Research Software Engineers

A community update

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New Zealand eScience Infrastructure

Who are RSE's ?

"A growing number of people in academia combine expertise in programming with an intricate understanding of research. Although this combination of skills is extremely valuable, these people lack a formal place in the academic system. This means there is no easy way to recognise their contribution, to reward them, or to represent their views."

https://rse.ac.uk

Achievements this year

- RSE-AUNZ has an enthusiastic core community – steering committee

- Workshop and BoF session at eResearch Australasia 2018 conference.

- BoF session at eResearch NZ 2019 conference.

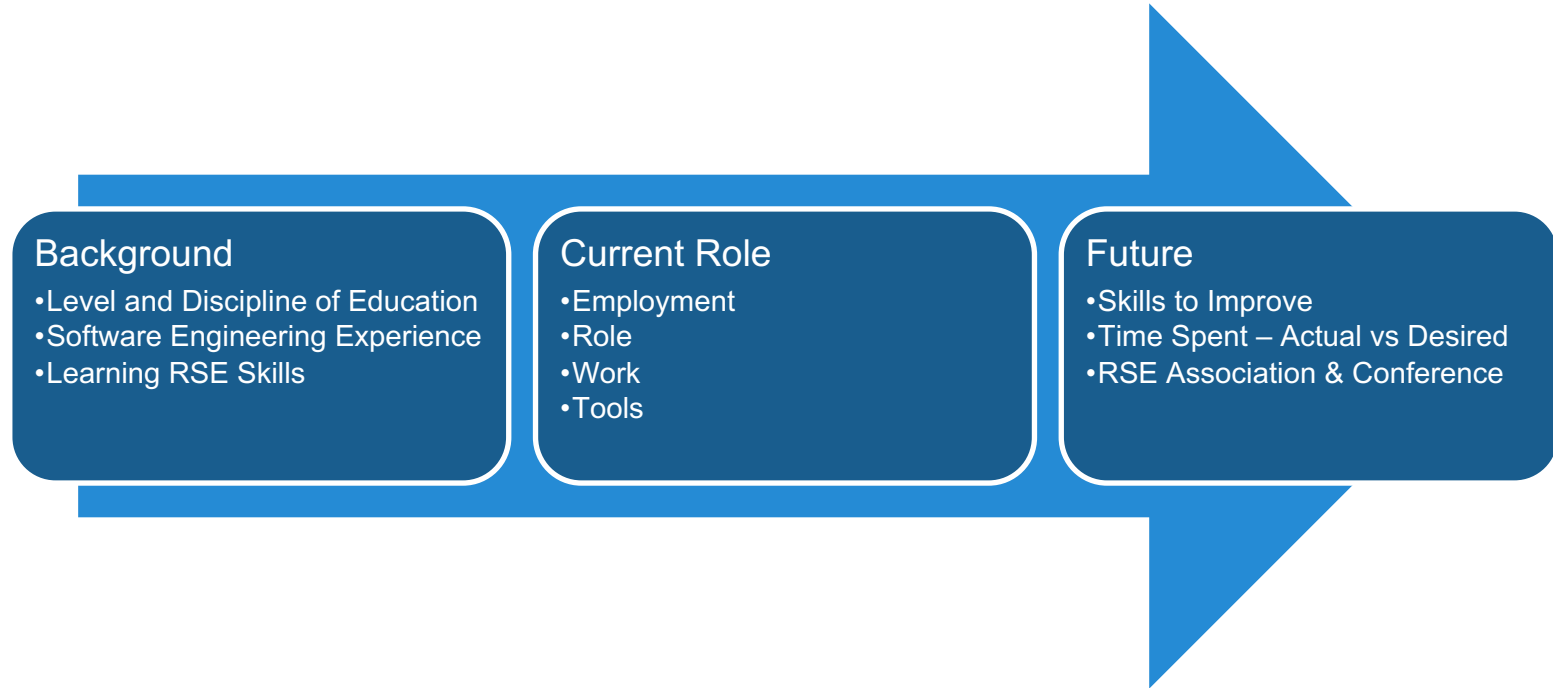- Participation in the international RSE Survey

Background

In 2018, the RSE-AUNZ association participated in an international survey [1] organized by the Software Sustainability Institute in the UK, with questions tailored for AU and NZ contexts [2].

"The purpose of this survey is to collect information about people who develop the software that is used in research."

"We call these people Research Software Engineers (RSEs)[2], but they exist under many job titles (from postdoctoral researcher to applications consultant, to bioinformatician)."

