Hankel Norm Model Reduction for Matrices

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The classical theory of Hankel norm model reduction based on Schur-Takagi interpolation in the complex plane and generalized by Adamyan-Arov-Krein (AAK) has an attractive matrix counterpart in the context of semi-separable systems of linear equations. We survey the basic matrix theory and discuss its relevance for the problem of solving large sets of equations iteratively.