JOB DESCRIPTION

Vacancy reference:	SRF33405
Post Title:	Postdoctoral Research Associate in Urban air quality sensing and exposure assessment for smart cities
Grade:	Grade 7
School/Department:	School of the Built Environment
Reports to:	Dr Zhiwen(Vincent) Luo
Responsible for:	

Purpose

We are seeking to appoint an outstanding Postdoctoral researcher with expertise in urban air quality sensing and exposure assessment for smart cities to join our recently funded ADEPT Thames Valley Live Lab project. The Thames Valley Live Lab – which brings together the private sector, University of Reading, engineering consultancy Stantec and six local authorities – will help local authorities to implement their required moves towards net-zero carbon dioxide (CO2) emissions.

The project partnership was awarded £4.5 million in 2019 as part of the ADEPT (Association of Directors of Environment, Economy, Planning & Transport) SMART Places Live Labs Programme, a two-year £22.9 million project funded by the Department for Transport and supported by project partners SNC-Lavalin's Atkins business, EY, Kier, O2, Ringway, and WSP. Local authorities are working on eight projects across England to introduce digital innovation across SMART mobility, transport, highways maintenance, data, energy and communications. Live Labs is part of ADEPT's SMART Places programme to support the use of digital technology in place-based services.

The key task for the project is to evaluate the impact of smart traffic management and other interventions on the urban air quality, the resultant population exposure and health outcome. The post will be based in the School of the Built Environment.

Main duties and responsibilities

- Collect and analyse current air quality data from various local authorities and partners;
- Contribute to the urban air quality measurement campaign for the project;
- Conduct the research on urban air pollution data analysis, interventions, and population exposure modelling and health outcome assessment;
- Organize stakeholder workshops to engage local partners (for example, community 'futures' workshops to assess attitudes and perspectives of end users to air quality, transport and energy deliverables)
- Contribute to ongoing cross-cutting evaluation of other workstreams such as transport and health.
- Effectively communicate and collaborate with project partners to facilitate cross disciplinary research with the interdisciplinary partners and local authorities.

- Prepare papers and reports to achieve milestones and deliverables (journal articles, conference presentations, materials for workshops etc), often with tight deadlines in collaboration with project partners

Supervision received

The post reports to Dr Zhiwen (Vincent) Luo and Prof Tim Dixon from School of the Built Environment at the University of Reading, who will oversee the overall research. The post-holder will also benefit from working with experts in different disciplines and project partners within the research team.

Supervision given

Opportunities for supervision of postgraduate students and for teaching within the department will be provided to support the post-holders staff development.

Contact

In addition to the day to day contact with team members, academic and departmental staff, the post holder will liaise with a wide range of University departments (Finance, HR etc) and external bodies within the scope of this role.

Terms and conditions

Full time and fixed term of 12 months

This document outlines the duties required for the time being of the post to indicate the level of responsibility. It is not a comprehensive or exhaustive list and the line manager may vary duties from time to time which do not change the general character of the job or the level of responsibility entailed.

Date assessed:

PERSON SPECIFICATION

Job Title	School/Department
PDRA	**Built Environment**

Criteria	Essential	Desirable
Skills Required	• Excellent urban air quality sensing skill e.g. air quality sensors, field measurement etc • Excellent data analytical skills • Excellent skills in exposure modelling and assessment • Good oral presentation skills • Excellent written English	• Programming in R, MATLAB, Python, and/or Fortran • Urban air quality modeling skills • Familiar with GIS software
Attainment	• PhD in a relevant discipline (physical geography, engineering, physics, exposure science etc) • Atmospheric and/or Environmental/exposure science (or engineering)	
Knowledge	• Advanced knowledge on urban air quality • Advanced knowledge on exposure science	
Relevant Experience	• Data processing of observational or modelled data sets • Experience with working other disciplines effectively • Preparation/publication of peer reviewed journal papers • Conference presentations • Preparation of literature reviews • Active involvement in research meetings and workshops	• Experience with managing projects
Disposition	• Work well with others and independently • Excellent problem solver • Ability to communicate and work with project participants and stakeholders • Work well to deadlines	
Completed by: Dr Zhiwen Luo		Date: 22/08/2020