



*3<sup>rd</sup> Annual International Conference*

# **Government by Algorithm?**

**6-7 September 2017 | London**



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# Welcome

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It is a great pleasure to welcome you to this third event in our annual international Data for Policy conference series. We have come a long way in the three years since our inaugural conference in Cambridge (2015). It has been a humbling experience for me personally, to see the overwhelming interest and support for this initiative from around world. The intention at the beginning was to offer a learning and knowledge exchange opportunity for various stakeholders that share the common interest of making the most of the ongoing digital revolution for the public sector, but often find themselves lost in translation. Since our first conference, I feel that this initiative has become so much more; offering real opportunities for experts from across the world to influence and shape the course of the data revolution, particularly for government applications. Our growth to date has been quite eclectic but in the coming months, we aim to initiate new organisational structures for multiple interest groups in order to make this a truly accessible medium for scholarly debate, publishing, and knowledge transfer in this emerging field of research.

We realise that although governments are likely to benefit most from the emerging technologies, given that they have the unique legitimacy to collect and process huge amounts of citizen data and manage the public infrastructure on behalf of each one of us, the right procedures should first be established to ensure that all potential societal outcomes are adequately assessed. The commercial success stories based on advancements in technologies like Artificial Intelligence, the Internet of Things, or Blockchain cannot be replicated in the public sector with the same speed as they have in the private. This is because the potential for social impact is so much greater - in privacy, security, ethics, and transparency terms. The specific theme for this year's conference is 'Government by Algorithm?' - a critical question within the broader 'Data for Policy' debate - since algorithms are the main load-bearers when it comes to extracting useful information from the massive explosion of data in all forms and from countless different sources. In the way that multi-national companies are changing how we work, socialize, or create value in the economy, data partnered with the 'right' algorithms can completely transform the public sector, improving its efficiency enormously in a number of fundamental functions ranging from offering 'intelligent' advice to citizens and 'intelligent' support to civil servants, to automating regulation and dispute resolution. The fundamental nature of this question of governance by algorithm; it's enormous potential and global impact, convinced us that this was the right focal point for our conference.

I should thank all our committee members, partners and sponsors (listed in the next few pages) for their invaluable support to this initiative. I would particularly like to mention Professor Anthony Finkelstein and the UK Government Data Science Partnership (Go-Science, ONS, and GDS) for hosting us at this premier conference venue this year. I would also like to express my sincere gratitude to University College London for hosting this initiative as a whole and to University of Cambridge for providing the space for all this to start and develop in the first two years.

I sincerely hope that you will enjoy the conference and continue to stay in touch with us afterwards.

Kind regards,

Zeynep Engin (Founder, Data for Policy)

# Committees

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## Advisory Committee:

Jean **Bacon** – University of Cambridge  
Kenneth **Benoit** – London School of Economics and Political Science  
Jon **Crowcroft** – University of Cambridge; The Alan Turing Institute  
Anthony **Finkelstein** – Government Office for Science; The Alan Turing Institute  
David **Hand** – Winton Capital Management; Imperial College  
Helen **Margetts** – University of Oxford; The Alan Turing Institute  
Natasha **McCarthy** – The Royal Society  
Beth **Noveck** – The GovLab, New York University  
Quentin **Palfrey** – J-PAL North America, MIT  
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Rob **Procter** – University of Warwick; The Alan Turing Institute  
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John **Shawe-Taylor** – University College London  
John **Taysom** – Privitar; University College London  
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Stefaan **Verhulst** – New York University  
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Derek **Wyatt** – Royal Trinity Hospice; All Party Parliamentary Group on Data Analytics

## Chief Organisers:

Zeynep **Engin** – Founder, Data for Policy; University College London  
Daniel **Edwards** – Department for Digital, Culture, Media & Sport (DCMS)

