

# James D. A. Millington

*PhD · MSc · BSc (HONS)*

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## EDUCATION

### Doctor of Philosophy, Geography

Department of Geography, King's College London, July 2007

### Master of Science with Distinction, Environmental Modelling, Monitoring and Management

Department of Geography, King's College London, September 2003

### Bachelor of Science, First Class, Geography

Department of Geography, King's College London, July 2002

## EMPLOYMENT HISTORY

### Leverhulme Early Career Fellow

Department of Geography, King's College London, Jan. 2011 – Present

### Visiting Research Associate

Center for Systems Integration & Sustainability, Michigan State University, May 2007 – Nov. 2010

### Adjunct Instructor

Department of Fisheries and Wildlife, Michigan State University, Aug. 2008 – Dec. 2008

### Undergraduate Personal Tutor

Department of Geography, King's College London, Sept. 2005 – June 2006

### Teaching Assistant

Department of Geography, King's College London, Sept. 2003 – June 2006

### Fieldwork Instructor

Department of Geography, King's College London, Dec. 2003

## PUBLICATIONS

### Peer-Review Journal Articles

**Millington, J.D.A.**, Walters, M.B., Laurent, E.J., Hall, K.R. and Liu, J. (2011) Combined effects of timber management and variable tree regeneration on songbird habitat *Forest Ecology and Management* 262 718-729 [doi: 10.1016/j.foreco.2011.05.002]

**Millington, J.D.A.** and Perry, G.L.W. (2011) Multi-model inference in biogeography *Geography Compass* 5(7) 448-530 [doi: 10.1111/j.1749-8198.2011.00433.x]

Matonis, M.S., Walters, M.B. and **Millington, J.D.A.** (2011) Gap-, stand-, and landscape-scale factors contribute to poor sugar maple regeneration after timber harvest *Forest Ecology and Management* 262 286-298 [doi: 10.1016/j.foreco.2011.03.034]

**Millington, J.D.A.**, Demeritt, D. and Romero-Calcerrada, R. (2011) Participatory evaluation of agent-based land use models *Journal of Land Use Science* 6(2) 195-210 [doi: 10.1080/1747423X.2011.558595]

Wainwright, J. and **Millington, J.D.A.** (2010) Mind, the Gap in Landscape-Evolution Modelling *Earth Surface Processes and Landforms* 35(7) 842-855 [doi: 10.1002/esp.2008]

**Millington, J.D.A.**, Walters, M.B., Matonis, M.S. and Liu, J. (2010) Effects of local and regional landscape characteristics on wildlife distribution across managed forests *Forest Ecology and Management* 259 1102-1110 [doi: 10.1016/j.foreco.2009.12.020]

- Romero-Calcerrada, R., Barrio-Parra, F., **Millington, J.D.A.** and Novillo, C.J. (2010) Spatial modelling of socioeconomic data to understand patterns of human-caused wildfire ignition risk in the SW of Madrid (central Spain) *Ecological Modelling* 221(1) 34-45 [doi: 10.1016/j.ecolmodel.2009.08.008]
- Millington, J.D.A.**, Wainwright, J., Perry, G.L.W., Romero-Calcerrada, R. and Malamud, B.D. (2009) Modelling Mediterranean landscape succession-disturbance dynamics: A landscape fire-succession model *Environmental Modelling and Software* 24 1196-1208 [doi: 10.1016/j.envsoft.2009.03.013]
- Millington, J.D.A.**, Romero-Calcerrada, R., Wainwright, J. and Perry, G.L.W. (2008) An agent-based model of Mediterranean agricultural land-use/cover change for examining wildfire risk *Journal of Artificial Societies and Social Simulation* 11(4)  
<http://jasss.soc.surrey.ac.uk/11/4/4.html>
- Romero-Calcerrada, R., Camacho, C.J., **Millington, J.D.A.** and Gomez-Jimenez, I. (2008) GIS analysis of spatial patterns of human-caused wildfire ignition risk in the SW of Madrid (Central Spain) *Landscape Ecology* 23 341-354 [doi: 10.1007/s10980-008-9190-2]
- Perry, G.L.W. and **Millington, J.D.A.** (2008) Spatial modelling of succession-disturbance dynamics in terrestrial ecological systems *Perspectives in Plant Ecology, Evolution and Systematics* 9(3-4) 191-210 [doi: 10.1016/j.ppees.2007.07.001]
- Millington, J.D.A.**, Perry, G.L.W. and Romero-Calcerrada, R. (2007) Regression techniques for examining land use/cover change: A case study of a Mediterranean landscape *Ecosystems* 10(4) 562 – 578 [doi: 10.1007/s10021-007-9020-4]
- Malamud, B.D., **Millington, J.D.A.** and Perry, G.L.W. (2005) Characterizing wildfire regimes in the USA *Proceedings of the National Academy of Science* 102(13) 4694 – 4699 [doi: 10.1073/pnas.0500880102]
- Millington, J.D.A.** (2005) Wildfire risk mapping: considering environmental change in space and time *Journal of Mediterranean Ecology* 6(1) 33 – 42

