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CONTROLLABILITY OF TIME-VARYING DYNAMICAL SYSTEMS

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Abstract. Controllability problems for sufficiently wide cass of linear timevarying systems of differential equations are studied. The unified method of researching
controllability for time-invariant and time-varying systems of ordinary differential
equations, singularly perturbed equations and linear differential equations with delay
is suggested. Some effective conditions of complete as well as relative controllability
are obtained for these type of systems in terms of the components of solutions to
matrix algebraic defining equations.

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Keywords: Controllability, time-varying systems, singularly perturbed systems, the unified method