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Monotone Functions of Abstract Chains

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Abstract. We discuss the monotonicity aspect and derive inequalities for vector functions that satisfy a general matrix ODE. The study is motivated by the properties of the subordination chains of analytic functions and by the de Branges treatment of Loewner's equation.

Keywords. Linear differential operators, Loewner-Kufarev equation, subordination chains of analytic functions, de Branges' weights, Legendre polynomials and associated functions, cosine expansions with positive coefficients.

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