

# Software Engineer: KTP Associate in association with PALTechnologies



Department	Biomedical Engineering ( <a href="http://www.strath.ac.uk/biomedeng/">www.strath.ac.uk/biomedeng/</a> )		
Faculty	Faculty of Engineering ( <a href="http://www.strath.ac.uk/engineering/">www.strath.ac.uk/engineering/</a> )		
Staff Category	Research	Reference No	20316
Reports To	The Head of Department, through Dr Andrew Kerr (Academic Supervisor) and Dr David Loudon, (Industrial Supervisor)	Grade:	RS79
Salary Range:	£25,513 - £28,695	Contract Type:	Fixed Term (30 months)
FTE:	1	Closing Date	Friday, 7 August 2015

## Job Advert

An exciting opportunity has arisen for a Software Engineer at the University of Strathclyde. The post, in association with PAL Technologies, will develop user-centred tools to provide appropriate learning to therapists and patients, engaging them in the rehabilitation process.

The University of Strathclyde has an established record of collaboration with industry partners, including local Small to Medium Enterprises (SMEs). The Department of Biomedical Engineering is ranked 1<sup>st</sup> for Medical Technology in the UK and has a 50 year history of developing devices for the rehabilitation community. The department of Biomedical Engineering is pleased to be partnering with PAL Technologies on a Knowledge Transfer Partnership (KTP) project in the area of providing patient-centred gait training tools for use at home and in the community.

PAL Technologies Ltd is a spin out from the University of Strathclyde's Bioengineering Unit. Founded in 2001, the company's innovative clinical research tools have gained world-wide recognition for their ability to accurately and objectively quantify physical behaviours across a wide range of clinical populations. PAL has previously developed a monitor in partnership with a prosthetic limb manufacturer to provide both clinician and amputee with objective measures of prosthetic limb use over extended periods and is eager to build on this experience. The recent appointment of a Research Development Executive specialising in the field of rehabilitation, further demonstrates the company's commitment to making a meaningful contribution to this important sector.

KTP is a three-way collaboration between an Associate, a Company, and a University (for further information, see: <http://www.ktpws.org.uk>). The Associate undertakes and manages a strategic project for the company, while being supported by Academic and Industry supervisors. As part of the KTP, the Associate benefits from management training opportunities and a further budget of £4,000 for personal development. There is also the opportunity for the successful candidate to study for a higher degree (PhD) Opportunities also exist to develop research papers, and to engage in the academic community at Strathclyde. At the end of the 30 month partnership there may be an employment opportunity for the Associate with the company.

To be considered for this role, you will be educated to a minimum of Masters Level in a relevant engineering discipline (such as Computer Science, Software Engineering, Electronic and Electronic Engineering or equivalent) or have significant relevant experience. You will have relevant experience of user-centred product development for software applications and have experience in the research of data visualisation and you will demonstrate an enthusiasm for this role, be adaptable, and have

excellent interpersonal and communication skills particularly when interacting with users who may have communication impairments'.

The post will be based at PAL Technologies premises in Glasgow city centre.

## Job Description

### Brief Outline of Job:

The candidate will work with the company on the development, and commercialisation of patient-centred gait training and evaluation tools for use at home and in the community. The tools will be based around a wireless sensor which can be incorporated into prosthetics and orthotics, these tools will take real-time measurements of key parameters of walking performance and share these with the patient or therapist using needs-orientated data-visualisation strategies. The candidate will develop and test algorithms to measure key gait characteristics, which will be validated in volunteers with walking problems (stroke, lower limb amputees, cerebral palsy, multiple sclerosis). A key part of the work will be engaging with end-users to design appropriate visualisations of the data to allow patients and therapists to discuss and share rehabilitation progress.

### Main Activities/Responsibilities:

1.	Deliver a product design specification informed by focus group of customers and end users, including a conceptual design of the product.
2.	Software development will span across the project. Initially this will focus on developing algorithms for step count, leading to more complex algorithm development for bespoke performance feedback.
3.	Development of software tools for data visualisation suitable for end users, therapists, patients and carers.
4.	Testing the prototype device under laboratory and field conditions initially with healthy subjects progressing to patient groups.
5.	Developing the product for market readiness including manufacturer's instructions, documentation of data from test results for publication and use in promotional materials.
6.	Manage costing and manufacturing and lead interactions with partners.
7.	Take lead responsibility for the management of the project and reporting to industrial partners.
8.	Prepare reports, deliver presentations to colleagues and otherwise ensure that knowledge arising from the KTP project is embedded within the company.

