BETTER SOFTWARE BETTER RESEARCH

```python
import heat as ht                    # HeAT for distribu
import opencarp as oc                # Hypothetical Oper

# Initialize tissue domain (e.g., 1000 cardiac cells)
num_cells = 1000
domain = ht.zeros(num_cells, split=0)  # distributed over

# Set up initial membrane potential (e.g., -85 mV)
Vm = ht.full((num_cells,), -85.0, split=0)

# Load a simplified OpenCARP cell model (e.g., ten Tussch
model = oc.models.TenTusscher()

# Time stepping loop (simplified)
dt = 0.01  # ms
for t in range(1000):  # simulate 10 ms
    I_ion = ht.array([model.compute_ionic_current(v) for
    Vm += dt * (-I_ion)  # Update Vm based on ionic curre

# Output final Vm
if ht.comm.rank == 0:
    print("Final Vm snapshot:", Vm[:10])
```

Research Software Engineering (RSE) @ KIT Requirements and Communication

Jörg Meyer, Jürgen Engelmann

Work Package 2: Requirements and Communication

Building a RSE community @ KIT

Bringing various activities on RSE @ KIT closer together

Helping newcomers

Supporting the communication in our RSE community

First Workshop on Research Software Engineering @ KIT

Methodology at workshop

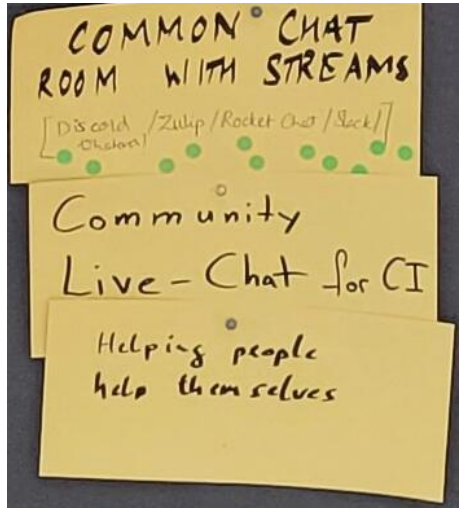
- Gathering of wishes and requirements (yellow cards)
- Ranking of ideas (green buttons)

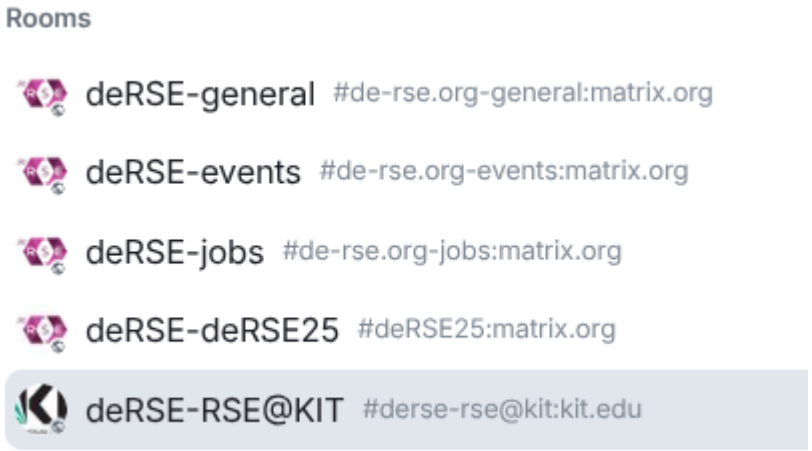
Digitalization and grouping of results

- Addressing of high-ranked wishes

- https://indico.kit.edu/event/3461/overview (May 2023)

New Chat Channel





New Matrix chat channel for RSE@KIT

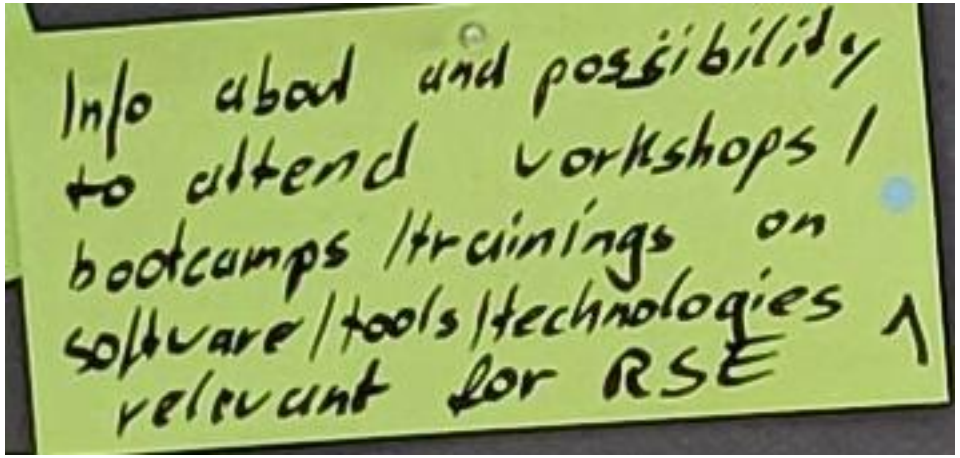
Join here: https://matrix.to/#/#derse-rse@kit:kit.edu

