	Last Updated: / /		
Job Title	Mathematics Innovation Research Associate (InRA)		
Faculty/ Department	FEPS/ School of Mathematics and Physics	**Legal Entity**	University of Surrey
Job Family	Technical and Experimental	**Job Level**	LO4
Reports To	Head of Research Group/ REF Impact Lead	**Line Manages (role title(s))**	N/A

Job Statement

The post holder will take a significant role in planning, coordinating and implementing research programmes which use mathematics to generate cross-disciplinary and real world knowledge exchange and impact. This may also include, where appropriate, commercial and consultancy activities. They will take lead responsibility for a small research project(s) or identified parts of a larger project(s).

Key Responsibilities This is not designed to be a list of all tasks undertaken but the main responsibilities (5 to 8 maximum)

1. To contribute to the development of the research of the University, by planning and carrying out research activity within a specified area, often in collaboration with colleagues.
2. 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.
3. 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.
4. To develop innovative research proposals (as a self-contained item or as part of a broader programme), identifying sources of funding, submitting funding bids, and gaining positive reviews for these. Promoting own area of research.
5. Pursue and advocate responsible and open research and innovation to ensure ethical, fair and inclusive advances in science, technology and use of data.
6. Continually to update knowledge and develop skills. To extend, transform and apply knowledge acquired from scholarship to research and appropriate external activities.

N.B. The above list is not exhaustive.

Role Scope and Impact This is a summary of the post holder's role in delivering outcomes, making decisions, and the complexity of problem-solving involved in the role.

1. Accountability: The post holder will follow established guidance with freedom to make decisions within defined boundaries. Decisions outside these parameters can be discussed with their line manager or project supervisor for approval.

2. Problem Solving: The post holder is expected to use their mathematical knowledge to solve research related problems in collaboration with other colleagues.

Supplementary Information

- The post holder has no budgetary responsibility,
- The post holder will interact with a large number of academic staff and industrial partners.

Person Specification This section describes the knowledge, experience & competence required by the post holder that is necessary for standard acceptable performance in carrying out this role.		
Qualifications and Professional Memberships		
A higher research degree (PhD) in a relevant subject.		E
Technical Competencies (Experience and Knowledge) This section contains the level of competency required to carry out the role (please refer to the Competency Framework for clarification where needed and the Job Matching Guidance). Level 1: basic level of understanding/experience and can apply it with guidance. Level 2: good level of understanding/experience and can apply it with little or no guidance. Level 3: expert level of understanding/experience and can apply, develop it and guide others.	**Essential/ Desirable**	**Level 1-3**
Experience of mathematical modelling	E	2
Significant research and analytical skills including programming	E	2
Excellent written and verbal communication skills with the ability to write project deliverables and give presentations on the completed work	E	2
Experience of writing research grants and applying for other research funding.	D	1
Proven ability to work effectively as part of a multidisciplinary research team.	E	2
Special Requirements This may include a Disclosure and Barring Service (DBS) check, regular overseas travel, driving licence, shift work.		**Essential/ Desirable**
Core Competencies This section contains the level of competency required to carry out this role. (Please refer to the competency framework for clarification where needed). n/a (not applicable) should be placed, where the competency is not a requirement of the grade.		**Level 1-3**
Communication		3
Adaptability and Flexibility		3
Customer, Client service and support		2
Planning and Organising		2
Continuous Improvement		3
Problem Solving and Decision Making Skills		3
Managing and Developing Performance		1
Creative and Analytical Thinking		3
Influencing, Persuasion and Negotiation Skills		2
Strategic Thinking and Leadership		2
This Job Purpose outlines the core activities of the role. As the Department/Faculty and the post holder evolve, the duties and focus of the role may change. The University expects the post holder to adopt a flexible approach to work, including undertaking relevant training when necessary. If significant changes to the Job Purpose are required, the post holder will be consulted, and the changes will be reflected in a revised Job Purpose.		

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.
- Work to achieve the aims of our Environmental Policy and promote awareness to colleagues and students.
- Follow University/departmental policies and working practices in ensuring that no breaches of information security result from their actions.
- Contribute towards broader university initiatives that have a positive impact on student experience, recruitment and campus operations. This may include participation in cross-functional activities such as open days, confirmation and clearing, welcome week, graduation.
- Ensure they are aware of and abide by all relevant University Regulations and Policies relevant to the role.
- Undertake such other duties within the scope of the post as may be requested by your Manager.
- Work supportively with colleagues, operating in a collegiate manner at all times.

Help maintain a safe working environment by:

- All staff have a statutory responsibility to take reasonable care of themselves and others and to prevent harm by their acts or omissions. All staff are, therefore, required to adhere to the University's Our Safety Policy Statement and associated Procedures.

Organisational/Departmental Information & Key Relationships

Background Information

This post is part of a new exciting initiative of Innovation Research Associates (InRA) in Mathematics, which is part of the School of Mathematics and Physics at the university of Surrey. This scheme is partially funded by the **Mathematical Innovators in the Digital Space** scheme and aims to develop Research Associates which harness the potential of the Mathematical Sciences by dynamically translating mathematical research into tangible societal and industrial impacts. InRAs collaborate on solving complex challenges from outside the Mathematical Sciences, enhancing research outcomes through cross-disciplinary work. Their contributions not only support academic advancement but also foster innovation within industry and government, directly contributing to economic growth.

School of Mathematics and Physics at University of Surrey

The Mathematics unit, part of the School of Mathematics and Physics at the University of Surrey, is an international centre of excellence in **Dynamics, Partial Differential Equations and Geometry,** consisting of 20 researchers. In the 2021 Research Excellence Framework Exercise 100% of the research submitted for mathematics was judged as Internationally Excellent. The unit has many existing collaboration areas which have the potential to generate tangible industrial and societal impacts such as through the Surrey Sleep Research Centre, the Centre for Criminology, through our work with the Oxford Health Biomedical Research Centre as well as through industrial research projects with F. Hoffmann-La Roche Ltd, Transport for London, GSK and AURA Veterinary.

Department Structure Chart