

Debugging and Optimising Parallel Codes with Linaro Forge

LRZ | 3 March 2026

Lecturers, Support and Organisation Team



- Lecturer:
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- Organisation/Support:
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 - Dr. Carmen Navarrete
 - Dr. Volker Weinberg



Course Webpage



- All materials are available under:
- <https://tinyurl.com/hlin1w25-materials>
- Further information on:
 - Agenda
 - Slides
 - Exercises



Login to the System



- 1. Login to Gateway:

```
ssh -X tbd.lrz.de -l hlrbkurs??
```

- 2. Login to SuperMUC-NG Phase 2:

```
ssh -X pvc.supermuc.lrz.de
```

Replace `tbd.lrz.de` with the hostname provided in the chat.

Replace `hlrbkurs??` with the account name sent to you via e-mail yesterday.

Reservation on SuperMUC-NG P2



```
hlrbkurs01@login22:~> scontrol show reservation
```

```
ReservationName=hlin1w25 StartTime=2026-03-03T10:00:00 EndTime=2026-03-03T17:00:00  
Duration=07:00:00
```

```
    Nodes=i20r03c01s[02,04,06,08,10],i20r03c02s[02,04,06,08,10] NodeCnt=10 CoreCnt=1120  
Features=(null) PartitionName=(null) Flags=SPEC_NODES  
    TRES=cpu=2240
```

```
Users=hlrbkurs00,hlrbkurs01,hlrbkurs02,hlrbkurs03,hlrbkurs04,hlrbkurs05,hlrbkurs06,hlrbkurs07  
,hlrbkurs08,hlrbkurs09,hlrbkurs10,hlrbkurs11,hlrbkurs12,hlrbkurs13,hlrbkurs14,hlrbkurs15,hlrb  
kurs16,hlrbkurs17,hlrbkurs18,hlrbkurs19,hlrbkurs20,di56ger,di75mid,lu65fok Groups=(null)  
Accounts=(null) Licenses=(null) State=INACTIVE BurstBuffer=(null) Watts=n/a  
    MaxStartDelay=(null)
```

```
lu65fok@login21:~> sbatch --reservation=hlin1w25 job.sh
```

zoom

Participants List



Kindly use “<first name> <last name> (<institute>)” as your screenname.

Otherwise you will not receive a certificate of attendance after the course.

