Maple Procedures for the Quasi-triangularization of Regular Matrix Polynomials

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Abstract

Matrix polynomials and their spectra are of interest to many fields due to their frequent occurence in applications. Over the years many algorithms have been developed and continue to be developed for the computation of matrix polynomial spectra, but the library of test matrices is limited. We present Maple procedures for constructing quasi-triangular matrix polynomials with a given spectrum, following the recent paper by Anguas et. al. [1]. Along the way we present a procedures for the construction presented in [2] and the triangularization of a matrix polynomial given in [3]. The procedures we present are currently limited to the finite spectrum.

References

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