



Almost sure convergence and asymptotical normality of a generalization of Kesten's stochastic approximation algorithm for multidimensional case

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It is shown the almost sure convergence and asymptotical normality of a generalization of Kesten's stochastic approximation algorithm for multidimensional case. In this generalization, the step increases or decreases if the scalar product of two subsequeunte increments of the estimates is positive or negative. This rule is intended to accelerate the entrance in the 'stochastic behaviour' when initial conditions cause the algorithm to behave in a 'deterministic fashion' for the starting iterations.

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