

Catapult Researcher in Residence (RiR) Programme: Opportunity Description

Offshore Wind Turbine Blade Technology

Name of the Catapult (s)	High Value Manufacturing Catapult Offshore Renewable Energy Catapult
Location (s)	National Composite Centre (Bristol), Blyth or Glasgow ORE Catapult offices
Description of the Catapult(s)	<p>The Catapult centres are a network of not for profit world-leading centres designed to transform the UK’s capability for innovation in specific areas and help drive future economic growth.</p> <p>ORE is the leading technology innovation and research centre for offshore renewable energy. We aim to deliver the largest clean growth opportunity by accelerating the creation and growth of UK companies in offshore renewable energy. We enable and support the development of a vibrant indigenous supply chain, provide a clear route to market for innovative new companies and technologies, and direct and pull through applied research from the UK’s world-leading academic base. We will use our unique facilities and research and engineering capabilities to bring together industry and academia and drive innovation in renewable energy. (https://ore.catapult.org.uk/)</p> <p>The High Value Manufacturing (HVM) Catapult is the catalyst for the future growth and success of advanced manufacturing in the UK. Our 7 Technology and Innovation centres work with companies of all sizes to bridge the gap in – and accelerate the activity between – technology concept and commercialisation. Our centres offer access to leading edge equipment, expertise and an environment of company collaboration. (https://hvm.catapult.org.uk/)</p>
Description of the Challenge	<p>ORE Catapult and the National Composites Centre (As one of the 7 technology and Innovation centres of HVM Catapult) are actively engaged in supporting users, suppliers and legislators to maximise the through life benefits of their investments.</p> <p>Both Catapult centres are engaged in research programmes focused on the application of composite materials to enable a step change in technological developments within the energy sector.</p> <p>Context The ultimate potential of offshore renewables is a significant opportunity for the UK. The UK has sufficient natural resources to provide all our energy through offshore renewables whilst</p>

	<p>creating a plentiful supply to export to Europe.</p> <p>As the technological challenges for Offshore Wind energy progresses to larger Wind Turbines and in turn larger turbine blades, then significant materials challenges exist to understand the facets of maintaining the whole life performance of the advanced composite turbine blade structures. The blades are amongst the largest advanced composite primary structures in operation globally.</p> <p>Challenges</p> <p>Applications are being sought from candidates with relevant research expertise who can contribute to this field in areas such as (but not limited to):</p> <ul style="list-style-type: none"> • Blade erosion and composite repair techniques • Modelling and development of thick film adhesives • Increased speed/decreased costs for product verification and assurance • Repair of composites • Process induced blade composite fatigue modelling <p>Please contact us to discuss your project idea before you submit your application. This will ensure that it will be within the focus areas of both Catapults.</p> <p>derek.craig@ore.catapult.org.uk mike.hinton@hvm.catapult.org.uk</p>
<p>Researcher Specification</p>	<p>The candidate should possess an enhanced understanding of the subject area to develop the existing work within the current academic work on the topic.</p> <p>For this call, we are following the EPSRC Eligibility Criteria, if you have any queries about satisfying this criteria please contact us or EPSRC directly prior to submission.</p>
<p>Other Details</p>	<p>The aims of the Researchers in Residence (RiR) programme are to build connections, support pathways to impact, and knowledge exchange between academia and the Catapult centres.</p> <p>The output of this residency would include a report, and depending on the project, could include a prototype system to demonstrate the principles of a larger project.</p>
<p>Closing Date for Applications</p>	<p>17:00 (GMT) Friday, 21 September 2018</p>