

## ON THE INVERSE EIGENVALUE PROBLEMS: THE CASE OF SUPERSTARS\*

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**Abstract.** Let  $T$  be a tree and let  $x_0$  be a vertex of  $T$ .  $T$  is called a superstar with central vertex  $x_0$  if  $T - x_0$  is a union of paths. The General Inverse Eigenvalue Problem for certain trees is partially answered. Using this description, some superstars are presented for which the problem of ordered multiplicity lists and the Inverse Eigenvalue Problem are not equivalent.

**Key words.** Eigenvalues, Tree, Graph, Symmetric matrices.

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