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**Positive definiteness and stability of interval matrices.** (English) Zbl 0796.65065

SIAM J. Matrix Anal. Appl. 15, No. 1, 175-184 (1994).

Interval matrices are considered that are positive definite, positive semidefinite, Hurwitz stable or Schur stable. Necessary and sufficient conditions for each of these properties are investigated. The conditions are based on corresponding properties of a finite number of real test matrices that are derived from the interval matrix under consideration.

Reviewer: [H.Ratschek \(Düsseldorf\)](#)

**MSC:**

[65G30](#) Interval and finite arithmetic

[15B57](#) Hermitian, skew-Hermitian, and related matrices

Cited in **1** Review  
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**Keywords:**

[positive definiteness](#); [Hurwitz stability](#); [Schur stability](#); [interval arithmetic](#); [interval matrices](#); [test matrices](#)

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