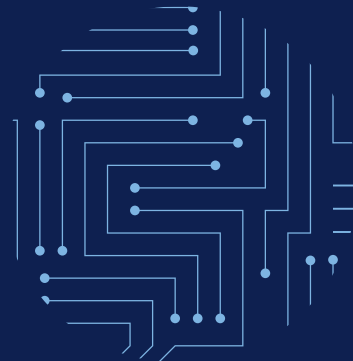




Data Science
Institute



• **DATA SCIENCE**
• **INSTITUTE**

• Annual Report



“

Unlocking the potential of bringing together data science and the social sciences”



DIRECTOR'S INTRODUCTION



In the third year since its launch, the LSE Data Science Institute (DSI) has seen 2023 mark several milestones. The most notable of these is a major investment from LSE alumnus and independent member of LSE Council Stuart Roden and his family.

This generous gift of £3.7 million is now supporting the strategic activities of the DSI for the next five years, as we unlock the potential of bringing together data science and the social sciences.

The visionary investment provides the DSI with a solid infrastructure for fostering innovative, world-class data science research, bringing data science methods to bear on social and economic analysis in a robust manner.

The DSI's activities have grown in many key areas over the first three years of its existence. In the new DSI-led undergraduate data science modules rolled out in 2021, we have tripled student enrolments in 2022/23, from students on degree programmes across the range of social science disciplines supported at the School. We also continued to develop our programme of events that offers a range of innovative ways for students,

researchers, and members of the public to understand the applications of data science and how to pursue careers in this field. This included key milestones in 2023 such as leading the LSE's membership in the re-launched Turing University Network and forging a complementary alliance with the Data Science Institute at Imperial College London through a partnership we call "DSI Squared".

In research, the DSI continues to support outstanding data science-focused applications, working with academic experts from across LSE, also reaching out to industry leaders and changemakers to shape the next generation of data-driven leaders. We secured funding from Ordnance Survey (OS) as part of the Public Sector Geospatial Agreement to deliver a collaborative three-year analytical project exploring data interdependencies and socio-spatial connections to understand

how the physical environment impacts health and well-being.

In outreach and public events, the DSI organised a public symposium in May 2023 on "Generative Artificial Intelligence and the Knowledge Economy", capped off by a public conversation about AI and the future of the Internet between Sir Tim Berners-Lee, President and Vice Chancellor Baroness Minouche Shafik, and me.

What makes LSE's approach to data science unique is the combination of data science research methods with world-leading domain expertise in the scientific study of human affairs. At LSE's newest institute, our small team has achieved remarkable things. Our success is outlined in this report.



Professor Ken Benoit
Director, LSE Data
Science Institute



I very much look forward to seeing the meaningful impact that the DSI will have on our society."

STUART RODEN

Independent Member, LSE Council



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THE DSI MISSION

The Data Science Institute (DSI) is an interdisciplinary institute established to foster the study of data science and new forms of data with a focus on their social, economic and political aspects.

As an interdisciplinary institute, the DSI includes affiliates from across the entire School. They are drawn from departments that include core data science, such as the Departments of Statistics, Mathematics, and Methodology, as well as from other departments across the School such as Finance, Government, Media and Communications, Law, Psychological and Behavioural Science, and Philosophy, Logic and Scientific Method, among others.

The DSI's approach consists of promoting data science through three major activities: research, teaching, and outreach.

In research, the DSI has a number of strategic priorities that match the range of social scientific expertise for which LSE is world leading. These priority areas are:

- Healthcare and social policy: supporting the social beneficial use of data for improving the delivery of healthcare and health and social policy-making and implementation.
- Ethics and artificial intelligence policy: exploring the real-world implications of the adoption of AI and data science.

- Environmental sustainability and climate change: understanding the role of data science in meeting the world's environmental challenges.
- Digital societies, digital misinformation, and social media: discovering how social data changes the way we interact in the social, political, and economic spheres.
- Finance, economics, firms, and markets: gaining insight into the transformative role of data science and AI in finance.
- Foundations of data science: mathematical and conceptual underpinnings of data science methods, including machine

learning and AI methods, natural language processing, and other forms of acquiring and managing big data.

In teaching, the DSI's mission is to teach students from across the range of subjects studied at LSE, including those in joint degrees such as the BSc in Politics and Data Science, as well as those in more traditional social science degrees not related to core data science.

In outreach, the DSI works with private and public sector partners to engage them for impact through a variety of public events, research partnerships, and seminars.



As an early participant in discussions on the inception of the DSI as LSE Governor, and now as LSE Council member, it is fantastic to see the progress achieved in a short time and the excitement to bring data science to the forefront of social sciences and increase positive impact for society."



DR ANGELA SPATHAROU

Independent Member, LSE Council Governance,
Legal and Policy Division



TEACHING



The DSI's aim is to shape future generations who can harness the power of big data in the digital world. In the fast-changing world of data science, the latest developments in research need to translate quickly into new techniques and skills in teaching for students.

The DSI is fully engaged in teaching in core data science, working closely with LSE departments to implement and support new undergraduate, postgraduate and short courses that will ensure that LSE students continue to become the most employable graduates who can lead in shaping the future.

The DSI has co-developed new joint degrees, including the BSc in Politics and Data Science, launched in September 2022, and the BSc in Mathematics with Data Science, launched in

September 2023. Our ambition is to launch more joint "Subject and Data Science" courses, ensuring that LSE students are equipped to become data-driven leaders and generate positive change in their specialised fields. In addition, short courses and modules are available to students across the School to introduce them to data science and its practice, with social science applications.

As the institutional cornerstone of interdisciplinary data science activity at LSE, the DSI offers three

modules of its own to students from across the School. The number of students selecting data science modules has increased exponentially, as did the range of departments represented within the student cohorts.



My learning experience with the DSI was invaluable, as it taught me about topics that are at the forefront of global considerations, including AI, machine learning and ethics within data science."

DS202 STUDENT

**DS101****Fundamentals of Data Science**

Students explore theoretical concepts of data science through reflecting on current literature.

Student numbers in 2021/22: 14

Students enrolled in 2022/23: 16

DS105 Data for Data Scientists

Students gain skills in collection and handling of real data through hands-on coding exercises and a group project.

Student numbers in 2021/22: 25

Students enrolled in 2022/23: 102

DS202 Data Science for Social Scientists

Students explore fundamental machine learning algorithms through practical use of machine learning techniques.

Student numbers in 2021/22: 46

Students enrolled in 2022/23: 107

The DSI teaching approach centres student experience through innovations such as empowering student representatives, making course content accessible by using easily navigable websites, and showcasing student successes by facilitating opportunities to publish research. This includes publishing student blogs on the DSI website.

Joint Data Science Degrees

In 2022, LSE welcomed its first student cohort on the innovative new BSc in Politics and Data Science degree. Developed in close collaboration between the Department of Government and the DSI and tailored to meet the evolving demands of the digital age, this programme intertwines training in political science with the rigour of applied data science methods. Students select half their modules from the Department of Government and the other half from a data science curriculum, including modules taught by the DSI and by the Department of Statistics.

Outside their coursework, students are actively involved in DSI events and activities throughout the academic year. Graduates of the BSc in Politics and Data Science programme will have the necessary skills to pursue advanced studies or careers traditionally open to political science graduates, as well as more data science-oriented roles in industry or government. With their unique blend of political and data acumen, we anticipate that our alumni will

become indispensable assets to a myriad of employers and fields, including digital and social media firms, regulators, the civil service, government, international organisations, data journalism, political data analytics, and political risk analysis and forecasting.



