

AIME@CZ

Czech workshop on applied mathematics in engineering

11-12 March 2014

Institute of Computer Science, Academy of Sciences of the Czech Republic, Prague

The workshop, organized in Czech-French collaboration aims at reporting recent achievements in applied mathematics in engineering on the Czech scene. It is a follow-up of a series of previous similar workshops that took place in Prague in 2010, 2011 and 2012.

The workshop is organized in the framework of the Nečas Center for Mathematical Modeling.

Tentative speakers

Tuesday, March 11, 2014

- 08:30-09:15 **Eduard Feireisl** - *Stability issues in the theory of complete fluid systems*
- 09:30-10:15 **Martin Vohralík** - *Polynomial-degree-robust a posteriori estimates in a unified setting for conforming, nonconforming, discontinuous Galerkin, and mixed discretizations*
- 11:00-11:45 **Tomáš Vejchodský** - *Deterministic and stochastic modelling of biochemical processes - an introduction and open problems*
- 12:00-12:45 **Giordano Tierra** - *Mathematical models for bacterial communities: Swarming processes and mechanical behavior of biofilms*
- 14:30-15:15 **Zdeněk Dostál** - *Scalable algorithms for computational mechanics: new results and numerical experiments*
- 15:30-16:15 **Miroslav Rozložník** - *Symmetric indefinite factorization and orthogonalization with respect to bilinear form*
- 17:00-17:45 **Jaroslav Kruis** - *Homogenization in coupled heat and moisture transport and its efficient implementation on parallel computers*

Wednesday, March 12, 2014

- 08:30-09:15 **Miroslav Fiedler** - *to be announced later*
- 09:30-10:15 **Vladimír Kolmogorov** - *Extensions of submodularity and their applications in computer vision*
- 11:00-11:45 **Anna Maria Bigatti** - *CoCoALib: a C++ library from algebra to applications*
- 12:00-12:45 **Jiří Matas** - *Wald's sequential analysis for time-constrained vision problems*
- 14:30-15:15 **Jiří Matoušek** - *Algorithmic aspects of embedding simplicial complexes in \mathbb{R}^d*
- 15:30-16:15 **Jean-Bernard Lasserre** - *Tractable characterizations of polynomials nonnegative on a set*

Everybody is welcome!