## Programme Committee:

Emanuele **Baldacci** – European Commission  
Sarah **Barns** – Western Sydney University  
Marcus **Besley** – Government Office for Science  
Anil **Bharath** – Imperial College London  
Daniel **Castro** – Centre for Data Innovation  
Gabrielle **Demange** – Paris School of Economics  
Suleyman **Demirsoy** – Intel  
Yves-Alexandre **de Montjoye** – Imperial College London  
Dawn **Duhaney** – Government Digital Service  
Rayid **Ghani** – University of Chicago  
Bilal **Gokpinar** – University College London  
David **Johnson** – Office for National Statistics  
Jose Manuel **Magallanes** – Uni. of Washington; Pontificia Universidad Catolica del Peru  
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Slava **Michaylov** – University of Essex  
Suzy **Moat** – University of Warwick; The Alan Turing Institute  
Jessica **Montgomery** – The Royal Society  
Will **Moy** – Full Fact  
Mirco **Musolesi** – University College London; The Alan Turing Institute  
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Martijn **Poel** – Technopolis Group

Tobias **Preis** – University of Warwick; The Alan Turing Institute  
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Ralph **Schroder** – University of Oxford  
Gideon **Shimshon** – Leiden University  
Jatinder **Singh** – University of Cambridge  
Barbara **Ubaldi** – The organisation for Economic Co-operation and Development (OECD)  
Diana **Vlad-Calci** – European Commission  
Andrew **Young** – New York University

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George **Dibb** – Policy Connect; All Party Parliamentary Group on Data Analytics  
Nathaniel **Hayward** – Data for Policy  
Carina **Schneider** – University College London  
Michael **Veale** – University College London  
Matthew **Wood** – Government Office for Science

**Demonstration Session Organisers:**

Jon **Crowcroft** (Chair) – University of Cambridge; The Alan Turing Institute  
Tabitha **Goldstaub** – CognitionX  
Giles **Pavey** – University College London  
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## Partners & Sponsors

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- University College London – Department of Computer Science and UCL Public Policy
- University of Cambridge – Computer Laboratory and Centre for Science and Policy (CSaP)
- UK Government Data Science Partnership – Government Office for Science (GO-Science), Office for National Statistics (ONS), and Government Digital Service (GDS)
- All Party Parliamentary Group on Data Analytics, UK Parliament
- Imperial College London – Data Science Institute
- London School of Economics and Political Science – Department of Methodology
- The Alan Turing Institute – UK National Institute for Data Science
- The Royal Statistical Society
- European Commission – Joint Research Centre and Eurostat
- University of Oxford – Oxford Internet Institute
- New York University – The Government Laboratory (GovLab) and the Open Governance Research Exchange (OGRX)
- University of Essex – Institute for Analytics and Data Science
- Essex County Council
- UK Administrative Data Research Network (ADRN)
- Privitar
- CognitionX

# Conference Programme

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## Wednesday, 6 September 2017

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**09:00 – 09:30 Arrivals & Registration**

**09:30 – 09:45 Data for Policy: From Idea to Practice (Room A)**

Anthony **Finklestein** (@profserious), Chief Scientific Adviser for National Security, UK

Zeynep **Engin** (@ZeynepEngin), Founder, Data for Policy; University College London (UCL)

**09:45 – 10:45 Opening Plenary Session (Room A)**

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**Plenary:** Data and the Transformation of Policy Making as We Know It

*“Government Statistical Services in the Data Analytics age”*

Mariana **Kotzeva** (@MarianaKotzeva), Acting Director-General, Eurostat, European Commission, Luxembourg

*“Better Data for Better Policy”*

Heather **Savory** (@SaturnSA4), Director-General for Data Capability, Office for National Statistics, UK

*“Maintaining Public Trust in the Era of Big Data”*

Daniel **Zeichner** (@DanielZeichner), Member of Parliament for Cambridge; Chair of All Party Parliamentary group on Data Analytics, UK

**Chair:** Anthony **Finklestein** (@profserious), Chief Scientific Adviser for National Security, UK

**10:45 – 11:15 Break**

**11:15 – 12:15 Parallel Session 1**

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**Session 1a (Room A):** Algorithms and Policy Making

**Chair:** Emanuele **Baldacci**, Director of Methodology, IT and Corporate Statistical Services, Eurostat

[43] *“The computer says ‘DEBT’: A critical analysis of Australia’s automation of welfare debt detection and recovery”* – Paul **Henman**, The University of Queensland, Australia

[46] *"Artificial Intelligence and the Future of Government"* – Joel **Tito**, Centre for Public Impact, UK

