

# Independent vertex subsets of degree-restricted trees

**E. Andriantiana**

University of Stellenbosch

*ericoda@sun.ac.za*

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The number of independent subsets of a graph is a parameter that has been studied extensively in the literature. Among many other results, it is known that the paths minimize the parameter among all trees. Motivated by the interesting relation to organic chemistry, we studied the class of trees containing vertices of degree one or four only. Our main result is that the graphs within this class that minimize the number of independent vertex subsets are path-like trees. Generalization in various directions will be discussed.