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**Estimates in Besov spaces for transport and transport-diffusion equations with almost Lipschitz coefficients.** (English) [Zbl 1098.35038](#)

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The aim of the paper is to give estimates of conservation or loss of regularity for the initial data of transport-diffusion equations  $\partial_t f + v \nabla f - \nu \Delta f = g$ . The regularity is described in terms of inhomogeneous Besov spaces. Roughly speaking if  $\nabla v$  belongs to  $L^1(0, T; L^\infty)$  then the regularity of initial data is preserved. If  $\nabla v$  is less regular then the regularity may coarsen with time.

Reviewer: Leszek Skrzypczak (Poznań)

**MSC:**

**35B45** A priori estimates in context of PDEs

**35Q35** PDEs in connection with fluid mechanics

Cited in **38** Documents

**Keywords:**

transport-diffusion equation; a priori estimates; regularity of solutions

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**References:**

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