

Job Description

Job title	Research Fellow
Department	Mathematics
Grade	FA6

Job purpose (a brief summary of the role)	Undertake mathematical and statistical model development into the spread and control of a number of pests / pathogens of wild and agricultural plants. Much of the focus will be on the spatial spread of infestations and the potential mechanisms of control. The work will be a mixture of model development, efficient coding and fitting models to the available data. The successful candidate will also be expected to liaise with project partners from multiple European institutions and assist the project leaders in the delivery of objectives and milestones. The research will help support the work of SBIDER, the Mathematics Institute and the School of Life Sciences to develop and enhance its reputation, both internally and externally.
Duties and responsibilities	RESEARCH - Assist the project leaders in the delivery of objectives and milestones connected to the project – primarily the development of computational models to quantify the impact of different control mechanisms. - To liaise with European project partners to ensure that the models match the known biology and are able to integrate within the platform. - Help establish a sound research base within the departments in order to assist the development of research objectives and proposals for own or joint research. - Conduct individual and collaborative research projects. - To publish research outcomes in appropriate journals of international standing and to publish and disseminate the result of research to other reputable outlets. - Translate knowledge of advances in the fields of mathematical modelling and epidemiology into research activity. - Communicate complex information (orally and in writing) and material of a specialist or highly technical nature. - Continually update own knowledge and understanding in mathematical modelling, parameter inference, veterinary epidemiology or other fields relevant to the project. - May contribute to preparing proposals and applications to external bodies, e.g. for funding and contractual purposes, to support a developing research agenda. - May present information on research progress and outcomes to bodies supervising research, e.g. steering groups. - May contribute to the preparation of papers for steering groups and other bodies. TEACHING AND LEARNING SUPPORT - Could be expected to make small contributions to the teaching and learning programmes in the department. - Assist in the supervision of student projects and the development of student research skills. - May be involved in the assessment of student knowledge and supervision of projects.

	ADMINISTRATION AND OTHER ACTIVITIES • May be required to attend departmental meetings and to participate (where necessary) in other committees and working groups within the department, the faculty and the University. • Ensure compliance with health and safety in all aspects of work. • Work within budget constraints. The duties and responsibilities outlined are not intended to be an exhaustive list but provide guidance on the main aspects of the job. You will be required to be flexible in your duties.
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Person Specification <i>The Person Specification focuses on the essential and desirable knowledge, skills, experience and qualifications required to undertake the role effectively. This is measured by (a) Application Form, (b) Test/Exercise, (c) Interview, (d) Presentation.</i>		
Essential Criterion No.	Essential Criterion Description	Measured by
E1	Good honours degree and possession of a PhD, or equivalent, in a strong quantitative field (ideally epidemiological modelling).	A & C
E2	Proficiency in model development, programming and statistical analysis (ideally fitting models to data).	A,C & D
E3	A developing research profile with the ability to publish and/or produce high-quality research output.	A,C & D
E4	Breadth or depth of specialist knowledge/expertise in all areas of quantitative modelling and model development to work within established research programmes.	A,C & D
E5	Effective communication skills (oral and written), including the ability to articulate and present research results to both specialist and general audiences.	A,C & D
E6	Ability to work independently and/or as part of a team on research programmes.	A,C & D
E7	Evidence of research ability/experience and quality research output in mathematical modelling or quantitative epidemiology, including experience gained during PhD studies and post PhD qualification (where appropriate).	A,B,C & D

Desirable Criterion No.	Desirable Criterion Description	Measured by
D1	Expertise in model development, especially an understanding of epidemiological modelling and matching models to data.	A,C & D
D2	Evidence of publications submitted to relevant journals, demonstrating both quantitative skills and policy-oriented insights.	A & C
D3	Interest in public health or veterinary epidemiology, and the broader implications of infection and control.	A, C & D
D4	Evidence of external research engagement—such as outreach, panel participation, or project management beyond PhD studies—together with the ability or potential to contribute to developing funding proposals for externally supported research.	A,C & D
D5	Evidence of input into research culture activities, University or other relevant committee memberships etc.	A & C