[83] *"Battling the algorithmic tyranny: Towards an algorithmic social contract"* – Bruno **Lepri** (@brulepri), FBK, Italy; David **Sangokoya** (@dsango), and Emmanuel **Letouzé** (@ManuLetouze), Data-pop Alliance, USA; Nuria **Oliver** (@nuriaoliver), Vodafone Research, Spain; Alex **Pentland** (@alex\_petland) and Iyad **Rahwan** (@iyadrahwan) MIT Media Lab, USA

## **Session 1b (Room B): Data and Economic Policy**

**Chair:** Gabrielle **Demange**, Paris School of Economics, France

[20] *"Modelling the impact of potential council tax reforms in London"* – Mark **Wingham**, Greater London Authority, UK

[36] *"One market, one money, one price: using COMEXT data to assess the EU market integration target"* – Andrea **Cerasa**, Domenico **Perrotta**, Francesca **Torti** and Daniela **Buscaglia**, Joint Research Centre, European Commission, Italy

[44] *"Mapping without a map: Classifying companies to market sectors using unsupervised learning"* – Konstantinos **Stathoulopoulos** and Juan **Mateos-Garcia**, Nesta, UK

[75] *"Public policy and the promise of digital credit for financial inclusion"* – Caroline L. Anderson, University of Washington Evans School, USA; Pierre **Biscaye** (@pbiscaye), Evans School of Public Policy & Governance, USA; Travis **Reynolds**, Colby College, USA

**Session 1c (Room C): Data and Urban Policy Making: "Building a whole system approach to data capability - collaborative data use and storage in local government as a way to improve service delivery" – organised by **Essex County Council** (@Essex\_CC)**

**Introduction:** Chi **Onwurah** MP, Co-chair, APPG Finance and Technology;

[54a] *"Essex Data Programme - place based risk profiles for 'wicked issues'"* – Liz **Ridler**, Essex County Council

[54b] *"Data supermarket - storing and monetising place-based data"* – David **Wilde**, Essex County Council

[54c] *"Essex Centre of Data Analytics - the architecture to derive value from data"* – Victoria **Harrington**, Essex Police

[54d] *"Can smarter use of data save local government?"* – Eddie **Copeland**, NESTA

**Discussion Panel:** Chi **Onwurah** MP, Co-chair, APPG Finance and Technology; Stephen **Aldridge** CB, Director for Analysis and Data at DCLG; Maria **Fasli**, Director of the Institute of Analytics and Data Science, University of Essex; Jason **Kitkat**, Executive Director, Corporate Development, Essex County Council; Councillor Stephen **Canning**, Bocking Ward, Essex County Council

## Session 1d (Room D): Data-driven Policy Making

**Chair:** Sue Bateman, Deputy Director, Better Use of Data, Government Digital Service

[34] *"Building Momentum for Evidence-Based Policymaking in State and Local Governments"* – Rohit **Naimpally** and Hannah **Myers**, J-PAL North America, MIT Media Lab, USA

[97] *"Big Data and Governance: Global Comparisons"* – Ralph **Schroeder** (@ralphschroeder), Oxford Internet Institute, University of Oxford, UK

[109] *"Data Science in BEIS: Clusters for Industrial Strategy"* – Steve **Dempsey** (@Scientist\_Steve), Louise **Davies**, Cathy **Atkinson** and Andreas **Harding**, Department for Business, Energy and Industrial Strategy (BEIS), UK

## 12:15 – 13:30 Lunch & Demonstrations

### List of Demonstrations (Room E)

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**Chair:** Jon **Crowcroft**, Computer Laboratory, University of Cambridge

[63] *"Collecting non-mandatory workforce data: Data quality and encouraging response"* – Charlynnne **Pullen** (@CharlynnnePullen), The Education and Training Foundation, UK

[102] *"GlassAI Demonstration"* – Sergi **Martorell**, GlassAI, UK

[104] *"How smart contracts can implement the policy objective of 'report once'"* – Marc **Sel**, Royal Holloway University of London; Sander **Demeester** (@SanderDemeester), PwC, Belgium; Harald **Stieber** (@StieberHarald), Harvard, U.S., and European Commission, Belgium; Henning **Diedrich** (@hdiedrich), Claryon, Germany

