Title: Compression Properties of Bioinspired Composites

Type of award  PhD Research Studentship

Department  Aerospace Engineering

Scholarship  A minimum £15,009 p.a. for 2019/20 subject to eligibility criteria (please check below for further scholarship details)

Funding Duration  3.5 years

Eligibility  Home/EU applicants only

Start date  Sept/Oct 2020

PhD Topic Background/Description

Imperial College and the University of Bristol have been jointly awarded a major programme grant (£6m), by EPSRC, to fundamentally redesign high performance composite materials.

This “NextCOMP” programme focusses on the challenge of improving the absolute performance of composites in compression, both to address practical limitations of current materials, and as a demonstration of the value of quantitative hierarchical materials design. Tools and materials developed during this programme will be useful in a range of other contexts. The work will develop and embed structure at every lengthscale from the molecules of the matrix, to the lay-up of final components, using new constituents and new architectures, designed within a new analytical framework.

The programme will benefit from a highly creative and interdisciplinary approach amongst the core project term, amplified by contributions from leading international advisors and collaborators. An extensive group of industrial partners will contribute to the project, and help to develop the outputs, building on concept demonstrators designed during the programme. The scientific and technical results will be widely disseminated nationally and internationally, helping to ensure UK leadership in this key field.

This position will be based at the Bristol Composites Institute, under the lead supervision of Prof Steve Eichhorn (at University of Bristol), and will be co-supervised by Prof Milo Shaffer, at Imperial College London.

Further Particulars

Candidate Requirements

Applicants must hold/achieve a minimum of a master’s degree (or international equivalent) in an experimental physical science / engineering with an emphasis on materials science, composites engineering
The ideal candidate will be a highly creative experimental materials scientist/engineer, with a good understanding of composite materials, natural materials/biomimetics and composite theory. They will be able to contribute to idea generation, and new ways of looking at composite materials.

If English is not your first language, you need to meet this profile level:

**Profile E**

Further information about [English language requirements and profile levels](https://epsrc.ukri.org/skills/students/help/eligibility/).

**Scholarship Details**

This DTP studentship will cover the following for 3.5 years:

- Tuition fees at home / EU rate
- Tax free stipend
- Travel / consumables budget

These are open to UK students and EU applicants who have been resident in the UK for at least 3 years (some constraints are in place around residence for education).

[https://epsrc.ukri.org/skills/students/help/eligibility/](https://epsrc.ukri.org/skills/students/help/eligibility/). Candidates must also comply with the entry requirements of the PhD programme they wish to be considered for.

**Informal enquiries**

For informal enquiries, please email Professor Stephen Eichhorn; [s.j.eichhorn@bristol.ac.uk](mailto:s.j.eichhorn@bristol.ac.uk)

For general enquiries, please email [came-pgr-admissions@bristol.ac.uk](mailto:came-pgr-admissions@bristol.ac.uk)

**Application Details**

To apply for this studentship, submit a PhD application using our [online application system](http://www.bristol.ac.uk/pg-howtoapply).

Please select PhD Aerospace Engineering on the Programme Choice page and enter details of the studentship when prompted in the Funding and Research Details sections of the form with the name of the supervisor.

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