



## Mathematics and CS Seminar

# Particle systems with singular interaction for Wasserstein-type diffusion.

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Host: Lorenzo Dello Schiavo

The talk is devoted to a system of interacting diffusion particles on the real line that start from an infinite set of points, move independently until they meet and then coalesce or sticky-reflect from each other. We additionally assume that particles transfer a mass obeying the conservation law, and their diffusion is inversely proportional to the mass. We will show that the process describing the evolution of particle mass solves a corrected Dean-Kawasaki equation for particle density in Langevin dynamics. This process also satisfies the Varadhan formula for short times that is governed by the quadratic Wasserstein distance.

**Thursday, April 27, 2023 05:15pm - 06:15pm**

Heinzel Seminar Room (I21.EG.101), Office Building West, ISTA



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