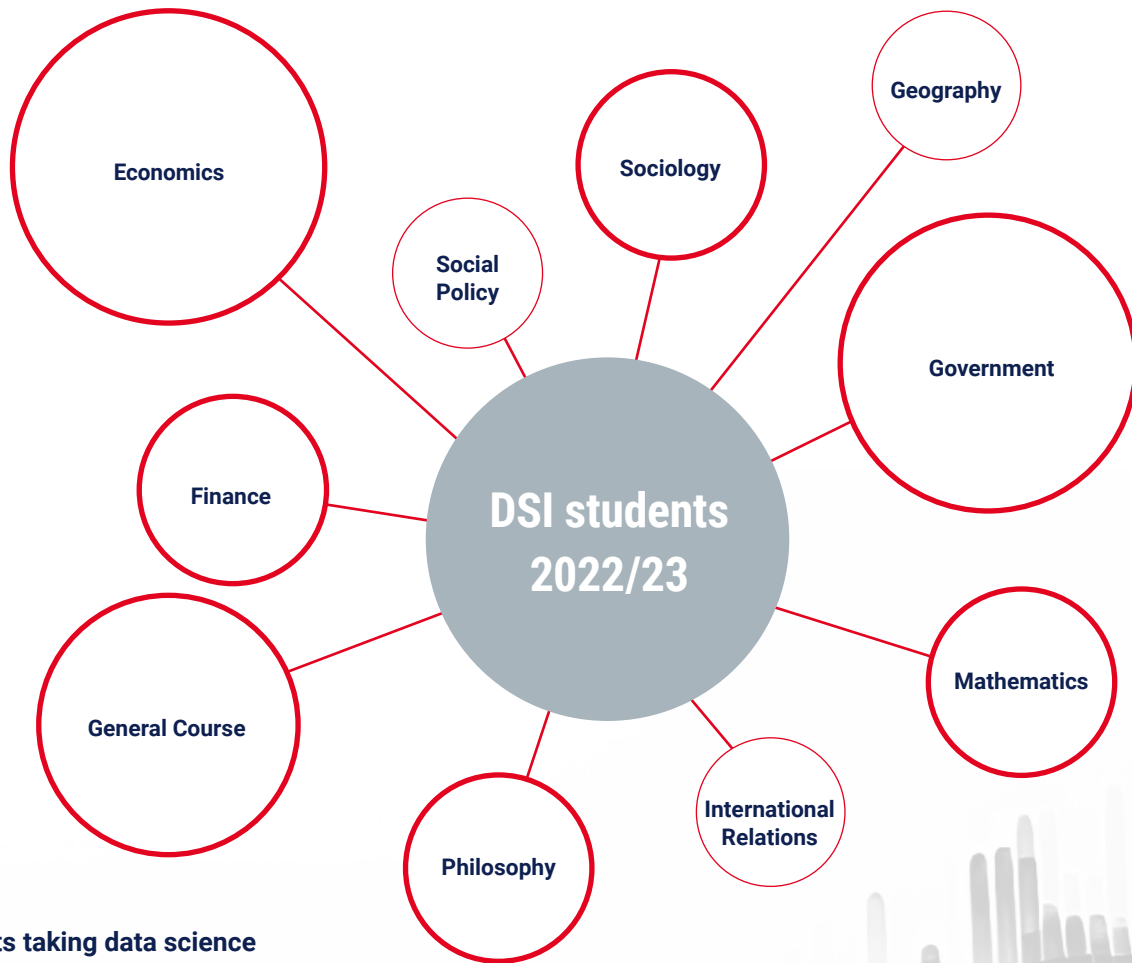
Combining political and social science with data science is essential in our rapidly changing world. The BSc in Politics and Data Science at LSE gives undergraduates a unique opportunity to explore these intersections early on, ensuring our students are well-equipped and poised to thrive in a wide range of data-driven careers."

DR MELISSA SANDS

Assistant Professor of Politics and Data Science

Student Blog**Deep neural networks and the rise of the "AI Gaydar"**

LSE students consider the core dangers that may arise as facial recognition software becomes a key component of our everyday lives.



Students taking data science courses come from degree programmes in different departments across the School



Insights into data science are important for my future career as I am hoping to go into a role that combines strategy and transformation. Taking DS101 with Dr Cardoso-Silva definitely aided in my ability to identify what I would like to go into in the future. It was a class that explored contemporary debates with a fun edge to it. I couldn't recommend the DSI enough."

DS101 STUDENT

What we do

The DSI embeds data science and the study of big data in our research and teaching. We are leveraging our existing world-leading expertise in the social sciences and embracing new technologies and ways of learning to keep LSE at the forefront of global thinking, solutions and impact.



RESEARCH



The DSI fosters applied data science research across the social science fields at LSE by assisting DSI-affiliated researchers in the priority areas of healthcare and social policy; data for climate change and environment; digital societies, digital misinformation and social media; finance, economics, firms and markets; ethics and AI; and core data science.

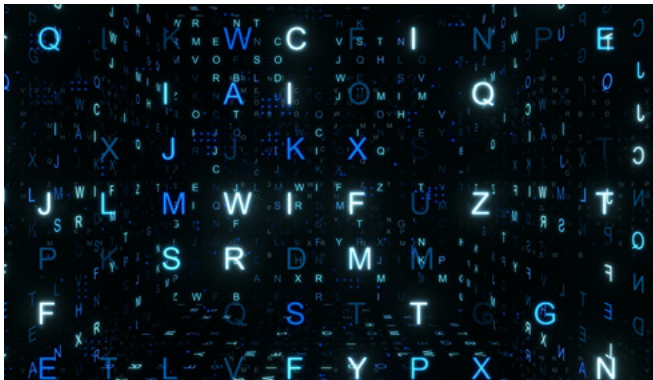
REF 2021

The Research Excellence Framework (REF) is an exercise that takes place every seven years that evaluates research submissions by higher education institutions across the UK. Submissions are evaluated by expert panels across 34 subject-based units of assessment. The DSI does not participate in its own submission but does foster a research environment to support excellence in submissions by department

units across LSE. For each submission, three distinct elements are assessed: the quality of **outputs** (eg, publications, performances, and exhibitions), their **impact** beyond academia, and the **environment** that supports research. For the REF 2021, DSI Affiliates submitted two data science-related Impact Case Studies that were part of the LSE's submission.



Powerful New Tools for Text Analysis



Professor Ken Benoit

Director, Data Science Institute
Professor of Computational Social Science,
Department of Methodology

Research led by Professor Ken Benoit has underpinned the development of new and improved methods of quantitative text analysis for social science research.

Large bodies of text are significant and useful data sources for social science research. However, there has been a lack of substantial academic work explaining the field of textual data analysis for the social sciences.

The innovation of the set of R packages led by quanteda (which stands for the “quantitative analysis of textual data”) lies in their provision of new and existing text analysis tools, in an accessible way. To facilitate their wider use, Professor Benoit and Dr Kohei Watanabe (Lazard Asset Management) established the Quanteda Initiative (QI), a non-profit, community interest company. Uptake has been significant: the main quanteda package has been installed more than 1.1 million times, and the total family of packages installed over 4 million times.

Cutting Edge Social Network Analysis



Dr Eleanor Power

Associate Professor, Department of Methodology

The work of DSI Affiliate Dr Eleanor Power in the field of social networks was recognised in the REF 2021.

This research into the role of religion in society was inspired by an interest in the meaning of religion for individuals, and its subsequent impact on how people relate to one another. Dr Power’s research exemplifies the use of data science methods for social science research by “bringing a new tool to the task – social network analysis”.



We fully expect that the next phase of studying the social sciences will be transformative and that the path to this transformation is through data science.”



PROFESSOR KEN BENOIT
Director, Data Science Institute



Data Science Research Group, LSE Department of Statistics

Research activities of this group are concerned with the development of machine learning and computational statistical methods, their theoretical foundations, and applications. Machine learning and computational statistics play an important role in a wide range of applications involving data, featuring variety, large dimension, volume or velocity.

Recently, the group has focused on how shape constraints, such as non-negativity, monotonicity (with regards to different partial orderings), convexity, n -monotonicity, alternating monotonicity, or supermodularity, play a key role in various applications of machine learning and statistics.

However, incorporating this side information into predictive models in a hard way (for example, at all points of an interval) for rich function classes is a notoriously challenging

problem. We proposed a unified and modular convex optimisation framework, relying on second-order cone (SOC) tightening, to encode hard affine SDP constraints on function derivatives, for models belonging to vector-valued reproducing kernel Hilbert spaces (vRKHSs).

