# Reaction-Convection in Incompressible $3D$-fluid: A Homogenization Problem

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**Abstract**

I will consider propagation of an ingredient in stationary incompressible $3D$-fluid which is close to planar flow. Under broad conditions, such a fluid behaves as a stochastic process. I will introduce a relative entropy for the deterministic flow, and describe the asymptotic motion of the domain occupied by the ingredient using large deviations estimates.