



A Reinforced Tabu Search Approach for 2D Strip Packing:

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This paper discusses a particular “packing” problem, namely the two dimensional strip packing problem, where a finite set of objects have to be located in a strip of fixed width and infinite height. The variant studied considers regular items, rectangular to be precise, that must be packed without overlap, not allowing rotations. The objective is to minimize the height of the resulting packing. In this regard, the authors present a local search algorithm based on the well-known tabu search metaheuristic. Two important components of the presented tabu search strategy are reinforced in attempting to include problem knowledge. The fitness function incorporates a measure related to the empty spaces, while the diversification relies on a set of historically “frozen” objects. The resulting reinforced tabu search approach is evaluated on a set of well-known hard benchmark instances and compared with state-of-the-art algorithms.

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