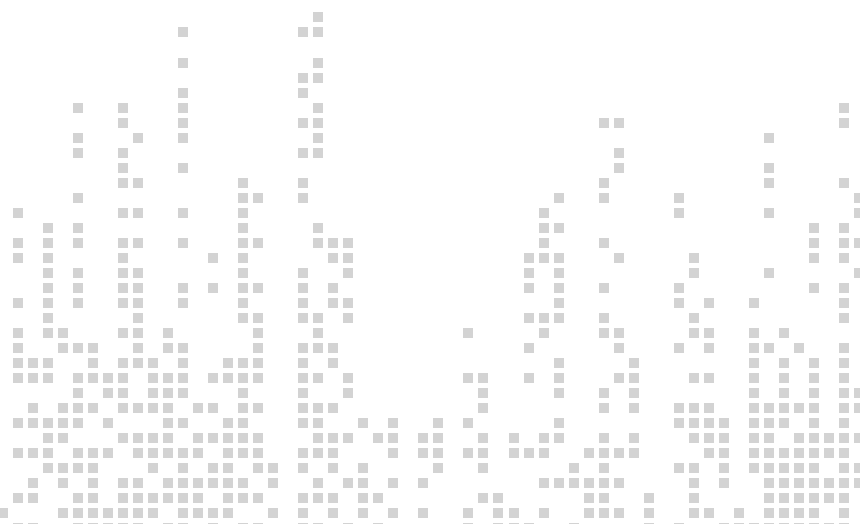
The modular nature of the proposed approach allows us to simultaneously handle multiple shape constraints, and to tighten an infinite number of constraints into finitely many. We proved the convergence of the proposed scheme and that of its adaptive variant, leveraging geometric properties of vRKHSs. Due to the covering-based construction of the tightening, the method is particularly well suited to tasks with small to moderate input dimensions.

The efficiency of the approach was illustrated in the context of shape optimisation (minimising the deformation of a catenary

under its weight, with a stand underneath); joint quantile regression (analysis of safe aircraft departure trajectories); convoy trajectory reconstruction (from noisy position measurements under speed and inter-vehicular distance constraints); safety-critical control (piloting an underwater vehicle while avoiding obstacles); robotics (estimation of robotic arm position); and econometrics (learning production functions). This line of research was published at [IFAC World Congress](#), [NeurIPS](#), and [JMLR](#).



Professor Zoltán Szabó
Professor of Data Science,
Department of Statistics





Dr Erica Thompson, Senior Policy Fellow at the DSI, won a prestigious UKRI Future Leaders Fellowship



The DSI hosts Dr Thompson's project "From models to insight: effective use of models to inform decisions" in partnership with UK Research and Innovation (UKRI). As part of this project, Dr Thompson will expand her research by hiring a postdoctoral researcher and convening a series of meetings on how mathematical modelling shapes decision making in high-profile sectors such as climate adaptation, pandemic planning and financial

risk regulation. Her book, *Escape from Model Land* (Basic Books, 2022), provides an accessible look at what models are, why we need them, and how they change the way we think.

The DSI engages actively with research partners outside of LSE, through participating in research networks, multi-site research grants, and bilateral arrangements with external academic and institutional partners.

Visiting Appointments Making Impact

The DSI is pleased to welcome visiting appointments who make an impact in a number of areas. These individuals participate in the activities of the institute and have special access to its resources.

Visiting Senior Fellow Dr Trevor Maynard, Executive Director Systemic Risks at the Cambridge Centre for Risk Studies, led activities that included:

- Advising a start-up to create a bespoke objects insurance product using computer vision.
- Helping to set up the Cambridge Centre for Risk Studies – Systemic Risks Hub.
- Advising a start-up using Internet of Things (IoT) sensors to create an enhanced view of marine risks.
- Designing climate services to understand EU flooding risks.

Visiting Senior Fellow John Burn-Murdoch, Chief Data Reporter and columnist at the *Financial Times*, contributed to the executive course "Data Science for Executives" led by Professor Ken Benoit. His presentation "Effective Visual Communication for Data Science" explained the elements of effective presentation of data in the visuals he developed during the COVID-19 pandemic and beyond in his role at the *Financial Times*.

A full list of visiting appointments can be found on page 24.



A new generation of thought leaders is required as LSE builds on our leading position in the social sciences. Dr Thompson's cross-disciplinary background and policy experience mean that she is ideally positioned to lead research bridging the gap between mathematical and social sciences."



PROFESSOR SUSANA MOURATO
Professor of Environmental Economics; Vice President and Pro-Vice Chancellor (Research); Department of Geography and Environment



OUTREACH



There is an urgent need to bring together expertise in social and data sciences to address the world's most pressing challenges and seize opportunities for global prosperity.

The DSI has worked to form transformational partnerships with the private sector to understand how data science can unite to shape the world's political, economic and social future.

The DSI's focus has been on developing impactful and strategic partnerships, convening industry leaders, academic experts, and changemakers to shape the next generation

of data-driven leaders and to embed data science across our ambitious research priorities. We developed relationships with external stakeholders to support the DSI's teaching and events strategy and co-create innovative ways of learning that incorporate the analytical skills and digital fluency needed to thrive in our rapidly changing world.



Working with industry and public sector enables the DSI to make a difference outside of the walls of academia, through partnering on research designed for impact and by equipping people with the skills and quality of thinking necessary to make significant change. With the increasing transformation of society through AI and data science, this objective is not just desirable but imperative."

PROFESSOR KEN BENOIT,
Director, Data Science Institute



OUTREACH

Education-Related Events

The DSI hosts a number of events that combine outreach and external partners with education-related activities designed to engage our students. These opportunities include a series entitled “Careers in Data Science” that brings speakers from industry to speak about career paths from LSE to data science jobs.

Our Careers in Data Science speakers have included:

- **Sunil Ramakrishnan**, Vice President for Consulting at CGI
- **Priyanka Suresh**, Applied Analyst at DeepMind
- **Luke Vilain**, Data Ethics Senior Manager at Lloyds Banking Group
- **Mads Frank**, Behavioural and Data Science for Talent & Organisation Manager at Accenture

We also lead regular field trips for students to data science firms, to get an insider view. Our field trips have included visits to Google CSG, Lloyds Banking Group and BCG X.

“

We enjoyed hosting a group of LSE students for a visit at our Google offices. It was great to meet such an engaged and curious group of students, who will undoubtedly have a bright future in data or tech. We’re looking forward to our continued collaboration with LSE’s Data Science Institute to help shape the next generation of data-driven leaders.”



TIES BOUKEMA
Financial Analyst, Google

LSE data science students visit Google CSG





Photo credit: Alexandra Gomes



Research and Innovation

The DSI secured research funding from Ordnance Survey (OS) as part of the Public Sector Geospatial Agreement. Launched in April 2023, the project explores data interdependencies and socio-spatial connections to understand how the physical environment impacts health and well-being.

We collaborate with LSE's Research and Innovation Division to leverage research grants from the UK Government and external research funding arms.

We were successful in securing grant funding from The Alan Turing Institute's Network Development Grant. We have contributed to UK Research and Innovation (UKRI) bids and are currently developing projects for Knowledge Transfer Partnerships.

In addition, we have been exploring research collaborations with industry and the public sector, either through funding or access to gifts in kind, datasets and industry expertise.

Alumni and Supporter Engagement

The DSI actively works to connect our alumni community and supporters with its activities in data science, engaging them with exciting events as guests or speakers, and brokering introductions to other parts of the School.

The DSI is guided by a high-level Advisory Board drawn from experts around the world, most of them LSE alumni themselves, bringing together senior representatives from technology, business and finance, the NGO community, media, and world-leading academic experts.

“

We are grateful for the generosity of our supporters and donors from our alumni community who support the DSI's growth.”

PROFESSOR KEN BENOIT



EXTERNAL PARTNERSHIPS



Photo credit: Gemma Ralton

The DSI is involved in a number of external partnerships and networks designed to increase its impact and to foster new avenues of research and education.

Turing University Network

Successes in this area include the DSI receiving one of The Alan Turing Institute's Network Development Awards in 2022 and in April 2023, leading the LSE's membership into the Turing University Network. These awards recognise proven research excellence and a track record of translation in data science, AI, or a related field. As part of the Turing University Network, LSE can now participate in the myriad of Turing Institute events and research projects and avail of its extensive UK network of universities and research organisations engaged in applying data science to social priority areas.

“

Every technological revolution in history results in panic that jobs will disappear, and every time new jobs have emerged, but jobs will change. We need to invest to make sure that both young people and current workers have access to the kind of training they'll need to adjust to a changing labour market. Being able to synthesise information, analyse it, and be critical about it, is very important. The DSI is enabling our students to interrogate data and make an argument. Thinking is the most valuable skill we give because that lasts.”

