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A depth-first search algorithm for computing pseudo-closed sets. (English) Zbl 1397.05013
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Summary: The question of the lower bounds for the delay in the computation of the Duquenne-Guigues implication basis in non-lectic orders is still open. As a step towards an answer, we propose an algorithm that can enumerate pseudo-closed sets in orders that do not necessarily extend the inclusion order using depth-first searches in a sequence of closure systems. Empirical comparisons with NextClosure on the runtime and number of closed sets computed are provided.

MSC:

05A15 Exact enumeration problems, generating functions

06A15 Galois correspondences, closure operators (in relation to ordered sets)

68T20 Problem solving in the context of artificial intelligence (heuristics, search strategies, etc.)

68T30 Knowledge representation

Keywords:

[implication](#); [pseudo-closed set](#)

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