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A METHOD FOR CONSTRUCTING MULTIPLY CLOSED STRATEGIES IN THE PROBLEM OF MINIMIZING THE TOTAL CONTROL IMPULSE IN A LINEAR SYSTEM WITH DISTURBANCE

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This paper deals with an optimal control problem for a linear discrete-time system subject to unknown bounded disturbance. It is required to steer the system robustly to a terminal set with the smallest total impulse of the control function. A problem of constructing an optimal multiply closed control strategy is formulated. It is assumed that the system states are measured and the control is corrected at some future times. A method for calculating an optimal strategy based on reducing the formulated problems to linear programs is proposed.

Keywords: linear system, disturbances, robust optimal control, control strategy, algorithm.

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