EIGENPAIR EXTRACTION USING KRYLOV SUBSPACES

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Abstract

This contribution deals with the various extraction methods to compute eigenpair approximations using Krylov subspaces. We present some of the known methods, like those based on

- Ritz pairs,
- zeros of (quasi-)kernel polynomials, and
- refinement of eigenvector approximations

in a common framework focusing on the assets and drawbacks. We give a glimpse of what might be beyond. This understanding helps to better rate the already known methods.