

# Research Software Engineer

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|----------------|---|----------------|------------------------|
| Department     | Strathclyde Institute of Pharmacy and Biomedical Sciences<br>( <a href="http://www.strath.ac.uk/science/strathclydeinstituteofpharmacybiomedicalsciences/">www.strath.ac.uk/science/strathclydeinstituteofpharmacybiomedicalsciences/</a> ) |                |                        |
| Faculty        | Faculty of Science ( <a href="http://www.strath.ac.uk/science/">www.strath.ac.uk/science/</a> )   |                |                        |
| Staff Category | Technical Services  | Reference No   | 330055                 |
| Reports To     | CMAC Programme Manager  | Grade:         | 7                      |
| Salary Range:  | £32,817 - £40,322   | Contract Type: | Fixed Term (18 months) |
| FTE            | 1 (35 hours/week)   | Closing Date   | 08/03/2021             |

## Job Advert

Applications are invited for a software engineer to work in the EPSRC Future Manufacturing Research Hub in Continuous Manufacturing and Advanced Crystallisation ([www.cmac.ac.uk](http://www.cmac.ac.uk)) led by the University of Strathclyde. The CMAC Hub comprises a multidisciplinary team of academics and researchers located across seven Universities within the UK providing a platform for collaborative research, training and knowledge exchange in the area of advanced pharmaceutical manufacturing. The CMAC Hub has a large and vibrant programme with key Industry partners including AZ, Bayer, GSK, Lilly, Novartis, Pfizer, Roche and Takeda with a broad range of technology companies and SMEs. CMAC has also benefited in recent years from significant capital investments to create a world-class suite of research facilities and operates a comprehensive suite of high-value, state-of-the-art continuous processing equipment, novel monitoring and control systems and extensive off-line characterisation capabilities to support our research.

You will join a vibrant programme of basic, applied and digital research that spans advanced crystallisation and processing of active ingredients and formulated systems, process analysis, monitoring and control as well as product analysis, testing and characterisation.

Experience of coding and development of software and digital tools will be essential. You will be a capable Computer Scientist able to do coding and software development and integration of tasks. Experience of working in a multi-centre University research environment will be advantageous.

You will have excellent written and verbal skills with the ability to demonstrate prioritisation and scheduling of your own workload. Candidates must have strong problem solving abilities, demonstrating innovation and creativity in dealing with challenges. Excellent organisational, communication and interpersonal skills will be essential. It would be advantageous if candidates have a degree in a relevant subject (computational science, chemical or mechanical engineering, physics, chemistry, mathematics, or other related discipline).

## Job Description

### Brief Outline of Job:

To adapt advanced digital technologies for partner needs by providing technical development expertise. Develop the digital tools and workflows.

## Main Activities/Responsibilities:

|     |  |
|-----|--|
| 1.  | To undertake development and improvement of the digital tools and digitalised workflows being developed across CMAC partners to ensure the improved functionality and usability makes them easier for new users to learn to use and adopt.         |
| 2.  | Work closely with the Hub Impact Officer (new post) to support the dissemination of CMAC digital tools and workflows by providing technical advice, support and expertise.   |
| 3.  | Develop a scalable, intuitive framework for digitalised workflows accessible for internal and external purposes.   |
| 4.  | Develop visualisation tools for workflow data and to support intelligent decision support.   |
| 5.  | Plan and manage own workload, with guidance from colleagues as required.   |
| 6.  | Assisting the Hub Impact Officer to increase user engagement for digital tools and digitalised workflows and raising awareness of federated access tools for cross-institutional tools and data sharing by providing technical advice and support. |
| 7.  | Write up work individually, or in collaboration with colleagues, and disseminate results as appropriate to the discipline by, for example, presentations at project and CMAC meetings and events.  |
| 8.  | Deliver quality software solutions including documentation and necessary operating processes that ensures the project meets the broader commitment to scientific and knowledge exchange.   |
| 9.  | Join external networks to share information and ideas, inform the development of models and technical solutions for use by the Hub team.   |
| 10. | Collaborate with colleagues to ensure that modelling packages developed are fit for purpose to inform the Future Manufacturing Research Hub research and training effort.  |
| 11. | Collaborate with colleagues on the development of knowledge exchange activities by, for example, participating in initiatives which establish links with other academic or industry research groups.   |
| 12. | 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 HND level qualification in a relevant discipline (computational science, chemical or mechanical engineering, physics, chemistry, mathematics, or other related discipline).