[113] *"An opensource strategy for public online algorithms and data services: the French water information system experience"* – Alexandre B. J. **Liccardi** and Laurent **Coudercy**, AFB (French Biodiversity Agency), France

[116] *"Economic policy, "alternative data" and global agriculture"* – Marina **Chang**, Coventry University, UK; Boglarka **Saxena**, University College London, UK; C.H. **Huang**, National Sun Yat-sen University, Taiwan; I.S **Mian**, University College London, UK

## 13:30 – 14:30 Keynote Lecture 1 (Room A)

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*"(Private) Data for (Public) Policy"*

Stefaan **Verhulst** (@sverhulst) Co-founder and Chief Research and Development Officer of the Governance Laboratory (GovLab), New York University, USA

**Chair:** Kenneth **Benoit** (@kenbenoit), Head of Department of Methodology, London School of Economics and Political Science



**Session 2a (Room A):** Automated Decision-making and Privacy

**Chair:** John **Taysom**, Privitar; University College London

[40] *"Privacy, Vulnerability, and Willingness to share: An Empirical Investigation Using Latent Growth Curve Model"* – Susan **Wakenshaw** (@sylwakenshaw), WMG University of Warwick, UK; Lalitha **Dhamotharan**, University Sains Malaysia; Joshua **Ignatius**, WMG University of Warwick, UK; Xiao **Ma**, University of Warwick; Irene **Ng** (@ireneclng), WMG University of Warwick, UK; Daqiang **Chen**, Zhejiang Gongshang University, China

[55] *"Revolutionising Computing Infrastructure for Citizen Empowerment"* – Noa **Zilberman**, University of Cambridge, UK

[69] *"Pervasive data profiling and the possibility of civic responsibility"* – Sylvie **Delacroix**, UCL Laws, UK

[94] *"The challenges and benefits of automated mediation system: case study of healthcare management"* – Leid **Zejnlovic** (@leid\_zejnlovic), Nova School of Business and Economics, Portugal; Qiwei **Han**, Carnegie Mellon University, USA

**Session 2b (Room B):** Urban Analytics and Policy Making I

**Chair:** Tony **Hey**, Chief Data Scientist, Rutherford Appleton Laboratory, <sup>[11]</sup>Science and Technology Facilities Council, UK

[6] *"Clean data for cleaner air?"* – Joep **Crompvoets** and Roel **Heijlen** (@RoelHeijlen), KU Leuven Public Governance Institute, Belgium

[84] *"Assessment of Implementation Differences of State Programs of Emissions Monitoring for Passenger Vehicles in the USA"* – H Scott **Matthews** (@HScottMatthews), Paul **Fischbeck**, Deanna **Matthews** and Sinnott **Murphy**, Carnegie Mellon University, USA

[100] *"A global ranking of cities by accessibility to services"* – Talia **Kaufmann**, Northeastern University, USA; Abel **Schumann** and Rudiger **Ahrend**, OECD, France

**Session 2c (Room C):** Data and Humanitarian Policy *"Interpreting the Geneva Conventions in the Age of Cyber Warfare: Critical Challenges in Applying International Humanitarian Law to the Use of Data in the Context of Modern Armed Conflict"* – organised by the **Harvard Humanitarian Initiative at Harvard University**

**Chair:** Nathaniel **Raymond** (@nattyray11), Harvard University

[70a] *"Use of ICTs and Data by Humanitarian Actors During Crisis Response"* – Stuart **Campo** (@stucampo), Harvard Humanitarian Initiative, Harvard University

[70b] *"Use of ICTs and Data by Civilian Populations Affected by Armed Conflict"* – Daniel **Scarnecchia**, (@mountainherder) Harvard Humanitarian Initiative, Harvard University



[70c] *"Use of ICTs and Data by State and Non-State Actors Party to Armed Conflict"* – Caitlin **Howarth** (@CaitlinHowarth), Harvard Humanitarian Initiative, Harvard University

## **Session 2d (Room D):** Institutionalizing Data as a Resource for Policy Making

**Chair:** Jean **Bacon**, University of Cambridge

[38] *"An (increasingly) visible college: Mapping and strengthening research and innovation networks with open data"* – Juan **Mateos-Garcia** (@JMateosGarcia), Kostas **Stathouloupoulos** and Saha Bashir **Mohamed**, Nesta, UK

