
High Multiplicity Strip Packing with Three Rectangle Types

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Abstract

The two-dimensional strip packing problem consists of packing in a rectangular strip of width 1 and minimum height a set of n rectangles, where each rectangle has width $0 < w \leq 1$ and height $0 < h \leq h_{\max}$. We consider the high-multiplicity version of the problem in which there are only K different types of rectangles. For the case when $K = 3$, we give an algorithm providing a solution requiring at most height $3/2h_{\max} + \epsilon$ plus the height of an optimal solution, where ϵ is any positive constant.

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