IMaR Technology Gateway – Automation Research Engineer

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 motivated and creative **Automation Research Engineer** to work within a team of mechanical 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 lead the day to day activities and will be responsible for:

- Collaborating with the client in the development of the functional requirements specification,
- Research of system architecture, including equipment, software and control logic,
- Development of outline design concepts and detailed full system design (electrical and mechanical hardware and software),
- Development of prototype system simulation so as to minimise trial and error / optimisation during system physical build,
- Providing direction to research assistants and working with IMaR and client management to deliver a robust, configurable and effective prototype system,
- Project documentation including, change control and effectively disseminating the research results.

The successful candidate will have experience in mechatronic / automation technologies including industrial robot integration, industrial interfacing / communications systems, control panel design, HMI, safety, quality management systems and a reasonable understanding of statistics, data analytics and computer vision.

Qualifications and Experience

Applicants are required to have a minimum of a bachelor's degree in Electronic, Mechatronic or Control Engineering or another engineering / science degree with at least five years experience, either in an industrial

or research setting (or a combination of both). The candidate should have experience in stakeholder and project management.

Candidates must also demonstrate the following:
- An in-depth knowledge and hands on experience of:
  o Industrial robotic and related software systems
  o Simulation of automation systems (e.g. systems such as RoboDK, Robot Studio)
  o Industrial communications protocols (e.g., Profinet, Profibus, Modbus, Canbus)
  o Integration of automation, interfacing and safety equipment / devices
  o System control/electrical panel, HMI and safety protocols as per machine directives
- Programming skills (e.g., ROS, PLC programming)
- Familiarity with electronics and microcontrollers hardware and related programming.
- Strong organizational skills and an ability to manage resources and competing priorities.

The following skills / attributes are desirable:
- Familiarity with scheduling paradigms, statistics and data analytics
- Experience working with scada systems
- Experience working with vision systems
- 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 (up to €43,870) 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 15th of October 2021

Applications received after the closing date will not be accepted.