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Forum de Physique Statistique @ ENS

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LPENS, 3 rue d'Ulm
Domaines : cond-mat.stat-mech

Titre : *Huge fluctuations of interacting populations*

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Résumé : *In nature, organisms of different species interact, which may cause their population sizes to vary in time. As ecosystems often contain many species, the dynamics of high-diversity ecosystems is of primary interest in ecology. In the presence of many species, theory predicts a sharp transition between a phase with no fluctuations in population sizes, and another phase where fluctuations may span many orders of magnitude, and in fact are of arbitrarily large amplitude. We describe the theoretical understanding of this transition, the role of space, and experimental evidence supporting this picture.*