[90] *"Digital Data as a Resource: A Comprehensive Review and Implications for Governance"* – Marco S. **Minervini**, Bocconi University, Italy

[101] *"What is the resource footprint of a computer science department? Place, People, and Pedagogy"* – I.S. **Mian**, Dave **Twisleton** (@davoloid), and Denis **Timm**, University College London

**15:35 – 16:00**                      **Break**

**16:00 – 17:00**                      **Parallel Session 3**

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## **Session 3a (Room A):** Data and Policy Co-Creation

**Chair:** Kenneth **Benoit** (@kenbenoit), London School of Economics and Political Science

[26] *"While Implementing Fintech Advancement, Does Financial Regulation Unintentionally Ignore Less Privileged Populations ? The Investigation of Regulatory Change, Objective and Subjective Financial Literacy"* – Maya Haran **Rosen** and Orly **Sade**, Hebrew University, Israel

[81] *"Policy Co-creation in the Era of Data Science"* – Borut **Sluban** and Stefano **Battiston** (@zbattiz), University of Zurich, Switzerland

[105] *"Classifying and searching through Parliamentary Questions"* – Sam **Tazzyman**, Ministry of Justice, UK

## **Session 3b (Room B):** Data Modelling and Simulation for Policy Making

**Chair:** Slava **Michaylov**, University of Essex

[47] *"Applications of nowcasting for policymaking"* - Álvaro **Gómez-Losada** and Panayotis **Christidis**, Joint Research Centre - European Commission, Spain; Dario **Buono** (@darbuo), Eurostat, Luxembourg

[82] *"Indicators of humanitarian aid performance using online data: case-study of Afghanistan in 2015"* – Peter **De Ford**, University of Warwick; Farooq **Khan**, Polymaths Consulting, UK; Javier **Cuervo**, Polymaths Consulting, Canada; Samuel **Johnson**, University of Warwick, UK

[98] *"The long-term effects of inherited wealth on social equality"* – James **Allen**, Sandtable, UK

**Session 3c (Room C):** Data Infrastructure for Policy: *“Infrastructure to support access to data for research”* – organised by the **UK Administrative Data Research Network (ADRN)**

**Chair:** Tanvi **Desai**, UK Administrative Data Research Network

[99a] Tanvi **Desai**, UK Administrative Data Research Network

[99b] Richard **Welpton** (@rwelpton), Cancer Research UK

[99c] Felix **Ritchie**, University of the West of England

[99d] Sarah **Lowe**, Welsh Government

**Session 3d (Room D):** Open Data and Policy Making

**Chair:** Ralph **Schroder** (@ralphschroeder), Oxford Internet Institute, University of Oxford

[18] *“Transparency as an antidote to corruption in government contracting: antidote or mirage?”* – Agnes **Czibik**, Government Transparency Institute, Hungary; Mihaly **Fazekas** (@mihaly\_fazekas), University of Cambridge UK; Monika **Bauhr**, University of Gothenburg, Sweden

[95] *“Open data: audit audiences or engaged publics?”* – Anne L. **Washington** and David **Morar** (@morar), George Mason University, USA

[120] *“Open Data Policies in Europe - why is it important, and what trends do we see?”* – Wendy **Carrara** (@wcarrara), European Data Portal/Capgemini Consulting, France; Heleen **Vollers** (@HeleenVollers), and Jorn **Berends** (@berendsjorn), European Data Portal/Capgemini Consulting, Netherlands

**17:00 – 19:30                      Conference Reception**

*\*\* Please continue to the next page for the second day's programme \*\**

## Thursday, 7 September 2017

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**09:00 – 09:30**                      **Tea & Coffee**

**09:30 – 10:30**                      **Parallel Session 4**

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### **Session 4a (Room A):** Digital Public Infrastructure

**Chair:** Stefaan **Verhulst** (@sverhulst), New York University, USA

[39] *"Mapping the digital government from a public administration perspective"* – Stijn **Wouters** and Joep **Crompvoets**, KU Leuven, Belgium

