

**Job Title:** Research Associate in Theoretical Astrophysics  
**Grade:** 7  
**Salary:** £34,189 to £37,345 per annum due to funding restrictions  
**Department:** Physics and Astronomy  
**Hours/Contract:** Full-time, open ended contract subject to fixed term funding. Funding is available to 31 March 2022.  
**Post Responsible To:** Prof. Sergei Nayakshin  
**Reference:** 1683

## Role Purpose

You will be expected to carry out independent and collaborative research with Prof. Nayakshin and other members of the Theoretical Astrophysics Group (whose existing research programme includes planet formation, AGN feeding and feedback, general theory of accretion discs, the role of Sgr A\* in the evolution of the Milky Way, Galactic dynamics and dark matter).

Main Duties and Responsibilities	% Time
<ul style="list-style-type: none"> <li>Responsible for personal and collaborative research, resulting in significant contributions to journal papers (often as lead author) and conference presentations in the specified area of research.</li> </ul>	40
<ul style="list-style-type: none"> <li>Contribute to the overall research programme using innovative research models and approaches, testing and developing them to enable work to be carried out that will result in the emergence of new understanding within the research field.</li> </ul>	20
<ul style="list-style-type: none"> <li>Contributing to determining the direction of the programme in line with reaching the research goals. This will include elements of research planning and project management.</li> </ul>	10
<ul style="list-style-type: none"> <li>Co-supervision of research students and provision of advice and guidance to other members of the team, both research staff and students</li> </ul>	10
<ul style="list-style-type: none"> <li>Contributing to applications for travel grants and research proposals</li> </ul>	5
<ul style="list-style-type: none"> <li>To take a lead role in representing the research group by presenting research results at external scientific meetings and workshops, both in the UK and overseas</li> </ul>	10
<ul style="list-style-type: none"> <li>To undertake such duties consistent with the grade of the post as may be reasonably required</li> </ul>	5
Internal and External Relationships	
<p>Regular attendance at conferences.</p> <p>Provide advice and support to research staff and post graduate students working on this and similar research projects. You may be responsible for supervising research students.</p> <p>To network and contribute to the maintenance of the wider research programmes profile and research area.</p> <p>You may be responsible for supervising research students.</p>	



**Planning and Organising**

Organisation of project report and deliverables.

To organise meetings of the wider collaborative network.

To foster new collaborations and to maintain a network of other research scientists elsewhere in the UK and overseas.

To assist the PI in day-to-day planning and organization of the wider research programme.

**Qualifications, Knowledge and Experience**

**Essential**

- A good honours degree\*
- PhD in astronomy, astrophysics or a closely related subject area\*
- Evidence of research experience and skills in theoretical astrophysics\*
- Evidence of experience in presenting results at national and international meetings\*
- Research experience and skills in one of the following topics: accretion or protoplanetary discs, AGN feedback or stellar evolution\*

**Desirable**

- Strong publication record in peer-reviewed astronomy journals\*
- Experience of parallel programming or significant code development\*
- Experience with numerical hydrodynamics or stellar evolution codes\*
- Experience of collaboration
- Supervisory experience
- Demonstrable success in producing publications of the very highest standard\*

**Skills, Abilities and Competencies**

**Essential**

- Ability to develop innovative approaches to modelling and interpretation of complex astrophysical systems\*
- High level of proficiency in English, sufficient to undertake research, teaching and administrative activities utilising English Language materials and to communicate effectively with staff and students\*
- Computer programming skills or willingness to acquire them\*
- Willingness to foster new collaborations with national and international experts

**Desirable**

- Proven ability to work as part of a team

**\*Criteria to be used in shortlisting candidates for interview**





**Criminal Declaration**

If you become an employee, you must inform your manager immediately, in writing, if you are the subject of any current or future police investigations/legal proceedings, which could result in a criminal offence, conviction, caution, bind-over or charges, or warnings.

**VITAL**

The University encourages all staff to live our [VITAL values](#) which are:  
**Valuing People, Innovators, Together, Accountable, Leaders.**

**Equality and Diversity**

We believe that equality, diversity and inclusion is integral to a successful modern workplace. By developing and implementing policies and systems that challenge stereotypes across all aspects of our work, we have a culture that recognises and values the diverse contributions of our staff which benefits everyone. Our strong values of inclusivity and equality support our efforts to attract a diverse range of high quality staff and students, and identify our University as a progressive and innovative workplace that mainstreams equality, diversity and inclusion.

