

# Monday, June 18, 2012

9:00        **Registration**

9:30        **Introduction**

Pekka Neittaanmäki (University of Jyväskylä, Finland), William E. Fitzgibbon (University of Houston, USA), Olivier Pironneau (University Paris 6, France)

## **Session 1: 9:50–11:10**

**Chairman: Olivier Pironneau, University Paris 6, France**

9:50        Jacques Rappaz

*Ecole Polytechnique Fédérale de Lausanne, Switzerland*

Finite Element Approximation of a Nonlinear Stationary Stokes Problem Arising in Glaciology

10:30       Annalisa Quaini

*University of Houston, USA*

A Computational Study on the Generation of the Coanda Effect in a Mock heart Chamber

11:10       **Coffee break at the main foyer of Agora**

## **Session 2: 11:40–13:00**

**Chairman: Sergey Repin, University of Jyväskylä, Finland**

11:40       Yuri Kuznetsov

*University of Houston, USA*

Mixed Finite Element Methods with Piece-wise Constant Fluxes on Polyhedral Meshes

12:20       Tai Xue-Cheng

*University of Bergen, Norway*

A Fast Algorithm for Euler's Elastica Model using Augmented Lagrangian Method

13:00        **Lunch at Piato**

**Session 3: 14:00–16:30**

**Chairman: Pekka Neittaanmäki, University of Jyväskylä, Finland**

14:00        Dirk Pauly  
*Universität Duisburg-Essen, Germany*  
Poincaré Meets Korn via Maxwell

14:40        Tommi Kärkkäinen  
*University of Jyväskylä, Finland*  
Towards Intelligent Optimization of Vehicle Routing Problems

15:20        **Coffee break at the main foyer of Agora**

15:50        Tuomo Rossi  
*University of Jyväskylä, Finland*  
Block Cyclic Reduction Type Fast Poisson Solvers for GPU

16:30        **End of day 1**

19:00        **Dinner at Nikolainkulma, Asemakatu 6**

# Tuesday, June 19, 2012

9:00            **Registration**

## **Session 4: 9:30–10:50**

**Chairman: Yuri Kuznetsov, University of Houston, USA**

9:30            Jacques Periaux  
*University of Jyväskylä, Finland and CIMNE/UPC Barcelona, Spain*  
Some Remarks on Modern Design Optimization in Aeronautics using  
Evolutionary Hybridization Techniques

10:10          Martin Berggren  
*Umeå University, Sweden*  
Analysis of the Weak Material Approximation for Fictitious Domain  
Methods and Topology Optimization

10:50          **Coffee break at the main foyer of Agora**

## **Session 5: 11:20–12:40**

**Chairman: Tommi Kärkkäinen, University of Jyväskylä, Finland**

11:20          Alexandre Caboussat  
*Geneva School of Business Administration, Switzerland*  
Least-Squares Methods for Fully Nonlinear Elliptic Equations

12:00          Alexander Lapin  
*Kazan University, Russia*  
Iterative Solution of the Large Scale Constrained Saddle point  
Problems: Numerical Experiments

12:40          **Lunch at Piato**

**Session 6: 14:00–15:20**

**Chairman: Jacques Periaux, University of Jyväskylä, Finland and CIMNE/UPC  
Barcelona, Spain**

- 14:00 Amir Averbuch  
*University of Jyväskylä, Finland and Tel Aviv University, Israel*  
Understanding the Geometry of Big High Dimensional Data to Achieve  
Efficient Computation
- 14:40 Jari Toivanen  
*Stanford University, USA, University of Jyväskylä, Finland*  
Operator Splitting Methods for Pricing American Options under Jump-  
diffusion Models
- 15:20 **Ending words**
- 15:30 **End of workshop**