Program - Thursday, October 16, 2025

12:30 Nils Thuerey
Beyond Gradient-based Methods for AI-based PDE Solvers

13:15 Alexander Heinlein
Efficient training of physics-informed neural networks via domain decomposition

13:45 Konrad Janik
Symplectic convolutional neural networks

14:15 *Coffee Break*

14:45 Jana de Wiljes
Filtering with Randomised Observations: Sequential Learning of Relevant Subspace Properties and Accuracy Analysis

15:30 A Sesh Aditya
Accelerating CFD simulations by combining Quantum with Geometry Aware Physics-Inspired AI models such as Neural Nets, Neural Operators, and Operator Transformer

16:00 Johannes Müller
Riemannian Newton Methods for Neural Quantum States

16:30 *COMinDS Annual*

17:00 *Poster Session + Get Together*

19:00 *Conference Dinner* at Malula – Chemnitz (Georgstr. 21, 09111 Chemnitz)

Program - Friday, October 17, 2025

09:00 Sebastian Lerch
Uncertainty quantification for data-driven weather prediction: From probabilistic forecasts to fair model comparisons

09:45 Joris Cornelius Kühl
Generative Adversarial Learning from Deterministic Ergodic Processes

10:15 Nicolas Venkovic
Randomized First-Order Short-Recurrence Iterative Methods for Approximate Low-Rank Factorizations

10:45 *Coffee Break*

11:15 Christian Mugisho Zagabe
An introduction to polyflow dynamics and polyflow approximation

11:45 Eleonora Arnone
Physics-informed spatial and functional data analysis

Poster Session

Fritz Backofen
Prediction of the Outcome of the Welded Bead Bending Test (WBBT) using Supervised Machine Learning

Kevin Bitterlich
Delayed Acceptance Slice Sampling

Sebastian Götschel
Physics-Informed Neural Operators: enforcing boundary conditions and accelerating parallel-in-time integration

Hans Harder
Surrogate Modeling for Large-scale Dynamical Systems using Flow Matching

Pei-Hsuan Hsia
Error propagation with sampling-free Bayesian neural networks

Julia Pelzer
Few-Shot Learning by Explicit Physics Integration: An Application to Groundwater Heat Transport

Minakshi Verma
Data-Driven Generalized Eigen value problems in TT format