A NOTE ON THE 4×4 POTENTIALLY NILPOTENT TRIDIAGONAL SIGN MATRICES WITH THREE CONSECUTIVE NONZERO DIAGONAL ENTRIES

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Abstract

In this note, we focus on the 4×4 tridiagonal sign patterns with three consecutive nonzero diagonal entries. It is shown that if $\mathfrak{A}$ is a 4×4 irreducible tridiagonal sign pattern with exactly three consecutive nonzero diagonal entries, then $\mathfrak{A}$ is potentially Nilpotent if and only if $\mathfrak{A}$ is spectrally arbitrary.

Keywords and phrases: tridiagonal sign pattern, potentially Nilpotent pattern, spectrally arbitrary pattern.