

The Alan Turing Institute

MISSION LEAD – ENVIRONMENTAL FORECASTING

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 purpose is to make great leaps in data science and AI research to change the world for the better. Its goals are to advance world-class research and apply it to national and global challenges, build skills for the future by contributing to training people across sectors and career stages, and drive an informed public conversation by providing balanced and evidence-based views on data science and AI.

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 500 researchers, a rapidly growing team of in-house research software engineers and data scientists and a business team.

BACKGROUND

Currently, Turing is undergoing a restructuring, moving towards a challenge-led model with three Grand Challenges (Environment & Sustainability, Health, Defence & National Security), underpinned by cross-cutting Fundamental Research. This new Turing 2.0 model focuses on world-class science and innovation and aims to generate high-quality research and translate it into real-world impact and deployment.

In the Environment & Sustainability Grand Challenge, we will use machine learning and AI as a transformative technology to benefit planet and people. Initially the Grand Challenge will centre around using machine learning and AI for

1. Weather modelling and forecasting (e.g., data assimilation, forecasts, downscaling, end-to-end forecasting).
2. Sea-ice modelling.
3. Modelling and forecasting of renewables, e.g., wind/solar.
4. Nuclear fusion.

We are now looking for an ambitious and inspirational scientific leader to drive forward research in the area environmental forecasting with an initial focus on weather modelling and forecasting and sea-ice modelling, reporting to the Science and Innovation Director for Environment and Sustainability. This role will form part of the Grand Challenge leadership team and be responsible for the leadership and delivery of a multi-million programme of directed activity.

ROLE PURPOSE

The Mission Lead will be key to delivering internationally leading research in machine learning for the first mission in environmental forecasting. This role will be part of the Environment & Sustainability Grand Challenge, and you will be reporting to the Science and Innovation Director and will work closely with other (Senior) Research Associates, PhD students, interns and business team colleagues across the Grand Challenge. You will be required to manage a small group of Research Leads under the mission. You are also expected to engage with stakeholders, coordinate funding applications, and actively contribute to continual shaping and scoping of the mission.

The Alan Turing Institute

DUTIES AND AREAS OF RESPONSIBILITY

Core responsibilities

Scientific Leadership and Team Management

- Develop the strategy and scope of the Environmental Forecasting mission for the Environment and Sustainability Grand Challenge in support of the Institute's objectives.
- Break down the mission's vision into strategic and financial planning with ambitious and measurable goals
- Lead the delivery of the Environmental Forecasting mission, ensuring delivery against objectives within allocated budgets and timeframes.
- Manage, lead and inspire a team of researchers and professional staff across the mission to produce, deliver and deploy high-quality, high-impact research, building a cutting-edge science and innovation research programme around Environmental Forecasting.
- Create a sense of cohesion and unity across the mission

Communication and Networking

- Convene Institute partners to maximise opportunities for translation and exploitation of the algorithms, software, methods, theories and tools developed through the mission.
- Cultivate strong relationships with internal stakeholders, liaising with the Institute's Programme Management team and associated delivery partners across the Institute and its wider network to oversee the management of the mission.
- Encourage the Institute's and the UK's wider research community within the area of Environmental Forecasting to work together to make a global impact and engage with wider academic and industrial research sectors.
- Help grow relationships with current and prospective funders and partners within mission-relevant areas to form sustainable and mutually beneficial collaborations, working closely with the Director of Science and Innovation as well as relevant directorates such as Turing Partnerships and International.
- Contribute to the writing and development of documents and materials leading the public conversation and influencing policy in the relevant area (e.g., position papers, policy recommendations, etc.).

Entrepreneurialism

- Ensure that potential for real-world application is embedded in the design and delivery of the mission's research, and develop and lead initiatives promoting the dissemination, translation, deployment and adoption of the mission's findings and outcomes.
- Create impact through efficient management of resources
- Lead and contribute to efforts of generating mission funding through a diverse range of sources

Additional Responsibilities

As part of the Grand Challenge leadership team, you will be expected to support and take part in the following:

- Collaborate with other mission and project leads to maximise delivery efficiencies and impact across domains.
- Act as a public face of the Institute, promoting its science and innovation within the mission area, nationally and internationally, and ensure that Turing's reputation as the UK's national centre for data science and AI is enhanced.
- Instil and promote a tenacious drive for capability across resources by promoting growth and performance.
- Contribute to securing large-scale investments (via grants, philanthropy and others) to support the Turing strategy and the Grand Challenge's research agenda

