

Director of Data Science and Informatics

Hours	Full time
Salary	Very competitive based on skills and experience
Duration	Available immediately with a five year start-up package funded by the UK DRI, with opportunity to extend funding based on performance.
Appointment terms	Professorial appointment in an agreed host university, subject to the university's terms and conditions of employment for academic posts.

About the UK DRI

The [UK Dementia Research Institute](#) (UK DRI) is the largest UK research initiative supporting research to fill the major knowledge gap in our basic understanding of the diseases that cause dementia.

We are a globally leading multidisciplinary research institute of 700 staff investigating the spectrum of neurodegenerative disorders causing dementia, driving a step change in our understanding of neurodegeneration and accelerating the discovery, development and delivery of interventions that will help diagnose, treat and ultimately prevent dementia.

Our laboratory-based research groups are located in UK DRI centres at [University College London](#), the [University of Cambridge](#), [Cardiff University](#), [Edinburgh University](#), [Imperial College London](#) (including our [Care Research & Technology](#) centre) and [King's College London](#).

Each of our centres has a Centre Director who, with the UK DRI Directors, forms the UK DRI's Scientific Strategy and Operational Board responsible for the overall strategic direction of the UK DRI.

Dementia is the biggest health challenge of our century – currently affecting fifty million people worldwide, projected to triple by 2050, with huge financial, emotional and social impact on people directly affected, their carers, families and the community.

Dementia is a symptom of several neurodegenerative disorders, with Alzheimer's disease accounting for about 60% of cases. To date there is no way to prevent or even slow the rate of progression of neurodegeneration.

About the role

The [UK Dementia Research Institute](#) (UK DRI) is seeking a world-renowned, visionary Director of Data Science and Informatics to develop and deliver a progressive data science and informatics strategy for our institute. The aim is to transform the UK DRI's capacity and capability in this area and exploit innovations in statistical science and artificial intelligence to accelerate research into dementia-causing disorders and drive new approaches to diagnosis, treatment, care provision and prevention. The UK DRI aims to link the massive datasets from its preclinical-phase research with clinical data, mostly generated externally, to transform these data into clinical and biologically relevant information to bring insights into molecular mechanisms and novel drug targets. You will be crucial in shaping the Institute's quinquennial review bid in the data science and informatics domain for our next cycle.

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You will set out and implement an institute-wide strategy for biomedical data science and informatics at the UK DRI and develop and run your own world-class research programme related to neurodegeneration and dementia.

You will provide visionary leadership, sitting on the UK DRI Scientific Strategy and Operational Board and working closely with our Group Leaders to develop a strategy that is aligned with the Institute's scientific mission and positions the UK DRI as an international centre of excellence for data science and informatics in neurodegenerative disease research.

Key to your success will be the recruitment of an expert team that could include informaticians, statisticians, data scientists, data architects or software engineers (the UK DRI Data Science and Informatics Team) to support the delivery of your strategy. You will define the resources required to deliver the strategy, continuously innovate and promote the development and utilisation of analytics support and data capabilities and evaluate the associated training needs of our community.

In addition to catalysing collaborations within the UK DRI, you will develop and shape strategic partnerships with academia, government, charities and industry, particularly those with established strengths in data science and informatics, to build the UK DRI's national and international profile in this area.

Your leadership of the UK DRI Informatics Steering Committee will guide the establishment of institute-wide policies and/or mechanisms on information governance, data sharing and reproducible data science, creating an environment that enables open science and reproducible research.

As a UK DRI Group Leader, you will also develop and direct your own *in silico* research programme in applying novel, cross-cutting approaches (including data science, informatics and/or computational modelling) to neurodegenerative disease research.

Benefits of joining the UK DRI

We will provide you with significant resources to fund your personal research programme and to support your institute-wide data science and informatics strategy. We also offer a professorial appointment and associated competitive salary within a current UK DRI host university that is mutually agreed to be the best fit with your research programme and serve as a base for the UK DRI Data Science and Informatics Team.

As a member of the UK DRI, you will have access to shared equipment and technology across the Institute, be eligible for internal funding programmes, have access to the UK DRI Headquarters and local university team for administrative and professional support, and be part of a community of world-leading scientists, united by our mission to advance dementia research that will transform lives.

Duties and responsibilities

Data Science and Informatics strategy

You will provide the strong and visionary strategic leadership required to expand the scientific expertise and output of the UK DRI in relation to data science and informatics, specific duties will include:

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- Working with the UK DRI's Scientific Strategy and Operational Board and Group Leaders to set the UK DRI's research direction in biomedical data science and informatics and to develop agreed strategic plans aligned to the Institute's scientific aims.
- Developing and leading UK DRI-wide strategic partnerships within the six host universities, as well as nationally and internationally with academic, governmental and industrial organisations, particularly those with established strengths in data science and informatics.
- Representing the UK DRI and developing its national and international profile on biomedical data science and informatics in neurodegeneration research.
- Developing an outstanding environment for the conduct of world-class scientific research in biomedical data science and informatics, ensuring that the principles of good research practice are observed in line with best practice as well as host universities and the requirements of those with responsibility for maintaining the integrity and confidentiality of data.
- Working with and leading the UK DRI Informatics Steering Committee to formulate institute-wide data/digital policies on information governance, data sharing and preservation.
- Working with the Informatics Steering Community to lead on the development and implementation of UK DRI data/code repositories and/or the integration of UK DRI's data into public domain databases.
- Establishing strategic technology direction for the Institute by identifying the infrastructure and methodological developments needed to open new opportunities and address previously intractable research questions. Directing the development, governance and financial sustainability of the UK DRI Data Science & Informatics team that hosts these technology capabilities (see below).
- Overseeing the effective deployment of computational resources available to the UK DRI.
- Helping to attract, develop, and retain talent in data science and informatics across UK DRI.
- Developing and sustaining appropriate structures for management, consultation, decision-making, and communication with UK DRI researchers and staff.
- Contributing to UK DRI's engagement with patients and the broader public to help raise UK DRI's profile.
- Participating in the UK DRI's strategic and quinquennial scientific review and the implementation of outcomes.
- Reporting to the UK DRI Directors on matters relating to recruitment, finances, administration, training and strategic partnerships within the Data Science and Informatics programme.

