The Research Software & Systems Community in Africa

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RSE-AfOx Workshop
June 2024
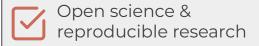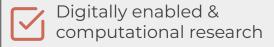
Who am I?

talarify
SHARING KNOWLEDGE • SUPPORTING CHANGE

- ☑ Open science & reproducible research
- ☑ Digitally enabled & computational research
- ☑ Training, mentorship, & communities of practice

RSSE Africa
RESEARCH SOFTWARE & SYSTEMS ENGINEERS

- ☑ Website
- ☑ Newsletters
- ☑ Monthly meetups
- ☑ Other

<ReSA>
Research Software Alliance

- ☑ Community engagement partner
- ☑ Policy level engagements
- ☑ Funders and decision-makers

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Joined by RSSE Africa colleagues...

Peter van Heusden

- ☑ South Africa
- ☑ Bioinformatics
- ☑ Founder of RSSE Africa
- ☑ Research software & systems

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Richard Dushime

- ☑ DRC but based in Uganda
- ☑ Open source contributor
- ☑ Secretary RSE Asia Australia Unconference
- ☑ RSSE Africa Independent Consultant

https://rsse.africa

Mireille Grobbelaar

- ☑ South Africa
- ☑ Done: MSc Physiology
- ☑ Busy: MSc Data Science
- ☑ RSSE Africa Independent Consultant

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What do we know about the state of African research software and systems and the people who develop it?

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We have a growing repertoire of software-producing research projects on the continent including

- astronomy
- genomics/bioinformatics
- machine learning applications
- health and public health
- geospatial
- physics
- computational social sciences
- digital humanities
- and more…

African respondents in SSI surveys since 2017

2017

South Africa: 22

2018

South Africa: 23
Botswana: 2
Malawi: 1
Nigeria: 1
Mauritius: 1
Ethiopia: 1

2022

South Africa: 2

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African research software stakeholders mapped

ReSA 2022: Benin, Botswana, Cameroon, Democratic Republic of the Congo (DRC), Ghana, Kenya, Namibia, Nigeria, and South Africa.

39 Communities or organisations involved in Research Software

In South Africa:

- South African National Bioinformatics Institute
- Council for Scientific and Industrial Research
- UCT eResearch
- RSE at SUN

Martinez, Paula Andrea. (2022) doi.org/10.5281/zenodo.7179892

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African research software stakeholders map v2.0

Talarify 2023: 26 African countries (67 in South Africa)

Type	Number mapped
Community	78
Research organisation	52
Research group	19
Training provider	7
Research infrastructure	5
Research software project	2
National Research and Education Network	1
Civic Tech organisation	1
Advisory body	1

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Research Software Indaba - South Africa 2023

TOWARDS
SUSTAINABLE
RESEARCH SOFTWARE
& SYSTEMS

Insights from the First
Research Software Indaba
in Africa

23 May 2023

Is your organisation involved in...	Responses
Research software or systems (data/compute) **development and/or maintenance for in-house research**	16
Employ research software or infrastructure developers	13
Training in research software or infrastructure development, maintenance, etc.	13
Research software or systems (data/compute) **development and/or maintenance as a service** to others	11
Provide access to specialised infrastructure on which research software runs (cloud/HPC)	10
Develop policies related to the research software ecosystem	9
Provide funding for research software projects, infrastructure, research, training, etc	8
Research software **project management**	8
Other	8

Anelda Van der Walt, & Noxolo Chalale. (2023). doi.org/10.5281/zenodo.7980636

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Join the African research software community

RSSE-Africa

- Uniquely African forum for African RSSEs
- Explicitly includes research system engineers

  e.g. data storage and computational infrastructure designers/developers (the extra "S")

- Founded in 2019
- No membership fees
- https://rsse.africa

Read more about our history

What we do in this community

 Raise awareness of RSE

 Share knowledge and resources

 Share our work and collaborate

 Showcase African expertise

 Help to connect African RSEs and the global community

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The Research Software Alliance

