



Head of Centre – Fraunhofer UK Centre for Applied Photonics

Department	Institute of Photonics (www.strath.ac.uk/science/physics/instituteofphotonics/)		
Faculty	Faculty of Science (www.strath.ac.uk/science/)		
Staff Category	Knowledge Exchange	Reference No	602842
Reports To	Institute of Photonics Director	Grade:	Professorial
Salary Range:	Salary commensurate with experience and standing	Contract Type:	Open Contract
FTE:	1.0 FTE	Closing Date	Wednesday, 15 May 2024
Holidays	31 days + 11 statutory days Option to purchase additional holidays	On Site Facilities	Car parking, sports centre, catering
Pensions	Contributory pension scheme available to all staff including generous employer contribution		
Training	Professional Development with Organisational and Staff Development Unit (OSDU) plus external training if required.		
Family Friendly Benefits	Generous parental leave provision, on-campus nursery and options for flexible working.		
Health and Wellbeing	University Sport centre, Occupational Health service, access to health and wellbeing events, cycle to work scheme, Employee Assistance Programme, agile working and established carers support network and carer friendly policies.		

Job Advert

Applications are invited for the position of Head of the Fraunhofer Centre for Applied Photonics (Fraunhofer CAP, a research centre of Fraunhofer UK Research Ltd), Glasgow, following the announcement that Professor Martin Dawson FRS, the inaugural holder of the post, will step down from this role on 31st December 2024 after over 12 years of service. The successful candidate will hold this full-time appointment as a Professor of Practice in the University of Strathclyde's Institute of Photonics, the academic interface for Fraunhofer CAP, devoting an average of 0.8 FTE to directing Fraunhofer CAP and 0.2 FTE to University responsibilities that develop and promote a dynamic and mutually beneficial interface between the University and Fraunhofer CAP.

The Institute of Photonics (IoP) is an applied research unit that is part of the Department of Physics and was formed in 1995 as a partnership between the University of Strathclyde, industry and government. We have expertise across many disciplines, with core capabilities in Advanced Lasers, Photonic Materials & Devices, Neurophotonics, Heterogeneous & Complex Photonic Integration, Optical Wireless Communications, and Neuromorphic Photonics. We are delivering in key applications areas including Quantum Technology, Sensing (medical, environmental, metrology), Neural Processing, Communications, Computing, and AI. Our research activities are strategically focussed to ensure academic excellence is combined with strong industrial engagement, with a primary mechanism being our interface with Fraunhofer CAP.

Fraunhofer CAP, co-located with the IoP in the University's Technology and Innovation Centre, is the UK's first and only Fraunhofer research centre, these prestigious research centres comprising the 'top tier' of Fraunhofer's international engagement. Fraunhofer CAP operates under Fraunhofer UK Research Ltd, a not-for-profit UK company limited by guarantee, located in Glasgow. Fraunhofer UK Research Ltd with its research centre Fraunhofer CAP is a legally independent affiliate of

Fraunhofer-Gesellschaft, based in Germany, the world's leading applied research organization. Prioritizing key future-relevant technologies and commercializing its findings in business and industry, Fraunhofer-Gesellschaft plays a major role in the innovation process. As a trailblazer and trendsetter in innovative developments and research excellence, it tries to turn pioneering ideas into innovative technologies and thereby to strengthen the German and European economies.

Fraunhofer UK Research Ltd with its research centre Fraunhofer CAP was established in 2012 to provide deep technology professional R&D services to industry by following the principles, operating model and branding of the Fraunhofer Gesellschaft. It employs its own staff, the majority of whom are scientists or engineers trained to PhD/EngD level, and it has its own well-equipped laboratories and workshops; extensive design and modelling software; and electronics, mechanical and design engineering support. Fraunhofer CAP concentrates on mid-technology readiness level (TRL) prototyping and proof of principle work and it does not sell or manufacture products; rather it undertakes strategic and collaborative work aimed at enabling business to develop new products, processes and capabilities. Fraunhofer CAP adheres to the distinctive 'Fraunhofer funding model' under which two thirds of the annual turnover must be generated by competitively won external contracts (either direct with industry or through industry-government co-funded programmes), with one third provided by public funds for strategic purposes.

