



Job Reference Number: UOS035734

Job Title: Research Associate in Leakage Modelling

Contract Type: Fixed term with an end date of 1.5.2025

Working Pattern: Full-time

Faculty: Faculty of Engineering

Department: Department of Civil and Structural Engineering

Salary: Grade 7
£35,333 to £43,414 per annum (pro-rata), with potential to progress to £47,423

Closing Date: 23rd January 2023

Summary:

Are you interested in working for a world top 100 University? Do you want to make a quantifiable difference to the UK water sector? We are looking for an exceptional researcher to use their skills to help the UK with the challenge of reducing leakage from our vital water networks.

We have an exciting opening in the Department of Civil and Structural Engineering for someone with a background in Engineering, Physics or Mathematics to develop and deliver models to help identify and locate background leakage in drinking water distribution systems.

You will apply the latest advanced analytical techniques including data driven one dimensional network modelling, optimisation and hydraulic transient analysis to a unique data set being collected from multiple UK water systems. You will be responsible for collating, cleansing, and interrogating multiple sources of data from extensive field surveys by the project partners, and using this to develop advanced analytics to understand, quantify and locate leakage.

A major component of the research will be in developing and applying advanced one-dimensional hydraulic modelling approaches and demonstrating these. It will also involve more data driven analysis, such as interpreting high frequency pressure data using transient analysis techniques. The aim of this research is to enhance understanding about background leakage; develop and prove approaches to assist water companies in proactively identifying problems, improving performance, and safeguarding water supplies.

Educated to PhD level in Engineering (or other relevant field or equivalent experience), you will possess a good solid understanding of UK water company data systems, in particular related to water distribution networks and leakage. You should also have excellent hydraulic network modelling, machine learning and coding skills. If you are passionate about reducing leakage, then we would love to hear from you.

We're one of the best not-for-profit organisations to work for in the UK. The University's Total Reward Package includes a competitive salary, a generous Pension Scheme and annual leave entitlement, as well as access to a range of learning and development courses to support your personal and professional development.

We build teams of people from different heritages and lifestyles from across the world, whose talent and contributions complement each other to greatest effect. We believe diversity in all its forms delivers greater impact through research,

teaching and student experience.

To find out what makes the University of Sheffield a remarkable place to work, watch this short film:
www.youtube.com/watch?v=7LbILk18zmo, and follow @sheffielduni and @ShefUniJobs on Twitter for more information.

By applying you are agreeing that we can share your information with Welsh Water

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