

**foster+freeman**  
Improving the Quality of Forensic Evidence

## Forensic analysis applications specialist (KTP Associate)

REQ200090

Period: 24 months

Salary: £29,000 - £35,000 per annum (Starting salary to be confirmed on offer of appointment), plus £2,000 training budget

Application deadline: **3 March 2020**

**Key words:** analytical chemistry, forensics, mass spectrometry, ion mobility

**Project Title:** To develop a probe capable of identifying forensically pertinent samples at crime scenes and indicating their approximate age.

### Introduction to KTP

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

This KTP is a 24 month' project between Loughborough University and Foster and Freeman. KTPs aim to help businesses improve their competitiveness and productivity through the better use of knowledge, technology and skills that reside within the UK Knowledge Base.

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### Introduction to the company

Foster & Freeman's principal activity is the design, manufacture and retail of forensic equipment. This equipment is utilized by police and government agency labs worldwide in their investigations. Examples of such equipment include specialist light sources used at crime scenes to uncover evidence, imaging systems for further lab investigation of evidence obtained, and systems for the development of fingerprints on exhibits. Products are manufactured at their Evesham base before being shipped to global end users; in 2018 92% of their turnover came from exports, which were made to some 80 countries. Their in-house control of R&D and manufacturing ensures significant "first mover" advantage from new systems, engendering a globally leading position in this sector.

### University/Department summary

Loughborough University is a top-10 UK university, consistently ranked by the Guardian and other league tables. Its position as a research-leading university is confirmed through outstanding research in science and engineering and world-class research facilities. It has been awarded a record of seven Queen's Anniversary prizes for its research impact to society and UK industry.

Today, Loughborough University is one of the UK's leading centres of excellence for teaching and research in STEM – with a proven track record in supplying industry with high calibre, highly motivated graduates, and a vibrant international research culture.

Bringing together the Departments of Chemistry, Computer Science, Mathematical Sciences, Physics and the Mathematics Education Centre, Loughborough's School of Science boasts state-of-the-art facilities, an active research community and a range of options for undergraduate study, postgraduate study and research – all based on the University's expansive green campus. Opened in 2017, STEMLab acts as a hub for Science and Engineering students, providing a truly student-focused laboratory learning environment. STEMLab represents a £17m investment in ensuring Loughborough University can meet the demands of industries and the demand from students for innovative courses in STEM subjects. It includes a Physical and Analytical Chemistry teaching laboratory. In addition to STEMLab, a projected investment of £6million for Chemistry teaching laboratories in the refurbished Sir David Davies Building will bring expansive teaching space for students in 2018.

### **Project Outline**

This 24 month KTP project will develop a probe capable of identifying forensically pertinent samples at crime scenes and indicating their approximate age. Once commercialised, the device will not only enhance investigators capabilities, it will reduce turn around time and decrease casework costs. The successful associate will be based at Foster & Freeman in Evesham but will work closely with academics at Loughborough University to deliver a successful project.

The project will involve travel between Evesham and Loughborough, as well as travel to other Foster & Freeman sites/clients as appropriate

## Job Description and Person Specification

### Job Grade: Other

#### Job Purpose

The KTP Associate will:

- Identify the key product requirements for an in-situ forensic evidence analyser
- Develop prototype systems based on collated requirements for the product
- Conduct testing and performance evaluations
- Assist with the development of marketing materials for the launch of the product
- Produce reports to senior management team
- Provide training materials/workshops to Foster & Freeman staff as necessary.
- Contribute to academic research papers.

#### Job Duties

- Carry out the KTP project tasks and deliver the outcomes as outlined in the project plan.
- Manage the project and disseminate the findings to the project team.
- Undertake KTP management training, as well as other courses as deemed necessary.
- 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.
- 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.
- Travel to Company clientele and to various other locations within the UK, and possibly overseas, as required.
- To undertake such other duties as may be reasonably requested and that are commensurate with the nature and grade of the post.

#### Points to Note

The purpose of this job description is to indicate the general level of duties and responsibility of the post. The detailed duties may vary from time to time without changing the general character or level of responsibility entailed.

Previous KTP associates or employees of Foster & Freeman are not eligible to apply for this KTP

Applicants must have completed their last qualification (degree, masters, PhD) no more than five years before closing date.

#### Special Conditions

All staff have a statutory responsibility to take reasonable care of themselves, others and the environment and to prevent harm by their acts or omissions. All staff are therefore required to adhere to the University's Health, Safety and Environmental Policy & Procedures.

All staff should hold a duty and commitment to observing the University's Equality & Diversity policy and procedures at all times. Duties must be carried out in accordance with relevant Equality & Diversity legislation and University policies/procedures.

Successful completion of probation will be dependent on attendance at the University's mandatory courses which include Respecting Diversity and, where appropriate, Recruitment and Selection.

### **Organisational Responsibility**

Reports to the KTP Lead Academic: Dr James Reynolds

## Person Specification

Your application will be reviewed against the essential and desirable criteria listed below. Applicants are strongly advised to explicitly state and evidence how they meet each of the essential (and desirable) criteria in their application. Stages of assessment are as follows:

- 1 – Application
- 2 – Presentation
- 3 – Interview

### Essential Criteria

Area	Criteria	Stage
Experience	Strong background in the operation of mass spectrometers and/ or ion mobility spectrometers	1,3
	Experience of the setup, installation and modification of mass spectrometers and/ or ion mobility spectrometers	1,3
	Excellent presentation / communication skills	1,2,3
	Ability to work both independently, without supervision, and, as part of a large team	1,3
	Ability to communicate with a wide range of academic and commercial personnel as well as a non-expert audience	1,2,3
	Excellent technical writing skills	1,3
Training	Willingness to undertake KTP training modules and other training as appropriate	3
Qualifications	PhD in analytical chemistry or associated discipline Or Experience of working with either mass spectrometers or ion mobility spectrometers and a chemistry or forensic background	1,3
Other	To observe the University Equal Opportunities policies at all times	3

### Desirable Criteria

Area	Criteria	Stage
Experience	Experience working in R&D projects	1,3
	Experience of forensic protocols, sampling procedures and the forensic instrumentation market	1,3
	Experience of the use of multivariate statistical analysis and design of experiments software	1,3
Skills and abilities	Ability to adapt instrumentation for surface analysis	1,3
Skills and abilities	Project management skills	1,3
Other	Licensed to drive in the UK	1,3

## Conditions of Service

The position is **full-time** and **fixed-term** for 24 months. Salary will be between (£29,000 to £35,000 per annum) at a starting salary to be confirmed on offer of appointment. The successful applicant will also receive a £2,000 per annum training budget.

The appointment will be subject to the University's normal Terms and Conditions of Employment for Academic and Related staff/Operational and Administrative staff, details of which can be found [here](#).

We strive to create a culture that supports equality and celebrates diversity throughout the campus. The University holds a Bronze Athena SWAN award which recognises the importance of support for women at all stages of their academic career. For further information on Athena SWAN see <http://www.lboro.ac.uk/services/hr/athena-swan/>.