[59] *"National ID programs: a multi-country review and analysis of policy and practical challenges"* – Caroline L **Anderson**, University of Washington Evans School, USA; Pierre **Biscaye** (@pbiscaye), Evans School of Public Policy & Governance, USA; Travis **Reynolds**, Colby College; USA

[77] *"Big Data Test Infrastructure"* – Roberto **Barcellan**, Marco **Fichera** (@marco\_fichera), and Tanya **Chetcuti** (@tanyachetcuti), European Commission, Belgium

### **Session 4b (Room B):** Data for Crime Prevention and Policing

**Chair:** H. Scott **Matthews**, Carnegie Mellon University, USA

[9] *"What ails smart policing in India"* – Shivangi **Narayan** (@NittiGrannies), Jawaharlal Nehru University, India

[52] *"More than Accomplices in Violence?: A Social Network Analysis of Boston Gang Members"* – Alexandra **Ciomek**, Harvard University, USA

[66] *"Small Area Estimation of Public Confidence"* – Dawn **Williams**, James **Haworth**, Tao **Cheng**, University College London; Marta **Blangiardo**, Imperial College London, UK

### **Session 4c (Room C):** *"Building self-service data science tools for policymakers"* – organised by the **Government Digital Service (GDS)**

**Chair:** Dawn **Duhaney**, Government Digital Service

[123a] *"Building the confidence of non-analytical data customers"* – Philippa **Peasland**, Product Manager for the Better Use of Data team at the Government Digital Service

[123b] *"Self-service data visualisation tools for policy makers"* – Ryan **Dunn**, Head of Data Science at the Department for Work & Pensions Newcastle Hub

[123c] *"Using data science to develop smarter digital services"* – Nicky **Zachariou**, Data Scientist in the Better Use of Data team at the Government Digital Service

#### **Session 4d (Room D): Data Ownership, Security and Linkage**

**Chair:** Diana **Vlad-Calci**, European Commission

[3] *"Implications of Next Generation Mobile Technology on Government Policy Making"* – Arnesh **Vijay**, Nokia Mobile Networks, Poland

[56] *"Evaluating the Troubled Families Programme using Administrative Data: the benefits and challenges"* – Lan-Ho **Man** and Liucija **Latanauskaite**, Department for Communities and Local Government (DCLG), UK

[127] *"Fostering public trust as an integral part of the digital transformation of the public sector: designing sound data governance"*, Barbara **Ubal**, The Organisation for Economic Co-operation and Development (OECD), France

**10:30 – 11:00**                      **Break**

**11:00 – 12:00**                      **Keynote Lecture 2 (Room A)**

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*"Algorithmic Government: Automating public services and supporting civil servants in using Data Science technologies?"*

Philip **Treleaven**, Director of the UK Financial Computing Centre, University College London, UK

**Chair:** Helen **Margetts** (@HelenMargetts), Director of the Oxford Internet Institute, University of Oxford; The Alan Turing Institute

**12:00 – 13:15**                      **Lunch & Demonstrations**

**List of Demonstrations (Room E)**

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**Chair:** Jon **Crowcroft**, Computer Laboratory, University of Cambridge

[103] *"IntelPol – Integrated Tool for Intelligent Policing"* – Tao **Cheng**, Toby **Davies** (@tobypeterdavies), Jianan **Shen**, Huanfa **Chen**, and Nan **Lin**, University College London, UK; Trevor **Adams**, Metropolitan Police Service, UK

[106] *"Essex Data Platform Demonstrator project"* – Liz **Ridler**, Essex County Council, UK; Stephen **Simpkin**, Essex County Council; Alison **Foster**, Pi

[111] *"Nature-Smart Cities"* – Sarah **Gallacher** (@sarah\_gallacher), Intel; Kate **Jones** (@ProfKateJones), University College London

[112] *"LDC's 'Smartstreetsensor' Project: Mapping Footfall, Retail Occupancy and Vacancy"* – Chris **Fowler**, The Local Data Company Ltd, UK

[119] *"New Vulnerability Monitoring Platforms for Food and Livelihood Security in Indonesia and Sri Lanka"* – Jong Gun **Lee** (@jonggunLee), Pulse Lab Jakarta;

