# 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 | 136.0 | 684.0 | $\geq 0.2$ | 1 |
| Bayesian | 327.5 | 492.5 | $\geq 0.2$ | 1 |
| CACC | 179.0 | 601.0 | $\geq 0.2$ | 1 |
| CADD | 760.0 | 60.0 | 2.864E-6 | 0.000017 |
| CAIM | 109.5 | 710.5 | $\geq 0.2$ | 1 |
| Chi2 | 152.0 | 668.0 | $\geq 0.2$ | 1 |
| ChiMerge | 88.0 | 692.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 220.0 | 560.0 | $\geq 0.2$ | 1 |
| DIBD | 352.0 | 468.0 | $\geq 0.2$ | 1 |
| Distance | 127.0 | 653.0 | $\geq 0.2$ | 1 |
| EqualFrequency | 160.0 | 660.0 | $\geq 0.2$ | 1 |
| EqualWidth | 180.0 | 640.0 | $\geq 0.2$ | 1 |
| Extended Chi2 | 288.0 | 492.0 | $\geq 0.2$ | 1 |
| FFD | 117.0 | 703.0 | $\geq 0.2$ | 1 |
| FUSINTER | 90.0 | 730.0 | $\geq 0.2$ | 1 |
| HDD | 213.0 | 567.0 | $\geq 0.2$ | 1 |
| HellingerBD | 209.0 | 611.0 | $\geq 0.2$ | 1 |
| Heter-Disc | 629.0 | 191.0 | 0.02494 | 0.025172 |
| ID3 | 223.0 | 557.0 | $\geq 0.2$ | 1 |
| IDD | 236.5 | 548.5 | $\geq 0.2$ | 1 |
| Khiops | 126.0 | 694.0 | $\geq 0.2$ | 1 |
| MDLP | 155.0 | 665.0 | $\geq 0.2$ | 1 |
| Modified Chi2 | 126.0 | 694.0 | $\geq 0.2$ | 1 |
| MODL | 139.5 | 680.5 | $\geq 0.2$ | 1 |
| MVD | 434.5 | 385.5 | $\geq 0.2$ | 1 |
| PKID | 86.0 | 734.0 | $\geq 0.2$ | 1 |
| UCPD | 284.0 | 536.0 | $\geq 0.2$ | 1 |
| USD | 217.0 | 563.0 | $\geq 0.2$ | 1 |
| Zeta | 185.0 | 635.0 | $\geq 0.2$ | 1 |

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

## 1.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| Ameva | [-0.1819 , -0.04885] | 0.90276 |
| Bayesian | [-0.0742 , 0.0108] | 0.90276 |
| CACC | [-0.15335 , -0.02995] | 0.90276 |
| CADD | [0.13715 , 0.2772] | 0.90276 |
| CAIM | [-0.18775 , -0.04085] | 0.90276 |
| Chi2 | [-0.1838 , -0.042] | 0.90276 |
| ChiMerge | [-0.18215 , -0.0411] | 0.90276 |
| ClusterAnalysis | [-0.15235 , -0.02265] | 0.90276 |
| DIBD | [-0.0668 , 0.01405] | 0.90276 |
| Distance | [-0.1662 , -0.0313] | 0.90276 |
| EqualFrequency | [-0.18155 , -0.03295] | 0.90276 |
| EqualWidth | [-0.17815 , -0.0319] | 0.90276 |
| Extended Chi2 | [-0.1396 , 0.0111] | 0.90276 |
| FFD | [-0.20015 , -0.0418] | 0.90276 |
| FUSINTER | [-0.19515 , -0.0474] | 0.90276 |
| HDD | [-0.1781 , -0.02645] | 0.90276 |
| HellingerBD | [-0.14685 , -0.0178] | 0.90276 |
| Heter-Disc | [0.05845 , 0.2317] | 0.90276 |
| ID3 | [-0.16925 , -0.0277] | 0.90276 |
| IDD | [-0.05455 , -0.00445] | 0.90276 |
| Khiops | [-0.17255 , -0.04055] | 0.90276 |
| MDLP | [-0.1665 , -0.03195] | 0.90276 |
| Modified Chi2 | [-0.1828 , -0.04995] | 0.90276 |
| MODL | [-0.1777 , -0.04815] | 0.90276 |
| MVD | [-0.04515 , 0.05355] | 0.90276 |
| PKID | [-0.19175 , -0.0512] | 0.90276 |
| UCPD | [-0.1444 , -0.0018] | 0.90276 |
| USD | [-0.1682 , -0.02575] | 0.90276 |
| Zeta | [-0.1743 , -0.02975] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| Ameva | [-0.20115 , -0.0418] | 0.95024 |
| Bayesian | [-0.0872 , 0.01825] | 0.95024 |
| CACC | [-0.16215 , -0.0222] | 0.95024 |
| CADD | [0.12355 , 0.28825] | 0.95024 |
| CAIM | [-0.20175 , -0.03235] | 0.95024 |
| Chi2 | [-0.20615 , -0.03285] | 0.95024 |
| ChiMerge | [-0.1993 , -0.03705] | 0.95024 |
| ClusterAnalysis | [-0.16775 , -0.00985] | 0.95024 |
| DIBD | [-0.0751 , 0.01665] | 0.95024 |
| Distance | [-0.17525 , -0.02695] | 0.95024 |
| EqualFrequency | [-0.19565 , -0.0296] | 0.95024 |
| EqualWidth | [-0.19515 , -0.02625] | 0.95024 |
| Extended Chi2 | [-0.15785 , 0.0176] | 0.95024 |
| FFD | [-0.21675 , -0.0361] | 0.95024 |
| FUSINTER | [-0.2113 , -0.0408] | 0.95024 |
| HDD | [-0.19705 , -0.01515] | 0.95024 |
| HellingerBD | [-0.1597 , -0.0113] | 0.95024 |
| Heter-Disc | [0.0431 , 0.24875] | 0.95024 |
| ID3 | [-0.1926 , -0.01545] | 0.95024 |
| IDD | [-0.0607 , -0.0007] | 0.95024 |
| Khiops | [-0.18745 , -0.03385] | 0.95024 |
| MDLP | [-0.17625 , -0.0246] | 0.95024 |
| Modified Chi2 | [-0.2074 , -0.04155] | 0.95024 |
| MODL | [-0.1899 , -0.03855] | 0.95024 |
| MVD | [-0.05925 , 0.06865] | 0.95024 |
| PKID | [-0.2056 , -0.04135] | 0.95024 |
| UCPD | [-0.16085 , 0.0056] | 0.95024 |
| USD | [-0.19035 , -0.015] | 0.95024 |
| Zeta | [-0.19 , -0.0213] | 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 | 684.0 | 136.0 | 1.1536E-4 | 0.000225 |
| Bayesian | 665.0 | 155.0 | 3.79E-4 | 0.000594 |
| CACC | 618.0 | 202.0 | 0.0393 | 0.038834 |
| CADD | 807.0 | 13.0 | 1.6008E-10 | 0 |
| CAIM | 430.0 | 353.0 | $\geq 0.2$ | 1 |
| Chi2 | 409.0 | 411.0 | $\geq 0.2$ | 1 |
| ChiMerge | 355.5 | 424.5 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 558.0 | 262.0 | 0.04662 | 0.04593 |
| DIBD | 647.0 | 133.0 | 1.8004E-4 | 0.000326 |
| Distance | 509.5 | 310.5 | $\geq 0.2$ | 0.380276 |
| EqualFrequency | 417.0 | 403.0 | $\geq 0.2$ | 0.919702 |
| EqualWidth | 426.0 | 394.0 | $\geq 0.2$ | 0.824484 |
| Extended Chi2 | 590.0 | 230.0 | 0.014678 | 0.01526 |
| FFD | 404.0 | 416.0 | $\geq 0.2$ | 1 |
| FUSINTER | 379.0 | 441.0 | $\geq 0.2$ | 1 |
| HDD | 486.0 | 294.0 | 0.18474 | 0.178091 |
| HellingerBD | 512.0 | 308.0 | 0.17436 | 0.168286 |
| Heter-Disc | 812.0 | 8.0 | 4.548E-11 | 0 |
| ID3 | 523.0 | 297.0 | 0.13156 | 0.127113 |
| IDD | 648.5 | 171.5 | 0.0032129999999999997 | 0.003813 |
| Khiops | 425.0 | 395.0 | $\geq 0.2$ | 0.834963 |
| MDLP | 468.0 | 352.0 | $\geq 0.2$ | 0.431682 |
| Modified Chi2 | 378.0 | 402.0 | $\geq 0.2$ | 1 |
| MODL | 428.0 | 392.0 | $\geq 0.2$ | 0.803621 |
| MVD | 699.0 | 121.0 | 4.098E-5 | 0.0001 |
| PKID | 389.0 | 431.0 | $\geq 0.2$ | 1 |
| UCPD | 591.5 | 228.5 | 0.013833000000000002 | 0.014268 |
| USD | 509.0 | 311.0 | 0.18762 | 0.180356 |
| Zeta | 471.0 | 349.0 | $\geq 0.2$ | 0.407653 |