### Book Chapters

- Millington, J.D.A.**, Wainwright, J. and Mulligan, M. (2012) Representing human activity in environmental modelling *In: Wainwright, J. and Mulligan, M. (Eds.) Environmental Modelling: Finding Simplicity in Complexity* (2nd Edition)
- O'Sullivan, D., **Millington, J.D.A.**, Perry, G.L.W. and Wainwright, J. (2012) Agent-based models – because they're worth it? *In: Heppenstall, A.J., Crooks, A.T., See, L.M. and Batty, M. (Eds.) Agent-Based Models of Geographical Systems* Springer, London [doi: 10.1007/978-90-481-8927-4\_6]
- Millington, J.D.A.**, Perry, G.L.W. and Malamud, B.D. (2006) Models, data and mechanisms: quantifying wildfire regimes *In: Cello, G., Malamud B. D., & Davey, P. (Eds.) Fractal Analysis for Natural Hazards*. Geological Society, London [doi: 10.1144/GSL.SP.2006.261.01.12]

### Other Articles

- McConnell, W.J., **Millington, J.D.A.** et al. (2011) Research on Coupled Human and Natural Systems (CHANS): Approach, Challenges, and Strategies. *Bulletin of the Ecological Society of America* 92 218-228 [doi: 10.1890/0012-9623-92.2.218]

### Book Reviews

- New models for ecosystem dynamics and restoration. Hobbs, R.J. and Suding, K.N. (Eds.) *Landscape Ecology* 24(9) 1269-1270 [doi: 10.1007/s10980-009-9394-0]
- A companion to environmental geography. Castree, N., Demeritt, D., Liverman, D. and Rhoads, B. (Eds.) *Progress in Physical Geography* 33(3) 445-447 [doi: 10.1177/0309132509341428]
- Engaging the future: forecasts, scenarios, plans, and projects. Hopkins, L.D. and Zapata, M.A. (Eds.) *Environment and Planning A* 39 2797-2798

## **In Preparation**

**Millington, J.D.A.**, O’Sullivan, D. and Perry, G.L.W. (in revision) Narrative explanation in generative simulation modelling; research manuscript under revision for *Geoforum*

**Millington, J.D.A.**, Walters, M.B., Matonis, M.S. and Liu, J. (in review) Modelling for forest management synergies and trade-offs: Tree regeneration, timber and wildlife; research manuscript in review at *Ecological Modelling*

**Millington, J.D.A.** and Wainwright, J. (in prep.) This is not a paper about modelling; invited for submission to *Dialogues in Human Geography*

Matonis, M.S., **Millington, J.D.A.** and Walters, M.B. (in prep.) Predicting Browse Pressure on Mesic Conifers with Estimates of Deer Density, Snow Depth, and Distance to Lowland Conifer Stands; research manuscript in preparation for submission to *Northern Journal of Applied Forestry*

**Millington, J.D.A.** (in press) Breaking the ‘hierarchical relationship’ between physical and social causes of land degradation; invited book chapter section for ‘*Patterns of land degradation in drylands. Understanding self-organized ecogeomorphic systems*’

