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## Dynamics of a conserved order parameter subjected to turbulence

Critical dynamics of fluids is described by continuum field equations, to which a stochastic noise is added to capture thermal and hydrodynamic fluctuations. This study reveals the interplay between critical ordering and developed turbulent flows. B-model coupled to the random Gaussian velocity field, which mimics Kolmogorov turbulence, is investigated on large scales via the functional renormalization group (FRG) approach. Numerical analysis was performed in the leading order of the nonperturbative expansion for the FRG equation, possible scaling regimes were obtained, and the respective universal exponents were estimated.

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