


Role Description Form

Job Title: Research Software Engineer (RSE)
Job Holder(s): TBA
Sub Department: n/a
Department: Scientific Computing Research Technology Platform (RTP)
Responsible to (title and name): 
Responsible for (title and numbers): n/a

Job Purpose: As a member of the SC RTP RSE team in a developing capacity, undertake and assist software development projects in support of research across multiple departments, at all stages of the research software development cycle. Deliver training in tools and techniques for ensuring sustainability of bespoke software created for research.

Principal Accountabilities	%
1. Technical <ul style="list-style-type: none"> a. Conduct individual and collaborative software development projects in support of, and in collaboration with, research active staff, mentored by a senior RSE if required b. Document and maintain software arising from RSE projects c. Maintain an awareness of new and emerging technologies in software engineering d. Communicate complex information relating to software development projects, both orally and in writing 	60
2. User engagement and support <ul style="list-style-type: none"> a. Deliver training to researchers and graduate students as a member of the RSE team in a developing capacity, mentored by a senior RSE if required. Current training courses include introductions to software development, version control, parallel programming and high-performance computing. These courses are delivered to groups of up to 30 researchers in a classroom environment involving presentation to the group and one-to-one interaction. b. Contribute with guidance, to a web-based resource linking Warwick researchers to available web-resources and UK-based RSE training opportunities. Contributions may include tutorial videos and text covering (for example) use of Linux in a research software development. c. Develop own classroom-based training materials methods and approaches with guidance d. Contribute to ad-hoc RSE researcher support activities, and hence identify common/recurring training needs as part of the RSE team 	30
3. Financial & managerial <ul style="list-style-type: none"> a. Monitor and report own effort expended in support of projects as required by external funding bodies b. May contribute to preparation of funding proposals and applications to external bodies, e.g. by planning and costing a programme of software development work c. Undertake duties related to course administration, such as attendance records, etc. d. Attend RSE team and research project meetings, which may involve overseas travel 	10
4. Health and safety <ul style="list-style-type: none"> a. Work within established health and safety procedures 	

Knowledge, Skills and Experience										
Qualifications		Degree or equivalent in a scientific discipline relevant to scientific computing or equivalent experience; higher degree desirable but not essential								
Professional Qualifications										
Previous Experience		a. Developing familiarity with the research software lifecycle b. Use of software in an academic research computing environment								
Knowledge and Skills		1. Specialist skills <ul style="list-style-type: none"> a. Working knowledge of Linux/Unix computing b. Sufficient breadth or depth of programming skills in one or more programming and/or scripting languages to work within the established research programmes supported by the RTP c. Experience of deploying and working with parallel software desirable. d. Developing portfolio of contributions to high quality research software and associated documentation/tutorial material e. Proficient in the use of revision control systems 2. Core skills <ul style="list-style-type: none"> a. Good interpersonal skills b. Ability to extend and apply own knowledge and problem-solving skills c. Strong written and verbal communication skills d. Proven organisational and time management skills e. Ability to give technical presentations on work done 								
Other Information										
Dimensions										
Financial		Responsible for delivery of software-development objectives comprising components of broader research projects. These could comprise 10 to 100% of objectives associated with a typical several £100k grant.								
Operational		Contributes to efficient use ~£2M of research computing equipment via RSE input to research projects. Facilitates longevity & reusability of software developed by researchers, hence minimises duplication of researcher effort.								
Staffing – Supervision Given		Provides ad-hoc support/advice to researchers, and graduate students on RSE practice via Scientific Computing RTP support mechanisms, with guidance from senior RSEs if required.								
Staffing – Supervision Received		Line managed by the Scientific Computing RTP Director, with day-to-day guidance and supervision provided by senior members of the RSE team. Co-supervised by academic staff when on working directly on funded projects.								
Planning and Organising										
What is the furthest ahead the job has to plan?										
Daily		Weekly		Monthly		Quarterly		Annually		Longer
Which Principal Accountability does this relate to?		1a, 1c, 2d								
Please provide an example of the work the post plans in advance (using the longest timescale).										

Identification of validation/testing suites for software currently under development.	
Communication	
<p>This role requires communication with a wide range of people:</p> <p>Research active academic staff, research-only staff and graduate students involved in developing, deploying or using research software across the university.</p> <p>SC RTP Director, Senior RSE staff, Facilities Manager and team members.</p> <p>RSE peers at other Higher Education Institutions, and the UK RSE network.</p>	
Decision Making	
Typical Decision	Selection of programming language/framework or algorithm with which to implement a particular software solution
Most Complex Decision	Appropriate selection of training material for graduate students with varied prior knowledge and experience
Supplementary information	Initial post will be fixed term and externally funded
Special circumstances	

Signatures:

	Signed	Printed
Head of Department	-----	-----
Line Manager	-----	-----
Job holder/s	-----	-----
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