Imaduddin **Amin** (@imadnov), Pulse Lab Jakarta; Katarina **Kohutova**, World Food Programme; Muhammad **Rheza**, Pulse Lab Jakarta, Muhammad **Subair**, Pulse Lab Jakarta; George **Hodge** (@lurglomond), Pulse Lab Jakarta, Indonesia

[122] “Spark For Social Science” – Alex **Engler** (@AlexCEngler), Urban Institute, University of Chicago, USA

[124] “*Citizen-driven monitoring of Sustainable Development Goals*” – Anita **Dhillon**, Lee Kuan Yew School of Public Policy, India; Ian **Reinert**, Lee Kuan Yew School of Public Policy, USA; Dan **Willett**, Lee Kuan Yew School of Public Policy, Australia

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## 13:15 – 14:15      Parallel Session 5

### Session 5a (Room A): Data, Trust and Accountability

**Chair:** Ken **Moody**, University of Cambridge

[29] “*A framework for unified privacy management in a multi-actor automated environment*” – Kevin **Miller** (@labyrinthlaw), Labyrinth Law PLLC, USA

[41] “*Practical priorities for data ethics*” – Olivia **Varley-Winter** (@ovarwin), Royal Statistical Society, UK

[53] “*Governance and Assessment of Future Spaces: a discussion of some issues raised by the possibilities of human-machine mergers*” – Anelka **Phillips** (@AnelkaM) Trinity College Dublin, The University of Dublin, Ireland; I. S. **Mian**, University College London, UK

### Session 5b (Room B): Data and Society

**Chair:** Jean **Bacon**, University of Cambridge

[12] “*Unleashing the power of data for children: Building an advocacy agenda for data*” – Emily **Garin** (@emily\_garin), UNICEF, USA

[62] “*Benefacts: an Irish case study in data analytics for public policy-makers*” – Patricia **Quinn**, Benefacts (@Benefacts\_ie), Ireland

[88] “*Land Administration: A Big Data Perspective*” – Sachin **Garg**, George Mason University, USA; Swapnil **Garg**, Indian Institute of Management, Indore, India

### Session 5c (Room C): Data and Protecting Minors – “*Predictive Analytics In Child Abuse and Neglect: Real world use-cases for fairness-aware, ethical and effective use of analytics in child welfare*”

**Chair:** Rhema **Vaithianathan** (@RVaithianathan), Auckland University of Technology, New Zealand

[49a] “*Implementing a Predictive Analytics Risk Scoring Tool for Allegheny County PA to help call workers screen children referred for child maltreatment*” – Rhema

**Vaithianathan** (@RVaithianathan), Auckland University of Technology, New Zealand

[49b] *"Predicting Child Welfare Involvement using the US Birth Record: An Exploratory Model Using Californian Birth Records"* – Emily **Putnam-Hornstein**, University of South California, USA

[49c] *"Fairness in Data-driven Decision-making"* – Alexandra **Chouldechova**, Carnegie Mellon University, USA

#### **Session 5d (Room D):** Data Accessibility and Visualisation

**Chair:** Anil **Bharath**, Imperial College London

[19] *"Policy design patterns that help people use data to create impact"* – Peter **Wells**, Open Data Institute, UK

[21] *"Fake news and information asymmetries: Data as public good"* – Dario **Buono** (@darbuo) and Emanuele **Baldacci** (@emibaldacci), Eurostat, Luxembourg

[60] *"Data-driven decisions for flood risk management"* – Liz **Edwards**, Gordon **Blair**, Graham **Dean**, Vatsala **Nundloll**, Ross **Towe** (@RPTowe), Richard **Bassett**, Faiza **Samreen** and William **Simm**, Lancaster University, UK

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#### **14:20 – 15:20                      Parallel Session 6**

#### **Session 6a (Room A):** Algorithmic Decision-making

**Chair:** David **Pym**, University College London

[24] *"Fair or Unfair Algorithmic Differentiation? Luck Egalitarianism as a Lens for Evaluating Algorithmic Decision-Making"* – Laurens **Naudts** (@RoboNaudts), KU Leuven, Centre for IT & IP Law, Belgium

[37] *"To err is algorithm: Algorithmic fallibility and economic organisation"* – Juan **Mateos-Garcia** (@JMateosGarcia) Nesta, UK

