

# On the maximum spectral radius of clique trees with a given zero forcing number

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## Abstract

Let  $G(n, k)$  be the class of clique trees on  $n$  vertices and zero forcing number  $k$ , where  $\lfloor \frac{n}{2} \rfloor + 1 \leq k \leq n - 1$  and each block is a clique of size at least 3. In this article, we proved the uniqueness of a clique tree in  $G(n, k)$  that attains maximal spectral radius among all graphs in  $G(n, k)$ . We also provide an upper bound for the spectral radius of the extremal graph.

## References

- [1] J. Das, On the spectral radius of clique trees with a given zero forcing number, *Preprint: ArXiv*.
- [2] W. Zhang, J. Wang, W. Wang and S. Ji, On the Zero Forcing Number and Spectral Radius of Graphs, *The Electron. J. Comb.*, Vol 29, P1.33 (2022).