

# Wilcoxon Signed Ranks test.

KEEL non-parametric statistical module

May 9, 2011

## 1 Detailed results for 1R

### 1.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| Ameva           | 125.0 | 695.0 | $\geq 0.2$    | 1                  |
| Bayesian        | 447.5 | 372.5 | $\geq 0.2$    | 1                  |
| CACC            | 138.0 | 682.0 | $\geq 0.2$    | 1                  |
| CADD            | 703.5 | 85.5  | 9.426E-4      | 0.001402           |
| CAIM            | 64.0  | 756.0 | $\geq 0.2$    | 1                  |
| Chi2            | 125.0 | 655.0 | $\geq 0.2$    | 1                  |
| ChiMerge        | 62.0  | 758.0 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 419.0 | 364.0 | $\geq 0.2$    | 1                  |
| DIBD            | 156.0 | 624.0 | $\geq 0.2$    | 1                  |
| Distance        | 99.0  | 721.0 | $\geq 0.2$    | 1                  |
| EqualFrequency  | 189.0 | 591.0 | $\geq 0.2$    | 1                  |
| EqualWidth      | 258.5 | 561.5 | $\geq 0.2$    | 1                  |
| Extended Chi2   | 223.0 | 560.0 | $\geq 0.2$    | 1                  |
| FFD             | 335.0 | 448.0 | $\geq 0.2$    | 1                  |
| FUSINTER        | 92.0  | 728.0 | $\geq 0.2$    | 1                  |
| HDD             | 270.0 | 513.0 | $\geq 0.2$    | 1                  |
| HellingerBD     | 183.0 | 637.0 | $\geq 0.2$    | 1                  |
| Heter-Disc      | 472.5 | 347.5 | $\geq 0.2$    | 1                  |
| ID3             | 449.0 | 371.0 | $\geq 0.2$    | 1                  |
| IDD             | 459.5 | 329.5 | $\geq 0.2$    | 1                  |
| Khiops          | 143.5 | 676.5 | $\geq 0.2$    | 1                  |
| MDLP            | 93.0  | 727.0 | $\geq 0.2$    | 1                  |
| Modified Chi2   | 181.0 | 602.0 | $\geq 0.2$    | 1                  |
| MODL            | 148.5 | 671.5 | $\geq 0.2$    | 1                  |
| MVD             | 363.0 | 457.0 | $\geq 0.2$    | 1                  |
| PKID            | 382.0 | 438.0 | $\geq 0.2$    | 1                  |
| UCPD            | 131.0 | 689.0 | $\geq 0.2$    | 1                  |
| USD             | 387.0 | 433.0 | $\geq 0.2$    | 1                  |
| Zeta            | 108.0 | 712.0 | $\geq 0.2$    | 1                  |

Table 1: Results obtained by the Wilcoxon test for algorithm 1R

### 1.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| Ameva           | [-0.267 , -0.0942]    | 0.90276          |
| Bayesian        | [-0.03435 , 0.0562]   | 0.90276          |
| CACC            | [-0.25225 , -0.0765]  | 0.90276          |
| CADD            | [0.06145 , 0.161]     | 0.90276          |
| CAIM            | [-0.2809 , -0.11815]  | 0.90276          |
| Chi2            | [-0.2614 , -0.05825]  | 0.90276          |
| ChiMerge        | [-0.27925 , -0.0952]  | 0.90276          |
| ClusterAnalysis | [-0.07495 , 0.06745]  | 0.90276          |
| DIBD            | [-0.19265 , -0.0446]  | 0.90276          |
| Distance        | [-0.2636 , -0.0984]   | 0.90276          |
| EqualFrequency  | [-0.2087 , -0.03205]  | 0.90276          |
| EqualWidth      | [-0.19725 , -0.0123]  | 0.90276          |
| Extended Chi2   | [-0.2062 , -0.02195]  | 0.90276          |
| FFD             | [-0.1567 , 0.0247]    | 0.90276          |
| FUSINTER        | [-0.28685 , -0.09175] | 0.90276          |
| HDD             | [-0.172 , -0.00005]   | 0.90276          |
| HellingerBD     | [-0.22235 , -0.05415] | 0.90276          |
| Heter-Disc      | [-0.02415 , 0.1354]   | 0.90276          |
| ID3             | [-0.0972 , 0.11635]   | 0.90276          |
| IDD             | [-0.00275 , 0.0373]   | 0.90276          |
| Khiops          | [-0.24345 , -0.0616]  | 0.90276          |
| MDLP            | [-0.26735 , -0.10445] | 0.90276          |
| Modified Chi2   | [-0.23965 , -0.03405] | 0.90276          |
| MODL            | [-0.1987 , -0.03745]  | 0.90276          |
| MVD             | [-0.109 , 0.0337]     | 0.90276          |
| PKID            | [-0.1542 , 0.0439]    | 0.90276          |
| UCPD            | [-0.2436 , -0.0718]   | 0.90276          |
| USD             | [-0.15415 , 0.03645]  | 0.90276          |
| Zeta            | [-0.25175 , -0.07955] | 0.90276          |

Table 2: Confidence intervals for algorithm 1R ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| Ameva           | [-0.28695 , -0.0811]  | 0.95024          |
| Bayesian        | [-0.07255 , 0.0707]   | 0.95024          |
| CACC            | [-0.2641 , -0.06365]  | 0.95024          |
| CADD            | [0.0537 , 0.1735]     | 0.95024          |
| CAIM            | [-0.2966 , -0.10385]  | 0.95024          |
| Chi2            | [-0.2749 , -0.0501]   | 0.95024          |
| ChiMerge        | [-0.2924 , -0.08395]  | 0.95024          |
| ClusterAnalysis | [-0.0894 , 0.0754]    | 0.95024          |
| DIBD            | [-0.2074 , -0.03555]  | 0.95024          |
| Distance        | [-0.277 , -0.08605]   | 0.95024          |
| EqualFrequency  | [-0.2228 , -0.0227]   | 0.95024          |
| EqualWidth      | [-0.2133 , -0.00325]  | 0.95024          |
| Extended Chi2   | [-0.22315 , -0.0146]  | 0.95024          |
| FFD             | [-0.17595 , 0.03185]  | 0.95024          |
| FUSINTER        | [-0.30335 , -0.0787]  | 0.95024          |
| HDD             | [-0.18615 , 0.012]    | 0.95024          |
| HellingerBD     | [-0.24245 , -0.04175] | 0.95024          |
| Heter-Disc      | [-0.03515 , 0.15205]  | 0.95024          |
| ID3             | [-0.1187 , 0.13555]   | 0.95024          |
| IDD             | [-0.0149 , 0.0408]    | 0.95024          |
| Khiops          | [-0.25215 , -0.05295] | 0.95024          |
| MDLP            | [-0.2837 , -0.08925]  | 0.95024          |
| Modified Chi2   | [-0.261 , -0.0237]    | 0.95024          |
| MODL            | [-0.21295 , -0.02915] | 0.95024          |
| MVD             | [-0.12725 , 0.04]     | 0.95024          |
| PKID            | [-0.16985 , 0.05405]  | 0.95024          |
| UCPD            | [-0.25485 , -0.06245] | 0.95024          |
| USD             | [-0.18035 , 0.0476]   | 0.95024          |
| Zeta            | [-0.2651 , -0.0671]   | 0.95024          |

Table 3: Confidence intervals for algorithm 1R ( $\alpha=0.95$ )

## 2 Detailed results for Ameva

### 2.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value         | Asymptotic P-value |
|-----------------|-------|-------|-----------------------|--------------------|
| 1R              | 695.0 | 125.0 | 5.45E-5               | 0.000121           |
| Bayesian        | 757.0 | 63.0  | 2.536E-7              | 0.000003           |
| CACC            | 416.0 | 404.0 | $\geq 0.2$            | 1                  |
| CADD            | 806.0 | 14.0  | 2.0E-10               | 0                  |
| CAIM            | 308.5 | 476.5 | $\geq 0.2$            | 1                  |
| Chi2            | 452.5 | 367.5 | $\geq 0.2$            | 0.959518           |
| ChiMerge        | 337.5 | 445.5 | $\geq 0.2$            | 1                  |
| ClusterAnalysis | 697.0 | 83.0  | 3.67E-6               | 0.000017           |
| DIBD            | 586.0 | 234.0 | 0.017158              | 0.017673           |
| Distance        | 376.5 | 406.5 | $\geq 0.2$            | 1                  |
| EqualFrequency  | 529.0 | 251.0 | 0.05256               | 0.051568           |
| EqualWidth      | 619.0 | 161.0 | 9.974E-4              | 0.001362           |
| Extended Chi2   | 623.0 | 197.0 | 0.00352               | 0.004108           |
| FFD             | 653.0 | 127.0 | 1.201E-4              | 0.000236           |
| FUSINTER        | 346.0 | 434.0 | $\geq 0.2$            | 1                  |
| HDD             | 603.0 | 180.0 | 0.008744              | 0.009463           |
| HellingerBD     | 564.0 | 216.0 | 0.014286              | 0.014712           |
| Heter-Disc      | 773.0 | 47.0  | 3.948E-8              | 0.000001           |
| ID3             | 722.5 | 97.5  | 2.5370000000000003E-5 | 0.000073           |
| IDD             | 750.0 | 70.0  | 5.278E-7              | 0.000005           |
| Khiops          | 484.0 | 296.0 | 0.19424               | 0.187254           |
| MDLP            | 372.5 | 447.5 | $\geq 0.2$            | 1                  |
| Modified Chi2   | 490.0 | 290.0 | 0.16676               | 0.160773           |
| MODL            | 513.5 | 306.5 | $\geq 0.2$            | 0.349584           |
| MVD             | 702.0 | 118.0 | 3.296E-5              | 0.000084           |
| PKID            | 705.5 | 114.5 | 9.488E-5              | 0.000199           |
| UCPD            | 504.0 | 316.0 | $\geq 0.2$            | 0.204012           |
| USD             | 641.0 | 139.0 | 2.66E-4               | 0.000449           |
| Zeta            | 481.0 | 302.0 | $\geq 0.2$            | 0.450661           |

Table 4: Results obtained by the Wilcoxon test for algorithm Ameva

### 2.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.0942 , 0.267]     | 0.90276          |
| Bayesian        | [0.10225 , 0.2175]   | 0.90276          |
| CACC            | [-0.0064 , 0.01545]  | 0.90276          |
| CADD            | [0.2637 , 0.40985]   | 0.90276          |
| CAIM            | [-0.02105 , 0.00265] | 0.90276          |
| Chi2            | [-0.0086 , 0.0302]   | 0.90276          |
| ChiMerge        | [-0.0149 , 0.0046]   | 0.90276          |
| ClusterAnalysis | [0.09615 , 0.2057]   | 0.90276          |
| DIBD            | [0.01855 , 0.0895]   | 0.90276          |
| Distance        | [-0.01455 , 0.0122]  | 0.90276          |
| EqualFrequency  | [0.005 , 0.07375]    | 0.90276          |
| EqualWidth      | [0.03035 , 0.094]    | 0.90276          |
| Extended Chi2   | [0.01895 , 0.09495]  | 0.90276          |
| FFD             | [0.0523 , 0.13995]   | 0.90276          |
| FUSINTER        | [-0.02295 , 0.0129]  | 0.90276          |
| HDD             | [0.0374 , 0.1434]    | 0.90276          |
| HellingerBD     | [0.0104 , 0.05225]   | 0.90276          |
| Heter-Disc      | [0.16085 , 0.29525]  | 0.90276          |
| ID3             | [0.11395 , 0.23425]  | 0.90276          |
| IDD             | [0.12345 , 0.24925]  | 0.90276          |
| Khiops          | [-0.0049 , 0.0404]   | 0.90276          |
| MDLP            | [-0.02275 , 0.01125] | 0.90276          |
| Modified Chi2   | [-0.00455 , 0.0602]  | 0.90276          |
| MODL            | [-0.00415 , 0.07115] | 0.90276          |
| MVD             | [0.06725 , 0.19245]  | 0.90276          |
| PKID            | [0.0695 , 0.1505]    | 0.90276          |
| UCPD            | [-0.00405 , 0.0388]  | 0.90276          |
| USD             | [0.05795 , 0.16335]  | 0.90276          |
| Zeta            | [-0.004 , 0.02855]   | 0.90276          |

Table 5: Confidence intervals for algorithm Ameva ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.0811 , 0.28695]   | 0.95024          |
| Bayesian        | [0.09395 , 0.2286]   | 0.95024          |
| CACC            | [-0.0086 , 0.01975]  | 0.95024          |
| CADD            | [0.25015 , 0.4208]   | 0.95024          |
| CAIM            | [-0.02245 , 0.00385] | 0.95024          |
| Chi2            | [-0.0119 , 0.03955]  | 0.95024          |
| ChiMerge        | [-0.01765 , 0.006]   | 0.95024          |
| ClusterAnalysis | [0.0859 , 0.2181]    | 0.95024          |
| DIBD            | [0.01065 , 0.09505]  | 0.95024          |
| Distance        | [-0.01765 , 0.01565] | 0.95024          |
| EqualFrequency  | [-0.00155 , 0.0806]  | 0.95024          |
| EqualWidth      | [0.0242 , 0.10145]   | 0.95024          |
| Extended Chi2   | [0.0149 , 0.1012]    | 0.95024          |
| FFD             | [0.0459 , 0.1482]    | 0.95024          |
| FUSINTER        | [-0.0257 , 0.0169]   | 0.95024          |
| HDD             | [0.02255 , 0.1545]   | 0.95024          |
| HellingerBD     | [0.0065 , 0.0558]    | 0.95024          |
| Heter-Disc      | [0.1448 , 0.31065]   | 0.95024          |
| ID3             | [0.10915 , 0.2443]   | 0.95024          |
| IDD             | [0.1139 , 0.26255]   | 0.95024          |
| Khiops          | [-0.0093 , 0.04495]  | 0.95024          |
| MDLP            | [-0.02565 , 0.0147]  | 0.95024          |
| Modified Chi2   | [-0.0101 , 0.06685]  | 0.95024          |
| MODL            | [-0.0084 , 0.08015]  | 0.95024          |
| MVD             | [0.0518 , 0.1999]    | 0.95024          |
| PKID            | [0.0638 , 0.1618]    | 0.95024          |
| UCPD            | [-0.00745 , 0.04375] | 0.95024          |
| USD             | [0.05185 , 0.1741]   | 0.95024          |
| Zeta            | [-0.0067 , 0.03075]  | 0.95024          |

Table 6: Confidence intervals for algorithm Ameva ( $\alpha=0.95$ )

### 3 Detailed results for Bayesian

#### 3.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| 1R              | 372.5 | 447.5 | $\geq 0.2$    | 1                  |
| Ameva           | 63.0  | 757.0 | $\geq 0.2$    | 1                  |
| CACC            | 115.0 | 705.0 | $\geq 0.2$    | 1                  |
| CADD            | 646.5 | 142.5 | 0.03839       | 0.03778            |
| CAIM            | 15.0  | 805.0 | $\geq 0.2$    | 1                  |
| Chi2            | 73.0  | 707.0 | $\geq 0.2$    | 1                  |
| ChiMerge        | 31.0  | 789.0 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 370.5 | 414.5 | $\geq 0.2$    | 1                  |
| DIBD            | 212.5 | 607.5 | $\geq 0.2$    | 1                  |
| Distance        | 95.0  | 725.0 | $\geq 0.2$    | 1                  |
| EqualFrequency  | 116.5 | 703.5 | $\geq 0.2$    | 1                  |
| EqualWidth      | 149.0 | 634.0 | $\geq 0.2$    | 1                  |
| Extended Chi2   | 123.0 | 660.0 | $\geq 0.2$    | 1                  |
| FFD             | 234.5 | 550.5 | $\geq 0.2$    | 1                  |
| FUSINTER        | 58.0  | 762.0 | $\geq 0.2$    | 1                  |
| HDD             | 243.5 | 576.5 | $\geq 0.2$    | 1                  |
| HellingerBD     | 127.0 | 693.0 | $\geq 0.2$    | 1                  |
| Heter-Disc      | 547.5 | 272.5 | $\geq 0.2$    | 0.336939           |
| ID3             | 470.0 | 350.0 | $\geq 0.2$    | 1                  |
| IDD             | 375.0 | 412.0 | $\geq 0.2$    | 1                  |
| Khiops          | 137.0 | 643.0 | $\geq 0.2$    | 1                  |
| MDLP            | 74.0  | 706.0 | $\geq 0.2$    | 1                  |
| Modified Chi2   | 115.5 | 669.5 | $\geq 0.2$    | 1                  |
| MODL            | 74.5  | 745.5 | $\geq 0.2$    | 1                  |
| MVD             | 349.0 | 471.0 | $\geq 0.2$    | 1                  |
| PKID            | 243.5 | 541.5 | $\geq 0.2$    | 1                  |
| UCPD            | 98.0  | 722.0 | $\geq 0.2$    | 1                  |
| USD             | 243.0 | 577.0 | $\geq 0.2$    | 1                  |
| Zeta            | 32.0  | 788.0 | $\geq 0.2$    | 1                  |

Table 7: Results obtained by the Wilcoxon test for algorithm Bayesian

#### 3.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [-0.0562 , 0.03435]   | 0.90276          |
| Ameva           | [-0.2175 , -0.10225]  | 0.90276          |
| CACC            | [-0.19955 , -0.07045] | 0.90276          |
| CADD            | [0.05295 , 0.2548]    | 0.90276          |
| CAIM            | [-0.2312 , -0.1282]   | 0.90276          |
| Chi2            | [-0.1928 , -0.0632]   | 0.90276          |
| ChiMerge        | [-0.21605 , -0.1112]  | 0.90276          |
| ClusterAnalysis | [-0.0336 , 0.02425]   | 0.90276          |
| DIBD            | [-0.1427 , -0.02685]  | 0.90276          |
| Distance        | [-0.2226 , -0.0888]   | 0.90276          |
| EqualFrequency  | [-0.14215 , -0.0589]  | 0.90276          |
| EqualWidth      | [-0.1269 , -0.04745]  | 0.90276          |
| Extended Chi2   | [-0.13715 , -0.03605] | 0.90276          |
| FFD             | [-0.09725 , -0.00925] | 0.90276          |
| FUSINTER        | [-0.2217 , -0.0982]   | 0.90276          |
| HDD             | [-0.0985 , -0.0111]   | 0.90276          |
| HellingerBD     | [-0.18015 , -0.06225] | 0.90276          |
| Heter-Disc      | [0.00725 , 0.1471]    | 0.90276          |
| ID3             | [-0.01475 , 0.04775]  | 0.90276          |
| IDD             | [-0.0199 , 0.0175]    | 0.90276          |
| Khiops          | [-0.192 , -0.06905]   | 0.90276          |
| MDLP            | [-0.2207 , -0.08615]  | 0.90276          |
| Modified Chi2   | [-0.1618 , -0.0453]   | 0.90276          |
| MODL            | [-0.1519 , -0.05605]  | 0.90276          |
| MVD             | [-0.0599 , 0.0159]    | 0.90276          |
| PKID            | [-0.068 , -0.00695]   | 0.90276          |
| UCPD            | [-0.1889 , -0.08255]  | 0.90276          |
| USD             | [-0.0374 , -0.004]    | 0.90276          |
| Zeta            | [-0.2001 , -0.0961]   | 0.90276          |

Table 8: Confidence intervals for algorithm Bayesian ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [-0.0707 , 0.07255]   | 0.95024          |
| Ameva           | [-0.2286 , -0.09395]  | 0.95024          |
| CACC            | [-0.20985 , -0.062]   | 0.95024          |
| CADD            | [0.03765 , 0.27925]   | 0.95024          |
| CAIM            | [-0.2395 , -0.11355]  | 0.95024          |
| Chi2            | [-0.20245 , -0.05135] | 0.95024          |
| ChiMerge        | [-0.22595 , -0.10225] | 0.95024          |
| ClusterAnalysis | [-0.03695 , 0.0308]   | 0.95024          |
| DIBD            | [-0.1577 , -0.01815]  | 0.95024          |
| Distance        | [-0.2326 , -0.07515]  | 0.95024          |
| EqualFrequency  | [-0.15005 , -0.0527]  | 0.95024          |
| EqualWidth      | [-0.1376 , -0.03785]  | 0.95024          |
| Extended Chi2   | [-0.15275 , -0.03095] | 0.95024          |
| FFD             | [-0.1054 , -0.0049]   | 0.95024          |
| FUSINTER        | [-0.2304 , -0.088]    | 0.95024          |
| HDD             | [-0.11785 , -0.0064]  | 0.95024          |
| HellingerBD     | [-0.1902 , -0.05385]  | 0.95024          |
| Heter-Disc      | [-0.0007 , 0.1676]    | 0.95024          |
| ID3             | [-0.01825 , 0.0556]   | 0.95024          |
| IDD             | [-0.0242 , 0.0399]    | 0.95024          |
| Khiops          | [-0.2055 , -0.05605]  | 0.95024          |
| MDLP            | [-0.2387 , -0.0683]   | 0.95024          |
| Modified Chi2   | [-0.17595 , -0.0379]  | 0.95024          |
| MODL            | [-0.1618 , -0.04845]  | 0.95024          |
| MVD             | [-0.0683 , 0.0253]    | 0.95024          |
| PKID            | [-0.07475 , -0.00095] | 0.95024          |
| UCPD            | [-0.2037 , -0.07115]  | 0.95024          |
| USD             | [-0.0392 , -0.0004]   | 0.95024          |
| Zeta            | [-0.2081 , -0.0883]   | 0.95024          |

Table 9: Confidence intervals for algorithm Bayesian ( $\alpha=0.95$ )

## 4 Detailed results for CACC

### 4.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value        | Asymptotic P-value |
|-----------------|-------|-------|----------------------|--------------------|
| 1R              | 682.0 | 138.0 | 1.3154E-4            | 0.00025            |
| Ameva           | 404.0 | 416.0 | $\geq 0.2$           | 1                  |
| Bayesian        | 705.0 | 115.0 | 2.64E-5              | 0.000071           |
| CADD            | 784.0 | 36.0  | 9.054E-9             | 0                  |
| CAIM            | 262.5 | 557.5 | $\geq 0.2$           | 1                  |
| Chi2            | 449.5 | 370.5 | $\geq 0.2$           | 0.994214           |
| ChiMerge        | 357.5 | 462.5 | $\geq 0.2$           | 1                  |
| ClusterAnalysis | 696.0 | 124.0 | 5.078E-5             | 0.000118           |
| DIBD            | 592.0 | 228.0 | 0.013558             | 0.014004           |
| Distance        | 336.0 | 447.0 | $\geq 0.2$           | 1                  |
| EqualFrequency  | 478.0 | 302.0 | $\geq 0.2$           | 0.216824           |
| EqualWidth      | 572.0 | 208.0 | 0.010196             | 0.010872           |
| Extended Chi2   | 541.0 | 279.0 | 0.07932              | 0.077139           |
| FFD             | 613.0 | 167.0 | 0.0013906            | 0.001815           |
| FUSINTER        | 323.0 | 457.0 | $\geq 0.2$           | 1                  |
| HDD             | 551.5 | 268.5 | 0.14238              | 0.135727           |
| HellingerBD     | 527.5 | 292.5 | $\geq 0.2$           | 0.254942           |
| Heter-Disc      | 768.5 | 51.5  | 2.739E-7             | 0.000004           |
| ID3             | 677.5 | 142.5 | 6.234000000000001E-4 | 0.00092            |
| IDD             | 717.0 | 103.0 | 1.0404E-5            | 0.000035           |
| Khiops          | 478.0 | 302.0 | $\geq 0.2$           | 0.216022           |
| MDLP            | 314.0 | 469.0 | $\geq 0.2$           | 1                  |
| Modified Chi2   | 458.0 | 322.0 | $\geq 0.2$           | 0.338271           |
| MODL            | 454.0 | 329.0 | $\geq 0.2$           | 0.728603           |
| MVD             | 645.5 | 174.5 | 0.003749             | 0.004376           |
| PKID            | 616.0 | 164.0 | 0.0011794            | 0.001573           |
| UCPD            | 522.0 | 298.0 | 0.13508              | 0.130497           |
| USD             | 593.0 | 187.0 | 0.003894             | 0.004514           |
| Zeta            | 414.5 | 405.5 | $\geq 0.2$           | 1                  |

Table 10: Results obtained by the Wilcoxon test for algorithm CACC

### 4.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.0765 , 0.25225]   | 0.90276          |
| Ameva           | [-0.01545 , 0.0064]  | 0.90276          |
| Bayesian        | [0.07045 , 0.19955]  | 0.90276          |
| CADD            | [0.2426 , 0.3865]    | 0.90276          |
| CAIM            | [-0.0279 , -0.0016]  | 0.90276          |
| Chi2            | [-0.01025 , 0.01815] | 0.90276          |
| ChiMerge        | [-0.03145 , 0.01005] | 0.90276          |
| ClusterAnalysis | [0.07365 , 0.18345]  | 0.90276          |
| DIBD            | [0.011 , 0.0746]     | 0.90276          |
| Distance        | [-0.01375 , 0.00485] | 0.90276          |
| EqualFrequency  | [-0.00495 , 0.0452]  | 0.90276          |
| EqualWidth      | [0.01495 , 0.07505]  | 0.90276          |
| Extended Chi2   | [0.00135 , 0.0814]   | 0.90276          |
| FFD             | [0.0344 , 0.10835]   | 0.90276          |
| FUSINTER        | [-0.02515 , 0.00505] | 0.90276          |
| HDD             | [0.0031 , 0.13655]   | 0.90276          |
| HellingerBD     | [-0.00065 , 0.04205] | 0.90276          |
| Heter-Disc      | [0.13305 , 0.2564]   | 0.90276          |
| ID3             | [0.0683 , 0.2181]    | 0.90276          |
| IDD             | [0.101 , 0.23365]    | 0.90276          |
| Khiops          | [-0.0053 , 0.0349]   | 0.90276          |
| MDLP            | [-0.0229 , 0.0031]   | 0.90276          |
| Modified Chi2   | [-0.0115 , 0.03985]  | 0.90276          |
| MODL            | [-0.0083 , 0.0292]   | 0.90276          |
| MVD             | [0.0273 , 0.18145]   | 0.90276          |
| PKID            | [0.0381 , 0.12685]   | 0.90276          |
| UCPD            | [-0.00175 , 0.0352]  | 0.90276          |
| USD             | [0.0321 , 0.1385]    | 0.90276          |
| Zeta            | [-0.0157 , 0.0171]   | 0.90276          |

