



**Job Title:** Research Associate in high-temperature creep and creep-fatigue  
**Grade:** 7  
**Salary:** £38,205 per annum pro rata due to funding restrictions  
**Department:** School of Engineering  
**Hours/Contract:** Part time (0.5FTE, 18.75 hours per week), fixed term contract until 28 February 2025  
**Job Family:** Research  
**Reference:** 10488

## Role Purpose

You will work with Prof Bo Chen on an EPSRC funded programme on high-temperature creep and creep-fatigue of austenitic stainless steel.

You will work in renowned research team carrying out high-quality research across advanced microstructure characterisation, large-scale experimental facilities as well as computational modelling. The role offers opportunity for industrial collaboration. You will be supported to grow their expertise into the role and lead their own activities within the team. You will also undertake travels within the UK and internationally.

This is a microstructure characterisation focused role. 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 Type 316 stainless steel subject to creep-fatigue loads.

## Main Duties and Responsibilities

- Plan and manage own research activity, including:
  - 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.
- 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.
- Develop research objectives and proposals for own or joint research under the direction of the Principal Investigator.
- Undertake (co-)supervision of PhD students and small-scale projects.
- Continually update knowledge and understanding in the discipline and develop new research techniques and approaches to enable contribution within established research programmes.
- Build or help to maintain internal and external contacts and networks.

## Internal and External Relationships

- You will work closely with Prof. Bo Chen and the project partners





- Frequent travels within the UK are expected in particular to the Oxfordshire and Manchester areas

## Planning and Organising

- Responsible for planning own workload.
- Managing own time to ensure tasks are completed to appropriate deadlines, including conference and journal paper submissions.

## Qualifications, Knowledge and Experience

### Essential

- PhD in a relevant subject area\*
- 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.
- Demonstrable track record in performing advanced electron microscopy and data analysis\*

### Desirable

- Working knowledge on crystal plasticity modelling and/or material constitutive laws

## Skills, Abilities and Competencies

### Essential

- Ability and track record to produce excellent, high-quality peer-reviewed journal publications and present at national/international peer-reviewed conferences and events.\*
- Willingness to travel nationally and internationally if required.
- Ability to manage time and work to strict deadlines.

### Desirable

- Ability to manage a research project including supervision of the work of others and/or provision expert advice and guidance to teams.
- Excellent interpersonal, oral and written communication skills, using a range of media.
- Highly self-motivated and organised, flexible, independent, innovative, and able to tolerate working with different styles.

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

## Reason for Fixed Term Contract

The reason for the fixed term contract is stated in section 1.9 in the summary of contractual terms in your contract of employment.





### Criminal Declaration

If you become an employee, you must inform your manager immediately, in writing, if you are the subject of any current or future police investigations/legal proceedings, which could result in a criminal offence, conviction, caution, bind-over or charges, or warnings.

### Supporting University Activities

As a University of Leicester citizen, you are expected to support key university activities such as clearing, graduation ceremonies, student registration and recruitment open days. We expect all staff as citizens to work flexibly across the University if required.

### University Values

**Inclusive** - We are diverse in our makeup and united in ambition. Our diversity is our strength and makes our community stronger.

**Inspiring** - We are passionate about inspiring individuals to succeed and realise their ambitions. We challenge our community to think differently, to get involved, and to constantly embrace new ideas.

**Impactful** - As Citizens of Change we will generate new ideas which deliver impact and empower our community

### Equity and Diversity

We believe that equity, 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 equity 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 equity, diversity and inclusion.

