Title: High Temperature Composites (supported by Rolls-Royce plc)

**Type of award**  PhD Research Studentship

**Department**  Aerospace Engineering

**Details**  Scholarship covers full UK/EU (EU applicants who have been resident in the UK for 3 years prior to 1st September 2017) PhD tuition fees and a tax-free stipend at the current EPSRC rate (£14,553 p.a. in 2017/18), enhanced by an additional industrial top-up when all contracts are in place.

**Duration**  4 years

**Eligibility**  Home/EU applicants only

**Latest Start Date**  29 September 2017

**PhD Topic Background/Description**

An EPSRC Industrial CASE award PhD studentship is available at the University of Bristol in collaboration with Rolls-Royce plc. This project will investigate advanced thermosetting composites that are designed for continuous, high temperature operation (> 200 °C), allowing increased use of polymer composites in thermally critical applications (e.g. gas turbine engines). The project will focus on cost, processability, mechanical performance and durability at temperature. Novel polymers will be reinforced using carbon fibres to produce advanced composites, in order to examine their thermal and mechanical performance and ease of processing. The mechanisms by which the composites degrade at elevated temperatures will be studied in the Bristol Composites Institute using state of the art equipment. Some familiarity with chemical synthesis is advantageous.

You will work alongside experts in the Bristol Composites Institute (ACCIS) at Bristol and receive extensive training in polymer preparation and characterisation, manufacturing and testing of composite materials, and fire testing. You will also work closely with the project industrial partner, Rolls-Royce plc, to help you understand the technical challenges and to enable the results of your research to have a real influence in the aerospace sector.

**Further Particulars**

**Doing research at the University of Bristol**

The quality of research at the University of Bristol places it within the top five Universities in the UK based on the Research Excellence Framework and Times higher Education rankings 2014-15. The PhD candidate will be a part of a friendly and diverse community, with the Bristol Doctoral College (BDC) as the focal central coordinating facility. Alongside the specialist training the candidate will receive in PhD-specific topics, the BDC offers approximately 200 courses, interactive workshops and seminars as a part of the University’s Personal and Professional Development Programme for PGR
students. The BDC organises University-wide events and provides a hub of information, guidance and resources to help researchers to get the most of their time at Bristol.

**Candidate Requirements**
We are looking for an enthusiastic student with at least a 2:1 Honours degree in Engineering, Chemistry, Physics or Materials. Candidates should have a strong interest in composite materials.

**Scholarship Details**
Research Council £14,553 per annum, PhD tuition fees plus an industrial top-up when all contracts are in place.

**Informal enquiries**
For informal enquiries please email Dr Ian Hamerton, ian.hamerton@bristol.ac.uk

For general enquiries, please email gsen-pgrs@bristol.ac.uk

**Application Details**
To apply for this studentship submit a PhD application using our online application system [www.bristol.ac.uk/pg-howtoapply] and select the **Aerospace Engineering** programme.

Please ensure that in the Funding section you tick “I would like to be considered for a funding award from the Aerospace Department” and specify the title of the scholarship in the “other” box below with the name of the supervisor.

**Apply now**