Output tables for the test of Multiple comparisons.

October 15, 2023

1 Average rankings of Friedman test

Average ranks obtained by applying the Friedman procedure

Algorithm	Ranking
Average Fitness HC	1.6667
Average Fitness HCRR	3
Average Fitness SA	3.3333
Average Fitness GRASP	2

Table 1: Average Rankings of the algorithms

Friedman statistic considering reduction performance (distributed according to chi-square with 3 degrees of freedom: 6.8.
P-value computed by Friedman Test: 0.07855315984340205.

2 Post hoc comparisons

Results achieved on post hoc comparisons for $\alpha = 0.05$, $\alpha = 0.10$ and adjusted p-values.

2.1 P-values for $\alpha = 0.05$

i	algorithms	$z = (R_0 - R_i)/SE$	p
6	Average Fitness HC vs. Average Fitness SA	2.236068	0.025347
5	Average Fitness HC vs. Average Fitness HCRR	1.788854	0.073638
4	Average Fitness SA vs. Average Fitness GRASP	1.788854	0.073638
3	Average Fitness HCRR vs. Average Fitness GRASP	1.341641	0.179712
2	Average Fitness HC vs. Average Fitness GRASP	0.447214	0.654721
1	Average Fitness HCRR vs. Average Fitness SA	0.447214	0.654721

Table 2: P-values Table for $\alpha = 0.05$

2.2 P-values for $\alpha = 0.10$

i	algorithms	$z = (R_0 - R_i)/SE$	p
6	Average Fitness HC vs. Average Fitness SA	2.236068	0.025347
5	Average Fitness HC vs. Average Fitness HCRR	1.788854	0.073638
4	Average Fitness SA vs. Average Fitness GRASP	1.788854	0.073638
3	Average Fitness HCRR vs. Average Fitness GRASP	1.341641	0.179712
2	Average Fitness HC vs. Average Fitness GRASP	0.447214	0.654721
1	Average Fitness HCRR vs. Average Fitness SA	0.447214	0.654721

Table 3: P-values Table for $\alpha = 0.10$

2.3 Adjusted p-values

i	hypothesis	unadjusted p
1	Average Fitness HC vs .Average Fitness SA	0.025347
2	Average Fitness HC vs .Average Fitness HCRR	0.073638
3	Average Fitness SA vs .Average Fitness GRASP	0.073638
4	Average Fitness HCRR vs .Average Fitness GRASP	0.179712
5	Average Fitness HC vs .Average Fitness GRASP	0.654721
6	Average Fitness HCRR vs .Average Fitness SA	0.654721

Table 4: Adjusted p-values