

ESSAM SCHOOL ON MATHEMATICAL MODELLING, NUMERICAL ANALYSIS AND
SCIENTIFIC COMPUTING, KÁCOV, CZECH REPUBLIC, MAY 29 – JUNE 3, 2016

Monday, May 30

08:00-08:55 BREAKFAST

08:55-09:00 **Opening**

Chairman: *J. Málek*

09:00-10:10 **Jan Mandel** *Probability on spaces of functions, with applications to inverse problems and data assimilation – I*

10:10-10:40 COFFEE, TEA

10:40-11:50 **Richard Katz** *Two-phase fluid dynamics of partially molten rock: fundamentals and application to the Earth – I*

11:50-12:10 **Piotr Minakowski** *The Taylor–Galerkin method and its application to visco-elastic and related models*

12:15-15:45 LUNCH & BREAK

15:45-16:00 COFFEE, TEA

Chairman: *P. Bastian*

16:00-17:10 **Richard Katz** *Two-phase fluid dynamics of partially molten rock: fundamentals and application to the Earth – II*

17:15-18:25 **Jan Mandel** *Probability on spaces of functions, with applications to inverse problems and data assimilation – II*

18:25-18:40 **Ondřej Šrámek** *Geoneutrinos, noble gases, and geophysical two-phase flow*

19:00-21:00 DINNER & WELCOME PARTY

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Tuesday, May 31

08:00-09:00 BREAKFAST

Chairman: *J. Liesen*

09:00-10:10 ***Richard Katz*** *Two-phase fluid dynamics of partially molten rock: fundamentals and application to the Earth – III*

10:10-10:40 COFFEE, TEA

10:40-11:50 ***Jan Mandel*** *Probability on spaces of functions, with applications to inverse problems and data assimilation – III*

11:50-12:10 ***Tomáš Vejchodský*** *Numerical lower bounds on eigenvalues of elliptic operators*

12:15-13:00 LUNCH

13:15-18:00 TRIP TO VLAŠIM

18:30-19:30 DINNER

Wednesday, June 1

08:00-09:00 BREAKFAST

Chairman: *M. Rozložník*

09:00-10:10 **Peter Bastian** *Simulation of multiphase flows in porous media – I*

10:10-10:40 COFFEE, TEA

10:40-11:50 **Jörg Liesen** *Krylov subspaces. Classical mathematics, iterative methods, and surprising links – I*

11:50-12:10 **Vít Vondrák** *ESPRESO – implementation of highly scalable multilevel FETI method for many-core architectures*

12:15-15:45 LUNCH & BREAK

15:45-16:00 COFFEE, TEA

Chairman: *R. Blaheta*

16:00-16:15 **Björn Baran** *Adjoint-based optimal boundary control of a Stefan problem system fully coupled with Navier–Stokes equations*

16:15-16:30 **Martin Řehoř** *Efficient numerical solution of multicomponent flows*

16:30-16:45 **Martin Hasal** *Numerical solution of the Stokes–Brinkman model by usage of the finite element method*

16:45-17:00 **Tomáš Lubner** *Effective preconditioning for poroelasticity*

17:00-17:15 BREAK

17:15-17:30 **Václav Ryška** *Numerical stabilizations of FEM solution for convection-dominated fluid problems and their impact on FETI convergence rate*

17:30-17:45 **Lukáš Rapant** *Traffic speed prediction using Bayesian networks and hidden Markov models*

17:45-18:00 **Robert Skopal** *Time series similarity measure*

18:00-18:15 **Peeter Parna** *Shallow water equations in real-time computer graphics*

18:30-19:30 DINNER

19:30-22:00 TBA

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Thursday, June 2

08:00-09:00 BREAKFAST

Chairman: *T. Kozubek*

09:00-10:10 **Jörg Liesen** *Krylov subspaces. Classical mathematics, iterative methods, and surprising links – II*

10:10-10:40 COFFEE, TEA

10:40-11:50 **Peter Bastian** *Simulation of multiphase flows in porous media – II*

11:50-12:10 **Jakub Šístek** *Adaptive mesh refinement and a parallel non-overlapping domain decomposition solver*

12:15-15:45 LUNCH & BREAK

15:45-16:00 COFFEE, TEA

16:00-18:30 TBA

18:30-22:00 CONFERENCE DINNER

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Friday, June 3

08:00-09:00 BREAKFAST

Chairman: *Z. Strakoš*

09:00-10:10 ***Peter Bastian*** *Simulation of multiphase flows in porous media – III*

10:10-10:40 COFFEE, TEA

10:40-11:50 ***Jörg Liesen*** *Krylov subspaces. Classical mathematics, iterative methods, and surprising links – III*

11:50-12:10 **Final remarks**

12:15-13:00 LUNCH

13:30 BUS DEPARTURE