Post-Doctoral Research Associate, LUVMI-X Surface Science Package

Fixed Term – 12 months
Full Time
Grade AC2
Walton Hall, Milton Keynes

The Role

Working as part of an interdisciplinary team, the post-holder will take a key role in designing and characterising a volatiles detection package intended for use in the ‘LUVMI’ system on the Moon. To be effective in this role, the post-holder will have experience in designing and undertaking testing of instrumentation in simulated extra-terrestrial environments and have an understanding of Lunar volatiles.

Key Duties

• To input into the design of, and analyse the results obtained from laboratory simulations of lunar analogues undertaken in the presence and absence of low temperature water
• To develop methodologies and approaches to facilitate the sampling, preparation and analysis of volatiles from these simulation experiments
• To undertake and characterize evolved volatiles in the laboratory and support testing during rover integration activities
• Conduct individual and collaborative research projects.
• Write up research work for publication.
• Continually update knowledge and understanding in field or specialism
• To contribute expertise and scientific ideas to research projects, methodologies and teaching areas as appropriate
• Disseminating results by presenting findings at project workshops, international conferences and workshops
• Carrying out administrative tasks associated with the work, such as risk assessments
• Undertaking any other duties, where required, as directed by the PI on the project

Other Duties

• Comply with the University’s Health and Safety and Equal Opportunities policies in the performance of their duties.
• Take reasonable care of the Health and Safety of themselves and that of any other person who may be affected by their acts or omissions at work.
• Co-operate with the Open University in ensuring as far as is necessary, that Statutory Requirements, Codes of Practice, University Policies and Departmental Health and Safety arrangements are complied with.
• Have a strong commitment to the principles and practice of equality and diversity.
• Attend appropriate staff development events
Person Specification

Skills and Experience

Essential

- PhD in Physics, Planetary Science or Engineering (completed or shortly obtained)
- Experience in the design, development and test of space instrumentation
- Experience in working with Lunar analogue materials
- Experience in operating analytical instrumentation
- Experience in using qualitative and/or quantitative research methods
- Demonstrated knowledge of vacuum systems
- Experience of working across discipline boundaries and in interdisciplinary teams
- A demonstrated track record of communicating research results through peer reviewed publications and conference proceedings
- Ability to plan and prioritise own workload and work to agreed deadlines
- Solving problems: Experience of analysing problems and working creatively to develop innovative and workable solutions
- Communication skills: Both oral and written in a variety of contexts, including the ability to offer and receive constructive criticism
- Time management: Ability to plan and organise work to agreed deadlines
- Fostering high performance: Demonstration of taking full responsibility and accountability for tasks while making effective use of available resources, information and feedback to improve efficiency, productivity and overall performance.
- Respecting the individual: Demonstration of a personal commitment to developing interpersonal skills, with an understanding of impact on individuals, respecting and valuing diversity

Desirable

- Knowledge of instrumentation control techniques
- Knowledge of programming for laboratory automation
- An understanding of Lunar volatiles and their distribution
- Ability to organise and statistically analyse data sets
- Evidence of, or potential for, a record of peer-reviewed publications and conference presentations
- Embracing change: The ability to work adaptively and responsively as the research develops
About the Unit

Faculty of Science, Technology, Engineering & Mathematics

The Faculty of Science, Technology, Engineering and Mathematics (STEM) is comprised:

- School of Computing & Communications
- School of Environment, Earth & Ecosystem Sciences
- School of Engineering & Innovation
- School of Life, Health & Chemical Sciences
- School of Mathematics & Statistics
- School of Physical Sciences
- Knowledge Media Institute
- Deanery including teams supporting Curriculum, Research and Enterprise, Laboratory Infrastructure and Faculty Administration

“We aspire to be world leaders in inclusive, innovative and high impact STEM teaching and research, equipping learners, employers and society with the capabilities to meet tomorrow’s challenges”

The Faculty of STEM consists of 2500 staff including 1,800 Associate Lecturers. The Faculty delivers over 185 modules across undergraduate and postgraduate curriculum, supporting nearly 19,000 students (full time equivalents) which is 29% of the OU total.

The Faculty generates more research income (circa £17M) than any other Faculty in the University, supported by a comprehensive laboratory infrastructure.

We are proud of our distinctive values and capabilities underpinning our aspiration:

**We are inclusive:**
- We transform people’s lives, ensuring STEM education is openly accessible to many thousands of students from diverse backgrounds – our students express high satisfaction with their study experience.
- We engage the public in exciting citizen science and engineering, including through free open educational resources, multi-platform broadcasting, outreach to inspire the next generation and with programmes to encourage more women into STEM.

**We are highly innovative:**
- We are at the forefront of innovative developments in teaching practical science and engineering at a distance, through simulated and remote access laboratories and practical experimentation.
- Our high-quality teaching and curriculum are informed by world-leading research, strong links with professional bodies and communities of practitioners, as well as by scholarship focused on continuously improving our STEM pedagogy.

**We deliver significant social and economic impact:**
- We provide STEM higher education at a scale and reach unsurpassed in the UK, with a sizeable international reach and further growth potential.
- We inject transferable STEM skills and knowledge direct into the workplace for immediate employee and employer benefit, as students combine study while working.
- The employability value of our courses is underpinned by accreditation from leading STEM Professional Bodies and Learned Societies, as well as partnerships and sponsorship with leading employers.
- Our high-quality, applied and academically relevant teaching and research addresses real-world issues, delivering impact for industry and society, including addressing pressing STEM skill shortages across the UK.