.

- O'Sullivan D** and G. L. W. Perry. 2009. A discrete space model for continuous space dispersal processes. *Ecological Informatics*, **4**(2), 57-68.
- O'Sullivan D** 2009. Changing neighborhoods – neighborhoods changing: a framework for spatially explicit agent-based models of social systems. *Sociological Methods and Research*, **37**(4), 498-530.
- Reardon SF., CR Farrell, SA Matthews, **D O'Sullivan**, K Bischoff and G Firebaugh. 2009. Race and space in the 1990s: changes in the geographic scale of racial residential segregation, 1990-2000. *Social Science Research*, **38**, 55-70.
- Lee BA, SF Reardon, G Firebaugh, CR Farrell, SA Matthews and **D O'Sullivan**. 2008. Beyond the census tract: patterns and determinants of racial segregation at multiple geographic scales. *American Sociological Review*, **73** (October), 766–791.
- Reardon SF, SA Matthews, **D O'Sullivan**, BA Lee, G Firebaugh, CR Farrell and K Bischoff. 2008. The geographic scale of metropolitan segregation. *Demography*, **45**(3), 489–514.
- O'Sullivan D**. 2008. Geographical information science: agent-based models. *Progress in Human Geography*, **32**(2), 541–50.
- O'Sullivan D** and DW Wong. 2007. A surface-based approach to measuring spatial segregation. *Geographical Analysis*, **39**(2), 147–68.
- O'Sullivan D**. 2006. Geographical information science: critical GIS. *Progress in Human Geography*, **30**(6), 783–91.
- Rygel L, **D O'Sullivan** and B Yarnal. 2006. A method for constructing a social vulnerability index: an application to hurricane storm surges in a developed country. *Mitigation and Adaptation Strategies for Global Change*, **11**(3), 741–64.
- Manson SM and **D O'Sullivan**. 2006. Complexity theory in the study of space and place. *Environment and Planning A*, **38**(4), 677–92.
- O'Sullivan D**, JP Messina, SM Manson and TW Crawford. 2006. Space, place, and complexity science. *Environment and Planning A*, **38**(4), 611–17.
- O'Sullivan D**. 2005. Geographical information science: time changes everything. *Progress in Human Geography*, **29**(6), 749–56.
- Crawford TW, JP Messina, SM Manson and **D O'Sullivan**. 2005. Complexity science, complex systems, and land-use research. *Environment and Planning B: Planning & Design*, **32**(5), 792–98.
- Reardon SF and **D O'Sullivan**. 2004. Measures of Spatial Segregation. *Sociological Methodology*, **34**(1), 121–62.
- O'Sullivan D**. 2004. Complexity science and human geography. *Transactions of the Institute of British Geographers*, **29**(3), 282–95.
- O'Sullivan D**. 2002. Toward micro-scale spatial modelling of gentrification. *Journal of Geographical Systems*, **4**(3), 251–74.
- O'Sullivan D**. 2001. Graph-cellular automata: a generalised discrete urban and regional model. *Environment and Planning B: Planning & Design*, **28**(5), 687–705.
- Haklay M, T Schelhorn, **D O'Sullivan** and M Thurstain-Goodwin. 2001. "So go down town": Simulating pedestrian movement in town centres. *Environment and Planning B: Planning & Design*, **28**(3), 343–59.

- Torrens PM and **D O'Sullivan**. 2001. Cellular automata and urban simulation: where do we go from here? *Environment and Planning B: Planning & Design*, **28**(2), 163–68.
- O'Sullivan D** and A Turner. 2001. Visibility graphs and landscape visibility analysis. *International Journal of Geographical Information Science*, **15**(3), 221–37.
- Turner A, M Doxa, **D O'Sullivan** and A Penn. 2001. From isovists to visibility graphs: a methodology for the analysis of architectural space. *Environment and Planning B: Planning & Design*, **28**(1), 103–21.
- O'Sullivan D**. 2001. Exploring spatial process dynamics using irregular cellular automaton models. *Geographical Analysis*, **33**(1), 1–18.
- O'Sullivan D**. and M Haklay. 2000. Agent-based models and individualism: is the world agent-based? *Environment and Planning A*, **32**(8), 1409–25.
- O'Sullivan D**, A Morrison and J Shearer. 2000. Using desktop GIS for the investigation of accessibility by public transport: an isochrone approach. *International Journal of Geographical Information Science*, **14**(1), 85–104.

Book chapters and refereed proceedings volumes

- Thatcher J, LR Bergmann and **D O'Sullivan**. 2016 Seeking common ground (again). In *Short Paper Proceedings of 9th International Conference on Geographical Information Science*, eds JA Miller, D O'Sullivan and N Wiegand, (Montreal, Canada), pages 304-307.
- Pfeffer K, J Martinez, **D O'Sullivan** and D Scott. 2015. Geo-Technologies for Spatial Knowledge: Challenges for Inclusive and Sustainable Urban Development. In *Geographies of Urban Governance*, eds. J Gupta, K Pfeffer, H Verrest and M Ros-Tonen, (Cham: Springer International Publishing), pages 147-173. doi: 10.1007/978-3-319-21272-2_8
- O'Sullivan D** 2014. Spatial Networks. In *Handbook of Regional Science* (eds MM Fischer and P Nijkamp). Springer, pages 1253-1273.
- O'Sullivan D**, JDA Millington, GLW Perry and J Wainwright. 2012. Agent-Based Models – Because They're Worth It? In AJ Heppenstall, AJ Crooks, LM See, and M Batty (eds), *Agent-Based Models of Geographical Systems* (Springer: Dordrecht, Netherlands), pages 109-123.
- Heppenstall AJ, AJ Evans, MH Birkin, JR Macgill and **D O'Sullivan**. 2005. The Use of Hybrid Agent-Based Systems to Model Petrol Markets. In T Terano, H Kita, H Kaneda, K Arai and H Deguchi (eds), *Agent-Based Simulation: From Modelling Methodologies to Real-World Applications*, Springer Series on Agent-Based Social Systems, pages 154–62.
- O'Sullivan D**. 2004. Too much of the wrong kind of data: implications for the practice of micro-scale spatial modelling. In MF Goodchild and D Janelle (eds), *Spatially Integrated Social Science: Examples of Best Practice* (Oxford University Press: Oxford), pages 95–107.
- O'Sullivan D**, JR Macgill and C Yu. 2003. Agent-based residential segregation: a hierarchically structured spatial model. In C Macal, M North and D Sallach (eds), *Agent 2003: Challenges in Social Simulation*, pages 493–507 (Argonne National Laboratory: Chicago). [<http://www.agent2004.anl.gov/Agent2003.pdf>]

