CANDIDATE BRIEF

Lecturer in Urban Data Science
School of Geography and Leeds Institute for Data Analytics (LIDA)

Salary: Grade 8 (£41,526 - £49,553 p.a.)

Reference: ENVGE1126

This post is not expected to start until after 1st October 2020

We will consider flexible working arrangements

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Are you an academic with the capability, inventiveness and initiative to collaborate with our established team in urban analytics and drive this activity to higher levels? Are you passionate about delivering an exceptional student experience in a research-intensive Russell Group University? Are you determined to attract research funding and develop high-quality publications in urban data science?

Cities are now home to the majority of the world's population and are drivers of economic growth, wealth creation, arts and culture, social interaction, and wellbeing. They also present huge inequalities in health, affluence, education, and lifestyle, with persistent challenges for management, administration, and policy. For example, alongside an existing global market of £400 billion for smart city technology, the UN estimates that $350 trillion, or five times global GDP, needs to be spent on urban infrastructure to address urgent needs.

At Leeds we have an established urban analytics group that is focused on the development and exploitation of data science and artificial intelligence approaches alongside spatial analysis, geostatistics and multi-disciplinary research methods for understanding and simulating urban areas. Our research in urban analytics has critical mass in the Centre for Spatial Analysis and Policy in the School of Geography, but draws on a wide range of collaborations across the University.

The urban analytics group is fostering innovations, for example, in individual-based modelling, data science, population forecasting, data visualisation, and data assimilation, to create more powerful representations, projections and scenario forecasts for city futures. Advanced statistical approaches are complemented by rigorous theory, for example, by building behaviourally realistic agent-based models to create robust and scalable insights into urban dynamics and behaviour.

We are supported by the infrastructure offered by the Leeds Institute for Data Analytics (LIDA). LIDA is an interdisciplinary research centre providing intellectual and physical space for researchers to come together to collaborate and grow ideas. The urban analytics group also benefits from strong links to the Alan Turing Institute and its Urban

Analytics Programme. It seeks to be relevant and engaged, working through active collaborations with policymakers and partners in the real world.

Building on this and its long-established global peak of excellence for spatial analysis and geocomputation, Leeds is taking a leading role in driving the international research agenda for urban analytics. We are now seeking to expand our capability to produce world-class learning in this area through the launch of an ambitious new MSc in Urban Data Science. As well as continuing to develop a strong research trajectory, you will be appointed to lead this course, to undertake the delivery of novel and innovative teaching, and provide the drive and ambition to deliver a world-leading programme that will push our group to new heights. Your research interests should relate to but extend existing capability within our group.

We welcome applications from energetic and ambitious candidates with an emerging reputation in urban data science, spatial modelling and other technologies and interests which are relevant to urban analytics. We are particularly interested in academics pushing new ground in the creative application of machine learning within the urban setting, and those with specific expertise in urban health, urban economics, or sustainability. The successful candidate will be appointed to the School of Geography in the Faculty of Environment, and will also be expected to pursue an agenda of strategic value to LIDA, supporting its alignment with the Urban Analytics programme at the Alan Turing Institute.

We welcome and encourage applications from all sections of the community. For this role we would particularly welcome applications from Female Academics and Academics from BAME backgrounds, as these groups are underrepresented within the Academic staff in the School of Geography. We will select the best candidate solely on the basis of merit and ability to do the job.

What does the role entail?

As a Lecturer in Urban Data Science, your main duties will include:

- Providing direction and leadership on a new MSc in Urban Data Science, working with closely colleagues in the School, LIDA, and Faculty;

- Contributing to the design and delivery of teaching in urban analytics and data science, including assessment design and quality assessment review;

- Being actively involved in research, innovation and impact at a national and international level, as well as contributing to local School, LIDA, and Faculty activity;

- Maintaining a record of high-quality publications of international standing;

- Attracting research funding individually and collaboratively to underpin high quality research activity and research programmes/projects;

- Promoting the integration of your own research area with other research interests within and, as appropriate, outside the School and Faculty;

- Providing research supervision and helping to attract students to the University;

- Actively engage with external organisations and stakeholders in order to promote the outreach and impact of our urban analytics research and teaching;

- Undertaking research-led teaching at different levels, including assessment and examinations and contributing towards module design, review and quality assurance mechanisms;

- Providing support, guidance and timely feedback to students, acting as a personal tutor, resolving issues and/or referring to specialist parties, where appropriate;

- Contributing effectively to the administrative processes and committee structures of the School/Faculty including taking on leadership roles and managing initiatives which facilitate School, Faculty or University performance or business.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the post grade.

What will you bring to the role?

