

SIGCOMM 2025 Non-Paper Session TRDC September 9, 2025

<https://conferences.sigcomm.org/sigcomm/2025/nonpaper/nonpaper-trdc/>

Outcomes of Dagstuhl Seminar 24462:

<https://www.dagstuhl.de/24462>

Research Infrastructures and Tools for Collaborative Networked Systems Research

Georg Carle, Serge Fdida, Kate Keahey, Henning Schulzrinne



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Leibniz-Zentrum für Informatik

Seminar 24462, November 10-13, 2024: Research Infrastructures
and Tools for Collaborative Networked Systems Research

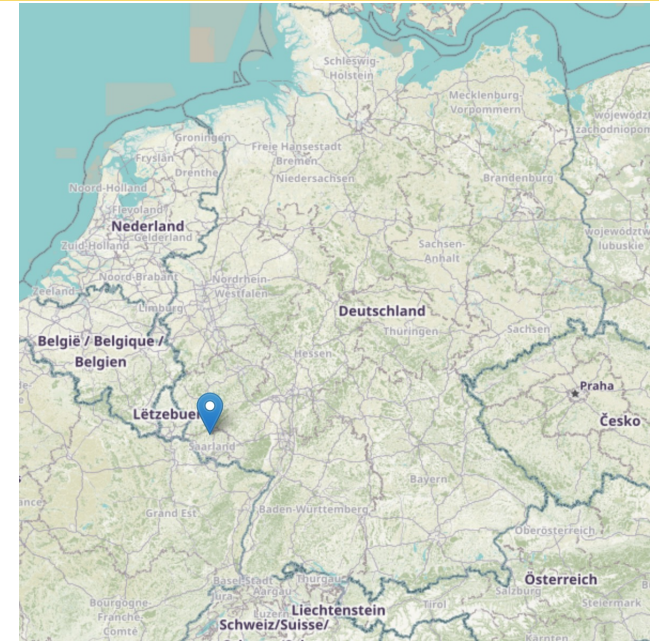
Dagstuhl

Schloss Dagstuhl

- Founded in 1990, retreat for computer science researchers
- <https://www.dagstuhl.de/>

Seminar program

- Seminars focus on exchange and development of ideas, participation by invitation, establishing trust and friendship
- Often praised by participants as most productive academic events they have experienced
- <https://www.dagstuhl.de/en/seminars/dagstuhl-seminars>



Conclusions

A. Strategic Investment & Community Engagement

- Research infrastructures represent a vital and long-term investment
- Active participation from research communities
- Sustained human capital development
- Financial sustainability

B. Open Access & Data Sharing

- Open access to shared physical infrastructure is essential
- Access to open research data is equally critical
- Digital sharing of scientific results accelerates innovation, enhances reproducibility
- Metaservices strengthen FAIR (Findable, Accessible, Interoperable, and Reusable) data sharing

C. Amplified Impact & Network Effects

- Research infrastructures inherently complement and amplify each other
- creating a synergistic network effect
(Metcalf's Law: value of a network grows with square of number of participants)
- Interconnection fosters rigorous scientific approach and methodology
- Strengthening of collaboration and knowledge advancement.



Recommendations

1. Define Clear **Scientific Objectives**
2. Foster a Strong **Scientific Community**
3. Implement **EasyFAIR** Principles
(**F**indability, **A**ccessibility, **I**nteroperability, and **R**eusability)
4. Enhance **Reproducibility**
5. **Multi-year investment strategy**
6. Establish **Common Abstractions**
7. Improve **Findability and Accessibility**
8. Define Standardized **Evaluation Criteria**
9. Optimize **User Experience**
10. Ensure **Interoperability and Openness**
11. Promote **Flexibility and Adaptability**
12. Support **Sustainable Development Goals** (SDGs)



Dagstuhl Report & The Networking Channel

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- <https://drops.dagstuhl.de/entities/journal/DagRep>
- <https://drops.dagstuhl.de/entities/document/10.4230/DagRep.14.11.60>
- see <https://www.dagstuhl.de/24462>



Dagstuhl Reports

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The Networking Channel

- Summary of the Dagstuhl Seminar “Research Infrastructures and Tools for Collaborative Networked Systems Research”
- Wed, 19th of February 2025, Time: 5 pm CET / 8am PST / 11am EST / 1am JST
- Speakers / Organisers: Georg Carle, Serge Fdida, Kate Keahey, Henning Schulzrinne
- <https://www.networkingchannel.eu>
- Archived video:
<https://www.youtube.com/watch?v=bUoNPBQ1xd0>



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