Minimal Realizations of the Inverse of a Polynomial Matrix using Finite and Infinite Jordan Pairs

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Abstract: A simple method is given which uses the notions of finite and infinite Jordan pairs from the theory of operators in such a way to find the minimal realization of the inverse of a given polynomial matrix. An application of the proposed method is to find the generalized state-space system which has as transfer function the inverse of the polynomial matrix.

Keywords:

AMS Subject Classification: