

Research Role Profile

Job Title:	Research Fellow (1A)
-------------------	----------------------

Responsible to:	Head of research group, or principal investigator
------------------------	---

Responsible for:	Not applicable
-------------------------	----------------

Job Summary and Purpose:
To undertake research in accordance with the specified research project(s) under the supervision of the principal investigator.

Main Responsibilities/Activities
<p>To undertake a range of research activities within a specified research area, assuming responsibility for specific areas of projects and making use of new research techniques and methods, in consultation with the research award holder or supervisor. This may include fieldwork, interviews, laboratory experimentation, critical evaluation and interpretation, computer-based data analysis and evaluation or library research.</p> <p>Using initiative and creativity to identify areas for research develop new research methods and extend the research portfolio. Analysing and interpreting results of own research. Write up results and prepare papers for submission to appropriate journals and conferences, and other outputs as required and/or appropriate. Attend appropriate conferences for the purpose of disseminating research results of personal development. The post holder may also contribute to writing bids for research grants and will contribute to collaborative decision making with colleagues in areas of research.</p> <p>Continually to update knowledge and develop skills, and translate knowledge of advances in the area into research activity.</p> <p>To plan and manage own research activity in collaboration with others. To carry out administrative tasks associated with specified research funding, for example risk assessment of research activities, organisation of project meetings and documentation. Implementation of procedures required to ensure accurate and timely formal reporting and financial control.</p> <p>To contribute to teaching in the Faculty by carrying out student supervision and/or demonstrating within the post holder's area of expertise and under the direct guidance of a member of departmental academic staff, as appropriate.</p> <p>The post holder may occasionally be required to supervise more junior research staff.</p>

Research Role Profile

Person Specification

The post holder must have:

A doctoral degree in a relevant discipline (although individuals who have almost completed a doctoral degree may be appointed). Consideration may also be given to individuals who do not hold a doctoral degree but have required skills based on a number of years experience in specified / relevant fields

The post holder will have authority over some aspects of project work and must be capable of providing academic judgement, offering original and creative thoughts and be able to interpret and analyse results.

Relationships and Contacts

Direct responsibility to the principal investigator or academic supervisor. The post holder may be asked to serve on a relevant Faculty committee. There may be additional reporting and liaison responsibilities to external funding bodies or sponsors. The post holder may work on original research tasks with colleagues in other institutions.

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.

Research Role Profile

Addendum to Role Profile

Job Title:

Research Fellow (1A)

Job Summary and Purpose:

This information sheet should be read in conjunction with the accompanying generic Research RA1A Role Profile and will be used for shortlisting processes. More specifically the post holder will be expected to:

Carry out research in the area of dry powder coating, primarily by computational means, with supporting experimental work. The research will include analysis of the influence of a wide range of material properties and process parameters on the coating performance, in order to develop a regime map for dry powder coating.

This role has arisen from the award of EPSRC grant EP/V003070/1: "Precise deposition of complex particles for structured functional products", which is in collaboration with Imperial College London and two industrial partners.

Main Responsibilities/Activities

The candidate will

- Modify an existing DEM contact model to allow surface energy heterogeneity to be incorporated
- Setup, run and analyse DEM simulations of powder coating:
 - Under simple dispersion and spreading conditions
 - Within a bulk mixer
- Carry out experimental measurements of material properties and coating behaviour for DEM validation
- Be fully engaged with the consortium activities, including close collaboration with the research fellow and principal investigator at nearby Imperial College London, and collaboration with industry partners
- Disseminate the findings of the research through publications, conferences (inside and outside the UK) and outreach activities
- Assist in supervision of students within the research group (postgraduate, undergraduate and visitors)

Research Role Profile

Person Specification

The post holder must have:

Essential:

- A PhD in Chemical Engineering or related discipline
- Significant DEM experience, including manipulation of code and analysis of cohesive systems
- Significant experimental experience in particle technology, including particle size and shape analysis and measurement of powder flowability
- Experience of measuring mixing/segregation performance of dry powder mixtures

Desirable:

- Experience of delivering oral presentations at national and international conferences
- Experience of collaboration with industry partners

Relationships and Contacts

The post holder will be directly line managed by Dr Colin Hare (Principal Investigator) and will be expected to work with direct team members, consortium members and industrial partners.