

September 12 – 14, 2022

**Monday, September 12th**

12:00 – 14:00 lunch break / check-in

Session 2 (chair: Öffner)

14:00 – 14:15 opening remarks

14:15 – 14:45 Simon Schneider Using neural networks to solve partial differential equations

14:45 – 15:15 Yuhuan Yuan Error estimates of a penalization finite volume method for the compressible Navier–Stokes system

15:15 – 15:45 coffee break

Session 3 (chair: Yuhuan Yuan)

15:45 – 16:15 Andrea Thomann A numerical scheme for single temperature two phase flows

16:15 – 16:45 Philipp Öffner Arbitrary High–Order Positivity–Preserving Finite–Volume Shallow–Water Scheme

Free Time

18:00 – 19:00 dinner

**Tuesday, September 13th**

08:00 – 09:00 breakfast

Session 4 (chair: Brunk)

09:00 – 09:30 Lukas Holbach Inferring Geometries and Rheological Properties of Tectonic Plates Using a Bayesian Level Set Method

09:30 – 10:00 Janka Bauer Conformation and Phase Behavior of Intrinsically Disordered Proteins from Molecular Simulations

10:00 – 10:30 coffee break

Session 5 (chair: Hanke-Bourgeois)

10:30 – 11:00 Jeanine Shea Passive probe particle in an active bath: can we tell it is out of equilibrium?

11:00 – 11:30 Niklas Bockius Computing Extended Markov Parameterizations for the Generalized Langevin Equation Using the Lanczos Algorithm

11:30 – 12:00 Maximillian Braun Der AAA-Algorithmus und seine Anwendung zur Approximation von Exponentialreihen

12:00 – 14:00 lunch break

Social events

14:00 – 18:00 hike or wellness

18:00 – 19:00 dinner

## Wednesday, September 14th

08:00 – 09:00 breakfast & checkout until 9:00

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Session 6 (chair: Lukacova)

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09:30 – 10:00 Anna Hundertmark Patient-based carotid artery flow and compliance modelling, hemodynamical risk evaluation using longitudinal shear stress

10:00 – 10:30 coffee break

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Session 7 (chair: Hundertmark)

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10:30 – 11:00 Birte Klug Simulations of the supersonic flow around a sounding rocket and of the impaction-based sampling efficiency of mesospheric particle

11:00 – 11:30 Fabio Frommer A Cluster type expansion of the interaction for the Kirkwood superposition process

11:30 – 12:00 Dennis Schumann Modeling phase separation with the Cahn-Hilliard equation

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12:00 – 14:00 lunch break

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