Theme Lead for Cell and Molecular Medicine

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

The Health and Medical Sciences Programme at Turing delivers research into the theory and methods of AI, statistics, and data analytics underpinning medical and health applications that will enable scientists to do better science, without compromising respect for privacy and patient trust.

The Health and Medical Sciences Programme is now establishing a new major long-term research theme in cell and molecular medicine. The UK is recognised as world-leading in cell and molecular biomedical research. However, the data that modern experimental methods produce is complex and requires advanced mathematical, computational and statistical methods to make the most of it. It is well established that the development of such methods is key to the future of personalised medicine. As such there is a strong need to develop advanced computational methods alongside experimental advances. Collectively, the combination of cutting-edge experiment and advanced analytics has the potential to transform our understanding of the basic biology of disease, with transformative implications across healthcare – from dissecting the causal mechanisms of disease outcomes to more precise risk prediction

We are recruiting a Theme Lead to lead development and implementation of a nationally significant research strategy in this important area. The post is offered part time at up to 0.5 FTE on a fixed term basis for one year in the first instance. However, funding will be provided to support and develop research activity with the possibility of extension should they be successful.

ROLE PURPOSE

The purpose of the Theme Lead is to develop and deliver a world-leading research initiative in the area of data science for cell and molecular medicine.

This is a stand-out opportunity for an established, ambitious, 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 experimental biomedical sciences.

The successful candidate will be expected to liaise closely with the leadership of the Turing and senior external stakeholders and will be a central part of the Turing's Health and Medical Sciences programme team, led by Director Professor Chris Holmes and Deputy Director Professor Ben MacArthur, supported by the Business Team for the programme. They will work closely with a wide range of colleagues from across the Turing and externally and will be expected to move easily between computational and experimental research communities.

DUTIES AND AREAS OF RESPONSIBILITY

The Theme Lead will work closely with the leadership of the Turing and external partners to:

- Develop and oversee the delivery of an ambitious, creative and collaborative research programme in data science for cell and molecular medicine generating first class research outputs, aligned with the aims and objectives of the Institute. Identify, initiate and nurture partnerships with biomedical research institutes and researchers across the UK and internationally to help deliver compelling research outputs and impacts
- Develop, deliver and coordinate the strategy for the theme with the wider Turing health programme and institutional strategies ensuring strategic links between other research and partners
- Build capabilities in the relevant research areas and contribute to the development of the Turing health and medical sciences programme, including identifying and establishing connections from the cell and molecular biology research portfolio to other areas of research focus, such as public health and clinical data science.
- Disseminate findings at industry, academic and practitioner conferences and meetings
- Work with Medical Sciences programme team, university members, partners and staff to maximise opportunities for translation and exploitation of methods and ideas developed through Institute's programmes.
- Help leverage resources and secure further funding for collaborative research in Health and Medical sciences from appropriate sponsors (e.g., research councils, government, industry, EU, charities, etc.)
- Inform and make decisions on appropriate use of funds within the Health and Medical Sciences Theme, in line with Programme processes and guidance
- Assist in the supervision of early career post-doctoral researchers working on the Health and Medical Sciences Theme. Contribute to the skills and career development for the community of early career post-doctoral researchers on the Health and Medical Sciences Programme through supporting a programme of informal knowledge exchange

Other duties

- Supervise postdoctoral research fellows, and Turing enrichment students as appropriate.
- Prepare written reports and research papers and give presentations representing the Turing health programme, as appropriate.

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.

The Alan Turing Institute

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 research experience in 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	A/I
Record of excellence and significant research experience in one or more of the following areas: Applications of data science to challenging problems in biomedical research; Advanced statistical modelling for complex high-dimensional data; Modern machine learning methods with applications in cell and molecular biology.	E	A/I
Experience in managing and leading multi-disciplinary teams consisting of both experimental and data scientists.	D	A/I
Leadership and strategic vision skills, especially as required in a complex, research-intensive collaboration with academic and/or industry partners.	E	A/I
Ability to create and promote a collegiate and collaborative approach to research partnership activities.	E	A/I
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.	E	A/I
Experience communicating complex outputs to a variety of audiences through a number of channels.	E	A/I
Ability to identify opportunities for research collaborations beyond the applicant's own academic specialty.	E	AI
Previous experience in a similar role.	D	AI
Communication		
Communication and advocacy skills, both verbal and written, with the ability to express ideas and concepts clearly and coherently to diverse audiences and to engage in public debate.	E	I
Ability to communicate and network across disciplines.	E	I
Able to verbally communicate complex and specialist information clearly and persuasively, presenting compelling arguments to influence and/or negotiate outcomes.	D	I
Decision Making		
Independently makes long lasting, complex decisions at an operational or strategic level which affect a large part of the department.	E	A/I
Able to make strategic decisions which have a significant impact for the organisation, ensuring processes are robust and decisions are challenged appropriately.	E	A/I
Planning and Organising		
Set performance standards and formulates action plans, monitoring and reviewing progress regularly.	D	A/I
Undertake medium-term resource planning in-line with department objectives.	D	A/I
Initiative and Problem Solving		
Able to resolve complex problems with the personal skills and initiative to achieve the solution.	E	A/I
Able to identify solutions that bring wider and longer-term benefits for the organisation and potentially external partners.	D	A/I
Analysis and Research		

Develop new hypotheses and concepts for testing to expand or extend existing body of knowledge.	**E**	**A/I**
Challenge the status quo and provide approaches to explore new possibilities or explanations.	**E**	**A/I**
Ability to bridge both fundamental and applied research.	**E**	**A/I**
Team Development		
Ability to manage and lead a small team.	**E**	**A/I**
Other Requirements		
Commitment to meeting deadlines.	**E**	**I**
Flexible attitude towards work.	**E**	**I**
Commitment to EDI principles and to the Organisation values.	**E**	**I**

EQUALITY, DIVERSITY AND INCLUSION

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 Rules of the Game

Respect – We treat everyone with respect, dignity and kindness and acknowledge the experiences, skills and contributions of others.

Trust - We communicate openly and honestly to support an environment where we have trust in each other.

Transparency – We seek to ensure that everyone understands the how and the why of our decisions and actions. We take on board to feedback when those decisions are challenged.

Inclusivity – We are committed to continuously learning how to be more inclusive by listening to those facing barriers.

Leadership – We recognise creating an inclusive, diverse and equitable institute requires leadership from all. We stand up and speak out when change is needed.

Integrity – We recognise that how we work is as important as our outputs and seek to exemplify best practice in all our decisions.

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, covering letter and contact details for your referees. If you have questions about the role or would like to apply using a different format, please contact them on 020 3970 2148 or 0203 862 3340, or email recruitment@turing.ac.uk.

CLOSING DATE FOR APPLICATIONS: Tuesday 19 October 2021 at 23.59

TERMS AND CONDITIONS

This part time (up to 0.5 FTE, subject to negotiation) post is offered on a fixed term basis for one year. The annual salary is £67,000 to £70,000 (this will be pro-rated for part-time hours), plus excellent benefits, including flexible working and family friendly policies, https://www.turing.ac.uk/work-turing/why-work-turing/employee-benefits

This opportunity is open for both direct employment and secondment from home institutions can be considered.

If you are seconded from your employer, a secondment agreement will cover salary and on-costs at the advertised rate only, plus VAT if applicable. Payments will be made on a quarterly basis to your employing University.

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.

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***.***