



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

**Research Fellow in Data Science for Sustainable Cities,
Faculty of Engineering and Physical Sciences**



Salary: Grade 7 (£35,333 – £42,155 p.a.)

Reference: EPSCP1110

Closing date: Sunday 4th December 2022

Fixed-term for 2.5 years, available from 01 January 2023

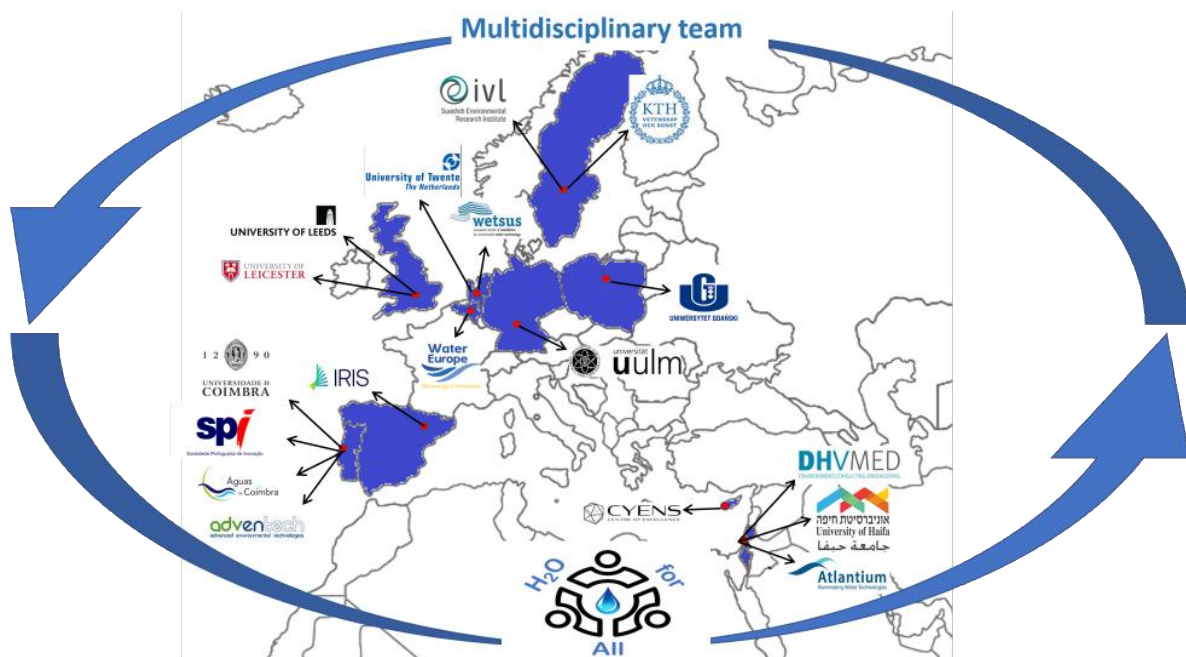
We are open to discussing flexible working arrangements

Research Fellow in Data Science for Sustainable Cities, School of Computing.

Are you eager to work as a data scientist to make cities more sustainable? Are you fascinated to work with cutting-edge data science techniques to understand and eliminate sources of water contamination that affect public health?

This is an opportunity to work for the H2OforAll EU project and be part of a creative team in the Distributed Intelligent Social Computing lab and in synergy with water@leeds. The goal of this project is to assess sources of drinking water pollutants (Disinfection ByProducts - DBPs) by developing suitable analytical techniques for monitoring such compounds, modelling their spreading through drinking water supply systems and evaluating their environmental and public health impact.

Using data-driven evidence, you will propose measures to safeguarding drinking water supply and breakthrough water treatments systems that remove or prevent the formation of water pollutants. Through your data science skills, you will create significant impact on increasing public and policy-makers' awareness by designing data-driven policy responses and guidance. An international consortium involving partners from academia, industry and various organization will support you to carry out ambitious research with real-world impact.



You will receive advice and support to develop further professional and transferrable skills with applications in other domains of data science beyond drinking water supply (e.g., transport, energy, consumption patterns, etc.).

The research project is well-resourced and designed to offer exceptional access to networking, training and career development opportunities including:

- A new laboratory space in the new [Sir William Henry Bragg Building](#) of School of Computing, links to [water@leeds](#) and [Virtuocity](#), an immersive, “human in the loop”, simulation and visualisation facility.
- An exceptional European network of partners with access to novel real-world data, funded visits and support for field test studies. You will also work in close connection with a [UKRI Future Leaders Fellowship team](#) with established collaborations in industry and cities.
- Novel training programmes at University of Leeds including opportunities for enhancing interdisciplinary research via the [Crucible programme](#) or pathways to commercialization and business engagement via the [Michael Beverley Innovation Fellowship](#).