Fraunhofer CAP has been highly successful and has grown progressively under the Fraunhofer model to currently over 70 staff and PhD/EngD students (the latter registered at the University of Strathclyde and several other universities). It is prominent in the UK's National Quantum Technology Programme and it has broad photonics-based activities in areas including quantum, stand-off chemical and environmental sensing, and LIDAR and asset monitoring for net zero and the energy industry. Fraunhofer CAP has been recognised as a UK asset in, for example, the 2023 National Quantum Strategy and 2023 National Semiconductor Strategy. To date it has won over 250 projects with over 150 distinct industrial partners, covering the full range from small to medium enterprises to major national companies and multi-national corporations; it now has an annual turnover of around £7M.

Appointed at the level of Professor in Strathclyde's Knowledge Exchange (KE) career path, you will provide scientific, technical and strategic leadership to Fraunhofer CAP, positioning and developing the organisation to support industry, particularly in the UK. You will liaise with stakeholders in the UK and Germany, and foster broad national and international linkages. You will provide the strategic framework for, and facilitate, support and oversee to successful completion, the wide and growing portfolio of R&D contracts held by Fraunhofer CAP. You will contribute to the fore sighting and strategic planning of research and infrastructure investments at the Institute of Photonics, working to develop and advise on joint strategy across the interface with the University, to mutual benefit. Where appropriate, you will lead on the development of R&D projects yourself as a Principal Investigator or Co-Investigator. Moreover, you will participate in and develop external networks to foster R&D collaborations, to inform the development of technical/commercial opportunities for the UK and beyond, and to identify potential sources of funding. You will develop knowledge exchange activities by establishing research links with industry and progressing the commercialisation and application of photonics in real-world applications.

To be considered for the role, you will have a PhD in an appropriate discipline (ideally physics or engineering), significant relevant research and technical experience in photonics, aligned with the core expertise of Fraunhofer CAP and/or the Institute of Photonics, and a track record of research publications, conference presentations and generation and filing of intellectual property rights appropriate to your career history. You will have demonstrated an ability to develop research proposals or technology-based commercial contract proposals and to attract research and/or R&D funding, including experience of creating consortia and writing industry-focussed/industry-partnered grant applications. Furthermore, you will have a demonstrated ability to plan, organise and lead research and KE programmes and to ensure successful programme budgeting, delivery, reporting and completion. You will have experience of planning and organising workloads, including the ability to supervise and delegate technical work and you will have a demonstrated ability to work within a team environment, including team leadership. You will have excellent interpersonal and communication skills, with the ability to listen, engage and persuade, and to present complex information in an accessible way to a range of audiences, partners, and stakeholders. Experience in the supervision of PhD/EngD students (either as an academic or industrial supervisor) is desirable.

Job Description

Brief Outline of Job:

The successful applicant will be the Head and Scientific Director of Fraunhofer CAP, with overall responsibility for its scientific vision, its technical programme of activities and its strategic direction and development, to be conceived and delivered in a manner fully consistent with the Fraunhofer model and in collaboration with Fraunhofer institutes at Fraunhofer-Gesellschaft in Germany and in particular with its partner institute, Fraunhofer Institute of Applied Solid-State Physics, IAF in Freiburg, Germany. In keeping with the namesake Joseph von Fraunhofer, the successful applicant will possess the skills and expertise of a scientist, inventor, and entrepreneur.

The Head of Centre will also bear the primary responsibility for managing and promoting Fraunhofer CAP's engagement with the Institute of Photonics, the University of Strathclyde, and the academic sector more broadly. This dual responsibility will involve regular reporting to, and engagement with, both the Board of Fraunhofer UK Research Ltd and the Director of the Institute of Photonics in the University of Strathclyde (and, via the Director of the Institute of Photonics, to the Head of the Department of Physics and the Dean of Science), facilitating effective transfer of University research to industry via Fraunhofer

CAP, and supporting increased research and KE income to the IoP. The Principal of the University convenes an annual Internal Board for Fraunhofer, to which the Head of Centre will also report. A high level of proven leadership credentials, deep technical expertise in the relevant areas of photonics, project management skills, and experience within either a commercial or commercially-interfaced R&D environment or from a university base working collaboratively and successfully with industry are required.

