Software
Sustainability
Institute

Research Software Engineers Community and Its Role in Training

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A movement in the UK to recognise and develop the role of software experts in research

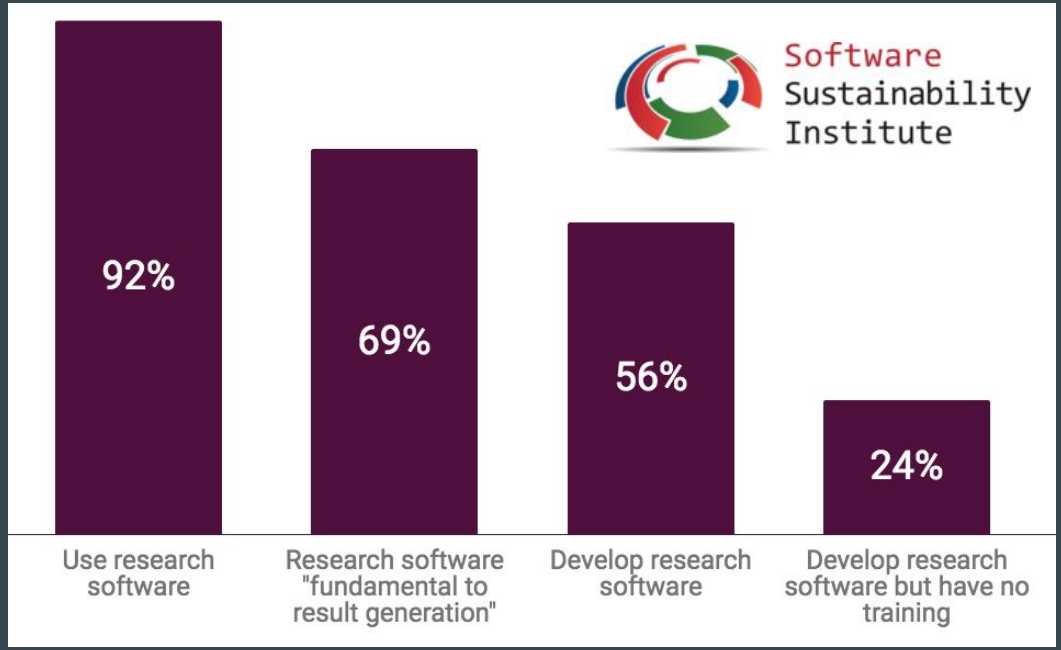
Aleksandra Nenadic on behalf of the UK RSE Association

CarpentryCon2018

Software in research

UK survey: software is vital to research

Majority of researchers write code



The “Research Software Engineer” role

Combine software engineering skills
with an intricate understanding of research

Hidden role & no career path

194 different job titles

Software Sustainability Institute

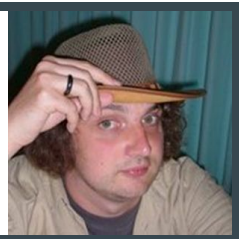
2010

Software Sustainability Institute

- Mar 2012 — Term coined
- Late 2012 — 1st new RSG
- Early 2014 — UK RSE
- Late 2014 — 1st UK RSE Elections
- June 2015 — RSE fellows
- 2015 -16 — UK Expansion
- Sep 2016 — 1st Conference
- 2017 -18 — Worldwide Expansion

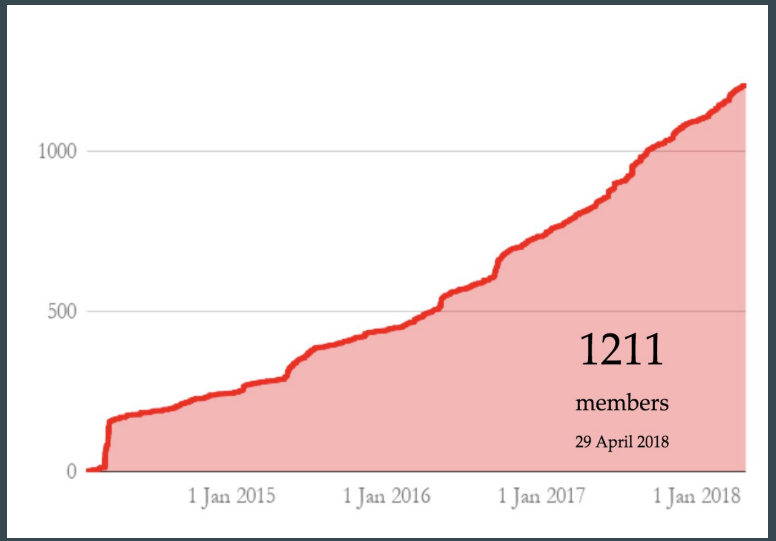
"Developing the profession of a scientific software engineer and the career track of software developers in academia"