Table 11: Confidence intervals for algorithm CACC ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.06365 , 0.2641]   | 0.95024          |
| Ameva           | [-0.01975 , 0.0086]  | 0.95024          |
| Bayesian        | [0.062 , 0.20985]    | 0.95024          |
| CADD            | [0.2283 , 0.4033]    | 0.95024          |
| CAIM            | [-0.03075 , -0.0001] | 0.95024          |
| Chi2            | [-0.01305 , 0.02215] | 0.95024          |
| ChiMerge        | [-0.0378 , 0.01285]  | 0.95024          |
| ClusterAnalysis | [0.06555 , 0.1979]   | 0.95024          |
| DIBD            | [0.00625 , 0.0858]   | 0.95024          |
| Distance        | [-0.0157 , 0.0067]   | 0.95024          |
| EqualFrequency  | [-0.0069 , 0.05335]  | 0.95024          |
| EqualWidth      | [0.01095 , 0.0829]   | 0.95024          |
| Extended Chi2   | [-0.003 , 0.0972]    | 0.95024          |
| FFD             | [0.02885 , 0.12325]  | 0.95024          |
| FUSINTER        | [-0.0305 , 0.0089]   | 0.95024          |
| HDD             | [-0.0001 , 0.15535]  | 0.95024          |
| HellingerBD     | [-0.004 , 0.0452]    | 0.95024          |
| Heter-Disc      | [0.1222 , 0.26825]   | 0.95024          |
| ID3             | [0.0618 , 0.2297]    | 0.95024          |
| IDD             | [0.0876 , 0.24815]   | 0.95024          |
| Khiops          | [-0.0085 , 0.0372]   | 0.95024          |
| MDLP            | [-0.0268 , 0.00595]  | 0.95024          |
| Modified Chi2   | [-0.01755 , 0.0453]  | 0.95024          |
| MODL            | [-0.01425 , 0.03875] | 0.95024          |
| MVD             | [0.02025 , 0.1934]   | 0.95024          |
| PKID            | [0.0294 , 0.14295]   | 0.95024          |
| UCPD            | [-0.00475 , 0.0386]  | 0.95024          |
| USD             | [0.0256 , 0.154]     | 0.95024          |
| Zeta            | [-0.01925 , 0.0204]  | 0.95024          |

Table 12: Confidence intervals for algorithm CACC ( $\alpha=0.95$ )

## 5 Detailed results for CADD

### 5.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| 1R              | 85.5  | 703.5 | $\geq 0.2$    | 1                  |
| Ameva           | 14.0  | 806.0 | $\geq 0.2$    | 1                  |
| Bayesian        | 142.5 | 646.5 | $\geq 0.2$    | 1                  |
| CACC            | 36.0  | 784.0 | $\geq 0.2$    | 1                  |
| CAIM            | 3.0   | 817.0 | $\geq 0.2$    | 1                  |
| Chi2            | 17.5  | 802.5 | $\geq 0.2$    | 1                  |
| ChiMerge        | 4.0   | 816.0 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 113.5 | 706.5 | $\geq 0.2$    | 1                  |
| DIBD            | 19.0  | 764.0 | $\geq 0.2$    | 1                  |
| Distance        | 20.0  | 800.0 | $\geq 0.2$    | 1                  |
| EqualFrequency  | 12.5  | 772.5 | $\geq 0.2$    | 1                  |
| EqualWidth      | 5.0   | 815.0 | $\geq 0.2$    | 1                  |
| Extended Chi2   | 62.5  | 722.5 | $\geq 0.2$    | 1                  |
| FFD             | 50.0  | 737.0 | $\geq 0.2$    | 1                  |
| FUSINTER        | 6.0   | 814.0 | $\geq 0.2$    | 1                  |
| HDD             | 99.0  | 721.0 | $\geq 0.2$    | 1                  |
| HellingerBD     | 1.0   | 819.0 | $\geq 0.2$    | 1                  |
| Heter-Disc      | 313.0 | 507.0 | $\geq 0.2$    | 1                  |
| ID3             | 222.5 | 597.5 | $\geq 0.2$    | 1                  |
| IDD             | 102.0 | 718.0 | $\geq 0.2$    | 1                  |
| Khiops          | 4.0   | 776.0 | $\geq 0.2$    | 1                  |
| MDLP            | 10.0  | 770.0 | $\geq 0.2$    | 1                  |
| Modified Chi2   | 19.5  | 765.5 | $\geq 0.2$    | 1                  |
| MODL            | 28.5  | 791.5 | $\geq 0.2$    | 1                  |
| MVD             | 119.5 | 669.5 | $\geq 0.2$    | 1                  |
| PKID            | 78.0  | 709.0 | $\geq 0.2$    | 1                  |
| UCPD            | 5.0   | 815.0 | $\geq 0.2$    | 1                  |
| USD             | 97.0  | 690.0 | $\geq 0.2$    | 1                  |
| Zeta            | 3.0   | 817.0 | $\geq 0.2$    | 1                  |

Table 13: Results obtained by the Wilcoxon test for algorithm CADD

### 5.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [-0.161 , -0.06145]   | 0.90276          |
| Ameva           | [-0.40985 , -0.2637]  | 0.90276          |
| Bayesian        | [-0.2548 , -0.05295]  | 0.90276          |
| CACC            | [-0.3865 , -0.2426]   | 0.90276          |
| CAIM            | [-0.43765 , -0.29355] | 0.90276          |
| Chi2            | [-0.41765 , -0.2521]  | 0.90276          |
| ChiMerge        | [-0.43005 , -0.2751]  | 0.90276          |
| ClusterAnalysis | [-0.2469 , -0.1016]   | 0.90276          |
| DIBD            | [-0.3549 , -0.20655]  | 0.90276          |
| Distance        | [-0.42425 , -0.2728]  | 0.90276          |
| EqualFrequency  | [-0.36245 , -0.20995] | 0.90276          |
| EqualWidth      | [-0.343 , -0.19665]   | 0.90276          |
| Extended Chi2   | [-0.3599 , -0.1859]   | 0.90276          |
| FFD             | [-0.32035 , -0.1503]  | 0.90276          |
| FUSINTER        | [-0.44335 , -0.281]   | 0.90276          |
| HDD             | [-0.3362 , -0.1549]   | 0.90276          |
| HellingerBD     | [-0.3787 , -0.2372]   | 0.90276          |
| Heter-Disc      | [-0.19575 , 0]        | 0.90276          |
| ID3             | [-0.24665 , -0.04095] | 0.90276          |
| IDD             | [-0.1703 , -0.0291]   | 0.90276          |
| Khiops          | [-0.39985 , -0.2459]  | 0.90276          |
| MDLP            | [-0.4244 , -0.28075]  | 0.90276          |
| Modified Chi2   | [-0.3862 , -0.22575]  | 0.90276          |
| MODL            | [-0.37805 , -0.2151]  | 0.90276          |
| MVD             | [-0.25615 , -0.11275] | 0.90276          |
| PKID            | [-0.31125 , -0.1151]  | 0.90276          |
| UCPD            | [-0.3996 , -0.24735]  | 0.90276          |
| USD             | [-0.33055 , -0.1224]  | 0.90276          |
| Zeta            | [-0.4143 , -0.26005]  | 0.90276          |

Table 14: Confidence intervals for algorithm CADD ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [-0.1735 , -0.0537]   | 0.95024          |
| Ameva           | [-0.4208 , -0.25015]  | 0.95024          |
| Bayesian        | [-0.27925 , -0.03765] | 0.95024          |
| CACC            | [-0.4033 , -0.2283]   | 0.95024          |
| CAIM            | [-0.4561 , -0.2804]   | 0.95024          |
| Chi2            | [-0.43045 , -0.23835] | 0.95024          |
| ChiMerge        | [-0.44445 , -0.2633]  | 0.95024          |
| ClusterAnalysis | [-0.2657 , -0.089]    | 0.95024          |
| DIBD            | [-0.3666 , -0.1926]   | 0.95024          |
| Distance        | [-0.4356 , -0.2637]   | 0.95024          |
| EqualFrequency  | [-0.3806 , -0.19675]  | 0.95024          |
| EqualWidth      | [-0.3548 , -0.1843]   | 0.95024          |
| Extended Chi2   | [-0.37785 , -0.17]    | 0.95024          |
| FFD             | [-0.33155 , -0.1247]  | 0.95024          |
| FUSINTER        | [-0.4566 , -0.2721]   | 0.95024          |
| HDD             | [-0.3533 , -0.1347]   | 0.95024          |
| HellingerBD     | [-0.3909 , -0.22745]  | 0.95024          |
| Heter-Disc      | [-0.22735 , 0.0093]   | 0.95024          |
| ID3             | [-0.2636 , -0.0161]   | 0.95024          |
| IDD             | [-0.17805 , -0.02825] | 0.95024          |
| Khiops          | [-0.4136 , -0.2339]   | 0.95024          |
| MDLP            | [-0.443 , -0.26945]   | 0.95024          |
| Modified Chi2   | [-0.411 , -0.20835]   | 0.95024          |
| MODL            | [-0.40005 , -0.20425] | 0.95024          |
| MVD             | [-0.26755 , -0.08965] | 0.95024          |
| PKID            | [-0.3342 , -0.0997]   | 0.95024          |
| UCPD            | [-0.4166 , -0.2338]   | 0.95024          |
| USD             | [-0.3446 , -0.10885]  | 0.95024          |
| Zeta            | [-0.4295 , -0.2458]   | 0.95024          |

Table 15: Confidence intervals for algorithm CADD ( $\alpha=0.95$ )

## 6 Detailed results for CAIM

### 6.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value        | Asymptotic P-value |
|-----------------|-------|-------|----------------------|--------------------|
| 1R              | 756.0 | 64.0  | 2.822E-7             | 0.000003           |
| Ameva           | 476.5 | 308.5 | $\geq 0.2$           | 0.908719           |
| Bayesian        | 805.0 | 15.0  | 2.492E-10            | 0                  |
| CACC            | 557.5 | 262.5 | 0.11987              | 0.115604           |
| CADD            | 817.0 | 3.0   | 9.094E-12            | 0                  |
| Chi2            | 582.5 | 237.5 | 0.05398              | 0.052861           |
| ChiMerge        | 457.5 | 325.5 | $\geq 0.2$           | 0.688757           |
| ClusterAnalysis | 771.0 | 49.0  | 5.064E-8             | 0.000001           |
| DIBD            | 678.0 | 142.0 | 1.703E-4             | 0.000307           |
| Distance        | 465.5 | 354.5 | $\geq 0.2$           | 0.810883           |
| EqualFrequency  | 631.0 | 149.0 | 4.954E-4             | 0.000751           |
| EqualWidth      | 683.0 | 97.0  | 1.2454E-5            | 0.000041           |
| Extended Chi2   | 678.5 | 141.5 | 1.6502E-4            | 0.000286           |
| FFD             | 757.5 | 62.5  | 9.527E-7             | 0.000008           |
| FUSINTER        | 472.0 | 308.0 | $\geq 0.2$           | 0.249614           |
| HDD             | 672.0 | 119.0 | 0.03262              | 0.032298           |
| HellingerBD     | 635.0 | 145.0 | 3.88E-4              | 0.000613           |
| Heter-Disc      | 778.0 | 42.0  | 2.07E-8              | 0.000001           |
| ID3             | 743.5 | 39.5  | 1.184E-7             | 0.000002           |
| IDD             | 795.0 | 25.0  | 1.6444E-9            | 0                  |
| Khiops          | 590.0 | 230.0 | 0.04138              | 0.040508           |
| MDLP            | 430.5 | 389.5 | $\geq 0.2$           | 1                  |
| Modified Chi2   | 582.0 | 198.0 | 0.00654              | 0.007123           |
| MODL            | 625.5 | 194.5 | 0.009784999999999999 | 0.010478           |
| MVD             | 689.0 | 91.0  | 7.486E-6             | 0.000029           |
| PKID            | 737.0 | 43.0  | 4.722E-8             | 0.000001           |
| UCPD            | 582.0 | 238.0 | 0.019988             | 0.020415           |
| USD             | 719.0 | 64.0  | 2.218E-6             | 0.000014           |
| Zeta            | 601.0 | 186.0 | 0.09332              | 0.088897           |

Table 16: Results obtained by the Wilcoxon test for algorithm CAIM

### 6.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.11815 , 0.2809]   | 0.90276          |
| Ameva           | [-0.00265 , 0.02105] | 0.90276          |
| Bayesian        | [0.1282 , 0.2312]    | 0.90276          |
| CACC            | [0.0016 , 0.0279]    | 0.90276          |
| CADD            | [0.29355 , 0.43765]  | 0.90276          |
| Chi2            | [0.00585 , 0.04295]  | 0.90276          |
| ChiMerge        | [-0.0046 , 0.01665]  | 0.90276          |
| ClusterAnalysis | [0.12215 , 0.2265]   | 0.90276          |
| DIBD            | [0.0291 , 0.09035]   | 0.90276          |
| Distance        | [-0.00535 , 0.01925] | 0.90276          |
| EqualFrequency  | [0.02655 , 0.0797]   | 0.90276          |
| EqualWidth      | [0.04875 , 0.11445]  | 0.90276          |
| Extended Chi2   | [0.0288 , 0.11295]   | 0.90276          |
| FFD             | [0.0745 , 0.16195]   | 0.90276          |
| FUSINTER        | [-0.0051 , 0.0271]   | 0.90276          |
| HDD             | [0.04805 , 0.15185]  | 0.90276          |
| HellingerBD     | [0.02555 , 0.07435]  | 0.90276          |
| Heter-Disc      | [0.1817 , 0.3302]    | 0.90276          |
| ID3             | [0.13475 , 0.25]     | 0.90276          |
| IDD             | [0.14405 , 0.2612]   | 0.90276          |
| Khiops          | [0.01255 , 0.05365]  | 0.90276          |
| MDLP            | [-0.00875 , 0.02085] | 0.90276          |
| Modified Chi2   | [0.0168 , 0.07265]   | 0.90276          |
| MODL            | [0.01065 , 0.07935]  | 0.90276          |
| MVD             | [0.08205 , 0.2188]   | 0.90276          |
| PKID            | [0.0872 , 0.16725]   | 0.90276          |
| UCPD            | [0.0105 , 0.0538]    | 0.90276          |
| USD             | [0.0714 , 0.17855]   | 0.90276          |
| Zeta            | [0.0041 , 0.02525]   | 0.90276          |

Table 17: Confidence intervals for algorithm CAIM ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.10385 , 0.2966]   | 0.95024          |
| Ameva           | [-0.00385 , 0.02245] | 0.95024          |
| Bayesian        | [0.11355 , 0.2395]   | 0.95024          |
| CACC            | [0.0001 , 0.03075]   | 0.95024          |
| CADD            | [0.2804 , 0.4561]    | 0.95024          |
| Chi2            | [0.00305 , 0.0512]   | 0.95024          |
| ChiMerge        | [-0.00685 , 0.0189]  | 0.95024          |
| ClusterAnalysis | [0.11555 , 0.23645]  | 0.95024          |
| DIBD            | [0.0244 , 0.09835]   | 0.95024          |
| Distance        | [-0.0081 , 0.02335]  | 0.95024          |
| EqualFrequency  | [0.0219 , 0.08915]   | 0.95024          |
| EqualWidth      | [0.04315 , 0.1201]   | 0.95024          |
| Extended Chi2   | [0.0237 , 0.1214]    | 0.95024          |
| FFD             | [0.0715 , 0.17135]   | 0.95024          |
| FUSINTER        | [-0.0076 , 0.0314]   | 0.95024          |
| HDD             | [0.046 , 0.16125]    | 0.95024          |
| HellingerBD     | [0.02175 , 0.0785]   | 0.95024          |
| Heter-Disc      | [0.1723 , 0.3538]    | 0.95024          |
| ID3             | [0.12645 , 0.25895]  | 0.95024          |
| IDD             | [0.13525 , 0.26965]  | 0.95024          |
| Khiops          | [0.00715 , 0.0579]   | 0.95024          |
| MDLP            | [-0.01155 , 0.0253]  | 0.95024          |
| Modified Chi2   | [0.0111 , 0.0802]    | 0.95024          |
| MODL            | [0.00875 , 0.0912]   | 0.95024          |
| MVD             | [0.0713 , 0.23335]   | 0.95024          |
| PKID            | [0.08105 , 0.17535]  | 0.95024          |
| UCPD            | [0.00515 , 0.0587]   | 0.95024          |
| USD             | [0.0635 , 0.18935]   | 0.95024          |
| Zeta            | [0.00325 , 0.02665]  | 0.95024          |

Table 18: Confidence intervals for algorithm CAIM ( $\alpha=0.95$ )

## 7 Detailed results for Chi2

### 7.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| 1R              | 655.0 | 125.0 | 1.046E-4      | 0.000211           |
| Ameva           | 367.5 | 452.5 | $\geq 0.2$    | 1                  |
| Bayesian        | 707.0 | 73.0  | 1.4158E-6     | 0.000009           |
| CACC            | 370.5 | 449.5 | $\geq 0.2$    | 1                  |
| CADD            | 802.5 | 17.5  | 1.6735E-9     | 0                  |
| CAIM            | 237.5 | 582.5 | $\geq 0.2$    | 1                  |
| ChiMerge        | 261.5 | 523.5 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 693.0 | 87.0  | 5.268E-6      | 0.000023           |
| DIBD            | 564.0 | 256.0 | 0.03812       | 0.037831           |
| Distance        | 374.5 | 445.5 | $\geq 0.2$    | 1                  |
| EqualFrequency  | 512.5 | 307.5 | $\geq 0.2$    | 0.357106           |
| EqualWidth      | 636.5 | 183.5 | 0.005855      | 0.006544           |
| Extended Chi2   | 529.5 | 290.5 | $\geq 0.2$    | 0.243035           |
| FFD             | 692.5 | 127.5 | 2.368E-4      | 0.000414           |
| FUSINTER        | 303.5 | 516.5 | $\geq 0.2$    | 1                  |
| HDD             | 550.5 | 269.5 | $\geq 0.2$    | 0.313716           |
| HellingerBD     | 514.0 | 266.0 | 0.08484       | 0.082317           |
| Heter-Disc      | 752.5 | 67.5  | 1.6132E-6     | 0.00001            |
| ID3             | 678.5 | 106.5 | 3.691E-4      | 0.000619           |
| IDD             | 742.5 | 77.5  | 4.34E-6       | 0.000021           |
| Khiops          | 472.5 | 347.5 | $\geq 0.2$    | 0.733252           |
| MDLP            | 306.5 | 513.5 | $\geq 0.2$    | 1                  |
| Modified Chi2   | 468.0 | 319.0 | $\geq 0.2$    | 1                  |
| MODL            | 421.0 | 399.0 | $\geq 0.2$    | 1                  |
| MVD             | 627.5 | 192.5 | 0.008935      | 0.009504           |
| PKID            | 673.0 | 110.0 | 1.3066E-4     | 0.000261           |
| UCPD            | 492.0 | 328.0 | $\geq 0.2$    | 0.26747            |
| USD             | 626.0 | 194.0 | 0.02832       | 0.028407           |
| Zeta            | 396.5 | 423.5 | $\geq 0.2$    | 1                  |

Table 19: Results obtained by the Wilcoxon test for algorithm Chi2

### 7.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [0.05825 , 0.2614]    | 0.90276          |
| Ameva           | [-0.0302 , 0.0086]    | 0.90276          |
| Bayesian        | [0.0632 , 0.1928]     | 0.90276          |
| CACC            | [-0.01815 , 0.01025]  | 0.90276          |
| CADD            | [0.2521 , 0.41765]    | 0.90276          |
| CAIM            | [-0.04295 , -0.00585] | 0.90276          |
| ChiMerge        | [-0.03605 , -0.0008]  | 0.90276          |
| ClusterAnalysis | [0.0839 , 0.1865]     | 0.90276          |
| DIBD            | [0.00545 , 0.04755]   | 0.90276          |
| Distance        | [-0.0206 , 0.00925]   | 0.90276          |
| EqualFrequency  | [-0.00325 , 0.0514]   | 0.90276          |
| EqualWidth      | [0.01965 , 0.0689]    | 0.90276          |
| Extended Chi2   | [-0.0001 , 0.05865]   | 0.90276          |
| FFD             | [0.03285 , 0.11205]   | 0.90276          |
| FUSINTER        | [-0.0177 , 0.0012]    | 0.90276          |
| HDD             | [0.00105 , 0.104]     | 0.90276          |
| HellingerBD     | [0.00185 , 0.048]     | 0.90276          |
| Heter-Disc      | [0.13245 , 0.28825]   | 0.90276          |
| ID3             | [0.0808 , 0.2291]     | 0.90276          |
| IDD             | [0.09965 , 0.24105]   | 0.90276          |
| Khiops          | [-0.0096 , 0.02975]   | 0.90276          |
| MDLP            | [-0.02795 , 0.00205]  | 0.90276          |
| Modified Chi2   | [-0.00145 , 0.0279]   | 0.90276          |
| MODL            | [-0.0141 , 0.01945]   | 0.90276          |
| MVD             | [0.02705 , 0.1954]    | 0.90276          |
| PKID            | [0.0404 , 0.121]      | 0.90276          |
| UCPD            | [-0.00635 , 0.0299]   | 0.90276          |
| USD             | [0.021 , 0.1319]      | 0.90276          |
| Zeta            | [-0.02895 , 0.0144]   | 0.90276          |

Table 20: Confidence intervals for algorithm Chi2 ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.0501 , 0.2749]    | 0.95024          |
| Ameva           | [-0.03955 , 0.0119]  | 0.95024          |
| Bayesian        | [0.05135 , 0.20245]  | 0.95024          |
| CACC            | [-0.02215 , 0.01305] | 0.95024          |
| CADD            | [0.23835 , 0.43045]  | 0.95024          |
| CAIM            | [-0.0512 , -0.00305] | 0.95024          |
| ChiMerge        | [-0.0405 , 0.00005]  | 0.95024          |
| ClusterAnalysis | [0.071 , 0.1975]     | 0.95024          |
| DIBD            | [0.00185 , 0.0522]   | 0.95024          |
| Distance        | [-0.0249 , 0.01215]  | 0.95024          |
| EqualFrequency  | [-0.0073 , 0.05685]  | 0.95024          |
| EqualWidth      | [0.0169 , 0.07745]   | 0.95024          |
| Extended Chi2   | [-0.00155 , 0.06745] | 0.95024          |
| FFD             | [0.0293 , 0.12475]   | 0.95024          |
| FUSINTER        | [-0.02075 , 0.0024]  | 0.95024          |
| HDD             | [0 , 0.1222]         | 0.95024          |
| HellingerBD     | [-0.00405 , 0.05115] | 0.95024          |
| Heter-Disc      | [0.1171 , 0.3045]    | 0.95024          |
| ID3             | [0.06235 , 0.2359]   | 0.95024          |
| IDD             | [0.0794 , 0.2496]    | 0.95024          |
| Khiops          | [-0.01345 , 0.0329]  | 0.95024          |
| MDLP            | [-0.0313 , 0.0045]   | 0.95024          |
| Modified Chi2   | [-0.0038 , 0.0318]   | 0.95024          |
| MODL            | [-0.0176 , 0.0237]   | 0.95024          |
| MVD             | [0.0187 , 0.2054]    | 0.95024          |
| PKID            | [0.0352 , 0.129]     | 0.95024          |
| UCPD            | [-0.01135 , 0.03305] | 0.95024          |
| USD             | [0.0156 , 0.14985]   | 0.95024          |
| Zeta            | [-0.0327 , 0.0168]   | 0.95024          |

Table 21: Confidence intervals for algorithm Chi2 ( $\alpha=0.95$ )

## 8 Detailed results for ChiMerge

### 8.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value       | Asymptotic P-value |
|-----------------|-------|-------|---------------------|--------------------|
| 1R              | 758.0 | 62.0  | 2.276E-7            | 0.000003           |
| Ameva           | 445.5 | 337.5 | $\geq 0.2$          | 0.826522           |
| Bayesian        | 789.0 | 31.0  | 4.32E-9             | 0                  |
| CACC            | 462.5 | 357.5 | $\geq 0.2$          | 0.844782           |
| CADD            | 816.0 | 4.0   | 1.2732E-11          | 0                  |
| CAIM            | 325.5 | 457.5 | $\geq 0.2$          | 1                  |
| Chi2            | 523.5 | 261.5 | $\geq 0.2$          | 0.376441           |
| ClusterAnalysis | 770.0 | 50.0  | 5.724E-8            | 0.000001           |
| DIBD            | 646.0 | 174.0 | 0.0011066           | 0.001479           |
| Distance        | 406.0 | 377.0 | $\geq 0.2$          | 1                  |
| EqualFrequency  | 629.0 | 151.0 | 5.586E-4            | 0.000814           |
| EqualWidth      | 688.0 | 92.0  | 8.162E-6            | 0.000031           |
| Extended Chi2   | 644.0 | 176.0 | 0.0012308           | 0.001622           |
| FFD             | 711.0 | 69.0  | 9.468E-7            | 0.000007           |
| FUSINTER        | 415.5 | 404.5 | $\geq 0.2$          | 1                  |
| HDD             | 667.5 | 152.5 | 0.0011335           | 0.001531           |
| HellingerBD     | 622.0 | 158.0 | 8.41E-4             | 0.001153           |
| Heter-Disc      | 787.0 | 33.0  | 5.844E-9            | 0                  |
| ID3             | 765.5 | 54.5  | 3.898E-7            | 0.000004           |
| IDD             | 793.0 | 27.0  | 2.294E-9            | 0                  |
| Khiops          | 522.0 | 258.0 | 0.0661              | 0.064452           |
| MDLP            | 360.0 | 423.0 | $\geq 0.2$          | 1                  |
| Modified Chi2   | 556.5 | 226.5 | 0.05978999999999996 | 0.05784            |
| MODL            | 553.5 | 231.5 | 0.1762              | 0.168869           |
| MVD             | 732.0 | 88.0  | 2.924E-6            | 0.000015           |
| PKID            | 724.0 | 56.0  | 2.32E-7             | 0.000003           |
| UCPD            | 566.0 | 254.0 | 0.0356              | 0.035417           |
| USD             | 711.0 | 69.0  | 9.468E-7            | 0.000007           |
| Zeta            | 560.0 | 260.0 | $\geq 0.2$          | 0.248202           |