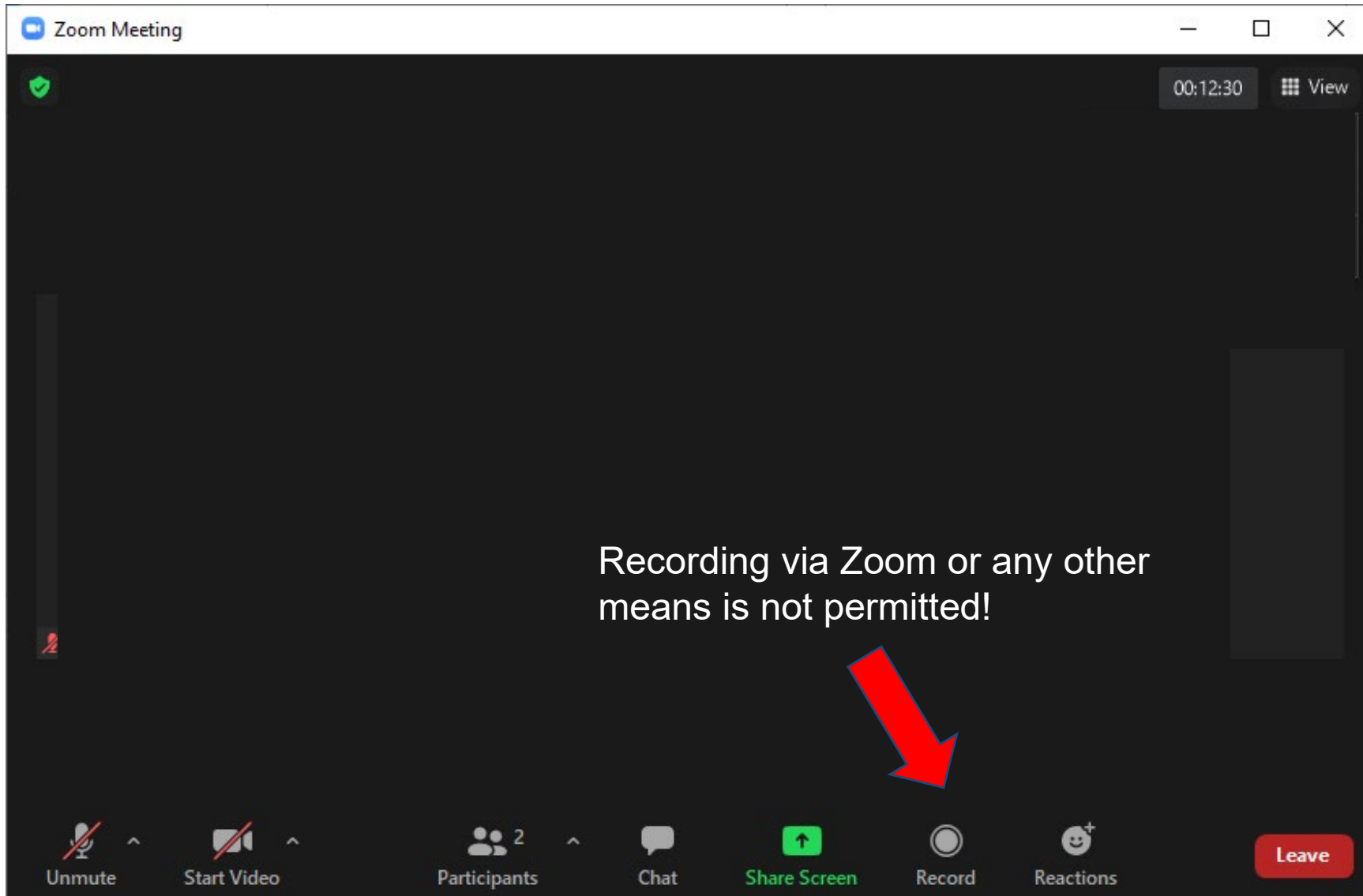
The image shows a Zoom Meeting interface with a dark theme. The main window displays the meeting controls at the bottom, including Unmute, Start Video, Participants (2), Chat, Share Screen, Record, Reactions, and Leave. A red arrow points from the 'Participants' icon to a floating 'Participants (2)' window. This window lists two participants: 'Volker Wei... (Me)' and 'Volker Weinberg Backup (Host)'. A blue box highlights the 'More >' button for the first participant, which has opened a context menu with 'Edit Profile Picture' and 'Rename' options. A red arrow points from a black box labeled 'Rename Yourself' to the 'Rename' option. A large orange circle with the number '1' is positioned above the 'Participants' icon, and another large orange circle with the number '2' is positioned below the 'Rename Yourself' box.

1

Open Participants List

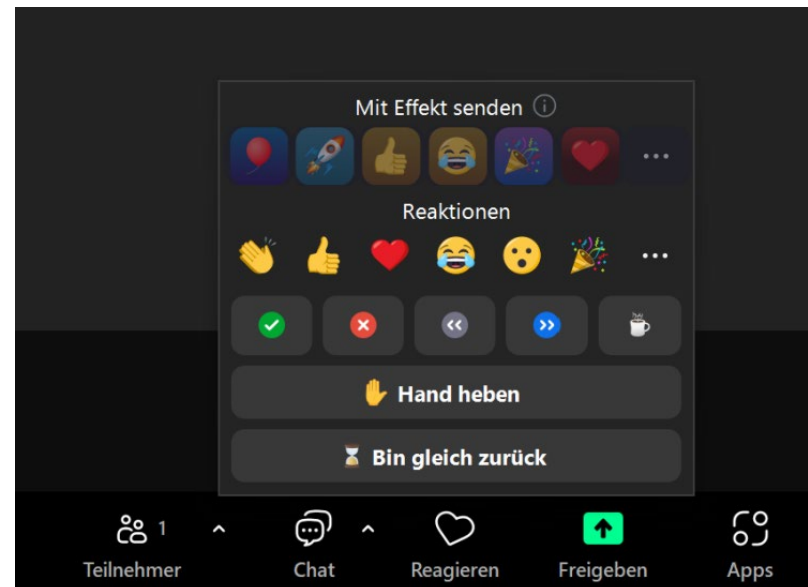
2

Rename Yourself



- Please **raise your hand** if you have questions (of general interest).
- You can also use **chat window** to ask questions.
- If you do not mind, please **show your video when asking questions** to make this course as interactive as possible.
- **Push to Talk:** The Push to Talk feature allows you to remain muted throughout the Zoom meeting and only if you hold down the spacebar you will be unmuted.

