Controllability of linear discrete systems with a single delay via discrete delayed matrix exponential

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The talk is about the representations of solutions of linear systems of differential and discrete equations in the case of a single delay with the use of special matrix functions - the delayed matrix exponential and its discrete analogue. For discrete systems, it considers applications to problems of relative controllability, constructing control functions and dealing also with the problem of trajectory controllability. It mentions some recent generalizations to systems with multiple delays as well.