Post Doc Researcher/Research Fellow – Motion Control, Navigation and Dynamics

The Intelligent Mechatronics and RFID Research Centre (IMaR) at the Institute of Technology Tralee, is a world-class research centre in the area of Intelligent Mechatronics and Radio-frequency identification (RFID).

A principal theme of the IMaR Research Centre is the synergy between mechatronics and RFID for industrial applications in the highly technological manufacturing industry driven by new technology, innovation and global demand. IMaR is increasingly focussed on the complementary fields of data analytics, autonomous vehicles research and machine learning.

IMaR is core funded by Enterprise Ireland and is a member of Lero, the Science Foundation Ireland (SFI) funded Irish Software Research Centre and Confirm, the SFI-funded centre for Smart Manufacturing. The overall mission of IMaR is to be industries partner of choice for the provision of innovative applied research. IMaR serves a cross section of industries including Automotive, Heavy Engineering, Telecommunications, Pharmaceutical, Production / Manufacturing, Aeronautical, Environmental, Healthcare and Agri-business.

IMaR has approximately 40 full-time researchers working across several disciplines; including automation, autonomous systems, software development, RFID, data analytics, systems dynamics and simulation and machine learning.

Position

We are looking for a highly motivated Senior Researcher or Research Fellow to work on a SFI-Lero co-funded project in collaboration with a leading manufacturer of heavy electromechanical equipment. The successful candidate will collaboratively work in the areas of path planning, system dynamics, motion control and sensor systems for autonomous vehicle operation. The successful candidate will also provide strategic and technical input to the project team.

Minimum Qualifications

- Relevant Honours level Engineering / Science degree or similar.
- Masters or PhD degree in a related discipline or industry experience is a distinct advantage.

Requirements

The candidate will have a proven research record in the following technical disciplines:
- Motion control theory and technology.
- System dynamics modelling.
- Path-planning algorithms and software development.

- Sensor systems technology, in particular sensors, for motion and position control, ideally including SLAM.

The ideal candidate will be proficient in a majority of the following:
- Machine learning techniques and ideally, experience in algorithm development.
- Data analytics, visualisation and statistical modelling.
- Some of the relevant analysis/modelling tools such as Mathcad, Minitab, Matlab, OpenModelica or equivalents, and / or,
- At least one of the popular programming languages such as C, C++, Python, Matlab, R.
- Use of engineering design software / solid modelling is an advantage.

The ideal candidate will be able to demonstrate:
- Strong analytical and problem-solving skills with an ability to derive appropriate technical solutions to complex engineering problems.
- A record of good organisational and team-working skills with an ability or amplitude to plan and manage small to medium size projects.
- An ability to take ownership of technical problems, stakeholder management and development of robust and sustainable solutions.
- An ability to identify and evaluate emerging technologies and where necessary, influence research direction accordingly.
- A strong motivation to develop a personal research profile and to contribute to the ongoing success of the IMaR Research Centre.

Eligibility to compete for this post is open to citizens of the European Economic Area (EEA) or to non-EEA nationals with a valid work permit. The EEA consists of the Member States of the European Union along with Iceland, Liechtenstein and Norway. Swiss citizens under EU agreements may also apply.

Duration of Contract

This position is initially for a fixed-term 12 month contract.

Salary

An attractive salary will apply to this post, dependant on the candidates experience and qualifications.

Citizenship Requirement

Candidates should note that eligibility to compete for this post is open to citizens of the European Economic Area (EEA) or to non-EEA nationals with a valid work permit. The EEA consists of the Member States of the European Union along with Iceland, Liechtenstein and Norway. Swiss citizens under EU agreements may also apply.

Application Procedure

All applications must be made online at www.ittralee.ie

Location

This post is located at the Institute of Technology Tralee and involves regular visits to industrial partners in the region and academic partners nationally and internationally. 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, email: joseph.walsh@staff.ittralee.ie

Closing date for applications is 12.00 noon on Wednesday 10th June 2020

Applications received after the closing date will not be accepted.