

Senior Lecturer/Reader - Pharmaceutical Innovation and Manufacturing Metrologies

Joint appointment with the National Physical Laboratory (NPL)

Faculty	Faculty of Science (www.strath.ac.uk/science/)		
Staff Category	Academic	Reference No	30278
Reports To	Head of Institute through the NPL Pharmaceutical Innovation and Manufacturing Metrologies Theme Lead	Grade:	9/10*
Salary Range:	£49,230 - £60,513*	Contract Type:	Open Contract
FTE:	1	Closing Date	Monday, 23 May 2016

Job Advert

The Opportunity

NPL is a world-leading centre of excellence in developing and applying the most accurate standards, science and technology available. It occupies a unique position as the UK's National Measurement Institute, at the intersection of scientific discovery and real world application. Its expertise and original research have underpinned quality of life, innovation and competitiveness for UK citizens and business for more than a century.

Supported by its Strategic Academic Partners, NPL is creating a series of regional Hubs across the UK, part of a strategic plan to grow the impact of NPL on the UK economy whilst enhancing the Laboratory's access to UK Science. The NPL Scotland Hub will serve the Scottish region, based at the University of Strathclyde.

The Pharmaceutical Innovation and Manufacturing Metrologies (PIMMS) Theme brings together a team supported by state-of-the-art measurement and metrology capabilities within NPL's NiCE-MSI (The National Centre of Excellence in Mass Spectrometry Imaging) and Strathclyde's CMAC National Centre (Continuous Manufacturing and Crystallisation). The shared vision is to develop and apply advanced metrologies to support advanced pharmaceutical manufacturing.

The post holder is the research theme lead and will benefit from support from an existing academic and senior management team within CMAC, reporting to the CMAC Centre Director and will take on a key role to develop the PIMMS theme within NPL Scotland.

About the Role

This is a key strategic senior leadership appointment working closely with the senior managers of CMAC and NPL to lead PIMMS research programmes with national and international impact. The post holder will be responsible for leading new research activities building on recent major investments in ToF-SIMS instrumentation and a suite of advanced analytical and characterisation tools within the new £16M CMAC National Facility housed within the University of Strathclyde's Technology and Innovation Centre. The post holder will also be required to make a significant contribution to administrative activities including membership/chairing of relevant committees and taking on senior administrative positions.

It is expected that the post holder will spend the majority of their time on research, although there will be opportunities to support and engage with the delivery of training at undergraduate, postgraduate and professional levels.

To be considered for this role, you will demonstrate:

- An established track record in senior research or academic positions, including an impressive track record of published research in high quality publications and experience of leading the attraction of significant research funding and of managing the delivery of a research project team/s.
- Significant experience in measurement, analysis and data science applied in pharmaceutical or molecular materials and utilisation of this expertise to harness knowledge and influence novel research areas aligned with advanced metrology challenges in pharmaceutical innovation, materials and advanced manufacturing.
- The knowledge, skills and experience normally associated with a first degree and PhD in the area of Analytical Science, Data Science, Materials Science, Advanced Manufacturing or related research.
- Significant experience in leading and development of research programmes with a national/international impact and experience in leading professional and knowledge exchange activities.
- Ability to work in a multi-disciplinary environment and have established links with industry and relevant professional bodies.
- Experienced in contributing to strategic planning and able to work autonomously, plan and prioritise own workload with minimal inputs from higher management, and deal with complex problems presented to them by colleagues.
- Significant experience of project planning and delivery, as well as excellent communication and interpersonal skills, with a proven ability to interact with a range of stakeholders from industry and academia.
- Contribution to teaching both at undergraduate and postgraduate levels.

* The appointment will be made at either the Reader (Grade 10, £57,047-£60,513) or the Senior Lecturer (Grade 9, £49,230 - £55,389) level depending on the profile of the successful candidate. Appointment to the equivalent grades in the research career path of Principal Research Fellow / Senior Research Fellow may be considered where appropriate.

Job Description

Brief Outline of Job:

To lead research programmes with national and international impact; to develop and deliver new research strategies, including identifying and securing funding of significant value; to disseminate research results through regular and sustained publications with national and growing international impact; to lead professional and knowledge exchange activities, including substantial contributions to the discipline at national/international levels; to contribute to teaching and student supervision at all levels; and to carry out senior administrative tasks assigned by senior management.

