



Department of Mathematics and Computer Science

7th Workshop on Kinetic Theory and Applications
Karlstad University, Sweden, June 19-21 2017

Programme

June 19 Monday

Room: 21A 342 (Eva Eriksson)

Morning session

Chair: B. Wennberg

09.40 – 09.50 Opening

09.50 – 10.25 *Quantization of probability densities: a gradient flow approach*,
F. Golse (Paris)

10.25 – 11.00 *Hopf-Cole transformation*, T.-P Liu, (Taipei/Stanford)

11.00 – 11.20 Coffee break

11.20 – 11.55 *Coarse-graining of collective dynamics models*, P. Degond (London)

11.55 – 12.30 *Kinetic-based models for tumor-immune system competition*,
M. Groppi (Parma)

12.30 – 13.50 LUNCH

Afternoon session

Chair: Y. Wondmagegne

13.50 – 14.25 *Fokker-Planck description of socio-economic phenomena*,
G. Toscani (Pavia)

14.25 – 15.00 *Solutions to the spatially inhomogeneous non-cutoff Kac equation*,
T. Yang (Hong Kong)

15.00 – 15.20 Coffee break

15.20 – 15.55 *On consistent BGK models for gas mixtures*, A. Bobylev (Moscow)

18.00 – 21.30 **BOAT EXCURSION on Vänern**

June 20 Tuesday

Room: 21A 342 (Eva Eriksson)

Morning session

Chair: L. Söderholm

- 09.15 – 09.50 *Shock wave structure for polyatomic gases with large bulk viscosities*, K. Aoki (Taipei/Tainan)
- 09.50 – 10.25 *Macroscopic closures of kinetic equations beyond the monatomic gas*, G. Spiga (Parma)
- 10.25 – 11.00 *Modelling and numerical study of the polyatomic bi-temperature Euler system*, S. Brull (Bordeaux)
- 11.00 – 11.20 Coffee break
- 11.20 – 11.55 *Continuum limit for metamaterials: an inverse problem*, M. Pulvirenti (L'Aquila)
- 11.55 – 12.30 *Derivation of the linear Boltzmann-Vlasov equation from particle system*, C. Saffirio (Zürich)
- 12.30 – 14.00 LUNCH

Afternoon session

Chair: H. Andreasson

- 14.00 – 14.35 *Bose condensates in interaction with excitations; a coupled Gross-Pitaevskii and quantum-kinetic model*, L. Arkeryd (Gothenburg)
- 14.35 – 15.10 *On some quantum kinetic equations related to anyons*, A. Nouri (Marseille)
- 15.10 – 15.40 Coffee break
- 15.40 – 16.15 *Common features between the quantum Boltzmann equation cold regimes and the wave turbulence model for stratified flows*, I. Gamba (Austin, Texas)
- 16.15 – 16.50 *Influence of boundary geometry on the fluid-dynamic quantities near the boundary*, S. Takata (Kyoto)
- 19.00 – **CONFERENCE DINNER at Frost**

June 21 Wednesday

Room: 21E 205

Morning session

Chair: M. Asadzadeh

- 09.15 – 09.50 *Kinetic modelling and numerics of strongly magnetized tokamak plasmas with mass disparate particles. The electron Boltzmann relation*, C. Negulescu (Toulouse)
- 09.50 – 10.25 *The Vlasov-Poisson plasma with infinite charge: An attempt to modeling a magnetic shield*, S. Caprino (Rome)
- 10.25 – 11.00 *Electron acceleration by plasmic waves caused by a laser pulse*, I. Potapenko (Moscow)
- 11.00 – 11.20 Coffee break
- 11.20 – 11.55 *On a three dimensional vision based collision avoidance model*, F. Filbet (Toulouse)
- 11.55 – 12.30 *Design of discrete velocity models*, H. Babovsky (Ilmenau)
- 12.30 – 13.40 LUNCH

Afternoon session

Chair: M. Vinerean

- 13.40 – 14.15 *Stochastic and deterministic solution of the Boltzmann equation*, S. Rjasanow (Saarbrücken)
- 14.15 – 14.50 *Onsager Conjecture in bounded domain with boundaries*, C. Bardos (Paris)
- 14.50 – 15.00 Closing remarks
- 15.15 – [Coffee at the Department of Mathematics](#)