عنوان مقاله:

Analysis of a kernel-based method for some pricing financial options

محل انتشار:

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خلاصه مقاله:

In this paper, we propose a kernel-based method for some pricing financial options. Based on the ideas of the kernel-based approximation and finite-difference discretization, we present an efficient numerical method for solving the generalized Black-Scholes option pricing models. Utilizing the reproducing property of kernels, we introduce an efficient framework for obtaining cardinal functions. Also, we discuss the solvability of final system to obtain some remarkable results. We provide the error estimate of the proposed kernel-based method and verify its efficiency and .accuracy by numerical experiments

کلمات کلیدی:

Black-Scholes equation, European option pricing, Kernel-Based Method, Finite difference discretization, Error analysis