PhD Project Title: Recycled carbon fibres for compounding

<table>
<thead>
<tr>
<th>Degree Programme</th>
<th>Advanced Composites PhD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department</td>
<td>EPSRC Centre for Doctoral Training in Composites Science, Engineering and Manufacturing. This is based in the School of Civil, Aerospace and Mechanical Engineering.</td>
</tr>
<tr>
<td>Scholarship</td>
<td>Funding is available for UK/EU students covering tuition fees and a tax-free stipend at the UKRI doctoral stipend level, which is expected to be £15,285 in 2020/21, plus a £1,500pa top-up. The PhD comes with a generous allowance for equipment, software and conference travel.</td>
</tr>
<tr>
<td>Funding Duration</td>
<td>4 years</td>
</tr>
<tr>
<td>Eligibility</td>
<td>Home/EU applicants only</td>
</tr>
<tr>
<td>Start date</td>
<td>21 September 2020</td>
</tr>
<tr>
<td>Supervisor</td>
<td>Dr Dmitry Ivanov</td>
</tr>
</tbody>
</table>

PhD Topic Background/Description

In partnership with ELG-CF, a new PhD project titled “Recycled carbon fibres for compounding” will explore the options for converting recycled carbon fibres into products that can be used for compounding. Recycled carbon fibres are by nature discontinuous, which would make them more suitable for compound production than virgin continuous fibres. However, they do present their own characteristics, such as a lower bulk density and different surface characteristics. This project will look at the possibilities and challenges of producing recycled carbon fibre-based options for compounding, with the aim of offering one or a set of industrial solutions. Some of the aspects expected to be explored as part of this project are:

- Processing steps required to achieve optimal recycled carbon fibre product
- Dust free
- Maximise fibre length when delivered to the start of the compounding process
- Preserve fibre length through the compounding process
- Tailor the fibre surface to improve compatibility with different polymers
- Stability of the product in storage

The end-users targeted for such applications are the automotive and electronic industries.

The four-year Advanced Composites PhD programme is based in the EPSRC Centre of Doctoral Training in Composites Science, Engineering and Manufacturing. It comprises one-year of innovative taught components and a three-year research project (as specified above). The taught components 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 compounding, injection moulding and high-volume requirements industries.

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 for 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.

Closing date for application: 31st July 2020

Apply now