GAMM2025

Tuesday 8 April 2025

S18: Numerical methods for differential equations: S18.01 - Room 13 (08:30 - 10:30)

-Conveners: Piotr Krzyżanowski

time	[id] title	presenter
08:30	[559] Lattice Boltzmann for 2D linear elastodynamics with Dirichlet and Neumann boundary conditions	BOOLAKEE, Oliver
08:50	[560] Lattice Boltzmann Method for linear elastodynamics in 3D	WEVERBERGH, Julie
09:10	[561] Numerical solution of the fractional Euler-Bernoulli equation for a beam with fixed-supported and fixed-free ends	NOWAK, Anna
09:30	[562] Numerical approximation of fractional compositions of differential operators with fixed memory length and its application to the problem of fractional continuum mechanics	KUSTAL, Dominika
09:50	[563] Analysis of a Fractional-Order Model for Diabetes Mellitus Incorporating Education and Media Awareness Campaigns Using the Two-Step Newtonian Polynomial Approach	PRAJAPATI, Vishalkumar

S18: Numerical methods for differential equations: S18.02 - Room 13 (16:30 - 18:30)

-Conveners: Piotr Krzyżanowski

time	[id] title	presenter
16:30	[565] Fluid-Structure Interactions in ALE coordinates	HERGL, Chiara
16:50	[566] A monolithic space-time temporal multirate finite element framework for interface and volume coupled problems	WICK, Thomas
17:10	[567] A Local hp Space-Time Multigrid Approach for Tensor-Product Finite Element Discretizations of the Stokes Equations	MARGENBERG, Nils
17:30	[568] Space-time least-squares FEM for convection-diffusion problems	KÖTHE, Christian
17:50	[569] Projection Methods in the Context of Nematic Crystal Flow	REITER, Maximilian

Wednesday 9 April 2025

S18: Numerical methods for differential equations: S18.03 - Room 13 (08:30 - 10:10)

-Conveners: Robert Altmann

time	[id] title	presenter
08:30	[570] Structure-preserving Model Reduction on Manifolds of port-Hamiltonian systems	GLAS, Silke
09:10	[571] Energy-preserving Arnoldi approximations for Gauss-Runge-Kutta integrators	MAIER, Stefan
09:30	[572] Beyond 1D: A higher dimensional perspective on composite gas flow simulations in pipelines	NAYAK, Ashwin Sadanand
09:50	[573] Convergence of a Riemannian gradient method for the Gross-Pitaevskii energy functional in a rotating frame	YADAV, Mahima

S18: Numerical methods for differential equations: S18.04 - Room 13 (16:30 - 18:30)

-Conveners: Roland Maier

time	[id] title	presenter
16:30	[574] Reduced-order modeling and data assimilation with applications in structural health monitoring	GRÄSSLE, Carmen
17:10	[575] Model Reduction for the Wave Equation beyond the limitations of the Kolmogorov N-width	FEUERLE, Moritz
17:30	[576] Fast Solution of the Wave Equation Using Model Order Reduction and the Laplace Transform	HENRIQUEZ, Fernando
17:50	[577] Temperature Stratification in Lakes: Thermobaric Effects and Stability	IRMSCHER, Jonathan
18:10	[578] Global Free Flight Optimization via Eikonal Approach	JOCAS, Arturas

Thursday 10 April 2025

S18: Numerical methods for differential equations: S18.05 - Room 13 (08:30 - 10:30)

-Conveners: Roland Maier

time	[id] title	presenter
08:30	[579] A posteriori error bounds without generic constants by the two-energies-principle	BRAESS, Dietrich
08:50	[580] Goal-oriented dual-weighted error estimation for first order Virtual Elements	SELLMANN, Christian
09:10	[581] Error representations for goal-oriented a posteriori error estimation in elasto-plasticity with applications to mesh adaptivity	TCHOMGUE SIMEU, Arnold
09:30	[582] Quantum Realization of the Finite Element Method	DEIML, Matthias
09:50	[583] Minimal residual discretization of a class of fully nonlinear elliptic PDE	TIEN TRAN, Ngoc
10:10	[584] Sparse low-rank approximation of multi-parametric partial differential equations	YANG, Huqing

S18: Numerical methods for differential equations: S18.06 - Room 13 (14:00 - 16:00)

-Conveners: Robert Altmann

time	[id] title	presenter
14:00	[585] Optimal Order Pressure Trajectory Approximation for Stokes Systems: Set of Pressure Solutions and its Post-Processing	BAUSE, Markus
14:20	[586] Stabilized finite elements for incompressible Navier-Stokes flows on manifolds	KAISER, Michael Wolfgang
14:40	[587] Mixed finite element for the Stokes eigenvalue problem	DAGLI, Tugay
15:00	[588] A positivity preserving scheme for a coupled Chemotaxis--(Navier--)Stokes system	PERVOLIANAKIS, Christos
15:20	[589] Goal-Oriented Adaptivity Techniques for Convection-Dominated Transport and Flow Problems	BRUCHHÄUSER, Marius Paul
15:40	[590] Analysis and numerics of nonlinear PDE systems in porous media flow models	BOISSERÉE, Simon

S18: Numerical methods for differential equations: S18.07 - Room 13 (16:30 - 18:30)

-Conveners: Roland Maier

time	[id] title	presenter
16:30	[591] Accelerating exponential integrators	OSTERMANN, Alexander
16:50	[592] Semi-explizit Discretization of Thermo-poroelasticity	SCHMECK, Jochewed
17:10	[593] A rigorous (validated) method for numerically solving systems of Delay Differential Equations	SZCZELINA, Robert

Friday 11 April 2025

S18: Numerical methods for differential equations: S18.08 - Room 13 (08:30 - 10:30)

-Conveners: Piotr Krzyżanowski

time	[id] title	presenter
08:30	[594] Parameter-robust unfitted finite element methods for a Maxwell interface problem	HAUBOLD, Tim
08:50	[595] A comparative study of H(curl) and Lagrange based interpolations for the magnetic field	VORWERK, Maximilian
09:10	[596] On the accuracy of the boundary element method for problems with discontinuous geometries	RAJSKI, Michał Paweł
09:30	[597] A methodology for calculating rotor-stator flows based on finite volume mesh-tying	KARIMIAN, Kian
09:50	[598] Numerical methods for nonlocal and nonlinear parabolic equations with applications	PŁOCINICZAK, Łukasz