

THE POST

College:	College of Engineering, Mathematics and Physical Sciences
Post:	Graduate Research Associate / Postdoctoral Research Associate
Reference No:	P62624
Grade:	E
HERA:	PRA/GRA
Reporting To:	Dr Xiaoyu Yan

The above full time post is available immediately for 16 months the College of Engineering, Mathematics and Physical Sciences. The role will be based at our Penryn campus, near Falmouth, in the Environment and Sustainability Institute (ESI), a 30 million pound interdisciplinary centre leading cutting-edge research into solutions to problems of climate change; in doing so we are enhancing people's lives by improving their relationships with the environment.

Job Description

Main purpose of the job:

The post will contribute to the [IMP@ACT: Integrated Mobile modularised Plant and Containerised Tools for Selective, Low-impact Mining of Small High-grade Deposits](#) project funded by the EU. This job role will conduct a technical and financial feasibility study on the use of a suite of renewable energy supply options for a novel Mobile Modular Plant (MMP) system designed to improve the viability of many critical metal and other small complex deposits. Energy demand and resulting greenhouse gas emissions will be calculated for conventional and renewable energy supply and demand scenarios. The post holder will work with a diverse group of research partners at Exeter and beyond to collect and synthesise the data necessary for the feasibility study. The successful applicants will be involved interdisciplinary and international teams and be a strong team player.

Main duties and accountabilities (Graduate Research Associate):

1. To support research activity under the direction of the principal investigator as appropriate to the research project. Responsibilities may include:
 - Undertaking a broad range of basic research activity according to the nature of the research project. For example preparing, setting up, conducting and recording the outcome of experiments and field work, developing questionnaires and conducting surveys, using straightforward mathematical modelling, statistical techniques or scientific computation;
 - Maintaining databases, keeping accurate written and computerised records and ensuring data is stored securely and managed in accordance with the Data Protection Act;
 - Conducting literature and database searches as required;
 - Writing up the results of own research;
 - Contributing to the production of research reports and publications;
 - Presenting information on research progress and outcomes to bodies supervising research, e.g. steering groups, sponsors or members of research groups;
 - Assisting in the preparation of papers or reports for steering groups and other bodies;
 - Providing administrative support to the principal investigator and other project researchers as required;
 - Making use of standard research techniques and methods;
 - Analysing and interpreting the results of own research and generating original ideas based on outcomes;
 - Contributing to the planning of future research projects.

2. To support teaching activity by assisting in the supervision of student projects and providing limited supervision or instruction to classes, if required.
3. To liaise with members of the research team and other colleagues as appropriate to the research project.
4. To establish internal and external contacts to develop knowledge and understanding and form networks for future collaboration.
5. To plan own day-to-day research activity within the framework of the agreed programme of research and co-ordinate own work with that of others in the group to avoid conflict or duplication of effort.
6. To use research resources, laboratories and workshops as appropriate and to adhere to safety procedures as appropriate. This may include wearing personal protective equipment, conducting risk assessments, reducing hazards and being responsible for the health and safety of others.
7. To engage in continuous professional development and to be responsible for continually updating own knowledge and understanding in field of study or specialism and for developing own skills.

This job description summarises the main duties and accountabilities of the post and is not comprehensive: the post-holder may be required to undertake other duties of similar level and responsibility.

Person Specification - Graduate Research Associate

Competency	Essential	Desirable
Attainments/Qualifications	Educated to first degree or master level in a Renewable Energy related field of study or equivalent experience.	
Skills and Understanding	Sufficient knowledge in renewable energy engineering and feasibility analysis and experience in relevant research methods and software tools.	Knowledge and/or experience in energy storage technologies and Life Cycle Analysis of energy systems
Prior Experience	Understanding of health and safety legislation.	
Behavioural Characteristics	<p>Ability to maintain accurate records.</p> <p>Ability to organise and prioritise own research work within the project framework.</p> <p>Good written and verbal communication skills.</p> <p>Computer literate.</p> <p>Good analytical skills.</p> <p>Able to liaise with colleagues and students.</p> <p>Able to build contacts and participate in internal and external networks for the exchange of information and collaboration.</p> <p>Actively participate as a member of a research team.</p> <p>Engage in continuous professional development.</p> <p>Understand equal opportunity issues as they may impact on areas of research content.</p>	
Circumstances	Willing to work flexibly to achieve project demands.	

Main duties and accountabilities (Postdoctoral Research Associate):

1. To undertake research as appropriate including:
 - Writing up research work for publication;
 - Making presentations at project meetings, national and international conferences and similar events;
 - Dealing with problems which may affect the achievement of research objectives and deadlines;
 - Analysing and interpreting the results of own research and generating original ideas based on outcomes;
 - Using new research techniques and methods;
 - Using initiative and creativity to identify areas for research, developing new research methods and extending the research portfolio;
 - Using creativity to analyse and interpret research data and draw conclusions on the outcomes.
2. To contribute to teaching and to be involved in the assessment of student knowledge including assisting in the supervision of student projects and in the development of student research skills.
3. To work in collaboration with colleagues as appropriate including:
 - Contributing to collaborative decision making within the research group;
 - Contributing to the production of collaborative research reports and publications.
 - Preparing papers and presenting information on research progress and outcomes to bodies supervising research, e.g. steering groups.
4. To communicate complex information, orally, in writing and electronically.
5. To prepare proposals and applications to external bodies, e.g. for funding and contractual purposes
6. To contribute to the planning of research projects.
7. To use research resources, laboratories and workshops as appropriate and to take responsibility for reducing hazards and for the health and safety of others. Where appropriate, will also be responsible for conducting risk assessments.
8. To monitor research budgets as appropriate.
9. To engage in continuous professional development and to be responsible for continually updating knowledge and understanding in field of study or specialism and for developing skills.

This job description summarises the main duties and accountabilities of the post and is not comprehensive: the post-holder may be required to undertake other duties of similar level and responsibility. Please visit the Human Resources website to view the Research Associate role profiles.

Person Specification – Postdoctoral Research Associate

Competency	Essential	Desirable
Attainments/Qualifications	PhD (or be nearing completion) or equivalent qualification/experience in Renewable Energy.	
Skills and Understanding	Sufficient knowledge in renewable energy engineering and feasibility analysis and experience in relevant research methods and software tools.	Evidence of research activity and published research; Knowledge and/or experience in energy storage technologies and Life Cycle Analysis of energy systems.
Prior Experience	Understanding of health and safety legislation	
Behavioural Characteristics	Excellent written and verbal communication skills.	

	<p>Able to communicate material of a specialist or highly technical nature.</p> <p>Able to manage research and administrative activities and to balance the competing pressures of research and administrative demands and deadlines.</p> <p>Able to liaise with colleagues and students. Able to build contacts and participate in internal and external networks for the exchange of information and collaboration.</p> <p>Actively participate as a member of a research team.</p> <p>Engage in continuous professional development.</p> <p>Understand equal opportunity issues as they may impact on areas of research content.</p>	
Circumstances	Willing to work flexibly to achieve project demands	Experience of completing professional quality deliverables to schedule.

Terms & Conditions

Our Terms and Conditions of Employment can be viewed [here](#).

Further Information

Please see our [website](#) for further information on working at the University of Exeter.