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

## 2.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.04885 , 0.1819] | 0.90276 |
| Bayesian | [0.0383 , 0.11515] | 0.90276 |
| CACC | [0.00575 , 0.02695] | 0.90276 |
| CADD | [0.293 , 0.44945] | 0.90276 |
| CAIM | [-0.0051 , 0.0086] | 0.90276 |
| Chi2 | [-0.0132 , 0.0128] | 0.90276 |
| ChiMerge | [-0.01315 , 0.00835] | 0.90276 |
| ClusterAnalysis | [0.00385 , 0.04535] | 0.90276 |
| DIBD | [0.04245 , 0.11205] | 0.90276 |
| Distance | [-0.00165 , 0.02105] | 0.90276 |
| EqualFrequency | [-0.0121 , 0.0161] | 0.90276 |
| EqualWidth | [-0.0123 , 0.0224] | 0.90276 |
| Extended Chi2 | [0.00845 , 0.0833] | 0.90276 |
| FFD | [-0.01025 , 0.0114] | 0.90276 |
| FUSINTER | [-0.0148 , 0.0081] | 0.90276 |
| HDD | [-0.00265 , 0.0381] | 0.90276 |
| HellingerBD | [-0.0026 , 0.04735] | 0.90276 |
| Heter-Disc | [0.21225 , 0.33865] | 0.90276 |
| ID3 | [-0.00185 , 0.0413] | 0.90276 |
| IDD | [0.01595 , 0.09585] | 0.90276 |
| Khiops | [-0.0112 , 0.0147] | 0.90276 |
| MDLP | [-0.00575 , 0.01935] | 0.90276 |
| Modified Chi2 | [-0.01335 , 0.0093] | 0.90276 |
| MODL | [-0.01385 , 0.0206] | 0.90276 |
| MVD | [0.0566 , 0.17985] | 0.90276 |
| PKID | [-0.0142 , 0.0097] | 0.90276 |
| UCPD | [0.0123 , 0.06525] | 0.90276 |
| USD | [-0.0042 , 0.0347] | 0.90276 |
| Zeta | [-0.0068 , 0.0238] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.0418 , 0.20115] | 0.95024 |
| Bayesian | [0.03095 , 0.12125] | 0.95024 |
| CACC | [0.00445 , 0.02965] | 0.95024 |
| CADD | [0.2772 , 0.46425] | 0.95024 |
| CAIM | [-0.0065 , 0.01025] | 0.95024 |
| Chi2 | [-0.0167 , 0.0154] | 0.95024 |
| ChiMerge | [-0.01615 , 0.0104] | 0.95024 |
| ClusterAnalysis | [0.0004 , 0.05025] | 0.95024 |
| DIBD | [0.03555 , 0.11755] | 0.95024 |
| Distance | [-0.0048 , 0.02475] | 0.95024 |
| EqualFrequency | [-0.01445 , 0.0196] | 0.95024 |
| EqualWidth | [-0.01475 , 0.02665] | 0.95024 |
| Extended Chi2 | [0.00405 , 0.08995] | 0.95024 |
| FFD | [-0.0128 , 0.01395] | 0.95024 |
| FUSINTER | [-0.0161 , 0.01005] | 0.95024 |
| HDD | [-0.0062 , 0.04235] | 0.95024 |
| HellingerBD | [-0.00545 , 0.04985] | 0.95024 |
| Heter-Disc | [0.20355 , 0.35785] | 0.95024 |
| ID3 | [-0.0074 , 0.04605] | 0.95024 |
| IDD | [0.0128 , 0.1165] | 0.95024 |
| Khiops | [-0.0136 , 0.01835] | 0.95024 |
| MDLP | [-0.00725 , 0.02355] | 0.95024 |
| Modified Chi2 | [-0.01635 , 0.01125] | 0.95024 |
| MODL | [-0.0166 , 0.02435] | 0.95024 |
| MVD | [0.0473 , 0.1957] | 0.95024 |
| PKID | [-0.017 , 0.012] | 0.95024 |
| UCPD | [0.00785 , 0.0693] | 0.95024 |
| USD | [-0.0077 , 0.03985] | 0.95024 |
| Zeta | [-0.0087 , 0.0271] | 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 | 492.5 | 327.5 | $\geq 0.2$ | 0.528139 |
| Ameva | 155.0 | 665.0 | $\geq 0.2$ | 1 |
| CACC | 195.0 | 585.0 | $\geq 0.2$ | 1 |
| CADD | 764.0 | 16.0 | 6.148E-10 | 0 |
| CAIM | 116.0 | 664.0 | $\geq 0.2$ | 1 |
| Chi2 | 143.0 | 677.0 | $\geq 0.2$ | 1 |
| ChiMerge | 126.0 | 654.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 179.0 | 601.0 | $\geq 0.2$ | 1 |
| DIBD | 332.0 | 448.0 | $\geq 0.2$ | 1 |
| Distance | 192.0 | 628.0 | $\geq 0.2$ | 1 |
| EqualFrequency | 169.0 | 651.0 | $\geq 0.2$ | 1 |
| EqualWidth | 181.0 | 639.0 | $\geq 0.2$ | 1 |
| Extended Chi2 | 276.0 | 504.0 | $\geq 0.2$ | 1 |
| FFD | 96.0 | 724.0 | $\geq 0.2$ | 1 |
| FUSINTER | 78.0 | 742.0 | $\geq 0.2$ | 1 |
| HDD | 196.0 | 584.0 | $\geq 0.2$ | 1 |
| HellingerBD | 220.0 | 600.0 | $\geq 0.2$ | 1 |
| Heter-Disc | 701.0 | 79.0 | 2.53E-6 | 0.000014 |
| ID3 | 187.5 | 632.5 | $\geq 0.2$ | 1 |
| IDD | 294.0 | 486.0 | $\geq 0.2$ | 1 |
| Khiops | 157.0 | 663.0 | $\geq 0.2$ | 1 |
| MDLP | 158.0 | 662.0 | $\geq 0.2$ | 1 |
| Modified Chi2 | 78.5 | 741.5 | $\geq 0.2$ | 1 |
| MODL | 92.0 | 728.0 | $\geq 0.2$ | 1 |
| MVD | 520.5 | 299.5 | $\geq 0.2$ | 0.299777 |
| PKID | 90.0 | 730.0 | $\geq 0.2$ | 1 |
| UCPD | 277.0 | 543.0 | $\geq 0.2$ | 1 |
| USD | 92.0 | 688.0 | $\geq 0.2$ | 1 |
| Zeta | 235.0 | 585.0 | $\geq 0.2$ | 1 |

