

The Alan Turing Institute

Theme Lead - Spatio-temporal AI for Sustainable Cities

THE ALAN TURING INSTITUTE

There has never been a more significant time to work in data science and AI. There is recognition of the importance of these technologies to our economic and social future: the so-called fourth industrial revolution. The technical challenge of keeping our data secure and private has grown in its urgency and importance. At the same time, voices from academia, industry, and government are coming together to debate how these technologies should be governed and managed.

The Alan Turing Institute, as the UK's national institute for data science and artificial intelligence, plays an important part in driving forward advances in these technologies in order to change the world for the better.

The Institute is named in honour of Alan Turing, whose pioneering work in theoretical and applied mathematics, engineering and computing is considered to have laid the foundations for modern-day data science and artificial intelligence. The Institute's goals are to undertake world-class research, apply its research to real-world problems, driving economic impact and societal good, lead the training of a new generation of scientists, and shape the public conversation around data and algorithms.

After launching in 2015 with government funding from EPSRC and five founding universities, the Institute has grown an extensive network of university partners from across the UK and launched a number of major partnerships with industry, public and third sector. Today it is home to more than 300 researchers, a rapidly growing team of in house research software engineers and data scientists and a business team.

BACKGROUND

The Turing's focus is on areas of UK national resilience: Defence and National Security, Sustainability and Environment, supported by a mission in Fundamental Research. The Sustainability mission focuses on the safe decarbonisation of transportation networks, manufacturing processes, and critical infrastructure, to create pathways to net-zero. The mission uses the tools of data-centric engineering, pioneered by researchers at the Turing in partnership with Lloyd's Register Foundation, a global safety charity with a mission to engineer a safer world.

The Sustainability Mission is built around the following five strategic 'pillars':

Technology development and translation – Accelerate the translation of Turing Sustainability research into real-world impact, with a particular focus on decarbonisation and safety-critical domains.

Standards and regulation – Drive the development of data science and AI standards for safety and sustainability by engaging potential users and regulators.

Skills, training and knowledge exchange – Convene the best talent to contribute to significant upskilling, knowledge and best practice exchange across data science, AI and data-centric engineering, together with a range of national and international partners.

Community building – Further integrate the data-centric engineering and sustainability communities, drawing together industry, academia and policymakers to align AI capabilities to key areas where the greatest reductions in emissions can be made.

Research and innovation – Identify gaps in current industry practices and develop new technology to boost impact.

The Mission has three existing themes of focused engineering activity, in manufacturing, maritime and critical infrastructure, and a fourth, interpretive technologies, which focuses on the interface between engineering and society.

The Spatio-temporal AI for Sustainable Cities will be a new theme, complementary to the mission's existing themes, which is intended to advance three strands of work: AI for low-carbon transport systems, decarbonisation of cities and future mobility ecosystems. These strands form a distinctive and complementary contribution to the Sustainability mission, addressing the mobility-specific dynamics essential to net-zero transitions.

ROLE PURPOSE

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This is a stand-out opportunity for an innovative academic or industrial scientist looking to take a leading national role in this important area, including establishing and strengthening national and international collaborations between the data and engineering and sustainability communities. The role has traditionally been taken on by a diverse range of people from various starting experiences: Research Fellows, Lecturers, Senior Lecturers, Associate Professors, Readers and Professors.

The successful candidate will be expected to liaise closely with the leadership of the Turing and senior external stakeholders. The role will be a central part of the Turing's Sustainability mission team, supported by the Business Team to create growth in the theme. They will work closely with a wide range of colleagues from across the Turing and externally, meaning they will be expected to move easily between research and industry communities.

HOW YOU WILL MAKE AN IMPACT

The Theme Lead will work closely with the leadership of the Turing and external partners to define the role which is likely to include:

