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Lattice Valuation Model Using $O(m, n)$ -Trapezoidal Type Fuzzy Numbers

In this paper we discuss an option valuation model using $O(m, n)$ trapezoidal type fuzzy numbers. We demonstrate how fuzzy algebra assisted by $O(m, n)$ trapezoidal type fuzzy numbers can be successfully applied to the discrete Cox–Ross–Rubinstein (1979) binomial risk neutral option pricing model. Through option pricing theory and fuzzy set theory we get results that allow us to effectively price option in a fuzzy environment. The approach developed in the paper is illustrated with the help of a numerical example.

Joint work with R. Thulasiram, C. R. Bector and S. K. Bhatt.