Main Activities/Responsibilities:

1.	To lead Fraunhofer CAP scientifically, providing the overall strategic and technical vision and direction which will frame and foster the further development of the organisation according to the Fraunhofer model. This includes responsibility for identifying new photonics-enabled market opportunities for the business, for its primarily UK customer base, and developing technical capabilities aligned to those sectors.
2	To lead, as a crucial part of the responsibility under 1) above, on the impactful strategic deployment of the public core funding of the organisation (1/3 of annual turnover). This can include, for example, purchase of capital equipment bringing new capability, support of PhD/EngD studentships, and support (where appropriate) for selected university-based chairs, fellowships and secondments that support Fraunhofer CAP's business. Such university interactions may be with Strathclyde or other universities.
3.	To work collaboratively with colleagues at the Institute of Photonics to develop a joint strategic and scientific vision, managing a two-way flow of information to mutual benefit. This will include foresighting University and Fraunhofer CAP funding opportunities, adding value to IoP funding applications, supporting increased KE income generation to the Department and Faculty, and developing cases for joint infrastructure investments.
4.	To lead Fraunhofer CAP organisationally: directing and supporting scientific, engineering, business development and administrative staff; developing, defending, monitoring and delivering the annual budget; convening and chairing management meetings; convening and chairing Fraunhofer research strategy days and student research days; overseeing studentship allocations, programmes and supervision.
5.	To lead and oversee Fraunhofer CAP's scientific and technical interactions with the Fraunhofer Gesellschaft, which includes quarterly formal reporting to the Board of Fraunhofer UK Research Ltd. and developing collaborative R&D links with Fraunhofer Institutes.
6.	To lead and oversee the health, safety, wellbeing, personal and career development of all Fraunhofer CAP staff and students.
7.	To maintain and develop a corporate culture which is supportive, ambitious, innovative and progressive, across all areas of the business.
8.	To be an effective ambassador, based on scientific excellence and commercial impact, who embodies the values and mission of the Fraunhofer network.
9.	To engage, as appropriate, with public funding agencies, learned and professional societies, and Scottish and UK government bodies and agencies and their programmes and strategies.
10.	To aspire to, and progress towards, high personal and professional standing as a scientist and technologist, through engagement with the photonics community, though professional society membership and advancement, and through contributing directly to the advancement of photonics via publications, conference papers, and new patents, technology development and demonstrations.

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)

E1 A PhD in a relevant area of Physics or Engineering with a sustained industrially linked research and development career.

Experience

E2 Extensive relevant leadership experience in industry and/or industry-interfaced academia.

E3 Highly developed knowledge of the principles and practices of photonics and/or quantum technology including the establishment of a supply chain and commercialisation of relevant technology.

E4 Technical expertise required to contribute to the strategic planning across the complementary research portfolios of Fraunhofer CAP and the Institute of Photonics.

E5 Proven track record of leading and delivering commercial and technical strategy and objectives in research or product development at national or international level.

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- E6 A track record in securing significant external funding for academic or commercial R&D.
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- E7 Practical experience of IP development/protection and entrepreneurship.
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- D1 Extensive knowledge of the photonics and quantum technology landscape in Scotland and the wider UK with a range of key academic, government, and industry contacts throughout the UK.
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- D2 Track record of mentoring junior researchers in academia and/or industry for career development and engagement.
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Job Related Skills and Achievements

- E8 The technical expertise to have good knowledge/understanding of the academic capabilities of consortium partners in, and to lead the creation of opportunities for, new R&D in photonics and/or quantum technology.
- E9 Skills to develop productive relationships with senior and influential individuals within industry, academia and key external bodies
- E10 Ability to engage with a range of stakeholders, educators, and government, adapting the key messages and effectively communicating with each audience.
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Personal Attributes

- E11 Strong leadership and interpersonal and presentational skills, including motivational, negotiating, influencing and networking nationally and internationally.
- E12 Personal credibility and the skill to work collaboratively, fostering relationships and influencing a broad range of internal and external partners nationally and internationally
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Application Procedure

Applicants are required to complete an application form including the name of three referees who will be contacted before interview without further permission, unless you indicate 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 as well as a one-page document outlining your vision and strategy for the further development of Fraunhofer CAP. Applicants should also complete the Equal Opportunities Monitoring Form.

Before applying, prospective applicants are welcome to contact the current Head of Centre, Professor Martin Dawson, if they wish further clarification or discussion on the roles and responsibilities of this post: m.dawson@strath.ac.uk

Other Information

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

Conditions of Employment

Conditions of employment relating to the Knowledge Exchange staff category can be found at: [Conditions of Employment](#).

