Mathematical Institute
University of Oxford
Oxford, OX2 6GG

07507303658
andrew.mellor@maths.ox.ac.uk
andrewmellor.co.uk

Andrew Mellor

Employment

Jul. 2017- Jun. 2020 | Postdoctoral Research Assistant in Data Science (3 years)
University of Oxford, Oxford, UK
Oxford-Emirates Research Lab, Mathematical Institute
Director: Prof. Pete Grindrod

May 2017- Jun 2017 | Postdoctoral Impact Research Fellow (2 months)
University of Leeds, Leeds, UK

Education

2013-2017 | Doctoral Candidate in Mathematics (PhD)
University of Leeds, Leeds, UK
EPSRC CASE Studentship, with sponsorship (£30,000) from Bloom Agency, UK
Thesis: "Monitoring and Modelling of Social Networks"
Advisors: Dr Jonathan Ward, Prof. Alastair Rucklidge, Dr Mauro Mobilia

2009-2013 | Masters in Mathematics (MMath)
University of Oxford, Oxford, UK
Upper Second Class (2.i)/Upper Second Class (2.i)

2007-2009 | Full Time Student (A Level)
Greenhead College, Huddersfield, UK
Mathematics A, Further Mathematics A, Physics A, Chemistry A

Publications, Conferences, and Workshops

Publications

— The Temporal Event Graph
Mellor, A.; *Under review*

Jan. 2017 A Heterogeneous Out-of-Equilibrium Nonlinear q-Voter Model with Zealotry
Mellor, A.; Mobilia, M. & Zia, R. K. P.. *Physical Review E*

Mar. 2016 Characterization of the Nonequilibrium Steady State of a Heterogeneous Nonlinear q-Voter Model with Zealotry
Mellor, A.; Mobilia, M. & Zia, R. K. P.. *Europhysics Letters (Editor's Choice & Featured in 2016 Highlights)*

Sept. 2015 Influence of Luddism on innovation diffusion
Mellor, A.; Mobilia, M.; Redner, S.; Rucklidge, A. M. & Ward, J. A.. *Physical Review E*

Selected Talks & Conferences

Apr. 2017 Nonlinear Dynamics Seminar, University of Bristol
Invited Talk: *A Heterogeneous Out-of-Equilibrium Nonlinear q-Voter Model with Zealotry*
Mellor, A.; Mobilia, M.; Zia, R. K. P.

Nov. 2016 KTN Alan Tayler Day, University of Oxford
Invited Talk: *Monitoring and Modelling Social Networks*
Mellor, A.; Mobilia, M.; Rucklidge, A. M. & Ward, J. A.

Nov. 2016 Statistical Network Analysis Workshop, Isaac Newton Institute, Cambridge
Contributed Poster: *Analysing Patterns in Digital Communication*
Mellor, A. & Ward, J. A.

Jan. 2016 Dynamical Networks and Network Dynamics, ICMS Edinburgh
Invited Talk: *Simple Motifs and Centrality in Temporal Networks*
Mellor, A.; Mobilia, M.; Rucklidge, A. M. & Ward, J. A.

Aug. 2015 CabDyn Seminar, University of Oxford
Invited Talk: *Influence of Luddism on Innovation Diffusion*
Mellor, A.; Mobilia, M.; Redner, S.; Rucklidge, A. M. & Ward, J. A.

Jul. 2015 Collective Dynamics & Evolving Networks Workshop, University of Bath
Invited Talk: *Influence of Luddism on Innovation Diffusion*
Mellor, A.; Mobilia, M.; Redner, S.; Rucklidge, A. M. & Ward, J. A.

Nov. 2014 KTN Alan Tayler Day, University of Oxford
Invited Poster: *Understanding Voting Preference and Influence in Social Media*
Mellor, A.; Mobilia, M.; Rucklidge, A. M. & Ward, J. A.

Sept. 2014 European Conference on Complex Systems, Italy
Contributed Poster: *Using Communicability for Infection Analysis on Temporal Networks*
Mellor, A.; Mobilia, M.; Rucklidge, A. M. & Ward, J. A.

Jun. 2016 Sante Fe Institute Complex Systems Summer School, Santa Fe, NM, US
Apr. 2014 Complex Networks Thematic School, Les Houches, France

Work Experience

Jun-Oct 2013 | Winton Capital Management, Oxford, UK
Research Assistant
Provided analysis of financial market data, both stock price time series and fundamentals (financial statements), with an emphasis on finding irregularities and inconsistencies. Developed tests using SQL and Python to flag records, and then subsequently investigated them before releasing them into the trading environment. Gained knowledge around financial markets, time series analysis and also engaged in internal research seminars and workshops.

Jun-Sep 2012 | Coutts, London, UK
Decision Support Analyst
Compiled company reports and in the executive decision support team as part of a summer internship. Reported findings to the chief financial officer and made suggestions on possible targets for efficiency savings. Created spreadsheet macros to streamline and automate what had previously been a long, manual reporting process.

Miscellaneous

Teaching: Tutor, Financial Mathematics I, University of Leeds (2014-16)
Tutor, Computational Mathematics, University of Leeds (2014-16)

Journals: Referee for European Physics Letters (EPL)
Referee for Journal of Statistical Mechanics (JSTAT)
Referee for New Journal of Physics (NJP)

Memberships: Member of the Complex Systems Society (CSS)
Member of the Society for Industrial and Applied Mathematics (SIAM)

Interviews: Student Representative on the interview panel for University of Leeds Academic Fellowships (2015)

Technical Skills

Programming: Python (extensive use), R (working knowledge),
MATLAB (working knowledge), Java (working knowledge), C++ (working knowledge)
Version Control: Git (extensive use), SVN (working knowledge)
Databases: mySQL, SQL Server, NoSQL
Web: HTML, CSS, Javascript
Operating Systems: Linux, Windows

Experience with large scale data-processing frameworks (Spark) and GPU processing (Theano, CUDA).

Interests and Activities

Academic:	Network Science	Dynamical Processes on Complex Networks
	Stochastic Processes	Data Visualisation
	Markovian Processes	Statistical Mechanics
	Social Networks	Agent-based Modelling
	Data-driven Modelling	Machine Learning
Recreational:	Road Cycling	Football
	Drawing	Triathlon

References

Dr J. Ward — School of Mathematics, University of Leeds, LS2 9JT
j.a.ward@leeds.ac.uk, 0113 3435157

Prof. R. K. P. Zia — Department of Physics, Virginia Tech, VA 24061, USA
rkpzia@vt.edu, +1-540-231-6712

P. Laflin — Bloom Agency, Marshall's Mill, Leeds, LS11 9YJ
peter.laflin@bloomagency.co.uk, 0113 8878200