

# Improving Coding Skills at the University of Reading

Paul Heaton | Maria Broadbridge

## Introduction

**Research software engineering and programming skills are becoming increasingly integral to research across a multitude of disciplines. Too often researchers, in particular early career researchers, have not had any formal education in these skills when joining the University and to do not have access to training and support. We are aiming to change that here at the University of Reading by creating a sustainable program of courses, tutorials, workshops and online resources to provide users with the basic knowledge in academic computing.**

## What is the current situation?

- A software survey from 2017 has revealed a substantial lack in formal education in research software engineering and programming skills across the university.
- Discussions with departmental representatives has revealed an immediate need in campus wide training in all coding skills.
- Researchers have identified a substantial lack of support in research-related programming and software engineering as well as training in basic scientific computing skills.
- In view of the current situation, the Research Deans as well as IT are very keen to change this and want to invest in training and support.

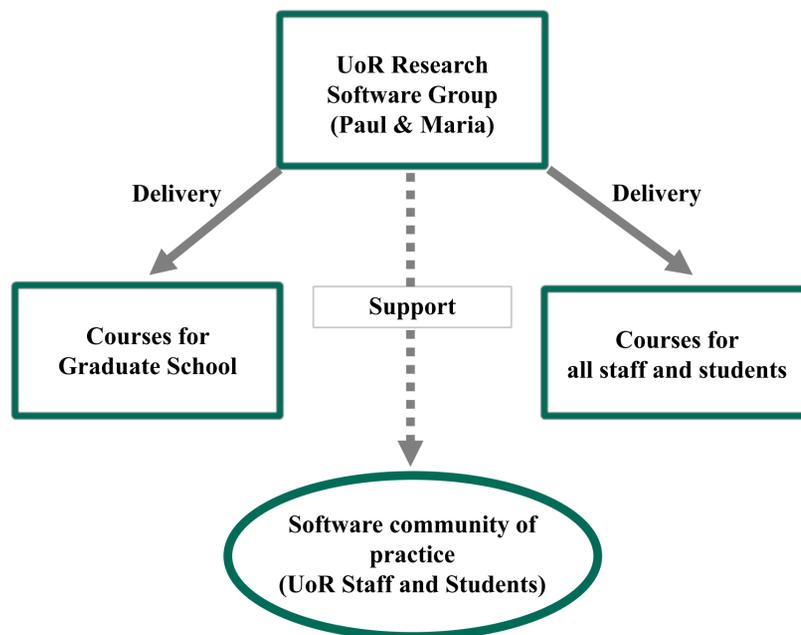
## What have we achieved already?

- The formation of a “Research Software Group (RSG)”, a panel of IT and academic staff. The RSG aims to establish a software community of practice at the university, which is a network and communication channels for the sharing of knowledge and skills.
- Initial training sessions have been run, mostly by invitation as part of the newly formed “SPCLS Coding Club”.
- Attending the Research Software Engineering Conference and other workshops for inspiration on how to implement better coding practice at UoR.
- We are collating training resources for the software community of practice on our academic computing team website: [research.reading.ac.uk/act](http://research.reading.ac.uk/act)

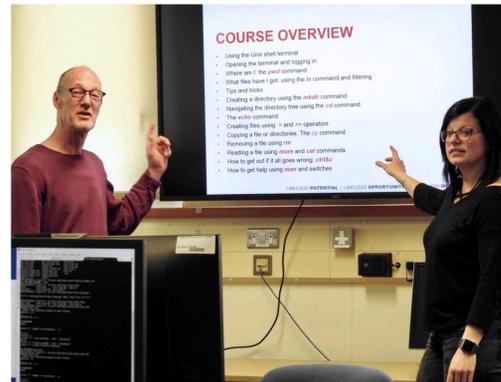
## What are the plans for the future?

- We are aiming to launch our series of training courses by autumn term, with some taster sessions beforehand. With enough resources, these courses will hopefully become available continuously and accessible by all staff and students at the University of Reading.
- Consulting services for research projects, supporting research staff and students in project-specific coding needs.
- By integrating with the Research Software Engineering Association and becoming members of the soon to be formed Research Software Engineering Society, we aim to collaborate and network with other Universities who have an existing Research Software Engineering Group in place.

## Plan for provision of training



## Our training sessions



Comprehensive, easy to follow training sessions

Starting with foundation skills

Hands on support



## Outcomes for the University

- **Added value to the staff and student experience at UoR**
- **Increased employability of students**
- **Improved quality of research output and software literacy**

### Acknowledgements

- Paul and Maria would like to thank
  - the Research Dean and IT management for their continued support
  - the members of the Research Software Group for their constructive discussions
  - the Research Software Engineering Association for inspiration and resources

### Contact information

- Information Technology, University of Reading, Whiteknights, RG6 6AH
- Email: [p.m.heaton@reading.ac.uk](mailto:p.m.heaton@reading.ac.uk) | [m.b.broadbridge@reading.ac.uk](mailto:m.b.broadbridge@reading.ac.uk)
- Website: [research.reading.ac.uk/act](http://research.reading.ac.uk/act)