

Candidate Information

Position:	Research Fellow
School/Department:	School of Mathematics and Physics
Reference:	23/110750
Closing Date:	Monday 17 April 2023
Salary:	£37,386 per annum
Anticipated Interview Date:	Wednesday 3 May 2023
Duration:	Fixed Term 4 years, or available until 30 September 2027, whichever is sooner

JOB PURPOSE:

To be a highly productive, ambitious and collaborative member of Dr Sean Eberhard's research group, developing and conducting individual and collaborative research objectives, particularly in the areas of algebra and combinatorics. Other duties include assisting in the supervision of student projects, organizing and giving seminars on research topics, liaising with external collaborators, and engaging in outreach.

This is a four-year, fixed-term position, funded by a research grant from the Royal Society. Anticipated starting date is Oct 2023.

MAJOR DUTIES:

1. Undertake research in pure mathematics related to the PI's Royal Society project "Noncommutative Combinatorics", such as algebra (especially asymptotic group theory), combinatorics, number theory, and ergodic theory.
2. Develop and plan an area of personal research and expertise.
3. Design, develop, and refine research using a range of theoretical tools.
4. Plan and deliver internal seminars relating to specialist research areas.
5. Participate in regular seminars in a broad range of other topics in mathematics.
6. Produce high-quality research outputs consistent with project aims and commensurate with career stage, both individually and jointly with the PI.
7. Promote research milestones and outputs at national and international conferences.
8. Assist grant holder in the preparation of funding proposals and applications to external bodies.
9. Carry out occasional educational supervision, demonstrating or lecturing duties within the post holder's area of expertise and under the direct guidance of a member of academic staff.
10. Assist in the supervision of student projects (summer undergraduate and/or PhD).
11. Undertake supplementary duties relevant to the success of the project including administrative duties and additional training and development activities as required.

ESSENTIAL CRITERIA:

1. Have or are about to obtain (within 3 months) a PhD in pure mathematics.
2. At least 3 years relevant research experience in pure mathematics, to include at least one of the following:
 - Asymptotic group theory
 - Combinatorics
 - Number theory
 - Ergodic theory
3. Strong publication track record commensurate with stage of career.
4. Experience working effectively as part of a research team in the development and promotion of the research theme.
5. Excellent (English) communication skills, including the ability to write for publication, present research proposals and results, and represent the research group at meetings.
6. Ability to build relationships to develop internal and external networks.

7. Ability to contribute to broader management and administrative processes.
8. Commitment to continuous professional development.
9. Ability to assess, organize, and manage resources.

DESIRABLE CRITERIA:

1. PhD in a topic in algebra, combinatorics, or number theory.
2. Research experience in algebra or combinatorics, especially additive combinatorics or growth in groups.
3. Knowledge of algebraic groups, primitive coherent configurations, or other related specialist topics.