BARONESS MINOUCHE SHAFIK
LSE President and Vice Chancellor



DSI Squared



The DSI has officially partnered with the Data Science Institute at Imperial College London in the form of the [DSI Squared](#) partnership. This involves networking events, seminars, and a joint small-grant scheme that encourages researchers from both institutions to collaborate on projects and grant applications through seed funding.

Through the DSI Squared partnership, we hold a regular, innovative seminar series entitled “Unsolved Problems in Data Science”, alternating venues between LSE and Imperial.

In May 2023, we held the first annual symposium in “Generative AI and the Knowledge Economy”, a two-day event held at both Imperial and LSE.

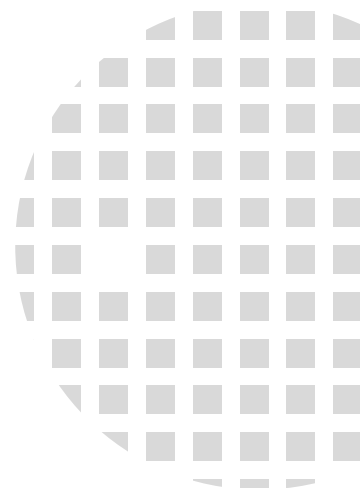
The DSI Squared activities also include regular networking events designed to connect social scientists from LSE with STEM researchers from Imperial, who are then encouraged to apply for seed funding for joint projects under the DSI Squared seed funding scheme.

Celonis

The DSI led LSE’s partnership with Celonis, an industry leader in the field of process mining, and was awarded ‘Process Mining Academic Centre of Excellence’ status. As part of this partnership, and working closely with the Department of Management, we have helped to deliver seminars, networking events and research methods training sessions.

CIVICA Research

The DSI contributed to data science research activities within the Research network of [CIVICA](#), the European University of Social Sciences. This is an EU-funded initiative that unites 10 leading European higher education institutions in the social sciences, humanities, business management and public policy. Through this network, we have delivered a fortnightly seminar series in social data science, collaboratively across the CIVICA network. The DSI has also led a research programme of CIVICA that delivers a series of “hackathons” on its research areas, such as an [event](#) led by DSI Affiliate Dr Tom Smith (LSE Department of Geography and Environment) within the Societies in Transition, Crises of Earth theme.





EVENTS



As we emerged from the pandemic restrictions on public gatherings, the DSI added in-person events to its interdisciplinary programme that facilitates exchange between key actors in academia, industry and government. Our events provide opportunities for students to access and engage with concepts and methods of data and technology, with a focus on shaping these data-driven leaders of the future by allowing them to explore interdisciplinary applications.

For a full list of DSI events, please see Appendix A (page 28).

“

I really like the new seminar series DSI Squared – Unsolved Problems in Data Science. This will lead to lots of opportunities to discover new research and collaborate between institutions.”



DR RACHEL SPICER,
Postdoctoral Fellow, Department of
Psychological and Behavioural Science



DSI-Hosted Events

Our programme of engaging events feature experts from a range of fields highlighting the social, economic and political applications of data science and new forms of data.

2022

Automation Era – How will technology reshape business and how does it change how people work today?

27 January 2022

Professor Leslie Willcocks and **Angela-Sophia Gebert** (Celonis) discussed how automation will impact business, how hyper-automation has taken place and how it can inject new life into global economies.

AI in Sport: an overview

24 March 2022

Dr Patrick Lucey (Chief Scientist, Stats Perform) explained how data and AI are used in sports analysis. He covered how teams, media and betting firms use data to reconstruct performance.

Data Science and the Future of Social Science

21 September 2022

This panel event celebrated the DSI's launch in 2020. **Professor Ken Benoit** was joined by experts from education, industry and public policy for a discussion of the challenges and opportunities represented by the revolution in social and data sciences. The

panel members were: **Caroline Gorski** (Chief Executive, R² Factory at Rolls Royce); **Ming Tang** (Chief Data and Analytics Officer, NHS England); **Professor Helen Margetts OBE FBA** (Professor of Internet and Society at the Oxford Internet Institute, University of Oxford); **Dr Stefan Hunt** (Chief Data and Technology Insights Officer, Competition and Markets Authority).

Using Data Science for Sustainable Business Performance

8 December 2022

Hosted by the DSI in partnership with Ekimetrics, this event explored how to reinvent business models to balance the need for commercial success while tackling climate change.

DSI Research Showcase

8 December 2022

To mark the end of term, the DSI hosted a Research Showcase event to connect the data science community for a celebration of some of the outstanding projects taking place.

2023

Follow the Science? Data, Models and Decisions in the 21st Century

24 January 2023

This discussion between **Professor Diane Coyle** (University of Cambridge), **Dr Stephanie Hare**, **Dr Erica Thompson** and **Baroness Minouche Shafik** lifted the lid on science for decision support, so that we can be savvier with how we use science, rather than following it blindly.

Generative AI and the Knowledge Economy Symposium

24-25 May 2023

Organised as part of the DSI Squared partnership between the Data Science Institutes from both Imperial College London and LSE, this event provided an overview of generative AI and large language models (LLMs) and their implications for the knowledge economy and society.

How Web 3.0 Technology and Data Policy Combine to Promote Data Sovereignty, Privacy and Trust

A conversation with
Sir Tim Berners-Lee

25 May 2023

This event saw LSE President and Vice Chancellor **Baroness Minouche Shafik** joined by **Sir Tim Berners-Lee** for a discussion chaired by **Professor Ken Benoit**.



EVENTS

CIVICA Data Science Seminar Series

This interdisciplinary seminar series is hosted by institutions from across Europe, led by the DSI. The seminars highlight the applications of novel methodological and data-driven approaches in addressing complex societal challenges.

Careers in Data Science

These events connect students with employers and foster industry links by hosting experts and LSE alumni.

Industry Collaboration

The DSI organises innovative events with the aim of highlighting the potential impact of data science in industry, such as an event in partnership with Ekimetrics that explored how to reinvent business models to balance the need for commercial success while tackling climate change.

DSI Squared

DSI Squared is a collaboration between DSI Imperial College London and DSI LSE. This partnership leverages LSE's strengths in social science that complement Imperial's strengths in science, technology and medicine.

The collaboration provides ongoing networking opportunities. During the inaugural event in the DSI Squared [Unsolved Problems in Data Science Seminar Series](#), participants worked together to find a solution to a research problem presented at LSE by a colleague from Imperial. In subsequent events LSE researchers have presented their research at Imperial.

Workshops and Skills Masterclasses

These interdisciplinary events are led by early-career members of our network, fostering data science study and research and highlighting its tangible applications for society.

Building Data Science Collaborations between the UK and Brazil

Organised by Dr Jon Cardoso-Silva, this event connected over 80 researchers from these countries to share ideas and form research partnerships.

Debugging (In)equality in Data Science

This event fostered camaraderie and collaboration between more than 50 doctoral students and early-career researchers. Organised by Dr Siân Brooke, Dr Marion Lieutaud, and Dr Jon Cardoso-Silva, this event investigated the emancipatory potential of data science for oppressed groups.

Research Showcases

These events explore cross-cutting research themes at LSE and their intersection with data science.

The focus of events, such as the Data Science Research Lightning Talks, was to raise awareness of the activity taking place within the data science community at LSE by offering researchers the chance to share their ongoing data science projects.



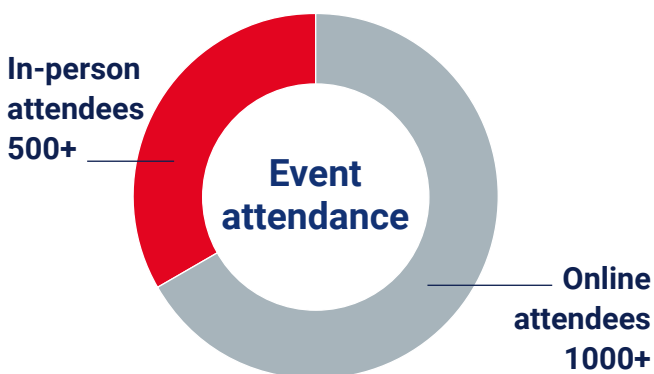
Hackathons

CIVICA Research Collaborative Hackathons

Led by the DSI, these hackathons brought together experts from across and beyond the CIVICA Network to consider the network's themes. For example, the CIVICA Research Collaborative Hackathon on Democracy in the 21st Century challenged participants to consider the advent of "democracy with adjectives" and led to the publishing of student blogs.