- O’Sullivan D** 2002. Understanding the difference that space can make: toward a geographical agent modeling environment. In C. Macal and D. Sallach (eds), *Agent 2002: Ecology, Exchange, and Evolution*, pages 13-25 (Argonne National Laboratory: Chicago). [<http://www.agent2003.anl.gov/proceedings/2002.pdf>]
- O’Sullivan D** and PM Torrens. 2001. Cellular models of urban systems. In S Bandini and T Worsch (eds), *Theoretical and Practical Issues on Cellular Automata*, Proceedings of the Fourth International Conference on Cellular Automata for Research and Industry (ACRI 2000), October 4–6, Karlsruhe, Germany (Springer-Verlag: London), pages 108–16. [Also available as *CASA Working Paper 22* at <http://www.casa.ucl.ac.uk/cellularmodels.pdf>]

Software

Co-designer with S-Y Hong (who is programmer and maintainer) of the **seg** package for the R statistical software environment. This package implements several standard segregation measures and their spatial variants as described in Reardon and O’Sullivan 92004). See: <http://cran.r-project.org/web/packages/seg/>

Reviews and other writing

- Review:* Lloyd CD. 2014. *Exploring Spatial Scale in Geography*. Wiley, Chichester, England. In *International Journal of Geographical Information Science*. **29**(10), 1932–1933 doi:10.1080/13658816.2015.1053890
- Review:* Anselin L and SJ Rey (eds). 2010. *Perspectives on Spatial Data Analysis* Springer, New York. In *Environment and Planning B: Planning & Design*, **38**(3), 565–566, 2011.
- Review:* Wilson J and AS Fotheringham. 2007. *The Handbook of Geographic Information Science*, Blackwell. In *Progress in Human Geography*, **33**(3), 434-435, 2009.
- Encyclopedia entry:* ‘Complexity Theory, Nonlinear Dynamic Spatial Systems’ in R Kitchin and NJ Thrift (eds). 2009. *International Encyclopedia of Human Geography* (Oxford: Elsevier), Volume 1, 239-244.
- Encyclopedia entry:* ‘Neural Computing’ in *Encyclopedia of Geographic Information Science*, K Kemp (ed.). 2008. Sage, Thousand Oaks, CA.
- Review:* Batty M. 2006. *Cities and Complexity: Understanding Cities with Cellular Automata, Agent-Based Models and Fractals* (MIT Press: Cambridge, MA). In *Environment and Planning A*, **39**(5), 1273-4, 2007.
- Encyclopedia entries:* ‘Cellular Automata’ and ‘Neural Computing’ in *Encyclopedia of Human Geography*, Warf B (ed.). 2006. Sage, Thousand Oaks, CA.
- Review:* Fotheringham, AS, C Brunson and M Charlton. 2002. *Geographically Weighted Regression: The Analysis of Spatially Varying Relationships* (Wiley: New York). In *Geographical Analysis*, **35**(3), 272–5, 2003.
- Review:* Byrne D. 2001. *Understanding the Urban* (Palgrave: Basingstoke, Hants). In *Environment and Planning B: Planning & Design*, **29**(2), 303–4, 2002.

Review: Wilson AG. 2000. *Complex Spatial Systems: The Modelling Foundations of Urban and Regional Analysis* (Prentice Hall/Pearson Education: Harlow, Essex). In *Environment and Planning B: Planning & Design*, **28**(3), 475–6, 2001.

Invited presentations (presented by self, except as indicated by *)

- O’Sullivan D.** 2016. Simple spatial models: Building blocks for a process-based GIS? *Geolunch series* at the Geospatial Innovation Facility (GIF), University of California, Berkely, CA November 3.
- O’Sullivan D.** 2016. Spatiality, maps, mathematics and critical human geography. University of Uppsala, Department of Social and Economic Geography, March 23.
- O’Sullivan D** and MW Wilson. 2016. Future GIS. University of British Columbia, Department of Geography, January 21.
- O’Sullivan D.** 2015. Thinking with and about models in geography. University of California, Davis, Geography Graduate Group seminar series, December 2.
- O’Sullivan D.** 2015. Spatial simulation: Exploring pattern and process. UNIGIS Salzburg, Webinar, May 12.
- O’Sullivan D.** 2015. Simple spatial models: Building blocks for process-based GIS? Stanford University, May 7.
- O’Sullivan D.** 2015. Identifying ‘narrative arcs’ to explain outcomes in an agent-based model of island resource exploitation. Stanford University Libraries’ Center for Interdisciplinary Digital Research, May 7.
- O’Sullivan D.** 2014. ‘Play well’: Learning about the world using spatial models. University of Oregon, Department of Geography and Complexity Science conference, November 20.
- O’Sullivan D.** 2014. Using Personal Names to Explore Cultural, Ethnic and Linguistic Structure in Populations. UC Berkeley, Department of Demography, September 24.
- O’Sullivan D.** 2014. Invited keynote speaker. Simple spatial models: building blocks for process-based GIS? *Institute of Australian Geographers – New Zealand Geographical Society Joint Conference*, University of Melbourne, June 30 – July 2.
- Invited panellist. 2014. alt.conf on Big Data and the Geoweb. *110th Annual Meeting of the Association of American Geographers*, Tampa, FL, April 8–12.
- Invited panellist. 2014. Visioning GIScience Education. *110th Annual Meeting of the Association of American Geographers*, Tampa, FL, April 8–12.
- O’Sullivan D.** 2013. Towards a ‘pattern language’ for spatial simulation models. Presented to Department of Geography, University of California Santa Barbara, February 28.
- O’Sullivan D.** 2012. Naming networks and population structure. Presented to Department of Urban Engineering, University of Tokyo, May 16.
- O’Sullivan D.** 2012. Spatial Simulation: Exploring Pattern and Process – A Work in progress. Centre for Spatial Information Science, University of Tokyo, May 9.
- O’Sullivan D.** 2009. Agent-Based Models in Social Science. Presented at Workshop on Agent-Based Models in Archaeology, University of Auckland, July 31.

