

Innovate UK QINETIQ

**Swyddog Cyswllt Partneriaeth Trosglwyddo Gwybodaeth (KTP):
Defnyddio dronau i greu cynnyrch sy'n barod i'r farchnad
Adran Daeryddiaeth a Gwyddorau Daear
Athrofa Daeryddiaeth, Hanes, Gwleidyddiaeth a Seicoleg**

Cyfnod penodol tan 30 Gorffennaf 2020
Gradd 7: £32,958 - £38,183 y flwyddyn

I hyrwyddo gweithlu hyblyg, bydd y Brifysgol yn ystyried ceisiadau gan unigolion sy'n ceisio am swydd gyda threfniadau gweithio llawn amser, rhan amser, rhannu swydd, neu yn ystod y tymor yn unig.

Dyma brosiect Partneriaeth Trosglwyddo Gwybodaeth (KTP) newydd a chyffrous a ariennir gan Innovate UK a Llywodraeth Cymru. Mewn partneriaeth â QinetiQ, nod y prosiect hwn yw creu cynnyrch sy'n barod i'r farchnad o ddelweddau drôn gan ddefnyddio ystod o lwyfannau a synwryddion. Bydd y gwaith yn cael ei gyflawni mewn tri maes allweddol o ddatblygu technegol: 1) defnyddio delweddau drôn i greu cynnyrch sy'n seiliedig ar dir; 2) trosi delweddau drôn i fesur adlewyrchiad arwyneb (sy'n angenrheidiol i olrhain newidiadau mewn gorchudd tir dros amser); a 3) cynnal arolygon drôn y tu hwnt i'r llinell olwg. Bydd yr arloesiadau a'r datblygiadau sy'n deillio o'r gwaith hwn yn cael eu treialu mewn prosiectau astudiaeth achos lle y diffinnir yr amcanion yn ôl anghenion a gofynion darpar gleientiaid ar ôl dadansoddi'r farchnad yn ofalus. Cloriannir y gwaith hwn ar sail hyfywedd masnachol y gweithdrefnau a ddatblygir.

Gan fod y swydd hon wedi'i lleoli gyda QinetiQ yn safle'r Weinyddiaeth Amddiffyn yn Aberporth, mae'r swydd hon yn amodol ar wiriad boddhaol gan y Gwasanaeth Datgelu a Gwahardd (DBS), ac sy'n amodol ar Fetio Diogelwch yr Deyrnas Unedig (<https://www.gov.uk/guidance/security-vetting-and-clearance>).

Gellir gwneud ymholiadau anffurfiol drwy gysylltu ag Dr Andrew Hardy ar ajh13@aber.ac.uk.

Cyf: GE.17.1572

Am fwy o wybodaeth ac i ymgeisio, ewch i <http://jobs.aber.ac.uk>.

Sefydliad Dwyieithog sy'n gweithredu Cynllun Iaith Gymraeg ac yn ymroddedig i Gyfle Cyfartal.

FEL ARFER FE BENODIR I SWYDDI O FEWN 4-8 WYTHNOS WEDI'R DYDDIAD CAU.





**Knowledge Transfer Partnership (KTP) Associate:
Delivering market-ready products from drones
Department of Geography and Earth Sciences
Institute of Geography, History, Politics and Psychology**

Fixed term to 30 July 2020
Grade 7: £32,958 - £38,183 per annum

To promote a flexible workforce, the University will consider applications from individuals seeking full time, part time, job share, or term time only working arrangements.

This is an exciting new Knowledge Transfer Partnership (KTP) project funded by Innovate UK and the Welsh Government. In partnership with QinetiQ, this project aims to derive market-ready products from drone imagery using a range of platforms and sensors. The delivery of these products will fall under three key areas of technical development: 1) extracting terrain-based products from drone imagery; 2) converting drone imagery into surface reflectance (required for tracking changes in land cover over time); and 3) conducting drone surveys Beyond Visual Line of Sight. Subsequent innovations and developments will be trialled in case-study projects with objectives defined by prospective client needs and requirements following considered market analysis. Evaluation of this work will be defined by the commercial viability of developed procedures.

As this job is based with QinetiQ at the Ministry of Defence site at Aberporth, this position is subject to a satisfactory Disclosure and Barring Service check, and subject to UK Security Vetting (<https://www.gov.uk/guidance/security-vetting-and-clearance>).

To make an informal enquiry, please contact Dr Andrew Hardy on ajh13@aber.ac.uk.

Ref: GE.17.1572

For information and to apply, please go to <http://jobs.aber.ac.uk>.

We are a Bilingual Institution which operates a Welsh Language scheme and is committed to Equal Opportunities.

APPOINTMENTS ARE NORMALLY MADE WITHIN 4-8 WEEKS OF THE CLOSING DATE.



Further Particulars (Yn Saesneg yn Unig)

This role may be dependent on the successful applicant obtaining UK security clearance from the relevant Government Agency in order to allow access to certain sites and locations. You should have normally been a resident of the UK for a period of 5 years to achieve this.

