



Applications of Mathematics 2013

in honor of the 70th birthday of Karel Segeth

May 15–17, 2013

*Blue Hall of the Institute of Mathematics
Academy of Sciences of the Czech Republic
Žitná 25, Prague 1*

<http://www.math.cas.cz/am2013>
am2013@math.cas.cz

PROGRAM OF THE CONFERENCE

Wednesday, May 15

13.00 – 14.00 Registration

Chairman: Michal Krížek

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

Chairman: Jan Brandts

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

18.00 – 22.00 Welcome Party, Blue Hall

Thursday, May 16

Chairman: Sergey Korotov

- 9.00 – 9.30 VÍT DOLEJŠÍ
hp-anisotropic mesh adaptation technique based on interpolation error estimates
- 9.30 – 10.00 PAVEL BURDA
Application of analytical solution of rotationally symmetric Stokes flow near corners
- 10.00 – 10.30 BELOSLAV RIEČAN
Small systems and fuzzy sets

10.30 – 11.00 Coffee Break

Chairman: Jakub Šístek

- 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

Chairman: Miro Rozložník

- 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

Chairman: Miloslav Feistauer

- 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

Chairman: Tomáš Vejchodský

- 9.00 – 9.30 JAKUB ŠÍSTEK
Parallel adaptive-multilevel BDDC method
- 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

Chairman: Ivo Marek

- 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

Chairman: Jan Chleboun

- 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

Chairman: Antti Hannukainen

- 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

Saturday, May 18

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