

Hurwicz model of uncertain optimal control with jump

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Abstract

How to choose the optimization criterion of the objective function is an important issue for uncertain optimal control. The Hurwicz criterion is a flexible optimization criterion attempting to find the intermediate area between the extremes posed by the optimistic and pessimistic criteria. Based on uncertainty theory, in this paper, we establish a new uncertain optimal control model with jump by making use of Hurwicz criterion to optimize an uncertain objective function. By applying Bellman's principle of optimality, the principle of optimality for the proposed model is presented and then the equation of optimality is derived. Finally, an example is given to show the the effectiveness of the results obtained.

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