Main Activities/Responsibilities:

1.	Working collaboratively with key stakeholders in PIMMs, lead and manage large and varied teams in the development and delivery of research programmes with national and international impact, disseminating results through regular and sustained publications in high impact journals, books and conference proceedings. Specifically to lead the development of the PIMMs research programme between CMAC and NPL in the NPL Scotland Hub in TIC.
2.	Working with colleagues in CMAC and NPL the post holder will lead, as Principal- or Co-Investigator, the development and submission of collaborative proposals aligned with PIMMS to appropriate external bodies for research funding of substantial value, manage grants awarded, and (at Grade 10) guide other team members establishing their own leadership in this area.
3.	Manage a range of research teams as overall group leader (Grade 10) / manage research teams as project leader (Grade 9), providing leadership, support and guidance to colleagues and co-ordinating the input of others in establishing future research strategy aligned with CMAC, University and NPL Scotland objectives aligned with the PIMMs theme.
4.	Generate new research approaches for pharmaceutical metrology with significant impact and identify, adapt, devise and use appropriate research methodologies and techniques. At Grade 10 there will be an expectation of international recognition.
5.	Lead and develop networks (including international networks at Grade 10) of researchers and leading thinkers in the field of advanced metrology in pharmaceutical innovation and manufacturing to foster research collaborations, to identify and deliver common research objectives and to generate income.
6.	Lead the development of knowledge exchange activities in this area to complement existing initiatives by, for example, establishing research links with industry, linking in with CMAC and NPL networks as well as creating new, and influencing public policy and the professions, and support and guide other team members establishing their own leadership in this area.

7.	Contribute to teaching and student supervision particularly at postgraduate levels as required to meet the skills agenda and, playing a lead role in ensuring that research advances inform CMAC/NPL training efforts.
8.	Carry out senior administrative and management functions, for example by undertaking management roles and/or convening and participating in relevant committees (including at Grade 10 at University/NPL-wide level).
9.	Play a leading role in the strategic development of the University, CMAC and NPL through, for example, developing new research strategies and/or groups and by anticipating and planning for new directions for themselves and research teams.
10.	Engage in continuous professional development.

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 Good Degree and PhD in a relevant subject area

D1 Membership of relevant Chartered/professional bodies

Experience

E2 Extensive knowledge and experience in analytical science including SIMS, chemical and physical analytical methods for pharmaceutical materials, data science, informatics or other relevant areas.

E3 Growing national (Grade 9) / international (Grade 10) reputation for leading significant research projects.

E4 Teaching or training experience at undergraduate and postgraduate levels or equivalent, including student assessments

E5 Research and knowledge exchange interests consistent with the strategic direction of CMAC, the University and NPL Scotland, including expertise in metrology applied to pharmaceutical molecular systems

E6 Experience of managing large research programmes and research teams, with ability to build a nationally/internationally leading research group in pharmaceutical metrology.

E7 Track record of multi/inter-disciplinary research collaboration and developing external partnerships.

Job Related Skills and Achievements

E8 A sustained track record of published research in high quality publications demonstrating a standard of excellence in a relevant field, consistent with REF/equivalent inclusion

E9 Ability to play a senior role within a team environment and motivate and manage staff, with experience of leading teams of less experienced staff and students

E10 Track record of securing and managing research/knowledge exchange funding and managing successful research projects.

E11 Ability to manage relationships work with partners within or outside the University to promote the University and NPL Scotland's interests

E12 Experience in leading a research/knowledge exchange area including development of new research strategies

Personal Attributes

E13 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.

E14 Ability to influence senior colleagues to implement change

E15 Established links with industry, learned societies, government and/or relevant Chartered/professional bodies.

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 that 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. Applicants should also complete the Equal Opportunities Monitoring Form.

Other Information

Background on Pharmaceutical Innovation and Manufacturing Metrology Theme (PIMMs):

The new joint research partnership in PIMMS between NPL's NiCE-MSI and CMAC will focus on developing a joint research programme addressing metrology-related challenges to support innovation in next generation manufacturing technologies and, ultimately, play a significant role in achieving the paradigm shift from batch to continuous manufacturing of pharmaceutical products. This area also strongly aligns with other major national programmes including the AMSCI projects REMEDIES and Digital Design and the developing Medicines Manufacturing Innovation Centre (MMIC) initiative as well as demand-led international manufacturing research agendas in the US, EU and Singapore. NPL Scotland will embed enhanced metrology capability within the existing partnership between academia, industry and public sector stakeholders to develop new fundamental understanding of pharmaceutical particles and formulations and exploit this to deliver advanced technologies to support innovation across a range of products, processes and operations.

