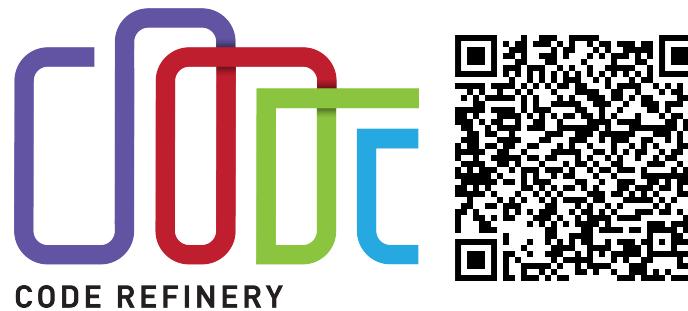


CodeRefinery Workshops:

Challenges in *reverse hybrid teaching*

CodeRefinery flashtalk in BoF at ISC

Matias Jääskeläinen (CSC – IT Center for Science)

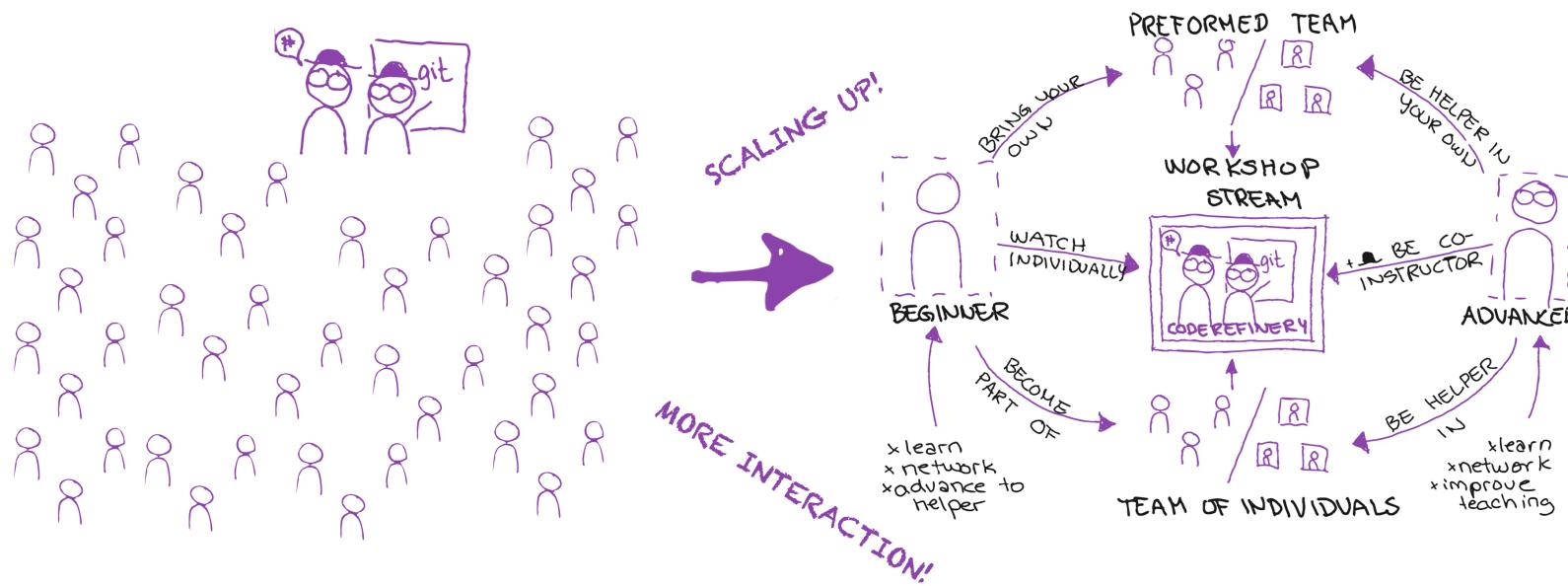


CodeRefinery workshop: Reverse hybrid

Next workshop: Sep, 2023

- 6 half-days, twice per year
- Online, free, live-streamed, recorded
- Asynchronous Q&A in collaborative document
- Version control, Collaborative coding, Reproducible research ...