LSE Data Science Society

The DSI facilitates events organised by the LSESU Data Science Society, including hackathons that develop students' skills and employability.



Data Science and the Future of Social Science

Data science has revolutionised the social sciences at the same time as industries and academia are being transformed by the availability of big data, coupled with massive increases in computing power.

At this crucial time for society, the DSI mapped out its ambitions to make a meaningful impact in the coming years at its official launch event. Speakers outlined how the DSI's vision is integral to realising the ambitions at the heart of LSE 2030 as the School embraces new technology to keep the social sciences at the forefront of global thinking, solutions and impact.

“

I enjoyed the launch events at the start of this academic year and look forward to more contact with peers.”



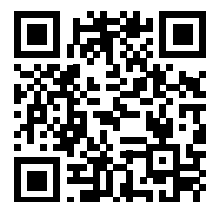
DR PATRICK GILDERSLEVE,
LSE Fellow in Computational Science,
Department of Methodology

“

It was a pleasure to take part in a discussion on the future of social data science. From government to public policy, data science presents both incredible opportunities and significant challenges that will shape our society. It is great to welcome the LSE Data Science Institute to the social data science landscape.”



PROFESSOR HELEN
MARGETTS OBE FBA,
University of Oxford



lse.ac.uk/DSI/Events



CONNECTING OUR COMMUNITY

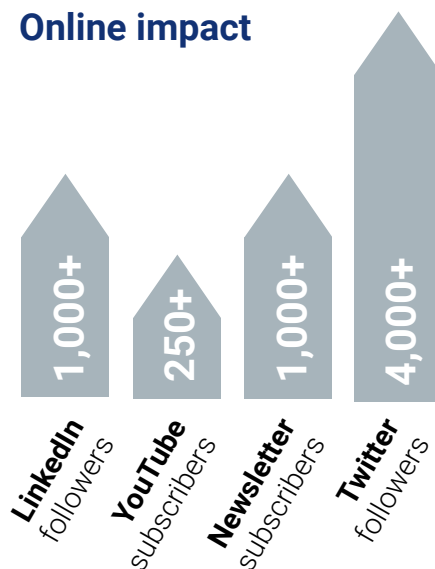


The DSI is uniquely placed to combine the technical aspects of data science (statistics, machine learning, and computer programming) with applications to the social world. Its role extends to sharing this story as the study of data science and its applications spreads across LSE and to celebrating the activity within our data science community.

Newsletter

The DSI's monthly newsletter – the *DSI Bulletin* – has continued to increase in readership. As a roundup of news, events, opportunities and sharing of research this aims to aggregate content from across and beyond the data science community at LSE. The newsletter provides a vital, comprehensive connection with those that are interested in the DSI's mission and aims.

Online impact



The newsletter is very helpful as a regular briefing on data science events and news."



DR CHRISTOPHER BLUNT,
Co-Director, LSE100



CONNECTING OUR COMMUNITY

Data Science Spotlight

The DSI regularly showcases the accomplishments and stories of LSE's data science community in the form of data science spotlights. These spotlights tell the story of students, researchers, and faculty members.

Our data science spotlights also contribute to the DSI's work to support social justice within data science, such as efforts to get women into data science and make progress towards gender equality.

On International Women's Day 2022, our data science spotlight celebrated women's achievement and raised awareness against bias by showcasing the success of a leading expert from our community, Dr Milena Tsvetkova, Assistant Professor of Computational Social Science, Department of Methodology.



The DSI Affiliate Scheme

DSI Affiliates are current members of staff from across the LSE community who are engaged with data science in their research or teaching. Affiliates participate in the activities of the DSI and have privileged access to its resources.



The Affiliate scheme is an amazing initiative and opportunity to liaise with colleagues working in the same field."



DR MARCOS BARRETO,
Assistant Professor (Education),
Department of Statistics



The collaborative and embracing atmosphere and nice people stabilises the long-term operation of the DSI."



DR ALEXANDRA GOMES,
Research Fellow, LSE Cities





OUR PEOPLE



The DSI Team

Academic Staff

Professor Ken Benoit

Director, Data Science Institute
Professor of Computational
Social Science, Department of
Methodology

Dr Jon Cardoso-Silva

Assistant Professor (Education)

Dr Ghita Berrada

Assistant Professor (Education)

Professor Zoltán Szabó

Turing University Network
Liaison (Academic)
Professor of Data Science,
Department of Statistics

Jinshuai Ma

Research Officer in Data Science

Hosted PhD Students

Sarah Jewett

PhD Candidate in Government

Wendy Wang

PhD Candidate in Social
Research Methods

Professional Services Staff

Jill Beattie

Institute Manager

Dave Poole

Communications and Events
Manager

Lou Flandrin

Business Development Manager

Nathaniel Ocquaye

Teaching Support and Events
Officer

Ginny Pavey

Turing University Network
Liaison and Executive Assistant
to the Director

Ellie Finlay

Events Officer



DSI Affiliates

Dr Miqdad Asaria

Assistant Professor
Department of Health Policy

Dr Mona Azadkia

Assistant Professor
Department of Statistics

Dr Marcos Barreto

Assistant Professorial Lecturer
Department of Statistics

Dr Tuğkan Batu

Assistant Professor
Department of Mathematics

Dr Liam Beiser-McGrath

Assistant Professor
Department of Social Policy

Dr Michael Blackwell

Associate Professor of Law
Department of Law

Dr Chris Blunt

Assistant Professorial Lecturer
and Co-Director of LSE100

Dr Siân Brooke

LSE Fellow in Computational
Social Science / Leverhulme
ECR Fellowship
Department of Methodology

Professor Umut Cetin

Professor of Statistics
Department of Statistics

Dr Yunxiao Chen

Assistant Professor
Department of Statistics

Dr Neil Cummins

Associate Professor
Department of Economic History

Dr Daniel De Kadt

Assistant Professor
Department of Methodology

Zachary Dickson

Postdoctoral Research Fellow
Department of Government

Dr Giulia Ferrari

Research Fellow
Centre for Women, Peace and
Security

Dr Florian Foos

Assistant Professor in Political
Behaviour
Department of Government

Dr Alexandra Gomes

Research Fellow
LSE Cities

Dr Patrick Gildersleve

LSE Fellow in Computational
Science

Dr Kostas Kalogeropoulos

Assistant Professor
Department of Statistics

Dr Joshua Loftus

Assistant Professor
Department of Statistics

Dr Jens Koed Madsen

Assistant Professor
Department of Psychological
and Behavioural Science

Dr Blake Miller

Assistant Professor
Department of Methodology

Dr Carl Müller-Crepon

Assistant Professor
Department of Government

Dr Marion Lieutaud

Leverhulme Early-Career
Researcher
Department of Methodology

Dr Michael Muthukrishna

Associate Professor of
Economic Psychology
Department of Psychological
and Behavioural Science

Dr Jean-Christophe Plantin

Associate Professor
Department of Media and
Communications

Dr Mathias Poertner

Assistant Professor in
Political Science
Department of Government

Dr Alison Powell

Associate Professor
Department of Media and
Communications

Dr Eleanor Power

Assistant Professor
Department of Methodology

Dr Xinghao Qiao

Assistant Professor
Department of Statistics

Professor Johannes Ruf

Professor
Department of Mathematics

Dr Thomas Robinson

Assistant Professor
Department of Methodology

Dr Melissa Sands

Assistant Professor of Politics
and Data Science
Department of Government

Dr Chengchun Shi

Assistant Professor
Department of Statistics



OUR PEOPLE

DSI Affiliates continued

Dr Rachel Spicer

Postdoctoral Fellow
Department of Psychological
and Behavioural Science

Dr Divya Srivastava

Guest Teacher
Department of Health Policy

Professor Zoltán Szabó

Professor of Data Science
Department of Statistics

Dr Johanna Thoma

Associate Professor
Department of Philosophy,
Logic and Scientific Method

Dr Milena Tsvetkova

Assistant Professor of
Computational Social Science
Department of Methodology

Professor László Végh

Professor
Department of Mathematics

Dr Kate Vredenburg

Assistant Professor
Department of Philosophy,
Logic and Scientific Method

Dr Yan Wang

Research Fellow
School of Public Policy

Professor Henry Wynn

Emeritus Professor of Statistics
Department of Statistics

DSI Visiting Appointments

Professor Arthur Petersen

Visiting Professor

Professor Leonard Smith

Visiting Professor

Dr Hadi Alagha

Visiting Senior Fellow

John Burn-Murdoch

Visiting Senior Fellow

Dr Gökhan Çiflikli

Visiting Senior Fellow

Dr Trevor Maynard

Visiting Senior Fellow

Dr Miriam Sorace

Visiting Senior Fellow

Dr Erica Thompson

Visiting Senior Fellow

Dr Hailiang Du

Visiting Fellow

Dr Kei Kobayashi

Visiting Fellow

Dr Tom Paskhalis

Visiting Fellow

Dr Joshua Townsley

Visiting Fellow

Visiting Research Students

Philipp Darius (Autumn 2021)