Rewards and Benefits

Our staff have access to a wide range of outstanding benefits that include financial rewards, family friendly and wellbeing benefits and career development opportunities, details of which can be found [here](#).

Probation

Where applicable, the successful applicant will be required to serve a 12 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](#).

Relocation

Where applicable, the University offers a relocation package to support new employees who meet the eligibility criteria. The relocation package is offered as a contribution towards costs incurred, and is designed to be flexible, allowing staff to use the financial support available in the way that will be most helpful to them. Further details are outlined in the Relocation Policy.

Interviews

Formal interviews for this post will be held 7th June 2024.

Equality and Diversity

The University of Strathclyde is a socially progressive institution that strives to ensure equality of opportunity and celebrates the diversity of its student and staff community. Strathclyde is people-oriented and collaborative, offering a supportive and flexible working culture with a deep commitment to our equality, diversity and inclusion charters, initiatives, groups and networks.

We strongly encourage applications from Black, Asian and minority ethnicity, women, LGBT+, and disabled candidates and candidates from lower socio-economic groups and care-experienced backgrounds.

University Values

The University's Values capture what we're all about: who we are, what we believe in and what we stand for. [Our Values](#) have been derived from how we act and how we expect to be treated as part of Strathclyde.



Conditions of Employment

Knowledge Exchange Staff above Grade 10



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, the Privy Council. Staff are also expected to familiarise themselves with, and adhere to, general University policies and procedures, as published on University web pages.

The University Court recognises Strathclyde Universities and College 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 Knowledge Exchange Staff. Such terms and conditions may be varied by the University Court after negotiation and consultation with SUCU.

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

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 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.

Any member of staff may at any time be exposed to commercially sensitive information, information related to potentially valuable intellectual property or information which may otherwise be of a confidential nature. This information, which could be found anywhere in the University, may be written or disclosed orally, can include information of a commercial or technical nature, and may be owned by the University or by third parties. The University requires all employees to keep any such information confidential in the first instance and not disclose, publish or otherwise disseminate it without prior consent of the University. Such confidentiality obligations are commonplace and in the commercial interests of the University. When in doubt advice should always be sought from Research and Knowledge Exchange Services prior to disclosure.

The University operates probationary periods for new staff. The probation period for posts in this staff category is 12 months. Further guidance on probationary procedures is published at www.strath.ac.uk/hr. Further guidance on probationary procedures is published at www.strath.ac.uk/hr.

Further information on the terms and conditions specified in this document and other staffing policies and procedures can also be found at www.strath.ac.uk/hr.

2. SALARY

Appointments are made at an appropriate salary point on the University's grading structure, with initial placing determined according to qualifications and experience.

Salaries are paid directly to staff members nominated bank account, normally on the second last working day of the month.

3. HOURS OF WORK

Working time is that required to fulfil the duties of the post. The University Court recognises that Knowledge Exchange staff carry out their duties in a variety of ways appropriate to the nature of their role, but expects work to generally be performed during normal working hours on week days. There are exceptions to this pattern which may involve contact at other locations or in the evenings, or at weekends, but these arrangement will be made with the agreement of the member of staff concerned.

Duties may, by arrangement with Head of Department/School/Director, include some teaching associated with the post (up to a maximum of 40 hours per semester) for which no additional payment will be made.

Additional work which does not fall within the scope of that described above may by arrangement attract payment which must be authorised and processed through the payroll.

4. HOLIDAYS

Annual leave entitlement is 31 days per year to be taken by agreement with the line manager. For staff members working on a part-time basis, holidays will be calculated on a pro-rata basis.

In addition to annual leave there is an entitlement to eleven public holidays per year which should be taken on days that the University is closed for this purpose. The University presently closes for four additional days over the Christmas and New Year period. **These additional days count against the annual leave entitlement.**

For staff members working on a part-time basis, public holiday entitlement will be calculated on a pro-rata basis.

Annual leave and public holiday entitlements should be taken in the leave year to which they relate. Up to five days leave can be carried forward into the new leave year subject to line management agreement. In exceptional circumstances, Heads of Department/School/Director may approve carry forward of accrued annual leave in excess of five days.

The University's expectation is that staff take all accrued holidays prior to their termination date. If staff have exceeded their entitlement the University will deduct an equivalent number of days pay from final salary payments.