- O’Sullivan D.** 2009. What’s in a (Kiwi) Name? Presented to University of Auckland, Statistics Department Seminar Series, March 26.
- O’Sullivan D.** 2008. What’s in a (Kiwi) Name? Presented at Centre of Methods and Policy Application in the Social Sciences (COMPASS), University of Auckland, December 12.
- O’Sullivan D.** 2008. What’s in a (New Zealand) Name? Presented at Centre for Advanced Spatial Analysis, University College London, October 8.
- O’Sullivan D.** 2008. Spatial structure and spatial processes in simulation models. Presented to University of Leicester, Department of Geography, October 2.
- O’Sullivan D.** 2008. Representing dynamic neighbourhoods. Presented to City University London, Department of Information Science, September 17.
- O’Sullivan D.** 2008. Spatial structure and spatial processes in simulation models. Presented at National Centre of Geocomputation, National University of Ireland, Maynooth, August 7.
- Invited panellist. 2008. ‘Straddling the Fence: Critical GIS’. *104th Annual Meeting of the Association of American Geographers*, Boston, MA, April 15–19.
- O’Sullivan D.** 2008. Invited keynote speaker. Modelling human behaviour: pie in the sky, or useful? *Rethinking Consumption: A Symposium on Sustainable Consumption*, Royal Society of New Zealand, Wellington, New Zealand, March 12-13.
- O’Sullivan D.** 2007. Invited keynote speaker. The production of space in social simulation models. *International Workshop on Social Space and Geographic Space*, Melbourne, Australia, September 19.
- O’Sullivan D** and MN Gahegan. 2007. Issues around verification, validation, calibration, and confirmation of agent-based models of complex spatial systems. *NSF-ESRC Workshop on Agent-based Models of Complex Spatial Systems*, Santa Barbara, CA, April 14–16.
- O’Sullivan D.** 2006. Dynamic spatial models of urban processes. *World University Network Global GIS Academy Virtual Seminar Series*, e-seminar, December 13/14. This is a global seminar series using virtual classroom technology with seminar participants in several countries in North America and Europe. I gave this talk from my kitchen at four in the morning, New Zealand time!
- O’Sullivan D.** 2006. Applying multiple methods to researching spatial problems: the New Zealand school system. Presented at *The Sixth Australasian Postgraduate Workshop on GISc; Social and Environmental Modelling*, Kioloa, NSW, August 29–31.
- O’Sullivan D.** 2006. Invited lecture. Spatial analysis: a roadmap. Presented at *National Institutes of Health Workshop on GIS and Population Science*, Penn State, University Park, PA, June 13.
- O’Sullivan D.** 2005. Virtual spaces, places and communities: simulating urban change. Presented to University of Auckland Social Simulation Interest Group, Department of Sociology, Auckland, New Zealand, November 29.
- O’Sullivan D.** 2005. Simulating urban dynamics. Presented to New Zealand Geographical Society, Old Government House, Auckland, New Zealand, October 12.

- O'Sullivan D.** 2005. Simulating urban neighbourhood change. Presented to University of Canterbury, Department of Geography, Seminar Series. Christchurch, New Zealand, September 14.
- O'Sullivan D.** 2005. Virtual spaces, places and communities: simulating urban change. Presented to University of Auckland, School of Geography and Environmental Science, Seminar Series. Auckland, New Zealand, August 25.
- O'Sullivan D.** 2005. Simulating urban neighbourhood dynamics. Presented to University of Melbourne, Department of Geomatics, Seminar Series. Melbourne, Australia, August 11.
- O'Sullivan D.** 2005. Invited Lecture. Spatial analysis: a roadmap. Presented at *National Institutes of Health Workshop on GIS and Population Science*, Penn State, University Park, PA, June 3.
- Reardon, SF* and **D O'Sullivan.** 2004. Measuring spatial segregation. Presented to Population Research Institute, The Pennsylvania State University, University Park, PA, April 20.
- O'Sullivan D.** 2004. Schelling bound and unbound: modeling residential segregation with complex spatial structure. Presented to *Complex Systems Advanced Academic Workshop* at Center for the Study of Complex Systems, University of Michigan, Ann Arbor, MI, March 11.
- O'Sullivan D.** 2003. Invited Lecture. Spatial analysis: a primer. Presented at *Center for Spatially Integrated Social Science Population Science and GIS Workshop*, Penn State, University Park, PA, May 19–23.
- O'Sullivan D.** 2003. The geography of complexity: learning from models of gentrification. Presented to Center for the Study of Complex Systems, University of Michigan, Ann Arbor MI, March 13.
- O'Sullivan D.** 2001. Invited keynote speaker. From cells to agents: putting some life into GIS. Presented at *GeoInfo 2001 III WorkShop Brasileiro de GeoInformatica*. Rio de Janeiro, October 4–5.

Other presentations (by self, except as noted *)

- Thatcher J, LR Bergmann and **D O'Sullivan.** 2016. Searching for common ground (again). Presented at *9th International Conference on Geographical Information Science (GIScience 2016)*, Montreal, Canada, September 28-30.
- O'Sullivan D.** 2016. Simple simulation models as a complexity 'pattern language'. Lightning talk at *Rethinking the ABCs: Agent-Based Models and Complexity Science in the age of Big Data, CyberGIS, and Sensor Networks* pre-conference workshop at *GIScience 2016*, Montreal, Canada, September 27.
- O'Sullivan D.** 2016. The eternal return of critical quantification. *112th Meeting of the American Association of Geographers*, San Francisco, CA March 29–April 2.
- O'Sullivan D** and GLW Perry. 2015. Identifying 'narrative arcs' to explain outcomes in an agent-based model of island resource exploitation. Presented at the *110th Annual Meeting of the Association of American Geographers*, Chicago, IL, April 21–25.

- Cheung, AK-L*, **D O'Sullivan** and GB Brierley. 2014. Graph-assisted landscape monitoring. *GeoCart 2014* University of Auckland, New Zealand, September 3–5.
- Mavoa, S*, **D O'Sullivan**, N Bagheri, MJ Koohsari, AT Kaczynski, KE Lamb and K Witten. 2014. Exploring the consequences of different neighbourhood definitions for built environment and physical activity research. *5th International Congress on Physical Activity and Public Health*, Rio de Janeiro, April 8–11.
- O'Sullivan D** and GLW Perry. 2013. Towards a 'pattern language' for spatial simulation models. Presented at *SIRC NZ 201*, University of Otago, Dunedin, New Zealand, August 29–30. Extended abstract available at <http://otago.ourarchive.ac.nz/handle/10523/4219>.
- O'Sullivan D** and GLW Perry. 2013. Towards a 'pattern language' for spatial simulation models. Presented at the *109th Annual Meeting of the Association of American Geographers*, Los Angeles, CA, April 9–13.
- O'Sullivan D**. 2012. Agent-based models: what are they good for? Or: did Schelling really need an ABM? Presented at the *108th Annual Meeting of the Association of American Geographers*, New York, NY, February 24–28.
- Millington JDA*, **D O'Sullivan** and GLW Perry. 2011. Model Histories: The Generative Properties of Agent-Based Modelling. Presented at *Annual Conference of the Royal Geographical Society with the Institute of British Geographers*, Royal Geographical Society, London, August 31 – September 2.
- O'Sullivan D** and P Mateos. 2011. Naming networks and population structure. Presented at the *107th Annual Meeting of the Association of American Geographers*, Seattle, WA, April 12–16.
- Manson SM* and **D O'Sullivan**. 2011. Do physicists have geography envy? Presented at the *107th Annual Meeting of the Association of American Geographers*, Seattle, WA, April 12–16.
- Morgan FJ* and **D O'Sullivan**. 2010. Residential developers: Competition, behaviour and the resulting urban landscape. Presented at the *106th Annual Meeting of the Association of American Geographers*, Washington, DC, April 14–18.
- O'Sullivan D** and GLW Perry. 2009. Simulating long distance dispersal processes in spatially heterogeneous landscapes. Presented at *Geocomputation 2009*, University of New South Wales, Sydney, Australia, November 30 –December 2.
- Morgan FJ* and **O'Sullivan D**. 2009. Residential developers: Competition, behaviour and the resulting urban landscape. Presented at *Geocomputation 2009*, University of New South Wales, Sydney, Australia, November 30–December 2.
- Tate NJ*, **D O'Sullivan**, and PF Fisher. 2009. Postpositivisms and GIScience. Presented at the *105th Annual Meeting of the Association of American Geographers*, Las Vegas, NV, March 22–27.
- O'Sullivan D**, SF Reardon, CR Farrell, SA Matthews, K Bischoff and G Firebaugh. 2008. Race and Space in the 1990s: Changes in the Geographic Scale of Racial Residential Segregation, 1990-2000. Presented at the *104th Annual Meeting of the Association of American Geographers*, Boston, MA, April 15–19.

