

Analytical synthesis of functional observers

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Abstract

A technique for constructing the observers to evaluate a linear combination of state variables is considered. We propose an algorithm for analytical synthesis of the minimum-order functional observers based on the nondegenerate transformation of the object model in the state space using the matrix canonization technology. The applicability limits of the technique and the conditions of problem solvability are defined. © 2013 Allerton Press, Inc.

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Keywords

functional observer, matrix canonization, modal control