Table 22: Results obtained by the Wilcoxon test for algorithm ChiMerge

### 8.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.0952 , 0.27925]   | 0.90276          |
| Ameva           | [-0.0046 , 0.0149]   | 0.90276          |
| Bayesian        | [0.1112 , 0.21605]   | 0.90276          |
| CACC            | [-0.01005 , 0.03145] | 0.90276          |
| CADD            | [0.2751 , 0.43005]   | 0.90276          |
| CAIM            | [-0.01665 , 0.0046]  | 0.90276          |
| Chi2            | [0.0008 , 0.03605]   | 0.90276          |
| ClusterAnalysis | [0.1163 , 0.20975]   | 0.90276          |
| DIBD            | [0.02465 , 0.07855]  | 0.90276          |
| Distance        | [-0.01795 , 0.0225]  | 0.90276          |
| EqualFrequency  | [0.0229 , 0.0682]    | 0.90276          |
| EqualWidth      | [0.04415 , 0.1028]   | 0.90276          |
| Extended Chi2   | [0.0295 , 0.09]      | 0.90276          |
| FFD             | [0.07235 , 0.1477]   | 0.90276          |
| FUSINTER        | [-0.0122 , 0.01405]  | 0.90276          |
| HDD             | [0.04525 , 0.141]    | 0.90276          |
| HellingerBD     | [0.02135 , 0.0613]   | 0.90276          |
| Heter-Disc      | [0.1716 , 0.3169]    | 0.90276          |
| ID3             | [0.1263 , 0.23975]   | 0.90276          |
| IDD             | [0.1248 , 0.25025]   | 0.90276          |
| Khiops          | [0.00295 , 0.0464]   | 0.90276          |
| MDLP            | [-0.02165 , 0.012]   | 0.90276          |
| Modified Chi2   | [0.00765 , 0.0614]   | 0.90276          |
| MODL            | [0.00335 , 0.06195]  | 0.90276          |
| MVD             | [0.07345 , 0.2046]   | 0.90276          |
| PKID            | [0.08405 , 0.14995]  | 0.90276          |
| UCPD            | [0.0047 , 0.05165]   | 0.90276          |
| USD             | [0.0681 , 0.159]     | 0.90276          |
| Zeta            | [0.002 , 0.02675]    | 0.90276          |

Table 23: Confidence intervals for algorithm ChiMerge ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.08395 , 0.2924]   | 0.95024          |
| Ameva           | [-0.006 , 0.01765]   | 0.95024          |
| Bayesian        | [0.10225 , 0.22595]  | 0.95024          |
| CACC            | [-0.01285 , 0.0378]  | 0.95024          |
| CADD            | [0.2633 , 0.44445]   | 0.95024          |
| CAIM            | [-0.0189 , 0.00685]  | 0.95024          |
| Chi2            | [-0.00005 , 0.0405]  | 0.95024          |
| ClusterAnalysis | [0.10945 , 0.2201]   | 0.95024          |
| DIBD            | [0.0182 , 0.08345]   | 0.95024          |
| Distance        | [-0.0213 , 0.0276]   | 0.95024          |
| EqualFrequency  | [0.0196 , 0.0743]    | 0.95024          |
| EqualWidth      | [0.0405 , 0.1109]    | 0.95024          |
| Extended Chi2   | [0.0216 , 0.09695]   | 0.95024          |
| FFD             | [0.06615 , 0.153]    | 0.95024          |
| FUSINTER        | [-0.01495 , 0.0165]  | 0.95024          |
| HDD             | [0.03645 , 0.15385]  | 0.95024          |
| HellingerBD     | [0.01815 , 0.0663]   | 0.95024          |
| Heter-Disc      | [0.1563 , 0.3306]    | 0.95024          |
| ID3             | [0.1187 , 0.24945]   | 0.95024          |
| IDD             | [0.1142 , 0.2607]    | 0.95024          |
| Khiops          | [-0.00135 , 0.0503]  | 0.95024          |
| MDLP            | [-0.02545 , 0.01815] | 0.95024          |
| Modified Chi2   | [0.00305 , 0.06695]  | 0.95024          |
| MODL            | [0.0012 , 0.07185]   | 0.95024          |
| MVD             | [0.06505 , 0.2161]   | 0.95024          |
| PKID            | [0.0769 , 0.1607]    | 0.95024          |
| UCPD            | [0.00135 , 0.05465]  | 0.95024          |
| USD             | [0.0614 , 0.16915]   | 0.95024          |
| Zeta            | [0.0003 , 0.0296]    | 0.95024          |

Table 24: Confidence intervals for algorithm ChiMerge ( $\alpha=0.95$ )

## 9 Detailed results for ClusterAnalysis

### 9.1 Results

| VS             | $R^+$ | $R^-$ | Exact P-value         | Asymptotic P-value |
|----------------|-------|-------|-----------------------|--------------------|
| 1R             | 364.0 | 419.0 | $\geq 0.2$            | 1                  |
| Ameva          | 83.0  | 697.0 | $\geq 0.2$            | 1                  |
| Bayesian       | 414.5 | 370.5 | $\geq 0.2$            | 1                  |
| CACC           | 124.0 | 696.0 | $\geq 0.2$            | 1                  |
| CADD           | 706.5 | 113.5 | 0.0011553000000000002 | 0.001572           |
| CAIM           | 49.0  | 771.0 | $\geq 0.2$            | 1                  |
| Chi2           | 87.0  | 693.0 | $\geq 0.2$            | 1                  |
| ChiMerge       | 50.0  | 770.0 | $\geq 0.2$            | 1                  |
| DIBD           | 204.0 | 576.0 | $\geq 0.2$            | 1                  |
| Distance       | 92.0  | 728.0 | $\geq 0.2$            | 1                  |
| EqualFrequency | 61.0  | 759.0 | $\geq 0.2$            | 1                  |
| EqualWidth     | 112.0 | 671.0 | $\geq 0.2$            | 1                  |
| Extended Chi2  | 167.5 | 652.5 | $\geq 0.2$            | 1                  |
| FFD            | 211.0 | 609.0 | $\geq 0.2$            | 1                  |
| FUSINTER       | 45.0  | 775.0 | $\geq 0.2$            | 1                  |
| HDD            | 222.5 | 562.5 | $\geq 0.2$            | 1                  |
| HellingerBD    | 81.5  | 698.5 | $\geq 0.2$            | 1                  |
| Heter-Disc     | 552.5 | 232.5 | 0.18155               | 0.173998           |
| ID3            | 415.0 | 372.0 | $\geq 0.2$            | 1                  |
| IDD            | 436.5 | 348.5 | $\geq 0.2$            | 1                  |
| Khiops         | 87.0  | 693.0 | $\geq 0.2$            | 1                  |
| MDLP           | 63.5  | 716.5 | $\geq 0.2$            | 1                  |
| Modified Chi2  | 69.0  | 714.0 | $\geq 0.2$            | 1                  |
| MODL           | 57.0  | 723.0 | $\geq 0.2$            | 1                  |
| MVD            | 383.5 | 436.5 | $\geq 0.2$            | 1                  |
| PKID           | 265.0 | 555.0 | $\geq 0.2$            | 1                  |
| UCPD           | 66.0  | 754.0 | $\geq 0.2$            | 1                  |
| USD            | 282.0 | 538.0 | $\geq 0.2$            | 1                  |
| Zeta           | 63.0  | 757.0 | $\geq 0.2$            | 1                  |

Table 25: Results obtained by the Wilcoxon test for algorithm ClusterAnalysis

### 9.2 Confidence intervals for Median of differences

| $\alpha=0.90$  | Confidence interval   | Exact confidence |
|----------------|-----------------------|------------------|
| 1R             | [-0.06745 , 0.07495]  | 0.90276          |
| Ameva          | [-0.2057 , -0.09615]  | 0.90276          |
| Bayesian       | [-0.02425 , 0.0336]   | 0.90276          |
| CACC           | [-0.18345 , -0.07365] | 0.90276          |
| CADD           | [0.1016 , 0.2469]     | 0.90276          |
| CAIM           | [-0.2265 , -0.12215]  | 0.90276          |
| Chi2           | [-0.1865 , -0.0839]   | 0.90276          |
| ChiMerge       | [-0.20975 , -0.1163]  | 0.90276          |
| DIBD           | [-0.1499 , -0.03425]  | 0.90276          |
| Distance       | [-0.21885 , -0.09745] | 0.90276          |
| EqualFrequency | [-0.1231 , -0.07]     | 0.90276          |
| EqualWidth     | [-0.1077 , -0.03755]  | 0.90276          |
| Extended Chi2  | [-0.1262 , -0.04385]  | 0.90276          |
| FFD            | [-0.0741 , -0.011]    | 0.90276          |
| FUSINTER       | [-0.21365 , -0.10385] | 0.90276          |
| HDD            | [-0.0884 , -0.00895]  | 0.90276          |
| HellingerBD    | [-0.1509 , -0.05735]  | 0.90276          |
| Heter-Disc     | [0.0164 , 0.155]      | 0.90276          |
| ID3            | [-0.0104 , 0.0418]    | 0.90276          |
| IDD            | [-0.0312 , 0.073]     | 0.90276          |
| Khiops         | [-0.17955 , -0.07525] | 0.90276          |
| MDLP           | [-0.2186 , -0.0986]   | 0.90276          |
| Modified Chi2  | [-0.15945 , -0.0591]  | 0.90276          |
| MODL           | [-0.14475 , -0.06885] | 0.90276          |
| MVD            | [-0.055 , 0.02975]    | 0.90276          |
| PKID           | [-0.0653 , -0.0017]   | 0.90276          |
| UCPD           | [-0.172 , -0.0821]    | 0.90276          |
| USD            | [-0.05885 , 0]        | 0.90276          |
| Zeta           | [-0.1919 , -0.0996]   | 0.90276          |

Table 26: Confidence intervals for algorithm ClusterAnalysis ( $\alpha=0.90$ )

| $\alpha=0.95$  | Confidence interval   | Exact confidence |
|----------------|-----------------------|------------------|
| 1R             | [-0.0754 , 0.0894]    | 0.95024          |
| Ameva          | [-0.2181 , -0.0859]   | 0.95024          |
| Bayesian       | [-0.0308 , 0.03695]   | 0.95024          |
| CACC           | [-0.1979 , -0.06555]  | 0.95024          |
| CADD           | [0.089 , 0.2657]      | 0.95024          |
| CAIM           | [-0.23645 , -0.11555] | 0.95024          |
| Chi2           | [-0.1975 , -0.071]    | 0.95024          |
| ChiMerge       | [-0.2201 , -0.10945]  | 0.95024          |
| DIBD           | [-0.1617 , -0.02205]  | 0.95024          |
| Distance       | [-0.22845 , -0.08745] | 0.95024          |
| EqualFrequency | [-0.1312 , -0.0617]   | 0.95024          |
| EqualWidth     | [-0.11735 , -0.0347]  | 0.95024          |
| Extended Chi2  | [-0.13615 , -0.03605] | 0.95024          |
| FFD            | [-0.0761 , -0.00855]  | 0.95024          |
| FUSINTER       | [-0.22415 , -0.0968]  | 0.95024          |
| HDD            | [-0.10335 , -0.00655] | 0.95024          |
| HellingerBD    | [-0.1678 , -0.0517]   | 0.95024          |
| Heter-Disc     | [0.0057 , 0.16835]    | 0.95024          |
| ID3            | [-0.01565 , 0.0537]   | 0.95024          |
| IDD            | [-0.036 , 0.08435]    | 0.95024          |
| Khiops         | [-0.1908 , -0.066]    | 0.95024          |
| MDLP           | [-0.2277 , -0.0907]   | 0.95024          |
| Modified Chi2  | [-0.1706 , -0.05425]  | 0.95024          |
| MODL           | [-0.15205 , -0.0614]  | 0.95024          |
| MVD            | [-0.0715 , 0.0404]    | 0.95024          |
| PKID           | [-0.0716 , 0]         | 0.95024          |
| UCPD           | [-0.1838 , -0.07405]  | 0.95024          |
| USD            | [-0.06925 , 0.0011]   | 0.95024          |
| Zeta           | [-0.2027 , -0.0927]   | 0.95024          |

Table 27: Confidence intervals for algorithm ClusterAnalysis ( $\alpha=0.95$ )

## 10 Detailed results for DIBD

### 10.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| 1R              | 624.0 | 156.0 | 7.494E-4      | 0.001066           |
| Ameva           | 234.0 | 586.0 | $\geq 0.2$    | 1                  |
| Bayesian        | 607.5 | 212.5 | 0.02114       | 0.021527           |
| CACC            | 228.0 | 592.0 | $\geq 0.2$    | 1                  |
| CADD            | 764.0 | 19.0  | 4.468E-9      | 0.000001           |
| CAIM            | 142.0 | 678.0 | $\geq 0.2$    | 1                  |
| Chi2            | 256.0 | 564.0 | $\geq 0.2$    | 1                  |
| ChiMerge        | 174.0 | 646.0 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 576.0 | 204.0 | 0.008562      | 0.009252           |
| Distance        | 141.5 | 678.5 | $\geq 0.2$    | 1                  |
| EqualFrequency  | 379.5 | 440.5 | $\geq 0.2$    | 1                  |
| EqualWidth      | 452.0 | 368.0 | $\geq 0.2$    | 0.567827           |
| Extended Chi2   | 389.0 | 431.0 | $\geq 0.2$    | 1                  |
| FFD             | 525.0 | 255.0 | 0.06          | 0.058637           |
| FUSINTER        | 159.5 | 660.5 | $\geq 0.2$    | 1                  |
| HDD             | 453.0 | 367.0 | $\geq 0.2$    | 0.558752           |
| HellingerBD     | 347.0 | 473.0 | $\geq 0.2$    | 1                  |
| Heter-Disc      | 719.5 | 100.5 | 3.238E-5      | 0.000088           |
| ID3             | 603.0 | 217.0 | 0.008622      | 0.009298           |
| IDD             | 646.0 | 134.0 | 1.9234E-4     | 0.000344           |
| Khiops          | 257.0 | 563.0 | $\geq 0.2$    | 1                  |
| MDLP            | 103.0 | 677.0 | $\geq 0.2$    | 1                  |
| Modified Chi2   | 327.0 | 493.0 | $\geq 0.2$    | 1                  |
| MODL            | 305.0 | 515.0 | $\geq 0.2$    | 1                  |
| MVD             | 526.0 | 257.0 | 0.15786       | 0.151802           |
| PKID            | 538.0 | 282.0 | 0.08666       | 0.084131           |
| UCPD            | 249.0 | 571.0 | $\geq 0.2$    | 1                  |
| USD             | 525.0 | 295.0 | 0.12472       | 0.12055            |
| Zeta            | 244.0 | 576.0 | $\geq 0.2$    | 1                  |

Table 28: Results obtained by the Wilcoxon test for algorithm DIBD

### 10.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [0.0446 , 0.19265]    | 0.90276          |
| Ameva           | [-0.0895 , -0.01855]  | 0.90276          |
| Bayesian        | [0.02685 , 0.1427]    | 0.90276          |
| CACC            | [-0.0746 , -0.011]    | 0.90276          |
| CADD            | [0.20655 , 0.3549]    | 0.90276          |
| CAIM            | [-0.09035 , -0.0291]  | 0.90276          |
| Chi2            | [-0.04755 , -0.00545] | 0.90276          |
| ChiMerge        | [-0.07855 , -0.02465] | 0.90276          |
| ClusterAnalysis | [0.03425 , 0.1499]    | 0.90276          |
| Distance        | [-0.0901 , -0.02285]  | 0.90276          |
| EqualFrequency  | [-0.03695 , 0.0176]   | 0.90276          |
| EqualWidth      | [-0.02055 , 0.03965]  | 0.90276          |
| Extended Chi2   | [-0.0398 , 0.04495]   | 0.90276          |
| FFD             | [0.00575 , 0.09605]   | 0.90276          |
| FUSINTER        | [-0.08285 , -0.02335] | 0.90276          |
| HDD             | [-0.0259 , 0.0911]    | 0.90276          |
| HellingerBD     | [-0.05205 , 0.0147]   | 0.90276          |
| Heter-Disc      | [0.0678 , 0.24405]    | 0.90276          |
| ID3             | [0.0466 , 0.1919]     | 0.90276          |
| IDD             | [0.06695 , 0.18245]   | 0.90276          |
| Khiops          | [-0.0639 , -0.0057]   | 0.90276          |
| MDLP            | [-0.08035 , -0.0334]  | 0.90276          |
| Modified Chi2   | [-0.0484 , 0.00895]   | 0.90276          |
| MODL            | [-0.05345 , 0.00565]  | 0.90276          |
| MVD             | [0.00455 , 0.12895]   | 0.90276          |
| PKID            | [0.0024 , 0.10115]    | 0.90276          |
| UCPD            | [-0.06675 , -0.0053]  | 0.90276          |
| USD             | [-0.0029 , 0.1161]    | 0.90276          |
| Zeta            | [-0.06335 , -0.0107]  | 0.90276          |

Table 29: Confidence intervals for algorithm DIBD ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [0.03555 , 0.2074]    | 0.95024          |
| Ameva           | [-0.09505 , -0.01065] | 0.95024          |
| Bayesian        | [0.01815 , 0.1577]    | 0.95024          |
| CACC            | [-0.0858 , -0.00625]  | 0.95024          |
| CADD            | [0.1926 , 0.3666]     | 0.95024          |
| CAIM            | [-0.09835 , -0.0244]  | 0.95024          |
| Chi2            | [-0.0522 , -0.00185]  | 0.95024          |
| ChiMerge        | [-0.08345 , -0.0182]  | 0.95024          |
| ClusterAnalysis | [0.02205 , 0.1617]    | 0.95024          |
| Distance        | [-0.097 , -0.019]     | 0.95024          |
| EqualFrequency  | [-0.04155 , 0.0229]   | 0.95024          |
| EqualWidth      | [-0.02835 , 0.04555]  | 0.95024          |
| Extended Chi2   | [-0.0458 , 0.05605]   | 0.95024          |
| FFD             | [-0.0024 , 0.1014]    | 0.95024          |
| FUSINTER        | [-0.0943 , -0.01615]  | 0.95024          |
| HDD             | [-0.036 , 0.1032]     | 0.95024          |
| HellingerBD     | [-0.0604 , 0.0206]    | 0.95024          |
| Heter-Disc      | [0.06025 , 0.25645]   | 0.95024          |
| ID3             | [0.0328 , 0.2041]     | 0.95024          |
| IDD             | [0.05485 , 0.19495]   | 0.95024          |
| Khiops          | [-0.0729 , -0.0009]   | 0.95024          |
| MDLP            | [-0.0862 , -0.0295]   | 0.95024          |
| Modified Chi2   | [-0.05575 , 0.0167]   | 0.95024          |
| MODL            | [-0.05855 , 0.0117]   | 0.95024          |
| MVD             | [-0.0037 , 0.1546]    | 0.95024          |
| PKID            | [-0.0057 , 0.11185]   | 0.95024          |
| UCPD            | [-0.0777 , -0.00235]  | 0.95024          |
| USD             | [-0.01105 , 0.13295]  | 0.95024          |
| Zeta            | [-0.071 , -0.0045]    | 0.95024          |

Table 30: Confidence intervals for algorithm DIBD ( $\alpha=0.95$ )

## 11 Detailed results for Distance

### 11.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| 1R              | 721.0 | 99.0  | 7.508E-6      | 0.000028           |
| Ameva           | 406.5 | 376.5 | $\geq 0.2$    | 1                  |
| Bayesian        | 725.0 | 95.0  | 5.372E-6      | 0.000022           |
| CACC            | 447.0 | 336.0 | $\geq 0.2$    | 0.80926            |
| CADD            | 800.0 | 20.0  | 6.748E-10     | 0                  |
| CAIM            | 354.5 | 465.5 | $\geq 0.2$    | 1                  |
| Chi2            | 445.5 | 374.5 | $\geq 0.2$    | 1                  |
| ChiMerge        | 377.0 | 406.0 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 728.0 | 92.0  | 4.154E-6      | 0.000019           |
| DIBD            | 678.5 | 141.5 | 1.6502E-4     | 0.000286           |
| EqualFrequency  | 542.0 | 238.0 | 0.03344       | 0.033326           |
| EqualWidth      | 608.0 | 172.0 | 0.0018188     | 0.002254           |
| Extended Chi2   | 545.0 | 275.0 | 0.07034       | 0.068562           |
| FFD             | 660.0 | 120.0 | 7.348E-5      | 0.00016            |
| FUSINTER        | 307.0 | 473.0 | $\geq 0.2$    | 1                  |
| HDD             | 591.0 | 229.0 | 0.0399        | 0.039107           |
| HellingerBD     | 583.5 | 236.5 | 0.05214       | 0.050271           |
| Heter-Disc      | 765.0 | 55.0  | 1.0366E-7     | 0.000002           |
| ID3             | 713.5 | 106.5 | 5.196E-5      | 0.000122           |
| IDD             | 729.0 | 51.0  | 1.2902E-7     | 0.000002           |
| Khiops          | 565.0 | 215.0 | 0.013706      | 0.014321           |
| MDLP            | 294.0 | 526.0 | $\geq 0.2$    | 1                  |
| Modified Chi2   | 461.0 | 319.0 | $\geq 0.2$    | 0.318385           |
| MODL            | 499.0 | 321.0 | $\geq 0.2$    | 0.844311           |
| MVD             | 634.0 | 186.0 | 0.00206       | 0.002548           |
| PKID            | 658.0 | 122.0 | 8.474E-5      | 0.000179           |
| UCPD            | 553.0 | 267.0 | 0.05482       | 0.053351           |
| USD             | 600.0 | 180.0 | 0.002752      | 0.003254           |
| Zeta            | 459.0 | 361.0 | $\geq 0.2$    | 0.884485           |

Table 31: Results obtained by the Wilcoxon test for algorithm Distance

### 11.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.0984 , 0.2636]    | 0.90276          |
| Ameva           | [-0.0122 , 0.01455]  | 0.90276          |
| Bayesian        | [0.0888 , 0.2226]    | 0.90276          |
| CACC            | [-0.00485 , 0.01375] | 0.90276          |
| CADD            | [0.2728 , 0.42425]   | 0.90276          |
| CAIM            | [-0.01925 , 0.00535] | 0.90276          |
| Chi2            | [-0.00925 , 0.0206]  | 0.90276          |
| ChiMerge        | [-0.0225 , 0.01795]  | 0.90276          |
| ClusterAnalysis | [0.09745 , 0.21885]  | 0.90276          |
| DIBD            | [0.02285 , 0.0901]   | 0.90276          |
| EqualFrequency  | [0.007 , 0.0691]     | 0.90276          |
| EqualWidth      | [0.02465 , 0.0904]   | 0.90276          |
| Extended Chi2   | [0.00195 , 0.09445]  | 0.90276          |
| FFD             | [0.04925 , 0.14025]  | 0.90276          |
| FUSINTER        | [-0.0193 , 0.0026]   | 0.90276          |
| HDD             | [0.01255 , 0.1246]   | 0.90276          |
| HellingerBD     | [0.0125 , 0.05875]   | 0.90276          |
| Heter-Disc      | [0.16125 , 0.30775]  | 0.90276          |
| ID3             | [0.0944 , 0.2454]    | 0.90276          |
| IDD             | [0.121 , 0.2502]     | 0.90276          |
| Khiops          | [0.00765 , 0.03955]  | 0.90276          |
| MDLP            | [-0.01295 , 0.00025] | 0.90276          |
| Modified Chi2   | [-0.0081 , 0.04565]  | 0.90276          |
| MODL            | [-0.0037 , 0.0323]   | 0.90276          |
| MVD             | [0.0322 , 0.21975]   | 0.90276          |
| PKID            | [0.059 , 0.15935]    | 0.90276          |
| UCPD            | [0.00165 , 0.0374]   | 0.90276          |
| USD             | [0.04605 , 0.1619]   | 0.90276          |
| Zeta            | [-0.0073 , 0.02505]  | 0.90276          |

Table 32: Confidence intervals for algorithm Distance ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.08605 , 0.277]    | 0.95024          |
| Ameva           | [-0.01565 , 0.01765] | 0.95024          |
| Bayesian        | [0.07515 , 0.2326]   | 0.95024          |
| CACC            | [-0.0067 , 0.0157]   | 0.95024          |
| CADD            | [0.2637 , 0.4356]    | 0.95024          |
| CAIM            | [-0.02335 , 0.0081]  | 0.95024          |
| Chi2            | [-0.01215 , 0.0249]  | 0.95024          |
| ChiMerge        | [-0.0276 , 0.0213]   | 0.95024          |
| ClusterAnalysis | [0.08745 , 0.22845]  | 0.95024          |
| DIBD            | [0.019 , 0.097]      | 0.95024          |
| EqualFrequency  | [0.00195 , 0.07705]  | 0.95024          |
| EqualWidth      | [0.01965 , 0.09575]  | 0.95024          |
| Extended Chi2   | [-0.0019 , 0.10235]  | 0.95024          |
| FFD             | [0.04375 , 0.15035]  | 0.95024          |
| FUSINTER        | [-0.02065 , 0.0051]  | 0.95024          |
| HDD             | [0.0069 , 0.15235]   | 0.95024          |
| HellingerBD     | [0.0069 , 0.06205]   | 0.95024          |
| Heter-Disc      | [0.14135 , 0.32825]  | 0.95024          |
| ID3             | [0.0817 , 0.2538]    | 0.95024          |
| IDD             | [0.11085 , 0.26205]  | 0.95024          |
| Khiops          | [0.0046 , 0.0423]    | 0.95024          |
| MDLP            | [-0.01365 , 0.00165] | 0.95024          |
| Modified Chi2   | [-0.0108 , 0.0535]   | 0.95024          |
| MODL            | [-0.00575 , 0.04235] | 0.95024          |
| MVD             | [0.02485 , 0.23335]  | 0.95024          |
| PKID            | [0.048 , 0.1691]     | 0.95024          |
| UCPD            | [-0.00055 , 0.039]   | 0.95024          |
| USD             | [0.03215 , 0.1801]   | 0.95024          |
| Zeta            | [-0.00925 , 0.02755] | 0.95024          |

Table 33: Confidence intervals for algorithm Distance ( $\alpha=0.95$ )

## 12 Detailed results for EqualFrequency

### 12.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| 1R              | 591.0 | 189.0 | 0.00429       | 0.004924           |
| Ameva           | 251.0 | 529.0 | $\geq 0.2$    | 1                  |
| Bayesian        | 703.5 | 116.5 | 1.0977E-4     | 0.000224           |
| CACC            | 302.0 | 478.0 | $\geq 0.2$    | 1                  |
| CADD            | 772.5 | 12.5  | 4.598E-9      | 0.000001           |
| CAIM            | 149.0 | 631.0 | $\geq 0.2$    | 1                  |
| Chi2            | 307.5 | 512.5 | $\geq 0.2$    | 1                  |
| ChiMerge        | 151.0 | 629.0 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 759.0 | 61.0  | 3.194E-6      | 0.000019           |
| DIBD            | 440.5 | 379.5 | $\geq 0.2$    | 1                  |
| Distance        | 238.0 | 542.0 | $\geq 0.2$    | 1                  |
| EqualWidth      | 527.0 | 293.0 | $\geq 0.2$    | 0.524595           |
| Extended Chi2   | 454.0 | 329.0 | $\geq 0.2$    | 0.728603           |
| FFD             | 672.5 | 147.5 | 0.009322      | 0.010081           |
| FUSINTER        | 174.0 | 609.0 | $\geq 0.2$    | 1                  |
| HDD             | 532.0 | 288.0 | $\geq 0.2$    | 0.474713           |
| HellingerBD     | 417.5 | 402.5 | $\geq 0.2$    | 1                  |
| Heter-Disc      | 696.0 | 87.0  | 2.032E-5      | 0.000064           |
| ID3             | 756.5 | 63.5  | 1.637E-5      | 0.000061           |
| IDD             | 656.0 | 127.0 | 4.336E-4      | 0.000688           |
| Khiops          | 283.0 | 500.0 | $\geq 0.2$    | 1                  |
| MDLP            | 214.5 | 605.5 | $\geq 0.2$    | 1                  |
| Modified Chi2   | 396.0 | 424.0 | $\geq 0.2$    | 1                  |
| MODL            | 317.5 | 502.5 | $\geq 0.2$    | 1                  |
| MVD             | 546.5 | 238.5 | $\geq 0.2$    | 0.207239           |
| PKID            | 711.5 | 108.5 | 8.112E-4      | 0.001196           |
| UCPD            | 329.0 | 491.0 | $\geq 0.2$    | 1                  |
| USD             | 602.0 | 181.0 | 0.009172      | 0.009887           |
| Zeta            | 214.5 | 565.5 | $\geq 0.2$    | 1                  |