**Millington, J.D.A.** (in press) Definitions: when is a pattern a pattern?; invited book chapter section for ‘*Patterns of land degradation in drylands. Understanding self-organized ecogeomorphic systems*’

## **GRANTS AND AWARDS**

### **Leverhulme Early Career Fellowship**

2010 – Three years’ salary and research expenses

### **University of London Central Research Fund**

2006 – Fieldwork grant; £500

### **ESRC Overseas Institutional Visit Grant**

2005 – University of Auckland, New Zealand; £1,800

### **ESRC / NERC Interdisciplinary PhD Research Studentship**

2003 – Three years’ student fees and maintenance

### **Head of Department Prize**

2002 – Department of Geography, King’s College London

## **TEACHING EXPERIENCE**

### **Postgraduate Courses**

#### *Systems Modeling and Simulation*

Lecturer, 2008, Michigan State University (16 week class)

#### *Environmental GIS*

Teaching Assistant, 2004 – 2005, King’s College London

### **Undergraduate Courses**

#### *Geography Tutorials: Critical Thinking and Techniques*

Academic Tutor, 2011-2012, King’s College London (Two-term module)

#### *Geographical Concepts Skills and Methods: Time, Environment and Landscape*

Lecturer, 2011-2012, King’s College London (Five week module)

#### *Critical Readings in Development Geography*

Academic Tutor, 2005 – 2006, King’s College London (Two-term module)

#### *Fieldwork in Physical Geography*

Instructor, 2003-2004, King’s College London (Two-term module with one week fieldtrip)

Teaching Assistant, 2004-2006, King’s College London

#### *Data Analysis in Physical Geography*

Teaching Assistant, 2005-2006, King’s College London

## **Guest Lectures**

*Analysis and Modelling of Environmental Processes*

July 2008, University of Auckland, New Zealand

*People and Processes in the Mediterranean Landscape*

November 2005, King's College London

## **TECHNICAL SKILLS AND EXPERTISE**

### **Statistics**

Numerous frequentist and Bayesian methods for data analysis, hypothesis testing, inference and forecasting

Proficient: R, SPSS, WinBUGS

### **Programming**

Object-oriented languages for development and use of bespoke scientific applications

Proficient: C++, R, SQL, HTML; Basic: Python, JavaScript, XML

### **Modelling and GIS**

Statistical, spatially-explicit, individual- and agent-based, and systems modelling & simulation

Proficient: ArcGIS, R, NetLogo, STELLA, Fragstats; Basic: GRASS, SIMILIE, ENVI,

IDRISI, Google Earth, Google Maps API, Garmin GPS

### **Other Software**

Office suite for productivity and project management; Publication-grade figures

Proficient: MS Word, Excel, PowerPoint, Access, Outlook, Visual Studio; EndNote, Inkscape, TheGIMP; Basic: Linux OS, OpenOffice

## **CONFERENCES**

Over 25 oral and poster presentations at international conferences including: Royal Geographical Society Annual Conference, International Association of Landscape Ecology meetings, and the European Geophysics Union General Assembly. [Full list online: <http://bit.ly/uy20En>]

## **SEMINARS AND WORKSHOPS**

Eight invited research seminars (at institutions in UK, US, Germany and New Zealand) and funded invitation to three European workshops on complexity science. [Details online: <http://bit.ly/tfsasF>]

## **ACADEMIC SERVICE**

### **Journal Reviewer**

Advances in Complex Systems, American Naturalist, Annals of Forest Science, Area, Canadian Journal of Zoology, Ecological Complexity, Ecological Modelling, Ecology and Society, Ecosystems, Environment and Planning A, Environmental Conservation, International Journal of Wildland Fire, Journal of Environmental Policy and Planning, Journal of Geographical Systems, Journal of Land Use Science, Land Use Policy, Landscape Ecology, Mammal Review, Natural Hazards, Tropical Conservation Science

### **Grant Reviewer**

US National Science Foundation – Collaboration in Mathematical Geosciences; UK Economic & Social Research Council