

Workshop on
“Probabilistic and variational methods in kinetic theory”

May 13-17, 2019

organized by
Esther S. Daus, Giacomo Di Gesù, André Schlichting

• Monday, May 13

10:30 - 11:00	Self registration and coffee break
11:00 - 11:10	Opening remarks
11:10 - 12:00	Angela Stevens <i>Alignment and Wavenumber Selection</i>
12:00 - 14:00	<i>Lunch break</i>
14:00 - 14:50	Boguslaw Zegarliński <i>Coercive inequalities for Markov generators on nilpotent Lie groups</i>
15:00 - 15:50	Laurent Desvillettes <i>A link between cross diffusion and predator prey systems</i>
16:00 - 16:30	<i>Coffee and cake</i>
16:30 - 17:20	Shi Jin <i>Random batch methods for interacting particle systems</i>
17:30 - 18:00	Rishabh Gvalani <i>A mountain pass theorem in the space of probability measures and applications</i>
afterwards	<i>Reception</i>

• Tuesday, May 14

09:00 - 09:30	Matthias Erbar <i>A gradient flow approach to the Boltzmann equation</i>
09:40 - 10:30	Jean-Christophe Mourrat <i>Energy methods for the kinetic Fokker-Planck equation</i>
10:30 - 11:00	<i>Group photo and coffee break</i>
11:00 - 11:50	Anton Arnold <i>Short- and long-time behavior in (hypo)coercive ODE-systems and Fokker-Planck equations</i>

12:00 - 12:30	Francesco Patacchini <i>The interaction equation near attracting manifolds</i>
12:30 - 14:30	<i>Lunch break</i>
14:30 - 15:20	Ansgar Jüngel <i>Cross-diffusion models for multispecies systems in biology: modeling, entropies, stochastics</i>
15:30 - 16:00	Oliver Tse <i>Equilibration in Wasserstein distance of partially damped Euler equations</i>
16:00 - 16:30	<i>Coffee and cake</i>
16:30 - 17:20	Michela Ottobre <i>A one-dimensional Vicsek-type model for self-propelled diffusions</i>

• **Wednesday, May 15**

09:00 - 09:30	Josephine Evans <i>Using Harris's theorem to prove hypocoercivity for linear kinetic equations with jumps</i>
09:40 - 10:30	Joaquin Fontbona <i>Quantitative uniform propagation of chaos for Maxwell molecules</i>
10:30 - 11:00	<i>Coffee break</i>
11:00 - 11:30	Franca Hoffmann <i>Reverse Hardy-Littlewood-Sobolev inequalities</i>
11:30 - 12:00	Amit Einav <i>Weak Poincaré inequalities in the absence of spectral gaps</i>
12:00 - 12:30	Hagop Tossounian <i>On Kac's model, ideal Thermostats, and finite Reservoirs</i>
<i>afterwards</i>	<i>Lunch break and free afternoon</i>
19:00	<i>Dinner at Tuscolo Münsterblick, Gerhard von Are Strasse 8</i>

• **Thursday, May 16**

09:00 - 09:30	Bao Q. Tang <i>Indirect diffusion effect and convergence to equilibrium</i>
09:40 - 10:30	Li Chen <i>Mean field limit of many particle system with non Lipschitz force</i>
10:30 - 11:00	<i>Coffee break</i>
11:00 - 11:50	Giada Basile <i>A gradient flow approach to kinetic equations</i>
11:50 - 12:30	Helge Dietert <i>About the entropic structure of detailed balanced multi-species cross-diffusion equations</i>

12:30 - 14:30	<i>Lunch break</i>
14:30 - 15:20	Mario Pulvirenti <i>A local mean-field stochastic particle system for the Boltzmann equation</i>
15:30 - 16:00	Simone Fagioli <i>Solutions to aggregation–diffusion equations with nonlinear mobility constructed via a deterministic particle approximation</i>
16:00 - 16:30	<i>Coffee and cake</i>
16:30 - 17:20	Giambattista Giacomin <i>Interacting diffusions on random graphs and PDE limits</i>

• **Friday, May 17**

09:00 - 09:30	Mathias Delgadino <i>Mean field limit by Gamma convergence</i>
09:40 - 10:30	Martin Burger <i>Propagation of gradient flow structures from microscopic to macroscopic models</i>
10:30 - 11:00	<i>Coffee break</i>
11:00 - 11:30	Antonio Esposito <i>Nonlinear degenerate cross-diffusion systems with nonlocal interaction</i>
11:40 - 12:30	Andreas Eberle <i>Couplings and convergence to equilibrium for Langevin dynamics and Hamiltonian Monte Carlo methods</i>
12:30 - 12:40	<i>Closing remarks</i>

All talks take place at HIM lecture hall, Poppelsdorfer Allee 45, Bonn.