

The determinant of the distance matrix of a graph

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Abstract

In 1971, Graham and Pollak proved that the determinant of the distance matrix of a tree of order n does not depend on the structure of the tree. In 1977, Graham, Hoffman and Hosoya gave a generalization by showing that the determinant of the distance matrix of a graph G only depends on its blocks. Since then there are many generalizations of this determinantal result. We give new classes of graphs such that the determinant of the distance matrix is constant among each class. This is a joint work with Jephian C.-H. Lin.

References

- [1] Yen-Jen Cheng, Jephian C. H. Lin, Graph families with constant distance determinant, *Electron. J. Combin.* **25** (2018), #P4.45.