

ON STOCHASTIC ESTIMATION

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Abstract. We consider a local random searching method to approximate a root of a specified equation. If such roots, which can be regarded as estimators for the Euclidean parameter of a statistical experiment, have some asymptotic optimality properties, the local random searching method leads to asymptotically optimal estimators in such cases. Application to simple first order autoregressive processes and some simulation results for such models are also included.

Key words and phrases: Autoregressive process, local asymptotic normality, Monte Carlo, parameter estimation, stochastic search.