## Core skills and responsibilities of an RSE

— invitation to participate —

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#### How to Teach and learn RSE?

#### The start

- workshop in Paderborn at deRSE23(co-located with SE23)
- we asked questions on:
  - who needs it?

  - essential topics?categories of RSEs?how do we reach users?



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# Foundational Competencies and Responsibilities of a Research Software Engineer

Florian Goth • · ¹, Renato Alves • ², Matthias Braun • ³, Leyla Jael Castro • ⁴, Gerasimos Chourdakis • ², Simon Christ • °, Jeremy Cohen • ², Fredo Erxleben • ², Jean-Noël Grad • ², Magnus Hagdorn • ¹ °, Toby Hodges • ¹ ¹, Guido Juckeland • ², Dominic Kempf • ¹ ², Anna-Lena Lamprecht • ¹ ³, Jan Linxweiler • ¹ ⁴, Moritz Schwarzneier • ¹ ⁵, Heidi Seibold • ¹ °, Jan Philipp Thiele • ¹ ⁻, Harald von Waldow • ¹ ³, and Samantha Wittke • ¹ ° .



#### The three pillars

#### Research Skills

- Skills that enable you to work in a research context and participate in it.
- Curiosity, (Software) Publication, interacting with domain infrastructure, research cycle, ...

#### Software/Technical Skills

- Skills that enable you to create good software for your community.
- Software lifecycle, Software behaviour and analysis(Program comprehension), creating software, ...

#### **Communication Skills**

- Skills that facilitate effective interaction with people/teams.
- teaching, project management, end user interaction, ...



#### Progression/Variation

#### dimensions

- Career level
- RSE specialization(how much RSE should be taught in standard domain courses)
- Project team structures/organisations

#### specializations

- \${DOMAIN} RSE
- Open Science RSEs
- project/community manager RSEs
  - Legal-RSEs
- ..



#### How can you participate?



Did you know that there is a career track with the job title Research Software Engineer? Well, if you are not already one, you could become one!

You can find here some very good resources on teaching and learning RSE skills. Examples include:

- . Which university programs could I attend to study and become a professional RSE?
- Which coherent online courses could I follow to build up skills from the set defined in the RSE Competencies?
- . What material can I reuse for teaching my students about RSE skills?

We aim for original and extensive resources, targetting both general-purpose RSEs, as well as RSE specializations.

#### How to contribute?

See the contributing guidelines, or open an issue.



### Our workshop

- the teachingRSE workshop meeting 07.03@9am HS4
- We will discuss topics on designing (infra) structures for teaching RSEs



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Side Note: If you're interested in structures also see 06.03@10:30, Community feedback session on establishing RSE departments.



#### Conclusion

#### Join Us!

- our github https://github.com/DE-RSE/learn-and-teach
- our ML: https://lists.uni-wuerzburg.de/mailman/listinfo/teachingrse
- get the details of our weekly meetings



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Thank You for your Attention!