As a Lecturer in Urban Data Science you will have:

- A PhD in a relevant field, for example in geography, urban planning, economics, transport and mobility, artificial intelligence, data science, machine learning, computing, mathematics, physics, etc.;

- A track record of peer-reviewed research outputs of internationally excellent quality, relating to the development and application of established and innovative methods within the area of urban data science;

- A successful record of obtaining external research funding and a clear and imaginative strategic vision for seeking further funding in the future;

- A track-record in contributing to and developing interdisciplinary collaborative research projects on themes relating to cities;

- A proven record of teaching in a University environment, with an enthusiastic approach to teaching data science or urban analytics and the ability to interact with students in ways that will enhance the student experience;

- Experience of proactive design and development of new teaching approaches and materials in the areas of data science or urban analytics, including the effective use and integration of online teaching pathways;

- Experience of working with partners and stakeholders external to academia to deliver jointly beneficial projects, and in developing research that responds to pressing real-world challenges;

You may also have:

- Experience in setting up and/or leadership of a degree programme;

- Experience of providing postgraduate student supervision;

- Completed training or a qualification in teaching and/or hold accreditation through HEA or similar body.

How to apply

You can apply for this role online; more guidance can be found on our [How to Apply](#) information page. Applications should be submitted by **23.59** (UK time) on the advertised closing date. Your application should include:

- a **supporting statement** highlighting how you meet each of the criteria for the role and how you believe your existing knowledge and experience equips you for performing the role;

- a copy of your **curriculum vitae** giving full details of qualifications and experience.

Contact information

To explore the post further or for any queries you may have, please contact:

Professor Ed Manley, Professor of Urban Analytics
Tel: +44 (0)113 343 3356
Email: E.J.Manley@Leeds.ac.uk

Additional information

Leeds Institute for Data Analytics (LIDA)

LIDA was established in 2014 to capitalise on an exceptional platform in data science. It unites two national Research Council Centres in Medical Bioinformatics (funded by MRC, with partners in the Faculty of Medicine and Health, Biological Sciences and Computing) and Consumer Data Research (funded by ESRC, with partners in the Faculty of Environment and Leeds University Business School). The University has committed £8 million of capital investment to create 40,000 square feet of purpose-built accommodation for LIDA. The Integrated Research Campus provides best-in-

class computational infrastructure for LIDA with projects supporting every faculty and more than 40 research council projects and programmes. 150+ Associates of LIDA includes postgraduates, research staff, early career researchers and senior academic staff with international reputations and influence.

LIDA has a philosophy of innovation through co-production and is a trusted research partner for numerous organisations across the public and private sectors. Current data partners and collaborators include: AQL; CallCredit Information Group; IBM Watson; Leeds City Council; Leeds Teaching Hospitals Trust; NHS Digital; Sainsbury's; TPP; YouGov; and Zoopla. Recognised as a strategic research platform at the University of Leeds, LIDA is enabled to leverage of resources of a major research-intensive University, for example by exploiting the capabilities of the unique NEXUS Innovation Centre opening in Spring 2019.

In 2018, Leeds became a partner within the Alan Turing Institute. LIDA is a central point of connection for the University of Leeds as partners in the Alan Turing Institute. Leeds currently has 24 Fellowships in the Alan Turing Institute, and collaborates with the Turing across a range of projects in Urban Analytics, Data-Centric Engineering, Public Policy, Health and Artificial Intelligence. Professor Mark Birkin is Programme Director for Urban Analytics at the Turing and a theme leader for the UKRI Strategic Priorities Fund in Data Science and Artificial Intelligence. Our portfolio brings together more than £45 million of live research projects and also includes Centres for Doctoral Training in Discovery Medicine and Data Analytics and Society, as well as rapidly growing MSc programmes in Consumer Analytics, Data Science and Health Informatics.

University of Leeds

The University of Leeds is one of the largest universities in Britain, with over 30,000 students and more than 6,000 staff, including over 2,000 academic and academic-related staff. The University has departments in all major disciplines and is committed to developing a number of research areas as world class centres of excellence. This has involved identifying a number of global challenges (Cities, Culture, Energy, Water, Food, Health and High Value Engineering) of high-quality research and providing considerable strategic investment initiatives for these areas to enable them to develop further. The Leeds Institute of Data Analytics (LIDA) and the Priestley International Centre for Climate are the two main initiatives based around established strengths

with considerable strategic investment that will provide much of the underpinning research to meet these global challenges.

Find out more about the Faculty of Environment, School of Geography, and the Leeds Institute for Data Analytics (LIDA).

Find out more about Athena Swan in the Faculty.

A diverse workforce

The Faculty of Environment has received a prestigious Athena SWAN bronze award from Advance HE, the national body that promotes equality in the higher education sector. This award represents the combined efforts of all schools in the Faculty and shows the positive actions we have taken to ensure that our policies, processes and ethos all promote an equal and inclusive environment for work and study.

Working at Leeds

Find out more about the benefits of working at the University and what it is like to live and work in the Leeds area on our Working at Leeds information page.

Candidates with disabilities

Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found on our Accessibility information page or by getting in touch with us at disclosure@leeds.ac.uk.

Criminal record information

Rehabilitation of Offenders Act 1974

A criminal record check is not required for this position. However, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending. Any offer of appointment will be accordance with our Criminal Records policy. You can find out more about required checks and declarations in our Criminal Records information page.