General information on Matrix: https://www.scc.kit.edu/en/services/matrix.php

New Mailing List

rse-announce@lists.kit.edu

Subscribe here: https://www.lists.kit.edu/sympa/subscribe/rse-announce



Caspart, Rene
rene.caspart@kit.edu

Reply | Reply List | Forward | Archive | Junk | Delete | More

To rse-announce@lists.kit.edu <rse-announce@lists.kit.edu> 9/25/24, 14:05

[rse-announce] deRSE25 | 25-27th February 2025 | Karlsruhe Institute of Technology S/MIME

List-ID <rse-announce.lists.kit.edu>

Dear all,

We're really pleased to announce that the 5th conference for Research Software Engineering in Germany will take place at the Karlsruhe Institute of Technology from the 25th-27th February 2025. Save the dates!

The Call for Contributions is now open and we welcome a diverse range of contributions to create an engaging programme. You can find out more information on potential topics, formats, deadlines and much more on the conference website: https://events.hifis.net/e/derse25

This conference is collocated with the SE conference https://se2025.sdq.kastel.kit.edu. There will be ticket options that allow attendance at both conferences. More information about how that will work will come out at a later date.

Gute Neuigkeit! Our colleagues from the JuRSE Team from Forschungszentrum Jülich have launched a travel grant scheme for the deRSE25 conference, open for everyone. More info here: https://www.fz-juelich.de/en/rse/community-initiatives/jurse-travel-grants

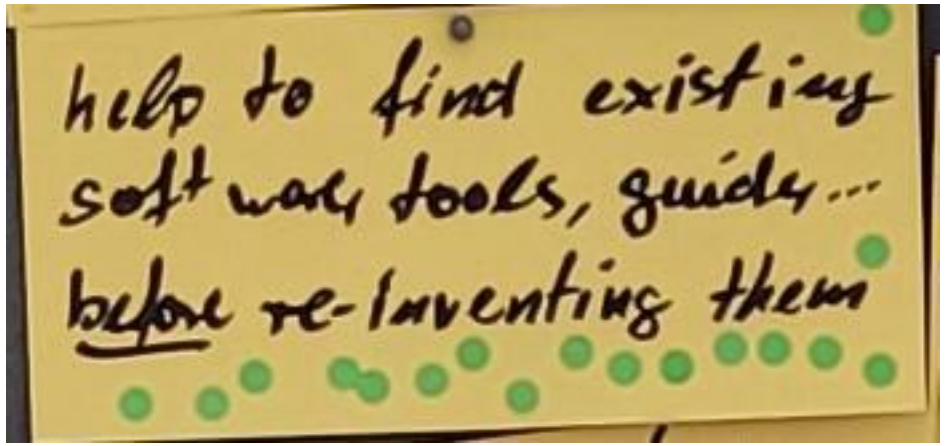
We look forward to seeing you at deRSE25!

