

Workshop

Advances on numerical methods for multiphase and free surface flows

June 4, 2009

All lectures will be held in the Institute of Numerical Mathematics RAS, room 727 (Gubkina str. 8, Moscow)

Program

- 10:00–10:40 Yuri Vassilevski, Alexander Danilov, Ivan Kapyrin, Kirill Nikitin (INM, Moscow)
Monotone conservative front resolving schemes for the 3D advection-diffusion equation
- 10:40–11:20 Vitaly Volpert (University Lyon 1)
Cell dynamics modelling in biology
- 11:20–11:40 Coffee break
- 11:40–12:20 Maxim Olshanskii, Piotr Grinevich (MSU, Moscow)
A solver for variable viscosity Stokes equations with application to Bingham problem
- 12:20–13:00 Kirill Bogachev (MSU, Moscow)
Free boundary problems for multiphase flows in porous media
- 13:00–14:20 Lunch
- 14:20–15:00 Sven Gross (University of Bonn)
Numerical simulation of two-phase flows with DROPS
- 15:00–15:40 Arnold Reusken (RWTH Aachen)
Properties of a new finite element pair for incompressible two-phase flow simulations
- 15:40–16:00 Coffee break
- 16:00–16:40 Joerg Grande (RWTH Aachen)
An Eulerian finite element method for surfactant transport on moving surface
- 16:40–17:20 Kirill Nikitin, Yuri Vassilevski (INM, Moscow)
Free surface flow modelling on dynamically refined hexahedral meshes
- 17:20–18:00 V.N. Buravtsev, A.I. Lobanov, A.V. Ukrainets (MIPT, Moscow)
Mathematical model of platelet thrombus formation

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