



## Maynooth University Ollscoil Mhá Nuad

### Doctoral Scholarships in the Department of Physics

#### Details of the Scholarship Award

The Department of Physics at Maynooth University is pleased to announce that two PhD Scholarships in Star Formation will be available for suitably qualified and successful applicants intending to commence their PhD studies in Astrophysics in September 2025.

The PhD scholars will be joining the Department of Physics' active Star and Planet Formation group under the supervision of Dr. Emma Whelan. For more information on the work of the group please see <https://www.maynoothuniversity.ie/physics/our-research>. The PhD scholars will work on the Research Ireland funded CARINA project which will combine machine learning with forefront instrumentation to probe Intermediate Mass Star Formation. CARINA is focussed on developing case agnostic, multi-sector machine learning tools to efficiently handle datasets generated by integral field spectroscopy and time domain surveys. The testbed for the machine learning tools is the question of how planets form in the disks of Intermediate Mass Herbig Ae/Be stars. One project will work with data from the MAUVE UV satellite due to be launched in October 2025 and one project will work with data from the European Southern Observatory's Very Large Telescope MUSE instrument

#### Value of PhD Scholarship Award

A fixed maintenance award of €25,000 per annum;

Annual tuition fees support;

Funding for research expenses e.g. publication charges or conference travel, will also be available.

#### Duration of PhD Scholarship Award

The scholarship is awarded for 4 years of study, subject to satisfactory annual academic progress

#### Role of the student

The PhD duties will include

- Working under the supervision of Dr. Emma Whelan and other project leads.
- Reduction and analysis of large astronomical datasets including the development of python tools. Travel to telescope sites for the collection of data may also be required.
- The development of machine learning tools for the analysis of astronomical data but with cross industry applications.
- Publication of papers and presentation of results at international conferences

#### Eligibility Criteria for Applicants

Full time research degree students who have a relevant first class or 2.1 honour in their primary degree, or have a relevant Master's degree, are eligible to apply. Relevant subjects include astrophysics, physics and computer science. A good knowledge of the python programming language is an advantage.

## Application and Selection Process

Applicants are asked to submit the following:

- Personal statement
- Curriculum Vitae
- Relevant final academic transcripts
- Names and contact details of two referees.

Applicants who are non-native speakers of the English language must provide written evidence of competency in the English language that satisfy the programme-specific requirements set out by the Maynooth University International Office. All scholarship Awards are conditional on approval for registration by the university

Informal queries can be sent to [emma.whelan@mu.ie](mailto:emma.whelan@mu.ie)

All eligible candidates will be considered for open positions. Applicants may be shortlisted for interview and, if so, will be contacted directly by the Department. Late applications will not be considered.

## Closing Date

Please apply by 5pm on Friday 4 July 2025

Please submit applications directly to: [emma.whelan@mu.ie](mailto:emma.whelan@mu.ie)



HR EXCELLENCE IN RESEARCH