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

## 3.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [-0.0108 , 0.0742] | 0.90276 |
| Ameva | [-0.11515 , -0.0383] | 0.90276 |
| CACC | [-0.0845 , -0.0166] | 0.90276 |
| CADD | [0.21215 , 0.36775] | 0.90276 |
| CAIM | [-0.11255 , -0.03335] | 0.90276 |
| Chi2 | [-0.11685 , -0.0378] | 0.90276 |
| ChiMerge | [-0.11695 , -0.03975] | 0.90276 |
| ClusterAnalysis | [-0.0792 , -0.01955] | 0.90276 |
| DIBD | [-0.0291 , 0.01835] | 0.90276 |
| Distance | [-0.0962 , -0.0247] | 0.90276 |
| EqualFrequency | [-0.11435 , -0.0363] | 0.90276 |
| EqualWidth | [-0.1128 , -0.0293] | 0.90276 |
| Extended Chi2 | [-0.0691 , 0.00065] | 0.90276 |
| FFD | [-0.1207 , -0.0416] | 0.90276 |
| FUSINTER | [-0.12155 , -0.05125] | 0.90276 |
| HDD | [-0.0881 , -0.0117] | 0.90276 |
| HellingerBD | [-0.0873 , -0.0217] | 0.90276 |
| Heter-Disc | [0.12845 , 0.27565] | 0.90276 |
| ID3 | [-0.07555 , -0.00955] | 0.90276 |
| IDD | [-0.0456 , 0.005] | 0.90276 |
| Khiops | [-0.10845 , -0.0265] | 0.90276 |
| MDLP | [-0.0922 , -0.0275] | 0.90276 |
| Modified Chi2 | [-0.11985 , -0.04425] | 0.90276 |
| MODL | [-0.1048 , -0.0315] | 0.90276 |
| MVD | [-0.0039 , 0.0949] | 0.90276 |
| PKID | [-0.1259 , -0.0507] | 0.90276 |
| UCPD | [-0.0766 , -0.0036] | 0.90276 |
| USD | [-0.0812 , -0.01745] | 0.90276 |
| Zeta | [-0.1032 , -0.01535] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [-0.01825 , 0.0872] | 0.95024 |
| Ameva | [-0.12125 , -0.03095] | 0.95024 |
| CACC | [-0.09005 , -0.012] | 0.95024 |
| CADD | [0.1974 , 0.38895] | 0.95024 |
| CAIM | [-0.119 , -0.0293] | 0.95024 |
| Chi2 | [-0.12715 , -0.03315] | 0.95024 |
| ChiMerge | [-0.12675 , -0.03475] | 0.95024 |
| ClusterAnalysis | [-0.08465 , -0.01525] | 0.95024 |
| DIBD | [-0.03485 , 0.02595] | 0.95024 |
| Distance | [-0.1023 , -0.0192] | 0.95024 |
| EqualFrequency | [-0.1213 , -0.0288] | 0.95024 |
| EqualWidth | [-0.1259 , -0.02435] | 0.95024 |
| Extended Chi2 | [-0.0775 , 0.0077] | 0.95024 |
| FFD | [-0.13515 , -0.03525] | 0.95024 |
| FUSINTER | [-0.1355 , -0.0483] | 0.95024 |
| HDD | [-0.098 , -0.00735] | 0.95024 |
| HellingerBD | [-0.0965 , -0.0148] | 0.95024 |
| Heter-Disc | [0.1192 , 0.2922] | 0.95024 |
| ID3 | [-0.0835 , -0.0077] | 0.95024 |
| IDD | [-0.0497 , 0.0125] | 0.95024 |
| Khiops | [-0.1142 , -0.0212] | 0.95024 |
| MDLP | [-0.09875 , -0.0223] | 0.95024 |
| Modified Chi2 | [-0.1293 , -0.0378] | 0.95024 |
| MODL | [-0.1104 , -0.02815] | 0.95024 |
| MVD | [-0.00865 , 0.1078] | 0.95024 |
| PKID | [-0.138 , -0.0425] | 0.95024 |
| UCPD | [-0.0858 , 0.00215] | 0.95024 |
| USD | [-0.08535 , -0.0141] | 0.95024 |
| Zeta | [-0.1129 , -0.0087] | 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 | 601.0 | 179.0 | 0.002616 | 0.003163 |
| Ameva | 202.0 | 618.0 | $\geq 0.2$ | 1 |
| Bayesian | 585.0 | 195.0 | 0.005696 | 0.006368 |
| CADD | 790.0 | 30.0 | 3.702E-9 | 0 |
| CAIM | 288.5 | 531.5 | $\geq 0.2$ | 1 |
| Chi2 | 274.0 | 546.0 | $\geq 0.2$ | 1 |
| ChiMerge | 259.0 | 521.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 431.0 | 389.0 | $\geq 0.2$ | 0.772591 |
| DIBD | 613.0 | 207.0 | 0.005576 | 0.006232 |
| Distance | 330.0 | 490.0 | $\geq 0.2$ | 1 |
| EqualFrequency | 312.0 | 508.0 | $\geq 0.2$ | 1 |
| EqualWidth | 366.0 | 454.0 | $\geq 0.2$ | 1 |
| Extended Chi2 | 483.0 | 297.0 | 0.1991 | 0.191964 |
| FFD | 286.0 | 534.0 | $\geq 0.2$ | 1 |
| FUSINTER | 203.0 | 617.0 | $\geq 0.2$ | 1 |
| HDD | 437.5 | 382.5 | $\geq 0.2$ | 1 |
| HellingerBD | 429.0 | 391.0 | $\geq 0.2$ | 0.79324 |
| Heter-Disc | 798.5 | 21.5 | 3.576E-9 | 0 |
| ID3 | 435.0 | 345.0 | $\geq 0.2$ | 0.525459 |
| IDD | 571.0 | 249.0 | 0.0299 | 0.029949 |
| Khiops | 293.0 | 527.0 | $\geq 0.2$ | 1 |
| MDLP | 290.0 | 530.0 | $\geq 0.2$ | 1 |
| Modified Chi2 | 259.5 | 560.5 | $\geq 0.2$ | 1 |
| MODL | 279.5 | 540.5 | $\geq 0.2$ | 1 |
| MVD | 609.0 | 174.0 | 0.00653 | 0.007245 |
| PKID | 260.0 | 560.0 | $\geq 0.2$ | 1 |
| UCPD | 488.0 | 332.0 | $\geq 0.2$ | 0.29136 |
| USD | 431.0 | 349.0 | $\geq 0.2$ | 0.5625 |
| Zeta | 357.0 | 463.0 | $\geq 0.2$ | 1 |

