



THE POST

College:	<u>College of Engineering, Mathematics and Physical Sciences</u>
Post:	Research Fellow (PDRF)
Reference No:	R68140
Grade:	F
HERA:	RFEL
Reporting To:	Dr Albert Chen

Job Description

The College of Engineering, Mathematics and Physical Sciences wishes to recruit a Research Fellow to participate in EU H2020 SIM4Nexus (Sustainable Integrated Management FOR the NEXUS of water-land-food-energy-climate for a resource-efficient Europe), NEXTGEN (Towards a next generation of water systems and services for the circular economy) and Fiware4Water (FIWARE for the Next Generation Internet Services for the WATER sector) projects.

Main purpose of the job:

The successful applicant will focus on the research methodology and the development of Serious Games for the Water-Energy-Food Nexus to promote dialogue and awareness for the engagement with stakeholders and citizens. The role will support the Centre for Water Systems team to implement cutting-edge technologies in the creation of cross-platform applications for multi-user collaboration.

The post will include conducting research on the above listed subjects. Travel to meetings and workshops in overseas countries during the post will be required.

Main duties and accountabilities:

1. To undertake research as appropriate to the field of study. The responsibilities may include all or some of the following:
 - 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
 - Design, code and test the software for water system modelling;
 - To write up the results of your own research and contribute to research reports/publications;

- To present findings of research e.g. prepare papers, make presentations with guidance and advice as appropriate;
 - Analysing and interpreting the results of own research and generating original ideas based on outcomes;
 - Using new research techniques and methods;
 - 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 to the field of study 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. advisory board.
 4. 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
 5. 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.
 6. To use research resources, laboratories and workshops as appropriate and to take responsibility for conducting risk assessments, reducing hazards and for the health and safety of others.
 7. 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.
 8. 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 ensuring 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.

Person Specification

Competency	Essential	Desirable
Attainments/Qualifications	Strong experience in gaming industry, computer science or related fields.	PhD degree.
Skills and Understanding	<p>Software development experience.</p> <p>Excellent skills in web programming centred on Javascript.</p> <p>Experience in Unity3D and Python programming.</p> <p>Successful experience in developing games for computer desktops and portable devices.</p> <p>Creative thinking and capacity to develop innovate solutions for public engagement.</p> <p>Ability to communicate effectively, both orally and in writing.</p>	<p>Experience in D3js, Three.js, R and Unreal engine.</p> <p>Expertise in Serious Game development, data visualisation and machine learning.</p> <p>Sufficient knowledge in the discipline and of research methods and techniques to work within established research programmes.</p> <p>Good understanding of environmental sciences.</p> <p>Experience in GIS applications and programming.</p>
Prior Experience	Undergraduate-level knowledge in a relevant discipline.	Experience of conducting risk assessments and understanding of health and safety legislation.
Behavioural Characteristics	<p>Ability to work unsupervised and to use initiative.</p> <p>Able to maintain accurate research records.</p> <p>Able to communicate material of a specialist or technical nature.</p> <p>Actively participate as a member of a research team.</p> <p>Engage in continuous professional development.</p> <p>Excellent written and verbal communication skills.</p> <p>Able to communicate complex and conceptual ideas to a range of groups.</p> <p>Able to participate in and develop external networks.</p> <p>Able to balance the pressures of research, administrative demands and competing deadlines.</p>	<p>Able to liaise with colleagues and students.</p> <p>Able to identify sources of funding, generate income, obtain consultancy projects, or build relationships for future activities.</p> <p>Evidence of the ability to collaborate actively within the Institution and externally to complete research projects and advance thinking.</p>

Informal Enquiries

Before submitting an application you may wish to discuss the post further by contacting Dr Albert Chen (+44 (0)1392 724075) or a.s.chen@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.