

Candidate Information

Position:	Electronic Design Engineer - KTP Associate - Creagh Concrete
School/Department:	KTP and Business Networks
Reference:	19/107236
Closing Date:	Wednesday 27 March 2019
Salary:	£24,000 to £34,000 per annum. One of the key KTP benefits for graduates is access to a £9,725 training and travel budget over the 30 month project.
Anticipated Interview Date:	Tuesday 9 April 2019
Duration:	30 months

Job Purpose

To develop low cost, rugged and reusable sensor technology for enabling digital manufacturing and product tracking for precast concrete.

Main Activities and Responsibilities

- We wish to recruit a highly skilled and motivated individual to work in Creagh Concrete in collaboration with Queen's University Belfast for 30 months. Through this Knowledge Transfer Partnership, Creagh Concrete aim to develop low cost, rugged and reusable sensor technology for enabling digital manufacturing and product tracking for precast concrete. The post holder will be based at Creagh Concrete, Toomebridge, with time spent at the laboratories at Queen's as required.
- Under the guidance and supervision of company and academic supervisors the KTP Associate will deliver the following key project stages:
 1. Learning the concrete business – specification, mix ingredients, curing, handling and storage.
 2. Scoping the sensor technology, cost benefit analysis and design of instrumentation.
 3. Laboratory trials – learning the strengths and weakness of the sensor assembly and instrumentation.
 4. Refine the prototype design and scale up for factory trials.
 5. Full scale factory trials and traffic light decision making for concrete curing duration.
 6. Feasibility assessment of RFID based digitisation of production and product storage/retrieval.
 7. Development of a near field communication system and cloud based data storage for digitising manufacturing, retrieval and to aid with handling and installation of panels on site.

Planning and Organising

- Manage and coordinate the items of work as laid out in the project plan (individual work plan will be provided by Supervisors).
- Plan day-to-day activity within the framework of the agreed work plan.
- Contribute to the planning and management of the project, approximately 3-6 months in advance.
- Ensure that all training and development activity is scheduled to ensure that progress on the work plan objectives is not interrupted or delayed.

Resource Management and Responsibilities

- Plan and manage day-to-day resources to ensure the project runs to time and on budget.
- Coordinate and obtain approval for planned expenditure/allocation of resources with the Management Committee and Steering Group.
- Carry out supervision of placement students or other staff members as required.
- Monitor travel and development budgets and produce a Personal Development Plan which will ensure best use of financial resources.
- Attend training modules (mandatory and additional job-specific training). This may be local, national and international.
- Perform any other additional duties as agreed by the Local Management Committee and Steering Groups to contribute to the development of the company, the university and the Associate.

Internal and External Relationships

- Present regular progress reports to members of the Steering and Management Groups and to external audiences.
- Liaise with company staff on a daily basis. Contribute to training of staff in the company and university as required.
- Build relationships with both company and university staff to ensure effective working practices are established.
- Attend and contribute to any appropriate meetings, both in the company and the university as required.
- Establish contacts with additional groups and organisations (other KTP Associates, other university departments, other industrial contacts, and Innovate UK) as required to develop knowledge and understanding and form relationships for future collaboration.
- Act as an Ambassador for the Knowledge Transfer Partnership Scheme.

Additional Information

- Knowledge Transfer Partnerships is a UK programme that enables businesses to work with universities to gain access to specialist knowledge and expertise and apply it within their organisation. Each Partnership recruits a Graduate to work in the company, implementing and embedding the latest research techniques. Guidance is provided by the academic and company supervisors to ensure that the objectives of the project are met. Although the scheme is aimed at recent graduates, any suitably qualified individual may apply.
- Each KTP is a fully salaried job that lasts between twelve and thirty six months, providing the graduate with an opportunity to fast track a career in industry. Each KTP Associate has a training and development budget and a travel budget. This funding provides opportunities for job-specific training, attending and presenting at conferences, visiting trade shows, customers and suppliers etc. Two, one week residential management training modules are also provided as part of the package.
- As members of University staff, KTP Associates can join the University pension scheme, gain access to University resources such as the Library and sports facilities.

More details are available at www.ktpjobsni.com.

ESSENTIAL CRITERIA

- Hold, or be about to obtain in July 2019, at least a 2.1 Honours Degree (or equivalent) in Electrical, Electronics, Control Engineering or a closely related discipline. Applicants who hold a 2.2 Honours Degree in above, in addition to either 1 years' relevant experience or a related higher degree will be considered.
- Experience of working in instrumentation and data analysis.*
- Experience of practical sensor system design and build.*
- An understanding of wireless communication theory*
- Experience of analog or RF circuit design.*

* may be demonstrated through the completion of a module, student project or placement

- Good oral written and presentation skills.
- High level of IT skills.
- Excellent communication skills.
- Ability to think logically, create solutions and make informed decisions.
- A high level of numeracy and the ability to interpret data.
- Ability to work effectively as a member of a group.
- Ability to work on own initiative and be able to plan and prioritise work.
- Well organised, attention to detail and ability to meet tight deadlines.
- An interest in staying with the Company. (Associates are normally invited to apply for permanent positions).
- Ability to develop networks and build contacts.
- Ability to take part in Associate management courses (requiring two one-week periods in England).
- Willing/able to travel throughout the UK and Ireland and abroad, as necessary.

DESIRABLE

- Hold, or be about to obtain, a higher degree in a relevant area.
- At least 3 months' relevant practical industrial/ research experience.*
- Skills in working with low-cost low-energy wireless systems.
- Experience of embedded programming for sensor applications.*
- Demonstrable skills in recording and displaying transmitted data for sensor applications.*

- Experience of antennas embedded in media.*
* may be demonstrated through the completion of a module, student project or placement
- Ability to deliver training and follow-up support to operatives.
- Ability to influence people effectively.
- Tenacious and committed to achieving goals.
- Capable of progressing the business at an operational and strategic level.