Table 34: Results obtained by the Wilcoxon test for algorithm EqualFrequency

### 12.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [0.03205 , 0.2087]    | 0.90276          |
| Ameva           | [-0.07375 , -0.005]   | 0.90276          |
| Bayesian        | [0.0589 , 0.14215]    | 0.90276          |
| CACC            | [-0.0452 , 0.00495]   | 0.90276          |
| CADD            | [0.20995 , 0.36245]   | 0.90276          |
| CAIM            | [-0.0797 , -0.02655]  | 0.90276          |
| Chi2            | [-0.0514 , 0.00325]   | 0.90276          |
| ChiMerge        | [-0.0682 , -0.0229]   | 0.90276          |
| ClusterAnalysis | [0.07 , 0.1231]       | 0.90276          |
| DIBD            | [-0.0176 , 0.03695]   | 0.90276          |
| Distance        | [-0.0691 , -0.007]    | 0.90276          |
| EqualWidth      | [-0.00005 , 0.03525]  | 0.90276          |
| Extended Chi2   | [-0.0167 , 0.0366]    | 0.90276          |
| FFD             | [0.0205 , 0.06885]    | 0.90276          |
| FUSINTER        | [-0.0691 , -0.01475]  | 0.90276          |
| HDD             | [0 , 0.0772]          | 0.90276          |
| HellingerBD     | [-0.0221 , 0.0233]    | 0.90276          |
| Heter-Disc      | [0.1135 , 0.2471]     | 0.90276          |
| ID3             | [0.0527 , 0.16495]    | 0.90276          |
| IDD             | [0.0642 , 0.1881]     | 0.90276          |
| Khiops          | [-0.03635 , 0.0011]   | 0.90276          |
| MDLP            | [-0.0684 , -0.0172]   | 0.90276          |
| Modified Chi2   | [-0.0315 , 0.0147]    | 0.90276          |
| MODL            | [-0.0377 , 0.0046]    | 0.90276          |
| MVD             | [0.00755 , 0.16225]   | 0.90276          |
| PKID            | [0.0268 , 0.088]      | 0.90276          |
| UCPD            | [-0.05325 , 0.00555]  | 0.90276          |
| USD             | [0.0166 , 0.10345]    | 0.90276          |
| Zeta            | [-0.05565 , -0.00985] | 0.90276          |

Table 35: Confidence intervals for algorithm EqualFrequency ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [0.0227 , 0.2228]     | 0.95024          |
| Ameva           | [-0.0806 , 0.00155]   | 0.95024          |
| Bayesian        | [0.0527 , 0.15005]    | 0.95024          |
| CACC            | [-0.05335 , 0.0069]   | 0.95024          |
| CADD            | [0.19675 , 0.3806]    | 0.95024          |
| CAIM            | [-0.08915 , -0.0219]  | 0.95024          |
| Chi2            | [-0.05685 , 0.0073]   | 0.95024          |
| ChiMerge        | [-0.0743 , -0.0196]   | 0.95024          |
| ClusterAnalysis | [0.0617 , 0.1312]     | 0.95024          |
| DIBD            | [-0.0229 , 0.04155]   | 0.95024          |
| Distance        | [-0.07705 , -0.00195] | 0.95024          |
| EqualWidth      | [-0.0026 , 0.04]      | 0.95024          |
| Extended Chi2   | [-0.02155 , 0.0438]   | 0.95024          |
| FFD             | [0.0182 , 0.0795]     | 0.95024          |
| FUSINTER        | [-0.0747 , -0.0107]   | 0.95024          |
| HDD             | [-0.00205 , 0.0953]   | 0.95024          |
| HellingerBD     | [-0.02725 , 0.02645]  | 0.95024          |
| Heter-Disc      | [0.0886 , 0.265]      | 0.95024          |
| ID3             | [0.04925 , 0.1751]    | 0.95024          |
| IDD             | [0.0578 , 0.20535]    | 0.95024          |
| Khiops          | [-0.0416 , 0.0056]    | 0.95024          |
| MDLP            | [-0.0733 , -0.0112]   | 0.95024          |
| Modified Chi2   | [-0.0378 , 0.018]     | 0.95024          |
| MODL            | [-0.0408 , 0.0085]    | 0.95024          |
| MVD             | [0.0015 , 0.17595]    | 0.95024          |
| PKID            | [0.0233 , 0.0905]     | 0.95024          |
| UCPD            | [-0.05925 , 0.00895]  | 0.95024          |
| USD             | [0.01065 , 0.10855]   | 0.95024          |
| Zeta            | [-0.06075 , -0.00575] | 0.95024          |

Table 36: Confidence intervals for algorithm EqualFrequency ( $\alpha=0.95$ )

## 13 Detailed results for EqualWidth

### 13.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| 1R              | 561.5 | 258.5 | 0.10644       | 0.102784           |
| Ameva           | 161.0 | 619.0 | $\geq 0.2$    | 1                  |
| Bayesian        | 634.0 | 149.0 | 0.001705      | 0.002195           |
| CACC            | 208.0 | 572.0 | $\geq 0.2$    | 1                  |
| CADD            | 815.0 | 5.0   | 2.91E-10      | 0                  |
| CAIM            | 97.0  | 683.0 | $\geq 0.2$    | 1                  |
| Chi2            | 183.5 | 636.5 | $\geq 0.2$    | 1                  |
| ChiMerge        | 92.0  | 688.0 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 671.0 | 112.0 | 1.5154E-4     | 0.000294           |
| DIBD            | 368.0 | 452.0 | $\geq 0.2$    | 1                  |
| Distance        | 172.0 | 608.0 | $\geq 0.2$    | 1                  |
| EqualFrequency  | 293.0 | 527.0 | $\geq 0.2$    | 1                  |
| Extended Chi2   | 346.5 | 473.5 | $\geq 0.2$    | 1                  |
| FFD             | 549.5 | 270.5 | $\geq 0.2$    | 0.321337           |
| FUSINTER        | 80.0  | 700.0 | $\geq 0.2$    | 1                  |
| HDD             | 486.0 | 334.0 | $\geq 0.2$    | 1                  |
| HellingerBD     | 264.0 | 519.0 | $\geq 0.2$    | 1                  |
| Heter-Disc      | 699.5 | 120.5 | 1.461E-4      | 0.00028            |
| ID3             | 691.5 | 128.5 | 0.003096      | 0.003757           |
| IDD             | 664.0 | 156.0 | 0.004598      | 0.005293           |
| Khiops          | 232.5 | 587.5 | $\geq 0.2$    | 1                  |
| MDLP            | 148.0 | 632.0 | $\geq 0.2$    | 1                  |
| Modified Chi2   | 271.5 | 513.5 | $\geq 0.2$    | 1                  |
| MODL            | 260.5 | 559.5 | $\geq 0.2$    | 1                  |
| MVD             | 542.0 | 241.0 | 0.09736       | 0.094017           |
| PKID            | 564.5 | 255.5 | $\geq 0.2$    | 0.46747            |
| UCPD            | 196.0 | 624.0 | $\geq 0.2$    | 1                  |
| USD             | 541.0 | 279.0 | $\geq 0.2$    | 0.391873           |
| Zeta            | 138.0 | 642.0 | $\geq 0.2$    | 1                  |

Table 37: Results obtained by the Wilcoxon test for algorithm EqualWidth

### 13.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [0.0123 , 0.19725]    | 0.90276          |
| Ameva           | [-0.094 , -0.03035]   | 0.90276          |
| Bayesian        | [0.04745 , 0.1269]    | 0.90276          |
| CACC            | [-0.07505 , -0.01495] | 0.90276          |
| CADD            | [0.19665 , 0.343]     | 0.90276          |
| CAIM            | [-0.11445 , -0.04875] | 0.90276          |
| Chi2            | [-0.0689 , -0.01965]  | 0.90276          |
| ChiMerge        | [-0.1028 , -0.04415]  | 0.90276          |
| ClusterAnalysis | [0.03755 , 0.1077]    | 0.90276          |
| DIBD            | [-0.03965 , 0.02055]  | 0.90276          |
| Distance        | [-0.0904 , -0.02465]  | 0.90276          |
| EqualFrequency  | [-0.03525 , 0.00005]  | 0.90276          |
| Extended Chi2   | [-0.0415 , 0.01235]   | 0.90276          |
| FFD             | [0.00095 , 0.0531]    | 0.90276          |
| FUSINTER        | [-0.09045 , -0.03405] | 0.90276          |
| HDD             | [-0.00845 , 0.0652]   | 0.90276          |
| HellingerBD     | [-0.0413 , -0.0006]   | 0.90276          |
| Heter-Disc      | [0.1055 , 0.237]      | 0.90276          |
| ID3             | [0.0364 , 0.14005]    | 0.90276          |
| IDD             | [0.0509 , 0.1786]     | 0.90276          |
| Khiops          | [-0.06195 , -0.012]   | 0.90276          |
| MDLP            | [-0.0927 , -0.0351]   | 0.90276          |
| Modified Chi2   | [-0.051 , 0]          | 0.90276          |
| MODL            | [-0.05355 , -0.007]   | 0.90276          |
| MVD             | [0.0052 , 0.13725]    | 0.90276          |
| PKID            | [0.0059 , 0.07375]    | 0.90276          |
| UCPD            | [-0.0658 , -0.0159]   | 0.90276          |
| USD             | [0.0023 , 0.0834]     | 0.90276          |
| Zeta            | [-0.0824 , -0.028]    | 0.90276          |

Table 38: Confidence intervals for algorithm EqualWidth ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [0.00325 , 0.2133]    | 0.95024          |
| Ameva           | [-0.10145 , -0.0242]  | 0.95024          |
| Bayesian        | [0.03785 , 0.1376]    | 0.95024          |
| CACC            | [-0.0829 , -0.01095]  | 0.95024          |
| CADD            | [0.1843 , 0.3548]     | 0.95024          |
| CAIM            | [-0.1201 , -0.04315]  | 0.95024          |
| Chi2            | [-0.07745 , -0.0169]  | 0.95024          |
| ChiMerge        | [-0.1109 , -0.0405]   | 0.95024          |
| ClusterAnalysis | [0.0347 , 0.11735]    | 0.95024          |
| DIBD            | [-0.04555 , 0.02835]  | 0.95024          |
| Distance        | [-0.09575 , -0.01965] | 0.95024          |
| EqualFrequency  | [-0.04 , 0.0026]      | 0.95024          |
| Extended Chi2   | [-0.04605 , 0.0211]   | 0.95024          |
| FFD             | [-0 , 0.062]          | 0.95024          |
| FUSINTER        | [-0.09615 , -0.0314]  | 0.95024          |
| HDD             | [-0.0162 , 0.07405]   | 0.95024          |
| HellingerBD     | [-0.04565 , 0.0018]   | 0.95024          |
| Heter-Disc      | [0.0962 , 0.25245]    | 0.95024          |
| ID3             | [0.0341 , 0.15485]    | 0.95024          |
| IDD             | [0.04045 , 0.20205]   | 0.95024          |
| Khiops          | [-0.069 , -0.00755]   | 0.95024          |
| MDLP            | [-0.099 , -0.0301]    | 0.95024          |
| Modified Chi2   | [-0.0584 , 0.00245]   | 0.95024          |
| MODL            | [-0.0576 , -0.00075]  | 0.95024          |
| MVD             | [0.00215 , 0.1538]    | 0.95024          |
| PKID            | [0 , 0.0793]          | 0.95024          |
| UCPD            | [-0.0732 , -0.0129]   | 0.95024          |
| USD             | [-0.00325 , 0.0927]   | 0.95024          |
| Zeta            | [-0.08905 , -0.0236]  | 0.95024          |

Table 39: Confidence intervals for algorithm EqualWidth ( $\alpha=0.95$ )

## 14 Detailed results for Extended Chi2

### 14.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value         | Asymptotic P-value |
|-----------------|-------|-------|-----------------------|--------------------|
| 1R              | 560.0 | 223.0 | 0.05274               | 0.051639           |
| Ameva           | 197.0 | 623.0 | $\geq 0.2$            | 1                  |
| Bayesian        | 660.0 | 123.0 | 3.308E-4              | 0.000551           |
| CACC            | 279.0 | 541.0 | $\geq 0.2$            | 1                  |
| CADD            | 722.5 | 62.5  | 7.4480000000000005E-6 | 0.000034           |
| CAIM            | 141.5 | 678.5 | $\geq 0.2$            | 1                  |
| Chi2            | 290.5 | 529.5 | $\geq 0.2$            | 1                  |
| ChiMerge        | 176.0 | 644.0 | $\geq 0.2$            | 1                  |
| ClusterAnalysis | 652.5 | 167.5 | 0.002605              | 0.003165           |
| DIBD            | 431.0 | 389.0 | $\geq 0.2$            | 0.772591           |
| Distance        | 275.0 | 545.0 | $\geq 0.2$            | 1                  |
| EqualFrequency  | 329.0 | 454.0 | $\geq 0.2$            | 1                  |
| EqualWidth      | 473.5 | 346.5 | $\geq 0.2$            | 0.722361           |
| FFD             | 498.5 | 321.5 | $\geq 0.2$            | 0.472842           |
| FUSINTER        | 212.0 | 568.0 | $\geq 0.2$            | 1                  |
| HDD             | 467.5 | 315.5 | $\geq 0.2$            | 0.581161           |
| HellingerBD     | 354.0 | 466.0 | $\geq 0.2$            | 1                  |
| Heter-Disc      | 644.0 | 139.0 | 9.368E-4              | 0.001312           |
| ID3             | 697.0 | 123.0 | 6.254E-4              | 0.000943           |
| IDD             | 638.0 | 182.0 | 0.016752              | 0.017305           |
| Khiops          | 323.0 | 457.0 | $\geq 0.2$            | 1                  |
| MDLP            | 243.0 | 577.0 | $\geq 0.2$            | 1                  |
| Modified Chi2   | 357.0 | 426.0 | $\geq 0.2$            | 1                  |
| MODL            | 351.0 | 432.0 | $\geq 0.2$            | 1                  |
| MVD             | 532.0 | 288.0 | $\geq 0.2$            | 0.474713           |
| PKID            | 572.0 | 248.0 | 0.18664               | 0.17919            |
| UCPD            | 297.5 | 522.5 | $\geq 0.2$            | 1                  |
| USD             | 561.0 | 259.0 | $\geq 0.2$            | 0.241825           |
| Zeta            | 241.0 | 579.0 | $\geq 0.2$            | 1                  |

Table 40: Results obtained by the Wilcoxon test for algorithm Extended Chi2

### 14.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [0.02195 , 0.2062]    | 0.90276          |
| Ameva           | [-0.09495 , -0.01895] | 0.90276          |
| Bayesian        | [0.03605 , 0.13715]   | 0.90276          |
| CACC            | [-0.0814 , -0.00135]  | 0.90276          |
| CADD            | [0.1859 , 0.3599]     | 0.90276          |
| CAIM            | [-0.11295 , -0.0288]  | 0.90276          |
| Chi2            | [-0.05865 , 0.0001]   | 0.90276          |
| ChiMerge        | [-0.09 , -0.0295]     | 0.90276          |
| ClusterAnalysis | [0.04385 , 0.1262]    | 0.90276          |
| DIBD            | [-0.04495 , 0.0398]   | 0.90276          |
| Distance        | [-0.09445 , -0.00195] | 0.90276          |
| EqualFrequency  | [-0.0366 , 0.0167]    | 0.90276          |
| EqualWidth      | [-0.01235 , 0.0415]   | 0.90276          |
| FFD             | [-0.0065 , 0.0587]    | 0.90276          |
| FUSINTER        | [-0.10435 , -0.0082]  | 0.90276          |
| HDD             | [-0.0049 , 0.04845]   | 0.90276          |
| HellingerBD     | [-0.05815 , 0.01675]  | 0.90276          |
| Heter-Disc      | [0.0931 , 0.25845]    | 0.90276          |
| ID3             | [0.03795 , 0.13575]   | 0.90276          |
| IDD             | [0.03835 , 0.18325]   | 0.90276          |
| Khiops          | [-0.07355 , 0.0141]   | 0.90276          |
| MDLP            | [-0.0908 , -0.00685]  | 0.90276          |
| Modified Chi2   | [-0.02245 , 0.013]    | 0.90276          |
| MODL            | [-0.0545 , 0.0097]    | 0.90276          |
| MVD             | [0 , 0.1347]          | 0.90276          |
| PKID            | [0.00825 , 0.06865]   | 0.90276          |
| UCPD            | [-0.07495 , 0.00145]  | 0.90276          |
| USD             | [0.0054 , 0.07535]    | 0.90276          |
| Zeta            | [-0.0867 , -0.0076]   | 0.90276          |

Table 41: Confidence intervals for algorithm Extended Chi2 ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.0146 , 0.22315]   | 0.95024          |
| Ameva           | [-0.1012 , -0.0149]  | 0.95024          |
| Bayesian        | [0.03095 , 0.15275]  | 0.95024          |
| CACC            | [-0.0972 , 0.003]    | 0.95024          |
| CADD            | [0.17 , 0.37785]     | 0.95024          |
| CAIM            | [-0.1214 , -0.0237]  | 0.95024          |
| Chi2            | [-0.06745 , 0.00155] | 0.95024          |
| ChiMerge        | [-0.09695 , -0.0216] | 0.95024          |
| ClusterAnalysis | [0.03605 , 0.13615]  | 0.95024          |
| DIBD            | [-0.05605 , 0.0458]  | 0.95024          |
| Distance        | [-0.10235 , 0.0019]  | 0.95024          |
| EqualFrequency  | [-0.0438 , 0.02155]  | 0.95024          |
| EqualWidth      | [-0.0211 , 0.04605]  | 0.95024          |
| FFD             | [-0.01055 , 0.06635] | 0.95024          |
| FUSINTER        | [-0.12025 , -0.0057] | 0.95024          |
| HDD             | [-0.0065 , 0.0544]   | 0.95024          |
| HellingerBD     | [-0.0671 , 0.02305]  | 0.95024          |
| Heter-Disc      | [0.07455 , 0.2714]   | 0.95024          |
| ID3             | [0.0342 , 0.15385]   | 0.95024          |
| IDD             | [0.0309 , 0.19645]   | 0.95024          |
| Khiops          | [-0.0865 , 0.0216]   | 0.95024          |
| MDLP            | [-0.10135 , -0.0025] | 0.95024          |
| Modified Chi2   | [-0.06905 , 0.01985] | 0.95024          |
| MODL            | [-0.0615 , 0.0131]   | 0.95024          |
| MVD             | [-0.0075 , 0.154]    | 0.95024          |
| PKID            | [0.00375 , 0.07395]  | 0.95024          |
| UCPD            | [-0.0839 , 0.0054]   | 0.95024          |
| USD             | [0.0005 , 0.08215]   | 0.95024          |
| Zeta            | [-0.0924 , -0.00395] | 0.95024          |

Table 42: Confidence intervals for algorithm Extended Chi2 ( $\alpha=0.95$ )

## 15 Detailed results for FFD

### 15.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| 1R              | 448.0 | 335.0 | $\geq 0.2$    | 0.79759            |
| Ameva           | 127.0 | 653.0 | $\geq 0.2$    | 1                  |
| Bayesian        | 550.5 | 234.5 | 0.1926        | 0.184604           |
| CACC            | 167.0 | 613.0 | $\geq 0.2$    | 1                  |
| CADD            | 737.0 | 50.0  | 7.17E-6       | 0.000037           |
| CAIM            | 62.5  | 757.5 | $\geq 0.2$    | 1                  |
| Chi2            | 127.5 | 692.5 | $\geq 0.2$    | 1                  |
| ChiMerge        | 69.0  | 711.0 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 609.0 | 211.0 | 0.0556        | 0.054286           |
| DIBD            | 255.0 | 525.0 | $\geq 0.2$    | 1                  |
| Distance        | 120.0 | 660.0 | $\geq 0.2$    | 1                  |
| EqualFrequency  | 147.5 | 672.5 | $\geq 0.2$    | 1                  |
| EqualWidth      | 270.5 | 549.5 | $\geq 0.2$    | 1                  |
| Extended Chi2   | 321.5 | 498.5 | $\geq 0.2$    | 1                  |
| FUSINTER        | 62.0  | 718.0 | $\geq 0.2$    | 1                  |
| HDD             | 371.5 | 448.5 | $\geq 0.2$    | 1                  |
| HellingerBD     | 149.0 | 634.0 | $\geq 0.2$    | 1                  |
| Heter-Disc      | 628.0 | 192.0 | 0.02604       | 0.026213           |
| ID3             | 622.5 | 170.5 | $\geq 0.2$    | 0.648048           |
| IDD             | 514.5 | 270.5 | $\geq 0.2$    | 0.461085           |
| Khiops          | 113.0 | 670.0 | $\geq 0.2$    | 1                  |
| MDLP            | 123.5 | 696.5 | $\geq 0.2$    | 1                  |
| Modified Chi2   | 166.0 | 619.0 | $\geq 0.2$    | 1                  |
| MODL            | 149.0 | 634.0 | $\geq 0.2$    | 1                  |
| MVD             | 477.0 | 343.0 | $\geq 0.2$    | 1                  |
| PKID            | 445.5 | 374.5 | $\geq 0.2$    | 1                  |
| UCPD            | 107.0 | 713.0 | $\geq 0.2$    | 1                  |
| USD             | 367.5 | 417.5 | $\geq 0.2$    | 1                  |
| Zeta            | 93.0  | 687.0 | $\geq 0.2$    | 1                  |

Table 43: Results obtained by the Wilcoxon test for algorithm FFD

### 15.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [-0.0247 , 0.1567]    | 0.90276          |
| Ameva           | [-0.13995 , -0.0523]  | 0.90276          |
| Bayesian        | [0.00925 , 0.09725]   | 0.90276          |
| CACC            | [-0.10835 , -0.0344]  | 0.90276          |
| CADD            | [0.1503 , 0.32035]    | 0.90276          |
| CAIM            | [-0.16195 , -0.0745]  | 0.90276          |
| Chi2            | [-0.11205 , -0.03285] | 0.90276          |
| ChiMerge        | [-0.1477 , -0.07235]  | 0.90276          |
| ClusterAnalysis | [0.011 , 0.0741]      | 0.90276          |
| DIBD            | [-0.09605 , -0.00575] | 0.90276          |
| Distance        | [-0.14025 , -0.04925] | 0.90276          |
| EqualFrequency  | [-0.06885 , -0.0205]  | 0.90276          |
| EqualWidth      | [-0.0531 , -0.00095]  | 0.90276          |
| Extended Chi2   | [-0.0587 , 0.0065]    | 0.90276          |
| FUSINTER        | [-0.14355 , -0.0605]  | 0.90276          |
| HDD             | [-0.025 , 0.0133]     | 0.90276          |
| HellingerBD     | [-0.072 , -0.02355]   | 0.90276          |
| Heter-Disc      | [0.0514 , 0.20755]    | 0.90276          |
| ID3             | [0.0051 , 0.0808]     | 0.90276          |
| IDD             | [0 , 0.13505]         | 0.90276          |
| Khiops          | [-0.1101 , -0.03875]  | 0.90276          |
| MDLP            | [-0.1429 , -0.0543]   | 0.90276          |
| Modified Chi2   | [-0.1002 , -0.0215]   | 0.90276          |
| MODL            | [-0.09055 , -0.0354]  | 0.90276          |
| MVD             | [-0.01995 , 0.12035]  | 0.90276          |
| PKID            | [-0.0081 , 0.01585]   | 0.90276          |
| UCPD            | [-0.11765 , -0.032]   | 0.90276          |
| USD             | [-0.0183 , 0.03265]   | 0.90276          |
| Zeta            | [-0.1294 , -0.0561]   | 0.90276          |

Table 44: Confidence intervals for algorithm FFD ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [-0.03185 , 0.17595]  | 0.95024          |
| Ameva           | [-0.1482 , -0.0459]   | 0.95024          |
| Bayesian        | [0.0049 , 0.1054]     | 0.95024          |
| CACC            | [-0.12325 , -0.02885] | 0.95024          |
| CADD            | [0.1247 , 0.33155]    | 0.95024          |
| CAIM            | [-0.17135 , -0.0715]  | 0.95024          |
| Chi2            | [-0.12475 , -0.0293]  | 0.95024          |
| ChiMerge        | [-0.153 , -0.06615]   | 0.95024          |
| ClusterAnalysis | [0.00855 , 0.0761]    | 0.95024          |
| DIBD            | [-0.1014 , 0.0024]    | 0.95024          |
| Distance        | [-0.15035 , -0.04375] | 0.95024          |
| EqualFrequency  | [-0.0795 , -0.0182]   | 0.95024          |
| EqualWidth      | [-0.062 , 0]          | 0.95024          |
| Extended Chi2   | [-0.06635 , 0.01055]  | 0.95024          |
| FUSINTER        | [-0.1504 , -0.0542]   | 0.95024          |
| HDD             | [-0.04445 , 0.02275]  | 0.95024          |
| HellingerBD     | [-0.08195 , -0.0216]  | 0.95024          |
| Heter-Disc      | [0.034 , 0.22]        | 0.95024          |
| ID3             | [0.0027 , 0.08445]    | 0.95024          |
| IDD             | [-0.0055 , 0.14745]   | 0.95024          |
| Khiops          | [-0.11835 , -0.0332]  | 0.95024          |
| MDLP            | [-0.1536 , -0.0481]   | 0.95024          |
| Modified Chi2   | [-0.1102 , -0.0176]   | 0.95024          |
| MODL            | [-0.09715 , -0.031]   | 0.95024          |
| MVD             | [-0.02615 , 0.13825]  | 0.95024          |
| PKID            | [-0.01235 , 0.02025]  | 0.95024          |
| UCPD            | [-0.12315 , -0.0277]  | 0.95024          |
| USD             | [-0.0215 , 0.04675]   | 0.95024          |
| Zeta            | [-0.139 , -0.04905]   | 0.95024          |

