

# The attractive log gas: propagation of chaos, stability and uniqueness questions

*Monday, June 24, 2024 10:30 AM (1 hour)*

We consider the dynamics of a system of particles with logarithmic attractive interaction, on the torus, at inverse temperature  $\beta$ . We show phase transitions on the stability and uniqueness of the uniform distribution. Investigating the mean-field convergence of the system by the modulated free energy method, we deduce that uniform-in-time convergence is not always true. This is joint work with Antonin Chodron de Courcel and Matthew Rosenzweig.

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