## Person Specification

### Educational and/or Professional Qualifications

(E=Essential, i.e. a candidate must meet all essential criteria to be considered for selection, D=Desirable)

E.1 Educated to a minimum of Masters level in Computer Science, Software Engineering, Electronic and Electronic Engineering or other relevant subject.

### Experience

E.2 Experience of user-centred product development for software applications

E.3 Experience in and current knowledge of research in data visualisation

E.4 Experience of interface development, particularly for mobile devices

D.1 Experience of working in multi discipline environments and comfortable in working with engineering and health care disciplines, and with patients

### Job Related Skills and Achievements

E.5 Strong computer programming skills

D.2 Experience of C++, Java, VB and JavaScript

D.3 Experience of cross-platform development, including desktop and mobile devices

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- D.4 Knowledge of data processing and statistics
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- D.5 Knowledge of wireless data transmission protocols
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- D.6 Knowledge of human anatomy and terminology
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#### **Personal Attributes**

- E.6 Personable with the ability to build positive professional relationships with colleagues, partners and patients.
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- E.7 Excellent communication skills particularly when interacting with users who may have communication impairments.
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- E.8 Strong organisational, interpersonal, verbal and technical writing skills
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- E.9 Strong presentation skills.
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## **Application Procedure**

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Applicants are required to complete an application form including the name of three referees who will be contacted before interview without permission, unless you indicate that you would prefer otherwise. Applicants should also submit a Curriculum Vitae and a covering letter detailing the knowledge, skills and experience you think make you the right candidate for the job. Applicants should also complete the Equal Opportunities Monitoring Form.

## **Other Information**

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Further information on the application process and working at Strathclyde can be found on our website (<http://www.strath.ac.uk/hr/workforus>).

Further information about the KTP programme can be obtained from: <http://ktp.innovateuk.org/graduate-opportunities>.

Informal enquiries about the post can be directed to Dr Andrew Kerr, Research Fellow ([a.kerr@strath.ac.uk](mailto:a.kerr@strath.ac.uk)).

#### **Probation**

Where applicable, the successful applicant will be required to serve a 6 month probationary period.

#### **Pension**

The successful applicant will be eligible to join the Universities' Superannuation Scheme. Further information regarding this scheme is available from [Payroll and Pensions](#).

#### **Interviews**

Formal interviews for this post will be held on 17/08/2015

#### **Equality and Diversity**

We value diversity and welcome applications from all sections of the community.

The University currently holds a Bronze Athena SWAN award, recognising our commitment to advancing women's careers in science, technology, engineering, maths and medicine (STEMM) employment in academia.



# Conditions of Employment

## KTP Associates



### 1. GENERAL CONDITIONS

Members of staff are subject to the Charter and Statutes and the Ordinances and Regulations of the University, published in the Calendar, and to any amendments or additions thereto approved by the University Court and, in the case of the Charter and Statutes, Privy Council.

The University Court recognises the Strathclyde University and Colleges Union (SUCU) as the sole body with which it will negotiate and consult on all collective issues concerned with the terms and conditions of employment of Research staff. Such terms and conditions may be varied by the University Court after negotiation and consultation with SUCU.

Further information on the terms and conditions specified in this document is contained in the Staff Handbook, which also includes further details of such conditions as provision for sick/injury leave and pay, leave of absence, holidays and holiday pay, individual grievance procedures, review and disciplinary procedures and collective agreements. Should you not receive a copy of the handbook on appointment a reference copy is accessible by visiting Human Resources.

### 2. CONTINUOUS SERVICE

In the case of new appointments, unless otherwise stated in the letter of appointment, the date of continuous employment for the purposes of statutory employment rights will be taken to be the date of appointment contained therein. In the case of promotions, regradings or transfers, previous service is continuous.

### 3. ALLOCATION OF POST

The post to which each member of staff is appointed is allocated to both the University Department and/or other area(s), and the Company Partner named in the member's letter of appointment and any accompanying papers. Should the University Court and/or the Company Partner deem it necessary, in the furtherance of the objectives of the University (specified in its Charter) and/ or the objectives of the Company Partner, they shall, having consulted with the parties concerned and having received the advice of the Senate, re-allocate the post and/or the duties pertaining partially or wholly to it to another University department or area and/or to another Company Partner Department or to an associated Company. Any such re-allocation will be without prejudice to the other conditions of employment of the holder.

If the need arises during the course of employment for members of staff to work outside the U.K. for a period (or periods) of more than one month then such arrangements will be subject to mutual agreement. Members of staff would then be provided with a statement in advance setting out the terms covering such periods of employment.

