Results of ILS trials

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1. Introduction

Comparison of ILS, with different implementations, applied to some symmetric TSP instances (available in TSPLIB [TspLib]). For 1, the first column gives the instance name and its size. The next columns give the best cost, taken over 1000 iterations, using: (i) a *sequential* **2-opt** ILS with one **double-bridge** perturbation; (ii) a *Parallel*, multi-processing, using *OpenMP* with 16 threads, for (i); (iii) a **3-opt** ILS get from [Helena R. Lorenço and STUTZLE]. The best results are taken over 5 trials on each instance.

For **??**, the first column gives the instance name and its size. The next columns give the best elapsed time, in seconds, taken over 1000 iterations, using: (i) a *sequential* **2-opt** ILS with one **double-bridge** perturbation; (ii) a *Parallel*, multi-processing, using *OpenMP* with 16 threads, for (i); (iii) a **3-opt** ILS get from [Helena R. Lorenço and STUTZLE]. The best results are taken over 30 trials on each instance.

2. Trials results

2.1. Costs

Table 1. Solution of each symmetric TSP instance for Parallel ILS (unidades de distância)

Instance	Solution Distance	stutzle-ILS Distance	Time
d198	1,639E+04	1,5780E+04	2,364E+01
a280	2,693E+03	-	6,748E+01
lin318	4,446E+04	4,2029E+04	1,094E+02
pcb442	5,325E+04	5,0778E+04	2,925E+02
rat783	9,490E+03	8,806E+03	1,815E+03
u1060	2,416E+05	2,24152E+05	5,062E+03
pcb1173	6,151E+04	-	7,716E+03

References

Helena R. Lorenço, O. M. and STUTZLE, T. Iterated local search.

TspLib. Disponível em: `http://comopt.ifi.uni-heidelberg.de/software/TSPLIB95/`. Acesso em: 11 de setemrbo 2023.