



Department of Mathematics and Computer Science

6<sup>th</sup> Workshop on Kinetic Theory and Applications  
Karlstad University, Sweden, May 12-14 2014

## Programme

May 12 Monday

Room: 21E 205

### Morning session

11.00 – 11.10 Opening

11.10 – 11.45 *The spatially homogeneous Boltzmann equation in various functional spaces*, A. Bobylev (Karlstad)

11.50 – 12.25 *Kinetic consistent equations of magnetogasodynamics and their implementation for supercomputers*, B. Chetverushkin (Moscow)

12.30 – 14.00 LUNCH

### Afternoon session

14.00 – 14.35 *Hydrodynamic limit of some P and NP combinatorial optimization problems*, Y. Brenier (Paris)

14.35 – 15.05 Coffee break

15.05 – 15.40 *On spectral analysis of semigroups in a Banach space and applications*, S. Mischler (Paris)

18.00 – 21.00 BOAT EXCURSION on Vänern

May 13 Tuesday

Room: 21E 205

### Morning session

- 09.30 – 10.05 *Rigorous derivation of the Fick's law in a low density regime*,  
M. Pulvirenti (Rome)
- 10.10 – 10.45 *Some new estimates for the Vlasov-Poisson equation*,  
L. Desvillettes (Paris)
- 10.45 – 11.10 Coffee break
- 11.10 – 11.45 *A derivation of models for aerosols*, F. Golse (Paris)
- 11.50 – 12.25 *On a Vlasov-Poisson plasma with infinite charge*, S. Caprino (Rome)
- 12.30 – 13.30 LUNCH

### Afternoon session

- 13.30 – 14.05 *A hierarchy of hybrid numerical methods for multi-scale kinetic equations*, F. Filbet (Lyon)
- 14.10 – 14.45 *On geometric calculus and finite elements for Vlasov-Maxwell system*, M. Asadzadeh, (Göteborg)
- 14.45 – 15.10 Coffee break
- 15.10 – 15.45 *High order semi-implicit schemes for evolutionary nonlinear partial differential equations with applications to nonlinear diffusion relaxation problems and to kinetic equations*, G. Russo (Catania)
- 15.50 – 16.25 *Galerkin-Petrov approach for the Boltzmann equation*,  
S. Rjasanow (Saarbrücken)
- 19.00 – 23.00 CONFERENCE DINNER at Barbros brygga

**May 14 Wednesday**

**Room: 21E 205**

**Morning session**

- 09.30 – 10.05 *Decay of a linear pendulum in a collisional gas: Spatially one-dimensional case*, K. Aoki (Kyoto)
- 10.10 – 10.45 *Bose condensates in interaction with excitations - a two-component space-dependent model close to equilibrium*, A. Nouri (Marseille)
- 10.45 – 11.10 Coffee break
- 11.10 – 11.45 *On the anyon Boltzmann equation*, L. Arkeryd (Göteborg)
- 11.50 – 12.25 *Numerical modeling of the electron heating for the nonlinear collision kinetic equation with a quasilinear diffusion operator*, I. Potapenko (Moscow)
- 12.30 – 13.30 LUNCH

**Afternoon session**

- 13.30 – 14.05 *On summability of moments and their applications*, I. Gamba (Austin, Texas)
- 14.05 – 14.15 Closing