

Random Walks and Option Pricing for European and American Options

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Abstract : In this paper, we describe a broad setting under which the error of the approximation can be quantified, controlled, and for which convergence occurs at a speed of n^{-1} for European and American options. We describe how knowledge of the error allows for arbitrarily fast acceleration of the convergence.

Keywords : random walk approximation, European and American options, rate of convergence, option pricing

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