

## Master of Science in Data Analytics for Government - Symposium 2019

The Federation, Manchester, 27th March 2019, 09:00-16:00

### PROGRAMME

**NOTE:** Speakers will be given 15 minutes to present their work and 5 minutes for questions and answers. It is anticipated that an article with Symposium highlights will be published on the ONS Data Science Campus external website (<https://datasciencecampus.ons.gov.uk/>) shortly after the event. The article will include the Symposium programme and links to the presentations. Please ensure your presentation only includes information that can be made available to the public.

09:00 – 10:00	<b>Registration and Refreshments</b>	
10:00 – 10:15	<b>Welcome from the Organising Committee</b> (Room: Defiant)	
10:15 – 10:30	<b>Welcome from David Johnson, Deputy Director for Knowledge Exchange, ONS Data Science Campus</b> (Room: Defiant)	
	<b>Parallel Session 1</b> (Room: Defiant) Chair: Wei (Tony) Guo, HMRC	<b>Parallel Session 2</b> (Room: Solidarity) Chair: Solange Correa Onel, ONS
10:30 – 10:50	NI Department for the Economy's experience on the ONS Data Science Pathfinder Programme, Jamie Stainer, Northern Ireland Statistics and Research Agency	Where did you come from, where did you go, where should you go to treat that broken elbow: A tool exploring proximity to and demand on health services, Katie Davidson, Department for Health and Social Care
10:55 – 11:15	How to acquire 2 billion records of data and make it usable for data scientists, Anthony Fitzroy, Office for National Statistics	Robust text document clustering and summarization for classifying company activities, Martin Wood, Home Office
11:20 – 11:40	Linear and logistic regression: What makes a good model and more, Rhonda Hypolite, Office for National Statistics	A brief history of (my) time (as a guinea pig at Brookes), and how it got me a job, Julia Clark, West Midlands Police
11:40 – 12:00	<b>Coffee Break</b>	
	<b>Session 3</b> (Room: Defiant) Chair: Harrison Davies, ONS	
12:00 – 12:20	Using optimisation to estimate Flow of Funds Matrices for the United Kingdom, Joshua Abramsky, Office for National Statistics	
12:20 – 12:40	Enhancing the detection of potential threats using Machine Learning, Fatima Chiroma, University of Portsmouth and Office for National Statistics	
12:40 – 13:00	Using Exploratory Data Analysis method for an early warning in Indonesia's earthquakes disaster, Yuliagnis Wijaya, University of Southampton and Statistics Indonesia	
13:00 – 13:15	<b>Welcome from Tom Smith, Managing Director, ONS Data Science Campus (Room:</b>	

	<b>Defiant)</b>
13:15 – 14:00	<b>Lunch</b>
	<b>Session 4</b> (Room: Defiant) Chair: Anthony Fitzroy, ONS
14:00 – 14:20	Using R Markdown to automate Historical Census Management Information, Harrison Davies, Office for National Statistics
14:20 – 14:40	Overview and applications of the Hawkes Process, Soumaya Mauthoor, Home Office
14:40 – 14:50	<b>Best Presentation voting</b>
	<b>Roundtable Session</b> (Room: Defiant) Title: “How can universities enable government to embed data science in its processes?” Chair: Martin Wood, Home Office
14:50 – 15:05	Tom Smith, Managing Director, ONS Data Science Campus
15:05 – 15:20	Prof Jackie Carter, Professor in Statistical Literacy, University of Manchester and Office for National Statistics
15:20 – 15:45	Questions and Answers
15:45 – 16:00	<b>Closing (Room: Defiant)</b>

#### ONS Data Science Campus Speakers and Panel Discussants



##### **David Johnson - Deputy Director, Knowledge Exchange of the ONS Data Science Campus**

With nearly twenty years’ experience building and managing operations from 10 to 100+ employees in the online and telecommunications sectors in the UK, Europe and the US, David joined the Data Science Campus in May 2016 as Interim Head, working with a small team to build the Campus and prepare it for formal launch.

Prior to joining the Campus he was co-founder of a machine-learning start-up that developed a real-time local event detection platform using geolocated social media photo and video uploads, forming a €1.6M EU FP7-funded Research programme in association with the University of Dublin, Trinity College and the Institut National des Sciences Appliquées de Lyon in the areas of Machine Learning, Data Mining and Computer Vision. He was part of the leadership team that launched Google’s European headquarters in Dublin, running its AdSense Online ad network in EMEA, and worked previously with BT and Comcast. In addition, he has served on the Boards of the University of Dublin, Trinity College and the Institute of Art, Design and Technology, Dún Laoghaire.



### **Tom Smith - Managing Director of the ONS Data Science Campus**

Tom Smith is Managing Director at the Data Science Campus, joining the Office for National Statistics (ONS) in 2017. He was co-founder and, prior to joining ONS, chief executive of Oxford Consultants for Social Inclusion (OCSI), a research and data 'spin-out' company from the University of Oxford.

Tom has more than 20 years' experience using data and analysis to improve public services. Working at the intersection of government, academia and industry, he has led data & research projects with hundreds of local and national public and community sector organisations, including the government's English Indices of Deprivation. His primary research interests are in using data science to improve public services, machine learning, and assessing non-traditional data sources to improve our understanding of society and the economy.

A life-long data addict, Tom has a PhD in computational neuroscience, evolving neural networks for robot control (Sussex, 2002), an MSc in knowledge-based systems (Sussex, 1997), and MA in theoretical physics (Cambridge, 1994). He is vice-chair of the Royal Statistical Society Official Statistics section, and previously chair of the Environment Agency Data Advisory Group, and a member of the Open Data User Group ministerial advisory group to Cabinet Office. He has also acted as an external advisor on opening-up, sharing and using data for multiple government departments.



### **Prof Jackie Carter - Professor in Statistical Literacy at the University of Manchester**

Current Affiliations: Social Statistics - School of Social Sciences, Cathie Marsh Institute for Social Research - School of Social Sciences, Urban Big Data Centre Advisory Board member, Office for National Statistics.

Co-director of the Manchester Q-Step Centre and Director for Engagement with Research Methods Training. Previously communications and Impact Director for UK Data Service, Jackie has extensive project experience as an expert in the provision and use of data in learning and teaching, undertaking a Teaching Fellowship on statistical literacy in 2011-12. She previously taught high school maths and undertook a PhD as a mature student in geostatistics. Jackie is based in Social Statistics for the Q-Step Centre role. Jackie also works together with Dr Mark Brown on the ESSTED (Enriching Social Science Teaching with Empirical Data) team, an ESRC funded project.

### **2019 MDataGov Symposium Organising Committee**

Harrison Davies, Office for National Statistics

Anthony Fitzroy, Office for National Statistics

Wei (Tony) Guo, HMRC

Martin Wood, Home Office

Solange Correa Onel, Office for National Statistics