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COUNTING TRANSVERSALS IN CLAW-FREE GRAPHS.

In 2005 Dahllöf, Jonsson and Wahlström gave an algorithm that counts the number of all transversals in a graph on n vertices in time $O^*(1.25..^n)$. Their algorithm was improved by Fürer and Kasiviswanathan. The time complexity of their algorithm is $O^*(1.24..^n)$. We present an algorithm for claw-free graphs. It is based on construction of a cut-set such that components of a graph obtained by removing this cut-set are small compared to its order. We combine the cut-set strategy with methods of Dahllöf and others. As a result we obtain an algorithm which counts all transversals of a claw-free graph in time $O^*(1.23..^n)$.

This is joint work with Konstanty Junosza-Szaniawski.

REFERENCES

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