Data Science and Informatics team

You will establish a team to support your institute-wide data science and informatics programme. Specific duties will include:

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- Recruiting, managing and mentoring the team.
- Overseeing the development and governance of the team, with input from the Informatics Steering Committee.
- Shaping training initiatives on in silico research.
- Determining and managing the resource requirements to realise the UK DRI's data science and informatics programme, including the staffing structure required for making this programme a success.
- Managing the resources to ensure financial sustainability and the effective delivery of essential analytics/computing support to the whole UK DRI community.
- Creating an institute-wide collaborative culture to develop technical/data capabilities and to coordinate relevant research efforts across the institute.

Research programme

You will direct an internationally competitive research programme in applying informatics / data science / computational modelling to neurodegeneration research, specific duties are in line with those expected of all senior Group Leaders, including:

- Developing and leading a research programme to deliver a cutting-edge novel approach to neurodegeneration research. Planning the programme's scientific direction to address key questions within the overall scientific remit of the UK DRI.
- Publishing the work in peer-reviewed scientific journals and presenting the research at national and international meetings/conferences. Working with HEI's and UK DRI's Communications to ensure that achievements are widely publicised through all suitable media.
- Securing and managing external funding.
- Establishing and managing internal and external UK DRI collaborations.
- Recruiting, training, managing and mentoring research team members, including PhDs, postdocs & support staff.
- Managing the financial and equipment resources of the programme.
- Developing industry interactions and translating research output into new approaches/treatments that can be taken up by the industry, ultimately to improve human health.
- Ensuring that any intellectual property is protected according to UK DRI Ltd policy. Identifying and acting on opportunities for creating intellectual property and cooperating in patent protection and exploitation according to UK DRI policy.

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- Contributing to scientific progress in the field as a whole by, for example, membership of expert committees, editing specialist journals or refereeing funding applications.
- Presenting the research programme for peer-review, in accordance with funders' procedures.
- Reporting to the UK DRI Directors.

Personal profile

You will already be working at the level of academic distinction that the UK DRI would expect of a substantive Professor, leading an internationally competitive research programme for which you will have obtained substantial external funding.

You will have the ability to inspire and influence the wider scientific community, sharing your interdisciplinary expertise across computer science, statistics, biomedical, clinical and public health spectrum.

You will have a deep understanding of the diverse fields from bioinformatics to clinical informatics and be able to build effective partnerships with a range of stakeholders including owners/controllers of data, academia, government, charities and industry.

Selection criteria

Research leadership

- PhD or equivalent in mathematics, physics, statistics, data science, artificial intelligence, computational biology, bioinformatics, systems biology or related fields.
- Being of such senior academic standing as to have immediate credibility within the UK DRI and to represent the UK DRI across the wider national and international academic community and with external stakeholders.
- A proven track record as a leading internationally recognised researcher in biomedical data science/informatics research including a substantial record of highly cited original publications in peer-reviewed journals and recognised for research quality by national/international awarding bodies.
- A strong record of independently obtained competitive, external research grants.
- Understanding the UK DRI's mission; the capacity to develop a clear vision for its *in silico* research programme and the ability to develop, plan and implement the relevant UK DRI's strategic aims.
- The ability to develop and advance an emerging research discipline.
- Proven academic leadership and vision across a range of academic disciplines. The ability and enthusiasm to lead and support interdisciplinary research.

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- Experience of leading multi-disciplinary teams with a track record of delivery.
- Evidence of providing strategic and scientific leadership in your field of scientific expertise.
- Understanding of principles of biology and medicine.
- Understanding of information governance and infrastructure.

Personal attributes

- Excellent interpersonal, social and diplomacy skills with an ability to work co-operatively in a multidisciplinary setting.
- Resourceful and able to act on own initiative.
- Ability to communicate and deal effectively and professionally (i.e., with tact, diplomacy and sensitivity) with a wide range of people at all levels in and outside the university.
- Ability to lead people in an inspiring manner, building them into an excellent team.
- A collaborative and proactive mindset, with the ability to seek appropriate input and make critical and timely decisions.
- Dynamic and forward thinking in your approach to work, with strong problem-solving abilities.
- Meticulous and accurate in all aspects of work, with the ability to work in a fast-paced environment, to meet deadlines and handle stressful situations.
- Demonstrable organisational skills, with a methodical approach to workload and time management.
- Commitment to active and ongoing personal and professional development.

Expressions of interest

If you are interested in our Director of Data Science and Informatics opportunity, please contact Dr Adrian Ivinson, UK DRI Director (Operations), a.ivanon@ukdri.ucl.ac.uk, for an informal discussion.

To apply

To apply please send the following supporting documents to Laura Allum, UK DRI Head of HR at l.allum@ukdri.ucl.ac.uk by 30 June 2021:

- A current CV.
- A letter of interest addressed to the UK DRI Director outlining your motivation for applying to the role, your vision for a UK DRI-wide data science and informatics programme and the personal qualities that would enable you to be successful in post.

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- A five-year personal research proposal outlining the research that you would undertake in your capacity as an independent investigator (maximum five pages including any references and other material).



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