1. Phillippe et. al. (2019), 'softwaresaved/international-survey: Public release for 2018 results', http://doi.org/10.5281/zenodo.2585783
2. by Nooriyah Poonawala Lohani (NeSI), Manodeep Sinha (Swinburne University of Technology), and Nicholas May (RMIT University).
3. https://www.software.ac.uk/blog/2016-11-17-not-so-brief-history-research-software-engineers

Results Overview

Background
- Level and Discipline of Education
- Software Engineering Experience
- Learning RSE Skills

Current Role
- Employment
- Role
- Work
- Tools

Future
- Skills to Improve
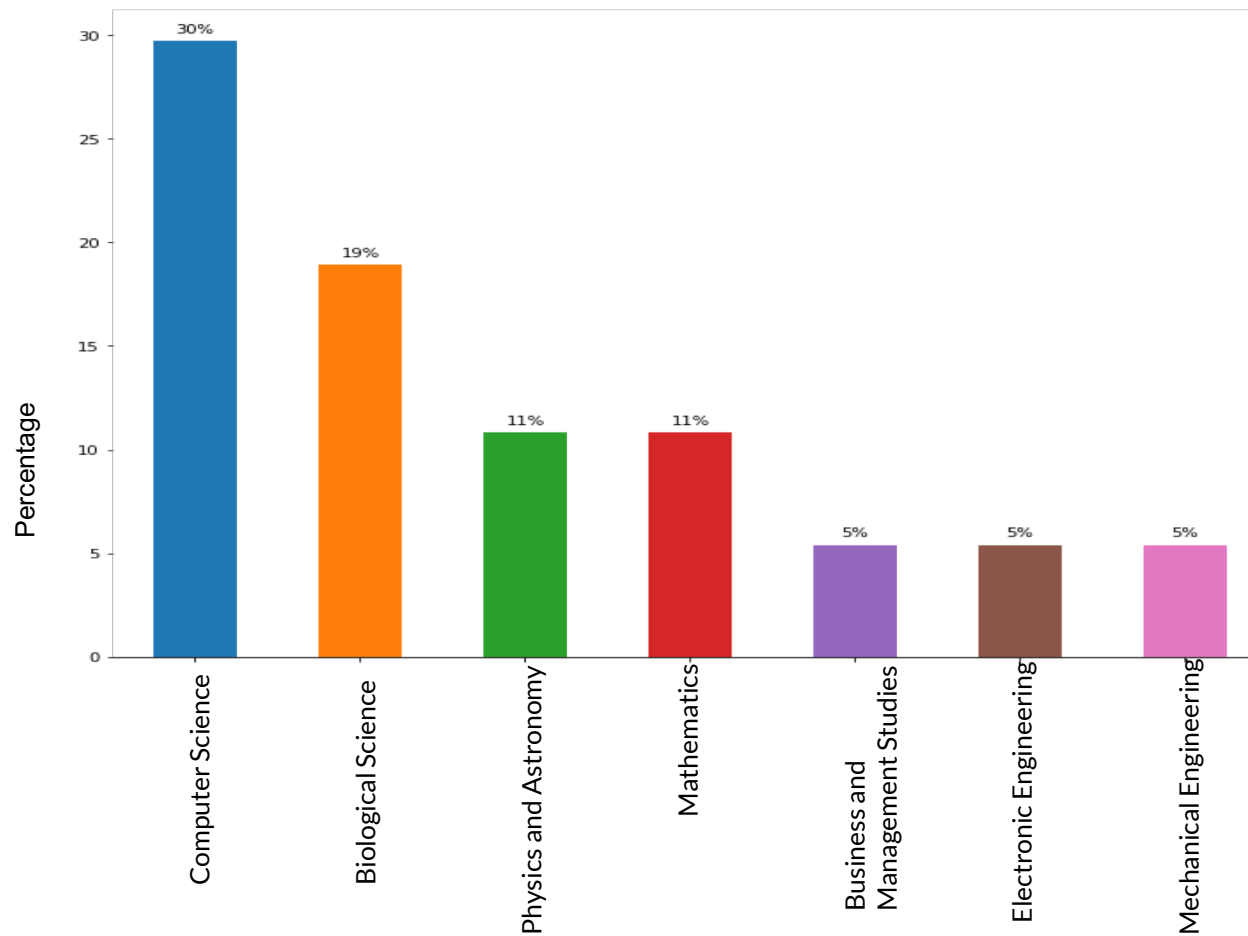- Time Spent – Actual vs Desired
- RSE Association & Conference

37 of the survey participants were from New Zealand

Education and Demographic

- PhD's - 38%

- Master's - 27%

- Undergraduate - 27%

- Majority in the 25-54 year age group

- 91% Males

Academic Field :

What do people spend their time doing?

