



Researcher Position at NUI Galway Sensorised Composites (ComSense) Project

Duration: 13 Months

Salary: Up to €41,630 per annum, depending on qualifications and experience

Start Date: January 2019

NUI Galway is part of the Irish Composites Centre (IComp) research centre (www.icomp.ie). IComp was established in 2010 under the EI/IDA Technology Centres initiative. It is hosted by the University of Limerick (UL), working in partnership with NUI Galway (NUI Galway), University College Dublin (UCD) and Athlone Institute of Technology (AIT). IComp is the link between industry and the extensive resources dedicated to composite materials available in Irish third level institutions. Directed by our industry members, IComp's work is focused on solving technical challenges encountered on a daily basis and delivering research and development activity. IComp is supported by world-class academics and a dedicated team of highly-experienced researchers. The IComp team is helping to develop knowledge and skills within the Irish composites community enabling it to take advantage of the latest technology and be competitive in the growing global market.

IComp is funding the research project **Sensorised Composites (ComSense)**. The aim of ComSense is to enhance the ability to design and manufacture sensorised composite components via process optimisation, experimental testing & microscopy and computational modelling of sensorised composite products manufactured in Ireland. This project has the active support of 6 IComp member companies and is led by NUI Galway via Dr Noel Harrison and Dr William Ronan. An additional researcher will be recruited at UCD (led by Prof Denis Dowling), focusing on novel sensorised composite additive manufacturing methods including additive manufacturing. We are seeking expressions of interest and applications for this role at NUI Galway. This position at NUI Galway will also have the responsibility of project management.

The recruited researcher at NUI Galway will be responsible for the analysis and optimisation of traditional composite manufacturing methods including vacuum-assisted resin transfer moulding and autoclave manufacturing. This first task in this project will involve surveying the IComp industry members and scientific literature on the progress and challenges to date in the integration of sensors into composite structure. The primary difficulty in sensor integration is avoiding the introduction of structural weaknesses in the composite structure. Electrical, optical and wireless sensors offer contrasting benefits and challenges, and will be explored in this project. This project will also see the design and manufacture of a sensorised composite demonstrator product. The NUI Galway researcher will also help to position the ComSense consortium and IComp members for continued advanced and long-term degradation research, by aiding in H2020, InterREG etc research project applications.

Expected Qualification and Skills:

Applications are invited from high-achieving individuals with research experience in Mechanical, Energy Systems, Materials Engineering, Manufacturing or closely related disciplines. Candidates must have a minimum of 2.1 Honours Bachelor or Master degree and should have excellent written and oral communication skills (English), composite material and composite manufacturing experience, computational skills appropriate to the task (e.g. finite element analysis, multiscale material modelling, programming). Experimental, microscopy and electrical / optical sensor expertise are also highly advantageous. An engineering PhD qualification is desirable. Research project experience, including research project management, is also desirable.

How to Apply:

If you are interested in this post send your CV and brief cover letter by email (with "*IComp NUI Galway ComSense Researcher application*" in the subject line) to noel.harrison@nuigalway.ie as soon as possible. Informal enquiries are also welcome in advance of submitting your CV and letter. The formal application process will be via administrated by NUI Galway HR, further details will be provided.

