

# WORKSHOP PROGRAM

## Numerical Methods for Evolution Equations Heraklion, Crete, September 21-22, 2018

### Friday, September 21

9:15-9:30	<b>Opening</b>
	<b>Chairman: Vidar Thomée</b>
9:30-10:00	<b>Sören Bartels</b> (U. Freiburg) <i>Approximation of gradient flows for self-avoiding inextensible curves and elastic knots.</i>
10:00-10:30	<b>Lehel Banjai</b> (Heriot Watt U.) <i>Finite element methods for fractional powers of elliptic operators.</i>
10:30-11:00	<b>Alexandre Ern</b> (U. Paris) <i>Low-rank approximation of linear parabolic equations by space-time tensor Galerkin methods.</i>
<i>Coffee Break</i>	
	<b>Chairman: Charalambos Makridakis</b>
11:30-12:00	<b>Patrick Joly</b> (INRIA) <i>Finite element solution of elastodynamics equations using a decomposition of the displacement fields into potentials.</i>
12:00-12:30	<b>Ian Smears</b> (U. College London) <i>Time-parallel iterative solvers for parabolic evolution equations.</i>
12:30-13:00	<b>Assyr Abdulle</b> (EPFL Lausanne) <i>Random time-step probabilistic methods for uncertainty quantification in chaotic and geometric numerical integration.</i>
<i>Lunch Break</i>	
	<b>Chairman: Patrick Joly</b>
14:30-15:00	<b>Omar Lakkis</b> (U. Sussex) <i>Saint-Venant's equations with rain: modeling, analysis and computations.</i>
15:00-15:30	<b>Balázs Kovács</b> (U. Tübingen) <i><math>L^2</math> error estimates for wave equations with dynamic boundary conditions.</i>
<i>Coffee Break</i>	
	<b>Chairman: Michel Crouzeix</b>
16:00-16:30	<b>Dimitrios Mitsoudis</b> (U. West Attica) <i>Imaging in a terminating waveguide.</i>
16:30-17:00	<b>Konstantinos Chrysafinos</b> (Technical U. Athens) <i>Discontinuous Galerkin time-stepping schemes for the Allen-Cahn equation.</i>

## Saturday, September 22

	<b>Chairman: Vassilios Dougalis</b>
<b>9:30-10:00</b>	<b>Andrea Cangiani</b> (U. Leicester) <i>A posteriori error estimation and adaptivity with general meshes.</i>
<b>10:00-10:30</b>	<b>Daniel Peterseim</b> (U. Augsburg) <i>Numerical simulation of the Gross-Pitaevskii equation with rough potentials.</i>
<b>10:30-11:00</b>	<b>Alexander Ostermann</b> (U. Innsbruck) <i>A low-rank splitting integrator for large-scale problems.</i>
<b>Coffee Break</b>	
	<b>Chairman: Cesar Palencia</b>
<b>11:30-12:00</b>	<b>Christian Kreuzer</b> (Technical U. Dortmund) <i>Quasi-optimality of parabolic spatial semi-discretisations.</i>
<b>12:00-12:30</b>	<b>Mats Larson</b> (Umea U.) <i>Least squares stabilized Nitsche and shape optimization using parabolic evolution.</i>
<b>12:30-13:00</b>	<b>Maria López-Fernández</b> (U. Roma) <i>Mosaic-free efficient algorithms for time-fractional differential equations.</i>
<b>Lunch Break</b>	
	<b>Chairperson: Angela Kunoth</b>
<b>14:30-15:00</b>	<b>Michael Plexousakis</b> (U. Crete) <i>A finite element method for the Helmholtz equation with nonlocal artificial boundary conditions in a two-dimensional waveguide.</i>
<b>15:00-15:30</b>	<b>Fotini Karakatsani</b> (U. Chester) <i>On the error control for fully discrete approximations of the time-dependent Stokes equation.</i>
<b>Coffee Break</b>	
	<b>Chairman: Christian Lubich</b>
<b>16:00-16:30</b>	<b>Georgios Akrivis</b> (U. Ioannina) <i>On the unconditional stability of implicit-explicit BDF methods.</i>
<b>16:30-17:00</b>	<b>Dimitrios Antonopoulos</b> (U. Athens) <i>Standard Galerkin - fourth-order explicit Runge-Kutta full discretization of the shallow water equations.</i>