Table 45: Confidence intervals for algorithm FFD ( $\alpha=0.95$ )

## 16 Detailed results for FUSINTER

### 16.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| 1R              | 728.0 | 92.0  | 4.154E-6      | 0.000019           |
| Ameva           | 434.0 | 346.0 | $\geq 0.2$    | 0.534601           |
| Bayesian        | 762.0 | 58.0  | 1.4608E-7     | 0.000002           |
| CACC            | 457.0 | 323.0 | $\geq 0.2$    | 0.346212           |
| CADD            | 814.0 | 6.0   | 2.546E-11     | 0                  |
| CAIM            | 308.0 | 472.0 | $\geq 0.2$    | 1                  |
| Chi2            | 516.5 | 303.5 | $\geq 0.2$    | 0.327628           |
| ChiMerge        | 404.5 | 415.5 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 775.0 | 45.0  | 3.062E-8      | 0.000001           |
| DIBD            | 660.5 | 159.5 | 4.937E-4      | 0.000726           |
| Distance        | 473.0 | 307.0 | $\geq 0.2$    | 0.243921           |
| EqualFrequency  | 609.0 | 174.0 | 0.00653       | 0.007245           |
| EqualWidth      | 700.0 | 80.0  | 2.778E-6      | 0.000015           |
| Extended Chi2   | 568.0 | 212.0 | 0.012092      | 0.01274            |
| FFD             | 718.0 | 62.0  | 4.53E-7       | 0.000005           |
| HDD             | 612.0 | 168.0 | 0.0014682     | 0.001903           |
| HellingerBD     | 624.0 | 156.0 | 7.494E-4      | 0.001066           |
| Heter-Disc      | 799.0 | 21.0  | 8.13E-10      | 0                  |
| ID3             | 735.0 | 45.0  | 6.122E-8      | 0.000001           |
| IDD             | 775.0 | 45.0  | 3.062E-8      | 0.000001           |
| Khiops          | 602.5 | 217.5 | 0.02581       | 0.025738           |
| MDLP            | 388.0 | 392.0 | $\geq 0.2$    | 1                  |
| Modified Chi2   | 563.0 | 257.0 | $\geq 0.2$    | 0.229418           |
| MODL            | 561.0 | 222.0 | 0.05086       | 0.049854           |
| MVD             | 692.0 | 88.0  | 5.758E-6      | 0.000024           |
| PKID            | 725.0 | 55.0  | 2.068E-7      | 0.000003           |
| UCPD            | 644.0 | 176.0 | 0.0012308     | 0.001622           |
| USD             | 670.0 | 110.0 | 3.506E-5      | 0.000091           |
| Zeta            | 453.0 | 327.0 | $\geq 0.2$    | 0.375541           |

Table 46: Results obtained by the Wilcoxon test for algorithm FUSINTER

### 16.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.09175 , 0.28685]  | 0.90276          |
| Ameva           | [-0.0129 , 0.02295]  | 0.90276          |
| Bayesian        | [0.0982 , 0.2217]    | 0.90276          |
| CACC            | [-0.00505 , 0.02515] | 0.90276          |
| CADD            | [0.281 , 0.44335]    | 0.90276          |
| CAIM            | [-0.0271 , 0.0051]   | 0.90276          |
| Chi2            | [-0.0012 , 0.0177]   | 0.90276          |
| ChiMerge        | [-0.01405 , 0.0122]  | 0.90276          |
| ClusterAnalysis | [0.10385 , 0.21365]  | 0.90276          |
| DIBD            | [0.02335 , 0.08285]  | 0.90276          |
| Distance        | [-0.0026 , 0.0193]   | 0.90276          |
| EqualFrequency  | [0.01475 , 0.0691]   | 0.90276          |
| EqualWidth      | [0.03405 , 0.09045]  | 0.90276          |
| Extended Chi2   | [0.0082 , 0.10435]   | 0.90276          |
| FFD             | [0.0605 , 0.14355]   | 0.90276          |
| HDD             | [0.0262 , 0.1425]    | 0.90276          |
| HellingerBD     | [0.02285 , 0.0688]   | 0.90276          |
| Heter-Disc      | [0.1723 , 0.32515]   | 0.90276          |
| ID3             | [0.1064 , 0.2495]    | 0.90276          |
| IDD             | [0.115 , 0.2692]     | 0.90276          |
| Khiops          | [0.01035 , 0.0431]   | 0.90276          |
| MDLP            | [-0.0106 , 0.0116]   | 0.90276          |
| Modified Chi2   | [0.0031 , 0.03625]   | 0.90276          |
| MODL            | [0.0043 , 0.02625]   | 0.90276          |
| MVD             | [0.0431 , 0.218]     | 0.90276          |
| PKID            | [0.0666 , 0.15645]   | 0.90276          |
| UCPD            | [0.01115 , 0.04085]  | 0.90276          |
| USD             | [0.0403 , 0.1663]    | 0.90276          |
| Zeta            | [-0.00865 , 0.0236]  | 0.90276          |

Table 47: Confidence intervals for algorithm FUSINTER ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.0787 , 0.30335]   | 0.95024          |
| Ameva           | [-0.0169 , 0.0257]   | 0.95024          |
| Bayesian        | [0.088 , 0.2304]     | 0.95024          |
| CACC            | [-0.0089 , 0.0305]   | 0.95024          |
| CADD            | [0.2721 , 0.4566]    | 0.95024          |
| CAIM            | [-0.0314 , 0.0076]   | 0.95024          |
| Chi2            | [-0.0024 , 0.02075]  | 0.95024          |
| ChiMerge        | [-0.0165 , 0.01495]  | 0.95024          |
| ClusterAnalysis | [0.0968 , 0.22415]   | 0.95024          |
| DIBD            | [0.01615 , 0.0943]   | 0.95024          |
| Distance        | [-0.0051 , 0.02065]  | 0.95024          |
| EqualFrequency  | [0.0107 , 0.0747]    | 0.95024          |
| EqualWidth      | [0.0314 , 0.09615]   | 0.95024          |
| Extended Chi2   | [0.0057 , 0.12025]   | 0.95024          |
| FFD             | [0.0542 , 0.1504]    | 0.95024          |
| HDD             | [0.01985 , 0.1517]   | 0.95024          |
| HellingerBD     | [0.01875 , 0.0724]   | 0.95024          |
| Heter-Disc      | [0.15635 , 0.35015]  | 0.95024          |
| ID3             | [0.0962 , 0.26015]   | 0.95024          |
| IDD             | [0.10415 , 0.27825]  | 0.95024          |
| Khiops          | [0.00615 , 0.0471]   | 0.95024          |
| MDLP            | [-0.0123 , 0.0135]   | 0.95024          |
| Modified Chi2   | [0.00065 , 0.04005]  | 0.95024          |
| MODL            | [0.00265 , 0.0313]   | 0.95024          |
| MVD             | [0.03735 , 0.2369]   | 0.95024          |
| PKID            | [0.0597 , 0.16615]   | 0.95024          |
| UCPD            | [0.0089 , 0.04425]   | 0.95024          |
| USD             | [0.0331 , 0.1795]    | 0.95024          |
| Zeta            | [-0.01175 , 0.02555] | 0.95024          |

Table 48: Confidence intervals for algorithm FUSINTER ( $\alpha=0.95$ )

## 17 Detailed results for HDD

### 17.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| 1R              | 513.0 | 270.0 | $\geq 0.2$    | 0.216059           |
| Ameva           | 180.0 | 603.0 | $\geq 0.2$    | 1                  |
| Bayesian        | 576.5 | 243.5 | $\geq 0.2$    | 0.351461           |
| CACC            | 268.5 | 551.5 | $\geq 0.2$    | 1                  |
| CADD            | 721.0 | 99.0  | 0.0014368     | 0.00197            |
| CAIM            | 119.0 | 672.0 | $\geq 0.2$    | 1                  |
| Chi2            | 269.5 | 550.5 | $\geq 0.2$    | 1                  |
| ChiMerge        | 152.5 | 667.5 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 562.5 | 222.5 | 0.13311       | 0.127694           |
| DIBD            | 367.0 | 453.0 | $\geq 0.2$    | 1                  |
| Distance        | 229.0 | 591.0 | $\geq 0.2$    | 1                  |
| EqualFrequency  | 288.0 | 532.0 | $\geq 0.2$    | 1                  |
| EqualWidth      | 334.0 | 486.0 | $\geq 0.2$    | 1                  |
| Extended Chi2   | 315.5 | 467.5 | $\geq 0.2$    | 1                  |
| FFD             | 448.5 | 371.5 | $\geq 0.2$    | 1                  |
| FUSINTER        | 168.0 | 612.0 | $\geq 0.2$    | 1                  |
| HellingerBD     | 283.0 | 497.0 | $\geq 0.2$    | 1                  |
| Heter-Disc      | 622.5 | 197.5 | 0.08909       | 0.08576            |
| ID3             | 642.5 | 177.5 | $\geq 0.2$    | 1                  |
| IDD             | 548.5 | 236.5 | $\geq 0.2$    | 0.195682           |
| Khiops          | 245.0 | 540.0 | $\geq 0.2$    | 1                  |
| MDLP            | 180.5 | 639.5 | $\geq 0.2$    | 1                  |
| Modified Chi2   | 283.5 | 536.5 | $\geq 0.2$    | 1                  |
| MODL            | 281.0 | 539.0 | $\geq 0.2$    | 1                  |
| MVD             | 494.0 | 326.0 | $\geq 0.2$    | 1                  |
| PKID            | 442.5 | 346.5 | $\geq 0.2$    | 1                  |
| UCPD            | 271.0 | 549.0 | $\geq 0.2$    | 1                  |
| USD             | 426.5 | 362.5 | $\geq 0.2$    | 1                  |
| Zeta            | 221.5 | 598.5 | $\geq 0.2$    | 1                  |

Table 49: Results obtained by the Wilcoxon test for algorithm HDD

### 17.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [0.00005 , 0.172]     | 0.90276          |
| Ameva           | [-0.1434 , -0.0374]   | 0.90276          |
| Bayesian        | [0.0111 , 0.0985]     | 0.90276          |
| CACC            | [-0.13655 , -0.0031]  | 0.90276          |
| CADD            | [0.1549 , 0.3362]     | 0.90276          |
| CAIM            | [-0.15185 , -0.04805] | 0.90276          |
| Chi2            | [-0.104 , -0.00105]   | 0.90276          |
| ChiMerge        | [-0.141 , -0.04525]   | 0.90276          |
| ClusterAnalysis | [0.00895 , 0.0884]    | 0.90276          |
| DIBD            | [-0.0911 , 0.0259]    | 0.90276          |
| Distance        | [-0.1246 , -0.01255]  | 0.90276          |
| EqualFrequency  | [-0.0772 , 0]         | 0.90276          |
| EqualWidth      | [-0.0652 , 0.00845]   | 0.90276          |
| Extended Chi2   | [-0.04845 , 0.0049]   | 0.90276          |
| FFD             | [-0.0133 , 0.025]     | 0.90276          |
| FUSINTER        | [-0.1425 , -0.0262]   | 0.90276          |
| HellingerBD     | [-0.10065 , 0.002]    | 0.90276          |
| Heter-Disc      | [0.0384 , 0.22665]    | 0.90276          |
| ID3             | [0.00115 , 0.06065]   | 0.90276          |
| IDD             | [0.0115 , 0.13575]    | 0.90276          |
| Khiops          | [-0.11505 , -0.004]   | 0.90276          |
| MDLP            | [-0.1263 , -0.02185]  | 0.90276          |
| Modified Chi2   | [-0.0749 , 0]         | 0.90276          |
| MODL            | [-0.08455 , -0.0013]  | 0.90276          |
| MVD             | [-0.0071 , 0.0986]    | 0.90276          |
| PKID            | [-0.00985 , 0.0274]   | 0.90276          |
| UCPD            | [-0.12225 , -0.0062]  | 0.90276          |
| USD             | [-0.0119 , 0.02635]   | 0.90276          |
| Zeta            | [-0.1314 , -0.0286]   | 0.90276          |

Table 50: Confidence intervals for algorithm HDD ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [-0.012 , 0.18615]    | 0.95024          |
| Ameva           | [-0.1545 , -0.02255]  | 0.95024          |
| Bayesian        | [0.0064 , 0.11785]    | 0.95024          |
| CACC            | [-0.15535 , 0.0001]   | 0.95024          |
| CADD            | [0.1347 , 0.3533]     | 0.95024          |
| CAIM            | [-0.16125 , -0.046]   | 0.95024          |
| Chi2            | [-0.1222 , 0]         | 0.95024          |
| ChiMerge        | [-0.15385 , -0.03645] | 0.95024          |
| ClusterAnalysis | [0.00655 , 0.10335]   | 0.95024          |
| DIBD            | [-0.1032 , 0.036]     | 0.95024          |
| Distance        | [-0.15235 , -0.0069]  | 0.95024          |
| EqualFrequency  | [-0.0953 , 0.00205]   | 0.95024          |
| EqualWidth      | [-0.07405 , 0.0162]   | 0.95024          |
| Extended Chi2   | [-0.0544 , 0.0065]    | 0.95024          |
| FFD             | [-0.02275 , 0.04445]  | 0.95024          |
| FUSINTER        | [-0.1517 , -0.01985]  | 0.95024          |
| HellingerBD     | [-0.12 , 0.0086]      | 0.95024          |
| Heter-Disc      | [0.02805 , 0.24865]   | 0.95024          |
| ID3             | [0.0002 , 0.06885]    | 0.95024          |
| IDD             | [0.005 , 0.1478]      | 0.95024          |
| Khiops          | [-0.1326 , 0]         | 0.95024          |
| MDLP            | [-0.1519 , -0.0168]   | 0.95024          |
| Modified Chi2   | [-0.08545 , 0.00175]  | 0.95024          |
| MODL            | [-0.09465 , 0.00205]  | 0.95024          |
| MVD             | [-0.01785 , 0.1152]   | 0.95024          |
| PKID            | [-0.0133 , 0.041]     | 0.95024          |
| UCPD            | [-0.13325 , 0.0024]   | 0.95024          |
| USD             | [-0.01945 , 0.0313]   | 0.95024          |
| Zeta            | [-0.13985 , -0.01985] | 0.95024          |

Table 51: Confidence intervals for algorithm HDD ( $\alpha=0.95$ )

## 18 Detailed results for HellingerBD

### 18.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| 1R              | 637.0 | 183.0 | 0.0017706     | 0.002229           |
| Ameva           | 216.0 | 564.0 | $\geq 0.2$    | 1                  |
| Bayesian        | 693.0 | 127.0 | 6.268E-5      | 0.000139           |
| CACC            | 292.5 | 527.5 | $\geq 0.2$    | 1                  |
| CADD            | 819.0 | 1.0   | 3.638E-12     | 0                  |
| CAIM            | 145.0 | 635.0 | $\geq 0.2$    | 1                  |
| Chi2            | 266.0 | 514.0 | $\geq 0.2$    | 1                  |
| ChiMerge        | 158.0 | 622.0 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 698.5 | 81.5  | 3.199E-6      | 0.000016           |
| DIBD            | 473.0 | 347.0 | $\geq 0.2$    | 0.39337            |
| Distance        | 236.5 | 583.5 | $\geq 0.2$    | 1                  |
| EqualFrequency  | 402.5 | 417.5 | $\geq 0.2$    | 1                  |
| EqualWidth      | 519.0 | 264.0 | 0.1917        | 0.184313           |
| Extended Chi2   | 466.0 | 354.0 | $\geq 0.2$    | 0.447593           |
| FFD             | 634.0 | 149.0 | 0.001705      | 0.002195           |
| FUSINTER        | 156.0 | 624.0 | $\geq 0.2$    | 1                  |
| HDD             | 497.0 | 283.0 | 0.13846       | 0.133572           |
| Heter-Disc      | 738.0 | 82.0  | 1.6944E-6     | 0.00001            |
| ID3             | 665.0 | 118.0 | 2.336E-4      | 0.000415           |
| IDD             | 710.0 | 110.0 | 1.806E-5      | 0.000054           |
| Khiops          | 318.0 | 462.0 | $\geq 0.2$    | 1                  |
| MDLP            | 223.5 | 596.5 | $\geq 0.2$    | 1                  |
| Modified Chi2   | 367.0 | 413.0 | $\geq 0.2$    | 1                  |
| MODL            | 332.5 | 487.5 | $\geq 0.2$    | 1                  |
| MVD             | 593.0 | 227.0 | 0.013026      | 0.013645           |
| PKID            | 624.0 | 159.0 | 0.002992      | 0.003595           |
| UCPD            | 374.0 | 446.0 | $\geq 0.2$    | 1                  |
| USD             | 572.0 | 208.0 | 0.010196      | 0.010872           |
| Zeta            | 273.5 | 506.5 | $\geq 0.2$    | 1                  |

Table 52: Results obtained by the Wilcoxon test for algorithm HellingerBD

### 18.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [0.05415 , 0.22235]   | 0.90276          |
| Ameva           | [-0.05225 , -0.0104]  | 0.90276          |
| Bayesian        | [0.06225 , 0.18015]   | 0.90276          |
| CACC            | [-0.04205 , 0.00065]  | 0.90276          |
| CADD            | [0.2372 , 0.3787]     | 0.90276          |
| CAIM            | [-0.07435 , -0.02555] | 0.90276          |
| Chi2            | [-0.048 , -0.00185]   | 0.90276          |
| ChiMerge        | [-0.0613 , -0.02135]  | 0.90276          |
| ClusterAnalysis | [0.05735 , 0.1509]    | 0.90276          |
| DIBD            | [-0.0147 , 0.05205]   | 0.90276          |
| Distance        | [-0.05875 , -0.0125]  | 0.90276          |
| EqualFrequency  | [-0.0233 , 0.0221]    | 0.90276          |
| EqualWidth      | [0.0006 , 0.0413]     | 0.90276          |
| Extended Chi2   | [-0.01675 , 0.05815]  | 0.90276          |
| FFD             | [0.02355 , 0.072]     | 0.90276          |
| FUSINTER        | [-0.0688 , -0.02285]  | 0.90276          |
| HDD             | [-0.002 , 0.10065]    | 0.90276          |
| Heter-Disc      | [0.13755 , 0.2752]    | 0.90276          |
| ID3             | [0.0663 , 0.19605]    | 0.90276          |
| IDD             | [0.09035 , 0.21275]   | 0.90276          |
| Khiops          | [-0.03275 , 0.00715]  | 0.90276          |
| MDLP            | [-0.0641 , -0.01485]  | 0.90276          |
| Modified Chi2   | [-0.0404 , 0.0203]    | 0.90276          |
| MODL            | [-0.0401 , 0.01145]   | 0.90276          |
| MVD             | [0.02345 , 0.19065]   | 0.90276          |
| PKID            | [0.02925 , 0.1082]    | 0.90276          |
| UCPD            | [-0.03835 , 0.0131]   | 0.90276          |
| USD             | [0.0175 , 0.1306]     | 0.90276          |
| Zeta            | [-0.04085 , 0.0016]   | 0.90276          |

Table 53: Confidence intervals for algorithm HellingerBD ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [0.04175 , 0.24245]   | 0.95024          |
| Ameva           | [-0.0558 , -0.0065]   | 0.95024          |
| Bayesian        | [0.05385 , 0.1902]    | 0.95024          |
| CACC            | [-0.0452 , 0.004]     | 0.95024          |
| CADD            | [0.22745 , 0.3909]    | 0.95024          |
| CAIM            | [-0.0785 , -0.02175]  | 0.95024          |
| Chi2            | [-0.05115 , 0.00405]  | 0.95024          |
| ChiMerge        | [-0.0663 , -0.01815]  | 0.95024          |
| ClusterAnalysis | [0.0517 , 0.1678]     | 0.95024          |
| DIBD            | [-0.0206 , 0.0604]    | 0.95024          |
| Distance        | [-0.06205 , -0.0069]  | 0.95024          |
| EqualFrequency  | [-0.02645 , 0.02725]  | 0.95024          |
| EqualWidth      | [-0.0018 , 0.04565]   | 0.95024          |
| Extended Chi2   | [-0.02305 , 0.0671]   | 0.95024          |
| FFD             | [0.0216 , 0.08195]    | 0.95024          |
| FUSINTER        | [-0.0724 , -0.01875]  | 0.95024          |
| HDD             | [-0.0086 , 0.12]      | 0.95024          |
| Heter-Disc      | [0.12545 , 0.28745]   | 0.95024          |
| ID3             | [0.05105 , 0.20955]   | 0.95024          |
| IDD             | [0.08065 , 0.2301]    | 0.95024          |
| Khiops          | [-0.0369 , 0.01275]   | 0.95024          |
| MDLP            | [-0.06935 , -0.00965] | 0.95024          |
| Modified Chi2   | [-0.0456 , 0.02645]   | 0.95024          |
| MODL            | [-0.0432 , 0.0187]    | 0.95024          |
| MVD             | [0.0149 , 0.2023]     | 0.95024          |
| PKID            | [0.025 , 0.11575]     | 0.95024          |
| UCPD            | [-0.0441 , 0.0158]    | 0.95024          |
| USD             | [0.01085 , 0.144]     | 0.95024          |
| Zeta            | [-0.04565 , 0.00505]  | 0.95024          |

Table 54: Confidence intervals for algorithm HellingerBD ( $\alpha=0.95$ )

## 19 Detailed results for Heter-Disc

### 19.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| 1R              | 347.5 | 472.5 | $\geq 0.2$    | 1                  |
| Ameva           | 47.0  | 773.0 | $\geq 0.2$    | 1                  |
| Bayesian        | 272.5 | 547.5 | $\geq 0.2$    | 1                  |
| CACC            | 51.5  | 768.5 | $\geq 0.2$    | 1                  |
| CADD            | 507.0 | 313.0 | $\geq 0.2$    | 1                  |
| CAIM            | 42.0  | 778.0 | $\geq 0.2$    | 1                  |
| Chi2            | 67.5  | 752.5 | $\geq 0.2$    | 1                  |
| ChiMerge        | 33.0  | 787.0 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 232.5 | 552.5 | $\geq 0.2$    | 1                  |
| DIBD            | 100.5 | 719.5 | $\geq 0.2$    | 1                  |
| Distance        | 55.0  | 765.0 | $\geq 0.2$    | 1                  |
| EqualFrequency  | 87.0  | 696.0 | $\geq 0.2$    | 1                  |
| EqualWidth      | 120.5 | 699.5 | $\geq 0.2$    | 1                  |
| Extended Chi2   | 139.0 | 644.0 | $\geq 0.2$    | 1                  |
| FFD             | 192.0 | 628.0 | $\geq 0.2$    | 1                  |
| FUSINTER        | 21.0  | 799.0 | $\geq 0.2$    | 1                  |
| HDD             | 197.5 | 622.5 | $\geq 0.2$    | 1                  |
| HellingerBD     | 82.0  | 738.0 | $\geq 0.2$    | 1                  |
| ID3             | 277.0 | 510.0 | $\geq 0.2$    | 1                  |
| IDD             | 345.0 | 475.0 | $\geq 0.2$    | 1                  |
| Khiops          | 50.0  | 730.0 | $\geq 0.2$    | 1                  |
| MDLP            | 38.0  | 782.0 | $\geq 0.2$    | 1                  |
| Modified Chi2   | 71.0  | 712.0 | $\geq 0.2$    | 1                  |
| MODL            | 81.0  | 699.0 | $\geq 0.2$    | 1                  |
| MVD             | 254.0 | 566.0 | $\geq 0.2$    | 1                  |
| PKID            | 179.5 | 640.5 | $\geq 0.2$    | 1                  |
| UCPD            | 24.0  | 796.0 | $\geq 0.2$    | 1                  |
| USD             | 200.0 | 583.0 | $\geq 0.2$    | 1                  |
| Zeta            | 47.0  | 773.0 | $\geq 0.2$    | 1                  |

Table 55: Results obtained by the Wilcoxon test for algorithm Heter-Disc

### 19.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [-0.1354 , 0.02415]   | 0.90276          |
| Ameva           | [-0.29525 , -0.16085] | 0.90276          |
| Bayesian        | [-0.1471 , -0.00725]  | 0.90276          |
| CACC            | [-0.2564 , -0.13305]  | 0.90276          |
| CADD            | [0 , 0.19575]         | 0.90276          |
| CAIM            | [-0.3302 , -0.1817]   | 0.90276          |
| Chi2            | [-0.28825 , -0.13245] | 0.90276          |
| ChiMerge        | [-0.3169 , -0.1716]   | 0.90276          |
| ClusterAnalysis | [-0.155 , -0.0164]    | 0.90276          |
| DIBD            | [-0.24405 , -0.0678]  | 0.90276          |
| Distance        | [-0.30775 , -0.16125] | 0.90276          |
| EqualFrequency  | [-0.2471 , -0.1135]   | 0.90276          |
| EqualWidth      | [-0.237 , -0.1055]    | 0.90276          |
| Extended Chi2   | [-0.25845 , -0.0931]  | 0.90276          |
| FFD             | [-0.20755 , -0.0514]  | 0.90276          |
| FUSINTER        | [-0.32515 , -0.1723]  | 0.90276          |
| HDD             | [-0.22665 , -0.0384]  | 0.90276          |
| HellingerBD     | [-0.2752 , -0.13755]  | 0.90276          |
| ID3             | [-0.14375 , 0]        | 0.90276          |
| IDD             | [-0.09175 , 0.0176]   | 0.90276          |
| Khiops          | [-0.2812 , -0.142]    | 0.90276          |
| MDLP            | [-0.30965 , -0.16505] | 0.90276          |
| Modified Chi2   | [-0.26165 , -0.116]   | 0.90276          |
| MODL            | [-0.25595 , -0.119]   | 0.90276          |
| MVD             | [-0.1742 , -0.00345]  | 0.90276          |
| PKID            | [-0.18925 , -0.03555] | 0.90276          |
| UCPD            | [-0.2746 , -0.15255]  | 0.90276          |
| USD             | [-0.20565 , -0.031]   | 0.90276          |
| Zeta            | [-0.30155 , -0.15715] | 0.90276          |

