



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

**Research Fellow in Massive Stars and Winds,
Faculty of Engineering and Physical Sciences**



Salary: Grade 7 (£41,064 – £48,822 p.a.) Due to funding restrictions, an appointment will not be made higher than £43,482 p.a.

Reporting to: Prof Julian Pittard

Closing date: Wednesday 26 August 2026

Reference: EPSPA1139

Fixed term (Until 30 September 2029 - to complete time limited work)

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

We are open to discussing flexible working arrangements

Research Fellow in Massive Stars and Winds, School of Physics and Astronomy.

Are you an ambitious researcher looking for your next challenge? Do you have a background in theory and/or modelling of massive stars and their winds? Do you want to further your career in one of the UK's leading research-intensive Universities?

Overview of the Role

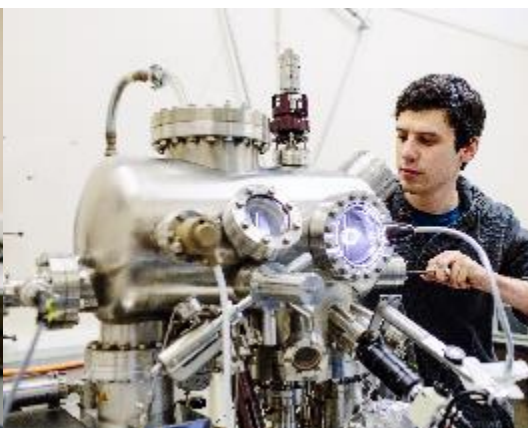
The University of Leeds invites applications for a 3-year postdoctoral research position to study particle acceleration in colliding wind binaries.

You will work with Prof Julian Pittard on an STFC-funded project to simulate particle acceleration in colliding wind binaries and compare against observational data of the thermal and non-thermal emission.

You will join the Astrophysics Group in the School of Physics & Astronomy at the University of Leeds, an active research community covering areas from star and planet formation to exoplanet atmospheres.

Main duties and responsibilities

- Leading the development of a new theoretical code to simulate particle acceleration in colliding wind binaries;
- Comparing the simulation output against observations of the thermal and non-thermal emission from these systems;
- 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.

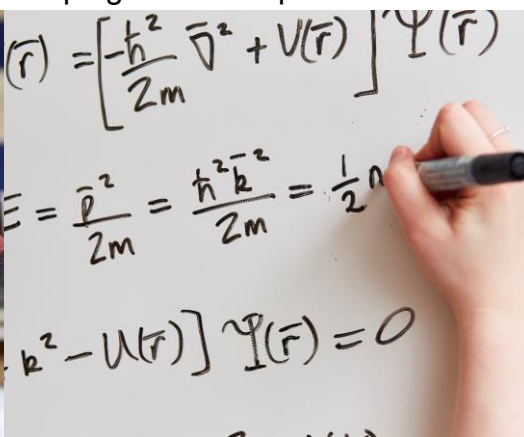
Qualifications and skills

Essential

- A PhD (or have submitted your thesis before taking up the role) in astrophysics or a closely allied discipline;
- A strong background in hydrodynamical/magnetohydrodynamical simulations of astrophysical systems;
- A detailed, up-to-date knowledge of the field of massive stars, particularly involving the latest advances in thermal/non-thermal observations;
- 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.

Desirable

- Experience of pursuing external research funding to support research;
- Expertise in grid-based and/or AMR simulations;
- Expertise in particle acceleration and thermal and non-thermal emission mechanisms in an astrophysical context;
- Experience in developing novel computational methods for astrophysics.



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:

[Prof Julian Pittard](#), Professor in Theoretical Astrophysics

Tel: +44 (0)113 343 3805

Email: J.M.Pittard@leeds.ac.uk

Additional information

Faculty and School Information

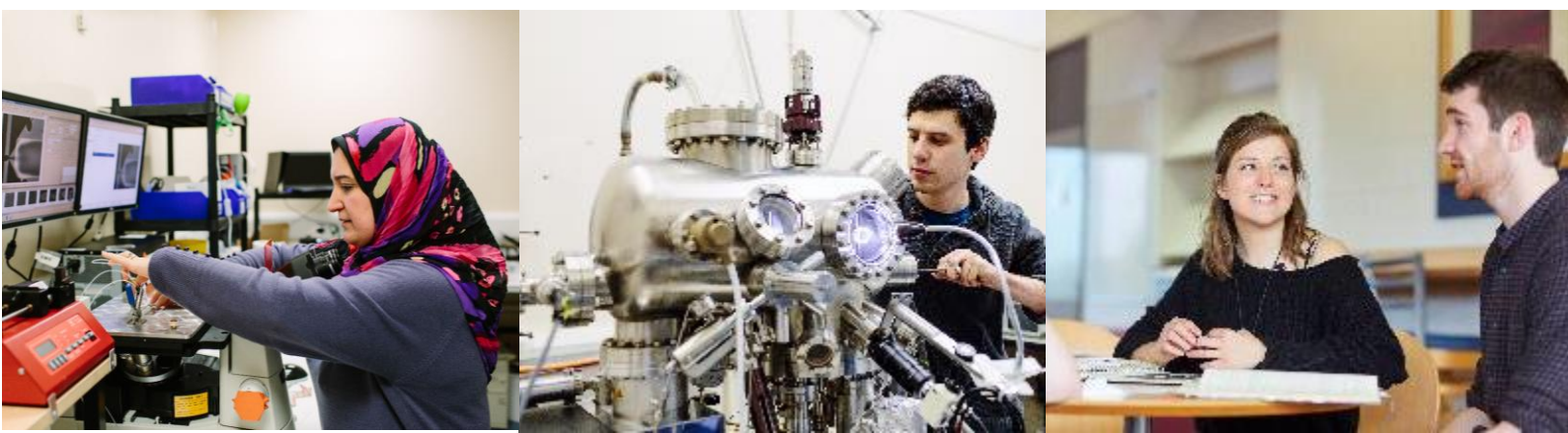
Further information is available on the research and teaching activities of the [Faculty of Engineering & Physical Sciences](#), and the [School of Physics and Astronomy](#).

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.

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.

Information for disabled candidates

Information for disabled candidates, impairments or health conditions, including requesting alternative formats, can be found under the 'Accessibility' heading on our [How to Apply](#) information page or by getting in touch by emailing HR via 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](#).