- Morgan FJ* and **O'Sullivan D**. 2008. Property Developers: A behavioural supply-side investigation into the growth of the city. Presented at the *104th Annual Meeting of the Association of American Geographers*, Boston, MA, April 15–19.
- Mahdavi B*, **O'Sullivan D**, and P Davis. 2007. An Agent-based Microsimulation Framework For Investigating Residential Segregation Using Census Data. In L. Oxley & D. Kulasiri (eds.) *MODSIM 2007 International Congress on Modelling and Simulation*, pages 365-371.
- Firebaugh G*, SF Reardon, BA Lee, SA Matthews, K Bischoff, CR Farrell and **D O'Sullivan**. 2007. Methods for studying the geographical scale of metropolitan racial segregation. Presented at *Meeting of the International Sociological Association Research Committee on Stratification*, Brno, Czech Republic, May 25.
- O'Sullivan D** and CJ McDowall. 2007. School Choice and Neighborhood Change in New Zealand, 1998-2005. Presented at the *103rd Annual Meeting of the Association of American Geographers*, San Francisco, CA, April 17–21.
- Morgan FJ* and **O'Sullivan D**. 2007. Understanding the human dynamics of neighbourhood re-development with agent-based models. Presented at the *103rd Annual Meeting of the Association of American Geographers*, San Francisco, CA, April 17–21.
- O'Sullivan D** and GLW Perry.* 2006. An Approach to Simulating Localised Diffusion Processes on Large-scale Landscapes. Presented at *SIRC 2006: 18th Annual Colloquium of the Spatial Information Research Centre*, University of Otago, Dunedin, New Zealand, November 6–7.
- Reardon SF*, G Firebaugh, **D O'Sullivan** and SA Matthews. 2006. New Approaches to Measuring Socio-Spatial Economic and Racial Segregation. Paper Proposal for the *29th General Conference of the International Association for Research on Income and Wealth (IARIW)*, Joensuu, Finland, August.
- O'Sullivan D**, T Clephane and R Amor. 2006. Integrating agent models and GIS: towards an extensible open source solution. Presented at *International Geographical Union 2006: Regional Responses to Global Changes - A View from the Antipodes*, Queensland University of Technology, Brisbane, Aust., July 3–7.
- Reardon SF*, SA Matthews, **D O'Sullivan**, BA Lee, G Firebaugh and C Farrell. 2006. Segregation and scale: The use and interpretation of spatial segregation profiles for investigating the causes, patterns, and consequences of residential segregation. Presented at the *Population Association of America*, Los Angeles, CA, March.
- Lee BA*, SF Reardon, G Firebaugh, CR Farrell, SA Matthews and **D O'Sullivan**. 2006. Beyond the Census Tract: Patterns and Determinants of Racial Residential Segregation at Multiple Scales. Presented at the *Population Association of America*, Los Angeles, CA, March.
- O'Sullivan D** and JR Macgill. 2005. Impacts of neighbourhood scale on the dynamics of segregation. Presented at *SIRC 2005: 17th Annual Colloquium of the Spatial Information Research Centre*, University of Otago, Dunedin, New Zealand, November 24–25.

- O'Sullivan D**, GLW Perry and JDA Millington*. 2005. Science Fictions: Narrative as a tool for model-based research. Presented at *Annual Conference of the Royal Geographical Society with the Institute of British Geographers*, Royal Geographical Society, London, August 31 – September 2.
- Haklay M* and **D O'Sullivan**. 2005. Complexity science in geography: understanding the limits of narratives. Presented at *Annual Conference of the Royal Geographical Society with the Institute of British Geographers*, Royal Geographical Society, London, August 31 – September 2.
- O'Sullivan D** and JR Macgill. 2005. Modelling urban residential neighbourhood dynamics. Presented at *EXYSTENCE Workshop on Modelling Urban Social Dynamics*, University of Sussex, Guilford, UK, April 7–8.
- O'Sullivan D** and DWS Wong. 2004. A Surface-based Approach to Measuring Spatial Segregation. Presented at the *100th Annual Meeting of the Association of American Geographers*, Philadelphia, PA, March 14–19.
- O'Sullivan D**, JR Macgill and C Yu. 2003. Agent-based residential segregation: a hierarchically structured spatial model. Presented at *Agent 2003*, University of Chicago, Argonne National Laboratory, October 2–4
- O'Sullivan D**. 2003. Complexity science and human geography. Presented at *99th Annual Meeting of the Association of American Geographers*, New Orleans, LA, March 5–8.
- O'Sullivan D**. 2002. Understanding the difference that space can make: toward a geographical agent modeling environment. Presented at *Agent 2002*, University of Chicago, Argonne National Laboratory, October 10–12.
- O'Sullivan D**. 2002. What about people in geographic information science? Presented at *GIScience 2002*, University of Colorado at Boulder, September 25–28
- O'Sullivan D**. 2002. Modeling complex social spaces: the case of gentrification. Presented at Penn State Department of Geography Coffee Hour, March 29.
- O'Sullivan D**. 2001. Toward micro-scale modeling of gentrification in relational spaces. Presented at the *97th Annual Meeting of the Association of American Geographers*, New York City, NY, February 27–March 3.
- Torrens PM* and **D O'Sullivan**. 2000. Cities, cells and complexity: developing a research agenda for urban geocomputation. Presented at *Geocomputation 2000*, University of Greenwich, London, August 25–28.
- Schelhorn T, **D O'Sullivan**, M Haklay and M. Thurstain-Goodwin. 1999. STREETS: an agent-based pedestrian model. Presented at *Computers in Urban Planning and Urban Management*, Venice, 8–10 September. [Also available as *CASA Working Paper 9* at <http://www.casa.ucl.ac.uk/streets.pdf>]
- O'Sullivan D**. 1999. Exploring the structure of space: towards geocomputational theory. Presented at *GeoComputation 99*, Mary Washington College, Fredericksburg, VA, July 25–28.
- Jiang B and **D O'Sullivan**. 1998. Urban Morphology in the Context of GIS. Presented at *GIS Research UK*, University of Edinburgh, March 30–April 2.

