**PhD Project Title:**

Layer-by-Layer Manufacturing of Complex Composites

<table>
<thead>
<tr>
<th><strong>Degree Programme</strong></th>
<th>PhD in Advanced Composites</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Department</strong></td>
<td>EPSRC Centre of Doctoral Training in Composites Science, Engineering and Manufacturing. This is based in the School of Civil, Aerospace and Mechanical Engineering.</td>
</tr>
<tr>
<td><strong>Scholarship</strong></td>
<td>This is a prestigious EPSRC studentship which covers full UK/EU (EU applicants who have UK residency) PhD tuition fees and a tax-free stipend the current RCUK rate, expected to be £15,285 in 2020/21. The PhD comes with a generous allowance for equipment, software, and conference travel.</td>
</tr>
<tr>
<td><strong>Funding Duration</strong></td>
<td>4 years</td>
</tr>
<tr>
<td><strong>Eligibility</strong></td>
<td>Home/EU applicants only</td>
</tr>
<tr>
<td><strong>Start date</strong></td>
<td>5 October 2020</td>
</tr>
</tbody>
</table>

**PhD Topic Background/Description**

In partnership with the Rolls-Royce Composites University Technology Centre and the EPSRC Future Composites Manufacturing Research Hub, an new PhD project titled “Layer-by-Layer Manufacturing of Complex Composites” will explore innovative routes to combine material placement, consolidation and curing of thermosetting composites into a single-stage additive layer manufacturing process. By bringing together the best aspects of automated fibre placement and 3D printing, high-value parts will be designed and made that are currently unfeasible with conventional technology. This project will deliver significant contributions to the field of composites by developing unique manufacturing techniques, optimising processing parameters through simulation, and assessing as-made quality in real-time.

The four-year Advanced Composites PhD programme is based in the EPSRC Centre of Doctoral Training in Composites Science, Engineering and Manufacturing. It comprises a one-year innovative taught component and a three-year research project (as specified above). The taught component will fast-track graduates with science and mathematics backgrounds to acquire core engineering skills, while engineering graduates will broaden their scientific knowledge before specialising in industrial application.

The three-year research project will be jointly supervised by the academic and industrial supervisors. It is an excellent opportunity to collaborate with a world leading research teams in composites, with links to the Rolls-Royce Composites UTC, the EPSRC Future Composites Manufacturing Research Hub, the National Composites Centre.

For more information on the programme structure and the opportunities available to you on this degree please visit the CDT website.
Further Particulars

Candidate Requirements
We're looking for exceptional students, with at least a high 2:1 Honours degree, from across all engineering and science subjects. See international equivalent qualifications on the International Office website.

Informal enquiries
For enquiries, please email the Centre of Doctoral Training - composites-cdt@bristol.ac.uk

Application Details
To apply for this studentship, submit a PhD application using our online application system.

Please select PhD Advanced Composites 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 Dr James Kratz.

Closing date for application: end of Sunday 12th July 2020

Apply now