

# Large deviations in a population dynamics with catastrophes

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The large deviation principle on phase space is proved for a class of Markov processes known as random population dynamics with catastrophes. The process we consider we call population dynamics with linear growth and uniform catastrophes, where an eliminating portion of the population is chosen uniformly. We also provide an optimal trajectory of large fluctuation. This joint work with Logachov A and Logacheva O. (Novosibirsk, Russia).