



# OPPORTUNITY

## Research Fellow in Photonic and Optical Communication Technologies

**Reference:** 0163-23

**Salary:** £44,414 to £48,423 per annum. Grade 9, depending on experience

**Contract Type:** Fixed term (up to 18 months)

**Basis:** Full Time

# Job description

## Job Purpose:

To plan, direct and undertake research into high-speed fibre communications, provide technical inputs within Aston and to external partners, to design and perform numerical system level validation of photonic-assisted DAC/ADC schemes, and to develop novel machine learning assisted DSP schemes for signal reconstruction and nonlinear equalisation.

The Research Fellow should have an established research profile at least at a national level with evidence of a growing track record in internationally excellent and leading research publications as well as attracting research grant income appropriate to the discipline.

## Research

- ▶ To carry out research in the field of high-speed optical fibre communications, implementing and investigating new ideas, and planning associated research tasks.
- ▶ To develop research objectives consistent with the delivery of the EPSRC CREATE research project.
- ▶ To conduct associated numerical modelling on photonic devices and optical communication systems and subsystems
- ▶ To develop and numerically validate novel digital signal processing schemes for nonlinear signal equalization combining new machine learning methodologies
- ▶ To maintain a sufficient breadth or depth of specialist knowledge in the discipline, and of research methods and techniques to work within the CREATE research programme
- ▶ To write up, publish and present research outcomes of research for journal papers, conferences, seminars, and the media.
- ▶ To coach junior colleagues in research
- ▶ To support supervision and training of postgraduate students
- ▶ To identify sources of funding, develop and submit funding applications, securing external research funding.
- ▶ To collaborate in research initiatives with colleagues in and beyond the School as appropriate.

## External engagement

- ▶ To represent the interests of the subject and School via activities to raise the regional, national and international profile, particularly with the professions, schools and businesses.
- ▶ To forge relationships with the professional bodies and other bodies representing relevant professional interests.

## **Citizenship**

- ▶ To carry out specific (School) roles and functions as may be reasonably required e.g. Subject Group Lead, Programme Director, Personal Tutor, Admissions Tutor).
- ▶ To take part in the meetings and activities of the Academic Department and, on occasion, act as Chair of one or more of the School committees, these responsibilities being equitably distributed across the academic staff.
- ▶ To demonstrate the University's leadership values through own actions and behaviour.
- ▶ 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 to develop themselves and support the development of others.
- ▶ 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
<b>Education and qualifications</b>	<p>1st class or upper second-degree Physics/Applied Physics, Electronic Engineering or equivalent.</p> <p>PhD in photonics, optical communications or closely related field, and/or relevant industrial experience.</p>	Application form
<b>Experience</b>	<p>Outstanding recent publication record in international journals and high impact conferences such as OFC and ECOC.</p> <p>Experience of the modelling/simulation of optical communication systems.</p> <p>Experience of the design of photonic devices</p> <p>Experience of developing new digital signal processing schemes using machine learning methods (preferably use of the KAF framework).</p> <p>Experience of leading the development of research grant proposals and of being the PI or key contributor of externally peer-reviewed grants.</p> <p>Experience of leading and/or contributing to national/international research collaborations and associated activities with other HEIs and industrial companies.</p> <p>Experience of supervising PhD students, other researchers and/or technical staff.</p>	Application form and interview
<b>Aptitude and skills</b>	<p>Ability to present data in both a clear and concise manner that is visually appealing.</p> <p>Ability to prepare written communications to a high standard</p>	Application form and interview

	Essential	Method of assessment
	<p>Ability to maintain an ongoing research programme and to publish in high quality publications.</p> <p>Evidence of ongoing national and international research collaboration</p> <p>Ability to build and develop links with industry and the professions and to secure research funds from external sources.</p> <p>Evidence of delivery of academic and/or people leadership related duties (or activities) and of management roles, either within or on behalf of the Research Group/Subject Discipline/Employer Institution</p> <p>Ability to harness IT as a research and teaching tool</p> <p>A willingness to undertake further training as appropriate and to adopt new procedures as and when required.</p>	



