

Asymptotic Properties and Optimization of Some Non-Markovian Stochastic Processes

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Abstract: We study the limit behavior of certain classes of dependent random sequences (processes) which do not possess the Markov property. Assuming these processes depend on a control parameter we show that the optimization of the control can be reduced to a problem of nonlinear optimization. Under certain hypotheses we establish the stability of such optimization problems.

Keywords: nonmarkovian control sequence; average cost; attracting point; non-linear optimization; stability;

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