

11th Annual Workshop on Numerical Methods
for Problems with Layer Phenomena
20–21 March 2014

**Thursday, 20th March – Multimedia Room, first floor, Central
University Building, (Dr Zorana Đinđića bb.)**

10:00– 10:30	<i>Registration – ground floor</i>
10:30 – 10:55	<i>Chair: Natalia Kopteva</i> Hans-Goerg Roos Some remarks on strongly coupled systems of convection-diffusion equations
10:55 – 11:20	Martin Stynes Boundary layers in a fractional-derivative boundary value problem
11:20 – 11:45	Lutz Tobiska A two-level local projection stabilization on hexahedral meshes
11:45 – 14:00	<i>Lunch</i>
14:00 – 14:25	<i>Chair: Hans-Goerg Roos</i> Eugene O’Riordan A singularly perturbed time dependent convection--diffusion turning point problem
14:25 – 14:50	Sebastian Franz Time-dependent singularly perturbed problems and discontinuous Galerkin
14:50 – 15:15	Nikolay N. Nefedov Existence and stability of interior and boundary layers in some new classes of singularly perturbed reaction-advection-diffusion equations
15:15 – 15:40	Vladimir Volkov Analytic-numerical method for moving fronts in reaction-advection-diffusion equations
15:40 – 16:00	<i>Tea & Coffee</i>
16:00 – 16:25	<i>Chair: Martin Stynes</i> Alan Hegarty Singularly perturbed elliptic problems with interior layers
16:25 – 16:50	Catherine Timoney Interior layers in a singularly perturbed 2D semilinear reaction-diffusion equation
16:50 – 17:15	Stephen Russell A multiscale sparse grid finite element method for a two-dimensional singularly perturbed reaction-diffusion problem

19:30	<p><i>Workshop Dinner at the Restaurant “Čarda Aqua Doria” (Kamenički put bb. Petrovaradin)</i> (1600 rsd (14 €) at participants' expense; the price is without drink)</p>
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Friday, 21st March– Multimedia Room, first floor, Central University Building

10:00 – 10:25	<p><i>Chair: Lutz Tobiska</i></p> <p>Relja Vulcanović, Nhan Anh Thai Uniform convergence via conditioning</p>
10:25 – 10:50	<p>Christos Xenophontos An exponentially graded mesh for singularly perturbed problems</p>
10:50 – 11:15	<p>Lars Ludwig Convergence and supercloseness of a finite element method for a singularly perturbed convection-diffusion problem on the L-shaped domain</p>
11:15 - 11:45	<i>Tea & Coffee</i>
11:45 – 12:10	<p><i>Chair: Eugen O’Riordan</i></p> <p>Niall Madden A first-order system Petrov-Galerkin discretization for solving a reaction-diffusion problem</p>
12:10 – 12:35	<p>Miljenko Marušić Stability of high order EFDF schemes</p>
12:35 – 13:00	<p>Helena Zarin Nonsymmetric interior penalty DG method for a singularly perturbed delay differential equation with a constant shift</p>
13:00 – 15:00	<i>Lunch</i>

	<i>Chair: Alan Hegarty</i>
15:00 – 15:25	Ljiljana Teofanov On the semilinear reaction-diffusion problem and its numerical solution
15:25 – 15:50	Goran Radojev A posteriori error estimates for 2D reaction-diffusion problem
15:50 – 16:15	Natalia Kopteva Maximum-norm a posteriori estimates for singularly perturbed reaction-diffusion problems
16:15 – 16:30	<i>Workshop Closing</i> (<i>Zorica Uzelac, Natalia Kopteva</i>)