5. SICKNESS ABSENCE

During any period of absence through illness or injury provided the appropriate notification and certification procedures have been followed 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:

Period of Continuous Employment at start of absence from work	Full Pay	Half Pay
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 Work and Pensions. For full details on the

general University policy in this area please refer to the Sickness Absence Management Policy at www.strath.ac.uk/staff/policies/hr.

6. PENSIONS

If you are under age 75 at the date your appointment commences you will automatically become a member of the pension scheme operated by the University — the Universities Superannuation Scheme (USS). You will be admitted to the career revalued benefits scheme called the USS Retirement Income Builder; the contribution rate that currently applies is 6.1% of pensionable salary. A threshold applies to the maximum salary that counts towards the USS Retirement Income Builder. The current threshold from 1 April 2024 is £70,296 per year. Contributions based on salary above the monthly equivalent rate of the threshold are paid to the defined contribution section of the scheme called the USS Investment Builder. Please use the following link to access information, including the USS Member Guide: <https://www.uss.co.uk/for-members/youre-a-new-joiner>. The scheme booklet is called 'Your Guide to the Universities Superannuation Scheme'.

The University operates a salary exchange arrangement, Pensions Plus, for members of the USS. Pensions Plus enables pension contributions to be made in a manner so that both employees and the University can benefit from available National Insurance Contribution savings. You will be automatically included in Pensions Plus, provided it does not adversely affect your take-home pay or your ability to claim certain state benefits. If your earnings fall below the Pension Plus pay protection limit you will be opted out of Pension Plus. This will not affect your membership of the USS.

New members of staff may opt out of USS within three months of taking up appointment and will then be treated as if they had never been a member of the scheme. 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, Finance, in the first instance (pensions@strath.ac.uk). Please note that if you are a member of Pensions Plus and withdraw from USS with less than two years of membership, or cease employment with the University and have less than two years of USS membership, the option of a refund of pension contributions will not be available to you. Instead, USS must provide you with a pension benefit that is payable from your Normal Pension Age. Regardless of whether you participate in Pensions Plus, if you are a member of the pension scheme for two years or more you are not entitled to a refund of pension contributions on leaving the scheme, you will be entitled to a pension benefit.

The University reserves the right to alter or withdraw Pensions Plus as it sees fit or as required to comply with legislative changes. Withdrawal or amendment of Pensions Plus will not affect your membership of USS. If you do not wish to participate in Pensions Plus but wish to remain in the pension scheme please contact the Pensions Team who will provide you with a non-participation form.

Information regarding pension scheme membership can be found on the Pensions pages of the University's website. Full information regarding USS can be found on the USS website – www.uss.co.uk

7. PLACE OF WORK AND RESIDENCE

Members of staff will be based on the John Anderson Campus, unless otherwise stated in the letter of appointment. The Department/School in which the post is initially placed will be specified in the letter of appointment although there will be an expectation to work at such other places as required in the course of employment.

If the need arises for members of staff to work outside the UK 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.

The University does not normally place specific restrictions upon the place of residence of members of staff. All staff are, however, expected

to reside in a location which is compatible with the satisfactory fulfilment of all the duties associated with their appointment.

8. CONSULTANCY/FURTHER ACTIVITIES

To support the strategic objectives of the University and to facilitate individual professional development, the University encourages staff to engage in professional activities with outside bodies related to their field of work. In many cases, such activity will be approved on the basis that it represents University knowledge exchange activity and should therefore be treated as part of the individual's overall workload and managed through the University's systems. It is also recognised that there will be some cases where an activity is entirely separate from the University and should thus be notified/approved as a personal business activity. For further information please refer to the "University Procedure in relation to Work for Outside Bodies including Consultancies", which forms part of the employment contract and can be accessed at <http://www.strath.ac.uk/hr>.

9. DISCIPLINARY AND GRIEVANCE PROCEDURES

Further information on the University's disciplinary and grievance procedure can also be found at www.strath.ac.uk/policies/hr or on request from Human Resources.

10. NOTICE AND TERMINATION

The employment of a member of staff is terminable by at least six months in writing, on either side; except during probationary period when the notice period is one month. If notice is being given by a member of staff earlier release may be granted if this can be arranged without detriment to the work of the department or area. If the appointment is for a fixed term it will expire at the end of the period without the necessity for notice. Fixed term contracts may be terminated by either party short of the expiry date by the serving of one month's notice in writing. The University is not obliged to continue a fixed term appointment beyond the employment period.

Revised April 2024