- 2 measure - time spent and time wish to spend
- Calculate the difference between time spent and wish to spend
- The activities measured are:
  - Develop software
  - Research
  - Management
  - Teaching
- Majority RSE wish to
  - spend more time on Developing software and Research
  - spend less time on management and teaching

Career path and motivation

- Majority worked at a University
- **Motivations** to be an RSE:
  - Desire to work in a research environment
  - Freedom to choose their own working environment
  - Desire to advance research
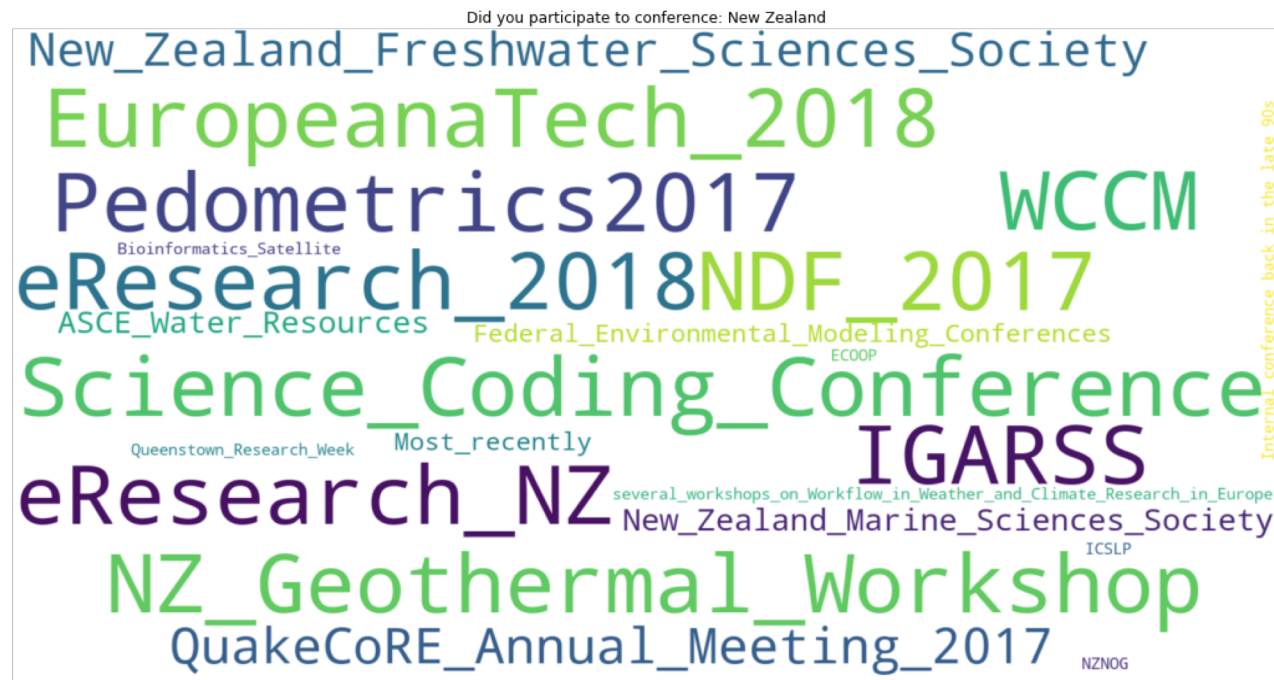 - Last : Salary and career advancement

Training

- Majority are currently involved in 1-5 projects

- Majority responses reflect 1-2 developers per project

- Many involved in training such as:

