



Job title	Research Associate/Fellow in Astrophysics	Job family and level	Research and Teaching Level 4 (or Level 4 career training grade where an appointment is made before PhD has been completed)
School/ Department	Physics & Astronomy	Location	University Park Campus

Purpose of role

This is a postdoctoral position to work on observations of intracluster light within Euclid images. This research role involves developing methods to process and analyse low-surface-brightness emission within images taken by the Euclid satellite. Using these images, the candidate will explore whether intracluster light can be used as a proxy for dark matter and provide direct constraints on the physics of galaxy mergers. The successful candidate will work with Dr Nina Hatch, Prof Alfonso Aragon-Salamanca, and Dr Steven Bamford within the Nottingham Astronomy Group, as well as interact with members of the Euclid collaboration across Europe and the USA.

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	% time per year
1	To take a leading role in the research project described above under the supervision of academic staff in the Nottingham Astronomy Group.	60%
2	To write up this research work for publication and contribute to dissemination at national/international conferences, resulting in successful research outputs.	25%
3	To build relationships with both internal and external collaborators in order to exchange information, develop collaborative projects and identify potential opportunities for future collaboration.	15%

Person specification

	Essential	Desirable
Skills	<ul style="list-style-type: none"> ▪ Competent at coding in high-level programming languages, including Python. ▪ Able to analyse complex data, critically evaluate results and generate new insights. ▪ Aptitude for thinking creatively and developing innovative solutions. ▪ Excellent oral and written communication skills, including the ability to communicate with clarity on complex information. ▪ Able to work independently, efficiently and in a proactive manner to lead their research. ▪ Comfortable building relationships and working with internal and external collaborators. ▪ Capable of working as part of a team, toward a shared goal through primarily online meetings. 	<ul style="list-style-type: none"> ▪ Ability to use high performance computing (HPC) systems and linux systems.
Knowledge and experience	<ul style="list-style-type: none"> ▪ Proven research track record in astrophysics. ▪ Experience processing astronomy data (simulation or observational). 	<ul style="list-style-type: none"> ▪ Experience in the detection and analysis of low-surface-brightness emission or the detection and analysis of clusters of galaxies in the optical/near-infrared.
Qualifications, certification and training (relevant to role)	<ul style="list-style-type: none"> ▪ BSc/MPhys degree (or equivalent) in a physics related subject. ▪ Ph.D. (or equivalent) in astrophysics or a closely related subject. Applicants in the process of Ph.D. submission will be considered. 	



The University of Nottingham is focused on embedding equality, diversity and inclusion in all that we do. As part of this, we welcome a diverse population to join our work force and therefore encourage applicants from all communities, particularly those with protected characteristics under the Equality Act 2010.

Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

- Valuing people** Is friendly, engaging and receptive, putting others at ease. Actively listens to others and goes out of way to ensure people feel valued, developed and supported.
- Taking ownership** Is clear on what needs to be done encouraging others to take ownership. Takes action when required, being mindful of important aspects such as Health & Safety, Equality, Diversity & Inclusion, and other considerations.
- Forward thinking** Drives the development, sharing and implementation of new ideas and improvements to support strategic objectives. Engages others in the improvement process.
- Professional pride** Is professional in approach and style, setting an example to others; strives to demonstrate excellence through development of self, others and effective working practices.
- Always inclusive** Builds effective working relationships, recognising and including the contribution of others; promotes inclusion and inclusive practices within own work area.

Key relationships with others