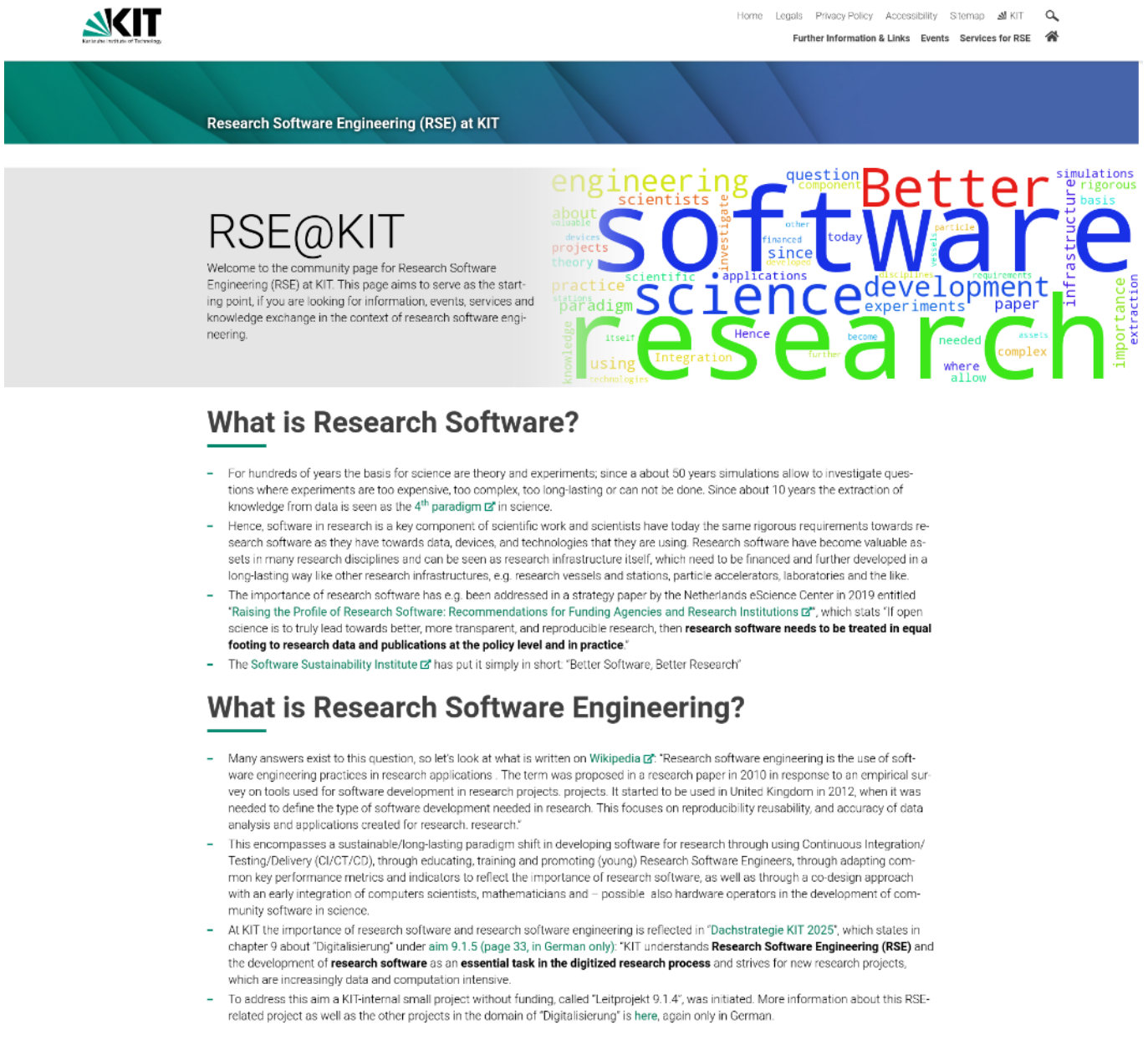
Best,
René

New Web Page

https://www.rse-community.kit.edu/

- About RSE
- Further information and links
- Events
- Services for RSE





Web Page: KIT links

KIT

- Handbook Free/Libre Open Source Software (in German)
- LP 9.1.4 Research Software (in German)
- SSPE team at the Scientific Computing Center (SCC)
- Working Groups/Arbeitskreis Open-Source-Software
- RSE announce mailing list – subscribe
- RSE@KIT Community Matrix Channel - join here

Web Page: National links

National

- Helmholtz Open Science Policy
- Helmholtz Working Group Open Science Task Group Research Software
- Helmholtz Working Group Open Science Task Group Helmholtz Quality Indicators for Data and Software Products
- Research Software Directory
- HIFIS Software Services
- Helmholtz Platform for Research Software Engineering - Preparatory Study (HiRSE_PS)
- HiRSE Seminar Series
- de-RSE e.V. - *Society for Research Software*
- NFDI Sektion Common Infrastructure, Working Group Research Software Engineering
- Access to and Reuse of Research Software – Position paper of the Helmholtz Association Open Science Working Group
- Helmholtz Information & Data Science
- Digitalization Strategy of the Helmholtz Association
- JuRSE, the Community of Practice for Research Software Engineering at Forschungszentrum Jülich