  - the carpentries

  - local institution training

  - code optimisation

  - local HPC on-boarding, etc.
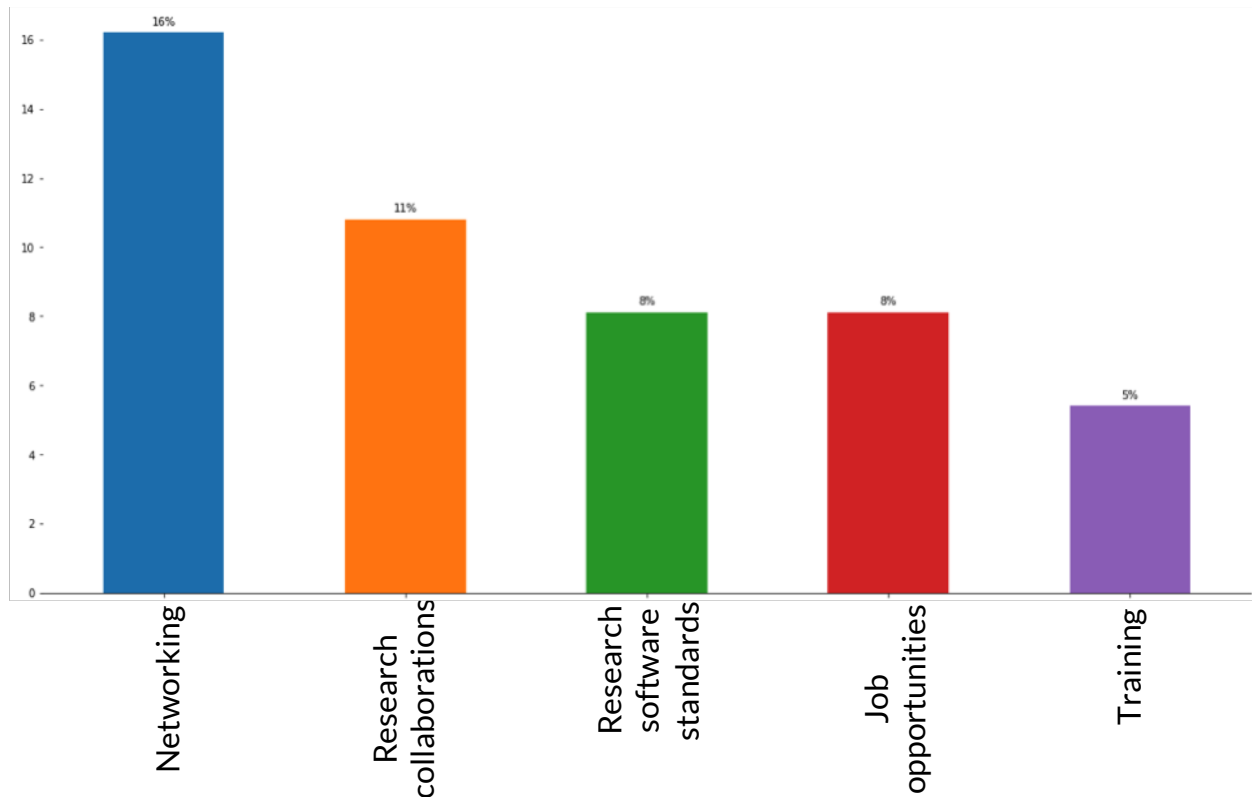
Publications and citations

44% (NZ) Named as co-author

- **56%** present at a conference/workshop

Did you participate to conference: New Zealand

New_Zealand_Freshwater_Sciences_Society
EuropeanaTech_2018
Pedometrics2017 WCCM
Bioinformatics_Satellite
eResearch_2018 NDF_2017
ASCE_Water_Resources
Federal_Environmental_Modeling_Conferences
ECOOP
Science_Coding_Conference
Queenstown_Research_Week Most_recently IGARSS
eResearch_NZ
several_workshops_on_Workflow_in_Weather_and_Climate_Research_in_Europe
New_Zealand_Marine_Sciences_Society
ICSLP
NZ_Geothermal_Workshop
QuakeCoRE_Annual_Meeting_2017 NZNOG
Internal_conference_back_in_the_late_90s

Job satisfaction and recognition

- Majority are **satisfied** with their current role

- 85 - 90% DO feel recognised by their **managers and colleagues**

- 48% do NOT feel recognised by their **institution**

- 66% would NOT accept **another job** at the same compensation level

- 60 - 70% do NOT see **career progression opportunities**

What should be the focus of an RSE organisation in New Zealand?

Where can I find this information?

https://github.com/rse-aunz/international-survey

Planning for the next year

- Publish a Manifesto or Mission Statement.

- Define Personas, Profiles, or Personal Stories of the people that form the RSE community.

- Establish a permanent Web Presence to be launched at eResearch Australasia 2019.

- For NZ specifically:

  - A slack channel - within the RSE channel

  - A virtual tech talk

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- Nick May, RMIT
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- Mingfang Wu, ARDC
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- Simon Hettrick, Software sustainability Institute UK

Thank you

Questions?

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2018 results',

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RSE-AUNZ

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