

Pebbling in Chordal Graphs

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Graph pebbling is a network model for transporting discrete resources that are consumed in transit. Deciding whether a given configuration on a particular graph can reach a specified target is **NP**-complete, even for diameter two graphs, and deciding whether the pebbling number has a prescribed upper bound is Π_2^P -complete. It has been conjectured that calculating the pebbling number of a chordal graph of bounded diameter or pathwidth can be done in polynomial time. Recently we proved this for split graphs, 2-paths, and semi-2-trees. We will discuss these results and the important tools developed to attack such problems. This is joint work with Liliana Alcon and Marisa Gutierrez of the National University of Argentina, San Luis.

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