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

## 4.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
| --- | --- | --- |
| 1R | [0.02995 , 0.15335] | 0.90276 |
| Ameva | [-0.02695 , -0.00575] | 0.90276 |
| Bayesian | [0.0166 , 0.0845] | 0.90276 |
| CADD | [0.25865 , 0.4176] | 0.90276 |
| CAIM | [-0.03285 , 0.00005] | 0.90276 |
| Chi2 | [-0.0319 , -0.002] | 0.90276 |
| ChiMerge | [-0.03465 , -0.0013] | 0.90276 |
| ClusterAnalysis | [-0.0165 , 0.02855] | 0.90276 |
| DIBD | [0.02075 , 0.093] | 0.90276 |
| Distance | [-0.02185 , 0.0032] | 0.90276 |
| EqualFrequency | [-0.03525 , 0.004] | 0.90276 |
| EqualWidth | [-0.02525 , 0.0113] | 0.90276 |
| Extended Chi2 | [-0.0035 , 0.0651] | 0.90276 |
| FFD | [-0.0332 , -0.00005] | 0.90276 |
| FUSINTER | [-0.0313 , -0.0063] | 0.90276 |
| HDD | [-0.01575 , 0.02835] | 0.90276 |
| HellingerBD | [-0.0137 , 0.02705] | 0.90276 |
| Heter-Disc | [0.17785 , 0.30465] | 0.90276 |
| ID3 | [-0.0125 , 0.02505] | 0.90276 |
| IDD | [0.00685 , 0.07165] | 0.90276 |
| Khiops | [-0.0264 , 0.00105] | 0.90276 |
| MDLP | [-0.01965 , 0.00045] | 0.90276 |
| Modified Chi2 | [-0.03085 , -0.00325] | 0.90276 |
| MODL | [-0.0235 , -0.00045] | 0.90276 |
| MVD | [0.02795 , 0.16475] | 0.90276 |
| PKID | [-0.02775 , -0.0021] | 0.90276 |
| UCPD | [-0.00885 , 0.04405] | 0.90276 |
| USD | [-0.0116 , 0.02135] | 0.90276 |
| Zeta | [-0.02945 , 0.01295] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.0222 , 0.16215] | 0.95024 |
| Ameva | [-0.02965 , -0.00445] | 0.95024 |
| Bayesian | [0.012 , 0.09005] | 0.95024 |
| CADD | [0.2425 , 0.43645] | 0.95024 |
| CAIM | [-0.03675 , 0.0022] | 0.95024 |
| Chi2 | [-0.03365 , 0.0034] | 0.95024 |
| ChiMerge | [-0.03905 , 0.00075] | 0.95024 |
| ClusterAnalysis | [-0.02075 , 0.0329] | 0.95024 |
| DIBD | [0.015 , 0.09955] | 0.95024 |
| Distance | [-0.02445 , 0.00475] | 0.95024 |
| EqualFrequency | [-0.0388 , 0.0069] | 0.95024 |
| EqualWidth | [-0.0316 , 0.01475] | 0.95024 |
| Extended Chi2 | [-0.0063 , 0.0726] | 0.95024 |
| FFD | [-0.03755 , 0.0018] | 0.95024 |
| FUSINTER | [-0.0357 , -0.00445] | 0.95024 |
| HDD | [-0.0212 , 0.03165] | 0.95024 |
| HellingerBD | [-0.0166 , 0.0305] | 0.95024 |
| Heter-Disc | [0.1638 , 0.31895] | 0.95024 |
| ID3 | [-0.01755 , 0.02895] | 0.95024 |
| IDD | [0.00245 , 0.0855] | 0.95024 |
| Khiops | [-0.02935 , 0.00325] | 0.95024 |
| MDLP | [-0.0217 , 0.00165] | 0.95024 |
| Modified Chi2 | [-0.0354 , -0.00055] | 0.95024 |
| MODL | [-0.02725 , 0.0017] | 0.95024 |
| MVD | [0.02365 , 0.1757] | 0.95024 |
| PKID | [-0.03055 , -0.0004] | 0.95024 |
| UCPD | [-0.0128 , 0.04765] | 0.95024 |
| USD | [-0.01625 , 0.0242] | 0.95024 |
| Zeta | [-0.03595 , 0.01605] | 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 | 60.0 | 760.0 | $\geq 0.2$ | 1 |
| Ameva | 13.0 | 807.0 | $\geq 0.2$ | 1 |
| Bayesian | 16.0 | 764.0 | $\geq 0.2$ | 1 |
| CACC | 30.0 | 790.0 | $\geq 0.2$ | 1 |
| CAIM | 0.0 | 820.0 | $\geq 0.2$ | 1 |
| Chi2 | 12.0 | 808.0 | $\geq 0.2$ | 1 |
| ChiMerge | 0.0 | 820.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 2.0 | 778.0 | $\geq 0.2$ | 1 |
| DIBD | 43.0 | 777.0 | $\geq 0.2$ | 1 |
| Distance | 19.0 | 801.0 | $\geq 0.2$ | 1 |
| EqualFrequency | 10.0 | 770.0 | $\geq 0.2$ | 1 |
| EqualWidth | 0.0 | 820.0 | $\geq 0.2$ | 1 |
| Extended Chi2 | 44.5 | 775.5 | $\geq 0.2$ | 1 |
| FFD | 1.0 | 819.0 | $\geq 0.2$ | 1 |
| FUSINTER | 1.0 | 819.0 | $\geq 0.2$ | 1 |
| HDD | 3.0 | 817.0 | $\geq 0.2$ | 1 |
| HellingerBD | 1.0 | 819.0 | $\geq 0.2$ | 1 |
| Heter-Disc | 377.5 | 442.5 | $\geq 0.2$ | 1 |
| ID3 | 3.0 | 817.0 | $\geq 0.2$ | 1 |
| IDD | 6.0 | 777.0 | $\geq 0.2$ | 1 |
| Khiops | 6.0 | 814.0 | $\geq 0.2$ | 1 |
| MDLP | 13.0 | 807.0 | $\geq 0.2$ | 1 |
| Modified Chi2 | 3.0 | 817.0 | $\geq 0.2$ | 1 |
| MODL | 2.0 | 818.0 | $\geq 0.2$ | 1 |
| MVD | 111.0 | 709.0 | $\geq 0.2$ | 1 |
| PKID | 1.0 | 819.0 | $\geq 0.2$ | 1 |
| UCPD | 27.0 | 793.0 | $\geq 0.2$ | 1 |
| USD | 3.0 | 817.0 | $\geq 0.2$ | 1 |
| Zeta | 1.0 | 819.0 | $\geq 0.2$ | 1 |

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

## 5.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [-0.2772 , -0.13715] | 0.90276 |
| Ameva | [-0.44945 , -0.293] | 0.90276 |
| Bayesian | [-0.36775 , -0.21215] | 0.90276 |
| CACC | [-0.4176 , -0.25865] | 0.90276 |
| CAIM | [-0.46275 , -0.3096] | 0.90276 |
| Chi2 | [-0.4689 , -0.3026] | 0.90276 |
| ChiMerge | [-0.4643 , -0.3106] | 0.90276 |
| ClusterAnalysis | [-0.4211 , -0.2627] | 0.90276 |
| DIBD | [-0.37495 , -0.2051] | 0.90276 |
| Distance | [-0.44495 , -0.2787] | 0.90276 |
| EqualFrequency | [-0.46655 , -0.2951] | 0.90276 |
| EqualWidth | [-0.4641 , -0.29625] | 0.90276 |
| Extended Chi2 | [-0.40355 , -0.21135] | 0.90276 |
| FFD | [-0.4735 , -0.31335] | 0.90276 |
| FUSINTER | [-0.4756 , -0.32075] | 0.90276 |
| HDD | [-0.43365 , -0.2769] | 0.90276 |
| HellingerBD | [-0.43625 , -0.2728] | 0.90276 |
| Heter-Disc | [-0.1742 , 0.01885] | 0.90276 |
| ID3 | [-0.4424 , -0.27] | 0.90276 |
| IDD | [-0.3437 , -0.1997] | 0.90276 |
| Khiops | [-0.4611 , -0.29575] | 0.90276 |
| MDLP | [-0.4448 , -0.27905] | 0.90276 |
| Modified Chi2 | [-0.47565 , -0.31635] | 0.90276 |
| MODL | [-0.4548 , -0.29425] | 0.90276 |
| MVD | [-0.29365 , -0.13005] | 0.90276 |
| PKID | [-0.47715 , -0.314] | 0.90276 |
| UCPD | [-0.4216 , -0.26015] | 0.90276 |
| USD | [-0.4451 , -0.27545] | 0.90276 |
| Zeta | [-0.442 , -0.29105] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [-0.28825 , -0.12355] | 0.95024 |
| Ameva | [-0.46425 , -0.2772] | 0.95024 |
| Bayesian | [-0.38895 , -0.1974] | 0.95024 |
| CACC | [-0.43645 , -0.2425] | 0.95024 |
| CAIM | [-0.4768 , -0.29365] | 0.95024 |
| Chi2 | [-0.48035 , -0.293] | 0.95024 |
| ChiMerge | [-0.48115 , -0.29765] | 0.95024 |
| ClusterAnalysis | [-0.4407 , -0.24565] | 0.95024 |
| DIBD | [-0.3948 , -0.1935] | 0.95024 |
| Distance | [-0.46145 , -0.26585] | 0.95024 |
| EqualFrequency | [-0.4817 , -0.28015] | 0.95024 |
| EqualWidth | [-0.47845 , -0.2819] | 0.95024 |
| Extended Chi2 | [-0.4192 , -0.19855] | 0.95024 |
| FFD | [-0.4852 , -0.3] | 0.95024 |
| FUSINTER | [-0.4849 , -0.3032] | 0.95024 |
| HDD | [-0.44915 , -0.26085] | 0.95024 |
| HellingerBD | [-0.4572 , -0.253] | 0.95024 |
| Heter-Disc | [-0.23225 , 0.02445] | 0.95024 |
| ID3 | [-0.45225 , -0.25325] | 0.95024 |
| IDD | [-0.36215 , -0.18815] | 0.95024 |
| Khiops | [-0.471 , -0.28175] | 0.95024 |
| MDLP | [-0.4631 , -0.26825] | 0.95024 |
| Modified Chi2 | [-0.4928 , -0.2985] | 0.95024 |
| MODL | [-0.47315 , -0.27915] | 0.95024 |
| MVD | [-0.305 , -0.10395] | 0.95024 |
| PKID | [-0.48735 , -0.30215] | 0.95024 |
| UCPD | [-0.43875 , -0.24195] | 0.95024 |
| USD | [-0.4589 , -0.2629] | 0.95024 |
| Zeta | [-0.4572 , -0.27455] | 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 | 710.5 | 109.5 | 6.537E-5 | 0.000149 |
| Ameva | 353.0 | 430.0 | $\geq 0.2$ | 1 |
| Bayesian | 664.0 | 116.0 | 5.496E-5 | 0.000128 |
| CACC | 531.5 | 288.5 | $\geq 0.2$ | 0.230679 |
| CADD | 820.0 | 0.0 | 1.819E-12 | 0 |
| Chi2 | 428.5 | 391.5 | $\geq 0.2$ | 0.798094 |
| ChiMerge | 317.0 | 463.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 565.0 | 255.0 | 0.03684 | 0.036607 |
| DIBD | 758.0 | 62.0 | 2.276E-7 | 0.000003 |
| Distance | 529.0 | 251.0 | 0.05256 | 0.051568 |
| EqualFrequency | 431.0 | 389.0 | $\geq 0.2$ | 0.772591 |
| EqualWidth | 434.0 | 346.0 | $\geq 0.2$ | 0.534601 |
| Extended Chi2 | 566.5 | 213.5 | 0.0128799999999999 | 0.013348 |
| FFD | 391.0 | 429.0 | $\geq 0.2$ | 1 |
| FUSINTER | 325.0 | 495.0 | $\geq 0.2$ | 1 |
| HDD | 504.0 | 316.0 | $\geq 0.2$ | 1 |
| HellingerBD | 558.0 | 262.0 | 0.04662 | 0.04593 |
| Heter-Disc | 815.0 | 5.0 | 1.819E-11 | 0 |
| ID3 | 489.0 | 291.0 | 0.17114 | 0.164978 |
| IDD | 621.0 | 159.0 | 8.906E-4 | 0.001187 |
| Khiops | 383.5 | 436.5 | $\geq 0.2$ | 1 |
| MDLP | 508.0 | 272.0 | 0.1015 | 0.098195 |
| Modified Chi2 | 369.0 | 451.0 | $\geq 0.2$ | 1 |
| MODL | 352.0 | 468.0 | $\geq 0.2$ | 1 |
| MVD | 712.5 | 107.5 | 5.612E-5 | 0.000129 |
| PKID | 342.5 | 477.5 | $\geq 0.2$ | 1 |
| UCPD | 631.5 | 188.5 | 0.002334 | 0.002799 |
| USD | 502.0 | 318.0 | $\geq 0.2$ | 0.44129 |
| Zeta | 513.5 | 306.5 | $\geq 0.2$ | 0.349584 |

