

## POSITIVITY OF DLV AND MDLVS ALGORITHMS FOR COMPUTING SINGULAR VALUES\*

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**Abstract.** The discrete Lotka-Volterra (dLV) and the modified dLV with shift (mdLVs) algorithms for computing bidiagonal matrix singular values are considered. Positivity of the variables of the dLV algorithm is shown with the help of the Favard theorem and the Christoffel-Darboux formula of symmetric orthogonal polynomials. A suitable shift of origin also guarantees positivity of the mdLVs algorithm which results in a higher relative accuracy of the computed singular values.

**Key words.** dLV algorithm, mdLVs algorithm, singular values, relative accuracy

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