Research support

2013 –	Startup funds	University of California, Berkeley , startup support \$350,000
2013 – 16	Chancellor's Professorship Berkeley	University of California, Berkeley, Chancellor's Professorship research support. \$125,000
2012 – 14	Postdoctoral support	University of Auckland, Faculty Research Development Fund support for Postdoctoral scholar (Tom Etherington) co-PI with George Perry. NZ\$ 70,000
2012	Visiting Professor	Centre for Spatial Information Science, University of Tokyo visiting position was fully (salary) funded for 7 weeks including support for travel costs. Total support NZ\$ 12,500.
2009	Co-PI	Performance-Based Research Fund support for visit by Prof. John Wainwright (Sheffield). Total support NZ\$ 5,000
2006/08	PI	University of Auckland Research Fund New Staff Award , 'Exploring the relationships between school choice, school zones, and urban social geography' using spatial analysis methods and GIS. Total support NZ\$ 13,900
2008	PI	Spatial Literacy in Teaching (SPLinT) fellowship (HEFCE funded programme at UCL, Leicester and Nottingham, UK) support for study leave in September-October at University College London. Total support GBP 5,000.
2008	PI	Host, Distinguished Visitor Dr Dimitris Ballas, University of Sheffield, funded by Performance Based Research Fund and Social Policy Evaluation and Research unit of Ministry of Social Development. Total support NZ\$ 8,500

2007/08	Co-PI	Modelling Primary Care in an Aging Society (PCASO) funded by Health Research Council, PI Prof Peter Davis (Sociology, Auckland). 20% salary contribution. A project to develop a simulation model of the impact of changes in population demographics on the New Zealand primary health care system.
2005/08	Consultant / co-PI	Social Science Methodology grant to develop improved measures of spatial segregation funded by US National Science Foundation. PI Prof. Sean Reardon, Stanford University, Sociology and Education. This is a two year project to develop GIS-based methods for measuring ethnic or income-based segregation of urban populations. I am coordinating technical aspects of the project, and contributing spatial analysis expertise. Total support over 2 years (extended to 3) US\$225K.
2006	PI	Host to University of Auckland Distinguished Visitor Awardee Prof Mark Gahegan. Total support NZ\$8,500
2003/04	Co-PI	A Model GIS/Atlas for State Comprehensive Cancer Control funded by The Centers for Disease Control with the Association of American Medical Colleges. PI Prof. Gene Lengrich, Penn State Hershey Medical Center. Total support over 3 years US\$300K.
2003/04	Co-PI	The Segregation Project a Penn State Children Youth and Families Consortium Level II project to support development of proposals for externally funded research on <i>spatial</i> measures of urban residential segregation. Total support over one year US\$15,000.
2003/04	Investigator	Ford Foundation One Nation supplemental grant awarded to PI Prof. Amy Glasmeier, Penn State Geography. One month summer salary support.

Summer 2003	Investigator	Choosing Schools, Choosing Neighborhoods: Understanding the 'New Segregation' , funded by National Academy of Education Postdoctoral Fellowship project, PI Prof. Sean Reardon, Education and Sociology, Penn State. One month summer salary support.
2002/03	PI	Feasibility of geographical agent-based modelling tools , funded by College of Earth and Mineral Sciences, Penn State. Total support US\$4,000.

Teaching

University of California, Berkeley

Current

Geog 254 **Seeing Geographically: Reimagining Mapping**

Instructor Fall 2016
Developed Fall 2016

Geog 259 **Social Implications of Geographical Technologies**

Instructor Fall 2015
Developed Fall 2015

Geog 228 **Spatial Simulation**

Instructor Spring 2015
Developed Spring 2015

Geog 187 **Geographic Information Analysis**

Instructor Spring 2016, Spring 2015
Developed Spring 2015

Geog 80 **Digital Worlds: An Introduction to Geospatial Technologies**

Instructor Fall 2016, Fall 2015, Fall 2014
Developed Fall 2014

University of Auckland

All completed

Geog 318 **GIS for Human Environments**

Lecturer and coordinator [\times 5] Semester 1 2013, S2 2012, S1 2011, S1 2010, S1 2009
Developed S1 2009

Geog 771 **Spatial Analysis**

Lecturer and course coordinator [\times 7] Semester 1 2013, S1 2011, S1 2010, S1 2009, S1 2008, S1 2007, S2 2006

Course coordinator S2 2005
Developed S2 2006

EnvSci 704 **Modelling Environmental and Social Systems** (previously **Geog 704**)
Lecturer and coordinator [$\times 9$] Semester 2 2013, S2 2012, S2 2011, S2 2010,
S2 2009, S2 2008, S2 2007, S2 2006, S1 2005
Developed S1 2005 *Substantially updated* S2 2006, S2 2009, S2 2011

Geog 779 **GIS Customization and Programming**
Lecturer and coordinator [$\times 3$] Semester 2 2010, S2 2009, S1 2008
Developed S1 2008

Geog 319 **Advanced Methods in GIS**
Lecturer and coordinator [$\times 3$] Semester 1 2007, S1 2006, S1 2005
Developed S1 2005

Geog 250 **Research Practice in Geography**
Lecturer (with 3 others) [$\times 3$] Semester 1 2010, S1 2009, S1 2008
Developed S1 2008

Geog 204 **Geographic Data Analysis**
Main lecturer and coordinator [$\times 3$] Semester 1 2007, S1 2006, S1 2005
Developed S1 2005

Pennsylvania State University

All completed (although note recent completion of Geog 586)

Geog 586 (Penn State) Online professional Masters in GIS **Geographic Information Analysis**

Online course materials developed Fall 2003
Course delivered [$\times 15$] Su 2013, Su 2012, Fa 2011, Sp 2011, Fa 2010,
Sp 2010, Su 2009, Fa 2008, Sp 2008, Fa 2007, Su 2007, Sp 2007,
Fa 2006, Fa 2005, Wi 2005