PhD Candidate in Governance at
the Centre for Digital Governance,
Hertie School, Germany

Fintan Oeri (Autumn 2021)

PhD Candidate at the Faculty
of Business and Economics,
University of Basel, Switzerland

Clint Claessen (Winter 2022)

PhD Candidate at the
Department of Social Sciences,
University of Basel, Switzerland

**Riccardo Ricciardi
(Autumn 2022)**

PhD Candidate in Statistics and
Data Science at the Department
of Economics and Management,
University of Brescia, Italy

Paride Carrara**(Winter and Spring 2023)**

PhD Candidate in Political and
Social Sciences, University of
Bologna, Italy



DSI Governance Bodies

Management Committee

Professor Jan van den Heuvel

Department of Mathematics

Professor Patrick Sturgis

Department of Methodology

Professor Zoltán Szabó

Department of Statistics

Dr Kate Vredenburg

Department of Philosophy, Logic
and Scientific Method

Professor Steve Gibbons

Department of Geography and
Environment

Professor Michael Laver

Visiting Professor
Department of Methodology

Professor Susana Mourato

Vice President and Pro-Vice
Chancellor (Research)

Data Science Education Forum

Professor Irini Moustaki

Department of Statistics

Professor Johannes Ruf

Department of Mathematics

Dr Milena Tsvetkova

Department of Methodology

Dr Melissa Sands

Department of Government

Dr Thomas Smith

Department of Geography and
Environment

Jeni Brown

Head of LSE Digital Skills Lab

Dr Claire Gordon

Director, LSE Eden Centre for
Education Enhancement

Professor Emma McCoy

Vice President and Pro-Vice
Chancellor (Education)



OUR PEOPLE

Advisory Board

Sir Tim Besley

Tim Besley is School Professor of Economics and Political Science and Sir W Arthur Lewis Professor of Development Economics at LSE. From September 2006 to August 2009, he served as an external member of the Bank of England Monetary Policy Committee and is currently a member of the UK National Infrastructure Commission and the UK Government's Levelling Up Advisory Council. He is a Fellow of the Econometric Society and the British Academy as well as a foreign honorary member of the American Economic Association and the American Academy of Arts and Sciences. The Professor is a member of the IFS Deaton Review panel on inequalities. He was the President of the Royal Economic Society from 2021 to 2022. His main research interests are in the understanding of how institutions shape how the economy works with a particular interest in political economy.

Professor Julia Black

Julia Black is Strategic Director of Innovation and Professor of Law at The London School of Economics and Political Science. Julia joined LSE as a lecturer in 1994, having completed her first degree in Jurisprudence and her DPhil at the University of Oxford. She was LSE's Pro Director of Research from 2014 to 2019 and interim Director of LSE from 2016 to 2017.

Julia has a range of external activities. She is an External Member of the Bank of England's Prudential Regulation Committee and of the Bank's Financial Markets Infrastructure Board, Senior Independent Member of the Board of UK Research and Innovation, the UK's main research funding body, a member of the Council of Science and Technology, on the Board of the Courtauld Institute of Art, and a Director of Zinc, a social sciences, mission-based incubator. She is also President of the British Academy, the United Kingdom's national academy for the humanities and the social sciences, taking up the role in July 2021.

Monisha Kaltenborn

Monisha Kaltenborn has helped shape motorsport since 1998. She completed her law degree at the University of Vienna in 1995, followed by a course in International Private Law at the Hague Academy for International Law. Monisha continued with a master's degree in International Business Law at The London School of Economics and Political Science. She acquired further competences in international cooperation during her research assistance at the United Nations Industrial Development Organization in Vienna and the UN Commission on International Trade Law in Vienna. Starting her career in motorsports from the Fritz Kaiser Group she moved to the Sauber Formula 1 Team in 2000, and from 2001 onwards acted as a member on the management board. In 2010 she was appointed as the CEO of the Sauber Group and further as the first woman team Principal in history of a Formula 1 Team. In 2017 Monisha left her position at Sauber. Since July 2019 she is the CEO of the Racing Unleashed Group, an international and sustainable motorsport company fully engaged in the world of e-sports, namely with state-of-the-art Formula 1 simulators. Her ambition is to make motorsports accessible to everyone and to support young people who want to pursue a career in racing.

Dr Mark Kennedy

Mark Kennedy is Associate Professor of Strategy and Organisation at Imperial College Business School, Director of Imperial Business Analytics – a research lab at Imperial's Data Science Institute (DSI) – and Co-Director of the DSI. His research focuses on the emergence of new markets and industries and the more basic building blocks of organising, with a particular interest in meaning construction processes. Mark has substantial experience in consulting and high technology and was a Principal in the management consulting unit of Computer Sciences Corporation prior to becoming an academic.

**Professor Helen Margetts**

Helen Margetts OBE FBA is Professor of Society and the Internet in the Oxford Internet Institute (OII) at the University of Oxford, and Director of the Public Policy Programme at The Alan Turing Institute for Data Science and AI in London. From 2011-8 she was Director of the OII, a multi-disciplinary department of the University of Oxford. Before coming to Oxford, she was UCL's first Professor of Political Science and Director of the School of Public Policy (2000-4). She has degrees in Mathematics (BSc, Bristol), Politics (MSc, LSE) and Government (PhD, LSE). She has researched and written extensively on the relationship between technology, government, politics and public policy, including *Political Turbulence: How Social Media Shape Collective Action* (with Peter John, Scott Hale, Taha Yasseri) which won the Political Studies Association's 2017 prize for best politics book; *Digital Era Governance* (with Patrick Dunleavy); and *The Tools of Government in the Digital Age* (with Christopher Hood). She received the Technical University of Munich's Friedrich Schiedel prize (2018) for research and research leadership in Technology and Politics; was awarded the O.B.E for services to social and political science (2019); held the Kluge Chair in Technology and Society at the Library of Congress (2019); became a Fellow of the British Academy in 2019; and won the Meyer-Struckmann Prize for research on Digitization and Democracy from the Heinrich-Heine-University Düsseldorf in 2020.

Professor Arthur Spirling

Arthur Spirling is *Class of 1987 Professor of Politics* at the Department of Politics, Princeton University. Previously, he served as Professor of Politics and Data Science at New York University (NYU). From 2016 to 2022, he was the Deputy Director and the Director of Graduate Studies (MSDS) at the Center for Data Science, and Chair of the Executive Committee of the Moore-Sloan Data Science Environment. Arthur received his PhD from the University of Rochester, Department of Political Science, in 2008. From 2008 to 2015, he was an Assistant Professor and then the John

L Loeb Associate Professor of the Social Sciences in the Department of Government at Harvard University. His work has been supported with grants from NSF and other funding bodies. He previously served as the Chair of the Executive Committee of the Moore-Sloan Data Science Environment at NYU.

Simone Verri

Simone Verri joined Goldman Sachs in 1997 and he is currently a Partner and Co-Head of Global Investment-Grade Capital Markets and Risk Management at Goldman Sachs. Simone is also a member of the Investment Banking Executive Committee and the Chair of Goldman Sachs' Firmwide Commitments Committee (global IPOs and Equity offering approvals). Simone is an LSE Alumnus (MSc Finance and Economics 1997).