Our vision is to support advanced manufacturing and pharmaceutical product and process innovation through advanced metrology. Specific aims of the theme include:

- To develop new fundamental understanding of particles structure and surfaces and how these influence quality and performance using advanced metrology
- To develop new fundamental understanding of structure and dynamics of pharmaceutical intermediates, formulations and dosage forms
- Apply chemical imaging or other applicable techniques with advanced data processing methodologies within pharmaceutical process R&D to demonstrate the influence of processing characteristics on quality attributes at the nanoscale
- To apply metrology for process understanding, monitoring and control and for real time release approaches
- To develop new methods and techniques for monitoring particle attributes and performance in vitro

The candidate will be required to build and lead a successful research team in this area. The candidate is not expected to have deep knowledge and experience in all the theme aims above.

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

Informal enquiries about the post can be directed to Professor Alastair Florence, Professor (alastair.florence@strath.ac.uk).

Pre-employment health screening

An offer of appointment will be subject to a medical assessment by Occupational Health. An individual who accepts an offer of employment must complete a confidential medical questionnaire and forward it to the Occupational Health Nurse within 5 days of receipt. If further information is required the individual may be contacted by the OHN or a Medical Advisor and a personal appointment with the individual may be arranged. An unconditional contract of employment will not be issued until Human Resources receives confirmation that applicant is fit to undertake the duties of the post.

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.

Equality and Diversity

We value diversity and welcome applications from all sections of the community.

The University currently holds a Bronze Athena SWAN award, recognising our commitment to advancing women's careers in science, technology, engineering, maths and medicine (STEMM) employment in academia.



Conditions of Employment

Non-Professorial Academic Staff

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 Colleges 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 Academic 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 duration of which will be specified in individual letters of appointment. 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. Increments are paid to staff on 1 April each year, when the employee has a minimum of 6 full months of service, allowing progression to the next point on the salary scale until the top guaranteed point of the scale is reached.

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 duties are: research, teaching, knowledge exchange and administrative activities organised by agreement with the Head of Department/School/equivalent to produce a reasonable balance of commitment between these duties. The University Court recognises that Academic Staff carry out these duties in a wide variety of ways, but expects student contact to take place on the campuses during normal working hours on week days. There are exceptions to this pattern which may involve student contact at other locations or in the evenings, or at the weekends, but these arrangements will be made with the agreement of the member of staff concerned and may involve additional payment.

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/equivalent 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

New members of staff, aged under 75, will be admitted automatically to membership of the Universities Superannuation Scheme (USS) on taking up appointment. If you are already in receipt of a USS pension you will join USS in accordance with pension auto-enrolment regulations. USS requires a contribution from the member, currently 8 per cent of pensionable salary. A contribution, currently 18 per cent of pensionable salary, is paid by the University. From 1 April 2016 all members are part of the career revalued benefits scheme called the USS Retirement Income Builder. From 1 October 2016 a threshold, initially of £55,000 a year, will apply to the maximum salary that counts towards the USS Retirement Income Builder. From the same date a new defined contribution section of the scheme called USS Investment Builder will open and any contributions above the threshold will be invested in this section. The exception to automatic membership of the pension scheme applies if your post is located out with the UK in an EU member state. If this is the case membership of USS is not available to you.

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 retirement date.

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

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.

7. 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 www.strath.ac.uk/hr

8. DISCIPLINARY AND GRIEVANCE PROCEDURES

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

9. NOTICE AND TERMINATION

The employment of a member of staff is terminable by at least three months' notice, in writing, on either side; termination dates are normally 31 March, 30 June, 30 September and 31 December. 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. Staff whose appointment has so terminated shall not normally be regarded as having been dismissed or removed from office in circumstances to which the terms of Ordinance 4.3 shall apply. Fixed term contracts may be terminated by either party short of the expiry date by the serving of three months' notice in writing. The University is not obliged to continue a fixed term appointment beyond the employment period.

Revised April 2016