IMaR Technology Gateway – Mechatronics / Mechanical Engineering Research Assistant

The IMaR Technology Gateway in Munster Technological University, Kerry is part of the Enterprise Ireland Technology Gateway Network, a nationwide resource providing innovation support and near-to-market technology solutions for industry and commercial enterprises. The principal theme of IMaR is the synergy between mechanical, electronic, RFID and IIoT technologies for industrial / commercial applications. Research activities involve the development and integration of mechatronic and embedded systems, sensors, automation and robotics, instrumentation, Industrial Internet of Things (IIoT), and developing complete software solutions for intelligent systems including data/process analytics and artificial intelligence.

The overall mission of IMaR is to be industries partner of choice for the provision of innovative applied research and training, to support and deliver new product and business development and optimisation or enhancement of existing products and services. IMaR serves a broad spectrum of industries including Automotive, Heavy Engineering, Telecommunications, Pharmaceutical, Logistics, Production / Manufacturing, Environmental, The Marine, Healthcare and Agri-business. The IMaR Technology Gateway is embedded in the IMaR Research Centre and closely affiliated to the AgriTech Centre of Excellence (ACE) and the Ireland AgriTech Cluster and has access to the skills and expertise of over 40 full-time research professionals, expanding the Gateways' capabilities to autonomous vehicle technologies, augmented and virtual reality systems and engineering modelling and simulation.

MTU is a multi-campus technological university, contributing to the region through the provision of academic programmes that support student development and opportunities, education and research. Partnering with industry and community, MTU has an extensive regional footprint with six campuses across South-West Ireland and is investing in the future with state-of-the-art research, education, enterprise, cultural and sports facilities.

Position

We are looking for a **Mechatronics / Mechanical Engineering Research Assistant** to work within a team of mechanical, automation and electronic engineers in the development of a prototype laboratory testing automation solution for a major client in the food sector. The successful candidate will be responsible for:

- Researching aspects of the overall system architecture, based the system functional requirements specification, including equipment, software and control logic,
- Contributing to the development of outline design concepts and developing these into detailed electrical and mechanical designs,
- Specifying and sourcing automation equipment in consultation with suppliers and client company,
- Building sub-systems and working with the team on the overall Integration of the prototype system, including physical hands-on assembly, software development, test and de-bug
- Maintaining project documentation and contributing to the dissemination of research results through technical publications.

Qualifications and Experience

Applicants are required to have a minimum of a bachelor's degree in Electronic, Mechatronic or Control Engineering or Manufacturing or Mechanical Engineering degree with 1 - 2 years experience (after completion of his/her bachelors degree), either in an industrial or research setting.

Candidates *must demonstrate* the following:
- A good knowledge of and direct experience working with:
  - Industrial robotic and control systems, including for example; integration of automation, interfacing (HMI) and safety equipment and devices
  - CAD / solid modelling capabilities
- An appreciation of Lean manufacturing and six sigma principles *OR* a good knowledge of statistics
- An amplitude for hands-on working and problem solving
- Good organizational skills and an ability to manage his/her time resources and competing priorities.

The following skills / attributes are *desirable*:
- Simulation of automation systems (e.g. systems such as RoboDK and RobotStudio) or comparable experience in other engineering simulation systems such as Simulink or engineering modelling platforms such as FEA
  - Alternatively, candidates may have experience in theoretical aspects of robot operation, but in such cases, he/she must demonstrate hands-on problem solving experience
- Experience designing end-effectors for industrial robots
- Familiarity with scheduling paradigms and data analytics may be advantageous
- An ability to progress product ideas / technical concepts to prototype/final products
- Self-motivated, reliable with an ability to take ownership of technical problems
- A strong interest in emerging technologies and a strong motivation to develop a personal research profile and to contribute to the ongoing success of the IMaR Research Centre.

Duration of Contract
This position is for a fixed-term 18 month contract.

Salary

An attractive salary (€31,437) will apply to this post, dependant on the candidates experience and qualifications.

Application Procedure

All applications must be made online at www.mtu.ie/vacancies

Location

This position is located at the Munster Technological University Kerry campus and involves regular visits to industrial partners in the region and academic partners nationally. Tralee is situated in the South West of Ireland in County Kerry – an area world-famous for its natural beauty and quality of life and the location of many high-tech indigenous and multi-national organisations.

Informal Enquiries

Informal enquiries ONLY may be addressed to Prof. Joseph Walsh or Dr. John Barry, email: joseph.walsh@MTU.ie or john.barry@MTU.ie

Closing date for applications is 1pm on Friday, October 15th 2021

Applications received after the closing date will not be accepted.