

Research Role Profile

Job Title:	Post-Doctoral Research Fellow
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Responsible to:	Head of research group, or principal investigator
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Responsible for:	Not applicable
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Job Summary and Purpose

To deliver research in accordance with the specified research project.

Main Responsibilities/Activities

To contribute to the development of the research of the Faculty, by planning and carrying out research activity within a specified area, often in collaboration with colleagues.

To take a significant role in planning, co-ordinating and implementing research programmes and, where appropriate, commercial and consultancy activities. To take lead responsibility for a small research project or identified parts of a large project. This may include planning fieldwork, data analysis and evaluation and laboratory experimentation. To make decisions about research programmes and methodologies, often in collaboration with colleagues, and to resolve the problems of meeting research objectives and deadlines. To develop new concepts and ideas to extend intellectual understanding. Assess, interpret and evaluate the outcomes of research, and develop ideas for the application of research outcomes. To take a role in the regular publication of results in appropriate journals, in giving presentations at national and/or international conferences, and in other outputs as required and/or appropriate.

Continually to update knowledge and develop skills. To extend, transform and apply knowledge acquired from scholarship to research and appropriate external activities.

To carry out management and administrative tasks associated with specified research funding, including managing and developing staff within their projects; risk assessment of project activities; organisation of project meetings and documentation; management of resources, preparation of annual reports, and management or monitoring of research budgets. To oversee and implement procedures required to ensure accurate and timely formal reporting and financial control.

To undertake liaison with external organisations including equipment manufacturers, steering committees, associated academic facilities and commercial users.

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Person Specification

The post holder must have:

Normally a doctoral degree in a relevant discipline, together with appropriate experience of working in a similar area of work.

The post holder will need to demonstrate a high level of competence and independent standing in research by being nationally recognised within their area of discipline, publishing regularly in recognised appropriate journals and attracting research funding for their own work or for other staff within the research group.

Relationships and Contacts

The post holder may have a key responsibility to the principal investigator, with prime responsibility for reporting and liaison with external funding bodies or sponsors. The post holder will also supervise the activities of PhD students and technician staff within the particular research group

Special Requirements

To be available to participate in fieldwork as required by the specified research project.

All staff are expected to:

- Positively support equality of opportunity and equity of treatment to colleagues and students in accordance with the University of Surrey Equal Opportunities policy.
- Help maintain a safe working environment by:
 - Attending training in Health and Safety requirements as necessary, both on appointment and as changes in duties and techniques demand
 - Following local codes of safe working practices and the University of Surrey Health and Safety Policy
- Undertake such other duties within the scope of the post as may be requested by your Manager.

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Addendum to Role Profile

Job Title:

Research Fellow (1A)

Job Summary and Purpose:

Applications are invited for a Post-Doctoral Research Fellow in the area of Energy Geotechnics. The successful applicant will work on the EPSRC funded project "Investigation of thermo-mechanical performance of Geothermal Energy Pile". The project is multi-disciplinary and requires understanding of geotechnical engineering, structural & material engineering, and environmental engineering. It is closely aligned with Surrey's research themes: Urban Living and Sustainability.

Main Responsibilities/Activities

The Post-Doctoral Research Fellow will be hosted at the Department of Civil and Environmental Engineering, University of Surrey. The successful candidate will work under the supervision of Dr Rao Martand Singh, and will be responsible for both experimental and numerical modelling parts of this project. Specific tasks include: 1) Experimental investigation of a laboratory scale geothermal energy pile embedded in unsaturated soils under different thermo-mechanical loading; 2) Developing a finite element method based thermo-hydro-mechanical (THM) model and simulating the experimental results. The project is supported by various industry partners and the University of Birmingham which will require liaising with them to discuss work programme and project outputs. The candidate will be expected to organise/attend meetings and present results to project partners which will require some travel.

Person Specification

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The post holder must have:

The candidate must have a PhD (or equivalent qualification) in Geotechnical or Geoenvironmental Engineering with a good publication record evident by papers published on geothermal energy piles in highly ranked journals. The candidate must demonstrate the deep understanding of geothermal energy piles and unsaturated soil mechanics. The candidate will have research experience in both experimental and numerical techniques of THM concept, and soil-structure interaction. Experience with the understanding of material (concrete) engineering is highly desirable. Strong communication/interpersonal skills, project management and an ability to work independently are essential.

Relationships and Contacts

Direct responsibility to the principal investigator (Dr Rao Martand Singh) and will become a member of Civil & Environmental Engineering Department.

Ensure that all research activities undertaken are in compliance with the 'Research Code of Conduct' operated by the University of Surrey.

Ensure compliance with health and safety requirements in all aspects of work.