

A Structure-preserved Algorithm for Computing a Few Eigenpairs of Skew-Hamiltonian/Hamiltonian Pencils

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In this talk, we give a structure-preserved projection algorithm for computing a few eigenpairs of skew-Hamiltonian/Hamiltonian (SHH) pencils. This algorithm projects the original SHH pencil as a small-size one. This algorithm can be applied with any shifts, and will get approximated eigenvectors directly. A two-level Arnoldi procedure are proposed to get the projection matrix. Some numerical examples are given to demonstrate the efficiency of the new algorithms.

This is a joint work with Zhaojun Bai.