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On Geometric Ergodicity and Prediction in Nonnegative Non-linear Autoregressive Processes

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Abstract: A non-linear AR(1) process is investigated when the associated white noise is positive. A criterion is derived for the geometric ergodicity of the process. Some explicit formulas are derived for one and two steps ahead extrapolation. Influence of parameter estimation on extrapolation is studied.

Keywords: geometric ergodicity; non-linear autoregression; least squares extrapolation;

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