PROGRAM

Karlsruhe Institute of Technology, Karlsruhe, Germany
Conference dinner (self-paid): 13 October 2026, 19:00, Pizzeria Il Caminetto

Venue: KIT, Building. 20.30, Seminar Room 1.067, Englerstraße 2, 76131 Karlsruhe

Tuesday, 13 October 2026

Time	Item	Speaker
12:00–12:20	*Arrival, registration and coffee*	
12:20–12:30	Opening	Mathias J. Krause
Method Development		**Chair: Martin Geier**
12:30–12:50	*The Frequency-Domain Lattice Boltzmann Method (FreqD-LBM): A Versatile Tool to Predict the QCM Response Induced by Structured Samples*	Diethelm Johannsmann
12:50–13:10	*Closed-Form Solution for Oscillatory Flow and Wall Shear Stress in Axisymmetric Corrugated Tubes*	Frederik Keil
13:10–13:30	*A Phase-Field Based Lattice Boltzmann Model for Multiphase and Multicomponent Fluids in the Capillary Regime*	Esteban Castro-Ávila
13:30–13:50	*Probabilistic Lattice Boltzmann Methods*	Stephan Simonis
13:50–14:20	*Coffee break*	
Solid Mechanics		**Chair: Stephan Simonis**
14:20–14:40	*Multigrid LBM for 3D Elastostatics*	Oliver Boolakee
14:40–15:00	*Lattice Boltzmann Method for Solids: High-Performance 3D Elastodynamics Solver using NVIDIA Warp*	Julie Weverbergh
15:00–15:20	*Gradient-based Optimization with Lattice Boltzmann Methods for Solid Mechanics*	Johannes Grafen
15:20–15:40	*Towards a Lattice-Boltzmann Monolithic Approach for Fluid Structure Interactions*	Andreas Nettekoven
15:40–16:10	*Coffee break & group photo*	
Multiphase and Particle-Laden Flows		**Chair: Fedor Bukreev**
16:10–16:30	*From Drying of Catalyst Ink to Bubble Dynamics in Porous Structures: Lattice Boltzmann Simulations for Water Electrolysis*	Qingguang Xie
16:30–16:50	*Effective Stresses Analyses in Unsaturated Granular Material via Multifluid LBM-DEM Coupling*	Clara M. Toffoli
16:50–17:10	*Stability Boundaries of Conservative Allen-Cahn Multiphase Simulations*	Tikhon Riazantsev
17:10–17:30	*Formation and Rheology of Particle-stabilized Emulsions*	Aaron De Clercq
17:30–19:00	*Open discussion: challenges and chances*	/ joint activities
19:00	*Conference dinner*	

Wednesday, 14 October 2026

Time	Item	Speaker
Aeroacoustics and Compressible Flows		**Chair: Adrian Kummerländer**
09:00–09:20	*Direct Aeroacoustic Simulations with Lattice Boltzmann Methods*	Andreas Schneider / Claus Feuchter
09:20–09:40	*Aeroacoustics and Supersonic Flow at the University of Siegen and Bonn-Rhein-Sieg University of Applied Sciences*	Philipp Spelten
09:40–10:00	*Towards Realistic Airframe Noise Prediction: LBM Simulations at High Reynolds and Mach Numbers*	Malav Soni
10:00–10:30	*Coffee break*	
High-performance Computing and Software		**Chair: Jens Harting**
10:30–10:50	*Lattice Boltzmann @ iRMB*	Martin Geier
10:50–11:10	*Coupling waLBerla and ESPResSo for Coarse-Grained Modelling of Particles and Flows*	Rudolf Weeber
11:10–11:30	*Offshore Aerodynamics across Accelerators with Platform-Transparent Lattice Boltzmann Methods*	Adrian Kummerländer
11:30–12:00	Closing discussion, open points and next meeting	Mathias J. Krause
12:00	*End of the meeting*	

Notes

- Talks are 15 minutes + 5 minutes for questions.
- Registration for the conference dinner by 12 October.
- For adaptations to the program contact johannes.grafen@kit.edu.