Lessons in CodeRefinery.org and Recordings in YouTube

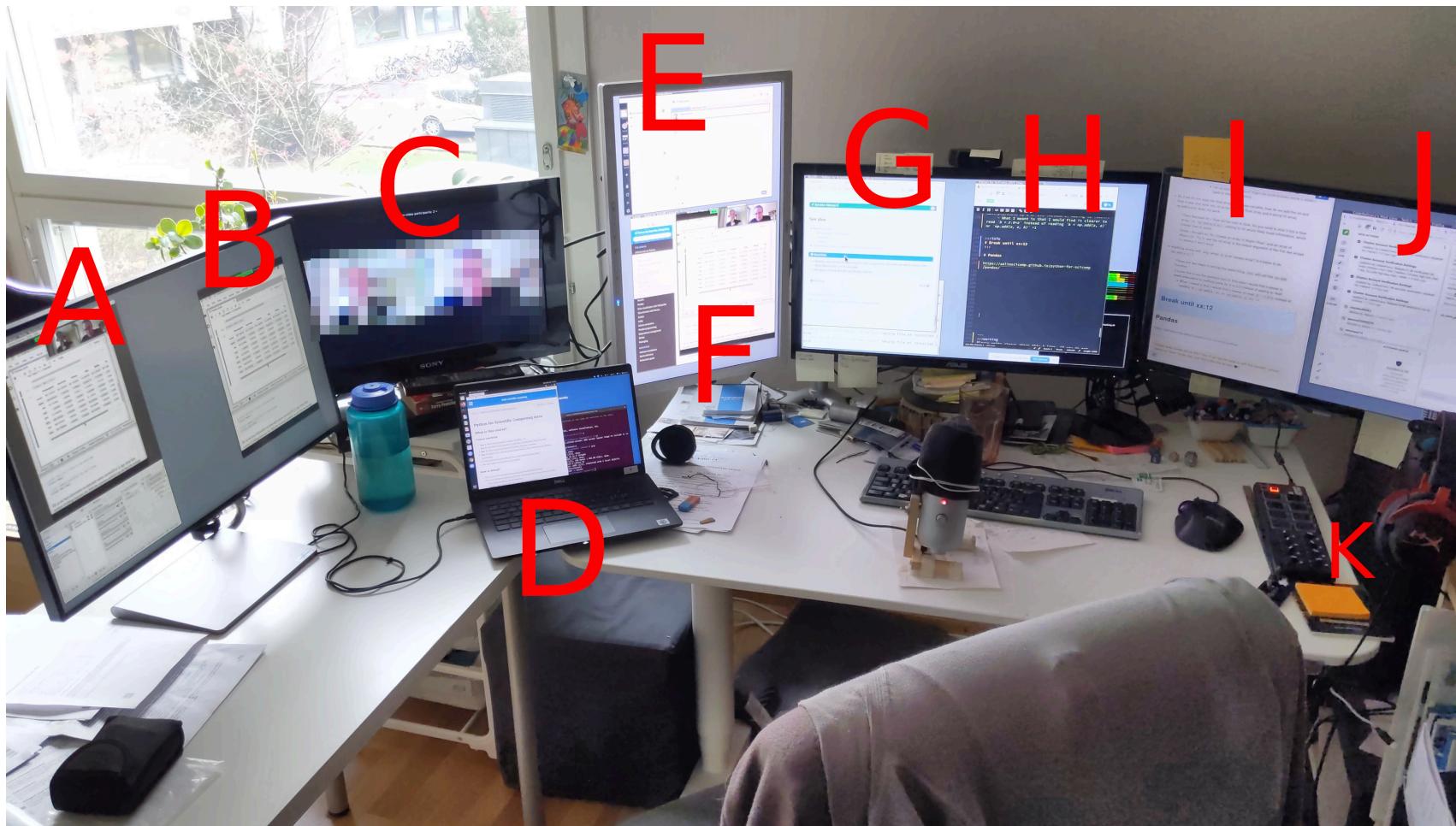


(c) Samantha Wittke

CodeRefinery workshop: Why Reverse hybrid

- **Issue with hybrid:**
 - People onsite ≠ people online.
- **Large courses:**
 - Most students don't have time to ask a question f2f
 - They online chat with the teacher anyway
- **Reverse hybrid:**
 - Teachers via video and online chat
 - Students in onsite groups
 - Those who want interaction can get it
 - The course isn't bound to one location, anyone can attend.
- *It is actually scaling up!*
- **First challenge:** Explain how to join :D

