

# Professor in Optical Communications or Sensing



**OPPORTUNITY**

Where change gets real.



**Reference: 0356-26**

**Grade: Band 1**

**Salary: £67,280 to £104,712, per annum, depending on experience**

**Contract Type: Permanent**

**Basis: Full Time**

## Job description

### Job Purpose:

Aston Institute of Photonic Technologies (AIPT), founded in 1991 as the Photonics Research Group is an internationally recognised research institute. Its primary mission is the advancement of Photonic Technologies for the betterment of society. We are looking for a new top-level professor in these specific priority areas: *high-speed optical communications*, data centre interconnects, *optical sensing, integrated sensing and communications*. We will also consider strong candidates in the area of neuromorphic/optical computing relevant to our coordination of the UK Multidisciplinary Centre for Neuromorphic Computing (<https://www.uk-neuromorphic-centre.net/>). Based in the AIPT, the successful candidate will lead research in the fields of optical communication or/and optical sensing and their applications. They will also carry out scholarship activities within the College of Engineering and Applied Sciences (EPS) through professional practice and expertise. In addition, to lead external links with regional, UK and international bodies such as government agencies, schools, colleges, professional bodies, business and industry as appropriate with the aim of promoting the use and commercial exploitation of optical communication or sensing technologies for societal and economic advantage.

Whilst initially bias towards research and engagement, the balance between research and teaching and learning will be discussed and agreed with individuals annually in line with operational needs, Institute, School and University strategy and with consideration of the individual's career goals and development plans.

Professors will have established and maintained international recognition through original, innovative and distinguished contributions to scholarship and research.

### Main Duties/Responsibilities

#### Research

- ▶ To pursue and lead an internationally recognised research program in the field of optical communications, sensing or neuromorphic computing which both informs and is consistent with the Aston University's 2030 Strategy.
- ▶ To publish the outcomes of research in highly regarded international journals in a form appropriate to achieving impact for academic, industrial, and public audiences.
- ▶ To maintain a proven experience of securing significant external funding from prestigious funders including research councils, charities and the European Commission.
- ▶ To successfully lead and manage a significant portfolio of research projects, people and resources and thus establish and sustainably operate major research programmes.
- ▶ To establish partnership links with external organisations to enhance Aston's research and industry profile with a particular focus on high potential value start-ups, UK SMEs and companies with major international presence.
- ▶ To provide strong leadership and team building across a major thematic area within AiPT.
- ▶ To supervise postgraduate masters and doctoral levels students to on-time completion.
- ▶ To foster an environment which encourages collaborative research at all levels.

- ▶ To lead research initiatives with colleagues and a wide range of external collaborators including internationally funded research projects as appropriate.
- ▶ To conduct research in a manner which demonstrates significant impact beyond academia e.g. the economy, society, culture, public policy or services, health, the environment or quality of life.
- ▶ To foster a safe, inclusive and entrepreneurial culture amongst PGR, PDRAs, and academic staff in AiPT.
- ▶ To build critical mass and promote excellence in optical communication or sensing technologies.

### **Teaching and Learning**

- ▶ To develop strong links (contribution to lectures, laboratories or final year projects) with at least one undergraduate programme in the EPS (e.g. CS, Maths, EEE, Mechanical Engineering, Civil Engineering and similar).
- ▶ To participate in the development of appropriate UG, PGT & CPD courses and programmes.
- ▶ To identify the opportunities for taught programmes in communications, sensing, applied physics, other programmes with links to Photonics with a particular focus of the needs of Aston's stakeholders, or the addition of modules to existing programmes, and to oversee the development of appropriate modules and programmes.
- ▶ To engage with undergraduate students at different levels, offering opportunities to experience research culture and so enhancing their employability.
- ▶ To provide academic support, pastoral care, and advice to Aston students at a variety of levels.
- ▶ To mentor colleagues in effective teaching practice.
- ▶ To cooperate with colleagues across disciplines in the continuous review and development of programmes and the curriculum.
- ▶ To promote the use of best-in-class methods and techniques in teaching, learning and assessment.
- ▶ To be responsible for the design and content of specific areas of teaching and learning within the School's teaching programmes.

### **External Engagement**

- ▶ To demonstrate research impact and secure commercialisation, identifying and pursuing opportunities for translational research.
- ▶ To deliver invited international keynote conference presentations and prestige lectures.
- ▶ To establish and lead partnerships for commercialisation including patents, inventions, and other exploitable intellectual property.

- ▶ To develop long-term research and development collaborations with industry partners.
- ▶ To contribute to businesses, the public sector and communities e.g. through innovation, knowledge transfer, cultural enrichment, advising government bodies, contributing to and influencing government (UK or overseas) policy-making and participating in standardisation activities.
- ▶ To contribute to community engagement activities to raise the regional and national profile of Photonics in particular and the School in general.
- ▶ To enhance the University's reputation with professional bodies such as Optica, Institute of Physics, and the IEEE Photonics Society through active participation.
- ▶ To develop student placement schemes with companies and research institutions both in the UK and overseas.