- James Hetherington



Ashley Towers
@ashleytowers

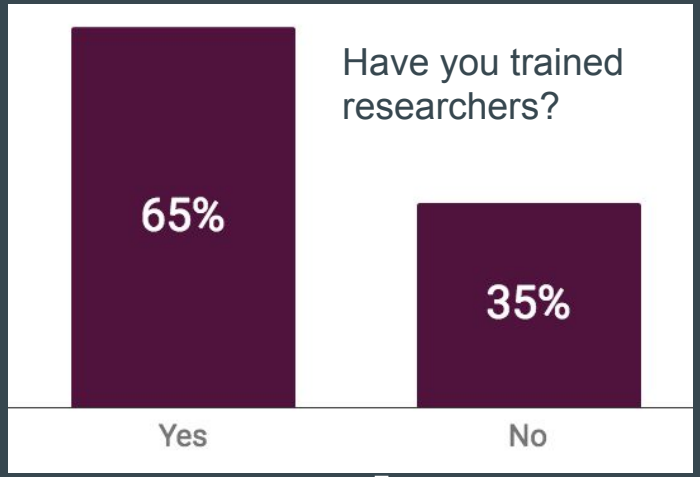
Yay my new job title is now official - Research Software Engineer - big thanks to @SoftwareSaved for starting the movement :-D



International RSE Groups

Country	Organisation	Group
Canada	CANARIE	Research Software Program
Canada	Perimeter Institute for Theoretical Physics	Research Computing Group
Germany	Gottingen State and University Library	Software and Service Development Group
Germany	National	German RSE Community
Germany	Digital Humanities im deutschsprachigen Raum (DHd) - Translation: Digital Humanities in the German-speaking regions.	Working Group 'Research Software Engineering in the Digital
South Africa	University of Cape Town	eResearch and Computational Biology Division (developers employed by the Division)
South Africa	University of the Western Cape	South African National Bioinformatics Institute (developers/devops employed by the Institute)
Sweden	Developer group at National Bioinformatics Infrastructure Sweden	Multiple groups within Sweden
The Netherlands	National	The Netherlands RSE Community
The Netherlands	Netherlands eScience Center	Netherlands eScience Center
USA	Argonne National Laboratory	PETSc Team
USA	Indiana University	Data to Insight Center (D2I) and Pervasive Technology Institute (PTI)
USA	Louisiana State University, Center for Computation and Technology	HPC enablement group
USA	National Center for Supercomputing Applications (NCSA) at University of Illinois Urbana-Champaign	parts of various groups
USA	RENCI at the University of North Carolina at Chapel Hill	parts of various groups
USA	University of Virginia, Charlottesville	Advanced Research Computing Services
USA	Princeton University	Research Computing

What we have learned...



RSEs are untapped training resource

Action can be taken on all scales

Change is not easy...

... but small changes add up

Communities are powerful

Read more

UK RSE website
www.rse.ac.uk

Simon Hettrick- A very brief history of RSEs
https://bit.ly/2IWDgfJ

Simon Hettrick- A not-so-brief history of RSEs
http://bit.ly/2uU99z4

Research Software Engineers:
State of the Nation Report 2017
https://zenodo.org/record/495360

Contact

www.rse.ac.uk
@ResearchSoftEng

www.software.ac.uk
@SoftwareSaved

Special thanks to...

- Alys Brett, co-chair of the UK RSE Association
- Simon Hettrick, co-director of the Software Sustainability Institute and former chair of the UK RSE Association