

Statistical solutions and degenerate regularity for the non-Newtonian micropolar fluids

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Abstract

This paper studies the non-autonomous non-Newtonian micropolar fluids in two-dimensional bounded domains. We first establish that the generated continuous process of the solutions operator possesses a pullback attractor. Then we verify the existence of statistical solutions by constructing the invariant Borel probability measures. Further, we prove that the statistical solutions possess the degenerated regularity of Lusin's type provided that the Grasshof number associated to the external forces is small enough.

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