

## **A faster global climate model for Mars**

**Code:** 19/34

**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:**

We use a leading Mars global climate model (MGCM) to simulate the weather and climate of the planet. Any improvements that could be made to the performance of the MGCM would be valuable, permitting researchers to model the present day in more detail or to conduct longer climate simulations. This project will test different options for running the MGCM, e.g. making better use of parallel computing facilities. A candidate will conduct a high-resolution MGCM experiment, and could produce innovative output visualisations, but prior knowledge of atmospheric science is unnecessary.

### **Applicant Specification:**

Project holder responsibilities:

1. Learn to run the MGCM and operate it at different resolutions
2. Test different compiler and parallelisation options
3. Document results

The project offers the applicant:

- To chance to work with other researchers in planetary science
- Development of skills in programming and running codes in parallel
- Opportunities to develop good analytical skills

**Minimum Requirements:**

- Studying for a degree in Physics/Maths/Computing or related numerate field
- Some knowledge of computer programming, for example FORTRAN
- Able to plan individual workload

**Further details:**

8 weeks fixed term contract to be agreed with successful candidate but nominally with a start date 1<sup>st</sup> July, 2019 to attend the SPIN Induction day at the Satellite Applications Catapult, and completion before 20<sup>th</sup> September for the Showcase the following week. Salary rate is £22,659 per Annum gross.

**Closing Date for Applications: 5pm on Friday 31 May**

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.