

Progress in Mathematical Programming Solvers from 2001 to 2020

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Abstract

We report on a study that investigates the progress made in LP and MILP solver performance during the last two decades by comparing the solver software from the beginning of the millennium with the codes available today. On average, we found out that for solving LP/MILP, the total speed-up was about 180 and 1,000 times, respectively. However, these numbers have a very high variance and they considerably underestimate the progress made on the algorithmic side: many problem instances can nowadays be solved within seconds, which the old codes are not able to solve within any reasonable time. We will report on how we measure performance and why it is very difficult to come up with one reasonable number.