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Università di Roma Tor Vergata
Dipartimento di Fisica



Seminar

Friday, 20 June 2014 - h. 14:30

Sala Grassano (Dipartimento di Fisica)

Dr. Prasad Perlekar

*Tata Institute of Fundamental Research - Centre for Interdisciplinary Sciences
Hyderabad (India)*

“Two-dimensional turbulence in symmetric binary mixture”

Abstract

A symmetric binary mixture when cooled below its critical temperature undergoes a phase transition via spinodal decomposition. This dynamics is characterised by an inverse cascade of concentration fluctuations.

We study the interplay of two-dimensional turbulence with the inverse cascade of concentration fluctuations in a symmetric binary mixture. In agreement with the earlier studies, we find that the presence of turbulence leads to an arrest of the inverse cascade of concentration fluctuations. More importantly, our study indicates that the presence of domains in the mixture restricts the inverse cascade of energy and an additional linear drag (Ekman friction) term is not required.

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Università degli Studi di Roma Tor Vergata
C.F. n. 80213750583 – Partita IVA n. 02133971008 - Via della Ricerca Scientifica, 1 – 00133 ROMA