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Fast and Simple Algorithms for Perfect Phylogeny and Triangulating Colored Graphs

by

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ABSTRACT

This paper presents an $O((r-n/m)^m rnm)$ algorithm for determining whether a set of n species has a perfect phylogeny, where m is the number of characters used to describe a species and r is the maximum number of states that a character can be in. The perfect phylogeny algorithm leads to an $O((2e/k)^k e^2 k)$ algorithm for triangulating a k-colored graph having e edges.