Kogbetliantz–like method for hyperbolic SVD

S. Singer, and V. Novaković

Faculty of Mechanical Engineering and Naval Architecture
University of Zagreb
Ivana Lučića 5, 10000 Zagreb, Croatia
ssinger@fsb.hr,venovako@fsb.hr

It is well–known that the hyperbolic Jacobi-like algorithm is an accurate algorithm for computation of the eigendecomposition of symmetric, but indefinite matrices. The first phase of the algorithm is the symmetric indefinite factorization, followed by the one-sided hyperbolic Jacobi-like orthogonalization of a matrix factor. The second phase could be replaced by the Kolgetliantz–like hyperbolic singular value decomposition (HSVD) of a matrix factor. In this talk we will present this algorithm, and compare it with the already known Jacobi HSVD algorithm.