Duality in Option Pricing Based on Prices of Other Derivatives

Michi NISHIHARA, Mutsunori YAGIURA, and Toshihide IBARAKI

We clarify a financial meaning of duality in the optimization problem which emerges in the context of determining a derivative price range based only on the no-arbitrage assumption and the observed prices of other derivatives. The interpretation links studies in the above context to studies in stochastic models.

Keywords: Option pricing, Hedging, Duality, Optimization, SILP