



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Higher Category Theory,
Faculty of Engineering and Physical Sciences



Salary: Grade 7 (£37,099 – £44,263 p.a.) Due to funding restrictions, an appointment will not be made higher than £39,347 p.a.

Reference: EPSMA1115

Closing date: Wednesday 03 July 2024

Fixed term for up to 10 months, available from 01 September 2024, to end by 30 October 2025

We are open to discussing flexible working arrangements

Research Fellow in Higher Category Theory, School of Mathematics.

Do you have expertise in Higher Category Theory? Do you feel enthusiastic in engaging in collaborative research around the connections between Category Theory and Logic, within a strong supportive team in the University of Leeds?

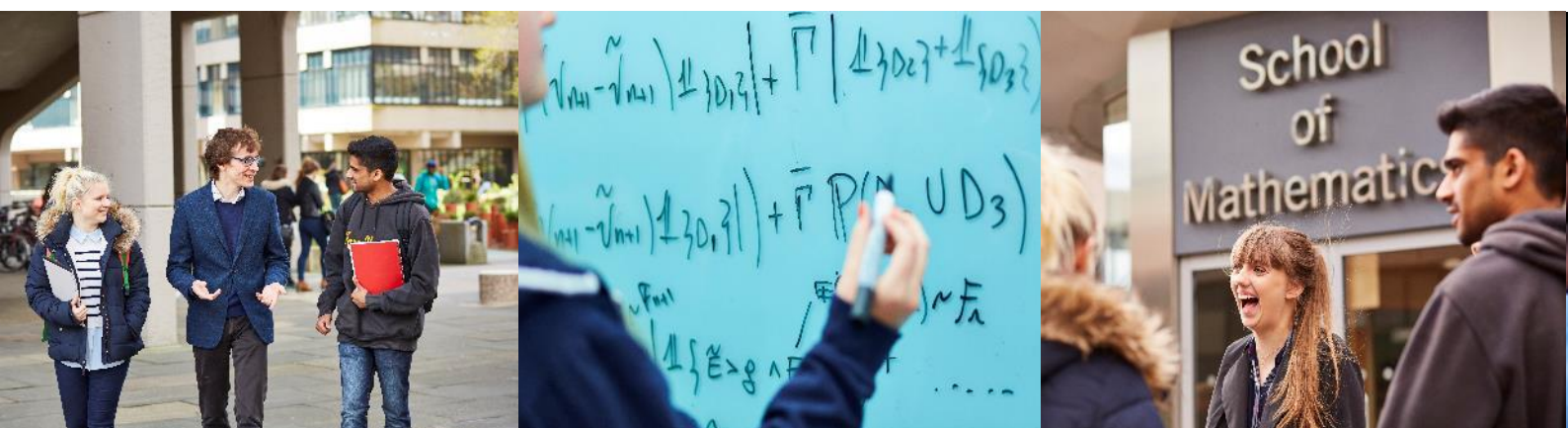
We are looking for one Research Fellow to work on the grant “Syntax and semantics of two-dimensional type theories”, funded by the US Air Force Office for Scientific Research. As part of the project, you will work at the boundary of Higher Category Theory and Logic to investigate how higher categories can be used to study logical systems. The project is led by Dr Andrew Brooke-Taylor (University of Leeds) and Dr Nicola Gambino (University of Manchester).

The vision of the grant is to extend the fundamental connections between Category Theory and Logic to higher categories, by investigating categorical structures such as bicategories and (∞, n) -categories, and the relationship between them.

What does the role entail?

As a Research Fellow, your main duties will include:

- Organising events and seminars in collaboration with 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;
- 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 Mathematics or a closely allied discipline;
- A strong background in Category Theory;
- A strong background in Higher Category Theory. E.g. bicategories and (∞, n) -categories;
- Interest in the connections between Category Theory and Logic;
- 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 with higher monoidal categories and higher operads.



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 and the current / future potential of your work, and your interest in the connections between Higher Category Theory and Logic. The research statement should be accessible to readers outside your immediate field of expertise and be at most one side of A4 (minimum font size 11).

Contact information

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

[Dr Andrew Brooke-Taylor](#), Associate Professor in Pure Mathematics, University of Leeds

Email: A.D.Brooke-Taylor@leeds.ac.uk

OR

[Dr Nicola Gambino](#), Reader in Pure Mathematics, University of Manchester

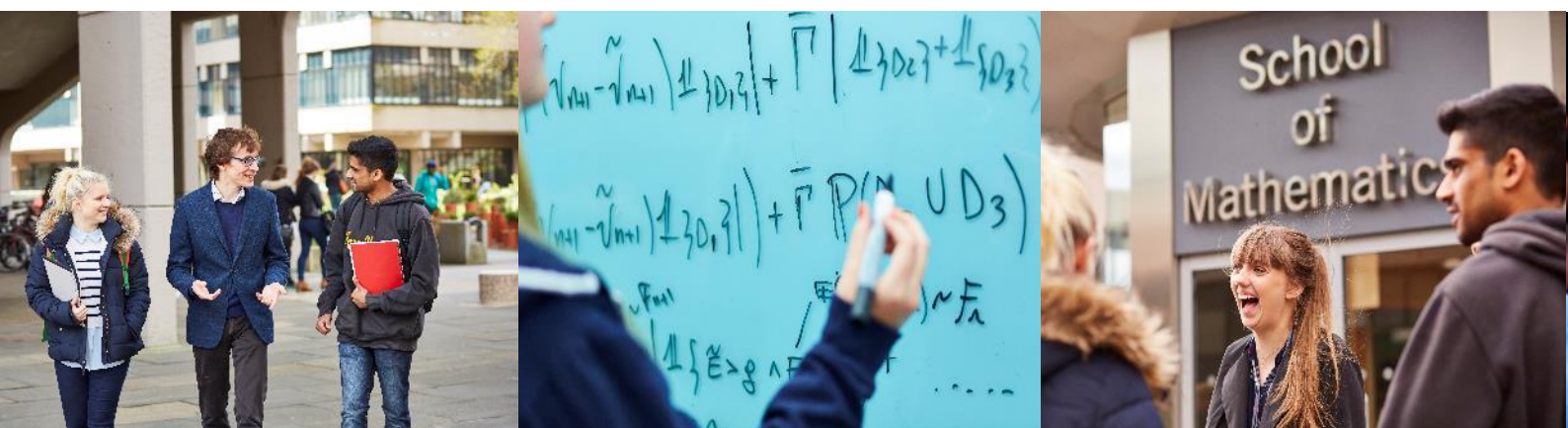
Email: Nicola.gambino@manchester.ac.uk

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. 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.

