New sources of data and ways to analyse them with machine learning, Artificial Intelligence (AI) and complexity science can help to capture the emergence of new scientific fields, technologies, industries and occupations, improving our ability to measure and model economic change and inform policy, funding and investment decisions. This includes how to identify and support emerging technologies and industries, level up local economies, make innovation more inclusive and accelerate the transition to a green economy.

This workshop will bring leading scholars, policymakers and statistical agencies at the forefront of this agenda together to discuss the state of the art and what’s needed to maximise the impact of these new data sources and methods on our understanding of the economy and the effectiveness of economic and research and innovation policy.

To register for this in-person event please click [here](#).

**Preliminary Programme**

**09:15 – 09:45** Registration

**09:50 – 10:00** Welcome

Jeremy Silver (Digital Catapult), Mirko Draca (Warwick-CAGE), Juan Mateos-Garcia (Nesta and ESCoE)

**10:00 – 10:45** Keynote Address

Chair: TBC

*Regional Resilience in Today’s Evolving Economy*

Mercedes Delgado (Copenhagen Business School, MIT Innovation Initiative and Institute for Strategy and Competitiveness at Harvard Business School)

**10:45 – 11:25** Session 1: Measurement

Chair: Mirko Draca (Warwick-CAGE)

*Economic Growth Goes Fractal: The Changing Structure of UK Venture Capital*

Anna Valero (LSE)

*A Bottom-up Industrial Taxonomy Using Web-data*

Juan Mateos-Garcia (Nesta and ESCoE)

**11:25 – 11:45** Tea and Coffee
11:45 – 12:30  Keynote Address
Chair: TBC

Title TBC
J. Doyne Farmer (Oxford INET)

12:30 – 12:50  Session 1 continued: Measurement

*Work2Vec: Learning a Latent Representation of Labor Demand*
Daniel Rock (Wharton) *(virtual)*

12:50 – 14:00  Lunch

14:00 – 15:00  Session 2: Modelling
Chair: TBC

*Is Innovation a Process of Combination? A Roundup of Recent Evidence*
Matt Clancy (Institute for Progress)

*Pathway of Innovation: Micro to Macro*
Hyejin Youn (Northwestern University)

*Measuring Exploration and Exploitation Patterns in Technological Innovation*
Mirko Draca (Warwick-CAGE)

15:00 – 16:00  Session 3: Informing
Chair: Brian MacAulay (Digital Catapult)

*Using Data Science to Better Understand Economic Activity*
Arthur Turrell (Office for National Statistics)

*Data Science for STI Policy: On Realistic Opportunities and Major Hurdles*
Caroline Paunov (OECD)

*The Policy Implications of Economic Complexity*
Viktor Stojkosi (Macedonian Academy of Sciences and Arts)

16:00 – 16:30  Tea and Coffee
16:30 – 17:30 Panel Session
   Chair: Rebecca Riley (ESCoE and King’s College London)

   Grant Fitzner (Office for National Statistics), Laura Gilbert (No 10 Data Science Unit), Stian Westlake (Royal Statistical Society)

17:30 – 18:30 Drinks Reception

Please note: This event will be live-streamed and recorded. Photographs will be taken which may be used in general promotional material by the host partners.

Organisers: Mirko Draca (Warwick-CAGE); Brian MacAulay (Digital Catapult); Juan Mateos-Garcia (Nesta and ESCoE), Rebecca Riley (ESCoE and King’s College London)