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Summary: The problem of linear control by the desired matrix transfer functions of the closed loop under incomplete information about the object state vector was considered. Matrix equations defining the entire constructive class of solutions of the posed problem were obtained using the system embedding technology. Two approaches to this problem-control based on the output feedback and control with observer-were compared. The latter kind of control was shown to have a basic advantage over the former control because it enables one to relax the constraints on the choice of the desired realizable matrix transfer function of the closed-loop system from input to state. Examples were presented.

MSC:

93C41 Control/observation systems with incomplete information
93B17 Transformations

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