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

## 6.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.04085 , 0.18775] | 0.90276 |
| Ameva | [-0.0086 , 0.0051] | 0.90276 |
| Bayesian | [0.03335 , 0.11255] | 0.90276 |
| CACC | [-0.00005 , 0.03285] | 0.90276 |
| CADD | [0.3096 , 0.46275] | 0.90276 |
| Chi2 | [-0.01005 , 0.0124] | 0.90276 |
| ChiMerge | [-0.01125 , 0.00305] | 0.90276 |
| ClusterAnalysis | [0.0043 , 0.0426] | 0.90276 |
| DIBD | [0.0406 , 0.1017] | 0.90276 |
| Distance | [0.0026 , 0.0178] | 0.90276 |
| EqualFrequency | [-0.00665 , 0.0118] | 0.90276 |
| EqualWidth | [-0.00555 , 0.0228] | 0.90276 |
| Extended Chi2 | [0.0061 , 0.0661] | 0.90276 |
| FFD | [-0.00915 , 0.0077] | 0.90276 |
| FUSINTER | [-0.0143 , 0.00245] | 0.90276 |
| HDD | [-0.00065 , 0.02755] | 0.90276 |
| HellingerBD | [0.0021 , 0.0418] | 0.90276 |
| Heter-Disc | [0.21965 , 0.36475] | 0.90276 |
| ID3 | [-0.0028 , 0.0353] | 0.90276 |
| IDD | [0.0106 , 0.1007] | 0.90276 |
| Khiops | [-0.01095 , 0.0093] | 0.90276 |
| MDLP | [-0.0003 , 0.02215] | 0.90276 |
| Modified Chi2 | [-0.0148 , 0.0061] | 0.90276 |
| MODL | [-0.0177 , 0.00825] | 0.90276 |
| MVD | [0.0534 , 0.20035] | 0.90276 |
| PKID | [-0.01345 , 0.0044] | 0.90276 |
| UCPD | [0.0178 , 0.05685] | 0.90276 |
| USD | [-0.0024 , 0.02765] | 0.90276 |
| Zeta | [-0.0012 , 0.01825] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.03235 , 0.20175] | 0.95024 |
| Ameva | [-0.01025 , 0.0065] | 0.95024 |
| Bayesian | [0.0293 , 0.119] | 0.95024 |
| CACC | [-0.0022 , 0.03675] | 0.95024 |
| CADD | [0.29365 , 0.4768] | 0.95024 |
| Chi2 | [-0.0141 , 0.0139] | 0.95024 |
| ChiMerge | [-0.0128 , 0.0046] | 0.95024 |
| ClusterAnalysis | [0.002 , 0.0477] | 0.95024 |
| DIBD | [0.0357 , 0.1064] | 0.95024 |
| Distance | [0.0003 , 0.02035] | 0.95024 |
| EqualFrequency | [-0.0082 , 0.01435] | 0.95024 |
| EqualWidth | [-0.00715 , 0.0266] | 0.95024 |
| Extended Chi2 | [0.00425 , 0.0774] | 0.95024 |
| FFD | [-0.01115 , 0.00985] | 0.95024 |
| FUSINTER | [-0.01675 , 0.0043] | 0.95024 |
| HDD | [-0.0015 , 0.0319] | 0.95024 |
| HellingerBD | [0.0002 , 0.04525] | 0.95024 |
| Heter-Disc | [0.20355 , 0.3773] | 0.95024 |
| ID3 | [-0.00515 , 0.0393] | 0.95024 |
| IDD | [0.0086 , 0.1168] | 0.95024 |
| Khiops | [-0.0125 , 0.011] | 0.95024 |
| MDLP | [-0.0021 , 0.0253] | 0.95024 |
| Modified Chi2 | [-0.01755 , 0.0077] | 0.95024 |
| MODL | [-0.02055 , 0.0124] | 0.95024 |
| MVD | [0.0453 , 0.21435] | 0.95024 |
| PKID | [-0.01695 , 0.00655] | 0.95024 |
| UCPD | [0.0096 , 0.0601] | 0.95024 |
| USD | [-0.0061 , 0.032] | 0.95024 |
| Zeta | [-0.00235 , 0.0212] | 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 | 668.0 | 152.0 | 3.168E-4 | 0.000512 |
| Ameva | 411.0 | 409.0 | $\geq 0.2$ | 0.983914 |
| Bayesian | 677.0 | 143.0 | 1.8148E-4 | 0.000324 |
| CACC | 546.0 | 274.0 | 0.06822 | 0.066088 |
| CADD | 808.0 | 12.0 | 1.2732E-10 | 0 |
| CAIM | 391.5 | 428.5 | $\geq 0.2$ | 1 |
| ChiMerge | 435.0 | 385.0 | $\geq 0.2$ | 0.731784 |
| ClusterAnalysis | 559.5 | 260.5 | 0.04436 | 0.043426 |
| DIBD | 674.0 | 146.0 | 2.192E-4 | 0.000378 |
| Distance | 422.0 | 398.0 | $\geq 0.2$ | 0.866571 |
| EqualFrequency | 406.5 | 373.5 | $\geq 0.2$ | 0.812153 |
| EqualWidth | 429.0 | 391.0 | $\geq 0.2$ | 0.79324 |
| Extended Chi2 | 669.5 | 150.5 | 2.894E-4 | 0.000464 |
| FFD | 365.5 | 414.5 | $\geq 0.2$ | 1 |
| FUSINTER | 345.5 | 474.5 | $\geq 0.2$ | 1 |
| HDD | 459.0 | 321.0 | $\geq 0.2$ | 0.331266 |
| HellingerBD | 487.5 | 292.5 | 0.17785 | 0.170693 |
| Heter-Disc | 782.0 | 38.0 | 1.2008E-8 | 0.000001 |
| ID3 | 492.5 | 287.5 | 0.15622 | 0.149902 |
| IDD | 604.0 | 216.0 | 0.008264 | 0.00894 |
| Khiops | 400.5 | 379.5 | $\geq 0.2$ | 0.877789 |
| MDLP | 440.0 | 380.0 | $\geq 0.2$ | 0.680822 |
| Modified Chi2 | 332.5 | 450.5 | $\geq 0.2$ | 1 |
| MODL | 410.0 | 370.0 | $\geq 0.2$ | 0.774819 |
| MVD | 708.0 | 112.0 | 2.104E-5 | 0.00006 |
| PKID | 355.0 | 425.0 | $\geq 0.2$ | 1 |
| UCPD | 637.0 | 183.0 | 0.0017706 | 0.002229 |
| USD | 526.5 | 293.5 | 0.11976999999999999 | 0.115192 |
| Zeta | 480.0 | 340.0 | $\geq 0.2$ | 0.343327 |