Geog 455 **Spatial Analysis II**
Lecturer and coordinator [$\times 4$] Taught Spring 2004, 2003, 2002, 2001
Developed Spring 2001

Geog 597A Graduate Seminar **Geographic modeling and complexity**
Spring 2004

Geog 454 **Spatial Analysis I**
Lecturer and coordinator [$\times 3$] Taught Fall 2003, 2002, 2001
Developed Fall 2001

Geog 596 **Independent study** Spatial analysis
Taught Fall 2003 (1 student), Spring 2001 (3 students)

Geog 596 **Independent study** Multi-agent systems
Taught Spring 2003 (1 student)

Geog 356 Programming for Geographers

Lecturer and coordinator [$\times 2$] Taught Fall 2002, Spring 2002
Developed Spring 2002

Geog 597A Seminar: Urban dynamics and gentrification: models and metaphors

Taught Fall 2001

Graduate advising, mentoring

Current PhD

<i>Student</i>	<i>Institution</i>	<i>Subject</i>	<i>Role</i>
Will Payne	Berkeley, Geography	Impacts of social media on urban space	Advisor
Geoff Boeing	Berkeley, CED	Complexity in urban planning	External
Phil Donovan	Massey U, NZ	Effects of walkable access on urban land value	Co-advisor
Victoria Torres	UC Davis	Food access	External
Kevin Stofan	U of South Florida	Spatial point pattern analysis	External
Ofurhe Igbinedion	UC Davis	Critical GIS and planning	External

Completed PhDs as sole or *co-advisor

<i>Student</i>	<i>Institution and degree</i>	<i>Topic and/or career (if known)</i>
*Ben Davies	U Auckland PhD 2016	Agent-based models in archaeology
*Suzanne Mavoava	Massey U, NZ PhD 2015	Postdoctoral Researcher, University of Melbourne, Australia
*Alan Cheung	U Auckland PhD 2015	Research Fellow, New Zealand Defence Force
Cheng Liu	U Auckland PhD 2015	Postdoctoral Researcher, China University of Geosciences, Wuhan
Babak Mahdavi	U Auckland PhD 2014	Hybrid agent-based microsimulation models of residential segregation
*Jinfeng Zhao	U Auckland PhD 2012	Postdoctoral Researcher, School of Population Health, U Auckland
Fraser Morgan	U Auckland PhD 2011	Research Scientist, Landcare Research, New Zealand
*Seong-Yun Hong	U Auckland PhD 2011	Professor, Urban Policy and Administration, Incheon National University, Korea
*James O'Brien	Penn State PhD 2005	Risk Scientist, Risk Frontiers, Sydney, Australia
*Frank Hardisty	Penn State PhD 2003	Research Associate, Penn State

Other Doctoral Committees

<i>Student</i>	<i>Institution</i>	<i>Additional comments</i>
Luis Alvarez	UCLA, PhD 2016	Postdoctoral Scholar USC Sol Price Center for Social Innovation
Jim Thatcher	Clark U 2014	Assistant Prof Urban Studies, University of Washington – Tacoma
Reuben Rose-Redwood	Penn State 2004	Assoc Prof, Geography, University of Victoria, BC
Guo Chen	Penn State 2003	Asst Prof, Geography, Michigan State
Junyan Luo	Penn State 2003	Research Associate, Center for Systems Integration and Sustainability, Michigan State
Bill Pike	Penn State 2003	Pacific Northwest National Labs
Michael Rios	Penn State 2002	Assoc Prof Landscape Architecture, UC Davis

Completed Masters as sole or *co-advisor

<i>Student</i>	<i>Institution and degree</i>	<i>Topic and/or career (if known)</i>
Phil Donovan	U Auckland MS 2012	PhD Candidate, Massey University, New Zealand
*Chris Rudge	U Auckland MS 2011	Dynamic spatially explicit model of Kauri forest succession
*Jingjing Xue	U Auckland MS 2008	Chinese ethnoburbs in Auckland, New Zealand
Yin Ting Fong	U Auckland MS 2007	Opus Consulting, Auckland, New Zealand
Birgitte Muehlenhaus	Penn State MS 2004	Cultural attitudes to privacy and their impact on location-based services
*Lisa Rygel	Penn State MS 2004	USGS
*Joel Staub	Penn State MS 2003	
*Geoffrey Hatchard	Penn State MS 2003	US Census Bureau
*Christine Mares	Penn State MS 2003	
*Jennifer Nolan	Penn State MS 2002	

Senior Honors Thesis

2015	Gina Cova
2016	Alexis Fung Martha Morrissey Lily Shafroth Philip Wolf

Postdoctoral mentor

Tom Etherington (with George Perry, University of Auckland)

Luc Guillemot (Swiss NSF funded postdoctoral scholar, hosted at UC Berkeley) 2015-17

Other teaching contributions

- | | |
|------------|---|
| 2014 – | Regular faculty advisor to Honors thesis students at UC Berkeley (4 to date) |
| 2005/06 | Co-advisor (with Assoc. Prof Robert Amor, Computer Science) Faculty of Science Summer Scholarship Student, Tim Clephane |
| S2 2006–07 | Guest lecture on GIS as part of the Postgraduate Diploma in Education Teaching Geography EDCURSEC 627 |

In addition, I regularly guest lecture in other classes for colleagues, on topics relating to spatial analysis, simulation modeling, philosophy and methodology in geography and geographical information science.

Service (ongoing duties, lightly shaded)

Highlights (details in sections below)

Americas editor of *International Journal of Geographical Information Science* (2017–present)

Program chair, *GIScience 2016*. This conference is the leading international conference in the field of geographical information science, with around 220 paper submissions and a full paper proceedings volume published by Springer.

Co-editor of *Transactions in GIS* (2009–14) and *Environment and Planning B: Planning and Design* (2011–15)

Subsection Editor, Association of American Geographers (2011-16) – Wiley
International Encyclopaedia of Geography

Director of Auckland School of Environment PhD programme (2009 – 12) of around 50 PhD students managing admissions, proposal development, progress monitoring and examination, student welfare, research support, etc.