Scaling up – Technical side

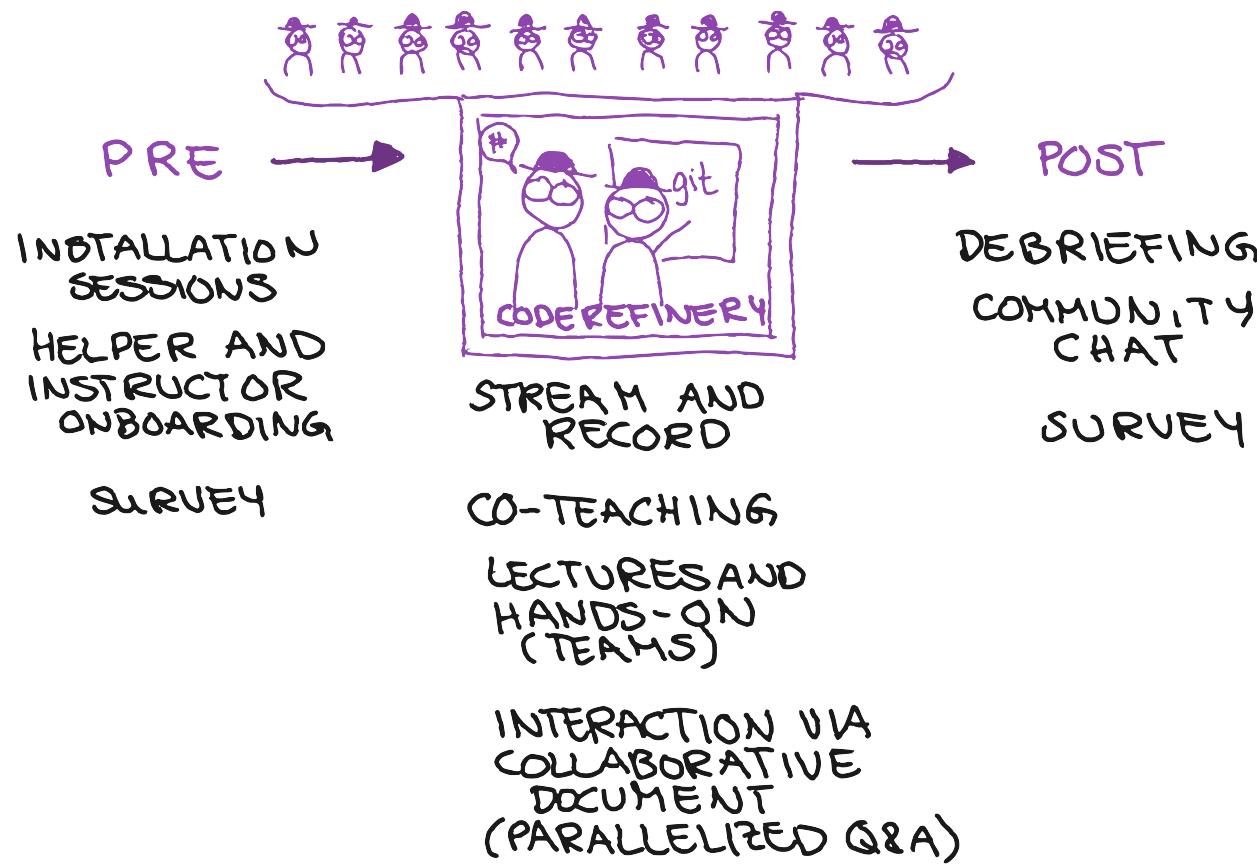


R. Darst's streaming setup during "Python for Scientific Computing".

Scaling up – Technical side

- **Many moving parts:**
 - Screenshare material and terminal / Jupyter
 - Zoom + OBS: audio and video in both (mute, on/off...)
 - Sound levels have to be checked with every speaker
 - Different scenes to screensharing, discussion, breaks...
- **New bottlenecks:**
 - What we worry the most: The Q&A document
 - We get up to 40 questions per hour
 - Collaborative document might crash
 - User errors: someone selects all and delete...
 - Needs a few people to moderate
 - *More people* -> more technical problems -> overhead in solving them

Scaling up – Arrangements



(c) Samantha Wittke

Scaling up – Challenges

- **Preparation and afterwork**
 - *Coordination effort > lesson preparation and teaching*
 - *We removed Zoom teams*
 - Volunteer retention and building lasting relationships takes effort
- **More people:**
 - Level of teaching:
 - No common prerequisite level
 - Take the novices into account -> Again a basic course
 - Meeting expectations:
 - Walkthroughs vs. proper problem-solving exercises
- **Remote people:**
 - How to ensure a common understanding about the topic
 - How to know how people are doing?
 - We don't see them, but the Q&A document
 - Certificates: how do we assess what people have been done?

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Collaborators and inspiration

- **Radovan Bast** (project manager – and whatever that might require)
- **Richard Darst** (design of the current workshop streaming format, developed many novel teaching techniques that we use)
- **Samantha Wittke** (graphics explaining the concepts, developed workshop on-boarding scheme)
- **Matias Jääskeläinen** (workshop coordination)
- **CodeRefinery team** (teaching, materials, everything)
- [Aalto RSE group](#)
- [Nordic-RSE](#)



Collaboration options

- **Use material**, give feedback
- **Join workshop** as learner, observer or co-organiser

News, support, and social media

- Chat: <https://coderefinery.zulipchat.com>
- Blog: <https://coderefinery.org/blog/>
- Newsletter: <https://tinyletter.com/coderefinery>
- YouTube: <https://www.youtube.com/@coderefinery3414>
- Twitter: <https://twitter.com/coderefine>
- Mastodon: <https://fosstodon.org/@coderefinery>
- Support: support@coderefinery.org

