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Singular matrix pencils: Minimal indices through perturbation behavior

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Computing the complete eigenstructure of matrix pencils is a challenging problem. Small perturbations can change both the eigenvalues with their multiplicities, as well as the minimal indices of a given pencil. Recently, however, perturbation theory was used to compute eigenvalues of singular matrix pencils. In this poster, we investigate how the behavior of a general matrix pencil under small perturbations can help determine its minimal indices.

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