



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Set Theory

Faculty of Engineering and Physical Sciences



Salary: Grade 7 (£41,064 – £48,822 p.a.)

Reference: EPSMA1144

Fixed term for 7 months

We are open to discussing flexible working arrangements



Research Fellow in Set Theory School of Mathematics

Do you have a deep understanding of the Axiom of Choice? Do you find large cardinal axioms interesting? Are you enthusiastic about collaborative research around the connections between the Axiom of Choice, symmetric extensions, and large cardinal axioms at the University of Leeds?

We are looking for one Research Fellow to work on the project “Understanding the axioms II: Symmetric extensions for large cardinal axioms”, funded by the UKRI through the Future Leaders Fellowship scheme. As part of this project you will be developing and analysing mathematical constructions related to the Axiom of Choice through various different lenses, and their connections to large cardinal axioms, as well as to other standard consequences of the Axiom of Choice. The project is led by Dr Asaf Karagila.

The vision of grant is to understand and extend how elementary embedding-based large cardinal axioms interact with the Axiom of Choice. Proving the necessity of choice axioms, constructing counterexamples, and laying the ground for future work on the subject.

What does the role entail?

As a Research Fellow, your main duties will include:

- Organising events and seminars in collaboration with your colleagues;
- Generating and pursuing independent and original research ideas in the appropriate subject area;
- Developing research objectives and proposals and contributing to setting the direction of the research project and team including preparing proposals for funding in collaboration with colleagues;



- Evaluating methods and techniques used and results obtained by other researchers and to relate such evaluations appropriately to your own research;
- Preparing papers for publication in leading international journals and disseminating research results through other recognised forms of output;
- Making a significant contribution to the dissemination of research results by publication in leading peer-reviewed journals and by presentation at national and international meetings;
- Working independently and as part of a larger team of researchers, both internally and externally, to develop new research links and collaborations and engage in knowledge transfer activities where appropriate;
- Maintaining your own continuing professional development and acting as a mentor to less experienced colleagues as appropriate;
- Contributing to the training of both undergraduate and postgraduate students, including assisting with the supervision of projects in areas relevant to the project.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

What will you bring to the role?

As a Research Fellow you will have:

- A PhD (or have submitted your thesis before taking up the role) in set theory or a closely allied discipline;
- A strong background in forcing and symmetric extensions;
- A strong background in choiceless set theory;
- A strong background in Ramsey theory of linear orders;
- Good time management and planning skills, with the ability to meet tight deadlines and manage competing demands effectively without close support;
- A developing track record of peer-reviewed publications in international journals;
- Excellent communication skills both written and verbal, and the ability to communicate your research at national and international conferences;
- A proven ability to work well both independently and in a team;
- A strong commitment to your own continuous professional development.





You may also have:

- Experience of pursuing external funding to support research;
- Experience working with large cardinal axioms;
- Experience using forcing over symmetric extensions;
- Experience organising conferences and seminars

How to apply

You can apply for this role online; more guidance can be found on our [How to Apply](#) information page. Applications should be submitted by **23.59** (UK time) on the advertised closing date.

As part of your application, please ensure that you upload a CV (including a publication list), and a Research Statement, summarising your research achievements, your current research pursuits, and future plans. This research statement should be accessible to readers outside of mathematical logic and be at most one side of A4 (minimum font size 11pt).

Contact information

To explore the post further or for any queries you may have, please contact:

[Dr Asaf Karagila](#), University Academic Fellow University of Leeds

Tel: +44 (0)113 343

Email: a.karagila@leeds.ac.uk

Additional information



Please note: If you are not a British or Irish citizen, you will require permission to work in the UK. This will normally be in the form of a visa but, if you are an EEA/Swiss citizen and resident in the UK before 31 December 2020, this may be your passport or status under the EU Settlement Scheme.

Faculty and School Information

Further information is available on the research and teaching activities of the [Faculty of Engineering & Physical Sciences](#), and the [School of Mathematics](#).

A diverse workforce

As an international research-intensive university, we welcome students and staff from all walks of life and from across the world. We foster an inclusive environment where all can flourish and prosper, and we are proud of our strong commitment to student education. Within the Faculty of Engineering and Physical Sciences we are dedicated to diversifying our community and we welcome the unique contributions that individuals can bring, and particularly encourage applications from, but not limited to Black, Asian and ethnically diverse people; people who identify as LGBT+; and people with disabilities. Candidates will always be selected based on merit and ability.

The Faculty of Engineering and Physical Sciences are proud to have been awarded the Athena SWAN [Silver](#) Award from the Equality Challenge Unit, the national body that promotes equality in the higher education sector. Our [equality and inclusion webpage](#) provides more information.

Working at Leeds

We are a campus-based community and regular interaction with campus is an expectation of all roles in line with academic and service needs and the requirements of the role. We are also open to discussing flexible working arrangements. To find out more about the benefits of working at the University and what it is like to live and work in the Leeds area visit our [Working at Leeds](#) information page.

Information for disabled candidates

Information for disabled candidates, impairments or health conditions, including requesting alternative formats, can be found on our [Accessibility](#) information page or by getting in touch with us at hr@leeds.ac.uk





Criminal record information

Rehabilitation of Offenders Act 1974

A criminal record check is not required for this position. However, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our [Criminal Records](#) information page.

