

## Program of the conference

In: Jan Brandts and Sergey Korotov and Michal Křížek and Jakub Šístek and Tomáš Vejchodský (eds.): Applications of Mathematics 2013, In honor of the 70th birthday of Karel Segeth, Proceedings. Prague, May 15-17, 2013. Institute of Mathematics AS CR, Prague, 2013. pp. 261–263.

Persistent URL: <http://dml.cz/dmlcz/702955>

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## PROGRAM OF THE CONFERENCE

### Wednesday, May 15

- 13.00–14.00 Registration  
14.00–14.30 Opening  
    Presentation of the Medal of the Czech Mathematical Society  
    to Karel Segeth  
14.30–15.00 JAN BRANDTS  
    Counting triangles that share their vertices with the unit  $n$ -cube  
15.00–15.30 Coffee Break  
15.30–16.00 MILOSLAV FEISTAUER  
    Analysis of the discontinuous Galerkin method for elliptic problems with boundary singularities  
16.00–16.30 SERGEY KOROTOV  
    Nonobtuse refinements of tetrahedral FE meshes  
16.30–17.00 ANTTI HANNUKAINEN  
    Pseudospectral analysis of preconditioners for the Helmholtz equation  
17.00–17.20 PAVEL BURDA  
    Application of analytical solution of rotationally symmetric Stokes flow near corners  
18.00–22.00 Welcome Party, Blue Hall

### Thursday, May 16

- 9.00– 9.30 VÍT DOLEJŠÍ  
     $hp$ -anisotropic mesh adaptation technique based on interpolation error estimates  
9.30–10.00 JÁNOS KARÁTSON  
    Discrete maximum principles for nonlinear PDEs  
10.00–10.30 BELOSLAV RIEČAN  
    Small systems and fuzzy sets  
10.30–11.00 Coffee Break  
11.00–11.30 ZDENĚK DOSTÁL  
    Scalable algorithm and variationally consistent discretization for contact problems  
11.30–12.00 ISTVÁN FARAGÓ  
    Convergence and stability constant in the theta-method

- 12.00–14.00 Lunch Break
- 14.00–14.20 MIROSLAV FIEDLER  
A quasicondition number of matrices
- 14.20–14.40 ŠÁRKA NEČASOVÁ  
Incompressible limits of fluids excited by moving domains
- 14.40–15.00 DRAHOSLAVA JANOVSKÁ  
Zero points of quadratic matrix polynomials
- 15.00–15.20 LUCIE KÁRNÁ  
Detection codes in railway interlocking systems
- 15.20–15.40 Coffee Break
- 15.40–16.00 JIŘÍ VALA  
On the computational identification of temperature variable characteristics of heat transfer
- 16.00–16.20 PETR VANĚK  
Multigrid with aggressive coarsening and polynomial smoothing 1
- 16.20–16.40 ROMAN KUŽEL  
Multigrid with aggressive coarsening and polynomial smoothing 2
- 16.40–17.00 PAVLA FRAŇKOVÁ  
Multigrid with aggressive coarsening and polynomial smoothing 3
- 18.00–23.00 Conference Dinner, U Seminaristy Restaurant, Spálená St. 45

### Friday, May 17

- 9.00– 9.30 SHUHUA ZHANG  
The valuation of weather derivatives and corresponding numerical methods
- 9.30–10.00 KAREL KOZEL  
Numerical solution of 2D and 3D unsteady flow in a channel with low upstream velocity
- 10.00–10.30 HEHU XIE  
The lower and upper bounds of eigenvalues by the finite element method
- 10.30–11.00 Coffee Break
- 11.00–11.30 PETR SVÁČEK  
On numerical modelling of gust response of an airfoil section
- 11.30–12.00 VLADIMÍR JANOVSKÝ  
Path-following the static contact problem with Coulomb friction
- 12.00–14.00 Lunch Break
- 14.00–14.20 TORSTEN LINSS  
A posteriori error estimation for parabolic PDEs

- 14.20–14.40 ZBYNĚK VASTL  
Multigrid with aggressive coarsening and polynomial smoothing 4
- 14.40–15.00 HANA KOPINCOVÁ  
Multigrid with aggressive coarsening and polynomial smoothing 5
- 15.00–15.20 MILAN HANUŠ  
Multigrid with aggressive coarsening and polynomial smoothing 6
- 15.20–15.40 Coffee Break
- 15.40–16.00 VRATISLAVA MOŠOVÁ  
Integral transformations – the base of recent technologies
- 16.00–16.20 JAROSLAV MLÝNEK  
Parallel programming and optimization of heat radiation intensity
- 16.20–16.40 JAN CHLEBOUN  
A random set approach applied to definite integration of uncertain functions
- 16.40–17.00 TOMÁŠ VEJCHODSKÝ  
Two-sided bounds of eigenvalues with applications to trace inequalities
- 17.00–17.20 JAKUB ŠÍSTEK  
Parallel adaptive-multilevel BDDC method

### **Saturday, May 18**

- 9.00–12.00 A walk through the Elephant Valley in the zoological garden