A NOTE ON LONGEST PATHS IN CIRCULAR ARC GRAPHS

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Abstract

As observed by Rautenbach and Sereni [SIAM J. Discrete Math. **28** (2014) 335–341] there is a gap in the proof of the theorem of Balister *et al.* [Combin. Probab. Comput. **13** (2004) 311–317], which states that the intersection of all longest paths in a connected circular arc graph is nonempty. In this paper we close this gap.

Keywords: circular arc graphs, longest paths intersection.

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REFERENCES

- [1] P.N. Balister, E. Győri, J. Lehel and R.H. Schelp, *Longest paths in circular arc graphs*, Combin. Probab. Comput. **13** (2004) 311–317.
doi:10.1017/S0963548304006145
- [2] T. Gallai, *Problem 4*, in: Theory of graphs, Proceedings of the Colloquium held at Tihany, Hungary, September, 1966., P. Erdős and G. Katona Eds., Academic Press, New York-London; Akademiai Kiad, Budapest (1968).
- [3] J.M. Keil, *Finding Hamiltonian circuits in interval graphs*, Inform. Process. Lett. **20** (1985) 201–206.
doi:10.1016/0020-0190(85)90050-X
- [4] D. Rautenbach and J.-S. Sereni, *Transversals of longest paths and cycles*, SIAM J. Discrete Math. **28** (2014) 335–341.
doi:10.1137/130910658
- [5] A. Shabbira, C.T. Zamfirescu and T.I. Zamfirescu, *Intersecting longest paths and longest cycles: A survey*, Electron. J. Graph Theory Appl. **1** (2013) 56–76.
doi:10.5614/ejgta.2013.1.1.6

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