

Research Role Profile

Job Title:	Research Fellow A
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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 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>

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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.

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Addendum	
Job Title:	Research Fellow in Cancer Evolution

Responsible to:	Dr Bingxin Lu
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Main Responsibilities/Activities
<p>We are seeking a Postdoctoral Research Fellow for a (up-to) 3-year position to work on an exciting project funded by the Medical Research Council and led by Dr Bingxin Lu.</p> <p>This project aims to reconstruct the evolutionary dynamics of chromosomal instability in cancer genomes. Understanding how chromosomal instability evolves during the progression from precancerous lesions to malignancy, metastasis, and treatment resistance is important for cancer detection and treatment. Building upon our previously published method, CNETML (https://doi.org/10.1186/s13059-023-02983-0), this project will develop more realistic evolutionary models of copy number alterations and better phylogenetic inference methods with wider applicability. The developed methods will then be applied to extensive publicly available datasets to investigate the dynamics of chromosomal instability. Our new methods will enhance the toolkit for cancer researchers and drive broader applications of cancer phylogenetic inference. The insights gained from the inferences will also support personalized therapy and advance public health efforts.</p> <p>The successful candidate will not only design and conduct the research, but also write and communicate results as scientific papers and in scientific presentations at national and international conferences.</p>

Criteria	Essential or Desirable
Qualifications, experience and knowledge	
PhD (or close to completion) in computational biology, bioinformatics, computer science, or related fields that include a substantial amount of computing and mathematical/statistical modeling, ideally related to phylogenetic method development	E
A strong record of publications in international, peer-reviewed journals	D
Working knowledge in genomics, evolutionary biology, cancer biology, or population genetics	D
An undergraduate degree in computer science, mathematics, statistics, physics, engineering, or another quantitative discipline	D
Skills and abilities	
Proficiency with Unix-based systems and programming, ideally in multiple languages, including but not limited to C++/C, Python, and R	E

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Criteria	Essential or Desirable
Solid mathematical and statistical modeling skills, ideally in Markov models and Bayesian statistics	E
Excellent English and communication skills	E
Experience in designing and implementing algorithms, ideally related to optimization and Markov chain Monte Carlo (MCMC) techniques	E
Experience in developing and deploying software in academic or industry settings	D
Experience in high-throughput sequencing data analysis, ideally using compute clusters or cloud computing	D
Personal attributes	
Strong commitment to rigorous and high-quality reproducible research	E
Highly motivated, curious, and enthusiastic in research	E
Openness to learn new techniques in a fast-moving interdisciplinary field	E
Ability to work both independently and collaboratively while maintaining integrity and accountability	E
Ability to work harmoniously with colleagues and students from diverse cultures and backgrounds	E