

ON BOUNDS OF EIGENVALUES OF MONIC MATRIX POLYNOMIALS

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Abstract. A matrix polynomial is monic if its leading coefficient is $I \in \mathbb{C}^{m \times m}$. In this paper, we derive a family of new explicit and implicit upper and lower bounds on the moduli of eigenvalues of a monic matrix polynomial which generalize the results obtained for scalar polynomials to matrix polynomials. Consequently, different kind of Cauchy-type bounds for matrix polynomials have been obtained as special cases.

Mathematics subject classification (2020): 15A18, 15A42, 65F15.

Keywords and phrases: Matrix polynomials, polynomial eigenvalue problem, bounds, zeros.

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