

[ABOUT LOUGHBOROUGH UNIVERSITY](#)

[SCHOOL OF ELECTRONIC, ELECTRICAL AND SYSTEMS ENGINEERING](#)

**ELECTRONIC PRODUCT DEVELOPMENT ENGINEER  
(KTP ASSOCIATE)**

**JOB REF: REQ15302**

**MAY 2015**

**As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.**

A KTP ([Knowledge Transfer Partnership](#)) is a collaboration between a university and company, jointly funded by the Company and [Innovate UK](#).

This KTP is between Loughborough University and [DJB Instruments \(UK\) Ltd](#). KTP aims to help businesses to improve their competitiveness and productivity through the better use of knowledge, technology and skills that reside within the UK Knowledge Base.

**The KTP Associate will be based at the Company premises in Mildenhall, Suffolk.**

**1. Introduction to the Company**

DJB Instruments UK Ltd has been a leader in the design and manufacture of vibration and pressure measurement equipment, including piezoelectric accelerometers and dynamic pressure transducers for over 40 years.

Our program of constant development ensures products meet the latest customer requirements whilst also maintaining the unique Konic Shear design principles introduced by the company's founder Don Birchall.

Our range of products now extends across all accelerometer types including IEPE (Voltage) output with market leading high temperature IEPE accelerometer solutions up to 900°C.

At DJB we recognise the importance of excellence in all aspects of our dealings with our customers. As an ISO 9001 registered company we maintain the highest level of quality control in all areas of the business and have a dedicated team of sales and customer support staff to provide one to one contact at every stage from enquiry to delivery.

We are proud to be a British manufacturer; we manufacture, assemble, test and calibrate every part of our products within our facility in Mildenhall, Suffolk, UK. We export all over the world via a network of distributors.

We are now seeking to develop a new compact wireless accelerometer for use in both industrial and human vibration applications.

## 2. Overview of the Department

### History

To meet the expanding range of related topics, the original pre-charter (1966) Electrical Engineering Department became the Department of Electronic and Electrical Engineering, and was housed in the Schofield building - named of course after Dr Herbert Schofield, Principal of Loughborough College, 1915-1950. Although this served the Department well for many years, the popularity of our subject continued to grow we eventually outgrew our home.

In 1974/5 a move was made to a new building at the west end of the campus. This is now named after Professor Sir David Davies, the distinguished electronic engineer and Fellow of the Royal Society, who also served as the fifth Vice Chancellor of Loughborough University

### The School Today

More recently, and as a consequence of the greatly increased level of postgraduate activity, we now occupy part of the former British Gas premises at Holywell Park. This has provided much needed space for the Advanced Virtual Reality Centre (AVRRC), the Centre for Biological Engineering (CBE), the Research School of Systems Engineering (RSSE), the Centre for Renewable Energy Systems Technology (CREST) and the Centre for Mobile Communications Research (CMCR).

The Department of Electronic and Electrical Engineering became the School of Electronic, Electrical and Systems Engineering on 1st August 2011 and is proud to be part of one of the largest and most successful engineering faculties in the UK. The School is an Enhanced Academic Partner of the IET.

## 3. Project Outline

The project will develop a novel wireless accelerometer and the primary outcome will be a demonstrator device and the knowledge transfer of the design processes and application domains. The project plan consists of several development stages for both the associate and the product itself. In brief this consists of evaluating a market (i.e. within the Civil Engineering or Sports domains), identifying the design requirements and developing signal processing and data transfer strategies appropriate to the application. The physical deliverable will be a miniature wireless accelerometer which is controlled from a computer or mobile device and the associated software programmes, electronic designs, and packaging.

The successful candidate will be employed as a KTP Associate by Loughborough University and will be based at [DJB Instruments \(UK\) Ltd](#). The work will also involve travel between the company and Loughborough University. The successful applicant will also need to travel to management training/courses and to interact with Company clientele.

## **JOB DESCRIPTION**

**Job Grade:** Other £21,000 to £26,000 per annum

### **Job Purpose:**

The KTP Associate will undertake:

- a literature review including market analysis, on wireless communications
- a review of current accelerometer manufacturing techniques
- initial research into application domains and produce product specification
- prototype hardware/software/firmware development
- patent application submission
- beta product testing
- product development
- industry discussions with potential customers for the product.
- Final Reporting

During the course of the KTP the Associate will have the opportunity to develop the following managerial and technical competencies:

- Significant experience and expertise in project management and team working within an industrial manufacturing environment
- Good communication and presentation skills to a wide variety of key stakeholders
- Ability to plan industrial/academic research and development projects and complete them on schedule
- Good negotiation skills for dealing with commercial contacts, suppliers, customers etc.
- Knowledge of costing and commercial process associated with product development

### **Challenges:**

- To develop an understanding of the costing and pricing infrastructure of product development
- To enhance technical skills in electronic design.
- To gain an understating of quality assurance and the importance of customer requirements
- To be immersed fully in a commercial R&D environment and meet the company's technical development challenges
- To understand the manufacturing process within a very niche manufacturing field with a broad range of applications.

### **Opportunities:**

- To work with and learn from scientists with many years experience in the field and contribute directly to product development and commercialisation
- To apply research and academic expertise in a real-time commercial context
- To enhance their professional development and develop skills in project management
- To become an expert in a very specialist field of engineering but with many potential application domains.