Chenning Zhao

Chenning Zhao is a seasoned investment professional who, as one of the four founding partners, co-founded, in 2008, FountainVest Partners, one of the largest and leading China dedicated private equity funds with over USD\$7bn AUM. The fund has led many sizable and high-profile successful investment transactions in the Greater China region. After 12 years as the Managing Director and Investment Committee Member in FountainVest Partners, Chenning retired from his managerial role, in 2019, though remains active on his own personal investment ideas. Prior to FountainVest, Chenning was a senior investment professional with Temasek and Vice President of JP Morgan Partners. Before that, Chenning was an investment banker with Goldman Sachs from 1997 to 2001.

He holds an MSc in Accounting and Finance from The London School of Economics and Political Science (1997), an MSc in International Finance from the Graduate School of People's Bank of China (1996) and a BSc in Economics from Nanjing University (1992).



APPENDIX A – LSE DATA SCIENCE INSTITUTE EVENTS

CIVICA Data Science Seminar Series

2021

Data Science and Digital Transformation in the Time of COVID-19

2 February 2021

Professor Ken Benoit, Professor Slava Jankin, Dr Caroline King, James Palmer, Dr Martin Waehlich, Dr James Hetherington

Police Diversity to Prevent Violence – Does it Work?

7 March 2021

Roman Rivera

Tracking COVID-19 with the Financial Times

24 March 2021

John Burn-Murdoch

Negotiating with AI: fairness in the labor market

7 April 2021

Dr Christo Wilson

How to Detect Fake News Before it is Written

21 April 2021

Dr Preslav Nakov

Using Public Video Cameras to Detect Racial Distancing on City Streets

5 May 2021

Dr Melissa Sands

Breaking the Social Media Prism: how to make our platforms less polarizing

19 May 2021

Professor Chris Bail

Incentives and COVID-19 vaccination uptake

8 September 2021

Professor Macartan Humphreys

The Art of Quantitative Editing

13 September 2021

Dr Laura Bronner

Understanding Beautiful Places and Wellbeing with AI

22 September 2021

Professor Suzy Moat

Framing A Protest: determinants and effects of visual frames

13 October 2021

Professor Michelle Torres

Deconstructing the Effects and Uses of Algorithmic Recommendation

20 October 2021

Professor Camille Roth

More than Words: how political rhetoric shapes voter opinions

3 November 2021

Professor Christopher Lucas

2022

What is Feminist Data Science?

12 January 2022

Professor Lauren Klein

Embedding Regression: models for context-specific description and inference

23 February 2022

Professor Arthur Spirling

The Science of Success: quantifying outcomes in social systems

9 March 2022

Professor Albert-László Barabási



Internet Communities and the French Presidential Election

20 April 2022

Professor David Chavaralias

Modelling Sustainable Development from the Bottom Up

4 May 2022

Dr Omar Guerrero

Visualising Spatial Exposure Data for Comparing Earthquakes

1 June 2022

Professor Stephanie Lackner

Becoming a Data Scientist: what it means to put data to work

14 September 2022

Professor Anne Beaulieu

Does Epistemic Vice Explain Corporate Misconduct?

19 October 2022

Dr Marco Meyer

Using Open Source Data Streams and Surveys on Elections

2 November 2022

Dr Lisa Singh

2023

Introducing the Online Harms Observatory: AI powered mapping of online abuse in real-time

11 January 2023

Pica Johnsson

New Faces of Bias in Online Platforms

8 February 2023

Dr Aniko Hannak

Models, Mathematics and Data Science: how to make sure we're answering the right questions

8 March 2023

Dr Erica Thompson

Using Multimodal Neural Networks to Better Understand How Voters Process Audiovisual Information

22 March 2023

Professor Bryce Jensen Dietrich

Exploring A New Model of Industry/Academic Collaboration: the US 2020 Facebook and Instagram election study

19 April 2023

Professor Pablo Barberá

Artificial Intelligence, Algorithmic Recommendations and Competition

3 May 2023

Professor Giacomo Calzolari

The Handbook of Computational Social Science for Policy

31 May 2023

Dr Eleonora Bertoni





APPENDIX A

Careers in Data Science Series

2022

How to Find your First Data Science Role

24 February 2022

David Dorrell (CMA) and **Anton Boychenko** (Decoded)

How Organisations Turn Data into Decisions

31 March 2022

Dr Martin Lukac and **Dr Peter Schmidt** (Quantco)

How my Degree Helps Me to Work as a Data Scientist

26 May 2022

Tabtim Duenger and **Conor Dempsey** (GLA)

Data Science for Management Consultancy

20 October 2022

Mads Frank (Accenture) and **Priyal Haria** and **Marta Bárcena Rodríguez** (Ekimetrics)

Moving from Talk to Practicalities: fairness in machine learning

10 November 2022

Luke Vilain (Lloyds Banking Group)

2023

From Tokyo 2021 to the Future of AI: my journey as a data scientist

16 February 2023

Priyanka Suresh (DeepMind)

Data Science: the new silver bullet in retail?

16 March 2023

Sunil Ramakrishnan (CGI)

Student Industry Visits

2022

Google Central Saint Giles Campus

8 June 2022

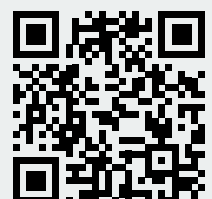
2023

BCG X

19 January 2023

Lloyds Banking Group

9 February 2023



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Public Events

2021

Building Resilience Through Data Centricity

2 January 2021

Jacky Wright (Chief Digital Officer, Microsoft) was hosted by **Professor Ken Benoit** for a discussion of Jacky's work in helping businesses leverage technology to drive innovation, adopt sustainable and accessible business models, and digitally transform.

2022

Automation Era – How will technology reshape business and how does it change how people work today?

27 January 2022

In this DSI event, **Professor Leslie Willcocks** and **Angela-Sophia Gebert** (Celonis) discussed how automation will impact business, how hyper-automation has taken place and how it can inject new life into global economies.

AI in Sport: an overview

24 March 2022

Dr Patrick Lucey (Chief Scientist, Stats Perform) explained how data and AI are used in sports analysis. He covered how teams, media and betting firms use data to reconstruct performance.

Data Science and the Future of Social Science

21 September 2022

This panel event celebrated the DSI's launch in 2020.

Professor Ken Benoit was joined by experts from education, industry and public policy for a discussion of the challenges and opportunities represented by the revolution in social and data sciences. The panel members were: **Caroline Gorski** (Chief Executive, R² Factory at Rolls Royce); **Ming Tang** (Chief Data and Analytics Officer, NHS England); **Professor Helen Margetts OBE FBA** (Professor of Internet and Society at the Oxford Internet Institute, University of Oxford); **Dr Stefan Hunt** (Chief Data and Technology Insights Officer, Competition and Markets Authority).

Using Data Science for Sustainable Business Performance

8 December 2022

Hosted in partnership with Ekimetrics, this event explored how to reinvent business models to balance the need for commercial success while tackling climate change.

2023

Follow the Science? Data, Models and Decisions in the 21st Century

24 January 2023

Hosted by the DSI, this discussion with **Professor Diane Coyle** (University of Cambridge), **Dr Stephanie Hare**, **Dr Erica Thompson** and **Baroness Minouche Shafik** lifted the lid on science for decision support, so that we can be savvier with how we use science, rather than following it blindly.

How Web 3.0 Technology and Data Policy Combine to Promote Data Sovereignty, Privacy and Trust

25 May 2023

This event saw LSE President and Vice Chancellor **Baroness Minouche Shafik** joined by **Sir Tim Berners-Lee** for a discussion chaired by **Professor Ken Benoit**.

The Power of Data in Health

17 June 2023

As part of the LSE Festival, **Professor Ken Benoit** chaired this panel event featuring **James Fransham**, **Dr Alexandra Gomes** and **Dr Angela Spatharou**.



APPENDIX A

DSI Squared Events

2022

“Speed Dating” Research Networking Event

14 June 2022

Researchers had the chance to meet each other, introduce their research interests and identify any opportunities for collaboration in a fast “speed dating” format.

Hosted by Imperial College London at their White City Campus, the event was attended by around 20 researchers from both institutes and participants had short, paired discussions, followed by an informal drinks reception.

