



HR EXCELLENCE IN RESEARCH

Research Associate in Sensorised Composites
Mechanical Engineering, School of Engineering,
College of Science and Engineering
NUI Galway
Ref. No. NUIG 204-19

Applications are invited from suitably qualified candidates for a full-time, fixed term position as a Research Associate in Sensorised Composites with Mechanical Engineering, College of Science and Engineering at the National University of Ireland, Galway.

This position is funded by the Irish Composites Research Centre (IComp) and is available from 27th November 2019 to contract end date of 31st May 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 by Dr Noel Harrison. An additional researcher has been recruited at UCD (led by Prof Denis Dowling), focusing on novel sensorised composite additive manufacturing methods including additive manufacturing. This position at NUI Galway will also have the responsibility of project management.

Job Description:

The successful candidate at NUI Galway will be responsible for the analysis and optimisation of sensor integration in traditional composite manufacturing methods including vacuum-assisted resin transfer moulding and autoclave manufacturing. Electrical, optical, printed 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.

Duties:

- Investigate existing sensor technologies
- Develop novel sensor and sensor integration methods
- Manufacture industry ready prototypes of sensorised composites.
- Seek follow on funding for composite sensor integration
- Engage with industry partners, including site visits and presentations
- Manage overall ComSense project including IComp reporting duties.
- Participate in research dissemination activities
- Contribute to undergraduate / postgraduate teaching via, for example guest lectures

Qualifications/Skills required:

Essential Requirements:

- Minimum H2.1 Degree or Master's Degree in Mechanical, Energy Systems, Materials Engineering, Manufacturing or closely related disciplines.
- Excellent written and oral communication skills (English)
- Composite material and composite manufacturing experience
- Experimental, microscopy and electrical / optical sensor expertise
- Computational skills appropriate to the task (e.g. finite element analysis, multiscale material modelling, sensor programming)
- Research project experience, including research project management

Desirable Requirements

- Industry experience.
- An engineering PhD qualification.
- Practical experimental / prototyping experience

Salary: €37,879 to €49,050 per annum (pro-rata)

Start date: Position is available from 27th November 2019

Continuing Professional Development/Training:

Researchers at NUI Galway are encouraged to avail of a range of training and development opportunities designed to support their personal career development plans.

Further information on research and working at NUI Galway is available on [Research at NUI Galway](#)

For information on moving to Ireland please see www.euraxess.ie

Further information about Mechanical Engineering is available at <http://www.nuigalway.ie/mecheng/> and about the Advanced and Sustainable Manufacturing and Materials Engineering Lab is available at <https://asmme.ie/>

Informal enquiries concerning the post may be made to Dr Noel Harrison (noel.harrison@nuigalway.ie)

To Apply:

Applications to include a covering letter, CV, and the contact details of three referees should be sent, via e-mail (in word or PDF only) to noel.harrison@nuigalway.ie

Please put reference number **NUIG 204-19** in subject line of e-mail application.

Closing date for receipt of applications is 5.00 pm Friday, 8th November 2019

Interviews are planned to be held on Friday, 15th November 2019

All positions are recruited in line with Open, Transparent, Merit (OTM) and Competency based recruitment

National University of Ireland, Galway is an equal opportunities employer.

