



Conference Kinetic Equations
CIRM, November 10th to 14th, 2014

Program

Centre International de Rencontres Mathématiques
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Monday, November 10th

9:00 Welcome

9:15–9:50 **Tai-Ping Liu** : *Boundary Phenomena for Some Kinetic Equations.*

9:55–10:30 **François Golse** : *The Boltzmann equation over \mathbf{R}^3 : dispersion vs dissipation.*

10:30–11:00 Coffee Break

11:00–11:35 **Jacques Schneider** : *On a well-posed simulation model for multi-component dilute reacting gases.*

11:40–12:15 **Véronique Bagland** : *The Boltzmann equation for ballistic annihilation.*

12:30–13:30 Lunch

16:00–16:35 **Walter Strauss** : *Stability Analysis of a Hot Plasma in a Torus.*

16:40–17:15 **Bruno Despres** : *Symmetrization of the Vlasov-Poisson and Vlasov-Ampère equations.*

17:15–17:45 Coffee Break

17:45–18:20 **Claude Bardos** : *Semi Classical limit and Vlasov Dirac Benney Equation.*

18:25–19:00 **Emmanuel Frénod** : *An exponential integrator for the 4D-Vlasov-Poisson system with strong magnetic field.*

Tuesday, November 11th

9:15–9:50 **Kazuo Aoki** : *A numerical study of the Taylor-Couette problem for a vapor-gas mixture.*

9:55–10:30 **Francis Filbet** : *On the numerical simulation of the Vlasov-Poisson model with an external magnetic field.*

10:30–11:00 Coffee Break

11:00–11:35 **Michel Mehrenberger** : *Semi-Lagrangian kinetic and gyrokinetic simulations.*

11:40–12:15 **Stéphane Brull** : *Asymptotic-preserving scheme for the Fokker-Planck-Landau-Maxwell system in the quasi-neutral regime.*

12:30–13:30 Lunch

16:00–16:35 **Raffaele Esposito** : *Stationary solutions to the Boltzmann equation and their hydrodynamic limit.*

16:40–17:15 **Ariane Trescases** : *Regularity of the Boltzmann Equation with Diffuse Boundary Conditions.*

17:15–17:45 Coffee Break

17:45–18:20 **Sigheru Takata** : *Grazing collision effect of non-cutoff potentials in a toy kinetic equation.*

18:25–19:00 **Alexander Bobylev** : *On the structure of the Chapman-Enskog expansion.*

Wednesday, November 12th

9:15–9:50 **Leif Arkeryd** : *On low temperature kinetic theory; spin diffusion, anyons, Bose Einstein condensates.*

9:55–10:30 **Miguel Escobedo** : *Convergence to equilibrium of a linearized kinetic equation for phonons.*

10:30–11:00 Coffee Break

11:00–11:35 **Jani Lukkarinen** : *Kinetic theory of the Hubbard model: a matrix-valued Boltzmann equation with a twist.*

11:40–12:15 **Niclas Bernhoff** : *Boundary layers for discrete quantum kinetic equations.*

12:30–13:30 Lunch

Other activities

13:45 – Excursions in the Parc national des Calanques.

Duration around 3h30, good shoes and water required.

14:45 – Visit to MuCEM : Musée des civilisations de l'Europe et de la Méditerranée (Departure from CIRM at 13:30).

Thursday, November 13th

9:15–9:50 **Julien Barré** : *From Vlasov-Poisson-Fokker-Planck to incompressible Euler equations.*

9:55–10:30 **Anton Arnold** : *Entropy method for hypocoercive & non-symmetric Fokker-Planck equations with linear drift.*

10:30–11:00 Coffee Break

11:00–11:35 **Sergio Simonella** : *The correlation error in the Boltzmann-Grad limit.*

11:40–12:15 **Stéphane Junca** : *A continuous model for ratings : a Kinetic model with a mean field derivation.*

12:30–13:30 Lunch

16:00–16:35 **Chiara Saffirio** : *From the Hartree-Fock dynamics to the Vlasov equation.*

16:40–17:15 **Kleber Carrapatoso** : *Rate of convergence to equilibrium for the Landau equation.*

17:15–17:45 Coffee Break

17:45–18:20 **Mohammed Lemou** : *Quantitative stability inequalities for Vlasov-Poisson and 2D-Euler systems*

18:25–19:00 **Christian Schmeiser** : *Existence and stability of stationary solutions of kinetic chemotaxis models.*

19:30– Social dinner

Friday, November 14th

Morning: Iter session by IRFM members

9:15–9:50: **Philippe Ghendrih** : *Around fusion and Landau collisional model.*

9:55–10h30: **Thomas Cartier-Michaud** : *Filamentation in a kinetic Rayleigh Bénard instability: plasma trapped ion turbulence.*

10:30–11:00 Coffee Break

11:00–11:35 **Damien Estève** : *On impurity transport and collisional exchange.*

11:40–12h15: **Claudia Norcini** : *Comparison of numerical codes and work with GYSELA in this perspective.*

12:30–13:30 Lunch

14:00–14:35 **Phil Morrison** *Lifting, a method for constructing consistent kinetic theories with electromagnetic interaction.*

14:40–15:15 **José Antonio Carrillo** : *Swarming models with repulsive-attractive effects.*

15:20 Last Coffee