Kompaktseminar Numerik 2021
PfalzAkademie Lambrecht

JOHANNES GUTENBERG UNIVERSITÄT MAINZ

September 8 – 10, 2021

Wednesday, September 8th

Session 1 (chair: Markus Bachmayr)		
11:15 – 11:30	opening remarks	
11:30 – 12:00	Martin Dönges	*Tensor networks and large-scale eigenvalue problems*
12:00 – 14:00	lunch break / check-in	
Session 2 (chair: Tijana Janjic Pfander)		
14:00 – 14:30	Peter Spichtinger	*A hierarchy of ice cloud models*
14:30 – 15:00	Stephanie Schwab	*Adaptive Multilevel Monte Carlo Sampling and Collocation for Processes of Cloud Formation*
15:00 – 15:30	Lukas Holbach	*A Bayesian Level Set Method for Identifying Subsurface Structures in Stokes Flow*
15:30 – 16:00	coffee break	
Session 3 (chair: Martin Hanke-Bourgeois)		
16:00 – 16:30	Fabio Frommer	*The relative entropy functional in the thermodynamical limit*
16:30 – 17:00	Niklas Bockius	*Computing Extended Markov Parameterizations for the Generalized Langevin Equation*
18:00 – 19:00	dinner	

Thursday, September 9th

8:00 – 9:00	breakfast	
Session 4 (chair: Philipp Öffner)		
9:00 – 9:30	Markus Bachmayr	*Adaptive low-rank methods for high-dimensional parabolic equations*
9:30 – 10:00	Igor Voulis	*A near-optimal adaptive Galerkin method for random elliptic PDEs*
10:00 – 10:30	Simon Boisserée	*A dPG method for nonlinear flows in porous media*
10:30 – 11:00	coffee break	
Session 5 (chair: Peter Spichtinger)		
11:00 – 11:30	Tijana Janjic Pfander	*Learning parameters of a numerical model from observations*
11:30 – 12:10	Bettina Wiebe	*Numerical simulations and uncertainty quantification for cloud simulation*
12:10 – 13:30	lunch break	
Social events		
14:00 – 18:00	hike	
18:00 – 19:00	dinner	

Friday, September 10th

8:00 – 9:30	breakfast	
Session 6 (chair: Andrea Thomann)		
9:30 – 10:00	Martin Hanke-Bourgeois	*Unique determination of an insulating inclusion by a single pair of boundary current/voltage data*
10:00 – 10:30	Andreas Schömer	*Measure-valued solutions to the compressible Navier-Stokes equations with potential temperature transport*
10:30 – 11:00	coffee break	
Session 7 (chair: Igor Voulis)		
11:00 – 11:30	Andrea Thomann	*An all-speed scheme for isentropic two phase flow*
11:30 – 12:00	Philipp Öffner	*On stability of positivity-preserving Patankar-type time integration methods*
12:00 – 13:30	lunch break / check-out	