

## On the $w$ -hermitian adjacency matrix

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Suppose that  $w = e^{\frac{\pi}{3}i}$ , then  $w$ -hermitian adjacency matrix,  $H^w(D) = [h_{ij}]$  of directed or partially directed graphs  $D$  is the matrix where its rows and columns corresponds to the vertices, and  $h_{ij} = w$  if  $v_i v_j$  is an arc in  $D$ ,  $h_{ij} = \bar{w}$  if  $v_j v_i$  is an arc in  $D$ ,  $h_{ij} = 1$  if  $v_i v_j$  is a digon in  $D$  and  $h_{ij} = 0$  otherwise, in this paper we give two results on the  $H^w$  adjacency matrix which are similar to those of adjacency matrices.

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