

An update from the Research Software Engineers Campaign in the UK

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An Update from UK Research Software Engineers

The problems facing research software are well known

- ▶ Low levels of reuse
- ▶ Poor standard of verification

Technical solutions to technical problems

The e-Research community has spent a long time trying to find technical solutions

- ▶ Research software distributions
- ▶ Grid
- ▶ Middleware
- ▶ Workflows

These have had limited adoption in research communities.

Social solutions to technical problems

We hypothesise that social innnovation is needed

- ▶ A new role in the academic system focused on research software
- ▶ Combines the best of the Craftsperson and the Scholar

Social innovation in centuries-old institutions is hard

Why a new role?

Alternative approaches:

- ▶ Reward good research software using traditional academic incentives:
- ▶ Recognise software as an academic output
- ▶ Reject submissions with unreproducible computational software
- ▶ Funder mandates

What is a Research Software Group?

- ▶ Collaborates with researchers to build Sustainable Software
- ▶ Delivers teaching in reproducible computational research
- ▶ Measured on research software output and quality
- ▶ Can be part of Research Computing / IT, or faculty
- ▶ Not independent researchers, but research background

Timeline

- ▶ February 2012: Software Sustainability Institute (SSI) Collaborations Workshop, agrees on “Research Software Engineer” title. (Also considered Scientific Programmer, research software developer, etc. . .)
- ▶ SSI begins Research Software Engineers Campaign
- ▶ September 2012: University College London founds Research Software Development Team, 3 centrally funded posts

Timeline

- ▶ September 2013: Founding, UK Community of Research Software Engineers
- ▶ Autumn 2013: First grant-funded work in UCL, research groups costing research programmers into grants
- ▶ Spring 2014: Launch of ARCHER embedded Computational Science and Engineering Call
- ▶ March 2014: First grant-funded recruitment in UCL team
- ▶ Winter 2014: UCL group grows to six through further grant collaborations from History to Radio Astronomy.

Timeline

- ▶ Spring 2015: Research Software Groups founded in Manchester, Southampton, Sheffield
- ▶ Spring 2015: Workshop on future of UK Cyberinfrastructure recommends software support as critical component
- ▶ Summer 2015: EPSRC announces first Research Software Engineering Fellowships
- ▶ Summer 2015: Activity towards founding of RSE groups in Cambridge, Oxford, Bristol, Imperial

The EPSRC Research Software Engineering Fellowships

UK Research Council Fellowships:

- ▶ Most common route to permanent position
- ▶ ~£1M, 5 years plus staff

RSE Fellowships:

- ▶ Can be used to found research software groups
- ▶ Expect to award 3-4
- ▶ *200 Applicants!*

The Future

- ▶ RSE groups in most research-intensive universities?
- ▶ Work sharing between groups?
- ▶ Faculty and department posts?
- ▶ RSE role recognised outside UK?