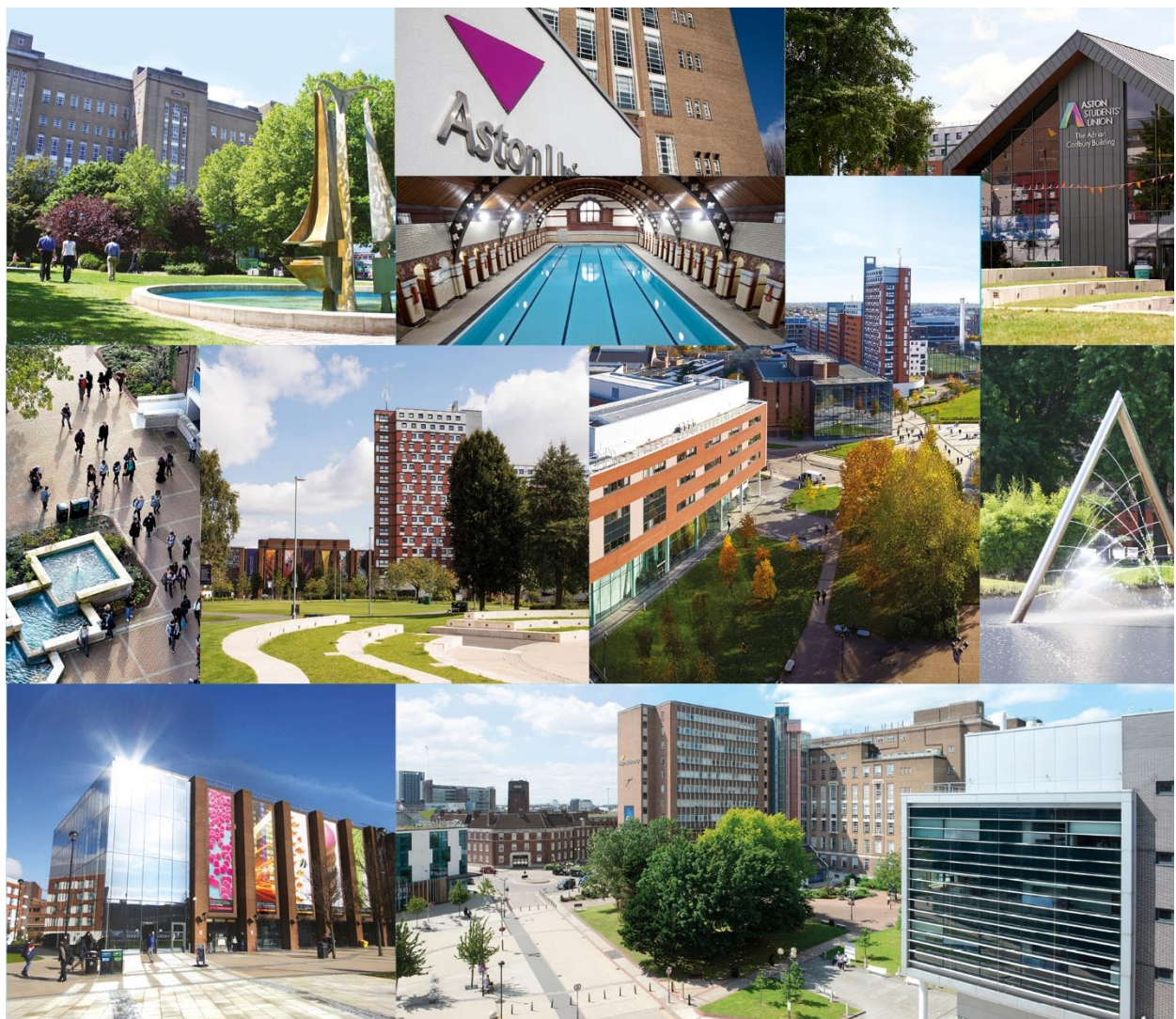
# How to apply

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

Applications should be submitted by 23:59pm 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 [jobs@aston.ac.uk](mailto:jobs@aston.ac.uk).



# Contact information

## Enquiries about the vacancy:

Name: Stylianos Sygletos

Job Title: Associate Professor

Email: [s.sygletos@aston.ac.uk](mailto:s.sygletos@aston.ac.uk)

## Enquiries about the application process, shortlisting or interviews:

Recruitment Team via [jobs@aston.ac.uk](mailto:jobs@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:** <https://www2.aston.ac.uk/staff-public/hr/Benefits-and-Rewards/index>

**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:

### New immigration system from 1 January 2021

A new immigration system has been introduced for people arriving in the UK from EEA countries with effect from 1 January 2021. In addition to those who have always required a visa, EU citizens who were not resident in the UK before 31 December 2021 will need to get a visa in advance.

You can find more information [here](#)

Candidates should check their eligibility to enter or remain in the UK in advance of making any job application via the [UKVI website](#). Before applying you should ensure that you meet the requirements, including meeting the English Language requirements. If you do not meet the eligibility criteria, any application for a work visa would be unsuccessful.

If you require a visa to work in the UK the most common types of visa are:

- Skilled Worker Visa <https://www.gov.uk/skilled-worker-visa>
- Global Talent Visa

If you are a leader or potential leader in one of the following fields you may be eligible to

apply for a Global Talent Visa:

- Academia or Research
- Arts and Culture
- Digital Technology

Please click the following link for further information and to check your eligibility for this visa.  
<https://www.gov.uk/global-talent>

**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>

**Aston University**  
**Birmingham**  
**B4 7ET, UK.**  
**+44 (0)121 204 3000**  
**[aston.ac.uk](https://www2.aston.ac.uk)**



**Where change  
gets real.**