

MASS TRANSPORT IN MODELS WITH VORTICITY

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ABSTRACT. Recently we studied interacting particles systems with vorticity, where we proved that the diffusion matrix in the Fick's law for the macroscopic current is given as the sum of a symmetric matrix and an antisymmetric one. In this short talk we discuss that switching on a weakly external field we obtain a symmetric mobility matrix that is related just to the symmetric part of the diffusion matrix by the Einstein relation. The proof show that this is not related to the intensity of the external field, implying that vortices in interacting particle systems can not transport mass.