



RESEARCH SOFTWARE & SYSTEMS ENGINEERS IN AFRICA

Introducing the RSSE Africa community of practice

Do you work in a research environment and spend a lot of your time coding or building infrastructure to support research computing and data storage?



Connect



Learn



Share

Why are RSSEs important?

Research Software and Systems Engineers play a critical role in the development and implementation of research software, i.e. “software that is used to generate, process or analyse results that you intend to appear in a publication (either in a journal, conference paper, monograph, book or thesis). Research software can be anything from a few lines of code written by yourself, to a professionally developed software package.” (*Definition from SSI RSE Survey*)



Most research would be impossible without software, and this reliance is forcing a rethink of the skills needed in a traditional research group. With the emergence of software as the pre-eminent research tool used across all disciplines, comes the realisation that a significant majority of results are based, ultimately, on the skill of the experts who design and build that software.

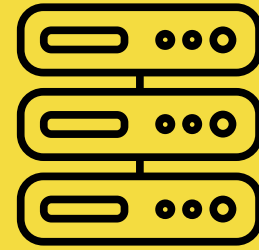
(Research Software Engineers: State of the Nation Report 2017, Bret et al.)

What is an RSE?

The term Research Software Engineer was coined in 2012 in the UK as part of a campaign for supporting expert software developers in academia and as such sustainably developed, reliable, well-engineered research software. In Africa, we started the RSSE Africa group to explicitly include software and systems engineers.



Research Software Engineers (RSE) combine professional software engineering expertise with research knowledge and skills to develop applied research software and scripts.



Research Systems Engineers (RSE), also known as **Research Computing** or **HPC Engineers**, combine research experience with computing, data, and networking infrastructure and architecture expertise. They often work with combinations of on- and off-site infrastructure, including cloud and high-performance computing, and networking solutions.

RS(S)Es include people who...

- develop software for research
- spend more time developing software than conducting research
- are postdoctoral researchers who predominantly work on software development
- Mostly do coding or software development in a research group
- Have had to build a programme or software while doing research. Ended up doing more software development than research

Global RSE Communities

1

Research Software Alliance

- A global alliance to bring research software communities together to collaborate on the advancement of the research software ecosystem - <https://www.researchsoft.org/>
- **Get involved**
 - List your RSE group on the [spreadsheet](#) for global research software communities
 - Join the FAIR 4 Research Software [task force](#)

2

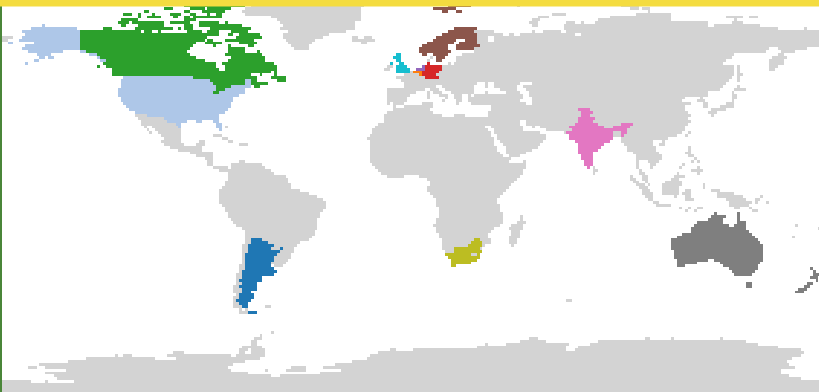
Software Sustainability Institute

- Cultivates better, more sustainable research software to enable world-class research. Help people build better software, and work with researchers, developers, funders and infrastructure providers to identify key issues and best practice in scientific software.
- **Get involved**
 - [Apply](#) to the SSI fellowship programme
 - Explore their [open & free resources](#)

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Society of Research Software Engineering

- Increasing software skills across research, promoting collaboration between researchers and software experts, supporting creation of academic career path for RSEs - <https://society-rse.org/>
- **Get involved**
 - [Become a member](#) to gain access to [funding](#), discounts to participate in events, and mentorship opportunities
 - Be active in the [community](#)



Regional RSE Associations

- Argentina RSE (under development)
- Belgium Research Software Engineers (est. 2017)
- Canada RSE (under development)
- DE RSE (est. 2017)
- NL-RSE (est. 2017)
- Nordic RSE (est. 2018)
- RSE Asia Association (under development)
- RSE Australia and New Zealand (est. 2017)
- RSSE Africa (under development)
- Society of Research Software Engineering (est. 2013)
- US RSE (est. 2018)
- Missing

RSSE
Africa

<https://rsse.africa/>

rsseafrika@sanbi.ac.za

[@RSSEAfrica](#)

RSSE in Africa

Research Software & Systems Engineering of Africa (RSSE Africa) was established to help grow a local community of practice in RSE. We provide a space to share skills, opportunities and promote diversity and inclusion in the RSE space. In 2022 RSSE Africa is launching a series of community events to help raise awareness and bring the community together. RSSE Africa also hosts a discussion platform where community members can ask questions, share opportunities and resources, and discuss best practices. Find out more about RSSE on at <https://rsse.africa/>.

Join RSSE Africa online forum

<https://rsse.africa/services/forum/>



Global Events

- [Software Sustainability Institute](#)
- [Research Software Alliance](#)
- [The Carpentries](#) (research computing and data analysis)

RSSE Africa Events in 2022

RSSE Africa is hosting alternating bi-monthly webinars and community discussion opportunities. Join us to learn more and meet the community. Tell us about your work and needs.

Sign up now

<https://qkt.io/rsse-africa-2022>

May: What is RSE and how do I know if I am one?

June: Community discussion

July: Resources and communities to support RSEs

August: Community discussion

September: How can I learn best practices for RSEs?

October: Community discussion

November: How can I start a local RSE community/group?

December: Community discussion

Looking for more RSE resources?

<https://society-rse.org/resources-database/>

<https://www.researchsoft.org/resa-resources/>

<https://software.ac.uk/resources>

Sources used to compile this document

<https://society-rse.org/>

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