

THE POST

College/Service: College of Engineering, Mathematics and Physical Sciences

Post: Postdoctoral Research Fellow

Reference No: P57189

Grade: F

Reporting To: Dr Yang Liu

The above full-time post is available from October 2017 until March 2019 in the College of Engineering, Mathematics and Physical Sciences.

Job Description

Main purpose of the job:

The project aims to develop a novel control strategy for multistable engineering systems in order to maintain their performance within a satisfactory level by implementing an energy-optimal steering. The work will focus on the study of a novel non-smooth dynamical system, namely the vibro-impact capsule system, through both theoretical development and experimental validation. The post holder will be responsible for experimental rig design, control strategy design and optimization, experimental validation, and co-supervision of PhD students.

Main duties and accountabilities:

To undertake research as appropriate to the field of study. The responsibilities may include all or some of the following:

- Acting as principal investigator on research projects;
 - Developing research objectives, projects and proposals;
 - Conducting individual or collaborative research projects;
 - Identifying sources of funding and contributing to the process of securing funds;
 - Extending, transforming and applying knowledge acquired from scholarship to research and appropriate external activities;
 - Writing or contributing to publications or disseminating research findings using media appropriate to the discipline;
 - Making presentations at conferences or exhibiting work in other appropriate events;
 - Assessing, interpreting and evaluating outcomes of research;
 - Developing new concepts and ideas to extend intellectual understanding;
 - Resolving problems of meeting research objectives and deadlines;
 - Developing ideas for generating income and promoting research area;
 - Developing ideas for application of research outcomes;
 - Deciding on / following research programmes and methodologies, often in collaboration with colleagues and sometimes subject to the approval of the head of the research programme on fundamental issues.
2. To contribute to teaching and learning programmes in the School and to supervise postgraduate research students.
 3. To act as research team leader including:

- Mentoring colleagues with less experience and advising on their professional development;
 - Coaching and supporting colleagues in developing their research techniques;
 - Supervising the work of others, for example in research teams or projects;
 - Developing productive working relationships with other members of staff;
 - Co-ordinating the work of colleagues to ensure equitable access to resources and facilities;
 - Dealing with standard problems and help colleagues to resolve their concerns about progress in research.
4. To routinely communicate complex and conceptual ideas to those with limited knowledge as well as to peers using high level skills and a range of media and to present the results of scientific research to sponsors and at conferences.
5. As determined by the nature of the project and at the direction of the PI, to plan, co-ordinate and implement research programme activity including:
- Managing the use of research resources and ensure that effective use is made of them;
 - Monitoring and reporting on the use of research budgets;
 - Helping to plan and implement commercial and consultancy activities;
 - Where appropriate, to plan and manage own consultancy assignments.

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 Fellow role profiles.

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Person Specification

Competency	Essential	Desirable
Attainments/Qualifications	PhD or equivalent qualification/experience in a related field of study.	Be a nationally recognised authority in the subject area.
Skills and Understanding	Possess sufficient specialist knowledge in the discipline to develop/follow research programmes and methodologies. Record of research output in high quality publications.	
Prior Experience	Experience of managing research projects and research teams.	Experience of undergraduate /postgraduate teaching and supervision. Experience of acting as principal investigator on research projects.
Behavioural Characteristics	Excellent written and verbal communication skills. Able to communicate complex and conceptual ideas to a range of groups. Evidence of the ability to collaborate actively within the Institution and externally to complete research projects and advance thinking.	Able to identify sources of funding, generate income, obtain consultancy projects, or build relationships for future activities.

	<p>Able to participate in and develop external networks.</p> <p>Able to balance the pressures of research, administrative demands and competing deadlines.</p>	
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Informal Enquiries

Before submitting an application you may wish to discuss the post further by contacting Dr Yang Liu, Lecturer in Engineering, telephone (01392724654) and email y.liu2@exeter.ac.uk .

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.