## **Citizenship**

- ▶ To contribute to effective leadership of the Aston Institute of Photonic Technologies.
- ▶ To make an outstanding contribution to governance and collegial life within and outside the University, for example by Chairing school committees, undertaking significant administrative positions, or participating in or Chairing University-level committees.
- ▶ To develop and manage major cross-departmental events e.g. Sixth Form Conferences, Scientific Festivals etc.
- ▶ To demonstrate the University's values through own actions and behaviour.
- ▶ To participate in continuing professional development in line with the demands of the role e.g. through seminars or conferences and by engaging in training programmes run by the University which are consistent with the needs and aspirations of the academic and the College.
- ▶ 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, inclusion and equality as well as working to support the University's environmental sustainability agenda and practices.
- ▶ To undertake such other duties as may be reasonably requested and that are commensurate with the nature and grade of the post.
- ▶ To have a sustained record of effective leadership of either/all of: teaching teams; research; and staff management and supervision.
- ▶ To Chair one or more of the School committees, these responsibilities being equitably distributed across the academic staff.

## **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
<b>Education and qualifications</b>	<ul style="list-style-type: none"> <li>▶ A doctorate in Photonics or Physics or equivalent industrial experience.</li> <li>▶ Active senior membership of a relevant professional body.</li> <li>▶ A recognised teaching qualification /membership of Advance HE (formally known as Higher Education Academy or HEA) at Fellow level as a minimum, Principal Teaching Fellow if focus is teaching.</li> </ul>	Application form and interview
<b>Experience</b>	<ul style="list-style-type: none"> <li>▶ Significant experience of initiating and conducting optical communication/sensing, or closely related, research.</li> <li>▶ A proven track record of high-quality research as evidenced by publication in the world-leading international journals.</li> <li>▶ Prior accomplishment of having secured a pipeline of research funds as Principal Investigator from external sources.</li> <li>▶ Sufficient to maintain a productive research team.</li> <li>▶ Proven experience of long-term productive research collaborations to build critical mass and promote excellence.</li> <li>▶ Successful supervision of PhD students to completion.</li> </ul>	Application form and interview

	Essential	Method of assessment
	<ul style="list-style-type: none"> <li>▶ Successful engagement beyond academia.</li> </ul>	
<b>Aptitude and skills</b>	<ul style="list-style-type: none"> <li>▶ Ability to lead the development and implementation of research strategy.</li> <li>▶ Highly developed communication and presentation skills.</li> <li>▶ Ability to present research findings at national and international conferences.</li> <li>▶ Ability to generate impact beyond Academia.</li> </ul>	Application form and interview

	Desirable	Method of assessment
<b>Experience</b>	<ul style="list-style-type: none"> <li>▶ Research management and/or leadership of or within an academic department or Research Institute.</li> <li>▶ Management of budgets and budget setting.</li> <li>▶ Development of constructive and inclusive research environment.</li> <li>▶ Development and delivery of a research related teaching Programme.</li> </ul>	Application form and interview

	Desirable	Method of assessment
<b>Aptitude and Skills</b>	<ul style="list-style-type: none"> <li>▶ Ability to engage with and inspire passion for research in PGR and UG students through activities within and beyond own organisation.</li> <li>▶ Ability to provide leadership in teaching.</li> </ul>	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.

**Values + Behaviours**

				
<b>Innovation</b>	<b>Collaboration</b>	<b>Ambition</b>	<b>Inclusion</b>	<b>Integrity</b>
We strive for excellence within ourselves and others, providing solutions to new and existing challenges.	We work best when we are collaborative, working together to contribute to the Aston community.	We strive together for improvement and innovation looking ahead to see the bigger picture.	We treat everyone in our community equally and how they would like to be treated.	We are open, honest and fair. We take ownership of the way we work and how we treat each other.

## 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](mailto:recruitment@aston.ac.uk).

## Contact information

### Enquiries about the vacancy:

Name: Sergei K. Turitsyn

Job Title: Professor, Director of AIPT

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

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

Recruitment Team via [recruitment@aston.ac.uk](mailto: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:** 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**.

Please see UKVI guidance for further information on eligibility, knowledge of English requirements and approved test centres <https://www.gov.uk/skilled-worker-visa> You can also find further information on our candidate immigration [web 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 our candidate immigration [web page](#) for further details.

## **Before you start and Right to Work**

### Right to Work Check

All employees must complete a Right to Work check before they commence work at Aston. HR will contact you during the onboarding process to arrange your check.

### Cost of Living - Estate and Letting Agents

There are numerous Estate and Letting Agents that can help you find suitable accommodation. Useful websites for support and guidance

<https://www.gov.uk/government/publications/how-to-rent/how-to-rent-the-checklist-for-renting-in-england> and <https://www.citizensadvice.org.uk/housing/>

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>

Aston University  
Birmingham  
B4 7ET, UK.  
+44 (0)121 204 3000

[www.aston.ac.uk](http://www.aston.ac.uk)