- Develop and oversee the delivery of an ambitious theme on Spatio-temporal AI for Sustainable Cities across major priorities including: 1) Technology development and translation; 2) Standards and regulation; 3) Skills, training, knowledge exchange; 4) Community building; 5) Research and innovation.
- Develop, deliver, and coordinate the strategy for the theme within the wider Sustainability mission, linked to overarching Institute strategy.
- Identify, initiate and nurture industry partnerships, including researchers across the UK and internationally to help deliver compelling outputs, build a community of researchers and practitioners, and improve skills.
- Help leverage resources for nationally significant projects in Sustainability and data-centric-engineering from appropriate sponsors (e.g., government, industry, charities, etc.).
- Deliver change in industry related to Spatio-temporal AI for Sustainable Cities, disseminate findings at industry, academic and practitioner conferences and supervise teams geared towards providing impact in industry.
- Cultivate strong relationships with internal stakeholders, liaising with the Institute's programme management and other business teams and associated delivery partners across the Institute and its wider network.
- Line management responsibility may be required.
- Assisting the mission leadership team with other mission activities as appropriate
- Developing an emerging data technology and policy community of interest
- Contributing to the academic life of the Institute, e.g. by leading seminars, workshops, etc.
- Liaising with the Institute's other missions and the business team to ensure that the mission is integrated with wider Institute activities and strategy.

Please note that job descriptions cannot be exhaustive, and the postholder may be required to undertake other duties, which are broadly in line with the above key responsibilities. This job description is written at a specific time and is subject to changes as the demands of the Institute and the role develop.

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PERSON SPECIFICATION		
Skills and Requirements Post holders will be expected to demonstrate the following:	Essential (E) Desirable (D)	Tested at application (a) Tested at interview (i)
Education/Qualification		
A PhD or equivalent industry research experience in engineering, mathematics, statistics, computer science or in related technical or scientific discipline.	E	A
Knowledge and Experience		
Excellent publication record in relevant areas in leading international conferences or journals.	E	AI
Demonstrated commitment to bridging fundamental and applied research.	E	AI
Ability to manage and lead a small team	E	AI
Communication and advocacy skills, both verbal and written, with the ability to express ideas and concepts and present compelling and persuasive arguments clearly and coherently to diverse audiences and to engage in public debate	E	I
Record of impact in one or more of the following areas: Spatial Temporal modelling, transport systems and/or sustainable cities	D	AI
Strategic vision skills, especially as required in a complex, innovation-intensive collaboration with academic and/or industry partners	D	AI
Ability to build and develop effective working relationships with external partner organisations (academia, commercial, public and third sectors), and working with a diverse set of stakeholders.	D	AI
Other Requirements		
Commitment to EDI principles and to the Organisation values	E	I

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OUR VALUES

The Alan Turing Institute is committed to equality diversity and inclusion and to eliminating discrimination. All employees are expected to embrace, follow and promote our [EDI Principles](#) and Our Values.

Our values



Trust

We create an environment where we have trust and can be trusted



Inclusivity

We expect our Turing community to contribute to a culture that is inclusive and free of barriers



Respect

We all have different roles, priorities and challenges but our shared purpose is the same



Leadership

Leadership is everyone's business; Turing leaders set the right tone and lead by example



Transparency

Everyone should understand the how and the why of our decisions and actions



Integrity

We are all ambassadors for the Turing's mission of changing the world for the better

APPLICATION PROCEDURE

If you are interested in this opportunity, please click the apply button on our webpage. You will need to register on the applicant portal and complete the application form including your CV and covering letter. If you have questions about the role or would like to apply using a different format, please contact us at recruitment@turing.ac.uk.

CLOSING DATE FOR APPLICATIONS: THURSDAY 23rd JULY at 23:59 (London, UK, BST)

TERMS AND CONDITIONS

This post is offered part-time at up to 0.4-0.6 FTE on a fixed term basis for two years. The annual salary is £78,367 - £81,876 pro rata plus excellent benefits, including flexible working and family friendly policies, <https://www.turing.ac.uk/work-turing/why-work-turing/employee-benefits>

EQUALITY, DIVERSITY AND INCLUSION

The Alan Turing Institute is committed to creating an environment where diversity is valued and everyone is treated fairly. We value diversity of background, experience, and perspective, and are proud to be an inclusive employer. We warmly encourage applications from all backgrounds, particularly from groups currently under-represented in our sector. If you feel passionate about this role but don't meet every single requirement, please apply — we recognise that great candidates may bring strengths beyond the criteria listed.

We are committed to making sure our recruitment process is accessible and inclusive. This includes making reasonable adjustments for candidates who have a disability or long-term condition. Please contact us at adjustments@turing.ac.uk to find out how we can assist you.

Please note all offers of employment are subject to obtaining and retaining the right to work in the UK and satisfactory pre-employment security screening which includes a DBS Check.

Full details on the pre-employment screening process can be requested from HR@turing.ac.uk.