

ADMISSABLE SETS FOR MATRIX EIGENPAIRS

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Let there be given a real (n, n) matrix A which is the center of an interval matrix $[A - \Delta A, A + \Delta A] = : [A]$. We consider the eigenpair sets

$$E = \{(x, \lambda) \in \mathbb{R}^{n+1} \mid Ax = \lambda x, A \in [A]\}$$

and

$$E_{\mathcal{P}} = \{(x, \lambda) \in \mathbb{R}^{n+1} \mid Ax = \lambda x, A \in [A], A \text{ has some property } \mathcal{P}\},$$

respectively. We discuss several equivalent conditions for a pair (x, λ) to belong to E or to $E_{\mathcal{P}}$, respectively.