Hu, Yangzi; **Wu, Fuke**; **Huang, Chengming**
Stochastic Lotka-Volterra models with multiple delays. (English) Zbl 1245.92063
J. Math. Anal. Appl. 375, No. 1, 42-57 (2011).

The authors investigate a stochastic Lotka-Volterra model given as the solution of a multidimensional quadratic stochastic differential equation with multiple delays driven by a scalar Brownian motion. They provide sufficient criteria for non-explosion, p-th moment boundedness, and upper bounds for the almost sure asymptotic growth of the solutions.

Reviewer: Michael Scheutzow (Berlin)

MSC:

92D40 Ecology
34K50 Stochastic functional-differential equations
60H10 Stochastic ordinary differential equations (aspects of stochastic analysis)
60J70 Applications of Brownian motions and diffusion theory (population genetics, absorption problems, etc.)

Keywords:

non-explosion; moment boundedness; stochastic delay differential equations

Full Text: DOI

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