[86] *"Governance and government in the time of algorithms"* – Diana **Vlad-Câlcic**, (@dianavladcalcic), European Commission, Belgium

#### **Session 6b (Room B):** Urban Analytics and Policy Making II

**Chair:** Mirco **Musolesi**, University College London

[58] *"Using OpenStreetMap Data to Understand Urban Environments and Inform Policy: The Case of Alcohol Availability"* – Jonathan **Bright** (@jonmbright), Oxford Internet Institute; Bharath **Ganesh** (@BharathGanesh), Oxford Internet Institute; Stefano **De Sabbat**, University of Leicester; Sumin **Lee**, Oxford Internet Institute; David **Humphreys**, (@DKHumphreys), University of Oxford, UK

[65] *"The working poor in urban areas: Effective policy initiatives"* – Wessel **Kraaij**, (@buzztext), Sarah **Giest** (@sarahgiest), and Jose **Miotto** (@el\_chuse), Leiden University, Netherlands

[91] *"Baltimore Housing Prices Disparity for Comparable Neighborhoods: A Case for Enabling Interactive, Visual Exploration of Neighborhoods"* – Akshay **Peshave** (@\_AxxE\_), Siraj **Memon**, Vedmurthy **Chavan** and Tim **Oates**, University of Maryland, Baltimore County, USA

### **Session 6c (Room C): "Better data for better policy"** – organised by the **Office for National Statistics (ONS)**

**Chair:** Emma **Rourke**, Director of Public Policy Analysis, Office for National Statistics

[107] *"Using administrative and survey data to classify UK finance sector organisations by activity"* – Tom **Smith**, Khloe **Evans**, Louisa **Nolan** (@LouisaNolan), and Alexandre **Noyvirt**, Office for National Statistics

[108] *"Better Scraping, Better Statistics? Ethical issues in developing web-scraping guidance"* – Owen **Abbott** (@owenabs) and Matthew **Greenaway**, Office for National Statistics

[110] *"Better Statistics, Better policy: Using Property Data in Official Statistics"* – Nigel **Henretty** and Kimberley **Brett**, Office for National Statistics

### **Session 6d (Room D): Data-driven Public Service Delivery**

**Chair:** Philip **Treleaven**, University College London

[30] *"Supporting decisions in public health policy-making – EVOTION"* – Lyubov **Trenkova**, Pazardzhik Regional Administration, Bulgaria; Ariane **Laplante-Lévesque**, Eriksholm Research Centre, Denmark; George **Spanoudakis** (@GESpanoudakis) and Andrew **Smith**, City University London, UK; Josip **Milas** and Dario **Brdaric**, Institute of Public Health for the Osijek-Baranya County, Croatia

[33] *"Towards a Data-driven Smart Governance in Nigeria"* – Emeka **Ogbuju**, Isa **Aminu** and Abraham Musa **Peter**, Federal University Lokoja, Nigeria

[92] *"Recommender Systems in Physical Retailing: Practices, Prospects and Policy Perspectives"* – Qiwei **Han**, Carnegie Mellon University, USA; Leid **Zejniliovic** (@leid\_zejniliovic), Nova School of Business and Economics, Portugal

**15:20 – 15:40                      Break**

*\*\* Please continue to the next page \*\**



**Plenary:** Reflections and Future Steps - Interactive Discussion

Helen **Margetts** (@HelenMargetts), Director of the Oxford Internet Institute, University of Oxford; The Alan Turing Institute, UK

Peter **Smith**, Director of the UK Administrative Data Research Network, University of Southampton, UK

Stefaan **Verhulst** (@sverhulst), Co-founder and Chief Research and Development Officer of the Governance Laboratory (GovLab), New York University, USA

Barbara **Ubaldi**, Head of the Digital Government and Open Data Unit, The Organisation for Economic Co-operation and Development (OECD), France

Jon **Crowcroft**, Marconi Professor of Networked Systems, University of Cambridge; The Alan Turing Institute, UK

**Moderator:** Zeynep **Engin** (@ZeynepEngin), Founder, Data for Policy; University College London (UCL)

**17:00 Final Remarks & End**

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