- https://researchsoft.org/
- *Advance the research software ecosystem by collaborating with decision makers and key influencers*
- Funders' Forum
  - Meet every 6 weeks
  - International workshop annually
  - Amsterdam Declaration on Funding Research Software Sustainability (ADORE.software) - https://adore.software/
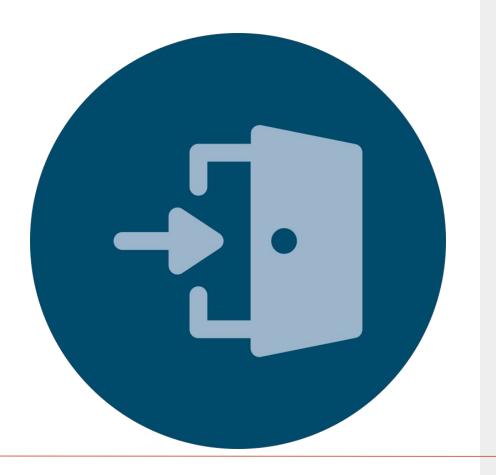- Monthly newsletter
  - https://bit.ly/resa-news

Huge opportunities to benefit from work done globally since 2010 for

- individuals
- research groups
- institutions
- funders

An invitation to join the RSE movement in Africa and beyond

Join RSSE-Africa

RSSE Africa
RESEARCH SOFTWARE &
SYSTEMS ENGINEERS

LinkedIn Group

Share opportunities, resources, achievements, challenges, events, and much more.

bit.ly/3rWezvz

Member spotlights

Create awareness of the breadth of knowledge and experience on the continent.

bit.ly/RSSEA-spotlights

Newsletter

Stay up to date with community news. Subscribe to our newsletter.

bit.ly/rsse-newsletter

Meetups

Join our monthly meetups. Showcase your work. Learn about resources and opportunities.

rsse.africa/events

Slack channel

We host a channel on the international RSE Slack workspace.

bit.ly/45z8eWm

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Share this info

Please tell your students, colleagues, employers, and funders about resources and opportunities shared in this presentation.

Make your voice heard

Help shape policy, funding, and research by sharing information

about your research software work through a variety of surveys,

working groups, meetups and more!

Acknowledgements

We'd like to thank the following people for their support, contributions and collaboration

- Peter van Heusden (SANBI, South Africa)

- Kim Martin (RSE @ SUN founder and RSE advocate)

- Mireille Grobbelaar & Richard Dushime (Independent consultants contributing to RSSE Africa)

- ReSA (Director: Michelle Barker & Community managers: Saranjeet, Jyoti, Kim)

- Members of the UK RSE community who joined our community meetups, share advice, support

- Member of RSSE-Africa for being part of the community

- The global community for being open and collaborative!

Thank you for your time!

We look forward to seeing you in the community!!

Questions?

A selection of fantastic resources and events

- Annual RSECon - https://rsecon23.society-rse.org/
- Research Software Funders Forum - https://www.researchsoft.org/funders-forum/
- Collaborations Workshop - https://www.software.ac.uk/programmes-and-events/collaborations-workshops
- RSE Fellows - https://society-rse.org/community/rse-fellows/
- SSI Fellows - https://software.ac.uk/programmes-and-events/fellowship-programme
- Mentorship - https://openlifesci.org/
- Research software community forum - https://www.researchsoft.org/events/2022-06/
- Did you know that there's an International RSE Day (10 OCT 2024)?
- Research software directory - https://research-software.dev/
- Practical guide to software management plans - https://doi.org/10.5281/zenodo.7038280
- Job descriptions: https://www.software.ac.uk/blog/2022-08-12-how-do-we-assess-candidates-rse-jobs
- Loads of other resources: https://www.software.ac.uk/resources/guides
- Research software studies in Zenodo: https://zenodo.org/communities/researchsoftwarestudies/
- Links to work done by Dr Kim Martin around RSE@SUN through collaboration with SSI: https://www.software.ac.uk/blog/2023-04-27-presenting-rsecon22-and-starting-rse-group-south-africa

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