Modelling the effect of voids in Composite Components

**Type of award**  PhD Research Studentship

**Department**  Aerospace Engineering

**Scholarship Details**  
- Subject to eligibility status and confirmation of award.

**Duration**  3.5 years

**Eligibility**  Home/EU (UK settled status) with permanent UK residency

**Start Date**  Available now, latest start 1 October 2021

**PhD Topic Background/Description**
Composite materials are critical for achieving the lightweight and fuel efficiency targets of modern aircraft; however, their manufacturing methods can produce significant and hard to control defects. Numerical simulation plays an important role in the design of composite components and so it is essential that computational methods are able to account for defects in the modelling process.

This project will focus on void type defects that occur in the manufacture of composite parts. Sponsored by BAE Systems and aligned with the multi-million-pound EPSRC CerTest project on Certification for Aerospace Design: Reshaping the Testing Pyramid that is developing a multi-scale modelling framework, that this research will form a part of.

The project will be based in the Bristol Composites Institute, a world-leading research centre at the heart of the UK Government Composites Strategy. The institute has over 150 researchers and works closely with the £60M National Composites Centre, which is a wholly owned subsidiary of the University, engaged with industry to fully exploit and develop composites technology.

Further details of our composites research can be found via [www.bris.ac.uk/composites/research](http://www.bris.ac.uk/composites/research) and for CerTest via [https://www.composites-certest.com](https://www.composites-certest.com)

**Further Particulars**

**Candidate Requirements**
Applicants must hold/achieve a minimum of a Master’s degree (or international equivalent) in a science, mathematics or engineering discipline. Applicants without a Master’s qualification may be considered on an exceptional basis, provided they hold a first-class undergraduate degree. Please note, acceptance will also depend on evidence of readiness to pursue a research degree.

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](http://www.bris.ac.uk/).
Scholarship Details
Minimum £15,285 p.a. (£15,609 in 2021/22) plus an industrial top-up (tbc). The scholarship will also cover the amount of tuition fees associated with UK-based students. Funding subject to eligibility status and confirmation of award.

Also open to EU applicants who have no restrictions on how long they can stay in the UK and have been ordinarily resident in the UK for at least 3 years prior to the start of the studentship (with some further constraint regarding residence for education).

For EPSRC funding, students must meet the EPSRC residency requirements

Informal enquiries
For questions about the research topic please contact Professor Stephen Hallett (Stephen.hallett@bristol.ac.uk) or Dr Luiz Kawashita at luiz.kawashita@bristol.ac.uk

For questions about eligibility and the application process please contact CAME Postgraduate Research Admissions came-pgr-admissions@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]

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

Deadline for applications: 30 May 2021.

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