

## **Packing Problem with Soft Rectangles**

Toshihide IBARAKI and Kouji NAKAMURA

We consider the problem of packing rectangles, whose shapes are adjustable within given perimeter and area constraints. Using “sequence pairs” to specify relative positions of rectangles, we solve the resulting linear or convex programming problems to determine sizes and locations of all rectangles. To find good sequence pairs, we then resort to local search techniques. This is therefore a hybrid of local search and mathematical programming. The resulting algorithm can solve problem instances with up to 50 rectangles in reasonable amount of time.