

WORKSHOP PROGRAM

Numerical Methods for Evolution Equations

Heraklion, Crete, September 22-23, 2023

Friday, September 22

9:15-9:30	Opening
	Chair: Vidar Thomée
9:30-10:00	Christian Lubich (U. Tübingen) <i>Time-dependent electromagnetic scattering from thin layers.</i>
10:00-10:30	Lehel Banjai (Heriot-Watt U.) <i>Runge-Kutta convolution quadrature for hyperbolic problems based on Gauss methods.</i>
10:30-11:00	Alexandre Ern (U. Paris) <i>Invariant-domain preserving Runge-Kutta methods.</i>
Coffee Break	
	Chair: Alexandre Ern
11:30-12:00	Patrick Joly (INRIA) <i>Remarks on explicit time stepping for the DG space discretisation of linear Friedrichs systems.</i>
12:00-12:30	David Ketcheson (KAUST) <i>How to approximate any evolution PDE by a hyperbolic PDE.</i>
12:30-13:00	Stig Larsson (Chalmers U. of Technology) <i>A priori and a posteriori error estimates for discontinuous Galerkin time-discrete methods via maximal regularity.</i>
Lunch Break	
	Chair: Patrick Joly
14:30-15:00	Mariya Ptashnyk (Heriot-Watt U.) <i>Numerical analysis of a time-stepping method for the Westervelt equation with time-fractional damping.</i>
15:00-15:30	Emmanuil Georgoulis (NTU Athens, Heriot-Watt U., and IACM) <i>Hypo-coercivity-exploiting stabilised finite element methods for Kolmogorov equation.</i>
15:30-16:00	Maria López-Fernández (U. Malaga) <i>Generalized convolution quadrature for sectorial problems.</i>
Coffee Break	
	Chair: Maria López-Fernández
16:30-17:00	Ulrich Langer (U. Linz) <i>Space-time finite element solvers for parabolic optimal control problems.</i>
17:00-17:30	Theodoros Katsaounis (U. Crete) <i>Optimisation methods for elastodynamics.</i>
17:30-18:00	Konstantinos Chrysafinos (Technical U. Athens) <i>Fully discrete approximations of the velocity tracking problem with pointwise-integral control constraints in time-space.</i>

Saturday, September 23

	Chair: Angela Kunoth
9:30-10:00	Daniel Peterseim (U. Augsburg) <i>Computational polyconvexification of isotropic functions.</i>
10:00-10:30	Thomas Wihler (U. Bern) <i>A discrete calculus for variable-order dG time stepping methods.</i>
10:30-11:00	Alexander Ostermann (U. Innsbruck) <i>An exponential integrator/WENO discretization for dispersive sonic-boom simulation.</i>
Coffee Break	
	Chair: Stig Larsson
11:30-12:00	Charalambos Makridakis (IACM, U. Crete, and U. Sussex) <i>Neural network approximations to evolution problems.</i>
12:00-12:30	Mats Larson (Umea U.) <i>Strong stabilization of cut elements and explicit time stepping.</i>
12:30-13:00	Christian Kreuzer (Technical U. Dortmund) <i>Inf-sup theory for the Biot equations: analysis and discretisation.</i>
Lunch Break	
	Chair: Alexander Ostermann
14:30-15:00	Tristan Pryer (U. Bath) <i>Structure-preservation in non-Newtonian flows.</i>
15:00-15:30	Vanja Nikolić (Radboud U.) <i>Asymptotic-preserving finite element discretization of quasilinear acoustic equations.</i>
15:30-16:00	Mohammad Asadzadeh (Chalmers U. of Technology) <i>On the Nitsche's approach for a finite element scheme for Vlasov-Maxwell system.</i>
Coffee Break	
	Chair: Christian Lubich
16:30-17:00	Georgios Akrivis (U. Ioannina and IACM) <i>The linearly implicit two-step BDF method for harmonic maps into spheres.</i>
17:00-17:30	Georgios Zouraris (U. Crete) <i>On the convergence of a linearly implicit finite element method approximating a nonlinear Schrödinger equation.</i>