Member of editorial boards:

Computers Environment and Urban Systems (2007–present);

Dialogues in Human Geography (2015–present);

Environment and Planning A (2015–present);

Environment and Planning B (2001–11, 2015–present);

International Journal of Geographical Information Science (2007–present);

Open Geospatial Data, Software and Standards (2015–present);

Transactions in GIS (2005-09, 2015–present)

Departmental

University of California, Berkeley

- 2015 – 16 Faculty Search Committee, position in human geography
- 2016 Graduate Admissions Committee
- 2014 Graduate Admissions Committee

University of Auckland

- 2012 – 13 Director School of Environment GIS programmes
- 2012 – 13 School of Environment Research Committee
- 2013 Chair, review committee, School of Environment Undergraduate Programme in Environmental Science
- 2013 School of Environment DSAC (promotions) Committee
- 2012 School of Environment DSAC (promotions) Committee
- 2009 – 12 School of Environment Head of Postgraduate Research, responsible for programme of ~50 PhD research students
- 2009 School of Environment DSAC (promotions) Committee
- 2007 – 08 School of Geography, Geology and Environmental Science (SGGES) Visitor Programme coordinator
- 2007 – 08 SGGES Research Committee
- 2007 SGGES Environmental Science Student presentation judge
- 2005 – 06 SGGES Undergraduate Committee
- 2006 Presenter, outreach meeting with Auckland Geography Teachers' Association
- 2006 School of Geography and Environmental Science (SGES) Environmental Science Student presentation judge
- 2006 SGGES DSAC (promotions) Committee
- 2004 – 06 Active driver of redevelopment of the GIS teaching programmes at University of Auckland

Penn State

- 2003 – 04 Penn State Geography Internship Committee
- Penn State Miller Lecture Series Committee
- Resources and Environment Committee
- 2002 – 04 Geographic Information Science Curriculum Subcommittee
- 2003 Miller Award Committee
- 2002 Graduate Selection Committee
- 2001 Miller Award Committee

University

University of California, Berkeley

- 2015 – Member of Academic Senate committee: Undergraduate Council
- 2014 – Co-director Campus-wide Minor in Geospatial Information Systems and Technology (GIST)

University of Auckland

- 2013 Graduating Year Review Committee, Programme in Anthropological Science
- 2013 Judge, Faculty of Science Poster Competition

- 2013 Independent chair PhD examination, Department of Philosophy, University of Auckland
- 2010 – 12 Faculty of Science Scholarships subcommittee of the Postgraduate Committee
- 2009 – 12 Faculty of Science Postgraduate Committee
- 2012 Faculty host to visiting World University Network research students, Tom Brughmans and Iza Romanowska, University of Southampton
- 2011 Judge, Faculty of Science Poster Competition
- 2010 – 11 Faculty of Science Vice-Chancellor’s PhD Thesis Prize Committee member
- 2007 – 09 Sub-Professorial member Vice-Chancellor’s Staff Advisory Committee
- 2009 Judge, Faculty of Science Poster Competition
- 2007 Participant HR Staff Survey follow up workshops
- 2006 University host to Prof. Mark Gahegan, Distinguished Visitor from Penn State Geography and Information Science. Contributions included: organisation of specialist international workshop, co-organiser of departmental seminar and public lecture, organisation of visitor contributions to graduate and undergraduate courses
- 2005 Faculty host to James Millington, visiting PhD candidate from Geography at King’s College London
- Penn State*
- 2003 – 10 Penn State World Campus Masters in Geographic Information Systems Advisory Board
- 2004 Assisted Department of Landscape Architecture faculty search
- 2003 College of Earth and Mineral Sciences Wilson Research Initiation Grant Committee
- 2003 18th Annual Graduate Exhibition Awards Judge

Disciplinary

- 2016 – Scientific Committee member *GIS Ostrava* conference 2017 (Czech Republic)
- 2016 Organizer (with Jim Thatcher, U Washington Tacoma) and Mark Graham (University of Oxford) of Digital Geographies Specialty Group of the AAG
- 2015 – Editorial board *Environment and Planning A*
- 2015 – Editorial board *Environment and Planning B: Planning & Design* (previously co-editor)
- 2015 – Editorial board *Transaction in GIS* (previously Asia-Pacific editor)
- 2015 – Editorial board *Open Geospatial Data, Software and Standards*
- 2010 – Editorial board *Dialogues in Human Geography*
- 2007 – Editorial board *International Journal of Geographical Information Science*
- 2007 – Regular promotion and tenure reviewer: including leading universities in the UK, USA, Singapore, Australia, New Zealand, Ireland and Canada – several per year
- 2007 – Editorial board *Computers, Environment and Urban Systems*

- 2001 – Proposal reviewing – around five per year, NSF, Swiss NSF, Israeli NSF, UK ESRC, Nuffield Foundation, Netherlands Organization for Scientific Research (NWO)
- 1998 – Regular book proposal reviewer Wiley, OUP, Sage, University presses.
- 2012 – 17 Subsection Editor, AAG *International Encyclopedia of Geography*, (AAG and John Wiley & Sons)
- 2015 – 16 – Program chair *GIScience 2016* International Conference
- 2016 Co-organizer with Jim Thatcher (Washington-Tacoma) and Luke Bergmann (Washington) of sessions on 'Constructively Critical GIS'. 112th Meeting of the American Association of Geographers, San Francisco, CA March 29–April 2.
- 2016 Co-organizer with May Yuan (University of Texas, Dallas) of sessions on 'Space-Time Analytics. 112th Meeting of the American Association of Geographers, San Francisco, CA March 29–April 2.
- 2016 External reviewer GIS program, Department of Geography, University of British Columbia, Canada
- 2013 – 15 University Consortium for Geographic Information Science (UCGIS) Geographic Information Science & Technology Body of Knowledge Task Force Steering Committee member
- 2015 – 16 Scientific Committee member *GIS Ostrava* conference 2016 (Czech Republic)
- 2015 Co-organizer with Chris Bone (Oregon) and Arika Ligmann-Zielinska (Michigan State) of sessions on 'New Directions in Geospatial Simulation'. 111th Meeting of the Association of American Geographers, Chicago, IL April 20–24.
- 2014 – 15 Program Committee *Geocomputation 2015*
- 2014 Co-organizer (with Luke Bergmann and Jim Thatcher, U Washington) of research workshop *Revisiting Critical GIS* held at Friday Harbor Labs, U Washington, October 2014
- 2011 – 2015 Co-editor *Environment and Planning B: Planning & Design*
- 2014 Program Committee specialist workshop 'Dirty time-oriented data: whereabouts and bottlenecks', *i-Know 2014* conference (Graz, Austria, 16-19 September 2014 <http://i-know.tugraz.at/>)
- 2012 – 14 Scientific Committee member *GIS Ostrava* conference 2013, 2014 (Czech Republic)
- 2009 – 14 Editor, Asia-Pacific region, *Transactions in GIS*
- 2014 Co-organiser with Steven Manson (Minnesota) and Tom Evans (Indiana) 'How can we make agent-based models more relevant' 110th Annual Meeting of the Association of American Geographers, Tampa, FL, April 8–12.
- 2012 – 13 Programme Committee *Geocomputation 2013*, Wuhan (China)
- 2009 – 13 Advisory Board Member, COMPASS research group, University of Auckland
- 2013 Programme Committee *Spatial Information Research Colloquium (SIRC) 2013* University of Otago, New Zealand