Data Learning for More Reliable AI Models

30 September 2022

Dr Rossella Arcucci

The first in the DSI Squared Unsolved Problems in Data Science Seminar Series featured Imperial College London’s **Dr Rossella Arcucci** in an event on the LSE Campus.

Scaling Text with the Class Affinity Model

25 November 2022

Professor Ken Benoit

The second in the DSI Squared Unsolved Problems in Data Science Seminar Series featured LSE’s **Professor Ken Benoit** in an event on the Imperial College London Campus.

2023

The Need for “Smarter” Data Curation Methods

16 January 2023

Dr Ovidiu Şerban

The third in the DSI Squared Unsolved Problems in Data Science Seminar Series featured **Dr Ovidiu Şerban** for an event on the LSE Campus.

Networking Event and Small Grant Scheme Launch

10 March 2023

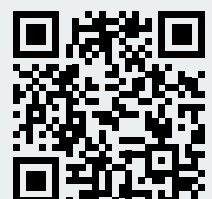
An opportunity for researchers with an interest in data science from LSE and Imperial to meet and share their current and planned work through short conversations, hosted at the LSE campus.

Generative AI and the Knowledge Economy Symposium

24-25 May 2023

Wojciech Zaremba, Professor Peter Pietzuch, Yingzhen Li, Jana Blount, Professor Aldo Faisal, Dr Mark Kennedy, Professor Ken Benoit, Dr Jon Cardoso-Silva, Professor Bingchen Meng, Mark Baltovic, Alexander Niederklapfer, Professor Lilian Edwards, Sir Christopher Pissarides, Hayley Fletcher.

As part of the DSI Squared partnership, this event provided an overview of generative AI and large language models (LLMs) and their implications for the knowledge economy and society.



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Welcome Events

2021

How to Study Data Science at LSE

24 September 2021

Academics from across LSE shared information on their courses, teaching and training workshops in data science.

2022

Data Science Taster Lecture

19 September 2022

How will data science change your life? **Dr Jon Cardoso-Silva** presents concepts from DSI modules to explain why the world needs to pay attention to technology.

Note: This event was cancelled due to the funeral of Her Majesty Queen Elizabeth II.

How to Study Data Science at LSE

21 September 2022

Academics from across LSE shared information on their courses, teaching and training workshops in data science.

Data Science Research Lightning Talks

21 September 2022

With the aim of sharing LSE's world-leading data science projects, academics presented for five minutes on their current work in areas such as health, climate change and politics.

Guest Lecture

27 September 2022

The DSI hosted innovative computational social scientist **Dr Ceren Budak** to share how she uses large scale data analysis techniques to study problems with social, political, and policy implications.





APPENDIX A

Hackathons

2021

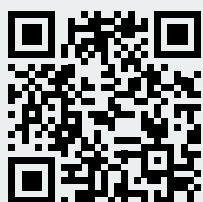
CIVICA Research Collaborative Hackathon on Data-Driven Technologies for Social Sciences

16 December 2021

Using the EUI COVID-19 Model Challenge, this focused on the question of how political and social features of countries relate to cumulative COVID-19 deaths.

Around 120 online participants shared their thoughts with the aim of contributing to this collaborative statistical modelling project.

Speakers included DSI Affiliate **Dr Miqdad Asaria** of LSE Health Policy who gave the keynote speech, as well as other experts **Dr Alex Scacco**, **Professor Alberto Dias Cayeros**, **Professor Miriam Golden**, **Dr Tara Slough** and **Dr Haoyu Zhai**.



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2022

Data Science Weekend

26-27 February 2022

The LSESU Data Science Society hosted this hybrid event that was open to all university students in the UK, with around 80 participants taking part in a range of workshops and challenges. This event represented another shared activity between the Society and the DSI with funding and logistical support offered, such as provision of rooms and catering.

The first day of the event commenced with a keynote speech from **Professor Ken Benoit**, who was later followed by a lecture from **Dr Jon Cardoso-Silva**. Representatives from industry partners Huawei, FNA, and TrueCue also introduced their respective organisations and briefed participants on their challenges.

CIVICA Research Collaborative Hackathon on Democracy in the 21st Century

13 June 2022

This event brought together experts from across and beyond the CIVICA Network to discuss the current wave of “democracy with adjectives” and how this poses a particularly severe challenge to quantitative tools of measurement.

Speakers included **Professor Ken Benoit**, **Professor Michael Coppedge** (University of Notre Dame), **Zselyke Csaky** (Freedom House), **Professor Zsolt Enyedi** (CEU), **Dr Juraj Medzihorsky** (Durham University), **Professor Andreas Schedler** (CEU), **Seema Shah** (International IDEA), **Professor Wolfgang Merkel** (WZB, CEU DI). Following presentations around 90 online attendees engaged with the debates and concepts.

CIVICA Research Collaborative Hackathon on Societies in Transition, Crises of Earth

22-24 November 2022

Working with Stockholm School of Economics (SSE) colleagues, the DSI supported DSI Affiliate **Dr Tom Smith** in delivering a multi-day hackathon attended by over 75 participants. This aimed to build on the “thinkathon” model of previous events with the addition of technical activity. It focused on climatic issues such as wildfires and drought.

Research Showcases

2021

DSI Research Showcase

13 December 2021

An event to facilitate the sharing of data science research across LSE. **Professor Ken Benoit** introduced the DSI research themes and speakers each gave 3-5 minute 'lightning talk' style presentations on their current or planned work in data science. The speakers were: **Dr Siân Brooke, Dr Joshua Loftus, Dr Florian Foos, Lanabi La Lova, Dr Yunxiao Chen, Dr Marcos Barreto, Dr Kate Vredenburgh, Fintan Oeri, Dr Milena Tsvetkova, Dr Erica Thompson, Dr Jon Cardoso-Silva and Dr Eleanor Power, Philipp Darius and Dr Zoltan Szabo.**

2022

DSI Research Showcase

8 December 2022

An event to facilitate the sharing of data science research across LSE. Speakers gave ten-minute presentations on current or planned work in data science. The speakers were: **Dr Erica Thompson, Dr Alison Powell, Dr Johanna Thoma, Dr Michael Blackwell and Riccardo Ricciardi.** The event was attended by over 50 LSE staff and students. It was followed by a networking opportunity over drinks served in the George IV pub.





APPENDIX A

Workshops and Skills Masterclasses

2021

Building Data Science Collaborations between the UK and Brazil

25 November 2021

Over 80 researchers based in academic institutions in the UK and Brazil, with an interest in establishing data science research collaborations, took part in this innovative brainstorming and networking event.

2022

Skills Seminar: introduction to SQL coding workshop

16 February 2022

Led by **Ties Boukema**, a Google Senior Analyst, this session explored SQL, which is fast becoming a fundamental skill that LSE students require when competing in the jobs market. Attended by 40 students.

Process Automation Bootcamp

31 March 2022

As part of the DSI's partnership with Celonis, the start-up delivered a course on Data-Driven Management in a Hyper-Automated World. Attended by 45 students.

Debugging (In)equality in Data Science

6 May 2022

Led by DSI Affiliate, **Dr Siân Brooke**, this workshop uniquely combined the benefits of hackathons for collaboration with the value of academic conferences in networking and showcasing expertise.

A wide range of activities, including roundtable discussions, skills sessions and two research grant competitions explored the potential emancipatory impact of data science. Attended by over 70 students, researchers and members of the public.

Three Week Mastercourse with Celonis

30 July 2022

As part of the DSI's partnership with Celonis, the start-up delivered a three-week course that asked, "What will the management of tomorrow look like in a world that is more digitised than ever?"

Three Week Mastercourse with Celonis

23 November 2022

As part of the DSI's partnership with Celonis, the start-up delivered a second three-week course that asked, "What will the management of tomorrow look like in a world that is more digitised than ever?"

2023

Discover Data Programme

In collaboration with LSE Careers, the DSI hosted three events.

Data Science Careers Panel

31 January 2023

Panel members: **Chinonye Dianne Pat-Ekeji, Mark Perfect, Micha Panagiotidi, Tabtim Duenger, Pauline Ting.**

Data Science Careers Networking Event

31 January 2023

Essential Skills for a Career in Data

2 February 2023

Professor Ken Benoit outlined the essential skills needed in practice for a successful career in data science, in the variety of human-focused fields that LSE graduates commonly enter.



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