E2 Relevant experience or alternatively sufficient equivalent relevant experience.

D1 Degree level qualification in a relevant discipline (chemical engineering, mathematics, computer science, software engineering)

### Experience

E3 Experience of coding and development of software and digital tools.

E4 Experience in one or more of the following platforms: R, MATLAB, python, SQL and LabView.

E5 Knowledge and experience of data systems

D2 Experience of the deployment of models for use by others.

### Job Related Skills and Achievements

E6 Highly focussed on core objective and target driven with the ability to work to tight deadlines and demonstrate prioritisation of workload.

E7 Able to understand and interpret queries from a broad range of sources including academics, researchers and external collaborators.

E8 Excellent organisational skills to plan and execute objectives.

E9 Interpersonal skills, presentation skills and written communication skills, including the ability to effectively transfer skills and knowledge to others.

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### Personal Attributes

E10 Excellent written and oral communication skills.

E11 Proactive and able to use initiative.

E12 Demonstrable evidence of ability in presentation of outputs.

E13 Strong analytical skills.

E14 Good computer literacy including databases, spreadsheets and statistical analysis.

### Other Relevant Factors

E15 Ability to immediately start and provide independent modelling support with minimal supervision.

D3 Experience of working in a multi-centre University research environment will be advantageous.

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## Application Procedure

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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

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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 Andrea Johnston, Hub Programme Manager ([andrea.johnston@strath.ac.uk](mailto:andrea.johnston@strath.ac.uk)).

### Conditions of Employment

Conditions of employment relating to the Technical Services 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 9 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

It is anticipated that formal interviews for this post will be held on 23/03/2021

### 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.

### 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

## Technical Services Staff Grades 6 to 8

### 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 UNITE as the sole body with which it will negotiate and consult on all collective issues concerned with the terms and conditions of employment of Technical Services staff. Such terms and conditions may be varied by the University Court after negotiation and consultation with UNITE.

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. Members of staff may not accept outside paid work including personal consultancies without the permission of the University, which will not be unreasonably withheld.

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](http://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. The normal probation period for posts in this staff category is 9 months for grades 6 and 7 and 12 months for grade 8. Further guidance on probationary procedures is published at <http://www.strath.ac.uk/staff/policies/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](http://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 August each year, when the employee has a minimum of 6 full months of service at the appointed grade, allowing progression to the next point on the salary scale until the top guaranteed point of the scale is reached.

Arrangements in relation to overtime, additional hours, non-standards and on-call working are published at [www.strath.ac.uk/staff/policies/hr](http://www.strath.ac.uk/staff/policies/hr)

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

### 3. HOURS OF WORK

The normal working week is 35 hours. Unless otherwise indicated in an individual's letter of appointment, the normal hours are 9.00am to 5.00pm Monday to Friday with a one hour lunch break. Certain members of staff may be required to work some hours outwith this normal pattern and this should be agreed locally. Nonetheless, operational requirements vary significantly across the University and therefore, where local circumstances dictate, reasonable variation may be adopted dependant upon operational needs. In such situations your Head of Department/School/equivalent will discuss with you the alternative arrangements that will apply

Overtime rates do not apply to staff grades 6 and above. Where a Head of Department/School/equivalent requests additional work, above the standard working week to meet the particular requirements of the Department, equivalent time off in lieu may be granted by prior agreement.

### 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](http://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 9.6% of pensionable salary. A threshold applies to the maximum salary that counts towards the USS Retirement Income Builder. From 1 April 2020, the threshold is £59,585.72 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. Information regarding USS can be found in the scheme booklet located on the website: [https://www.uss.co.uk/-/media/Project/USSMainSite/Files/For\\_members/Guides/Your\\_guide\\_to\\_Universities\\_Superannuation\\_Scheme.pdf](https://www.uss.co.uk/-/media/Project/USSMainSite/Files/For_members/Guides/Your_guide_to_Universities_Superannuation_Scheme.pdf). The scheme booklet is called 'Your Guide to the Universities Superannuation Scheme'.

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.

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](mailto: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](http://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. 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](http://www.strath.ac.uk/policies/hr) or on request from Human Resources.

## 9. NOTICE AND TERMINATION

The employment of a member of staff is terminable by at least 3 months' notice, in writing, on either side, except during the probationary period when notice 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 period 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 specified employment period.

Revised April 2020