Web Page: International links

International

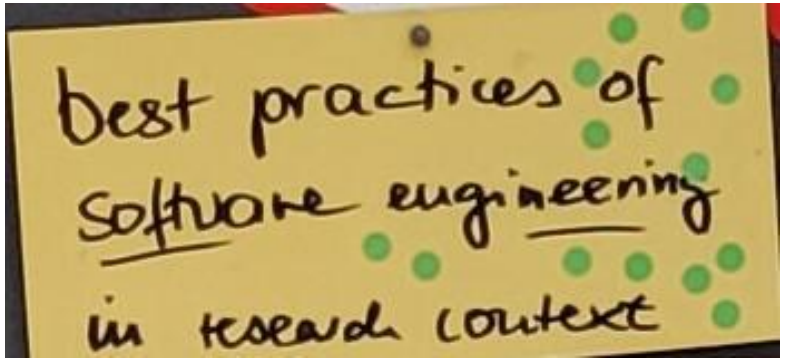
- US Research Software Engineer Association (US-RSE)
- Society of Research Software Engineering (UK)
- Research Software Alliance – ReSA
- FAIR for Research Software (FAIR4RS) WG of the Research Data Alliance
- Linux Foundation: Open Source Licensing Basics for Software Developers (LFC 191)

HiRSE Seminar Series

https://www.helmholtz-hirse.de/series.html

- Seminar on RSE topics
- Started in April 2022
- 44th edition tomorrow!

- You missed it so far? → youtube channel



Events

- July 08, 2025 (virtual)
  44th HiRSE Seminar
  On Tuesday 8th July at 11am CEST, **Judith Hartstein** from the German Centre for Higher Education Research and Science Studies (DZHW) will join us at the HiRSE Seminar Series to talk about '**Research practices in a digitalized world: Research software, mundane software and programming languages in research**.'

- June 23, 2025 (virtual)
  43rd HiRSE Seminar
  On Monday 23rd June at 2pm CEST, **Sabine Grießbach** from Jülich Supercomputing Centre (FZJ) will join us at the HiRSE Seminar Series to talk about '**Leveraging Earth System Science to Exascale**' and the German National Earth System Modelling Support Team.

- May 15, 2025 (virtual)
  42nd HiRSE Seminar
  On Thursday 15th May at 11am CEST, we will celebrate the '**Young RSE Award**' winners from 2023, 2024 and 2025 with a presentation from each of them on the research topic that won them the award. If your RSE career has just started you can get involved in the Young RSE competition which occurs annually organised by the deRSE Association and takes place at the deRSE Conference. We welcome the 2023 Award Winner - Yudong Sun, the 2024 Award Winner - Florian Sihler, the 2025 Award Winner - Anna Lena Schaible.

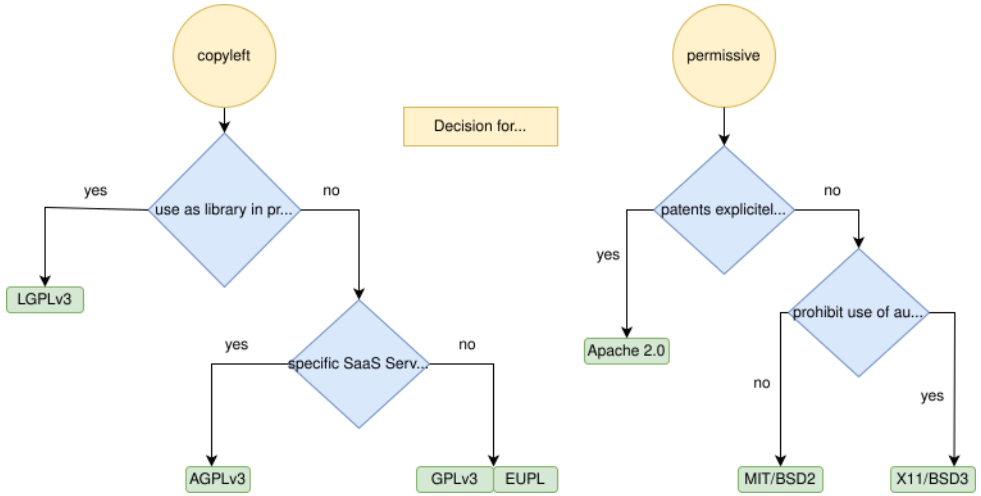
- April 02, 2025 (virtual)
  41st HiRSE Seminar
  On April 2nd, 2025, 2pm CEST, **Mascha Schmidt, Victor Haguet and Fritz Niesel** from the Applied Machine Learning Group based at the Jülich Supercomputing Centre will join us at the HiRSE Seminar Series with their talk about **Bridging the Gap Between Private Data and AI: A Beginner's Guide to Retrieval Augmented Generation (RAG)**.

