



# Welcome to OpenMP Training Series, Session 3: optimization for NUMA and SIMD



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# Sessions and Topics

- Session 1: OpenMP Introduction (May 6)
- Session 2: Tasking (Jun 10)
- Session 3: Optimization for NUMA and SIMD (Jul 8)
- Session 4: What Could Possibly Go Wrong Using OpenMP (Aug 5, guest session from Ruud van der Pas)
- **Session 5: Introduction to Offloading with OpenMP (Sept 4)**
- Session 6: Advanced OpenMP Offloading Topics (Oct 7)
- Session 7: Selected / Remaining Topics (Oct 28)

Links to slides, exercises, recordings of previous sessions available at  
<https://www.nersc.gov/openmp-training-series-may-oct-2024/>

GitHub repo: <https://github.com/NERSC/openmp-series-2024/>

# Introduction of Speakers

- Both Michael Klemm and Christian Terboven
  - OpenMP Language Committee members
  - Among a group of experts who regularly give technical talks and tutorials on OpenMP, at SC, ISC, IWOMP, and other HPC centers, etc.
- Dr. Christian Terboven
  - Leads HPC group at RWTH Aachen University as a senior scientist
  - Co-chair of OpenMP Affinity Subcommittee
  - Co-author of book "Using OpenMP - The Next Step", published by MIT Press
- Dr. Michael Klemm
  - Principal Technical staff in the Compilers, Languages, Runtimes & Tools team of Machine Learning & Software Engineering group at AMD
  - CEO of the OpenMP Architecture Review Board
  - Lead author of book "High Performance Parallel Runtimes: Design and Implementation"

# Some Logistics

- Users are muted upon joining Zoom due to large number of attendees
- Please change your name in Zoom session as “first\_name last\_name (nersc\_user\_name)”, such as “Helen He (yunhe)”
  - Click “Participants”, then “More” next to your name to rename
- You can click the CC button to toggle captions and view full transcript
- Trainings are recorded. Feel free to unmute and ask questions
  - If prefer not to record your voice, please type questions in Slack
- Slides have been uploaded. Recording to be available in a few days
  - <https://www.nersc.gov/openmp-training-series-may-oct-2024/>
- Please join [OpenMP-series-2024 Slack](#)
  - **#general**: Q&A and discussions
  - **#perlmutter-accounts**: training accounts issues
- Please take our [survey](#) to help us improve!