

Research Role Profile

<b>Job Title:</b>	Research Fellow A Quantitative Genetics
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<b>Responsible to:</b>	Head of research group, or principal investigator
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<b>Responsible for:</b>	Not applicable
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<b>Job Summary and Purpose:</b>
To undertake research in accordance with the specified research project(s) under the supervision of the principal investigator.

<b>Main Responsibilities/Activities</b>
<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 to Role Profile

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#### **Job Summary and Purpose:**

##### The Project

The project aims to advance understanding of the brain basis and common genetic architecture underlying infant and childhood neurodevelopment, with a particular focus on the development of autism spectrum conditions. Objectives will be achieved by applying advanced multivariate analytic methods to large-scale datasets emerging from genome-wide association studies of developmental traits. The project will use new data on the common genetic architecture associated with childhood traits and milestones to better understand autism, its presentation, heterogeneity, and its biological similarities and differences with related phenotypes. Existing datasets, including genetic, neuroimaging and clinical data, will be combined to generate novel insights into biological and developmental processes contributing to autism and related traits.

##### The Role and its Responsibilities

We are seeking an ambitious and highly motivated postdoctoral Research Fellow in quantitative genetics to join a multidisciplinary research team. The post involves working with a team based at the University of Surrey, King's College London and the University of Oxford. The post is based at the University of Surrey with Professor Angelica Ronald.

You will be responsible for pre-registering and conducting a range of advanced quantitative analysis on secondary datasets. You will have responsibility for supporting integration across the study team including: overseeing data transfer agreements between institutions; version-controlling and archiving code and leading data cleaning, harmonisation and analysis. Throughout the project you will work with an interdisciplinary team of lead investigators and external collaborators. You will have access to advanced methodological training courses and other professional development training opportunities. You will lead on high-impact publications, conference presentations and dissemination of results.

##### The Faculty of Health and Medical Sciences

The post-holder will be based within the University of Surrey's Faculty of Health and Medical Sciences. This is a growing and vibrant faculty, renowned for its research and resources in fields including biosciences, human and veterinary medicine and psychology. It is highly equipped with state-of-the-art laboratories, a Human Tissue Act license and considerable research, administrative and laboratory staff expertise and resources.

##### The University of Surrey

The post-holder will be based in the School of Psychology at the University of Surrey. The University of Surrey is located on a beautiful, leafy campus in Guildford, just 30 miles from London and benefitting from excellent rail and road connections. We are an ambitious, research-led organization, committed to research excellence and to the application of our research for the benefit of society. The University of Surrey is amongst the highest achieving universities in the United Kingdom. The School of Psychology has a long-standing reputation for its vibrant and supportive research

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environment. Psychology at Surrey has a strong track record of innovation in Psychology. The School currently houses 600+ UG students, 100+ Masters and 150+ taught Doctorate and PhD students and more than 70 staff.

### The Research Team

You will work within a leading interdisciplinary research team known for their research in infant and child development, neurodevelopmental conditions including autism, and methodological expertise that spans psychology, pediatrics, neuroscience and human genetics. The research team includes Prof. Angelica Ronald, University of Surrey, Prof Tomoki Arichi and Dr Harriet Cullen, both King's College London and Prof Stephan Sanders, University of Oxford. You will be managed and responsible to Prof. Angelica Ronald in the School of Psychology, University of Surrey.

The post will be based in the Department of Psychology, within the University's School of Psychology, Faculty of Health and Medical Sciences.

You are welcome to contact Prof. Angelica Ronald (a.ronald@surrey.ac.uk) if you would like further information or would like to discuss the post.

The post is full-time and offered on a fixed-term contract for 2 years.

### **Main Responsibilities/Activities**

1. Conduct advanced secondary data analyses using a wide range of pre-specified and exploratory statistical models across genetic, neuroimaging, and clinical datasets, alongside attending relevant analytic training courses, pre-registering analytic plans and documenting work using analytic code.
2. Continually update knowledge and develop skills, translating advances in the field into research activity. Specific development of knowledge in the fields of infant, toddler and child development, with a particular focus on brain and behavioural development and neurodevelopmental conditions such as autism and ADHD.
3. Working collaboratively in a multidisciplinary team with basic researchers and clinicians across the fields of behaviour genetics, neuroimaging and clinical genetics.
4. 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. This may include critical evaluation and interpretation, computer-based data analysis and evaluation or library research.
5. Conduct a range of writing tasks relevant to the project. This is likely to include writing up results and preparing manuscripts for submission to appropriate journals and submitting empirical abstracts to scientific conferences, writing blog posts and articles to other outputs as required and/or appropriate. The post holder may also work with the principal investigator in writing bids for research grants.
6. Attend appropriate conferences and national and international meetings for the purpose of disseminating research results.

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7. 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, oversight and organisation of data transfer agreements and ethics approval documentation, organisation of project meetings and related documentation. To show compliance with all ethical and data management and data protection requirements.
8. To contribute to teaching in the Faculty by carrying out student supervision within the post holder's area of expertise and under the direct guidance of a member of departmental academic staff, as appropriate.
9. The post holder may occasionally be required to supervise more junior research staff.

**N.B. The above list is not exhaustive.**

### Person Specification

Qualifications and Professional Memberships	Essential/ Desirable
A doctoral degree in a relevant discipline (although individuals who have almost completed a doctoral degree may be appointed).	Essential
An undergraduate degree in a relevant discipline with a 2:1 or first-class grade (or international equivalent).	Essential
Experience in conducting quantitative data analytic studies and preparing data for analysis.	Essential
Proficient in using R, Python or similar programming language.	Essential
The ability to write clearly and concisely with a good publication record commensurate with the level of your career.	Essential
The ability to work independently with excellent organisation and communication skills.	Essential
A background in human genetic research on complex traits, working with genome-wide association summary statistics and/or polygenic scores.	Desirable
A background in research on developmental psychology, individual differences psychology, neuroimaging or paediatrics.	Desirable
Familiarity with open science / open research practices.	Desirable
Experience supervising and managing more junior researchers, e.g., placement students, undergraduate students, or research assistants.	Desirable

### Relationships and Contacts

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You will be managed and responsible to Prof. Angelica Ronald in the School of Psychology, University of Surrey.

Please see information above on the research team. You are welcome to contact Prof. Angelica Ronald (a.ronald@surrey.ac.uk) if you would like further information or would like to discuss the post.