

# Project 2

<b>Project Name/Research Title</b>	<b>Selective stiffness modification and performance prediction for composite components</b>
<b>Project Description</b>	<p>There has been a tremendous growth of utilizing Automated Fibre Placement (AFP) to manufacture highly precise components and large structures like fuselage panels and wing skins for high-end applications in aircrafts and next generation of space vehicles. This additive manufacturing technology is gaining popularity due to its fast rate of material deposition, repeatability, ability to produce parts with complex geometry and reduction of material waste.</p> <p>The PhD candidate will perform cutting edge research in selective stiffness modification and performance prediction of AFP. This entails the development of tools and technology to identify risks in the manufacturing process; locate likely defect locations; predict the as-manufactured properties; and predict the stiffness and strength of manufactured components.</p>
<b>Academic Expectations</b>	<p>The Ideal candidate will have the following qualities:</p> <ul style="list-style-type: none"><li>• you have a strong motivation for (and preferably a history of) conducting scientific research and working with complex questions;</li><li>• you possess structured and creative problem-solving abilities;</li><li>• you possess strong analytical and technical skills and take responsibility for the development of your work;</li><li>• you can work independently as well as in team;</li><li>• you have excellent English communication skills (written and presentation);</li><li>• knowledge of fibre reinforced polymer composites is an advantage;</li><li>• experience with computational mechanics is an advantage;</li><li>• experience with experimental work is an advantage;</li></ul>