

Job Title: Research Associate
Grade: 7
Salary: £34,189 to £39,609 per annum
Department: Engineering
Hours/Contract: Full-time fixed term contract for 24 months with possible extension, subject to funding
Reference: 808

Role Purpose

Mechanics of Materials Research Group at University of Leicester is seeking to appoint a Research Associate based at Department of Engineering. You will work primarily with Prof Bo Chen on his recently awarded EPSRC Early Career Fellowship in Nuclear Fission.

Your role is to use high-end microstructural characterisation facilities that include Focused Ion Beam, High-Resolution Transmission Electron Microscopy and Atom Probe Tomography to study long-term microstructural degradation of 316L(N) stainless steel subject to creep-fatigue loads. You will work closely with academic and industrial collaborators from University of Oxford, EDF Energy UK and Wood as well as several Prof Chen's international research partners at Europe and China working on advanced sodium-cooled fast nuclear reactors.

You will be based in Department of Engineering, and will be jointly supervised by Prof. Bo Chen and Prof. Hongbiao Dong, supporting a range of research projects in their group. You will undertake frequent travels to Oxford Materials and spend a significant amount of time at Oxford working with Prof. Chen's research partner, Prof. Michael Moody, (Professor of Materials and Fellow of Trinity College) on advanced microstructural characterisation particularly by the use of atom probe tomography. You will also undertake travel within the UK and internationally.

Main Duties and Responsibilities	% Time
<ul style="list-style-type: none"> • Plan and manage own research activity, including <ul style="list-style-type: none"> ○ Designing, conducting and recording outcome of advanced microstructural characterisation ○ Designing and conducting literature and database searches and preparing reviews of findings ○ Analysis, interpretation and evaluation of research outcomes 	45
<ul style="list-style-type: none"> • Develop research objectives and proposals for own or joint research under the direction of the Principal Investigator 	10
<ul style="list-style-type: none"> • Communicate complex research information using a range of methods and media, including to the public where appropriate. This may include material of a specialist or highly technical nature 	5
<ul style="list-style-type: none"> • Undertake (co-)supervision of PhD students and small-scale projects 	5
<ul style="list-style-type: none"> • Continually update knowledge and understanding in the discipline and develop new research techniques and approaches to enable contribution within established research programmes 	3

<ul style="list-style-type: none"> To undertake the publication of your research results and outcomes with a view to developing a national/international profile. Contribute to REF impact rated nationally/internationally excellent by publishing peer-reviewed papers at top journals in the field 	20
<ul style="list-style-type: none"> Build or help to maintain internal and external contacts and networks 	10
Internal and External Relationships	
<p>You will work closely with Prof. Bo Chen and Prof. Hongbiao Dong.</p> <p>Frequent collaboration with Prof. Michael Moody (Professor of Materials and Fellow of Trinity College, Oxford Material).</p>	
Planning and Organising	
<p>Responsible for planning own workload.</p> <p>Managing own time to ensure tasks are completed to appropriate deadlines, including conference and journal paper submissions.</p>	
Qualifications, Knowledge and Experience	
Essential	
<ul style="list-style-type: none"> PhD in a relevant subject or having submitted a PhD dissertation by March 2019* Good first degree (1st class or 2.1) in an appropriate subject such as Materials or Mechanical Engineering* Expert knowledge of discipline in a field relevant to physical metallurgy of steels or relevant metallic materials, or solid mechanics* FIB-SEM expertise (must have working experience) for advanced microstructural characterisation. Working experience on TEM and/or APT* Research sufficient to produce excellent, high-quality publications and to communicate the results of their work to the wider public* 	
Desirable	
<ul style="list-style-type: none"> PhD in Materials or Mechanical Engineering (Solid Mechanics)* Prior research experience related to Nuclear Energy or Conventional Power Plant* Demonstrable up to date knowledge and understanding of relevant discipline and contribute to innovation and development in own field Experience of collaborative, interdisciplinary or cross-disciplinary research* 	
Skills, Abilities and Competencies	
Essential	
<ul style="list-style-type: none"> Ability to manage time and work to strict deadlines 	



- Ability and track record to produce excellent, high-quality peer-reviewed journal publications and present at national/international peer-reviewed conferences and events*
- Ability to lead and/or take responsibility for a small research project or identified parts of a large project
- Excellent interpersonal, oral and written communication skills, using a range of media*
- Ability to collaborate with other researchers and produce appropriate collaborative outputs
- Highly self-motivated and organised, flexible, independent, innovative, and able to tolerate working with different styles
- Willingness to travel nationally and internationally

Desirable

- Ability to manage a research project including supervision of the work of others and/or provision expert advice and guidance to teams
- Competency to conduct individual and collaborative research projects
- Aptitude for working as part of a team
- Flexible approach to work

****Criteria to be used in shortlisting candidates for interview***

VITAL

The University encourages all staff to live our [VITAL values](#) which are:
Valuing People, Innovators, Together, Accountable, Leaders.

Equality and Diversity

We believe that equality, diversity and inclusion is integral to a successful modern workplace. By developing and implementing policies and systems that challenge stereotypes across all aspects of our work, we have a culture that recognises and values the diverse contributions of our staff which benefits everyone. Our strong values of inclusivity and equality support our efforts to attract a diverse range of high quality staff and students, and identify our University as a progressive and innovative workplace that mainstreams equality, diversity and inclusion.

