



Previous examples of job descriptions for  
NextCOMP Post-doctorial Research  
Assistant/Associates

# Example One

## Purpose of the Post

The post is funded by the EPSRC to investigate the design, synthesis, and prototyping of bio-inspired high-performance carbon-fibre composite micro-structures for improved damage tolerance.

The post will involve carrying out research programmes in bio-inspired advanced engineering composites, undertake project management and/or supervise multi-disciplinary teams.

In addition, the Research Associate will be expected to submit publications to refereed journals. There will be opportunities for travel and for close interaction with world leading academic/industrial project partners.

## Key Responsibilities

### Main Duties:

- To design (numerically or analytically as appropriate) of bio-inspired composite microstructures for improved damage tolerance
- To synthesise said micro-structures for the manufacture of specimens
- To identify and develop suitable techniques, and apparatus, for the collection and analysis of data
- To verify experimentally the predicted performance
- To identify and investigate opportunities for demonstrating the merits of newly-developed solutions to industry
- Assist with the analysis of data
- Ensure the validity and reliability of data at all times
- Maintain accurate and complete records of all findings
- Assist with the writing of reports to research sponsors
- Present findings to colleagues
- Provide advice to other staff and students
- Assist with the publication of findings
- Attend relevant workshops and conferences as necessary
- Develop contacts within the College and the wider community
- Promote the reputation of the Group, the Department and the College

### In addition, at Research Associate level:

- Take initiatives in the planning of research
- Direct the work of small research teams
- Write reports for submission to research sponsors
- Submit publications to refereed journals
- Provide guidance to staff and students
- Provide guidance to PhD Students
- Contribute to bids for research grants
- Conduct and plan own scientific work with appropriate supervision.
- Maintain highly organised and accurate record of experimental Work.
- Actively participate in the research programme of the Group
- Publish in high quality journals and to present data at national and international meetings.

- Participate in Group research meetings and internal seminars.
- Collaborate with other allied scientists within Imperial College and elsewhere in London and abroad, as appropriate.
- Contribute to the smooth running of the Group's laboratories and, facilities with other scientists, clinicians, technicians and students within the laboratories.
- Assist in the supervision of undergraduate and postgraduate research students and research assistants as required.

Where Imperial or funder conditions necessitate, you will be required to complete timesheets for your work on projects in a timely manner.

#### Other Duties

- Undertake any necessary training and/or development
- Undertake appropriate administration tasks
- Attend relevant meetings

## Example Two

### Main Job Purpose

NextCOMP is a collaboration between University of Bristol and Imperial College London with multiple industrial and academic partners and funded by EPSRC until June 2025. The NextCOMP programme is working on developing the next-generation of fibre composites, with improved compression performance. For this purpose, novel constituents (fibres, matrices) and new architectures are being developed, taking inspiration from nature.

### Main Statement of Responsibilities

- Undertake research to contribute to the research goals of the NextCOMP programme. Specifically, to develop novel solutions for enhancing the compressive strength of composite materials.
- To create novel hierarchical microstructures to control matrix shear instability and achieve higher compressive strength.
- Design, trial and validate specimen and rig manufacturing methods producing manufacturing drawings as required for the project.
- Undertake experiments and analyse results including post-mortem analysis of specimens using micrography and Xray tomography.
- Participate in relevant project meetings; prepare and present talks, posters and reports to disseminate the results of the research.
- Prepare progress reports against project milestones and deliverables.
- Participate in national and international conferences and workshops to present the results of the project to a wider audience and to learn about current advances in the field.
- Prepare conference and journal papers for publication of project findings.
- Collaborate with project partners on our portfolio of projects and other relevant stakeholders in the context of the research.