



1 Advertisement

Post Title: Research Fellow in infectious diseases modelling

School/department: School of Life Sciences

Hours: full time considered up to a maximum of 100% FTE . Requests for flexible working options will be considered (subject to business need).

Contract: fixed term for 24 months

Reference: 6512

Salary: starting at £34,304 to £40,927 per annum, pro rata if part time

Placed on: 10 August 2021

Closing date: 20 September 2021 Applications must be received by midnight of the closing date.

Expected Interview date: Early October

Expected start date: November or shortly afterward

We wish to appoint a Research Fellow in the field of infectious diseases modelling. Recent years have shown the importance of better understanding the dynamic of transmission of zoonotic and emerging infectious diseases, e.g. SARS-CoV-2, Ebola virus, zika virus.

The 2-year Post-doctoral Research Fellow position is available in the laboratory of Pierre Nouvellet at University of Sussex (<https://profiles.sussex.ac.uk/p191234-pierre-nouvellet/>). The research group focuses on developing statistical methods to better understand the dynamics of diseases' transmission and mitigate their public health risk.

The post-holder will contribute to the development of new models to understand the dynamic of transmission of coronaviruses (CoVs) between bats and pigs, and its relevance for human health. Bats show frequent infections by a wide diversity of CoVs. They have been suggested as a source for most recent CoVs' epidemics in animals (e.g. the Porcine Epidemic Diarrhoea virus, the Swine Acute Diarrhoea Syndrome Coronavirus), and human (e.g. Severe Acute Respiratory Syndrome and SARS-COV-2, the agent of COVID-19).

The post-holder is expected to work closely with collaborators in Italy and the Netherlands to integrate the virological, epidemiological and ecological information gathered by the project. The project, funded by the BBSRC and the European Commission, is a collaboration between the Istituto Zooprofilattico Sperimentale delle Venezie in Padua (<https://www.izsvenezie.com/>), the Erasmus Medical Centre in Rotterdam (<https://www.erasmusmc.nl/en/research/departments/viroscience>) and the University of Sussex.

Please contact Pierre Nouvellet pierre.nouvellet@sussex.ac.uk for informal enquiries.

The University is committed to equality and valuing diversity, and applications are particularly welcomed from women and black and minority ethnic candidates, who are under-represented in academic posts in Science, Technology, Engineering, Medicine and Mathematics (STEMM) at Sussex.

“Please note that this position may be subject to ATAS clearance if you require visa

sponsorship.”

For full details and how to apply see our vacancies page

The University of Sussex values the diversity of its staff and students and we welcome applicants from all backgrounds.

2. The School / Division

Please find further information regarding the school/division at

<http://www.sussex.ac.uk/lifesci/>

3. Job Description

Job Description for the post of: Research Fellow in infectious diseases modelling

Section/Unit/School: School of Life sciences

Location: John Maynard Smith (JMS) Building, University of Sussex, Falmer, Brighton

Grade: Research Fellow I, Grade 7

Responsible to: Principal Investigator through to Head of School

Key contacts: Members of research group, members of faculty within the School and University.

Role description: Research Fellow I is an early career-grade research position. Post-holders will be expected to contribute to the work of the research team, and also to develop their research skills with support from more experienced members of staff

PRINCIPAL ACCOUNTABILITIES

- To engage in individual and/or collaborative research activity resulting in high-quality publications; and to develop research funding and knowledge exchange income individually or in collaboration with others, as appropriate, depending on the size and scope of the bid.
- To contribute to School teaching activities.

KEY RESPONSIBILITIES

Research, Scholarship & Enterprise

- Develop research objectives and proposals for own or joint research, at acceptable levels, with assistance if required.
- Conduct research projects individually and in collaboration with others.
- Analyse and interpret research findings and draw conclusions on the outcomes.
- Produce high-quality research outputs for publication in monographs or recognised high-quality journals, or performance/exhibition, as appropriate, and contribute to the School's REF submission at acceptable levels of volume and academic excellence.
- Contribute to the preparation of proposals and applications to external bodies, for example for funding purposes.
- Individually or with colleagues, explore opportunities for enterprise activity, knowledge exchange income and/or consultancy, where permissible.
- Build internal contacts and participate in internal networks and relevant external networks in order to form relationships and collaborations.
- Continually update knowledge and understanding in field or specialism, and engage in continuous professional development.

Teaching & Student Support

- Undertake teaching duties, if required.
- Assist in the assessment of student knowledge and supervision of student projects if required.
- Assist in the development of student research skills, for example as part of a postgraduate supervision team.

Contribution to School & University

- Attend and contribute to relevant School and project meetings.
- Undertake additional duties, as required by the Principal Investigator and/or Head of

School.

Role-specific duties

- Develop new statistical methods to infer the transmission dynamics of CoVs within and between bats and pigs.
- Investigate the relevance of this dynamic for human population.
- Test and validate the framework using actual surveillance data.
- Contribute to writing report to scientific journals and public health agencies, to inform improvement in preparedness, surveillance and control.
- Maintain effective communication with other partners involved.
- If require, contribute to capacity building activities in partners institutions.

This Job Description sets out current duties of the post that may vary from time to time without changing the general character of the post or level of responsibility entailed.

INDICATIVE PERFORMANCE CRITERIA

- A PhD or equivalent scholarly or relevant professional activity
- Pursuing a line of independent research within a research group.
- Publishing research (either from a recently completed PhD or new original research).
- Other forms of externally recognised professional practice of creative output of a standing equivalent to regular publication of original research.
- Initiating, developing or participating in links between the University and external bodies such as business and industry, the professions, community organisations and policy-makers.
- Evidence of successful engagement in teaching or supervision.

4. Person Specification

ESSENTIAL CRITERIA

- Normally educated to doctoral level, or other equivalent qualification, or appropriate level of experience, as appropriate to the discipline (see role-specific criteria below).
- Evidence of engagement in high-quality research activity.
- Excellent presentation skills, with the ability to communicate effectively, both orally and in writing, with students, colleagues and external audiences.
- Ability to work individually on own initiative and without close supervision, and as part of a team.
- Ability to exercise a degree of innovation and creative problem-solving.
- Excellent organisational and administrative skills.
- Ability to prioritise and meet deadlines.
- Excellent IT skills.

ESSENTIAL ROLE-SPECIFIC CRITERIA

- PhD in one of the following areas: statistics, infectious disease epidemiology, population biology, bioinformatics, physics, or computer sciences.
- Working knowledge of either statistics or infectious disease modelling.
- Programming in R software or other programming languages.
- An interest in infectious disease epidemiology and control.
- Knowledge of Bayesian inference and/or spatial statistics

DESIRABLE CRITERIA

- Emerging track record of high-quality publications in reputable journals and other appropriate media of similar standing.

- Experience of generating research or knowledge exchange income.
- Epidemiological knowledge, in particular surrounding zoonotic diseases.
- Broad interest in epidemiology, including working at the interface between virology, ecology, veterinary and public health sciences .
- Practical knowledge of R and/or C++ (efficient code writing, using Rcpp).