Canonical Structures for Palindromic Matrix Polynomials

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joint work with P. Lancaster and U. Prells

We study spectral properties and canonical structures of palindromic matrix polynomials in terms of their linearizations, standard triples, and unitary triples. These triples describe matrix polynomials via eigenvalues and Jordan chains. As an application of canonical structures and their properties, we develop criteria for stable boundedness of solutions of systems of linear differential equations with symmetries. Open problems will be mentioned.