- 2013 External reviewer proposals to Nuffield Foundation, the Economic and Social Research Council and the Higher Education Funding Council for England, *Quantitative Methods Program* for the social sciences.
- 2013 Co-organiser with Steven Manson (Minnesota) and Tom Evans (Indiana) panel discussion session ‘Yet another ABM, whatever... nevermind (YAAWN)’ in Land Systems Science symposium at 109th Annual Meeting of the Association of American Geographers, Los Angeles, April 2013.
- 2011 – 12 Scientific Committee of *the International Symposium on Cellular Automata Modeling for Urban and Spatial Systems*, 2012, Oporto, Portugal
- 2011 – 12 Programme Committee member *GIScience 2012*
- 2012 Programme Committee *GeoCart 2012* New Zealand
- 2010 – 11 Programme Committee Member *First International Conference on Spatial Thinking and Geographic Information Science 2011*
- 2001 – 11 Editorial board *Environment and Planning B: Planning & Design* (subsequently co-editor)
- 2011 Programme Committee member *Epistemological Perspectives on Simulation (EPOS)* conference, October 2011, San Antonio, NM
- 2009 – 10 Programme Committee member *GIScience 2010*
- 2005 – 09 Editorial board *Transactions in GIS* (subsequently co-editor)
- 2009 Paper reviewer, submissions to GIS Research UK (*GISRUK*) 2010
- 2009 Expert reviewer, 3 proposals, to Swiss Secretariat for Education and Research, under the COST (European Cooperation in the Field of Scientific and Technical Research) programme
- 2009 External Examiner PhD Thesis Curtin University of Technology (Australia)
- 2006 – 08 Secretary Auckland branch, New Zealand Geographical Society
- 2008 Programme Committee member *GIScience 2008*
- 2006 – 07 Program Committee Member, International Cartographic Association Workshops on Geospatial Analysis and Modeling (2 events)
- 2007 External Examiner PhD Thesis Otago University, Information Science
- 2007 External Examiner MSc Thesis (×2) University of Melbourne, Department of Geomatics
- 2007 Program Committee Member, International Workshop on Social Space and Geographic Space, Melbourne, Australia
- 2006 GeoCart 2006 New Zealand Cartographic Society International Conference, Organising Committee
- 2006 Reviewer of Israel Science Foundation proposal
- 2006 Organiser of Specialist International Workshop on ‘Intelligent GIScience’ held at University of Auckland.
- 2004 – 05 Program Committee member EU funded *EXYSTENCE Workshop on Modelling Urban Social Dynamics*, University of Sussex, Guilford, UK.
- 2004 External assessor/reader for University of Canterbury Geography Honours and Masters dissertation.
- 2004 Co-organiser with Steven Manson (Minnesota), Joe Messina (Michigan State) and Tom Crawford (East Carolina) of two paper sessions on ‘Geographical Perspectives on Complexity’ at the 100th Annual Meeting of the Association of American Geographers, March 2004.

- 2004 Co-organiser with David Wong (George Mason), of three paper sessions on urban segregation at the 100th Annual Meeting of the Association of American Geographers, March 2004.
- 2003 USGS proposal reviewing
- 2001 Program Committee *GeoInfo 2001*
- 2000 Co-organiser with Paul Torrens, Specialist Workshop on ‘Urban Cellular Automata: Where Are We Now?’, Centre for Advanced Spatial Analysis, University College London, October.

Other professional service

- 2006 Invited participant Auckland Regional Council “A skilled and responsive labour force for Auckland” Metro Auckland project.

Refereeing for journals

Peer reviewing work for journals as detailed below. Each review in a year is recorded once. Superscripts indicate where more than one review was completed in a year. From 2009 to 2015 and again starting in 2017 I have been a journal editor, limiting my ability to take on as many reviews as previously.

Advances in Complex Systems 2007

American Journal of Sociology 2007

Annals of the Association of American Geographers (7 total) 2016 2014 2013 2012 2008 2003 2002

Cartography and Geographic Information Science 2016

Computational Statistics 2003

Complexity 2010

Computers and Geosciences 2009 2007

Computers, Environment and Urban Systems (27 total) 2016² 2015³ 2014² 2013³ 2012³ 2011² 2010³ 2009 2008² 2007² 2006 2005 2002 2001

Demography 2016

Dialogues in Human Geography 2016 2013

Discrete Dynamics in Nature and Society 2006

Environment and Planning A (12 total) 2016 2014 2013 2010 2009 2008 2007 2005² 2004² 2003

Environment and Planning B: Planning & Design (33 total) 2015 2014 2009³ 2007⁴ 2006⁴ 2005² 2004³ 2003⁴ 2002⁴ 2001³ 2000 1999² 1998

Geoforum 2014 2006

GeoJournal 2014

Geographical Analysis (7 total) 2016 2014 2013 2008 2005 2004²

Geographical Review 2015

Geography Compass 2009

Health and Place 2009 2008

IEEE Transactions on Evolutionary Computation (IEEE-TEC) 2003

International Journal of Geographical Information Science (34 total) 2016² 2015² 2014⁷ 2013³ 2012² 2011² 2010 2009³ 2008³ 2007² 2006 2005² 2004 2003² 2001

International Regional Science Review 2015 2011

Journal of Artificial Societies and Social Simulation (9 total) 2013 2012² 2011² 2010
 2009 2007 2001
Journal of Computational and Graphical Statistics 2002
Journal of Environmental Management 2006
Journal of Land Use Science 2016 2011
Journal of Mathematical Sociology 2006
Journal of Spatial Information Science 2015 2011 2010 2009
Journal of Spatial Science 2014 2013³
Journal of Transport Geography 2014
Methods in Ecology and Evolution 2012
PLOSOne 2015
Progress in Human Geography 2010 2008
Professional Geographer 2007
Review of Urban and Regional Development Studies 2005
Science 2015
Spatial Cognition and Computation 2016
Systems 2015
Transactions in GIS (11 total) 2016 2015² 2008² 2007 2006⁵
Transactions of the Institute of British Geographers 2005
Transportation Record 2002
Urban Geography 2011
Urban Morphology 2014 2005 2004
Urban Studies 2016 2012 2010³

Professional memberships

2000 – Member of the Association of American Geographers
 2000 – 10 Fellow of Royal Geographical Society – Institute of British Geographers
 2005 – 11 Associate of New Zealand Geographical Society