

Scharfetter-Gummel for aggregation-diffusion equations: Gradient structures and their limits

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In this talk, I will present some new insights into the variational structure of the Scharfetter-Gummel scheme for aggregation-diffusion equations. In particular, we propose a gradient structure that allows one to prove asymptotic limits in two regime – the continuum limit and the zero-diffusion limit. This is a work in progress with Anastasiia Hraivoronska and André Schlichting.