

Seminar

HPC Lab · CDS

Wednesday, January 10, 2024

4–5:30 p.m.

Seminar Room 1

Mathematical Institute

University of Cologne

Weyertal 86–90

Speaker:

Dr. Tim Gerrits

RWTH Aachen University

Center for
Data and
Simulation
Science

BRINGING VISUALIZATION TO NATIONAL HPC INFRASTRUCTURE: DESIGNING DIALOGUES

The rapid advancements of high performance computing hardware and efficient algorithms allows domain scientists to create more efficient, accurate, and reliable models of real-world phenomena. However, this also leads to an increase of size and complexity of data, resulting in cumbersome or unfeasible analysis processes. While the visualization community has been actively exploring new approaches and metaphors to address these challenges, modern scientific visualization tools have not yet found their way into the day-to-day workflow of domain scientists. As part of the

national high performance computing initiative (NHR), the Cross-Sectional Group *Visualization* aims to bridge this gap.

This talk focuses on the challenges, limitations, and potential of this journey. It covers insights into current practices, wishes, and requirements of HPC users in regards to visualization, gained from the unique network and close collaboration of HPC-related researchers. It presents custom solutions to individual problems and proposes an outlook on the future of visualization within high performance computing.

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