

The Alan Turing Institute

PROGRAMME MANAGER, TURING RESEARCH AND INNOVATION CLUSTER IN DIGITAL TWINS

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

BACKGROUND

Programme Management

The Alan Turing Institute has ten Programmes of scientific research in key areas of AI and data science, each led by a Programme Director. There are also a small number of significant programmes of activity which sit across several research Programmes.

This role sits within the Institute's Programme Management Directorate, which is responsible for the management and delivery of these programmes in support of the senior academic Programme Directors. The team oversees millions of pounds of data science and AI research, training and knowledge exchange programme initiatives in these programmes, ensuring they are managed to business requirements, specification, time and budget.

There are a number of Programme Managers within the team, usually focussed on one research Programme or programme of activity, but who may provide programme management capabilities and support to other projects or activities from time to time as required. Programme managers are not permanently attached to programmes and may be moved to other research programmes in-line with business needs. Programme Managers may also have the opportunity to support other programmes ad-hoc or more formally, where there is a business need.

Turing Research and Innovation Cluster, Digital Twins

A digital twin (DT) is a virtual replica of a physical process or system that is dynamically updated using data collected from real-time monitoring of its physical counterpart. Although they originated in the engineering sciences, DTs are starting to be used to successfully approach a wide range of complex scientific and social problems, including in healthcare, environmental monitoring, urban analytics, and economics.

Digital Twins are a strategic priority for the Institute and area of research and innovation strength. Through ongoing work within the [Data-Centric Engineering](#), [Urban Analytics](#) and [AI for Science and Government](#) (ASG) Programmes, and the [Environment and Sustainability](#) interest group, The Alan Turing Institute has established one of the largest impactful portfolios of [Digital Twin research](#) and innovation in the UK – in areas from aerospace and civil engineering to urban modelling and agricultural and environmental monitoring – supported by a total investment of more than £26M.

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Building on this momentum, and supported by a further £6M investment, the Alan Turing Institute is establishing a new Turing and Innovation Cluster in Digital Twins (TRIC-DT) to support research and innovation at the interface of AI and DT technologies, ensuring UK leadership in these technologies. This cluster will work closely with partner organizations and coordinate activity with other national DT initiatives to extend the Institute's substantial DT research and innovation activity, and will explicitly focus on solving significant societal challenges and generating tangible societal benefits in three interrelated areas:

1. Environment and sustainability: predicting and mitigating the negative impacts of climate change
2. Infrastructure: enhancing the efficiency and resilience of critical infrastructure (e.g., energy)
3. Health: improving human health and wellbeing

These focus areas will provide a set of defined case study projects on which to anchor the development of interoperable software and open science tools that will help move DTs from a powerful yet bespoke technology to a more easily adoptable industrial technology. The TRIC-DT will be governed by principles of open and reproducible research and effective innovation.

This vision will be achieved by establishing knowledge exchange between a central Turing Impact Hub, and a network of collaborators across the academic, government and private sectors. The Impact Hub will support a team of funded postdoctoral research fellows, dedicated [DT software engineers](#), [research application managers](#), [community managers](#) and [ethics advisors](#).

ROLE PURPOSE

Programme Managers oversee and manage delivery of research projects within the designated programme/s, within funding parameters and to meet agreed delivery milestones and impact objectives. We anticipate that the postholder will demonstrate initiative, balance and accountability in addition to the core values of Turing and their commitment to Equality, Diversity and Inclusion as described in the Turing's EDI Principles and Our Values (below).

The post holder plans, organises and communicates the start-up of individual projects and initiatives and is responsible for oversight of ongoing activities within the Programme. Funding may originate from Research Councils, external partners and sponsors, or Turing core funding.

Programme Managers report either to a Senior Programme Manager or the Director of Programme Management, and may have line management responsibility for one or more Research Project Managers. Their relationships are broad and varied, spanning a diverse team of academic research and business staff within the Institute, together with researchers and operational and senior stakeholders within partner organisations (both university partners and funding partners).

This post holder will support the Institute's Turing Research and Innovation Cluster in Digital Twins (TRIC-DT). The Programme Manager is responsible for facilitating smooth operational links between the partner universities and research institutes as well as close working within The Alan Turing Institute to deliver high-quality research projects, research programmes, and knowledge exchange in data science and AI.

