

عنوان مقاله:

Stochastic analysis and invariant subspace method for handling option pricing with numerical simulation

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خلاصه مقاله:

In this paper, option pricing is given via stochastic analysis and invariant subspace method. Finally numerical solutions is driven and shown via diagram. The considered model is one of the most well known non-linear time series model in which the switching mechanism is controlled by an unobservable state variable that follows a first-order Markov chain. Some analytical solutions for option pricing are given under our considered model. Then numerical solutions are presented via finite difference method.

کلمات کلیدی:

Option pricing, Markov chain, Geometric Brownian motion, finite difference method

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