



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

**Research Fellow in Mathematics,
Faculty of Engineering and Physical Sciences**



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

Reporting to: Professor Clare Dunning

Closing date: Tuesday 15 September 2026

Reference: EPSMA1143

Fixed-term (for 3 years - to complete specific time limited work)

Location: Leeds Main Campus (with scope for hybrid working)

We are open to discussing flexible working arrangements

Research Fellow in Mathematics, School of Mathematics.

Are you an ambitious researcher looking for your next challenge? Do you have a track record of high-quality research? Do you want to further your career in one of the UK's leading research-intensive Universities?

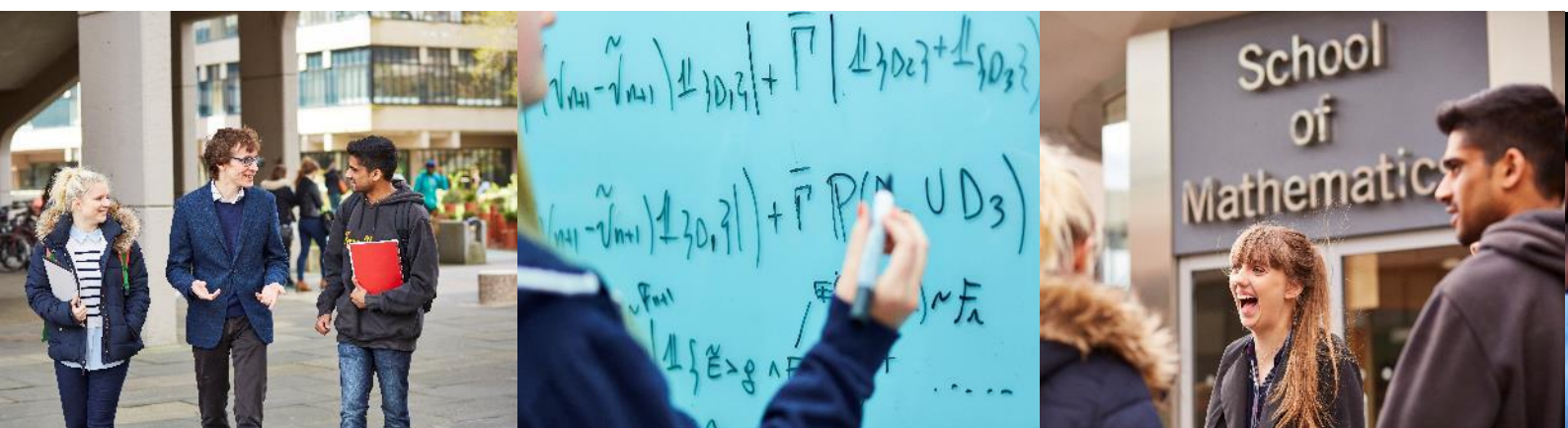
Overview of the Role

The University of Leeds invites applications for a 3-year postdoctoral research position working with Professor Clare Dunning to study Painlevé equations from an algebraic combinatorics perspective. Painlevé equations appear naturally in many areas of mathematics and physics including in statistical mechanics, random matrix theory, classical and quantum integrable systems, vortices, Bose Einstein condensation, quantum gravity and number theory. This project seeks to understand rational solutions of the Painlevé equations, their higher-order analogues and their generalisations by studying how the partition that encodes the building blocks of the solutions underpins the form and properties of the solutions.

You will join the Algebra and Integrable Systems Group in the School of Mathematics at the University of Leeds, an active research community covering areas from classical and quantum integrability to algebra and representation theory.

The School of Mathematics is committed to Equity, Diversity, and Inclusion, and to an environment free of any type of discrimination, where everyone can reach their full potential. We strive to support the career development of the Post-doctoral Research Fellows that we recruit, and to provide them with the flexibility and support needed in their development as the future generation of world-leading researchers.

The School of Mathematics also offers several family-friendly employment practices that are designed to enable a good work-life balance and to be responsive to support personal circumstances. In many roles we offer flexible working and part-time working, and we have a range of services to help support staff through work and personal challenges.



Main duties and responsibilities

- Designing, planning and conducting a programme of investigation, in consultation with Professor Clare Dunning;
- 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.

Qualifications and skills

Essential

- A PhD (or have submitted your thesis before taking up the role) in Mathematics or a closely allied discipline;
- A strong background in Painlevé equations and/or integrable systems;
- Experience in or willingness to learn algebraic combinatorics;
- Strong analytical and problem-solving skills and the ability to perform complex calculations;



- A track record in using computational tools such as Maple, Magma, GAP SAGEMath or similar;
- 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, 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.

Desirable

- Experience of pursuing external funding to support research.

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](#).

Contact information

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

[Professor Clare Dunning](#), Professor of Mathematical Physics

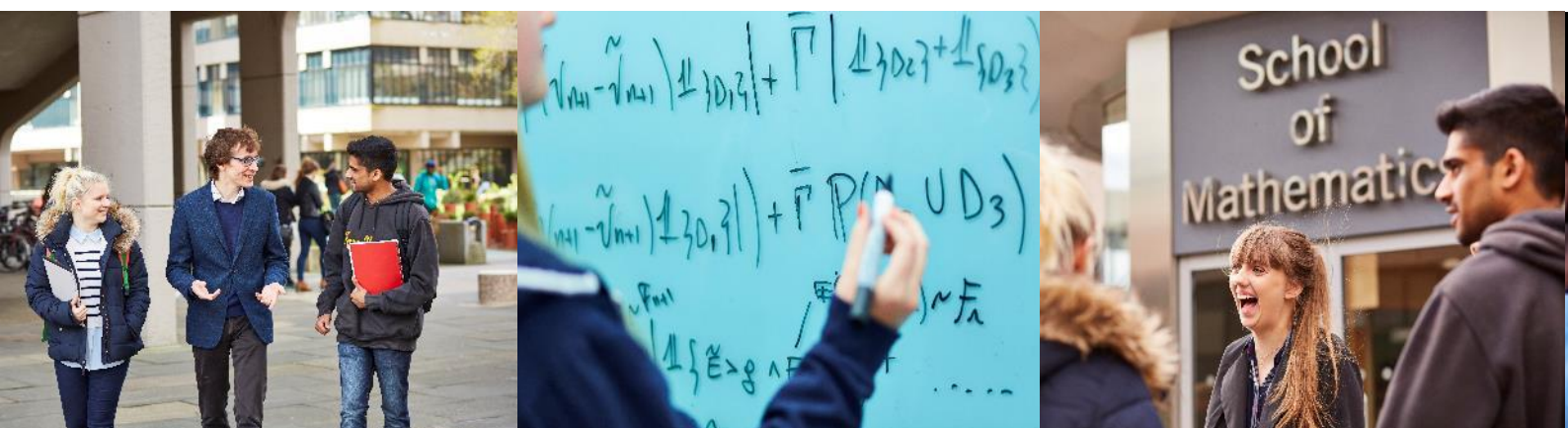
Tel: +44 (0)113 343 7257

Email: T.C.Dunning@leeds.ac.uk

Additional information

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 [AdvanceHE](#). The [Athena Swan Charter](#) is a framework which is used across the globe to support and transform gender equality within higher education and research. 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.



Salary Requirements of the Skilled Worker Visa Route

Please note that this post may be suitable for sponsorship under the Skilled Worker visa route but first-time applicants might need to qualify for salary concessions. For more information, please visit [the Government's Skilled Worker visa page](#).

For research and academic posts, we will consider eligibility under the Global Talent visa. For more information, please visit [the Government's page, Apply for the Global Talent visa](#).