The post will be jointly supervised by [Dr. Evangelos Pournaras](#) (School of Computing) and [Dr. Miller Alonso Camargo-Valero](#) (School of Civil Engineering).

What does the role entail?

As a Research Fellow, your main duties will include:

- Generating and pursuing independent and original research ideas within the project scope and beyond;
- Developing new research objectives and shaping the research programme both in short and long term, including preparing proposals for funding in collaboration with colleagues;
- Discovering existing data sources as well as designing data collection processes including the preparations ethical approval applications;
- Writing software code, documentation, performing experiments, collecting, analysing and managing data;
- Preparing papers for publication in leading international journals and conferences proceedings;
- Preparing project reports and deliverables;



- Working both independently and also as part of a larger interdisciplinary team of researchers, engaging in training and knowledge-transfer activities where appropriate and feasible;
- Dissemination and exploitation of research results within and beyond the network of partners;
- Participation and contribution to local, online and remote project meetings, including the organization and preparations of workshops;
- Assisting in the supervision of MSc and PhD students in areas relevant to the project;
- Maintaining your own continuing professional development and acting as a mentor to less experienced colleagues as appropriate.

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 grade of the post.

What will you bring to the role?

As a Research Fellow, you will have:

- A PhD (or have submitted your thesis before taking up the role) in the broader area of data science or a closely allied discipline e.g. statistics, agent-based modelling, AI, sustainability, computational social science, etc.;
- Advanced knowledge of statistics (beyond descriptive statistics), such as causal inference, hypotheses testing, regression analyses, parametric and non-parametric statistical tests, etc.;
- Programming skills and practical experience in statistics, data science, machine learning and/or agent-based simulation - e.g. Python, R, or Java, database systems, collecting, cleaning, processing, retrieving and visualizing data, etc.;
- Evident scientific writing skills and proven track record of peer-reviewed publications in high-quality journals and conferences;
- Excellent communication skills (written, verbal and presentational) and the ability to run effective collaborations with multiple stakeholders e.g. participation in projects including partners from academia, industry or government;



- Demonstrate research ambition, drive for research impact, public engagement, commitment to research quality and independence and resilience to tackle research challenges;
- A proven ability to work well both individually and in a team;
- Good time management and planning skills, with the ability to meet tight deadlines and work effectively under pressure.

You may also have:

- Experience in working as part of EU projects or other national project consortia;
- Experience with lab/online human experimentation, including recruitment, experimental design, ethical approval applications as well as interest on equity, diversity and inclusion aspects in digital society, e.g. AI ethics and trust, autonomy, fairness, gender/age balance, digital divide, etc.;
- Knowledge, experience or interest in any of the following areas: water quality/management, experimental social science, sustainability, sustainable consumption, environment, Smart Cities.

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](#).

Contact information

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

[Dr Evangelos Pournaras](#), Associate Professor

Tel: +44 (0)113 343 5447

Email: E.Pournaras@leeds.ac.uk

Additional information

Faculty and School Information

Further information is available on the research and teaching activities of the [Faculty of Engineering](#) and the [School of Computing](#).



A diverse workforce

As an international research-intensive university, we welcome students and staff from all walks of life and from across the world. We foster an inclusive environment where all can flourish and prosper, and we are proud of our strong commitment to student education. Within the Faculty of Engineering and Physical Sciences we are dedicated to diversifying our community and we welcome the unique contributions that individuals can bring, and particularly encourage applications from, but not limited to Black, Asian and ethnically diverse people; people who identify as LGBT+; and people with disabilities. Candidates will always be selected based on merit and ability.

The Faculty of Engineering and Physical Sciences are proud to have been awarded the Athena SWAN [Silver](#) Award from the Equality Challenge Unit, the national body that promotes equality in the higher education sector. Our [equality and inclusion webpage](#) provides more information.

Working at Leeds

We are a campus based community and regular interaction with campus is an expectation of all roles in line with academic and service needs and the requirements of the role. We are also open to discussing flexible working arrangements. To find out more about the benefits of working at the University and what it is like to live and work in the Leeds area visit our [Working at Leeds](#) information page.

Information for disabled candidates

Information for disabled candidates, impairments or health conditions, including requesting alternative formats, can be found on our [Accessibility](#) information page or by getting in touch with us at hr@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 in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our [Criminal Records](#) information page.