**Duties & Responsibilities:**

1. Carry out the KTP project tasks and deliver the outcomes as outlined in the project plan.
2. Manage the project and disseminate the findings to the project team.
3. Undertake KTP management training, as well as other courses as deemed necessary.
4. Write R&D reports, and present these at the Local Management Committee (LMC) meetings, as well as at national conferences and symposia with other members of the project team.
5. Prepare research papers for publication in highly acclaimed learned journals, in line with the expected scholarly activities of the University Research Staff, but in accordance to the commercial sensitivity of collaborating companies.
6. Travel to Company clientele and to various other locations within the UK, and possibly overseas, as required.
7. To undertake such other duties as may be reasonably requested and that are commensurate with the nature and grade of the post.

## PERSON SPECIFICATION

**Job Title:** Electronic Product Development Engineer (KTP Associate)

**Job Grade:** Other

	<b>Essential</b>	<b>Desirable</b>	<b>Stage to be assessed</b>
<b>Qualifications</b>	An MEng (2.1 or equivalent) in Electronic and Electrical Engineering or Mechanical/manufacturing Engineering providing the course included electronic design. Related disciplines with similar degree subject coverage (including BEng with strong relevant competencies) are also acceptable.		1
<b>Experience</b>	<p>Past experience of electronic design and assembly.</p> <p>Experience in one or more of the following additional areas;</p> <ul style="list-style-type: none"> <li>• Embedded software development.</li> <li>• Mechanical vibration testing.</li> <li>• Piezoelectronic accelerometers and charge amplifiers.</li> </ul>	<p>Experience of team and project working in a multi-disciplinary environment.</p> <p>Experience of two or more of the additional areas listed in the essential criteria.</p>	All to be assessed at stages 1 and 3
<b>Skills and Abilities</b>	<p>Good written communication skills, ability to produce professional standard reports</p> <p>A good standard of oral English and the ability to be clear and concise in verbal communications</p> <p>Good personal and presentational skills</p> <p>Good research skills and ability to handle data</p>		<p>All to be assessed at stages 1 and 3</p> <p style="text-align: center;">3</p>

	Good time management skills		
	Good computer skills including Word processing, spreadsheets, databases and presentation software		
<b>Other</b>	A person qualified at NVQ Level 4 in an appropriate subject (HNC/D or equivalent) up to PhD, who has the potential to be a business leader of tomorrow.		1,3
	To observe the University Equal Opportunities policies at all times.		3
	Flexibility in working conditions and hours.		1
		Licensed to drive in the UK	1

Stages in Assessment: 1, Application Form, 2, Selection Test, 3, Interview.

### Conditions of Service

This is a full-time, fixed-term appointment for a period of 24 Months. The salary for the post will be within the range £21,000 to £26,000 per annum. Commencing salary will be determined by previous experience. The successful candidate will be employed by Loughborough University, but will be based at Mildenhall, Suffolk.

The appointment will be subject to the Conditions of Service for Academic and Related Staff, insofar as they do not conflict with the working practices of the Company with which you will be expected to comply, details can be found at:

<http://www.lboro.ac.uk/services/hr/a-z/conditions-of-service.html>

### Informal Enquiries

Informal enquiries are welcomed and should be directed to:

Dr James Flint  
Senior Lecturer in Wireless Systems Engineering  
+44 (0)1509 227036  
j.a.flint@lboro.ac.uk

### Applications

The closing date for receipt of applications is **7<sup>th</sup> June 2015**.

**Interviews will be held at the offices of DJB Instruments Ltd on 26<sup>th</sup> June 2015.**






**£21,000 to £26,000 per annum****Plus: Up to £4,000 for individual training & development**

### Knowledge Transfer Partnerships

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Knowledge Transfer Partnerships enable recently qualified graduates (known as KTP Associates) to work in companies managing challenging projects central to the development needs of participating companies.

Knowledge Transfer Partnerships can provide you with:

-  Valuable work experience in a commercial environment with improved career prospects
-  Competitive salary
-  An opportunity to lead and manage a R&D project with defined goals
-  The possibility for future employment with the company partner at the end of the project
-  A generous personal professional development and training budget.

An enthusiastic, innovative and self-motivated person is required for a Knowledge Transfer Partnership between Loughborough University and DJB Instruments (UK) Ltd. The project involves the development of a new compact wireless accelerometer for use in both industrial and human vibration applications. A generous training budget is available to enhance the career profile of the successful candidate.

The successful candidate will be employed by the University, but **based at Mildenhall, Suffolk, UK**

You should have either an MEng or BEng (2.1 or equivalent) in electronic and electrical engineering or Mechanical engineering providing the course included some electronic modules. Some experience of electronics and software and some appreciation of the topic of vibration. Experience of team and project working in a multi-disciplinary environment is desirable.

You will gain experience of a commercial research and development environment and may have the opportunity to register for a higher degree.

**Informal enquiries:**

Dr James Flint  
Senior Lecturer in Wireless Systems Engineering  
+44 (0)1509 227036  
j.a.flint@lboro.ac.uk

Please quote ref no: **REQ15302**

Closing date: **5<sup>th</sup> June 2015**

Interviews will be held on **26<sup>th</sup> June 2015**

This Partnership has received financial support from the Knowledge Transfer Partnerships programme (KTP). KTP aims to help businesses to improve their competitiveness and productivity through the better use of knowledge, technology and skills that reside within the UK Knowledge Base. KTP is funded by Innovate UK along with the other government funding organisations.