Table 56: Confidence intervals for algorithm Heter-Disc ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [-0.15205 , 0.03515]  | 0.95024          |
| Ameva           | [-0.31065 , -0.1448]  | 0.95024          |
| Bayesian        | [-0.1676 , 0.0007]    | 0.95024          |
| CACC            | [-0.26825 , -0.1222]  | 0.95024          |
| CADD            | [-0.0093 , 0.22735]   | 0.95024          |
| CAIM            | [-0.3538 , -0.1723]   | 0.95024          |
| Chi2            | [-0.3045 , -0.1171]   | 0.95024          |
| ChiMerge        | [-0.3306 , -0.1563]   | 0.95024          |
| ClusterAnalysis | [-0.16835 , -0.0057]  | 0.95024          |
| DIBD            | [-0.25645 , -0.06025] | 0.95024          |
| Distance        | [-0.32825 , -0.14135] | 0.95024          |
| EqualFrequency  | [-0.265 , -0.0886]    | 0.95024          |
| EqualWidth      | [-0.25245 , -0.0962]  | 0.95024          |
| Extended Chi2   | [-0.2714 , -0.07455]  | 0.95024          |
| FFD             | [-0.22 , -0.034]      | 0.95024          |
| FUSINTER        | [-0.35015 , -0.15635] | 0.95024          |
| HDD             | [-0.24865 , -0.02805] | 0.95024          |
| HellingerBD     | [-0.28745 , -0.12545] | 0.95024          |
| ID3             | [-0.1706 , 0.0069]    | 0.95024          |
| IDD             | [-0.1149 , 0.02445]   | 0.95024          |
| Khiops          | [-0.30145 , -0.13005] | 0.95024          |
| MDLP            | [-0.3251 , -0.15055]  | 0.95024          |
| Modified Chi2   | [-0.2759 , -0.10635]  | 0.95024          |
| MODL            | [-0.27435 , -0.1064]  | 0.95024          |
| MVD             | [-0.19545 , 0]        | 0.95024          |
| PKID            | [-0.2073 , -0.0288]   | 0.95024          |
| UCPD            | [-0.294 , -0.14355]   | 0.95024          |
| USD             | [-0.22335 , -0.0218]  | 0.95024          |
| Zeta            | [-0.32445 , -0.14455] | 0.95024          |

Table 57: Confidence intervals for algorithm Heter-Disc ( $\alpha=0.95$ )

## 20 Detailed results for ID3

### 20.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| 1R              | 371.0 | 449.0 | $\geq 0.2$    | 1                  |
| Ameva           | 97.5  | 722.5 | $\geq 0.2$    | 1                  |
| Bayesian        | 350.0 | 470.0 | $\geq 0.2$    | 1                  |
| CACC            | 142.5 | 677.5 | $\geq 0.2$    | 1                  |
| CADD            | 597.5 | 222.5 | $\geq 0.2$    | 0.829013           |
| CAIM            | 39.5  | 743.5 | $\geq 0.2$    | 1                  |
| Chi2            | 106.5 | 678.5 | $\geq 0.2$    | 1                  |
| ChiMerge        | 54.5  | 765.5 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 372.0 | 415.0 | $\geq 0.2$    | 1                  |
| DIBD            | 217.0 | 603.0 | $\geq 0.2$    | 1                  |
| Distance        | 106.5 | 713.5 | $\geq 0.2$    | 1                  |
| EqualFrequency  | 63.5  | 756.5 | $\geq 0.2$    | 1                  |
| EqualWidth      | 128.5 | 691.5 | $\geq 0.2$    | 1                  |
| Extended Chi2   | 123.0 | 697.0 | $\geq 0.2$    | 1                  |
| FFD             | 170.5 | 622.5 | $\geq 0.2$    | 1                  |
| FUSINTER        | 45.0  | 735.0 | $\geq 0.2$    | 1                  |
| HDD             | 177.5 | 642.5 | $\geq 0.2$    | 1                  |
| HellingerBD     | 118.0 | 665.0 | $\geq 0.2$    | 1                  |
| Heter-Disc      | 510.0 | 277.0 | $\geq 0.2$    | 0.943023           |
| IDD             | 348.0 | 439.0 | $\geq 0.2$    | 1                  |
| Khiops          | 76.0  | 707.0 | $\geq 0.2$    | 1                  |
| MDLP            | 85.5  | 734.5 | $\geq 0.2$    | 1                  |
| Modified Chi2   | 94.5  | 725.5 | $\geq 0.2$    | 1                  |
| MODL            | 89.0  | 731.0 | $\geq 0.2$    | 1                  |
| MVD             | 313.0 | 474.0 | $\geq 0.2$    | 1                  |
| PKID            | 153.5 | 639.5 | $\geq 0.2$    | 1                  |
| UCPD            | 98.0  | 722.0 | $\geq 0.2$    | 1                  |
| USD             | 98.0  | 693.0 | $\geq 0.2$    | 1                  |
| Zeta            | 68.5  | 751.5 | $\geq 0.2$    | 1                  |

Table 58: Results obtained by the Wilcoxon test for algorithm ID3

### 20.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [-0.11635 , 0.0972]   | 0.90276          |
| Ameva           | [-0.23425 , -0.11395] | 0.90276          |
| Bayesian        | [-0.04775 , 0.01475]  | 0.90276          |
| CACC            | [-0.2181 , -0.0683]   | 0.90276          |
| CADD            | [0.04095 , 0.24665]   | 0.90276          |
| CAIM            | [-0.25 , -0.13475]    | 0.90276          |
| Chi2            | [-0.2291 , -0.0808]   | 0.90276          |
| ChiMerge        | [-0.23975 , -0.1263]  | 0.90276          |
| ClusterAnalysis | [-0.0418 , 0.0104]    | 0.90276          |
| DIBD            | [-0.1919 , -0.0466]   | 0.90276          |
| Distance        | [-0.2454 , -0.0944]   | 0.90276          |
| EqualFrequency  | [-0.16495 , -0.0527]  | 0.90276          |
| EqualWidth      | [-0.14005 , -0.0364]  | 0.90276          |
| Extended Chi2   | [-0.13575 , -0.03795] | 0.90276          |
| FFD             | [-0.0808 , -0.0051]   | 0.90276          |
| FUSINTER        | [-0.2495 , -0.1064]   | 0.90276          |
| HDD             | [-0.06065 , -0.00115] | 0.90276          |
| HellingerBD     | [-0.19605 , -0.0663]  | 0.90276          |
| Heter-Disc      | [0 , 0.14375]         | 0.90276          |
| IDD             | [-0.06725 , 0.05315]  | 0.90276          |
| Khiops          | [-0.21985 , -0.0802]  | 0.90276          |
| MDLP            | [-0.2541 , -0.09655]  | 0.90276          |
| Modified Chi2   | [-0.19545 , -0.0642]  | 0.90276          |
| MODL            | [-0.16895 , -0.07645] | 0.90276          |
| MVD             | [-0.0804 , 0.01825]   | 0.90276          |
| PKID            | [-0.06745 , -0.0133]  | 0.90276          |
| UCPD            | [-0.21785 , -0.09455] | 0.90276          |
| USD             | [-0.07485 , -0.01945] | 0.90276          |
| Zeta            | [-0.2242 , -0.1165]   | 0.90276          |

Table 59: Confidence intervals for algorithm ID3 ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [-0.13555 , 0.1187]   | 0.95024          |
| Ameva           | [-0.2443 , -0.10915]  | 0.95024          |
| Bayesian        | [-0.0556 , 0.01825]   | 0.95024          |
| CACC            | [-0.2297 , -0.0618]   | 0.95024          |
| CADD            | [0.0161 , 0.2636]     | 0.95024          |
| CAIM            | [-0.25895 , -0.12645] | 0.95024          |
| Chi2            | [-0.2359 , -0.06235]  | 0.95024          |
| ChiMerge        | [-0.24945 , -0.1187]  | 0.95024          |
| ClusterAnalysis | [-0.0537 , 0.01565]   | 0.95024          |
| DIBD            | [-0.2041 , -0.0328]   | 0.95024          |
| Distance        | [-0.2538 , -0.0817]   | 0.95024          |
| EqualFrequency  | [-0.1751 , -0.04925]  | 0.95024          |
| EqualWidth      | [-0.15485 , -0.0341]  | 0.95024          |
| Extended Chi2   | [-0.15385 , -0.0342]  | 0.95024          |
| FFD             | [-0.08445 , -0.0027]  | 0.95024          |
| FUSINTER        | [-0.26015 , -0.0962]  | 0.95024          |
| HDD             | [-0.06885 , -0.0002]  | 0.95024          |
| HellingerBD     | [-0.20955 , -0.05105] | 0.95024          |
| Heter-Disc      | [-0.0069 , 0.1706]    | 0.95024          |
| IDD             | [-0.07225 , 0.09155]  | 0.95024          |
| Khiops          | [-0.2265 , -0.06735]  | 0.95024          |
| MDLP            | [-0.2635 , -0.08525]  | 0.95024          |
| Modified Chi2   | [-0.20735 , -0.0539]  | 0.95024          |
| MODL            | [-0.17805 , -0.06505] | 0.95024          |
| MVD             | [-0.0968 , 0.03285]   | 0.95024          |
| PKID            | [-0.0694 , -0.0075]   | 0.95024          |
| UCPD            | [-0.2334 , -0.0828]   | 0.95024          |
| USD             | [-0.0771 , -0.01495]  | 0.95024          |
| Zeta            | [-0.23515 , -0.10835] | 0.95024          |

Table 60: Confidence intervals for algorithm ID3 ( $\alpha=0.95$ )

## 21 Detailed results for IDD

### 21.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| 1R              | 329.5 | 459.5 | $\geq 0.2$    | 1                  |
| Ameva           | 70.0  | 750.0 | $\geq 0.2$    | 1                  |
| Bayesian        | 412.0 | 375.0 | $\geq 0.2$    | 1                  |
| CACC            | 103.0 | 717.0 | $\geq 0.2$    | 1                  |
| CADD            | 718.0 | 102.0 | 0.0204        | 0.020816           |
| CAIM            | 25.0  | 795.0 | $\geq 0.2$    | 1                  |
| Chi2            | 77.5  | 742.5 | $\geq 0.2$    | 1                  |
| ChiMerge        | 27.0  | 793.0 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 348.5 | 436.5 | $\geq 0.2$    | 1                  |
| DIBD            | 134.0 | 646.0 | $\geq 0.2$    | 1                  |
| Distance        | 51.0  | 729.0 | $\geq 0.2$    | 1                  |
| EqualFrequency  | 127.0 | 656.0 | $\geq 0.2$    | 1                  |
| EqualWidth      | 156.0 | 664.0 | $\geq 0.2$    | 1                  |
| Extended Chi2   | 182.0 | 638.0 | $\geq 0.2$    | 1                  |
| FFD             | 270.5 | 514.5 | $\geq 0.2$    | 1                  |
| FUSINTER        | 45.0  | 775.0 | $\geq 0.2$    | 1                  |
| HDD             | 236.5 | 548.5 | $\geq 0.2$    | 1                  |
| HellingerBD     | 110.0 | 710.0 | $\geq 0.2$    | 1                  |
| Heter-Disc      | 475.0 | 345.0 | $\geq 0.2$    | 1                  |
| ID3             | 439.0 | 348.0 | $\geq 0.2$    | 1                  |
| Khiops          | 99.5  | 720.5 | $\geq 0.2$    | 1                  |
| MDLP            | 40.0  | 780.0 | $\geq 0.2$    | 1                  |
| Modified Chi2   | 108.5 | 676.5 | $\geq 0.2$    | 1                  |
| MODL            | 71.5  | 748.5 | $\geq 0.2$    | 1                  |
| MVD             | 315.5 | 504.5 | $\geq 0.2$    | 1                  |
| PKID            | 308.0 | 479.0 | $\geq 0.2$    | 1                  |
| UCPD            | 93.0  | 727.0 | $\geq 0.2$    | 1                  |
| USD             | 362.5 | 457.5 | $\geq 0.2$    | 1                  |
| Zeta            | 30.0  | 790.0 | $\geq 0.2$    | 1                  |

Table 61: Results obtained by the Wilcoxon test for algorithm IDD

### 21.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [-0.0373 , 0.00275]   | 0.90276          |
| Ameva           | [-0.24925 , -0.12345] | 0.90276          |
| Bayesian        | [-0.0175 , 0.0199]    | 0.90276          |
| CACC            | [-0.23365 , -0.101]   | 0.90276          |
| CADD            | [0.0291 , 0.1703]     | 0.90276          |
| CAIM            | [-0.2612 , -0.14405]  | 0.90276          |
| Chi2            | [-0.24105 , -0.09965] | 0.90276          |
| ChiMerge        | [-0.25025 , -0.1248]  | 0.90276          |
| ClusterAnalysis | [-0.073 , 0.0312]     | 0.90276          |
| DIBD            | [-0.18245 , -0.06695] | 0.90276          |
| Distance        | [-0.2502 , -0.121]    | 0.90276          |
| EqualFrequency  | [-0.1881 , -0.0642]   | 0.90276          |
| EqualWidth      | [-0.1786 , -0.0509]   | 0.90276          |
| Extended Chi2   | [-0.18325 , -0.03835] | 0.90276          |
| FFD             | [-0.13505 , 0]        | 0.90276          |
| FUSINTER        | [-0.2692 , -0.115]    | 0.90276          |
| HDD             | [-0.13575 , -0.0115]  | 0.90276          |
| HellingerBD     | [-0.21275 , -0.09035] | 0.90276          |
| Heter-Disc      | [-0.0176 , 0.09175]   | 0.90276          |
| ID3             | [-0.05315 , 0.06725]  | 0.90276          |
| Khiops          | [-0.22635 , -0.0978]  | 0.90276          |
| MDLP            | [-0.25645 , -0.1307]  | 0.90276          |
| Modified Chi2   | [-0.2224 , -0.06915]  | 0.90276          |
| MODL            | [-0.19235 , -0.07095] | 0.90276          |
| MVD             | [-0.10045 , 0.0167]   | 0.90276          |
| PKID            | [-0.12665 , 0.0071]   | 0.90276          |
| UCPD            | [-0.2364 , -0.1033]   | 0.90276          |
| USD             | [-0.10145 , 0.0114]   | 0.90276          |
| Zeta            | [-0.23705 , -0.11175] | 0.90276          |

Table 62: Confidence intervals for algorithm IDD ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [-0.0408 , 0.0149]    | 0.95024          |
| Ameva           | [-0.26255 , -0.1139]  | 0.95024          |
| Bayesian        | [-0.0399 , 0.0242]    | 0.95024          |
| CACC            | [-0.24815 , -0.0876]  | 0.95024          |
| CADD            | [0.02825 , 0.17805]   | 0.95024          |
| CAIM            | [-0.26965 , -0.13525] | 0.95024          |
| Chi2            | [-0.2496 , -0.0794]   | 0.95024          |
| ChiMerge        | [-0.2607 , -0.1142]   | 0.95024          |
| ClusterAnalysis | [-0.08435 , 0.036]    | 0.95024          |
| DIBD            | [-0.19495 , -0.05485] | 0.95024          |
| Distance        | [-0.26205 , -0.11085] | 0.95024          |
| EqualFrequency  | [-0.20535 , -0.0578]  | 0.95024          |
| EqualWidth      | [-0.20205 , -0.04045] | 0.95024          |
| Extended Chi2   | [-0.19645 , -0.0309]  | 0.95024          |
| FFD             | [-0.14745 , 0.0055]   | 0.95024          |
| FUSINTER        | [-0.27825 , -0.10415] | 0.95024          |
| HDD             | [-0.1478 , -0.005]    | 0.95024          |
| HellingerBD     | [-0.2301 , -0.08065]  | 0.95024          |
| Heter-Disc      | [-0.02445 , 0.1149]   | 0.95024          |
| ID3             | [-0.09155 , 0.07225]  | 0.95024          |
| Khiops          | [-0.235 , -0.09]      | 0.95024          |
| MDLP            | [-0.26395 , -0.11775] | 0.95024          |
| Modified Chi2   | [-0.23505 , -0.043]   | 0.95024          |
| MODL            | [-0.20225 , -0.0628]  | 0.95024          |
| MVD             | [-0.12145 , 0.0226]   | 0.95024          |
| PKID            | [-0.1346 , 0.0118]    | 0.95024          |
| UCPD            | [-0.244 , -0.09175]   | 0.95024          |
| USD             | [-0.12455 , 0.0143]   | 0.95024          |
| Zeta            | [-0.2461 , -0.10005]  | 0.95024          |

Table 63: Confidence intervals for algorithm IDD ( $\alpha=0.95$ )

## 22 Detailed results for Khiops

### 22.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value        | Asymptotic P-value |
|-----------------|-------|-------|----------------------|--------------------|
| 1R              | 676.5 | 143.5 | 6.629E-4             | 0.000969           |
| Ameva           | 296.0 | 484.0 | $\geq 0.2$           | 1                  |
| Bayesian        | 643.0 | 137.0 | 2.34E-4              | 0.000404           |
| CACC            | 302.0 | 478.0 | $\geq 0.2$           | 1                  |
| CADD            | 776.0 | 4.0   | 2.546E-11            | 0                  |
| CAIM            | 230.0 | 590.0 | $\geq 0.2$           | 1                  |
| Chi2            | 347.5 | 472.5 | $\geq 0.2$           | 1                  |
| ChiMerge        | 258.0 | 522.0 | $\geq 0.2$           | 1                  |
| ClusterAnalysis | 693.0 | 87.0  | 5.268E-6             | 0.000023           |
| DIBD            | 563.0 | 257.0 | 0.03944              | 0.03909            |
| Distance        | 215.0 | 565.0 | $\geq 0.2$           | 1                  |
| EqualFrequency  | 500.0 | 283.0 | $\geq 0.2$           | 0.296985           |
| EqualWidth      | 587.5 | 232.5 | 0.045270000000000005 | 0.044583           |
| Extended Chi2   | 457.0 | 323.0 | $\geq 0.2$           | 0.346212           |
| FFD             | 670.0 | 113.0 | 1.6306E-4            | 0.000311           |
| FUSINTER        | 217.5 | 602.5 | $\geq 0.2$           | 1                  |
| HDD             | 540.0 | 245.0 | $\geq 0.2$           | 0.247232           |
| HellingerBD     | 462.0 | 318.0 | $\geq 0.2$           | 0.310819           |
| Heter-Disc      | 730.0 | 50.0  | 1.143E-7             | 0.000002           |
| ID3             | 707.0 | 76.0  | 7.416E-6             | 0.000031           |
| IDD             | 720.5 | 99.5  | 2.987E-5             | 0.000082           |
| MDLP            | 177.0 | 603.0 | $\geq 0.2$           | 1                  |
| Modified Chi2   | 430.0 | 353.0 | $\geq 0.2$           | 1                  |
| MODL            | 364.5 | 455.5 | $\geq 0.2$           | 1                  |
| MVD             | 590.5 | 229.5 | 0.040639999999999996 | 0.040163           |
| PKID            | 712.0 | 108.0 | 2.158E-4             | 0.000386           |
| UCPD            | 414.0 | 406.0 | $\geq 0.2$           | 0.951769           |
| USD             | 614.0 | 169.0 | 0.005074             | 0.005766           |
| Zeta            | 293.0 | 487.0 | $\geq 0.2$           | 1                  |

Table 64: Results obtained by the Wilcoxon test for algorithm Khiops

### 22.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [0.0616 , 0.24345]    | 0.90276          |
| Ameva           | [-0.0404 , 0.0049]    | 0.90276          |
| Bayesian        | [0.06905 , 0.192]     | 0.90276          |
| CACC            | [-0.0349 , 0.0053]    | 0.90276          |
| CADD            | [0.2459 , 0.39985]    | 0.90276          |
| CAIM            | [-0.05365 , -0.01255] | 0.90276          |
| Chi2            | [-0.02975 , 0.0096]   | 0.90276          |
| ChiMerge        | [-0.0464 , -0.00295]  | 0.90276          |
| ClusterAnalysis | [0.07525 , 0.17955]   | 0.90276          |
| DIBD            | [0.0057 , 0.0639]     | 0.90276          |
| Distance        | [-0.03955 , -0.00765] | 0.90276          |
| EqualFrequency  | [-0.0011 , 0.03635]   | 0.90276          |
| EqualWidth      | [0.012 , 0.06195]     | 0.90276          |
| Extended Chi2   | [-0.0141 , 0.07355]   | 0.90276          |
| FFD             | [0.03875 , 0.1101]    | 0.90276          |
| FUSINTER        | [-0.0431 , -0.01035]  | 0.90276          |
| HDD             | [0.004 , 0.11505]     | 0.90276          |
| HellingerBD     | [-0.00715 , 0.03275]  | 0.90276          |
| Heter-Disc      | [0.142 , 0.2812]      | 0.90276          |
| ID3             | [0.0802 , 0.21985]    | 0.90276          |
| IDD             | [0.0978 , 0.22635]    | 0.90276          |
| MDLP            | [-0.0437 , -0.0144]   | 0.90276          |
| Modified Chi2   | [-0.0143 , 0.02775]   | 0.90276          |
| MODL            | [-0.025 , 0.01455]    | 0.90276          |
| MVD             | [0.0211 , 0.2078]     | 0.90276          |
| PKID            | [0.03815 , 0.1255]    | 0.90276          |
| UCPD            | [-0.0198 , 0.0152]    | 0.90276          |
| USD             | [0.0254 , 0.1444]     | 0.90276          |
| Zeta            | [-0.0371 , 0.00425]   | 0.90276          |

Table 65: Confidence intervals for algorithm Khiops ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.05295 , 0.25215]  | 0.95024          |
| Ameva           | [-0.04495 , 0.0093]  | 0.95024          |
| Bayesian        | [0.05605 , 0.2055]   | 0.95024          |
| CACC            | [-0.0372 , 0.0085]   | 0.95024          |
| CADD            | [0.2339 , 0.4136]    | 0.95024          |
| CAIM            | [-0.0579 , -0.00715] | 0.95024          |
| Chi2            | [-0.0329 , 0.01345]  | 0.95024          |
| ChiMerge        | [-0.0503 , 0.00135]  | 0.95024          |
| ClusterAnalysis | [0.066 , 0.1908]     | 0.95024          |
| DIBD            | [0.0009 , 0.0729]    | 0.95024          |
| Distance        | [-0.0423 , -0.0046]  | 0.95024          |
| EqualFrequency  | [-0.0056 , 0.0416]   | 0.95024          |
| EqualWidth      | [0.00755 , 0.069]    | 0.95024          |
| Extended Chi2   | [-0.0216 , 0.0865]   | 0.95024          |
| FFD             | [0.0332 , 0.11835]   | 0.95024          |
| FUSINTER        | [-0.0471 , -0.00615] | 0.95024          |
| HDD             | [0 , 0.1326]         | 0.95024          |
| HellingerBD     | [-0.01275 , 0.0369]  | 0.95024          |
| Heter-Disc      | [0.13005 , 0.30145]  | 0.95024          |
| ID3             | [0.06735 , 0.2265]   | 0.95024          |
| IDD             | [0.09 , 0.235]       | 0.95024          |
| MDLP            | [-0.04555 , -0.0113] | 0.95024          |
| Modified Chi2   | [-0.01735 , 0.032]   | 0.95024          |
| MODL            | [-0.02805 , 0.01865] | 0.95024          |
| MVD             | [0.0139 , 0.2161]    | 0.95024          |
| PKID            | [0.03165 , 0.1347]   | 0.95024          |
| UCPD            | [-0.02475 , 0.01805] | 0.95024          |
| USD             | [0.0186 , 0.15855]   | 0.95024          |
| Zeta            | [-0.0397 , 0.0093]   | 0.95024          |

Table 66: Confidence intervals for algorithm Khiops ( $\alpha=0.95$ )

## 23 Detailed results for MDLP

### 23.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value        | Asymptotic P-value |
|-----------------|-------|-------|----------------------|--------------------|
| 1R              | 727.0 | 93.0  | 4.528E-6             | 0.00002            |
| Ameva           | 447.5 | 372.5 | $\geq 0.2$           | 1                  |
| Bayesian        | 706.0 | 74.0  | 1.5624E-6            | 0.00001            |
| CACC            | 469.0 | 314.0 | $\geq 0.2$           | 0.566456           |
| CADD            | 770.0 | 10.0  | 1.5644E-10           | 0                  |
| CAIM            | 389.5 | 430.5 | $\geq 0.2$           | 1                  |
| Chi2            | 513.5 | 306.5 | $\geq 0.2$           | 0.349584           |
| ChiMerge        | 423.0 | 360.0 | $\geq 0.2$           | 1                  |
| ClusterAnalysis | 716.5 | 63.5  | 5.333E-7             | 0.000005           |
| DIBD            | 677.0 | 103.0 | 2.03E-5              | 0.00006            |
| Distance        | 526.0 | 294.0 | $\geq 0.2$           | 0.534884           |
| EqualFrequency  | 605.5 | 214.5 | 0.022920000000000003 | 0.023231           |
| EqualWidth      | 632.0 | 148.0 | 4.662E-4             | 0.000714           |
| Extended Chi2   | 577.0 | 243.0 | 0.02408              | 0.024359           |
| FFD             | 696.5 | 123.5 | 1.8018E-4            | 0.000332           |
| FUSINTER        | 392.0 | 388.0 | $\geq 0.2$           | 0.972169           |
| HDD             | 639.5 | 180.5 | 0.00506              | 0.005733           |
| HellingerBD     | 596.5 | 223.5 | 0.03252              | 0.032429           |
| Heter-Disc      | 782.0 | 38.0  | 1.2008E-8            | 0.000001           |
| ID3             | 734.5 | 85.5  | 9.073E-6             | 0.000035           |
| IDD             | 780.0 | 40.0  | 1.582E-8             | 0.000001           |
| Khiops          | 603.0 | 177.0 | 0.002362             | 0.00284            |
| Modified Chi2   | 522.0 | 258.0 | 0.0661               | 0.064452           |
| MODL            | 585.0 | 235.0 | 0.12664              | 0.121013           |
| MVD             | 661.0 | 119.0 | 6.838E-5             | 0.000151           |
| PKID            | 666.0 | 114.0 | 4.74E-5              | 0.000114           |
| UCPD            | 592.0 | 228.0 | 0.013558             | 0.014166           |
| USD             | 639.0 | 141.0 | 3.022E-4             | 0.000498           |
| Zeta            | 498.5 | 321.5 | $\geq 0.2$           | 0.472842           |

Table 67: Results obtained by the Wilcoxon test for algorithm MDLP

### 23.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.10445 , 0.26735]  | 0.90276          |
| Ameva           | [-0.01125 , 0.02275] | 0.90276          |
| Bayesian        | [0.08615 , 0.2207]   | 0.90276          |
| CACC            | [-0.0031 , 0.0229]   | 0.90276          |
| CADD            | [0.28075 , 0.4244]   | 0.90276          |
| CAIM            | [-0.02085 , 0.00875] | 0.90276          |
| Chi2            | [-0.00205 , 0.02795] | 0.90276          |
| ChiMerge        | [-0.012 , 0.02165]   | 0.90276          |
| ClusterAnalysis | [0.0986 , 0.2186]    | 0.90276          |
| DIBD            | [0.0334 , 0.08035]   | 0.90276          |
| Distance        | [-0.00025 , 0.01295] | 0.90276          |
| EqualFrequency  | [0.0172 , 0.0684]    | 0.90276          |
| EqualWidth      | [0.0351 , 0.0927]    | 0.90276          |
| Extended Chi2   | [0.00685 , 0.0908]   | 0.90276          |
| FFD             | [0.0543 , 0.1429]    | 0.90276          |
| FUSINTER        | [-0.0116 , 0.0106]   | 0.90276          |
| HDD             | [0.02185 , 0.1263]   | 0.90276          |
| HellingerBD     | [0.01485 , 0.0641]   | 0.90276          |
| Heter-Disc      | [0.16505 , 0.30965]  | 0.90276          |
| ID3             | [0.09655 , 0.2541]   | 0.90276          |
| IDD             | [0.1307 , 0.25645]   | 0.90276          |
| Khiops          | [0.0144 , 0.0437]    | 0.90276          |
| Modified Chi2   | [0.0021 , 0.0504]    | 0.90276          |
| MODL            | [0.00325 , 0.0358]   | 0.90276          |
| MVD             | [0.0444 , 0.22515]   | 0.90276          |
| PKID            | [0.05885 , 0.15935]  | 0.90276          |
| UCPD            | [0.00775 , 0.04025]  | 0.90276          |
| USD             | [0.0377 , 0.17195]   | 0.90276          |
| Zeta            | [-0.00385 , 0.0305]  | 0.90276          |