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		
PhD or equivalent level of professional qualifications and/or experience in data science (broadly defined to include mathematics, statistics, computer science pure or applied) or related quantitative discipline	E	A
Knowledge and Experience		
Record of research excellence in an academic, government and/or industrial setting in the area of environmental modelling	E	A
In-depth understanding of the national data science and AI landscape, in the context of environment & sustainability	E	A/I
Demonstrable experience of income generation for large scale research initiatives	E	A/I
Demonstrable ability and vision to develop and deliver large strategic initiatives	E	A/I
Experience of line management, and/or matrix management	E	I
Knowledge of the UK higher education sector and/or a strong understanding of current academic and commercial research in data science and AI	D	A
Communication		
Communicates complex, specialist or conceptual information clearly and persuasively, presenting compelling arguments to influence and/or negotiate satisfactory outcomes	E	A/I
Clear and effective communication skills, with and to a wide range of people and audiences at all levels (e.g., Academics, Scientists, Professional services staff, general public and others)	E	A/I
Leadership and Team development		
Ability to provide leadership to a diverse team of scientists and engineers, assessing and managing performance through regular reviews and appraisals	E	A/I
Ability to work collaboratively as part of diverse multi-disciplinary teams, focusing on impact	E	A/I
Project Management and Delivery		
Ability to actively define, promote and monitor progress in an area of work to ensure organisational objectives and standards are met	E	I
Demonstrable ability to plan and deliver large-scale collaborative research projects or programmes, whilst managing multi-disciplinary research teams	E	A/I

The Alan Turing Institute

Decision Making		
Ability to work in uncertainty, and to map out risks/benefits of potential solutions to problems arising and make long term effective strategic decisions	E	I
Analysis and Research		
Ability to communicate, translate and champion research findings, for optimal results to relevant stakeholders	E	A/I
Ability to develop new hypotheses and concepts for testing to expand or extend existing body of knowledge.	E	A
Ability to challenge the status quo and provide approaches to explore new possibilities or explanations, bridging fundamental and applied research	E	A/I
Other Requirements		
Commitment to EDI principles and to the Organisation values	E	I

The Alan Turing Institute

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 below. You will need to register on the applicant portal and complete the application form including your CV and covering letter. The covering letter should address

- Why you are applying for this position
- How you qualify for this position (see criteria under “Person Specification”)
- A statement of what area within the scope of “Environmental Forecasting” you would like to see at Turing and why (max. 2 pages plus references)
- Publication list (if not covered in CV)

If you have questions about the role or would like to apply using a different format, please contact us on 020 3862 3335 or email recruitment@turing.ac.uk

CLOSING DATE FOR APPLICATIONS: Sunday 13 October 2024 at 23:59 (LONDON UK BST)

TERMS AND CONDITIONS

This role will be appointed on a full-time, fixed term basis for 3 years (with the potential to be extended). Part-time applications can be considered (0.8 FTE minimum) and will be discussed further with the successful applicant.

Secondments can be considered on an interim basis only, before engaging in a direct employment contract. You must be willing to commit at least 80% of your time to the Turing with a maximum of 20% of your time working on non-conflicting activities at your home organisation.

The annual salary is from £89,598 (pro-rated to the hours worked) with excellent benefits, including flexible working and family friendly policies, [Employee-only benefits guide | The Alan Turing Institute](#).

The Alan Turing Institute is based at the British Library, in the heart of London's Knowledge Quarter. While the Turing operates a hybrid working model you will be expected to spend time there each month to connect to your peer group and to work with teams across the Institute. We would ideally like the successful candidate to be in our office 3 days per week.

EQUALITY, DIVERSITY AND INCLUSION

The Alan Turing Institute is committed to creating an environment where diversity is valued, and everyone is treated fairly. In accordance with the Equality Act, we welcome applications from anyone who meets the specific criteria of the post regardless of age, disability, ethnicity, gender reassignment, marital or civil partnership status, pregnancy and maternity, religion or belief, sex and sexual orientation.

We are committed to building a diverse community and would like our leadership team to reflect this. We therefore welcome applications from the broadest spectrum of backgrounds.

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.