### 4. RESPONSIBILITY AND SERVICE

The University is committed to ensuring that its business is conducted in an open and transparent manner and will take all appropriate steps to address risks of bribery or corruption. Members of staff are required at all times to act honestly and with integrity and to safeguard the resources for which they are responsible. The University has in place a robust Public Interest Disclosure (Whistleblowing) Policy to enable concerns to be brought to its attention. This is available at <http://www.strath.ac.uk/publicinterestdisclosure/>. Other relevant policies, e.g. Fraud Prevention and Conflicts of Interests can also be found on the University's website.

Each member of staff is responsible for the proper performance of allocated duties to the person or persons specified in the member's letter and any accompanying papers. Unless otherwise indicated

### 5. WORKING TIME

Working time is that required to fulfil the duties of the post and members of staff are expected to comply with the general working pattern of the KTP Company Partner. Further details in relation to working hours will be provided within the offer of employment and/or by the Company Partner on commencement of employment.

### 6. HOLIDAYS

Entitlement to accrue paid annual holiday will apply from the date of commencement and the accrual rate will be as per the provisions of the KTP Company Partner, Public Holidays will only apply where they are observed by Company Partner and it may be that these have to be taken from the annual leave entitlement where the Company does not apply a separate entitlement in this regard. Where Public Holidays are not observed by the Company Partner, these days may still be taken from the annual holiday entitlement, subject to authorisation. In cases where the Company Partner operates a period of annual closedown, these days may count against the accrued annual holiday entitlement, subject to the normal practices of the Company Partner. Further details and arrangements for requesting leave will be confirmed within the Offer of Employment and/or by the Company Partner on commencement of employment.

### 7. SICK LEAVE

During any period of absence through illness or injury provided the appropriate medical certificates are received the University will pay a member of staff (having taken account of the aggregate of all periods of absence due to illness during the twelve months immediately preceding the first day of the current absence) as follows:

<b>Period of Continuous Employment at start of absence from work</b>	<b>Full Pay</b>	<b>Half Pay</b>
Less than 1 year	1 month	1 month
1 year but less than 2 years	2 months	2 months
2 years but less than 3 years	4 months	4 months
3 years but less than 5 years	5 months	5 months
5 years or more	6 months	6 months

In order to manage the University's sick pay scheme the University requires to maintain sickness absence records on individual members of staff. When making payments after the expiry of statutory sick pay the University will deduct an amount equivalent to any benefit normally payable by the Department of Health and Social Security. For this and other details see staff handbook.

### 8. SALARY AND SUPERANNUATION

Salaries are payable monthly by means of a credit transfer to a specified bank account.

New members of staff, under age 75, will be admitted to membership of the Universities' Superannuation Scheme on taking up appointment unless they notify the University in advance, at the point of signing their offer letter, that they do not wish to be admitted to membership of USS. USS requires a contribution from the member (currently 6.5 per cent of salary for the Career Revalued Benefits section of the scheme and 7.5% for the Final Salary section of the scheme), to which a contribution of salary is added by the University as required by USS. If a new member of staff has previously been a member of USS and rejoins the scheme on or after 1 October 2011 they will be eligible to rejoin the Final Salary section of the scheme if they:

- left before 1 October 2011 and have deferred benefits in USS and are rejoining before 1 April 2012; or
- leave the Final Salary section after 30 September 2011 and rejoin the scheme within 30 months of leaving.

New members of staff may opt out of USS within three months of taking up appointment when they will be treated as if they had never been members. After three months members of staff who wish to withdraw from USS during their employment will be required to give a minimum of 28 days' notice in writing to the University. Any member of staff who wishes to opt out should contact the Pensions Section in the first instance.

A new employee's guide to joining USS is issued with the offer letter. Full details of the Scheme are available for reference purposes at the Pensions Section of Finance Office, John Anderson Campus.

## **9. PLACE OF RESIDENCE**

The University does not normally place specific restrictions upon the place of residence of members of staff. They are, however, expected to reside in a location which is compatible with the satisfactory fulfilment of all the duties associated with their appointment and with membership of the academic community.

## **10. PERIOD OF EMPLOYMENT**

Members of staff are employed on the conditions indicated in individual letters of appointment and any accompanying papers. The University is not obliged to give notice of termination or continue any employment beyond the end of the fixed term period. Where the period of the contract of employment is for one year or less it may be terminated short of the fixed term period by 1 month's notice on either side. Where the period of the contract of employment is for more than one year, or where there have been a further contract or series of contracts immediately consecutive, the employment may be terminated short of the fixed term period by 3 months' notice on either side.

Revised September 2011