

SET PACKING PROBLEM WITH LINEAR FRACTIONAL OBJECTIVE FUNCTION

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ABSTRACT

The Set Packing problem has a dual covering problem, which asks how many of the same objects are required to completely cover every region of the container, where the objects are allowed to overlap. Many applications arise having the packing and covering structure. Delivery and routing problems, scheduling problems and location problems, switching theory, wireless network design, VLSI circuits and line balancing often take on a set covering structure. However, if one wishes to satisfy as much demand as possible without creating conflict, it takes on a set packing format.

In this paper a linearization technique is developed to solve set packing problems with linear fractional objective function. The correctness of the algorithm is shown by an numerical example.

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KEYWORDS: Set Packing Problem, Linear Fractional Set Packing Problem