

Studying the prototype CMOS Image Sensor for the soft X-ray imager on THESEUS

Code: 21/03

Company: The Open University

Location: The Open University, Milton Keynes

Company Description:

The Open University is an internationally recognised research leader in planetary and space sciences and the development of space instrumentation. Covering a wide range of disciplines from astrobiology to electrical engineering, geochemistry to quantum physics; and technologies from electronic imaging to remote sensing, mass spectroscopy to novel sensors; Open University researchers are often found in key roles in international space science missions such as Rosetta, ExoMars, Euclid, JUICE and Athena; with much of the activities performed in collaboration with Space Agencies, Universities and companies around the World. This research also informs our world-leading teaching in the Physical Sciences, Engineering and Earth and Environmental Sciences

Project Description:

Transient High Energy Sky and Early Universe Surveyor (THESEUS) is one of the mission concepts selected to enter assessment phase study for the European Space Agency's M5 mission. This space telescope will be able to explore the early Universe by unveiling a complete census of the gamma-ray bursts in the first billion year, and to perform an unprecedented deep monitoring of the X-ray transient Universe.

The team at the Open University's world-leading research centre, the Centre for Electronic Imaging, has been contracted by the European Space Agency to lead the development and the characterisation of prototype CMOS Image Sensors optimised for the Soft X-ray Imager instrument, but also capable to find use in terrestrial applications. The internship will be a great opportunity to learn and to be among the first to apply modern characterisation techniques to the world's first CMOS Image Sensor optimised for soft X-ray applications.

The project offers the applicant:

A clear goal will be agreed upon at the start of the internship, depending on the intern's specific interests, skillset and background and current progress in the TDE/TDA work packages. The intern's project goal will be designed to fit in with the THESEUS team, and either assist in currently planned work or carry out extension work.

Person specification:

This internship would suit a keen and enthusiastic individual with a background in Physics, Engineering, or a related discipline, who is looking to gain experience in the field of space instrumentation. Experience in MATLAB and/or Python programming and general laboratory equipment (vacuum systems, temperature controllers) would be desirable but similar experience and a desire to learn are equally valued.

Further details:

8 weeks minimum fixed term contract to be agreed with successful candidate but nominally with a start date around June 2021 to attend the SPIN Induction day hosted by the Satellite Applications Catapult, and completion before September 2021 for the Showcase that month. Salary is £1,500 per calendar month gross.

Closing Date for Applications: 5pm on Friday 29 January 2021

Applications should be made through the online form attaching a CV, before the closing date. Please note that elements of the form left incomplete will be deemed to render the application ineligible. They will be checked for eligibility and forwarded to the employer.