Table 68: Confidence intervals for algorithm MDLP ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.08925 , 0.2837]   | 0.95024          |
| Ameva           | [-0.0147 , 0.02565]  | 0.95024          |
| Bayesian        | [0.0683 , 0.2387]    | 0.95024          |
| CACC            | [-0.00595 , 0.0268]  | 0.95024          |
| CADD            | [0.26945 , 0.443]    | 0.95024          |
| CAIM            | [-0.0253 , 0.01155]  | 0.95024          |
| Chi2            | [-0.0045 , 0.0313]   | 0.95024          |
| ChiMerge        | [-0.01815 , 0.02545] | 0.95024          |
| ClusterAnalysis | [0.0907 , 0.2277]    | 0.95024          |
| DIBD            | [0.0295 , 0.0862]    | 0.95024          |
| Distance        | [-0.00165 , 0.01365] | 0.95024          |
| EqualFrequency  | [0.0112 , 0.0733]    | 0.95024          |
| EqualWidth      | [0.0301 , 0.099]     | 0.95024          |
| Extended Chi2   | [0.0025 , 0.10135]   | 0.95024          |
| FFD             | [0.0481 , 0.1536]    | 0.95024          |
| FUSINTER        | [-0.0135 , 0.0123]   | 0.95024          |
| HDD             | [0.0168 , 0.1519]    | 0.95024          |
| HellingerBD     | [0.00965 , 0.06935]  | 0.95024          |
| Heter-Disc      | [0.15055 , 0.3251]   | 0.95024          |
| ID3             | [0.08525 , 0.2635]   | 0.95024          |
| IDD             | [0.11775 , 0.26395]  | 0.95024          |
| Khiops          | [0.0113 , 0.04555]   | 0.95024          |
| Modified Chi2   | [-0.0017 , 0.0547]   | 0.95024          |
| MODL            | [0.0016 , 0.04125]   | 0.95024          |
| MVD             | [0.0401 , 0.2365]    | 0.95024          |
| PKID            | [0.0499 , 0.1684]    | 0.95024          |
| UCPD            | [0.00445 , 0.04285]  | 0.95024          |
| USD             | [0.02865 , 0.18785]  | 0.95024          |
| Zeta            | [-0.01035 , 0.03375] | 0.95024          |

Table 69: Confidence intervals for algorithm MDLP ( $\alpha=0.95$ )

## 24 Detailed results for Modified Chi2

### 24.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| 1R              | 602.0 | 181.0 | 0.009172      | 0.009887           |
| Ameva           | 290.0 | 490.0 | $\geq 0.2$    | 1                  |
| Bayesian        | 669.5 | 115.5 | 7.056E-4      | 0.001054           |
| CACC            | 322.0 | 458.0 | $\geq 0.2$    | 1                  |
| CADD            | 765.5 | 19.5  | 1.9735E-8     | 0.000001           |
| CAIM            | 198.0 | 582.0 | $\geq 0.2$    | 1                  |
| Chi2            | 319.0 | 468.0 | $\geq 0.2$    | 1                  |
| ChiMerge        | 226.5 | 556.5 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 714.0 | 69.0  | 3.724E-6      | 0.00002            |
| DIBD            | 493.0 | 327.0 | $\geq 0.2$    | 0.261714           |
| Distance        | 319.0 | 461.0 | $\geq 0.2$    | 1                  |
| EqualFrequency  | 424.0 | 396.0 | $\geq 0.2$    | 1                  |
| EqualWidth      | 513.5 | 271.5 | $\geq 0.2$    | 0.471105           |
| Extended Chi2   | 426.0 | 357.0 | $\geq 0.2$    | 1                  |
| FFD             | 619.0 | 166.0 | 0.013682      | 0.014139           |
| FUSINTER        | 257.0 | 563.0 | $\geq 0.2$    | 1                  |
| HDD             | 536.5 | 283.5 | $\geq 0.2$    | 0.804212           |
| HellingerBD     | 413.0 | 367.0 | $\geq 0.2$    | 0.742955           |
| Heter-Disc      | 712.0 | 71.0  | 4.552E-6      | 0.000022           |
| ID3             | 725.5 | 94.5  | 2.796E-4      | 0.000503           |
| IDD             | 676.5 | 108.5 | 4.278E-4      | 0.000698           |
| Khiops          | 353.0 | 430.0 | $\geq 0.2$    | 1                  |
| MDLP            | 258.0 | 522.0 | $\geq 0.2$    | 1                  |
| MODL            | 398.0 | 422.0 | $\geq 0.2$    | 1                  |
| MVD             | 605.0 | 215.0 | 0.06442       | 0.062645           |
| PKID            | 669.5 | 150.5 | 0.010945      | 0.011678           |
| UCPD            | 397.0 | 423.0 | $\geq 0.2$    | 1                  |
| USD             | 606.5 | 213.5 | 0.15524       | 0.148555           |
| Zeta            | 290.0 | 490.0 | $\geq 0.2$    | 1                  |

Table 70: Results obtained by the Wilcoxon test for algorithm Modified Chi2

### 24.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.03405 , 0.23965]  | 0.90276          |
| Ameva           | [-0.0602 , 0.00455]  | 0.90276          |
| Bayesian        | [0.0453 , 0.1618]    | 0.90276          |
| CACC            | [-0.03985 , 0.0115]  | 0.90276          |
| CADD            | [0.22575 , 0.3862]   | 0.90276          |
| CAIM            | [-0.07265 , -0.0168] | 0.90276          |
| Chi2            | [-0.0279 , 0.00145]  | 0.90276          |
| ChiMerge        | [-0.0614 , -0.00765] | 0.90276          |
| ClusterAnalysis | [0.0591 , 0.15945]   | 0.90276          |
| DIBD            | [-0.00895 , 0.0484]  | 0.90276          |
| Distance        | [-0.04565 , 0.0081]  | 0.90276          |
| EqualFrequency  | [-0.0147 , 0.0315]   | 0.90276          |
| EqualWidth      | [0 , 0.051]          | 0.90276          |
| Extended Chi2   | [-0.013 , 0.02245]   | 0.90276          |
| FFD             | [0.0215 , 0.1002]    | 0.90276          |
| FUSINTER        | [-0.03625 , -0.0031] | 0.90276          |
| HDD             | [0 , 0.0749]         | 0.90276          |
| HellingerBD     | [-0.0203 , 0.0404]   | 0.90276          |
| Heter-Disc      | [0.116 , 0.26165]    | 0.90276          |
| ID3             | [0.0642 , 0.19545]   | 0.90276          |
| IDD             | [0.06915 , 0.2224]   | 0.90276          |
| Khiops          | [-0.02775 , 0.0143]  | 0.90276          |
| MDLP            | [-0.0504 , -0.0021]  | 0.90276          |
| MODL            | [-0.0214 , 0.01]     | 0.90276          |
| MVD             | [0.02105 , 0.1778]   | 0.90276          |
| PKID            | [0.02005 , 0.09615]  | 0.90276          |
| UCPD            | [-0.0298 , 0.0176]   | 0.90276          |
| USD             | [0.00865 , 0.0968]   | 0.90276          |
| Zeta            | [-0.05 , 0.0042]     | 0.90276          |

Table 71: Confidence intervals for algorithm Modified Chi2 ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [0.0237 , 0.261]      | 0.95024          |
| Ameva           | [-0.06685 , 0.0101]   | 0.95024          |
| Bayesian        | [0.0379 , 0.17595]    | 0.95024          |
| CACC            | [-0.0453 , 0.01755]   | 0.95024          |
| CADD            | [0.20835 , 0.411]     | 0.95024          |
| CAIM            | [-0.0802 , -0.0111]   | 0.95024          |
| Chi2            | [-0.0318 , 0.0038]    | 0.95024          |
| ChiMerge        | [-0.06695 , -0.00305] | 0.95024          |
| ClusterAnalysis | [0.05425 , 0.1706]    | 0.95024          |
| DIBD            | [-0.0167 , 0.05575]   | 0.95024          |
| Distance        | [-0.0535 , 0.0108]    | 0.95024          |
| EqualFrequency  | [-0.018 , 0.0378]     | 0.95024          |
| EqualWidth      | [-0.00245 , 0.0584]   | 0.95024          |
| Extended Chi2   | [-0.01985 , 0.06905]  | 0.95024          |
| FFD             | [0.0176 , 0.1102]     | 0.95024          |
| FUSINTER        | [-0.04005 , -0.00065] | 0.95024          |
| HDD             | [-0.00175 , 0.08545]  | 0.95024          |
| HellingerBD     | [-0.02645 , 0.0456]   | 0.95024          |
| Heter-Disc      | [0.10635 , 0.2759]    | 0.95024          |
| ID3             | [0.0539 , 0.20735]    | 0.95024          |
| IDD             | [0.043 , 0.23505]     | 0.95024          |
| Khiops          | [-0.032 , 0.01735]    | 0.95024          |
| MDLP            | [-0.0547 , 0.0017]    | 0.95024          |
| MODL            | [-0.0252 , 0.0117]    | 0.95024          |
| MVD             | [0.0156 , 0.19465]    | 0.95024          |
| PKID            | [0.0174 , 0.1111]     | 0.95024          |
| UCPD            | [-0.0377 , 0.02035]   | 0.95024          |
| USD             | [0.00615 , 0.10995]   | 0.95024          |
| Zeta            | [-0.05415 , 0.00895]  | 0.95024          |

Table 72: Confidence intervals for algorithm Modified Chi2 ( $\alpha=0.95$ )

## 25 Detailed results for MODL

### 25.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value        | Asymptotic P-value |
|-----------------|-------|-------|----------------------|--------------------|
| 1R              | 671.5 | 148.5 | 8.962E-4             | 0.001252           |
| Ameva           | 306.5 | 513.5 | $\geq 0.2$           | 1                  |
| Bayesian        | 745.5 | 74.5  | 3.252E-6             | 0.000017           |
| CACC            | 329.0 | 454.0 | $\geq 0.2$           | 1                  |
| CADD            | 791.5 | 28.5  | 1.1721E-8            | 0.000001           |
| CAIM            | 194.5 | 625.5 | $\geq 0.2$           | 1                  |
| Chi2            | 399.0 | 421.0 | $\geq 0.2$           | 1                  |
| ChiMerge        | 231.5 | 553.5 | $\geq 0.2$           | 1                  |
| ClusterAnalysis | 723.0 | 57.0  | 2.602E-7             | 0.000003           |
| DIBD            | 515.0 | 305.0 | 0.16178              | 0.156174           |
| Distance        | 321.0 | 499.0 | $\geq 0.2$           | 1                  |
| EqualFrequency  | 502.5 | 317.5 | $\geq 0.2$           | 0.437825           |
| EqualWidth      | 559.5 | 260.5 | 0.113                | 0.109045           |
| Extended Chi2   | 432.0 | 351.0 | $\geq 0.2$           | 0.987963           |
| FFD             | 634.0 | 149.0 | 0.001705             | 0.002195           |
| FUSINTER        | 222.0 | 561.0 | $\geq 0.2$           | 1                  |
| HDD             | 539.0 | 281.0 | $\geq 0.2$           | 0.409482           |
| HellingerBD     | 487.5 | 332.5 | $\geq 0.2$           | 0.576614           |
| Heter-Disc      | 699.0 | 81.0  | 3.05E-6              | 0.000016           |
| ID3             | 731.0 | 89.0  | 4.722E-5             | 0.000122           |
| IDD             | 748.5 | 71.5  | 2.419999999999997E-6 | 0.000014           |
| Khiops          | 455.5 | 364.5 | $\geq 0.2$           | 0.924763           |
| MDLP            | 235.0 | 585.0 | $\geq 0.2$           | 1                  |
| Modified Chi2   | 422.0 | 398.0 | $\geq 0.2$           | 1                  |
| MVD             | 653.5 | 166.5 | 0.00247              | 0.00302            |
| PKID            | 640.0 | 143.0 | 0.0011958            | 0.001616           |
| UCPD            | 411.0 | 409.0 | $\geq 0.2$           | 0.983914           |
| USD             | 650.0 | 133.0 | 6.42E-4              | 0.000954           |
| Zeta            | 315.5 | 504.5 | $\geq 0.2$           | 1                  |

Table 73: Results obtained by the Wilcoxon test for algorithm MODL

### 25.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [0.03745 , 0.1987]    | 0.90276          |
| Ameva           | [-0.07115 , 0.00415]  | 0.90276          |
| Bayesian        | [0.05605 , 0.1519]    | 0.90276          |
| CACC            | [-0.0292 , 0.0083]    | 0.90276          |
| CADD            | [0.2151 , 0.37805]    | 0.90276          |
| CAIM            | [-0.07935 , -0.01065] | 0.90276          |
| Chi2            | [-0.01945 , 0.0141]   | 0.90276          |
| ChiMerge        | [-0.06195 , -0.00335] | 0.90276          |
| ClusterAnalysis | [0.06885 , 0.14475]   | 0.90276          |
| DIBD            | [-0.00565 , 0.05345]  | 0.90276          |
| Distance        | [-0.0323 , 0.0037]    | 0.90276          |
| EqualFrequency  | [-0.0046 , 0.0377]    | 0.90276          |
| EqualWidth      | [0.007 , 0.05355]     | 0.90276          |
| Extended Chi2   | [-0.0097 , 0.0545]    | 0.90276          |
| FFD             | [0.0354 , 0.09055]    | 0.90276          |
| FUSINTER        | [-0.02625 , -0.0043]  | 0.90276          |
| HDD             | [0.0013 , 0.08455]    | 0.90276          |
| HellingerBD     | [-0.01145 , 0.0401]   | 0.90276          |
| Heter-Disc      | [0.119 , 0.25595]     | 0.90276          |
| ID3             | [0.07645 , 0.16895]   | 0.90276          |
| IDD             | [0.07095 , 0.19235]   | 0.90276          |
| Khiops          | [-0.01455 , 0.025]    | 0.90276          |
| MDLP            | [-0.0358 , -0.00325]  | 0.90276          |
| Modified Chi2   | [-0.01 , 0.0214]      | 0.90276          |
| MVD             | [0.0258 , 0.13135]    | 0.90276          |
| PKID            | [0.03985 , 0.0999]    | 0.90276          |
| UCPD            | [-0.026 , 0.02235]    | 0.90276          |
| USD             | [0.02805 , 0.0941]    | 0.90276          |
| Zeta            | [-0.0523 , 0.0043]    | 0.90276          |

Table 74: Confidence intervals for algorithm MODL ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.02915 , 0.21295]  | 0.95024          |
| Ameva           | [-0.08015 , 0.0084]  | 0.95024          |
| Bayesian        | [0.04845 , 0.1618]   | 0.95024          |
| CACC            | [-0.03875 , 0.01425] | 0.95024          |
| CADD            | [0.20425 , 0.40005]  | 0.95024          |
| CAIM            | [-0.0912 , -0.00875] | 0.95024          |
| Chi2            | [-0.0237 , 0.0176]   | 0.95024          |
| ChiMerge        | [-0.07185 , -0.0012] | 0.95024          |
| ClusterAnalysis | [0.0614 , 0.15205]   | 0.95024          |
| DIBD            | [-0.0117 , 0.05855]  | 0.95024          |
| Distance        | [-0.04235 , 0.00575] | 0.95024          |
| EqualFrequency  | [-0.0085 , 0.0408]   | 0.95024          |
| EqualWidth      | [0.00075 , 0.0576]   | 0.95024          |
| Extended Chi2   | [-0.0131 , 0.0615]   | 0.95024          |
| FFD             | [0.031 , 0.09715]    | 0.95024          |
| FUSINTER        | [-0.0313 , -0.00265] | 0.95024          |
| HDD             | [-0.00205 , 0.09465] | 0.95024          |
| HellingerBD     | [-0.0187 , 0.0432]   | 0.95024          |
| Heter-Disc      | [0.1064 , 0.27435]   | 0.95024          |
| ID3             | [0.06505 , 0.17805]  | 0.95024          |
| IDD             | [0.0628 , 0.20225]   | 0.95024          |
| Khiops          | [-0.01865 , 0.02805] | 0.95024          |
| MDLP            | [-0.04125 , -0.0016] | 0.95024          |
| Modified Chi2   | [-0.0117 , 0.0252]   | 0.95024          |
| MVD             | [0.01985 , 0.17635]  | 0.95024          |
| PKID            | [0.03 , 0.10555]     | 0.95024          |
| UCPD            | [-0.03435 , 0.0264]  | 0.95024          |
| USD             | [0.0243 , 0.1074]    | 0.95024          |
| Zeta            | [-0.0656 , 0.007]    | 0.95024          |

Table 75: Confidence intervals for algorithm MODL ( $\alpha=0.95$ )

## 26 Detailed results for MVD

### 26.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| 1R              | 457.0 | 363.0 | $\geq 0.2$    | 1                  |
| Ameva           | 118.0 | 702.0 | $\geq 0.2$    | 1                  |
| Bayesian        | 471.0 | 349.0 | $\geq 0.2$    | 1                  |
| CACC            | 174.5 | 645.5 | $\geq 0.2$    | 1                  |
| CADD            | 669.5 | 119.5 | 0.010686      | 0.011473           |
| CAIM            | 91.0  | 689.0 | $\geq 0.2$    | 1                  |
| Chi2            | 192.5 | 627.5 | $\geq 0.2$    | 1                  |
| ChiMerge        | 88.0  | 732.0 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 436.5 | 383.5 | $\geq 0.2$    | 1                  |
| DIBD            | 257.0 | 526.0 | $\geq 0.2$    | 1                  |
| Distance        | 186.0 | 634.0 | $\geq 0.2$    | 1                  |
| EqualFrequency  | 238.5 | 546.5 | $\geq 0.2$    | 1                  |
| EqualWidth      | 241.0 | 542.0 | $\geq 0.2$    | 1                  |
| Extended Chi2   | 288.0 | 532.0 | $\geq 0.2$    | 1                  |
| FFD             | 343.0 | 477.0 | $\geq 0.2$    | 1                  |
| FUSINTER        | 88.0  | 692.0 | $\geq 0.2$    | 1                  |
| HDD             | 326.0 | 494.0 | $\geq 0.2$    | 1                  |
| HellingerBD     | 227.0 | 593.0 | $\geq 0.2$    | 1                  |
| Heter-Disc      | 566.0 | 254.0 | $\geq 0.2$    | 0.844345           |
| ID3             | 474.0 | 313.0 | $\geq 0.2$    | 1                  |
| IDD             | 504.5 | 315.5 | $\geq 0.2$    | 1                  |
| Khiops          | 229.5 | 590.5 | $\geq 0.2$    | 1                  |
| MDLP            | 119.0 | 661.0 | $\geq 0.2$    | 1                  |
| Modified Chi2   | 215.0 | 605.0 | $\geq 0.2$    | 1                  |
| MODL            | 166.5 | 653.5 | $\geq 0.2$    | 1                  |
| PKID            | 377.0 | 443.0 | $\geq 0.2$    | 1                  |
| UCPD            | 212.0 | 608.0 | $\geq 0.2$    | 1                  |
| USD             | 361.0 | 426.0 | $\geq 0.2$    | 1                  |
| Zeta            | 147.0 | 673.0 | $\geq 0.2$    | 1                  |

Table 76: Results obtained by the Wilcoxon test for algorithm MVD

### 26.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [-0.0337 , 0.109]     | 0.90276          |
| Ameva           | [-0.19245 , -0.06725] | 0.90276          |
| Bayesian        | [-0.0159 , 0.0599]    | 0.90276          |
| CACC            | [-0.18145 , -0.0273]  | 0.90276          |
| CADD            | [0.11275 , 0.25615]   | 0.90276          |
| CAIM            | [-0.2188 , -0.08205]  | 0.90276          |
| Chi2            | [-0.1954 , -0.02705]  | 0.90276          |
| ChiMerge        | [-0.2046 , -0.07345]  | 0.90276          |
| ClusterAnalysis | [-0.02975 , 0.055]    | 0.90276          |
| DIBD            | [-0.12895 , -0.00455] | 0.90276          |
| Distance        | [-0.21975 , -0.0322]  | 0.90276          |
| EqualFrequency  | [-0.16225 , -0.00755] | 0.90276          |
| EqualWidth      | [-0.13725 , -0.0052]  | 0.90276          |
| Extended Chi2   | [-0.1347 , 0]         | 0.90276          |
| FFD             | [-0.12035 , 0.01995]  | 0.90276          |
| FUSINTER        | [-0.218 , -0.0431]    | 0.90276          |
| HDD             | [-0.0986 , 0.0071]    | 0.90276          |
| HellingerBD     | [-0.19065 , -0.02345] | 0.90276          |
| Heter-Disc      | [0.00345 , 0.1742]    | 0.90276          |
| ID3             | [-0.01825 , 0.0804]   | 0.90276          |
| IDD             | [-0.0167 , 0.10045]   | 0.90276          |
| Khiops          | [-0.2078 , -0.0211]   | 0.90276          |
| MDLP            | [-0.22515 , -0.0444]  | 0.90276          |
| Modified Chi2   | [-0.1778 , -0.02105]  | 0.90276          |
| MODL            | [-0.13135 , -0.0258]  | 0.90276          |
| PKID            | [-0.0897 , 0.0279]    | 0.90276          |
| UCPD            | [-0.18995 , -0.0287]  | 0.90276          |
| USD             | [-0.0653 , 0.0247]    | 0.90276          |
| Zeta            | [-0.1915 , -0.0562]   | 0.90276          |

Table 77: Confidence intervals for algorithm MVD ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [-0.04 , 0.12725]     | 0.95024          |
| Ameva           | [-0.1999 , -0.0518]   | 0.95024          |
| Bayesian        | [-0.0253 , 0.0683]    | 0.95024          |
| CACC            | [-0.1934 , -0.02025]  | 0.95024          |
| CADD            | [0.08965 , 0.26755]   | 0.95024          |
| CAIM            | [-0.23335 , -0.0713]  | 0.95024          |
| Chi2            | [-0.2054 , -0.0187]   | 0.95024          |
| ChiMerge        | [-0.2161 , -0.06505]  | 0.95024          |
| ClusterAnalysis | [-0.0404 , 0.0715]    | 0.95024          |
| DIBD            | [-0.1546 , 0.0037]    | 0.95024          |
| Distance        | [-0.23335 , -0.02485] | 0.95024          |
| EqualFrequency  | [-0.17595 , -0.0015]  | 0.95024          |
| EqualWidth      | [-0.1538 , -0.00215]  | 0.95024          |
| Extended Chi2   | [-0.154 , 0.0075]     | 0.95024          |
| FFD             | [-0.13825 , 0.02615]  | 0.95024          |
| FUSINTER        | [-0.2369 , -0.03735]  | 0.95024          |
| HDD             | [-0.1152 , 0.01785]   | 0.95024          |
| HellingerBD     | [-0.2023 , -0.0149]   | 0.95024          |
| Heter-Disc      | [0 , 0.19545]         | 0.95024          |
| ID3             | [-0.03285 , 0.0968]   | 0.95024          |
| IDD             | [-0.0226 , 0.12145]   | 0.95024          |
| Khiops          | [-0.2161 , -0.0139]   | 0.95024          |
| MDLP            | [-0.2365 , -0.0401]   | 0.95024          |
| Modified Chi2   | [-0.19465 , -0.0156]  | 0.95024          |
| MODL            | [-0.17635 , -0.01985] | 0.95024          |
| PKID            | [-0.1061 , 0.0401]    | 0.95024          |
| UCPD            | [-0.2027 , -0.01605]  | 0.95024          |
| USD             | [-0.0896 , 0.0382]    | 0.95024          |
| Zeta            | [-0.20335 , -0.04585] | 0.95024          |

Table 78: Confidence intervals for algorithm MVD ( $\alpha=0.95$ )

## 27 Detailed results for PKID

### 27.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| 1R              | 438.0 | 382.0 | $\geq 0.2$    | 1                  |
| Ameva           | 114.5 | 705.5 | $\geq 0.2$    | 1                  |
| Bayesian        | 541.5 | 243.5 | $\geq 0.2$    | 0.237318           |
| CACC            | 164.0 | 616.0 | $\geq 0.2$    | 1                  |
| CADD            | 709.0 | 78.0  | 1.3206E-4     | 0.000287           |
| CAIM            | 43.0  | 737.0 | $\geq 0.2$    | 1                  |
| Chi2            | 110.0 | 673.0 | $\geq 0.2$    | 1                  |
| ChiMerge        | 56.0  | 724.0 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 555.0 | 265.0 | $\geq 0.2$    | 0.281849           |
| DIBD            | 282.0 | 538.0 | $\geq 0.2$    | 1                  |
| Distance        | 122.0 | 658.0 | $\geq 0.2$    | 1                  |
| EqualFrequency  | 108.5 | 711.5 | $\geq 0.2$    | 1                  |
| EqualWidth      | 255.5 | 564.5 | $\geq 0.2$    | 1                  |
| Extended Chi2   | 248.0 | 572.0 | $\geq 0.2$    | 1                  |
| FFD             | 374.5 | 445.5 | $\geq 0.2$    | 1                  |
| FUSINTER        | 55.0  | 725.0 | $\geq 0.2$    | 1                  |
| HDD             | 346.5 | 442.5 | $\geq 0.2$    | 1                  |
| HellingerBD     | 159.0 | 624.0 | $\geq 0.2$    | 1                  |
| Heter-Disc      | 640.5 | 179.5 | 0.014938      | 0.015343           |
| ID3             | 639.5 | 153.5 | $\geq 0.2$    | 0.387094           |
| IDD             | 479.0 | 308.0 | $\geq 0.2$    | 1                  |
| Khiops          | 108.0 | 712.0 | $\geq 0.2$    | 1                  |
| MDLP            | 114.0 | 666.0 | $\geq 0.2$    | 1                  |
| Modified Chi2   | 150.5 | 669.5 | $\geq 0.2$    | 1                  |
| MODL            | 143.0 | 640.0 | $\geq 0.2$    | 1                  |
| MVD             | 443.0 | 377.0 | $\geq 0.2$    | 1                  |
| UCPD            | 145.0 | 675.0 | $\geq 0.2$    | 1                  |
| USD             | 386.0 | 401.0 | $\geq 0.2$    | 1                  |
| Zeta            | 78.0  | 702.0 | $\geq 0.2$    | 1                  |