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

## 7.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.042 , 0.1838] | 0.90276 |
| Ameva | [-0.0128 , 0.0132] | 0.90276 |
| Bayesian | [0.0378 , 0.11685] | 0.90276 |
| CACC | [0.002 , 0.0319] | 0.90276 |
| CADD | [0.3026 , 0.4689] | 0.90276 |
| CAIM | [-0.0124 , 0.01005] | 0.90276 |
| ChiMerge | [-0.0143 , 0.018] | 0.90276 |
| ClusterAnalysis | [0.00375 , 0.0433] | 0.90276 |
| DIBD | [0.04445 , 0.11305] | 0.90276 |
| Distance | [-0.0125 , 0.01755] | 0.90276 |
| EqualFrequency | [-0.01285 , 0.01835] | 0.90276 |
| EqualWidth | [-0.01135 , 0.02335] | 0.90276 |
| Extended Chi2 | [0.0185 , 0.07365] | 0.90276 |
| FFD | [-0.0137 , 0.0089] | 0.90276 |
| FUSINTER | [-0.0179 , 0.0045] | 0.90276 |
| HDD | [-0.004 , 0.03485] | 0.90276 |
| HellingerBD | [-0.0033 , 0.03525] | 0.90276 |
| Heter-Disc | [0.22405 , 0.3761] | 0.90276 |
| ID3 | [-0.0019 , 0.0359] | 0.90276 |
| IDD | [0.0117 , 0.0973] | 0.90276 |
| Khiops | [-0.0094 , 0.0132] | 0.90276 |
| MDLP | [-0.0101 , 0.0139] | 0.90276 |
| Modified Chi2 | [-0.0137 , 0.0047] | 0.90276 |
| MODL | [-0.0143 , 0.02175] | 0.90276 |
| MVD | [0.07345 , 0.2042] | 0.90276 |
| PKID | [-0.01535 , 0.00785] | 0.90276 |
| UCPD | [0.01745 , 0.06215] | 0.90276 |
| USD | [-0.0013 , 0.03185] | 0.90276 |
| Zeta | [-0.00825 , 0.0349] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.03285 , 0.20615] | 0.95024 |
| Ameva | [-0.0154 , 0.0167] | 0.95024 |
| Bayesian | [0.03315 , 0.12715] | 0.95024 |
| CACC | [-0.0034 , 0.03365] | 0.95024 |
| CADD | [0.293 , 0.48035] | 0.95024 |
| CAIM | [-0.0139 , 0.0141] | 0.95024 |
| ChiMerge | [-0.017 , 0.02145] | 0.95024 |
| ClusterAnalysis | [0.00025 , 0.04725] | 0.95024 |
| DIBD | [0.03825 , 0.12225] | 0.95024 |
| Distance | [-0.01595 , 0.0203] | 0.95024 |
| EqualFrequency | [-0.0157 , 0.0222] | 0.95024 |
| EqualWidth | [-0.0143 , 0.0268] | 0.95024 |
| Extended Chi2 | [0.0153 , 0.0797] | 0.95024 |
| FFD | [-0.01785 , 0.0112] | 0.95024 |
| FUSINTER | [-0.0206 , 0.00845] | 0.95024 |
| HDD | [-0.00605 , 0.03895] | 0.95024 |
| HellingerBD | [-0.0068 , 0.0383] | 0.95024 |
| Heter-Disc | [0.20325 , 0.38675] | 0.95024 |
| ID3 | [-0.00425 , 0.0411] | 0.95024 |
| IDD | [0.00735 , 0.1148] | 0.95024 |
| Khiops | [-0.01135 , 0.01525] | 0.95024 |
| MDLP | [-0.0142 , 0.018] | 0.95024 |
| Modified Chi2 | [-0.0158 , 0.006] | 0.95024 |
| MODL | [-0.0183 , 0.02605] | 0.95024 |
| MVD | [0.063 , 0.2203] | 0.95024 |
| PKID | [-0.0175 , 0.01035] | 0.95024 |
| UCPD | [0.0129 , 0.066] | 0.95024 |
| USD | [-0.0048 , 0.0354] | 0.95024 |
| Zeta | [-0.01205 , 0.04015] | 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 | 692.0 | 88.0 | 5.758E-6 | 0.000023 |
| Ameva | 424.5 | 355.5 | $\geq 0.2$ | 0.624645 |
| Bayesian | 654.0 | 126.0 | 1.121E-4 | 0.000223 |
| CACC | 521.0 | 259.0 | 0.06824 | 0.066494 |
| CADD | 820.0 | 0.0 | 1.819E-12 | 0 |
| CAIM | 463.0 | 317.0 | $\geq 0.2$ | 0.304192 |
| Chi2 | 385.0 | 435.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 519.0 | 261.0 | 0.0727 | 0.070735 |
| DIBD | 719.0 | 61.0 | 4.064E-7 | 0.000004 |
| Distance | 547.0 | 273.0 | 0.06616 | 0.064577 |
| EqualFrequency | 475.0 | 305.0 | $\geq 0.2$ | 0.229543 |
| EqualWidth | 554.0 | 266.0 | 0.05308 | 0.052105 |
| Extended Chi2 | 588.0 | 192.0 | 0.004948 | 0.005604 |
| FFD | 375.5 | 444.5 | $\geq 0.2$ | 1 |
| FUSINTER | 335.0 | 485.0 | $\geq 0.2$ | 1 |
| HDD | 477.0 | 303.0 | $\geq 0.2$ | 0.222062 |
| HellingerBD | 570.0 | 250.0 | 0.03098 | 0.03098 |
| Heter-Disc | 811.0 | 9.0 | 6.002E-11 | 0 |
| ID3 | 484.0 | 296.0 | 0.19424 | 0.187254 |
| IDD | 591.0 | 189.0 | 0.00429 | 0.004924 |
| Khiops | 431.0 | 389.0 | $\geq 0.2$ | 0.772591 |
| MDLP | 494.0 | 286.0 | 0.15012 | 0.144759 |
| Modified Chi2 | 361.5 | 458.5 | $\geq 0.2$ | 1 |
| MODL | 364.5 | 455.5 | $\geq 0.2$ | 1 |
| MVD | 689.0 | 91.0 | 7.486E-6 | 0.000029 |
| PKID | 342.0 | 478.0 | $\geq 0.2$ | 1 |
| UCPD | 633.0 | 187.0 | 0.002166 | 0.002663 |
| USD | 487.0 | 296.0 | $\geq 0.2$ | 0.398205 |
| Zeta | 603.5 | 216.5 | 0.008442999999999999 | 0.009001 |

