

China-Norway-Sweden Workshop on Computational Mathematics

Programme

Tuesday, June 8

- 12.00-13.00** Lunch and Registration. Place: Lobby, High Technology Centre, Thormøhlensgate 55
- 13.00-13.15** **Opening**
- 13.15-13.50** Prof. Pingbing Ming (China): "Economical Heterogeneous Multiscale Method for Homogenization Problems"
- 13.50-14.25** Prof. Gunilla Kreiss (Sweden): "Perfectly matched layers for linear, anisotropic elasto-dynamics"
- 14.25-15.00** Prof. Alexander Malyshev (Norway): "On fast algorithms for solving block tridiagonal Toeplitz systems"
- 15.00-15.30** **Coffee break**
- 15.30-16.05** Prof. Xuejun Xu (China): "Rigorous Spectral Analysis of Optimized Schwarz Methods with Robin Transmission Conditions"
- 16.05-16.40** Prof. Stig Larsson (Sweden): "Local pointwise a posteriori gradient error bounds for the Stokes equations"
- 16.40-17.15** Ass. Prof. Anne Kværnø (Norway): "Stiffly accurate stochastic Runge-Kutta methods"
- 20.00** Dinner at Fløien Folkerestaurant. We leave together from Hotel Rica at 19.15 and take the Fløibanen funicular at 19:45.

Wednesday, June 9

- 09.00-09.35** Prof. Jiansong Deng (China): "Polynomial Splines over T-meshes"
- 09.35-10.10** Yana Di, Researcher (Sweden): "Simulation of Dendritic Growth with Melt Flows"
- 10.10-10.45** Prof. Einar Rønquist (Norway): "High order polynomial approximations in deformed domains: optimal point distributions"
- 10.45-11.15** **Coffee break**
- 11.15-11.50** Prof. Björn Engquist (Sweden): "Fast algorithms for high frequency wave propagation"
- 11.50-12.25** Prof. Zhongyi Huang (China): "Tailored finite point method for singular perturbation problems"
- 12.25-13.00** Prof. Tom Lyche (Norway): "Isogeometric Analysis; Bridging the Gap between Computer Aided Design and Finite Element Analysis"
- 13.00-14.00** **Lunch at VilVite**

- 14.00-14.35** Anders Logg, Research Scientist (Sweden): "Automated error control"
14.35-15.10 Ass. Prof. Trond Kvamsdal (Norway): "Isogeometric Finite Element Analysis"
15.10-15.45 Ass. Prof. Tiejun Li (China): "The boosted hybrid tau-leaping algorithm and its application in mathematical biology"
18.00 Dinner at [Cornelius](#) on a small island outside Bergen. We leave together from Hotel Rica at 17.30.

Thursday, June 10

- 09.00-09.35** Prof. Martin Berggren (Sweden): "Weak-material approximations of natural boundary conditions"
09.35-10.10 Prof. Jianxian Qiu (China): "Runge-Kutta discontinuous Galerkin methods for simulations of multi-medium flow"
10.10-10.45 Prof. Nils Henrik Risebro (Norway): "Simulation of the solar atmosphere"
10.45-11.15 **Coffee break**
11.15-11.50 Prof. Yangfeng Su (China): "Nonlinear Eigenvalue Problems"
11.50-12.25 Olof Runborg, Researcher (Sweden): "Gaussian Beam Approximation of High Frequency Waves"
12.25-13.00 Ass. Prof. Talal Rahman (Norway): "A fast algorithm for a constrained Total Variation minimization with application to image processing"
13.00-14.25 **Lunch at "På Høyden"**
14.45-15.20 Prof. Ziqing Xie (China): "Error analysis of discontinuous Galerkin methods for time-dependent Maxwell equations"
15.20-15.55 Ass. Prof. Axel Målquist (Sweden): "Error estimation and adaptivity for multiscale methods"
15.55-16.30 Ass. Prof. Jan Martin Nordbotten (Norway): "On unified frameworks for upscaling and preconditioning for porous media"
16.30 Closing

19.00 Dinner at "Bryggeloftet" restaurant. We leave from the hotel at 18.45.

Friday, June 11

["Norway in a Nutshell"](#) excursion

We leave from the hotel at 08.10. The train leaves at 08.40.

Dinner at Rica Hotel at 19.00