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Further remarks on multivariate polynomial matrix factorizations.
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Summary: Multivariate \((n-D)\) polynomial matrix factorizations are basic research problems in multidimensional systems and signal processing. In this paper, D. C. Youla's and G. Gnavi's [IEEE Trans. Circuits Syst. 26, 105–111 (1979; Zbl 0394.93004)] MLP Lemma is extended to the general case. Based on this extension, generalizations of some results in [M. Wang and C. P. Kwong, Math. Control Signals Syst. 17, No. 4, 297–311 (2005; Zbl 1098.93010)] are proved which might be useful for further investigations on problems of factorizations of multivariate polynomial matrices.

Keywords: multivariate polynomial matrices; matrix factorizations; MLP lemma
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