Aston University
BIRMINGHAM UK

Optical Communication Systems Engineer– KTP Associate

Reference: 0351-25

Grade: No grade

Salary: £37,500 per annum depending on experience with up to £4,000 dedicated development and training budget

Contract Type: Fixed term (24 months)

Job description

This 24-month project takes the form of a Knowledge Transfer Partnership (KTP), which provides you with practical and formal training and the availability of support from experienced mentors from Pulse Power and Measurement (PPM) Ltd, Aston University and Innovate UK Business Connect

Job Purpose:

- This Knowledge Transfer Partnership (KTP) project will incorporate novel amplification approaches to develop an extended reach Radio over Fibre (RFoF) transport system for long transmission distances.
- PPM has four key business divisions: PPM Power, ViaLite Communications, PPM Test and PPM Systems. This project will operate within the ViaLite Communications division and the activity will expedite the development of the next generation of product. PPM was acquired by BAE Systems in 2021 as a wholly owned subsidiary. Due to the location of the workplace, it would be preferable for the candidate to have access to their own car or be located nearby public transport links.
- The proposed system is a novel technology for RFoF, offering PPM a first-to-market opportunity for a novel product to meet a known market need. While system components are available off-the-shelf, knowledge required to develop an integrated product solution is not, and this KTP will provide PPM with the capabilities to take a novel product to market.
- This KTP is a great opportunity for someone who wishes to plan and deliver business change. You will work with senior University academics on a commercial project which puts theory and modelling into practice. Due to the high sensitivity involved in this project, it is highly unlikely that the candidate will be able to publish any journals or papers from the results until a few years after completion.

Candidate Profile:

- Minimum Masters' level degree in Photonics/Optics with relevant practical / work experience in the field. A PhD would be desirable.

Skills/ experience required include:

Essential

- Strong analytical and problem-solving skills related to photonic/optic-based systems.
- Expertise and hands-on experience in designing, testing and optimising photonic networks.
- Proficiency with simulation tools such as MATLAB, Python, and ideally VPI photonic design suite.
- Excellent communication and management skills.
- Highly motivated and adaptable.
- Strong ability to work independently and in a team.

Experience in the following would be desirable:

- Experience of experimental optical communication system performance characterisation, test bed design and assembly
- Recent publication record in international journals and high impact conferences.
- Long-haul/unrepeated high-capacity transmission system testing.
- Creative problem-solving skills.
- Demonstrable track record of team working.
- Good English language communication skills to relay work in spoken and written media.
- Ability to contribute to and coordinate collaborative project reports and deliverables.
- Knowledge of the protection of intellectual property.

Main Duties/Responsibilities

- Initially assume the Development Team Lead and Systems Architect roles, overseeing the efforts of a wider development team.
- Generate whitepapers, technical notes and video for use as sales channel training materials/marketing collateral.
- Participate in engineering team monthly staff meetings.
- Embed learning from lab work at Aston University into PPM staff.
- To conduct work in line with the project plan to which you are assigned, initiating novel ideas and contributing to the planning of associated research tasks.
- To undertake numerical simulation, experimental investigations, and the prototype building
- To maintain accurate and traceable working records, including appropriate software version control and links to raw data
- To Maintain a sufficient breadth or depth of specialist knowledge research methods and techniques in the discipline
- To contribute to the generation, protection and exploitation of intellectual property.
- Fully engage in all relevant safety protocols, taking responsibility for your own safety and highlighting risks which may impact others.
- To undertake such other duties as may be reasonably requested and that are commensurate with the nature and grade of the post.

Additional responsibilities

- Engage in continuous personal and professional development in line with the demands of the role, including undertaking relevant training and development activities.
- Ensure and promote the personal health, safety and wellbeing of staff and students.
- Carry out duties in a way which promotes fairness in all matters and which engenders trust.
- Promote equality of opportunity and support diversity and inclusion as well as working to support the University's environmental sustainability agenda and practices.

Person specification

	Essential	Method of assessment
Education and qualifications	▶ Minimum Masters' level degree in Photonics/Optics with relevant practical / work experience in the field.	▶ Application form and interview
Experience	▶ Strong analytical and problem-solving skills related to photonic/optic-based systems. ▶ Expertise and hands-on experience in designing, testing and optimising photonic networks. ▶ Proficiency with simulation tools such as MATLAB, Python, and ideally VPI photonic design suite.	▶ Application form and interview
Aptitude and skills	▶ Excellent communication and management skills. ▶ Highly motivated and adaptable. ▶ Strong ability to work independently and in a team.	▶ Application form and interview

	Desirable	Method of assessment
Education and qualifications	▶ PhD in Photonics/Optics with relevant practical / work experience in the field.	Application form
Experience	▶ Experience of experimental optical communication system performance characterisation, test bed design and assembly ▶ Recent publication record in international journals and high impact conferences.	Application form and interview

	Desirable	Method of assessment
Aptitude and Skills	▶ Long-haul/unrepeated high-capacity transmission system testing. ▶ Creative problem-solving skills. ▶ Demonstrable track record of team working. ▶ Good English language communication skills to relay work in spoken and written media. ▶ Ability to contribute to and coordinate collaborative project reports and deliverables. ▶ Knowledge of the protection of intellectual property.	▶ Application form and interview

University values

All staff are expected to demonstrate/promote the University's values and expectations, which are an integral part of our strategy and underpin the culture of the University. In addition, our leaders are expected to be accountable, help to execute strategic visions of the University and share and set clear expectations that inspire those around them.

