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**Optimistic value model of multidimensional uncertain optimal control with jump.** (English)

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Summary: Based on the optimistic value model of uncertain optimal control with jump in one-dimensional case, this paper investigates the optimistic value model of multidimensional uncertain optimal control with jump, which are based on a new uncertainty theory and differs from the stochastic optimal control based on probability theory. The principle of optimality is given and the equation of optimality is obtained. In the end, an example of a portfolio selection is presented to illustrate the effectiveness of the new results.

**MSC:**

93E20 Optimal stochastic control

93C41 Control/observation systems with incomplete information

91G10 Portfolio theory

49K45 Optimality conditions for problems involving randomness

Cited in 3 Documents

**Keywords:**

stochastic optimal control; optimistic value; uncertainty; jump; multidimensional problem

**Full Text:** DOI

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