- **Instant Feedback:**



And now enjoy the Course!

Survey



- Please fill out the online survey under



<https://tinyurl.com/hlin1w25-survey>



- This helps us to
 - increase the quality of the courses,
 - design the future training programme at LRZ and GCS according to your needs and wishes,
 - get future funding for training events.

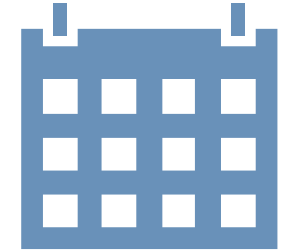


Certificate of Attendance



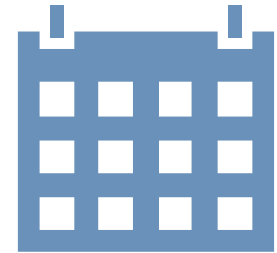
- A digital certificate of attendance for the whole workshop will be send to you in the next couple of days if you have attended at least 70% of the course.

Upcoming Courses and Workshops



Debugging and Optimising Parallel Codes with Linaro Forge	03.03.2026 – 03.03.2026	ONLINE	0.00 EUR	53	24.02.2026	Register now
Debugging with TotalView	05.03.2026 – 05.03.2026	ONLINE	0.00 EUR	60	26.02.2026	Register now
Introduction to CoolMUC-4 with Focus on CFD and FEM Workflows	19.03.2026 – 19.03.2026	ONLINE	0.00 EUR	56	12.03.2026	Register now
AI Training Series - Orientation Session	08.04.2026 – 09.04.2026	ONLINE	0.00 EUR	43	01.04.2026	Register now
AI Training Series - Introduction to Container Technology & Application to AI at LRZ	27.04.2026 – 27.04.2026	ONLINE	0.00 EUR	47	20.04.2026	Register now
AI Training Series - Introduction to the LRZ AI Systems	04.05.2026 – 04.05.2026	ONLINE	0.00 EUR	55	27.04.2026	Register now
Introduction to C++	11.05.2026 – 13.05.2026	ONLINE	0.00 EUR	61	04.05.2026	Register now
AI Training Series - Scaling Deep Learning - From Single GPU to Clusters	18.05.2026 – 20.05.2026	Leibniz Rechenzentrum	0.00 EUR	41	11.05.2026	Register now
GPU Programming Workshop	08.06.2026 – 11.06.2026	ONLINE	0.00 EUR	48	01.06.2026	Register now
Modern Python in Depth - From Fundamentals to Acceleration	17.06.2026 – 17.06.2026	ONLINE	0.00 EUR	55	10.06.2026	Register now
Iterative Solvers for Linear Systems	16.09.2026 – 17.09.2026	Leibniz Rechenzentrum	0.00 EUR – 505.00 EUR	32	02.09.2026	Register now
Modern C++ Software Design	21.10.2026 – 23.10.2026	ONLINE	0.00 EUR – 720.00 EUR	64	07.10.2026	Register now
Node-Level Performance Engineering	01.12.2026 – 03.12.2026	ONLINE	0.00 EUR – 720.00 EUR	64	17.11.2026	Register now

Upcoming Courses and Workshops



- **Information on further courses:**

- by LRZ: <http://www.lrz.de/services/compute/courses/>
- by the Gauss Centre of Supercomputing (GCS): <https://www.gauss-centre.eu/trainingsworkshops>
- by German Centres: <https://veranstaltungen.hpc-in-deutschland.de/>
- by European Centres and Projects: <https://hpc-portal.eu/training>



- Subscribe via <https://lists.lrz.de/mailman/listinfo/training-announce> to get regular information on education and training events at LRZ.
- Subscribe via <https://www.lrz.de/wir/newsletter/> to get the general LRZ newsletter.

Thank you!
We hope to see you again in a future training event!