How to apply

You can apply for this role online via our website https://www2.aston.ac.uk/staff-public/hr/jobs.

Applications should be submitted by 23.59 on the advertised closing date.
All applicants must complete an application form, along with your CV.
Any CV sent direct to the Recruitment Team and Recruiting Manager will not be accepted.
If you require a manual application form, then please contact the Recruitment Team via recruitment@aston.ac.uk.

Contact information

Enquiries about the vacancy:
Name: Dr Mingming Tan
Job Title: Research Fellow at Aston Institute of Photonic Technologies (AIPT), College of Engineering and Physical Sciences
Email: m.tan1@aston.ac.uk

Name: Dr Ian Phillips
Job Title: Lecturer in Aston's School of Engineering and Innovation and member of AIPT, College of Engineering and Physical Sciences
Email: i.phillips@aston.ac.uk

Enquiries about the application process, shortlisting or interviews:
Recruitment Team via recruitment@aston.ac.uk or 0121 204 4500.

Additional information

Visit our website https://www2.aston.ac.uk/staff-public/hr for full details of our salary scales and benefits Aston University staff enjoy.

Salary scales: https://www2.aston.ac.uk/staff-public/hr/payroll-and-pensions/salary-scales/index

Benefits: Benefits and Rewards | Aston University

Working in Birmingham: https://www2.aston.ac.uk/birmingham

Employment of Ex-Offenders: Under the Rehabilitation of Offenders Act 1974, a person with a criminal record is not required to disclose any spent convictions unless the positions they applying for is listed an exception under the act.

Eligibility to work in the UK: You should ensure that you meet the eligibility requirements, including meeting the English language standards. If you do not meet the eligibility criteria, any application for a work visa would be unsuccessful. Please see UKVI guidance for further information on eligibility, knowledge of English requirements and approved test centres https://www.gov.uk/tier-2-general

With the end of free movement for EU/EEA/Swiss nationals from 1 January 2021, the UK's new immigration system applies to all non-UK/Irish nationals who require a visa.

Where an individual is subject to UK immigration control, they will require a visa to work in the UK.

The following individuals do not need a visa for the UK, but do still have to prove their right to work before employment can commence:

- **British Citizens or Irish Nationals**
- **EU/EEA/Swiss nationals with Settled or Pre-settled status under the EU Settlement Scheme**
- **Non-EEA nationals with Indefinite Leave to Remain/Settlement in the UK**

The main routes available for those who need a visa to work in the UK are **Skilled Worker**, **Global Talent** and the **Graduate Route**.

You can find further information about each of these visa routes on our candidate immigration page.

If you will conduct research in your role, you may need to apply for and obtain ATAS clearance before Aston can issue a Certificate of Sponsorship for your visa application. Please see below for further details.

Academic Technology Approval Scheme (ATAS):
If you will conduct research in your role and you apply for a Skilled Worker or Temporary

Worker GAE visa, you may need to apply for and obtain ATAS clearance before Aston can issue a Certificate of Sponsorship for your visa application.

This process can take at least 6 weeks to process, and Aston will consider this when confirming your expected start date. Processing times will increase between April and September and can longer to complete.

There is no fast-track option available. ATAS certificates will be processed in order of receipt.

You can find more information about ATAS on our candidate immigration page.

Before you start and Right to Work

90-day entry vignette

If you have applied for your visa outside of the UK, you will receive a vignette in your passport which is usually valid for 90 days. Please make sure to travel to the UK within the 'valid from' and 'valid to' dates on this visa. If you entered the UK before or after these dates, you would not 'activate' the visa and you would need to leave and re-enter the country.

You will also receive a decision letter confirming details about your immigration permission and where to collect your Biometric Residence Permit.

Cost of Living - Estate and Letting Agents

There are numerous Estate and Letting Agents in and around Birmingham that can help you find suitable accommodation. The Midland Landlord Accreditation Scheme provides a list of professional agencies and landlords who have applied with them for accreditation. Whilst accreditation is not a guarantee of quality, it provides some reassurance about the standard of the service they provide.

You can also use property search websites such as Rightmove or Zoopla.

Equal Opportunities

Aston University promotes equality and diversity in all aspects of its work. We aim to ensure, through our admissions policies for students, and our staff recruitment and selection processes that we encourage applications from all groups represented in the wider community at a local, national and international level.

The University will endeavour not to discriminate unfairly or illegally, directly or indirectly, against student or potential students, staff or potential staff. This commitment applies to all functions of the University and to any stage of an individual's career.

An Equal Opportunities Monitoring Form is included within the application form. Data you provide on the Equal Opportunities Monitoring Form will be included in a general database, for statistical monitoring purposes, enabling the University to monitor the effectiveness of its Policy, Codes of Practice and Guidelines on Equal Opportunities in Employment. Individuals will not be identified by name.

Data Protection

Your personal data will be processed in compliance with the Data Protection Act 2018 and the General Data Protection Regulation ((EU) 2016/679) ("GDPR"). The University's Data Protection Policy and Privacy Notices, including the Job Applicant Privacy Notice can be found at https://www2.aston.ac.uk/data-protection. Your application will only be used to inform the selection process, unless you are successful, in which case it will form the basis of your personal record with the University which will be stored in manual and/or electronic files. Information in statistical form on present and former employees is given to appropriate outside bodies.

Full details of our terms and conditions of service and associated policies and procedures are available online at https://www2.aston.ac.uk/staff-public/hr/policies

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