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

## 8.2 Confidence intervals for Median of diferences

| α=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.0411 , 0.18215] | 0.90276 |
| Ameva | [-0.00835 , 0.01315] | 0.90276 |
| Bayesian | [0.03975 , 0.11695] | 0.90276 |
| CACC | [0.0013 , 0.03465] | 0.90276 |
| CADD | [0.3106 , 0.4643] | 0.90276 |
| CAIM | [-0.00305 , 0.01125] | 0.90276 |
| Chi2 | [-0.018 , 0.0143] | 0.90276 |
| ClusterAnalysis | [0.00145 , 0.04845] | 0.90276 |
| DIBD | [0.0426 , 0.10705] | 0.90276 |
| Distance | [0.0011 , 0.0263] | 0.90276 |
| EqualFrequency | [-0.00305 , 0.0174] | 0.90276 |
| EqualWidth | [0.00165 , 0.02275] | 0.90276 |
| Extended Chi2 | [0.0112 , 0.07025] | 0.90276 |
| FFD | [-0.0144 , 0.00935] | 0.90276 |
| FUSINTER | [-0.01495 , 0.0035] | 0.90276 |
| HDD | [-0.00415 , 0.0292] | 0.90276 |
| HellingerBD | [0.0046 , 0.0371] | 0.90276 |
| Heter-Disc | [0.21875 , 0.36615] | 0.90276 |
| ID3 | [-0.0026 , 0.0326] | 0.90276 |
| IDD | [0.01035 , 0.1024] | 0.90276 |
| Khiops | [-0.01115 , 0.01425] | 0.90276 |
| MDLP | [-0.0013 , 0.02815] | 0.90276 |
| Modified Chi2 | [-0.01715 , 0.00615] | 0.90276 |
| MODL | [-0.01625 , 0.00825] | 0.90276 |
| MVD | [0.05825 , 0.2007] | 0.90276 |
| PKID | [-0.0197 , 0.00715] | 0.90276 |
| UCPD | [0.01925 , 0.0601] | 0.90276 |
| USD | [-0.0028 , 0.0275] | 0.90276 |
| Zeta | [0.00565 , 0.0267] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.03705 , 0.1993] | 0.95024 |
| Ameva | [-0.0104 , 0.01615] | 0.95024 |
| Bayesian | [0.03475 , 0.12675] | 0.95024 |
| CACC | [-0.00075 , 0.03905] | 0.95024 |
| CADD | [0.29765 , 0.48115] | 0.95024 |
| CAIM | [-0.0046 , 0.0128] | 0.95024 |
| Chi2 | [-0.02145 , 0.017] | 0.95024 |
| ClusterAnalysis | [-0.0016 , 0.0545] | 0.95024 |
| DIBD | [0.0367 , 0.1154] | 0.95024 |
| Distance | [-0.00055 , 0.02905] | 0.95024 |
| EqualFrequency | [-0.00545 , 0.01925] | 0.95024 |
| EqualWidth | [-0.00025 , 0.02425] | 0.95024 |
| Extended Chi2 | [0.00835 , 0.0833] | 0.95024 |
| FFD | [-0.01615 , 0.0125] | 0.95024 |
| FUSINTER | [-0.0163 , 0.00575] | 0.95024 |
| HDD | [-0.00945 , 0.03275] | 0.95024 |
| HellingerBD | [0.00255 , 0.04245] | 0.95024 |
| Heter-Disc | [0.2116 , 0.38215] | 0.95024 |
| ID3 | [-0.00495 , 0.0365] | 0.95024 |
| IDD | [0.007 , 0.12325] | 0.95024 |
| Khiops | [-0.0135 , 0.0168] | 0.95024 |
| MDLP | [-0.00255 , 0.0316] | 0.95024 |
| Modified Chi2 | [-0.02 , 0.00795] | 0.95024 |
| MODL | [-0.01785 , 0.01195] | 0.95024 |
| MVD | [0.04925 , 0.2182] | 0.95024 |
| PKID | [-0.0218 , 0.00905] | 0.95024 |
| UCPD | [0.0159 , 0.06655] | 0.95024 |
| USD | [-0.00515 , 0.0298] | 0.95024 |
| Zeta | [0.00385 , 0.02905] | 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 | 560.0 | 220.0 | 0.016812 | 0.017344 |
| Ameva | 262.0 | 558.0 | $\geq 0.2$ | 1 |
| Bayesian | 601.0 | 179.0 | 0.002616 | 0.003163 |
| CACC | 389.0 | 431.0 | $\geq 0.2$ | 1 |
| CADD | 778.0 | 2.0 | 1.0914E-11 | 0 |
| CAIM | 255.0 | 565.0 | $\geq 0.2$ | 1 |
| Chi2 | 260.5 | 559.5 | $\geq 0.2$ | 1 |
| ChiMerge | 261.0 | 519.0 | $\geq 0.2$ | 1 |
| DIBD | 583.0 | 237.0 | 0.019246 | 0.019697 |
| Distance | 332.0 | 488.0 | $\geq 0.2$ | 1 |
| EqualFrequency | 276.5 | 543.5 | $\geq 0.2$ | 1 |
| EqualWidth | 299.0 | 481.0 | $\geq 0.2$ | 1 |
| Extended Chi2 | 449.0 | 371.0 | $\geq 0.2$ | 0.595466 |
| FFD | 170.0 | 610.0 | $\geq 0.2$ | 1 |
| FUSINTER | 201.0 | 619.0 | $\geq 0.2$ | 1 |
| HDD | 386.0 | 434.0 | $\geq 0.2$ | 1 |
| HellingerBD | 362.0 | 418.0 | $\geq 0.2$ | 1 |
| Heter-Disc | 743.0 | 37.0 | 2.088E-8 | 0.000001 |
| ID3 | 438.5 | 381.5 | $\geq 0.2$ | 1 |
| IDD | 478.0 | 302.0 | $\geq 0.2$ | 0.216824 |
| Khiops | 284.0 | 536.0 | $\geq 0.2$ | 1 |
| MDLP | 334.0 | 486.0 | $\geq 0.2$ | 1 |
| Modified Chi2 | 191.0 | 629.0 | $\geq 0.2$ | 1 |
| MODL | 315.5 | 504.5 | $\geq 0.2$ | 1 |
| MVD | 606.0 | 174.0 | 0.00202 | 0.002517 |
| PKID | 174.0 | 606.0 | $\geq 0.2$ | 1 |
| UCPD | 480.0 | 340.0 | $\geq 0.2$ | 0.343327 |
| USD | 360.0 | 420.0 | $\geq 0.2$ | 1 |
| Zeta | 327.0 | 493.0 | $\geq 0.2$ | 1 |

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

## 9.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.02265 , 0.15235] | 0.90276 |
| Ameva | [-0.04535 , -0.00385] | 0.90276 |
| Bayesian | [0.01955 , 0.0792] | 0.90276 |
| CACC | [-0.02855 , 0.0165] | 0.90276 |
| CADD | [0.2627 , 0.4211] | 0.90276 |
| CAIM | [-0.0426 , -0.0043] | 0.90276 |
| Chi2 | [-0.0433 , -0.00375] | 0.90276 |
| ChiMerge | [-0.04845 , -0.00145] | 0.90276 |
| DIBD | [0.0148 , 0.0929] | 0.90276 |
| Distance | [-0.04165 , 0.00965] | 0.90276 |
| EqualFrequency | [-0.0414 , -0.00235] | 0.90276 |
| EqualWidth | [-0.04515 , 0.005] | 0.90276 |
| Extended Chi2 | [-0.01455 , 0.0525] | 0.90276 |
| FFD | [-0.04525 , -0.01405] | 0.90276 |
| FUSINTER | [-0.0532 , -0.01235] | 0.90276 |
| HDD | [-0.0242 , 0.0154] | 0.90276 |
| HellingerBD | [-0.0256 , 0.0215] | 0.90276 |
| Heter-Disc | [0.17715 , 0.32505] | 0.90276 |
| ID3 | [-0.0157 , 0.0154] | 0.90276 |
| IDD | [-0.0057 , 0.0596] | 0.90276 |
| Khiops | [-0.0326 , -0.001] | 0.90276 |
| MDLP | [-0.0371 , 0.0054] | 0.90276 |
| Modified Chi2 | [-0.0415 , -0.0082] | 0.90276 |
| MODL | [-0.04435 , 0.00555] | 0.90276 |
| MVD | [0.0422 , 0.1472] | 0.90276 |
| PKID | [-0.05 , -0.0124] | 0.90276 |
| UCPD | [-0.01015 , 0.03515] | 0.90276 |
| USD | [-0.0208 , 0.01] | 0.90276 |
| Zeta | [-0.04125 , 0.0108] | 0.90276 |

