

DIAS

Institiúid Ard-Léinn | Dublin Institute for
Bhaile Átha Cliath | Advanced Studies

Two PhD studentships at the Dublin Institute for Advanced Studies (DIAS)

Applications are invited for two PhD studentships at the Dublin Institute for Advanced Studies (DIAS) in theoretical modelling and observational studies relating to star and planet formation. DIAS' Astronomy & Astrophysics Section is a vibrant and inclusive community of more than 40 researchers working on topics ranging from Star Formation to High-Energy Astrophysics. These projects are funded by Science Foundation Ireland (SFI) through two SFI-Irish Research Council Pathway Grants.

The successful applicant to the first project will be co-supervised by Dr Donna Rodgers-Lee and Prof Tom Ray. He/she will be involved in researching the impact of energetic particles on the atmospheres of exoplanets and protoplanetary disks around low-mass stars. The student will model the interaction of energetic particles with stellar winds.

The successful applicant to the second project will be co-supervised by Dr. Patrick Kavanagh and Prof Tom Ray. He/she will work with the Webb Space Telescope guaranteed time observations of SN1987A and its neighbourhood in the 30 Doradus star-forming region. The student will study young stellar objects in 30 Doradus to investigate the star formation process in the low-metallicity regime.

Excellent synergies exist between the theoretical modelling work and observations with Webb and ESA's upcoming Ariel mission that will characterise the atmospheres of exoplanets and protoplanetary disks. Dr Rodgers-Lee and Prof Ray are members of the Ariel consortium and Dr Kavanagh and Prof Ray are members of the Webb Mid-infrared Instrument (MIRI) European Consortium.

Requirements: applicants need to have gained a first class or upper second honours degree (or equivalent) or a master's degree in an appropriate subject e.g. astronomy or physics. A good command of English, to at least IELTS level 6.5, is required for international applicants. Experience with programming in C and python is advantageous.

Candidates should email a PDF copy of their transcript of records, CV (2 pages max.) and a cover letter explaining their motivation and research interests (1 page max.) to Eileen Flood (eflood@cp.dias.ie) by 8th April 2022, preferably as one PDF file. Candidates should also arrange for 2 letters of reference to be sent to Eileen Flood by the same date. Queries about the research topics can be sent to Donna Rodgers-Lee (drodgers@tcd.ie) or Patrick Kavanagh (pkavanagh@cp.dias.ie). Applicants must specify their preference for either the modelling or observational project.

The PhD studentships are funded for 4 years beginning by September 2022 and consist of a stipend (€18,500 per year tax-free), university registration fees, plus funds for a laptop and travel to conferences etc.

DIAS is committed to gender balance, diversity and inclusion