The KTP Associate will be based with the partner company QinetiQ in Aberporth for the duration of the project but with regular visits from academic partners and advisors from the Earth Observation and Ecosystem Dynamics (EOED) research group in the Department of Geography and Earth Sciences at Aberystwyth University. As a world leader in the processing and analysis of remotely sensed data, the KTP Associate will be supported by EOED academics in order to establish robust and efficient spatial data processing streams to deliver market-ready products, utilising and expanding the suite of python based software tools developed and maintained by EOED (i.e. RSGISLib, ARCSI). This will be based on the commercial needs and requirements which will be defined by the KTP Associate through consultation with prospective clients, supported by QinetiQ – a world leader in delivering innovative technologies for a range of market sectors including transport, energy and water.

As such, as well as being technically capable (at a post-doctoral or industrial equivalent level) it is equally important that the KTP Associate is able to translate developed methodologies for integration into QinetiQ's operational framework, requiring excellent communication skills and an ability to integrate into appropriate project teams within the company. In addition, the KTP Associate will have a keen sense of the commercial potential of drone-derived products. To this effect, the KTP Associate will have an ability to interface with prospective clients to understand their needs and ultimately understand the financial viability of producing survey products from drone imagery.

This job description is subject to review and amendment in the light of the changing needs of the University, to provide appropriate development opportunities and/or the addition of any other reasonable duties.

Main duties

The KTP Associate will be expected to handle the day-to-day running of the project, supported by the academic partners at Aberystwyth University and the commercial partners in QinetiQ. The project will be delivered in a series of project stages (led by the KTP Associate) outlined below:

Project Stage 1 – project spin-up (month 1), including establishment of day-to-day collaborators within company and the development of a Programme Definition Plan.

Project Stage 2 – defining the commercial opportunity (months 2-3) by liaising with prospective clients within key market sectors (transport, energy, land management) outlining product requirements and projected costs.



Project Stage 3 – extracting terrain-based products from drone imagery (months 3-15) using an automated processing stream, including preliminary consultation with prospective clients and academic literature, development of optimal procedures within an automated processing environment. Application to transport corridor asset survey through collaboration with prospective clients.

Project Stage 4 – extracting at-surface reflectance market-ready products from drone imagery (months 15-24), including development and evaluation of optimal procedures. Application of developed procedures to case-study, low-access area through consultation with prospective clients.

Project Stage 5 – case-study for Beyond Visual Line of Sight (BVLoS) drone surveying (months 24-33), including development of safety case with company colleagues and key market sectors. Carry out BVLoS survey and delivery of market-ready products using procedures developed in project stages 3 and 4).

Project Stage 6 – embedding knowledge and securing legacy (months 33-36) through workshops and guidance material for all developed procedures and software disseminated throughout the company. Presentation of work at external commercial conference to foster prospective clients.

Following the development of novel and innovative techniques, together with deployment in user case-studies, the KTP Associate will be expected to produce academic papers published in sector-leading journals and present their work at academic conferences.

The processing and analysis of datasets are to be undertaken in accordance with AU data management policy and all research will be compliant with AU ethical policy and framework.

Reporting and collaboration

The KTP Associate will be employed full-time until 31st August, 2020. The KTP Associate will primarily report to and work closely with the KTP Company Supervisor, Rob Walter, and facilitator Jeremy Howitt (QinetiQ). Additionally, the KTP Associate will report to the academic knowledge based supervisors Dr Andy Hardy and Dr Pete Bunting (AU).

Other Duties & Responsibilities

- To undertake health and safety duties and responsibilities appropriate to the post.
- To be committed to the University's Equal Opportunities and Diversity Policy, together with an understanding of how it operates within the responsibilities of the post.
- To be committed to your own development and that of your staff through the effective use of the University's staff development and performance review.
- Any other duties reasonably requested.

The responsibilities of this vacancy have been matched to the Academic Role Profile Research 2. Details of the role profile can be found at:

<https://www.aber.ac.uk/en/media/departmental/humanresources/frameworkagreement/academicprofiles/R2.pdf>.



Person Specification

Essential	Desirable
Qualifications <ul style="list-style-type: none"> • Must have a PhD in a relevant field or MSc with equivalent industrial experience; 	
Experience <ul style="list-style-type: none"> • Must have coding experience, specifically in Python, which underpins the software developed by the EOED group Experience in quantitative data analysis; 	<ul style="list-style-type: none"> • Experience working both in academia and industry; • Experience working in both Windows and Unix platforms; • Experience in handling large geospatial datasets; • Desirable to have experience in drone surveying;
Knowledge <ul style="list-style-type: none"> • Understanding of the commercial potential of geographical information; 	
Skills <ul style="list-style-type: none"> • Ability to interface between academic and industrial partners/stakeholders; • Ability to work in the field including full valid UK driving licence or equivalent right to drive in the UK; • Proven record of excellent written and oral communicative skills; • Ability to project manage both independently and as part of a team; 	
Welsh Language <ul style="list-style-type: none"> • An ability to understand the bilingual nature of the University and an awareness of the procedures in place to support working bilingually; 	<ul style="list-style-type: none"> • Oral (spoken) and Written Welsh Level A1*.

*Oral Welsh Level A1. I can:

- interact in a simple way provided the other person is willing to speak slowly, repeat or rephrase things, as well as being willing to help me
- use basic expressions and phrases, e.g. introduce myself or another person,
- ask and answer questions on familiar topics e.g. 'Where do you live?'
- write a short simple message as an email or note, including the time, date and place.
- fill in forms with personal details, e.g. name, address and telephone number.

