

Recent results obtained with Primal-Dual VNS algorithms

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The variable neighborhood search metaheuristic is applied to the primal simple plant location problem and to a reduced dual obtained by exploiting the complementary slackness conditions. This leads to (i) heuristic resolution of (metric) instances with uniform fixed costs, up to $n = 15,000$ users and $m = n$ potential locations for facilities with an error not exceeding 0.04%; (ii) exact solution of such instances with up to $m = n = 7,000$; (iii) exact solution of instances with variable fixed costs and up to $m = n = 15,000$. Recent results in the p-median problem for which instances of size up to $m = n = 30,000$ were solved exactly with also be reported.