Table 79: Results obtained by the Wilcoxon test for algorithm PKID

### 27.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [-0.0439 , 0.1542]    | 0.90276          |
| Ameva           | [-0.1505 , -0.0695]   | 0.90276          |
| Bayesian        | [0.00695 , 0.068]     | 0.90276          |
| CACC            | [-0.12685 , -0.0381]  | 0.90276          |
| CADD            | [0.1151 , 0.31125]    | 0.90276          |
| CAIM            | [-0.16725 , -0.0872]  | 0.90276          |
| Chi2            | [-0.121 , -0.0404]    | 0.90276          |
| ChiMerge        | [-0.14995 , -0.08405] | 0.90276          |
| ClusterAnalysis | [0.0017 , 0.0653]     | 0.90276          |
| DIBD            | [-0.10115 , -0.0024]  | 0.90276          |
| Distance        | [-0.15935 , -0.059]   | 0.90276          |
| EqualFrequency  | [-0.088 , -0.0268]    | 0.90276          |
| EqualWidth      | [-0.07375 , -0.0059]  | 0.90276          |
| Extended Chi2   | [-0.06865 , -0.00825] | 0.90276          |
| FFD             | [-0.01585 , 0.0081]   | 0.90276          |
| FUSINTER        | [-0.15645 , -0.0666]  | 0.90276          |
| HDD             | [-0.0274 , 0.00985]   | 0.90276          |
| HellingerBD     | [-0.1082 , -0.02925]  | 0.90276          |
| Heter-Disc      | [0.03555 , 0.18925]   | 0.90276          |
| ID3             | [0.0133 , 0.06745]    | 0.90276          |
| IDD             | [-0.0071 , 0.12665]   | 0.90276          |
| Khiops          | [-0.1255 , -0.03815]  | 0.90276          |
| MDLP            | [-0.15935 , -0.05885] | 0.90276          |
| Modified Chi2   | [-0.09615 , -0.02005] | 0.90276          |
| MODL            | [-0.0999 , -0.03985]  | 0.90276          |
| MVD             | [-0.0279 , 0.0897]    | 0.90276          |
| UCPD            | [-0.12715 , -0.0419]  | 0.90276          |
| USD             | [-0.0122 , 0.0123]    | 0.90276          |
| Zeta            | [-0.1393 , -0.06815]  | 0.90276          |

Table 80: Confidence intervals for algorithm PKID ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [-0.05405 , 0.16985]  | 0.95024          |
| Ameva           | [-0.1618 , -0.0638]   | 0.95024          |
| Bayesian        | [0.00095 , 0.07475]   | 0.95024          |
| CACC            | [-0.14295 , -0.0294]  | 0.95024          |
| CADD            | [0.0997 , 0.3342]     | 0.95024          |
| CAIM            | [-0.17535 , -0.08105] | 0.95024          |
| Chi2            | [-0.129 , -0.0352]    | 0.95024          |
| ChiMerge        | [-0.1607 , -0.0769]   | 0.95024          |
| ClusterAnalysis | [0 , 0.0716]          | 0.95024          |
| DIBD            | [-0.11185 , 0.0057]   | 0.95024          |
| Distance        | [-0.1691 , -0.048]    | 0.95024          |
| EqualFrequency  | [-0.0905 , -0.0233]   | 0.95024          |
| EqualWidth      | [-0.0793 , 0]         | 0.95024          |
| Extended Chi2   | [-0.07395 , -0.00375] | 0.95024          |
| FFD             | [-0.02025 , 0.01235]  | 0.95024          |
| FUSINTER        | [-0.16615 , -0.0597]  | 0.95024          |
| HDD             | [-0.041 , 0.0133]     | 0.95024          |
| HellingerBD     | [-0.11575 , -0.025]   | 0.95024          |
| Heter-Disc      | [0.0288 , 0.2073]     | 0.95024          |
| ID3             | [0.0075 , 0.0694]     | 0.95024          |
| IDD             | [-0.0118 , 0.1346]    | 0.95024          |
| Khiops          | [-0.1347 , -0.03165]  | 0.95024          |
| MDLP            | [-0.1684 , -0.0499]   | 0.95024          |
| Modified Chi2   | [-0.1111 , -0.0174]   | 0.95024          |
| MODL            | [-0.10555 , -0.03]    | 0.95024          |
| MVD             | [-0.0401 , 0.1061]    | 0.95024          |
| UCPD            | [-0.14205 , -0.03595] | 0.95024          |
| USD             | [-0.0151 , 0.01725]   | 0.95024          |
| Zeta            | [-0.1443 , -0.0621]   | 0.95024          |

Table 81: Confidence intervals for algorithm PKID ( $\alpha=0.95$ )

## 28 Detailed results for UCPD

### 28.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| 1R              | 689.0 | 131.0 | 8.252E-5      | 0.000172           |
| Ameva           | 316.0 | 504.0 | $\geq 0.2$    | 1                  |
| Bayesian        | 722.0 | 98.0  | 6.91E-6       | 0.000027           |
| CACC            | 298.0 | 522.0 | $\geq 0.2$    | 1                  |
| CADD            | 815.0 | 5.0   | 1.819E-11     | 0                  |
| CAIM            | 238.0 | 582.0 | $\geq 0.2$    | 1                  |
| Chi2            | 328.0 | 492.0 | $\geq 0.2$    | 1                  |
| ChiMerge        | 254.0 | 566.0 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 754.0 | 66.0  | 3.49E-7       | 0.000004           |
| DIBD            | 571.0 | 249.0 | 0.0299        | 0.029673           |
| Distance        | 267.0 | 553.0 | $\geq 0.2$    | 1                  |
| EqualFrequency  | 491.0 | 329.0 | $\geq 0.2$    | 0.271699           |
| EqualWidth      | 624.0 | 196.0 | 0.003358      | 0.003937           |
| Extended Chi2   | 522.5 | 297.5 | 0.13332       | 0.128154           |
| FFD             | 713.0 | 107.0 | 1.43E-5       | 0.000045           |
| FUSINTER        | 176.0 | 644.0 | $\geq 0.2$    | 1                  |
| HDD             | 549.0 | 271.0 | 0.06218       | 0.060784           |
| HellingerBD     | 446.0 | 374.0 | $\geq 0.2$    | 0.623704           |
| Heter-Disc      | 796.0 | 24.0  | 1.386E-9      | 0                  |
| ID3             | 722.0 | 98.0  | 6.91E-6       | 0.000027           |
| IDD             | 727.0 | 93.0  | 4.528E-6      | 0.00002            |
| Khiops          | 406.0 | 414.0 | $\geq 0.2$    | 1                  |
| MDLP            | 228.0 | 592.0 | $\geq 0.2$    | 1                  |
| Modified Chi2   | 423.0 | 397.0 | $\geq 0.2$    | 0.856008           |
| MODL            | 409.0 | 411.0 | $\geq 0.2$    | 1                  |
| MVD             | 608.0 | 212.0 | 0.006956      | 0.007628           |
| PKID            | 675.0 | 145.0 | 2.06E-4       | 0.000359           |
| USD             | 636.0 | 184.0 | 0.0018628     | 0.002253           |
| Zeta            | 321.0 | 499.0 | $\geq 0.2$    | 1                  |

Table 82: Results obtained by the Wilcoxon test for algorithm UCPD

### 28.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [0.0718 , 0.2436]     | 0.90276          |
| Ameva           | [-0.0388 , 0.00405]   | 0.90276          |
| Bayesian        | [0.08255 , 0.1889]    | 0.90276          |
| CACC            | [-0.0352 , 0.00175]   | 0.90276          |
| CADD            | [0.24735 , 0.3996]    | 0.90276          |
| CAIM            | [-0.0538 , -0.0105]   | 0.90276          |
| Chi2            | [-0.0299 , 0.00635]   | 0.90276          |
| ChiMerge        | [-0.05165 , -0.0047]  | 0.90276          |
| ClusterAnalysis | [0.0821 , 0.172]      | 0.90276          |
| DIBD            | [0.0053 , 0.06675]    | 0.90276          |
| Distance        | [-0.0374 , -0.00165]  | 0.90276          |
| EqualFrequency  | [-0.00555 , 0.05325]  | 0.90276          |
| EqualWidth      | [0.0159 , 0.0658]     | 0.90276          |
| Extended Chi2   | [-0.00145 , 0.07495]  | 0.90276          |
| FFD             | [0.032 , 0.11765]     | 0.90276          |
| FUSINTER        | [-0.04085 , -0.01115] | 0.90276          |
| HDD             | [0.0062 , 0.12225]    | 0.90276          |
| HellingerBD     | [-0.0131 , 0.03835]   | 0.90276          |
| Heter-Disc      | [0.15255 , 0.2746]    | 0.90276          |
| ID3             | [0.09455 , 0.21785]   | 0.90276          |
| IDD             | [0.1033 , 0.2364]     | 0.90276          |
| Khiops          | [-0.0152 , 0.0198]    | 0.90276          |
| MDLP            | [-0.04025 , -0.00775] | 0.90276          |
| Modified Chi2   | [-0.0176 , 0.0298]    | 0.90276          |
| MODL            | [-0.02235 , 0.026]    | 0.90276          |
| MVD             | [0.0287 , 0.18995]    | 0.90276          |
| PKID            | [0.0419 , 0.12715]    | 0.90276          |
| USD             | [0.02725 , 0.1362]    | 0.90276          |
| Zeta            | [-0.03455 , 0.0061]   | 0.90276          |

Table 83: Confidence intervals for algorithm UCPD ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [0.06245 , 0.25485]   | 0.95024          |
| Ameva           | [-0.04375 , 0.00745]  | 0.95024          |
| Bayesian        | [0.07115 , 0.2037]    | 0.95024          |
| CACC            | [-0.0386 , 0.00475]   | 0.95024          |
| CADD            | [0.2338 , 0.4166]     | 0.95024          |
| CAIM            | [-0.0587 , -0.00515]  | 0.95024          |
| Chi2            | [-0.03305 , 0.01135]  | 0.95024          |
| ChiMerge        | [-0.05465 , -0.00135] | 0.95024          |
| ClusterAnalysis | [0.07405 , 0.1838]    | 0.95024          |
| DIBD            | [0.00235 , 0.0777]    | 0.95024          |
| Distance        | [-0.039 , 0.00055]    | 0.95024          |
| EqualFrequency  | [-0.00895 , 0.05925]  | 0.95024          |
| EqualWidth      | [0.0129 , 0.0732]     | 0.95024          |
| Extended Chi2   | [-0.0054 , 0.0839]    | 0.95024          |
| FFD             | [0.0277 , 0.12315]    | 0.95024          |
| FUSINTER        | [-0.04425 , -0.0089]  | 0.95024          |
| HDD             | [-0.0024 , 0.13325]   | 0.95024          |
| HellingerBD     | [-0.0158 , 0.0441]    | 0.95024          |
| Heter-Disc      | [0.14355 , 0.294]     | 0.95024          |
| ID3             | [0.0828 , 0.2334]     | 0.95024          |
| IDD             | [0.09175 , 0.244]     | 0.95024          |
| Khiops          | [-0.01805 , 0.02475]  | 0.95024          |
| MDLP            | [-0.04285 , -0.00445] | 0.95024          |
| Modified Chi2   | [-0.02035 , 0.0377]   | 0.95024          |
| MODL            | [-0.0264 , 0.03435]   | 0.95024          |
| MVD             | [0.01605 , 0.2027]    | 0.95024          |
| PKID            | [0.03595 , 0.14205]   | 0.95024          |
| USD             | [0.0184 , 0.14985]    | 0.95024          |
| Zeta            | [-0.0391 , 0.0102]    | 0.95024          |

Table 84: Confidence intervals for algorithm UCPD ( $\alpha=0.95$ )

## 29 Detailed results for USD

### 29.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|-----------------|-------|-------|---------------|--------------------|
| 1R              | 433.0 | 387.0 | $\geq 0.2$    | 1                  |
| Ameva           | 139.0 | 641.0 | $\geq 0.2$    | 1                  |
| Bayesian        | 577.0 | 243.0 | $\geq 0.2$    | 0.687664           |
| CACC            | 187.0 | 593.0 | $\geq 0.2$    | 1                  |
| CADD            | 690.0 | 97.0  | 6.51E-4       | 0.00101            |
| CAIM            | 64.0  | 719.0 | $\geq 0.2$    | 1                  |
| Chi2            | 194.0 | 626.0 | $\geq 0.2$    | 1                  |
| ChiMerge        | 69.0  | 711.0 | $\geq 0.2$    | 1                  |
| ClusterAnalysis | 538.0 | 282.0 | $\geq 0.2$    | 0.418461           |
| DIBD            | 295.0 | 525.0 | $\geq 0.2$    | 1                  |
| Distance        | 180.0 | 600.0 | $\geq 0.2$    | 1                  |
| EqualFrequency  | 181.0 | 602.0 | $\geq 0.2$    | 1                  |
| EqualWidth      | 279.0 | 541.0 | $\geq 0.2$    | 1                  |
| Extended Chi2   | 259.0 | 561.0 | $\geq 0.2$    | 1                  |
| FFD             | 417.5 | 367.5 | $\geq 0.2$    | 1                  |
| FUSINTER        | 110.0 | 670.0 | $\geq 0.2$    | 1                  |
| HDD             | 362.5 | 426.5 | $\geq 0.2$    | 1                  |
| HellingerBD     | 208.0 | 572.0 | $\geq 0.2$    | 1                  |
| Heter-Disc      | 583.0 | 200.0 | 0.02146       | 0.021841           |
| ID3             | 693.0 | 98.0  | 0.008594      | 0.009465           |
| IDD             | 457.5 | 362.5 | $\geq 0.2$    | 1                  |
| Khiops          | 169.0 | 614.0 | $\geq 0.2$    | 1                  |
| MDLP            | 141.0 | 639.0 | $\geq 0.2$    | 1                  |
| Modified Chi2   | 213.5 | 606.5 | $\geq 0.2$    | 1                  |
| MODL            | 133.0 | 650.0 | $\geq 0.2$    | 1                  |
| MVD             | 426.0 | 361.0 | $\geq 0.2$    | 1                  |
| PKID            | 401.0 | 386.0 | $\geq 0.2$    | 1                  |
| UCPD            | 184.0 | 636.0 | $\geq 0.2$    | 1                  |
| Zeta            | 111.5 | 708.5 | $\geq 0.2$    | 1                  |

Table 85: Results obtained by the Wilcoxon test for algorithm USD

### 29.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [-0.03645 , 0.15415]  | 0.90276          |
| Ameva           | [-0.16335 , -0.05795] | 0.90276          |
| Bayesian        | [0.004 , 0.0374]      | 0.90276          |
| CACC            | [-0.1385 , -0.0321]   | 0.90276          |
| CADD            | [0.1224 , 0.33055]    | 0.90276          |
| CAIM            | [-0.17855 , -0.0714]  | 0.90276          |
| Chi2            | [-0.1319 , -0.021]    | 0.90276          |
| ChiMerge        | [-0.159 , -0.0681]    | 0.90276          |
| ClusterAnalysis | [0 , 0.05885]         | 0.90276          |
| DIBD            | [-0.1161 , 0.0029]    | 0.90276          |
| Distance        | [-0.1619 , -0.04605]  | 0.90276          |
| EqualFrequency  | [-0.10345 , -0.0166]  | 0.90276          |
| EqualWidth      | [-0.0834 , -0.0023]   | 0.90276          |
| Extended Chi2   | [-0.07535 , -0.0054]  | 0.90276          |
| FFD             | [-0.03265 , 0.0183]   | 0.90276          |
| FUSINTER        | [-0.1663 , -0.0403]   | 0.90276          |
| HDD             | [-0.02635 , 0.0119]   | 0.90276          |
| HellingerBD     | [-0.1306 , -0.0175]   | 0.90276          |
| Heter-Disc      | [0.031 , 0.20565]     | 0.90276          |
| ID3             | [0.01945 , 0.07485]   | 0.90276          |
| IDD             | [-0.0114 , 0.10145]   | 0.90276          |
| Khiops          | [-0.1444 , -0.0254]   | 0.90276          |
| MDLP            | [-0.17195 , -0.0377]  | 0.90276          |
| Modified Chi2   | [-0.0968 , -0.00865]  | 0.90276          |
| MODL            | [-0.0941 , -0.02805]  | 0.90276          |
| MVD             | [-0.0247 , 0.0653]    | 0.90276          |
| PKID            | [-0.0123 , 0.0122]    | 0.90276          |
| UCPD            | [-0.1362 , -0.02725]  | 0.90276          |
| Zeta            | [-0.14985 , -0.0523]  | 0.90276          |

Table 86: Confidence intervals for algorithm USD ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [-0.0476 , 0.18035]   | 0.95024          |
| Ameva           | [-0.1741 , -0.05185]  | 0.95024          |
| Bayesian        | [0.0004 , 0.0392]     | 0.95024          |
| CACC            | [-0.154 , -0.0256]    | 0.95024          |
| CADD            | [0.10885 , 0.3446]    | 0.95024          |
| CAIM            | [-0.18935 , -0.0635]  | 0.95024          |
| Chi2            | [-0.14985 , -0.0156]  | 0.95024          |
| ChiMerge        | [-0.16915 , -0.0614]  | 0.95024          |
| ClusterAnalysis | [-0.0011 , 0.06925]   | 0.95024          |
| DIBD            | [-0.13295 , 0.01105]  | 0.95024          |
| Distance        | [-0.1801 , -0.03215]  | 0.95024          |
| EqualFrequency  | [-0.10855 , -0.01065] | 0.95024          |
| EqualWidth      | [-0.0927 , 0.00325]   | 0.95024          |
| Extended Chi2   | [-0.08215 , -0.0005]  | 0.95024          |
| FFD             | [-0.04675 , 0.0215]   | 0.95024          |
| FUSINTER        | [-0.1795 , -0.0331]   | 0.95024          |
| HDD             | [-0.0313 , 0.01945]   | 0.95024          |
| HellingerBD     | [-0.144 , -0.01085]   | 0.95024          |
| Heter-Disc      | [0.0218 , 0.22335]    | 0.95024          |
| ID3             | [0.01495 , 0.0771]    | 0.95024          |
| IDD             | [-0.0143 , 0.12455]   | 0.95024          |
| Khiops          | [-0.15855 , -0.0186]  | 0.95024          |
| MDLP            | [-0.18785 , -0.02865] | 0.95024          |
| Modified Chi2   | [-0.10995 , -0.00615] | 0.95024          |
| MODL            | [-0.1074 , -0.0243]   | 0.95024          |
| MVD             | [-0.0382 , 0.0896]    | 0.95024          |
| PKID            | [-0.01725 , 0.0151]   | 0.95024          |
| UCPD            | [-0.14985 , -0.0184]  | 0.95024          |
| Zeta            | [-0.1605 , -0.04705]  | 0.95024          |

Table 87: Confidence intervals for algorithm USD ( $\alpha=0.95$ )

## 30 Detailed results for Zeta

### 30.1 Results

| VS              | $R^+$ | $R^-$ | Exact P-value         | Asymptotic P-value |
|-----------------|-------|-------|-----------------------|--------------------|
| 1R              | 712.0 | 108.0 | 1.5466E-5             | 0.000048           |
| Ameva           | 302.0 | 481.0 | $\geq 0.2$            | 1                  |
| Bayesian        | 788.0 | 32.0  | 5.03E-9               | 0                  |
| CACC            | 405.5 | 414.5 | $\geq 0.2$            | 1                  |
| CADD            | 817.0 | 3.0   | 9.094E-12             | 0                  |
| CAIM            | 186.0 | 601.0 | $\geq 0.2$            | 1                  |
| Chi2            | 423.5 | 396.5 | $\geq 0.2$            | 1                  |
| ChiMerge        | 260.0 | 560.0 | $\geq 0.2$            | 1                  |
| ClusterAnalysis | 757.0 | 63.0  | 2.536E-7              | 0.000003           |
| DIBD            | 576.0 | 244.0 | 0.02498               | 0.025223           |
| Distance        | 361.0 | 459.0 | $\geq 0.2$            | 1                  |
| EqualFrequency  | 565.5 | 214.5 | 0.013427999999999999  | 0.013879           |
| EqualWidth      | 642.0 | 138.0 | 2.496E-4              | 0.000426           |
| Extended Chi2   | 579.0 | 241.0 | 0.02236               | 0.022709           |
| FFD             | 687.0 | 93.0  | 8.892E-6              | 0.000033           |
| FUSINTER        | 327.0 | 453.0 | $\geq 0.2$            | 1                  |
| HDD             | 598.5 | 221.5 | 0.03014               | 0.030152           |
| HellingerBD     | 506.5 | 273.5 | 0.10603               | 0.101926           |
| Heter-Disc      | 773.0 | 47.0  | 3.948E-8              | 0.000001           |
| ID3             | 751.5 | 68.5  | 1.7874999999999998E-6 | 0.000011           |
| IDD             | 790.0 | 30.0  | 3.702E-9              | 0                  |
| Khiops          | 487.0 | 293.0 | 0.18012               | 0.173636           |
| MDLP            | 321.5 | 498.5 | $\geq 0.2$            | 1                  |
| Modified Chi2   | 490.0 | 290.0 | 0.16676               | 0.160773           |
| MODL            | 504.5 | 315.5 | $\geq 0.2$            | 0.420891           |
| MVD             | 673.0 | 147.0 | 2.332E-4              | 0.000389           |
| PKID            | 702.0 | 78.0  | 2.3E-6                | 0.000013           |
| UCPD            | 499.0 | 321.0 | $\geq 0.2$            | 0.228978           |
| USD             | 708.5 | 111.5 | 7.597999999999999E-5  | 0.000168           |

Table 88: Results obtained by the Wilcoxon test for algorithm Zeta

### 30.2 Confidence intervals for Median of differences

| $\alpha=0.90$   | Confidence interval  | Exact confidence |
|-----------------|----------------------|------------------|
| 1R              | [0.07955 , 0.25175]  | 0.90276          |
| Ameva           | [-0.02855 , 0.004]   | 0.90276          |
| Bayesian        | [0.0961 , 0.2001]    | 0.90276          |
| CACC            | [-0.0171 , 0.0157]   | 0.90276          |
| CADD            | [0.26005 , 0.4143]   | 0.90276          |
| CAIM            | [-0.02525 , -0.0041] | 0.90276          |
| Chi2            | [-0.0144 , 0.02895]  | 0.90276          |
| ChiMerge        | [-0.02675 , -0.002]  | 0.90276          |
| ClusterAnalysis | [0.0996 , 0.1919]    | 0.90276          |
| DIBD            | [0.0107 , 0.06335]   | 0.90276          |
| Distance        | [-0.02505 , 0.0073]  | 0.90276          |
| EqualFrequency  | [0.00985 , 0.05565]  | 0.90276          |
| EqualWidth      | [0.028 , 0.0824]     | 0.90276          |
| Extended Chi2   | [0.0076 , 0.0867]    | 0.90276          |
| FFD             | [0.0561 , 0.1294]    | 0.90276          |
| FUSINTER        | [-0.0236 , 0.00865]  | 0.90276          |
| HDD             | [0.0286 , 0.1314]    | 0.90276          |
| HellingerBD     | [-0.0016 , 0.04085]  | 0.90276          |
| Heter-Disc      | [0.15715 , 0.30155]  | 0.90276          |
| ID3             | [0.1165 , 0.2242]    | 0.90276          |
| IDD             | [0.11175 , 0.23705]  | 0.90276          |
| Khiops          | [-0.00425 , 0.0371]  | 0.90276          |
| MDLP            | [-0.0305 , 0.00385]  | 0.90276          |
| Modified Chi2   | [-0.0042 , 0.05]     | 0.90276          |
| MODL            | [-0.0043 , 0.0523]   | 0.90276          |
| MVD             | [0.0562 , 0.1915]    | 0.90276          |
| PKID            | [0.06815 , 0.1393]   | 0.90276          |
| UCPD            | [-0.0061 , 0.03455]  | 0.90276          |
| USD             | [0.0523 , 0.14985]   | 0.90276          |

Table 89: Confidence intervals for algorithm Zeta ( $\alpha=0.90$ )

| $\alpha=0.95$   | Confidence interval   | Exact confidence |
|-----------------|-----------------------|------------------|
| 1R              | [0.0671 , 0.2651]     | 0.95024          |
| Ameva           | [-0.03075 , 0.0067]   | 0.95024          |
| Bayesian        | [0.0883 , 0.2081]     | 0.95024          |
| CACC            | [-0.0204 , 0.01925]   | 0.95024          |
| CADD            | [0.2458 , 0.4295]     | 0.95024          |
| CAIM            | [-0.02665 , -0.00325] | 0.95024          |
| Chi2            | [-0.0168 , 0.0327]    | 0.95024          |
| ChiMerge        | [-0.0296 , -0.0003]   | 0.95024          |
| ClusterAnalysis | [0.0927 , 0.2027]     | 0.95024          |
| DIBD            | [0.0045 , 0.071]      | 0.95024          |
| Distance        | [-0.02755 , 0.00925]  | 0.95024          |
| EqualFrequency  | [0.00575 , 0.06075]   | 0.95024          |
| EqualWidth      | [0.0236 , 0.08905]    | 0.95024          |
| Extended Chi2   | [0.00395 , 0.0924]    | 0.95024          |
| FFD             | [0.04905 , 0.139]     | 0.95024          |
| FUSINTER        | [-0.02555 , 0.01175]  | 0.95024          |
| HDD             | [0.01985 , 0.13985]   | 0.95024          |
| HellingerBD     | [-0.00505 , 0.04565]  | 0.95024          |
| Heter-Disc      | [0.14455 , 0.32445]   | 0.95024          |
| ID3             | [0.10835 , 0.23515]   | 0.95024          |
| IDD             | [0.10005 , 0.2461]    | 0.95024          |
| Khiops          | [-0.0093 , 0.0397]    | 0.95024          |
| MDLP            | [-0.03375 , 0.01035]  | 0.95024          |
| Modified Chi2   | [-0.00895 , 0.05415]  | 0.95024          |
| MODL            | [-0.007 , 0.0656]     | 0.95024          |
| MVD             | [0.04585 , 0.20335]   | 0.95024          |
| PKID            | [0.0621 , 0.1443]     | 0.95024          |
| UCPD            | [-0.0102 , 0.0391]    | 0.95024          |
| USD             | [0.04705 , 0.1605]    | 0.95024          |

Table 90: Confidence intervals for algorithm Zeta ( $\alpha=0.95$ )