ON A CONJECTURE OF HOFFMAN

Milica Andelic
University of Aveiro
milica.andelic@ua.pt

Let T be a tree with at least two edges and let e be an end-edge of T. Let $\hat{A}(T, e)$ obtained from the adjacency matrix of $L(T)$, the line graph of T, with a -1 in the diagonal position corresponding to e. We say that the pair (T, e) is proper provided $\lambda(\hat{A}(T,e)) < \lambda(L(T))$, where λ stands for the least eigenvalue the correspondent matrix. It was conjectured in A.J. Hoffman. On limit points of the least eigenvalue of a graph, Ars Combinatoria 3 (1977), 3-14, that every (T, e) is proper. We give an equivalent form of the conjecture using the signless Laplacian matrix and several results related with it.