The Alan Turing Institute

Research Associate in Computational Biology (in partnership with the Earlham Institute)

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 Alan Turing Institute is partnering with The Earlham Institute (EI) as part of the EI's Institute Strategic Programme on Cellular Genomics. The Earlham Institute is a life science research institute that specialises in data-driven biological research and infrastructure. The aim of the partnership is for the Turing to contribute computational expertise to the analysis and characterization of the implication of cellular heterogeneity through a wide range of biological data sources, including genome sequences, gene expression data, and gene regulatory networks, as well as biological databases, ontologies, and research articles.

ROLE PURPOSE

The Alan Turing Institute is recruiting a full-time postdoctoral research associate to contribute to the development and application of computational biology methods for the analysis of genome sequences, gene expression data, and gene regulatory networks. Additionally, the research associate would develop methods for mining the contents of published biological research, databases, and ontologies.

In particular the research associate will investigate:

- gene expression analysis and the inference of gene regulatory networks in the context of karyotype changes and programmed polyploidy
- the functional relevance of alternative splicing, and in particular the way in which regulatory networks are rewired by alternative splicing
- automated metadata enrichment and ontology building through automated extraction of ontological information from the natural language contents of academic publications.

The Research Associate will likely use network analysis, machine learning, pattern detection, and text-mining approaches.

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DUTIES AND AREAS OF RESPONSIBILITY

- to contribute to the development of computational methods for the analysis of genome data, gene expression data, and gene regulatory networks

- to contribute to the development of text-mining approaches and ontology building

- to research and adapt existing research tools in other domains

- to build collaborative links inside, between, and outside the Alan Turing and Earlham Institutes.

- to organise workshops and seminars to bring together researchers to discuss findings in context

- to disseminate findings through peer-reviewed articles and at seminars, workshops, and conferences.

OTHER DUTIES

- Teaching may be required as part of collaboration work

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		
Undergraduate degree in Natural Science, Mathematics, Computer Science	E	A
PhD (awarded or awaiting viva) or equivalent research experience/qualifications in a relevant are in Natural Science, Mathematics, Computer Science	E	A
Knowledge and Experience		
Programming experience, including machine learning, AI, or data science	E	A,I
Research experience in computational biology, bioinformatics, or closely related area	E	A,I
Research experience formulating and pursuing scientific research questions	E	A,I
Communication		
Good written and oral communication skills, presenting research in publications and talks	E	I
Liaison and Networking		
Ability to seek out and build collaborations within Turing and Earlham, and externally	E	I
Planning and Organising		
Ability to plan workshops and seminars	D	A
Initiative and Problem Solving		
Motivation to take on new problems and solve them alone or in a team	E	A
Analysis and Research		
Good analysis skills to formulate and address research questions	E	A
Teaching and Learning		
Ability to lead tutorial and teaching events related to tools and methods developed	D	A
Other Requirements		
Commitment to EDI principles and to the Organisation values	E	I

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. If you have questions about the role or would like to apply using a different format, please contact us on 020 3862 3533 or 0203 862 3516, or email recruitment@turing.ac.uk.

CLOSING DATE FOR APPLICATIONS: 25 May 2023 at 23:59

TERMS AND CONDITIONS

This full time post is offered on a fixed term basis until 31 March 2025 with the expectation to be extended to 31 March 2028, subject to funding.

The annual salary is £42,893 - £48,510 dependent on previous relevant experience and skills plus excellent benefits, including flexible working and family friendly policies, https://www.turing.ac.uk/work-turing/why-work-turing/employee-benefits

Candidates who have not yet been officially awarded their PhD will be appointed as Research Assistant at a salary of £40,148 per annum

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 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***.***