Homogenization and mean-field limits of transport costs

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We treat the limits, in terms of Gamma-convergence, of several discrete dynamic transport costs. The first concerns Wasserstein-type transport actions on stationary random graphs, for which we use stochastic homogenization and geometric measure theory to find a continuous limit functional. (joint work with Lorenzo Portinale and Jan Maas) The second treats interacting particles with different origins and destinations, which will develop coordinated oscillations in order to minimize a common functional. We show Gamma-convergence as the number of particles tends to infinity, and that minimizers converge to solutions of a Vlasov equation. (joint work with Bernhard Kepka)