

Output tables for 1xN statistical comparisons.

June 28, 2020

1 Average rankings of Friedman test

Average ranks obtained by each method in the Friedman test.

Algorithm	Ranking
MIL-EF-CON	2.7222
MIL-CVCF-CON	2.7778
MIL-IPF-CON	2.8333
MIL-EF-MAX	3.4444
MIL-CVCF-MAX	3.8889
MIL-IPF-MAX	5.3333

Table 1: Average Rankings of the algorithms (Friedman)

Friedman statistic (distributed according to chi-square with 5 degrees of freedom): 13.079365.  
P-value computed by Friedman Test: 0.022646.

## 2 Post hoc comparison (Friedman)

P-values obtained in by applying post hoc methods over the results of Friedman procedure.

$i$	algorithm	$z = (R_0 - R_i) / SE$	$p$	Holland
5	MIL-IPF-MAX	2.960722	0.003069	0.010206
4	MIL-CVCF-MAX	1.322876	0.185877	0.012741
3	MIL-EF-MAX	0.818923	0.41283	0.016952
2	MIL-IPF-CON	0.125988	0.899741	0.025321
1	MIL-CVCF-CON	0.062994	0.949771	0.05

Table 2: Post Hoc comparison Table for  $\alpha = 0.05$  (FRIEDMAN)

Holland’s procedure rejects those hypotheses that have an unadjusted p-value  $\leq 0.012741$ .

### 3 Adjusted P-Values (Friedman)

Adjusted P-values obtained through the application of the post hoc methods (Friedman).

i	algorithm	unadjusted $p$
1	MIL-IPF-MAX	0.003069
2	MIL-CVCF-MAX	0.185877
3	MIL-EF-MAX	0.41283
4	MIL-IPF-CON	0.899741
5	MIL-CVCF-CON	0.949771

Table 3: Adjusted  $p$ -values (FRIEDMAN) (I)

i	algorithm	unadjusted $p$	$p_{Holland}$
1	MIL-IPF-MAX	0.003069	0.015252
2	MIL-CVCF-MAX	0.185877	0.560701
3	MIL-EF-MAX	0.41283	0.797563
4	MIL-IPF-CON	0.899741	0.989948
5	MIL-CVCF-CON	0.949771	0.989948

Table 4: Adjusted  $p$ -values (FRIEDMAN) (II)