

# Evolution systems of measures for stochastic flows

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A new concept of an evolution system of measures for stochastic flows is considered. It corresponds to the notion of an invariant measure for random dynamical systems (or cocycles). The existence of evolution systems of measures for asymptotically compact stochastic flows is obtained. For a white noise stochastic flow, there exists a one to one correspondence between evolution systems of measures for a stochastic flow and evolution systems of measures for the associated Markov transition semigroup. As an application, an alternative approach for evolution systems of measures of 2D stochastic Navier-Stokes equations with a time-periodic forcing term is presented.

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