

The Alan Turing Institute

Research Associate, Enhancing Security and Privacy of National Identity Systems.

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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

This role sits within the Defence and Security Programme at the Institute and the particular project this role will be involved in is the Trustworthy Digital Infrastructure for Identity project. This role will work closely with the 3 Principal Investigators on this project, the Technical Development Manager and other PDRA s on the team.

ROLE PURPOSE

The provision of digital infrastructure such as foundational identity systems is an emerging requirement in many modern societies across the developed and developing world. New techniques for deployment at scale promise to improve the assurance of users' rights to access to various digital and physical resources, vastly more easily, cheaply and quickly. However, systems come with strong security requirements, including confidentiality and integrity. Moreover, protecting citizens' rights when such systems are deployed requires the development of novel and appropriate socio-technical interventions. We are seeking candidates for a research position involving threat analysis, including security and privacy, of National Digital Identity Systems. The candidate will also be expected to read team designs, architectures and implementations of Digital Identity

DUTIES AND AREAS OF RESPONSIBILITY

The post holder will work closely with the principal investigators and research associates based at Turing Institute to:

- To take initiatives in the planning and execution of research.
- To identify and develop suitable techniques, and apparatus, for the development and implementation of the exiting programmes.
- To conduct data analysis.
- To ensure the validity and reliability of data at all times.
- To maintain accurate and complete records of all findings.
- To undertake any training and or professional development.
- To prepare material for presentation in oral and poster formats.

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- To draft publications and prepare them for submission to journals.
- To write and publish articles in peer-reviewed journals/digests that highlight findings from research ensuring consistency with the highest standards of academic publication and showcasing the Institute's research leadership.
- To contribute to writing bids for research grants.
- To provide guidance to staff and students.
- To supervise practical work and advise students on techniques.
- To take responsibility for organising resources and effective decision making in support of research.
- To attend relevant workshops and conferences as necessary.
- To develop contacts and research collaborations within the Institute and the wider community.
- Teaching and related activities may be required as part of collaboration work.

Other duties:

- To work in close co-operation with the principal investigator and collaborators on the project.
- To provide regular updates on progress to the team.
- To undertake appropriate administration tasks.
- Support the Principal Investigator and research group in the design and development of the research programme.

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PERSON SPECIFICATION

<p style="text-align: center;">Skills and Requirements</p> <p style="text-align: center;">Post holders will be expected to demonstrate the following:</p>	<p style="text-align: center;">Essential (E)</p> <p style="text-align: center;">Desirable (D)</p>	<p style="text-align: center;">Tested at application(a)</p> <p style="text-align: center;">Tested at interview (i)</p>
Education/Qualification		
<ul style="list-style-type: none"> Research Associate level: Holds a PhD or equivalent level of professional qualification in a cybersecurity or related subject (e.g. computer science, management science, mathematics or related discipline). 	E	A
<ul style="list-style-type: none"> Research Assistant level: Near completion of a PhD or equivalent level of professional qualification in a cybersecurity or related subject (e.g. computer science, management science, mathematics or related discipline). <p><i>Where a PhD has yet to be awarded appointment will initially be made as a research assistant and amended to research associate once the PhD is awarded.</i></p>	E	A
Knowledge and Experience		
<ul style="list-style-type: none"> Experienced in cyber security analysis and threat modelling. 	E	A&I
<ul style="list-style-type: none"> Previous experience of cybersecurity threat identification and assessment in applied settings. This may have been gained in commercial or industrial settings as well as through production of academic papers. 	E	A
<ul style="list-style-type: none"> Good knowledge of behavioural aspects of cyber security. 	D	A&I
<ul style="list-style-type: none"> Understanding of statistics or data science. 	E	A
<ul style="list-style-type: none"> Evidence of an excellent publication record, commensurate with level of experience. Candidates from outside academia may be able to evidence this by providing examples of technical writing or system design and implementation, published or distributed through channels other than academic conferences and journals, e.g., blog posts and/or software repositories. 	E	A&I
Communication		
<ul style="list-style-type: none"> Excellent written communication skills, including the ability to write for publication, present research proposals and results, and represent the research group at meetings. 	E	A&I
<ul style="list-style-type: none"> Adapts the style of communication to the audience and ensures understanding. 	E	I
<ul style="list-style-type: none"> Ability to communicate complex, specialist or conceptual information clearly and persuasively, presenting compelling arguments to influence and/or negotiate satisfactory outcomes. 	E	I
<ul style="list-style-type: none"> Ability to communicate clearly in English, in both written and spoken forms. 	E	A&I
<ul style="list-style-type: none"> Other language skills may be an asset. 	D	A

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Liaison and Networking		
<ul style="list-style-type: none"> Ability to work across the organisation and externally in order to influence developments, promote, market and build a reputation which generates benefits for the organisation as a whole. 	D	A/I
<ul style="list-style-type: none"> Networks with others with shared interests, collaborating on projects and strengthening future relations. 	D	A/I
<ul style="list-style-type: none"> Leads and develops internal networks, such as working groups or committees in order to deliver collaborative and cross functional projects or initiatives 	D	A/I
Planning and Organising		
<ul style="list-style-type: none"> Ability to organise and prioritise own work with minimal supervision 	E	A/I
Analysis and Research		
<ul style="list-style-type: none"> Ability to carry out original research and to produce published research papers. 	E	A
<ul style="list-style-type: none"> Previous experience of conducting studies of related literature and research to support the design and implementation of projects. 	E	A
<ul style="list-style-type: none"> Previous experience and ability of developing reports, ensuring conceptual relevance, comprehensiveness, and currency of information. 	E	A
<ul style="list-style-type: none"> Ability to identify, develop and apply new concepts, techniques and methods. 	D	A/I
Teamwork and Motivation		
<ul style="list-style-type: none"> Experience of working independently and in medium to large-scale teams, on collaborative and interdisciplinary research projects with academic and industrial partners. Dealing with users in the real world will be very important. 	E	A&I
<ul style="list-style-type: none"> Ability to work with others, especially postdocs, research assistants and PhD students. 	E	A/I
<ul style="list-style-type: none"> Ability to direct the work of a small research team and motivate others to produce a high standard of work. 	D	I
<ul style="list-style-type: none"> Ability to encourage research culture in others. 	D	I
Teaching and Learning		
<ul style="list-style-type: none"> Ability to deliver routine lectures or training on a regular basis where content is standard or provided by someone else. Assesses learners' progress and provides feedback during the event. 	D	A/I
Initiative and Problem Solving		
<ul style="list-style-type: none"> Creative approach to problem solving. 	D	A/I
Other requirements		
Commitment to meeting deadlines	E	A&I
The post holder may be required to travel within the UK and internationally.	D	A
Commitment to EDI principles and to the Organisation values	E	I

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Flexible attitude towards work

E

A&I

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.

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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 0203 862 3340, or email recruitment@turing.ac.uk.

CLOSING DATE FOR APPLICATIONS: 25 November 2020 at 23:59.

TERMS AND CONDITIONS

This full time post is offered on a two years contract fixed term basis. The annual salary for this role is £35,000-£41,000 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 within the salary range £32,000-£34,000 per annum.

This job description is written at a specific time and is subject to change as the demands of the Institute and the role develop. The role requires flexibility and adaptability and the post holder needs to be aware that they may be asked to perform tasks and be given responsibilities not detailed in this job description.

EQUALITY, DIVERSITY AND INCLUSION

The Alan Turing Institute is committed to creating an environment where diversity is valued and everyone is treated fairly. 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 can also 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.