The role will work closely with:

- The three Co- Directors for the TRIC-DT and other governance bodies that provide scientific leadership and direction for the programme.
- Senior Programme Manager and Research Project Managers on the TRIC-DT and other programmes at the Turing that are relevant to the TRIC-DTs focus areas Data-Centric Engineering and Urban Analytics programmes
- Researchers active within the TRIC-DT and at partner institutions, along with Research Application Managers and Community Managers
- The functions in the COO's office, including Finance, HR and Recruitment, Legal, Training, Academic Engagement, Events, Communications.
- Partnerships team, who initiate and nurture non-academic partnerships, shape research projects with partners, negotiate collaborative research contracts, funding and data sharing arrangements.
- Strategic and Project Partners/Funders, who are important stakeholders in post-award delivery and where the effective relationship management and timely reporting provided by Programme Management maximise the opportunity to grow and further build partnerships.

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- Universities & other research employers, to formalise how researchers will be engaged and funded, working with local Research Offices or HR teams.

DUTIES AND AREAS OF RESPONSIBILITY

- Oversee the delivery of millions of pounds of data science and AI research, training and knowledge exchange programme initiatives, ensuring they are managed to business requirements, specification, time and budget
- Provide support, advice, and challenge to the TRIC-DT Co-Directors and Senior Programme Manager in the implementation of robust programme management processes and protocols. Ensure the TRIC-DT complies with Institute policies and governance.
- With the PI and Industry lead and other colleagues, shape the programme strategy and set, implement, and regularly review programme objectives and activities, in alignment with the Institute's strategies
- Foster, grow and develop the research community engaging with the programme through activities that meet the mutual needs of the programme and the research community
- Manage the budget for some aspects of the programme, which includes estimating proposal/project costs, forecasting, tracking actuals, and reconciliations.
- Highlight impact, outcomes, outputs of the programme and promote its successes with stakeholders.
- Monitor all activities, review risks, issues and progress, taking actions or escalating as necessary to ensure minimum impact on programme.
- Deliver regular updates and communications of programme information, highlighting risks and opportunities to stakeholders, internally and externally. Cultivate strong relationships with programme stakeholders.
- Responsible for performance management and professional development of one or more Research Project Managers (where applicable).
- Cultivate strong relationships with programme stakeholders, including strong open working relationship with funders, strategic partners and delivery partners across the programme.

Please note that job descriptions cannot be exhaustive, and the post-holder 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		
Degree or equivalent level of professional qualifications and/or experience with a demonstrated interest in data science and artificial intelligence	E	A
Formal training in one or more project management processes (Scrum, Lean, Agile, Prince II etc.) as well as familiarity with project management tools and software.	D	A
Knowledge and Experience		
Demonstrated programme and project management and organisational skills	E	A, I
Experience managing multi-disciplinary projects, involving external and internal partners;	E	A, I
Experience of managing complex projects and programmes in an academic environment;	D	A
Budget management and financial processes; experience working with Finance on budget planning, reporting, reconciliations;	E	A, I
Experience negotiating, managing and monitoring contracts;	E	A, I
Experience negotiating, managing and monitoring academic research funding and research contracts;	D	A
Experience facilitating research using sensitive data, including an understanding of information governance requirements;	E	A, I
Ability to work in uncertainty, and to map out risks/benefits of potential solutions to problems arising;	E	I
Structured and proactive approach to work, comfortable multi-tasking and able to re-prioritise as required;	E	I
Ability to renegotiate deadlines and deliverables appropriately and seeking advice as required to maintain stakeholder buy-in;	E	I
Experience negotiating, for example in service contracts or within projects, resource management, contract requirements, milestones;	D	A
Experience with research governance structures and research ethics processes;	D	A
Experience of line management, and matrix management.	D	A
Significant experience in managing large UKRI funding awards (or equivalent such awards e.g. EU grants) including understanding of the terms and conditions of such funding	D	A
Experience working with or in industry research projects	D	A
Communication		
Excellent communication, negotiation and influencing skills at all levels with the ability to present to a diverse audience.	E	A,I
Team Development		

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Knowledge and ability to monitor and manage the performance of team members and the ability to coach and mentor others.	E	A, I
Project Management and Project Delivery		
Experience of making recommendations to contribute to service improvement	E	A, I
Be aware of external factors impacting on workload and monitor resourcing requirements to continuously provide a quality service	E	A, I
Decision Making		
Ability to confidently make low-risk decisions after assessing the wider impact with the ability to contribute to discussions and make decisions as part of team	E	I
Teamwork and Motivation		
Able to work effectively as part of a team, providing support to others where required, with an approachable and flexible attitude towards work	E	A, I
Analysis and Research		
Ability to adopt appropriate data analysis methods for the purpose and present the findings	E	A
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
- **Inclusion**

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. If you have questions about the role or would like to apply using a different format, please contact us on 020 3862 3546 or email recruitment@turing.ac.uk.

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TERMS AND CONDITIONS

This full-time post is offered on a permanent basis. The annual salary for full-time hours is £49,025 - £54,500, 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. 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.

Reasonable adjustments to the interview process will be made for any candidates with a disability.

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.