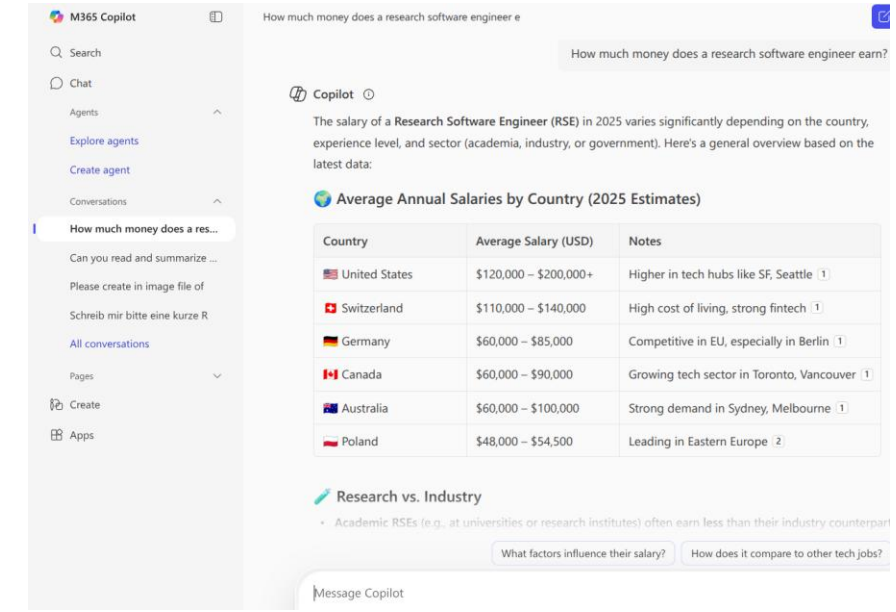
- March 07, 2025 (virtual)
  40th HiRSE Seminar
  On March 7, 2025, 11am CET, **Samantha Wittke** from CSC – IT Center for Science will continue the HiRSE Seminar with her talk about **CodeRefinery: A Community for Teaching, Learning, and Growing Together**

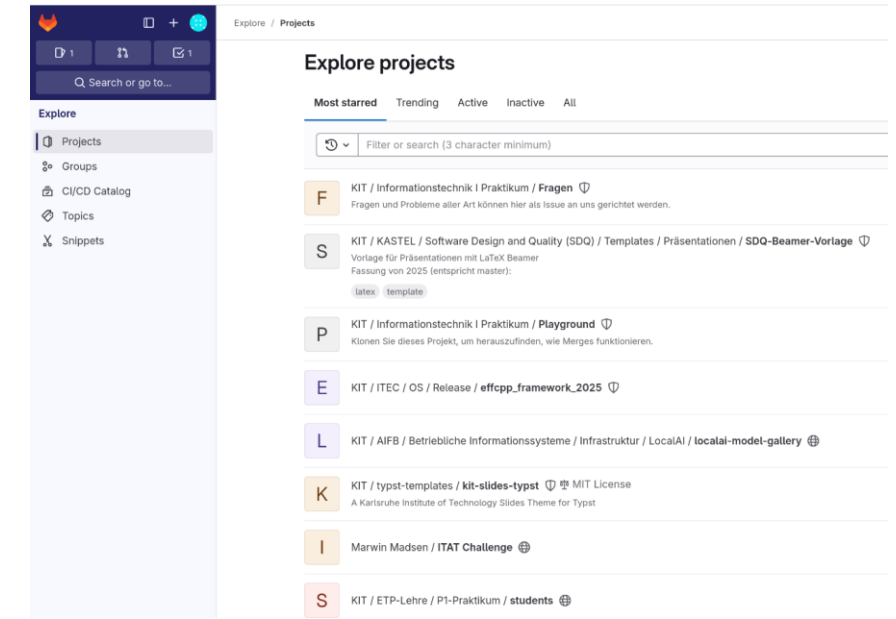
- February 21, 2025 (virtual)
  39th HiRSE Seminar
  On February 21, 2025, 11am CET, **Guido Juckeland** from Helmholtz-Zentrum Dresden-Rossendorf will continue the HiRSE Seminar with his talk about **Introduction of a quality indicator for research software publications**

Web Page: Services for RSE

- Gitlab at KIT
- Continuous Integration/Testing/Delivery/Benchmarking (CI/CT/CD/CB) on the HPC clusters at KIT
- Service Catalogue on the Helmholtz Cloud Portal
- Assistance in finding a suitable open source license
- Microsoft Copilot







Community – That's you!

RSE@KIT
Research Software Engineering at KIT

A community thrives on participation

- Make use of the offered RSE tools and communication channels
  - Exchange of experiences, best practices, …
- Already many RSE activities at KIT –
  - We hope LP9.1.4 helped in supporting and linking research software engineers