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

| α=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.00985 , 0.16775] | 0.95024 |
| Ameva | [-0.05025 , -0.0004] | 0.95024 |
| Bayesian | [0.01525 , 0.08465] | 0.95024 |
| CACC | [-0.0329 , 0.02075] | 0.95024 |
| CADD | [0.24565 , 0.4407] | 0.95024 |
| CAIM | [-0.0477 , -0.002] | 0.95024 |
| Chi2 | [-0.04725 , -0.00025] | 0.95024 |
| ChiMerge | [-0.0545 , 0.0016] | 0.95024 |
| DIBD | [0.0074 , 0.09975] | 0.95024 |
| Distance | [-0.04705 , 0.01505] | 0.95024 |
| EqualFrequency | [-0.04575 , 0.0035] | 0.95024 |
| EqualWidth | [-0.0497 , 0.00855] | 0.95024 |
| Extended Chi2 | [-0.0195 , 0.0612] | 0.95024 |
| FFD | [-0.0504 , -0.0111] | 0.95024 |
| FUSINTER | [-0.0572 , -0.00915] | 0.95024 |
| HDD | [-0.0267 , 0.01895] | 0.95024 |
| HellingerBD | [-0.0294 , 0.0271] | 0.95024 |
| Heter-Disc | [0.16375 , 0.34185] | 0.95024 |
| ID3 | [-0.01975 , 0.0204] | 0.95024 |
| IDD | [-0.01245 , 0.0708] | 0.95024 |
| Khiops | [-0.036 , 0.0033] | 0.95024 |
| MDLP | [-0.04205 , 0.01045] | 0.95024 |
| Modified Chi2 | [-0.0459 , -0.0068] | 0.95024 |
| MODL | [-0.04835 , 0.0089] | 0.95024 |
| MVD | [0.03395 , 0.15895] | 0.95024 |
| PKID | [-0.05395 , -0.01055] | 0.95024 |
| UCPD | [-0.01255 , 0.0405] | 0.95024 |
| USD | [-0.0244 , 0.0121] | 0.95024 |
| Zeta | [-0.0456 , 0.0153] | 0.95024 |

Table 27: Confidence intervals for algorithm ClusterAnalysis (α=0.95)

# 10 Detailed results for DIBD

## 10.1 Results

| VS | $R^+$ | $R^-$ | Exact P-value | Asymptotic P-value |
|---|---|---|---|---|
| 1R | 468.0 | 352.0 | $\geq 0.2$ | 0.431682 |
| Ameva | 133.0 | 647.0 | $\geq 0.2$ | 1 |
| Bayesian | 448.0 | 332.0 | $\geq 0.2$ | 0.41429 |
| CACC | 207.0 | 613.0 | $\geq 0.2$ | 1 |
| CADD | 777.0 | 43.0 | 2.362E-8 | 0.000001 |
| CAIM | 62.0 | 758.0 | $\geq 0.2$ | 1 |
| Chi2 | 146.0 | 674.0 | $\geq 0.2$ | 1 |
| ChiMerge | 61.0 | 719.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 237.0 | 583.0 | $\geq 0.2$ | 1 |
| Distance | 177.0 | 643.0 | $\geq 0.2$ | 1 |
| EqualFrequency | 111.0 | 709.0 | $\geq 0.2$ | 1 |
| EqualWidth | 151.0 | 669.0 | $\geq 0.2$ | 1 |
| Extended Chi2 | 283.5 | 536.5 | $\geq 0.2$ | 1 |
| FFD | 66.0 | 714.0 | $\geq 0.2$ | 1 |
| FUSINTER | 78.0 | 742.0 | $\geq 0.2$ | 1 |
| HDD | 227.0 | 593.0 | $\geq 0.2$ | 1 |
| HellingerBD | 139.0 | 641.0 | $\geq 0.2$ | 1 |
| Heter-Disc | 746.0 | 74.0 | 7.88E-7 | 0.000006 |
| ID3 | 225.0 | 555.0 | $\geq 0.2$ | 1 |
| IDD | 302.0 | 518.0 | $\geq 0.2$ | 1 |
| Khiops | 76.0 | 744.0 | $\geq 0.2$ | 1 |
| MDLP | 158.0 | 662.0 | $\geq 0.2$ | 1 |
| Modified Chi2 | 81.0 | 739.0 | $\geq 0.2$ | 1 |
| MODL | 95.0 | 725.0 | $\geq 0.2$ | 1 |
| MVD | 514.0 | 306.0 | 0.1659 | 0.160136 |
| PKID | 53.0 | 727.0 | $\geq 0.2$ | 1 |
| UCPD | 250.0 | 570.0 | $\geq 0.2$ | 1 |
| USD | 224.5 | 595.5 | $\geq 0.2$ | 1 |
| Zeta | 187.0 | 633.0 | $\geq 0.2$ | 1 |

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

## 10.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [-0.01405 , 0.0668] | 0.90276 |
| Ameva | [-0.11205 , -0.04245] | 0.90276 |
| Bayesian | [-0.01835 , 0.0291] | 0.90276 |
| CACC | [-0.093 , -0.02075] | 0.90276 |
| CADD | [0.2051 , 0.37495] | 0.90276 |
| CAIM | [-0.1017 , -0.0406] | 0.90276 |
| Chi2 | [-0.11305 , -0.04445] | 0.90276 |
| ChiMerge | [-0.10705 , -0.0426] | 0.90276 |
| ClusterAnalysis | [-0.0929 , -0.0148] | 0.90276 |
| Distance | [-0.0938 , -0.02335] | 0.90276 |
| EqualFrequency | [-0.1082 , -0.04125] | 0.90276 |
| EqualWidth | [-0.1111 , -0.0328] | 0.90276 |
| Extended Chi2 | [-0.07395 , -0.0017] | 0.90276 |
| FFD | [-0.11875 , -0.04915] | 0.90276 |
| FUSINTER | [-0.12185 , -0.05495] | 0.90276 |
| HDD | [-0.09745 , -0.02005] | 0.90276 |
| HellingerBD | [-0.09 , -0.0265] | 0.90276 |
| Heter-Disc | [0.1136 , 0.2726] | 0.90276 |
| ID3 | [-0.09715 , -0.01465] | 0.90276 |
| IDD | [-0.04045 , 0.00235] | 0.90276 |
| Khiops | [-0.1072 , -0.04655] | 0.90276 |
| MDLP | [-0.0874 , -0.0283] | 0.90276 |
| Modified Chi2 | [-0.1186 , -0.04795] | 0.90276 |
| MODL | [-0.10525 , -0.04645] | 0.90276 |
| MVD | [-0.00685 , 0.0936] | 0.90276 |
| PKID | [-0.1166 , -0.057] | 0.90276 |
| UCPD | [-0.0598 , -0.0075] | 0.90276 |
| USD | [-0.1041 , -0.01905] | 0.90276 |
| Zeta | [-0.0956 , -0.0255] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [-0.01665 , 0.0751] | 0.95024 |
| Ameva | [-0.11755 , -0.03555] | 0.95024 |
| Bayesian | [-0.02595 , 0.03485] | 0.95024 |
| CACC | [-0.09955 , -0.015] | 0.95024 |
| CADD | [0.1935 , 0.3948] | 0.95024 |
| CAIM | [-0.1064 , -0.0357] | 0.95024 |
| Chi2 | [-0.12225 , -0.03825] | 0.95024 |
| ChiMerge | [-0.1154 , -0.0367] | 0.95024 |
| ClusterAnalysis | [-0.09975 , -0.0074] | 0.95024 |
| Distance | [-0.0989 , -0.01955] | 0.95024 |
| EqualFrequency | [-0.116 , -0.03655] | 0.95024 |
| EqualWidth | [-0.1158 , -0.0272] | 0.95024 |
| Extended Chi2 | [-0.08245 , 0.0074] | 0.95024 |
| FFD | [-0.12435 , -0.0452] | 0.95024 |
| FUSINTER | [-0.1285 , -0.05] | 0.95024 |
| HDD | [-0.1046 , -0.01265] | 0.95024 |
| HellingerBD | [-0.09705 , -0.02295] | 0.95024 |
| Heter-Disc | [0.10435 , 0.28135] | 0.95024 |
| ID3 | [-0.1074 , -0.00845] | 0.95024 |
| IDD | [-0.0452 , 0.00515] | 0.95024 |
| Khiops | [-0.11205 , -0.04215] | 0.95024 |
| MDLP | [-0.0946 , -0.02285] | 0.95024 |
| Modified Chi2 | [-0.1245 , -0.04435] | 0.95024 |
| MODL | [-0.11115 , -0.0417] | 0.95024 |
| MVD | [-0.0137 , 0.1081] | 0.95024 |
| PKID | [-0.12285 , -0.05205] | 0.95024 |
| UCPD | [-0.067 , -0.00345] | 0.95024 |
| USD | [-0.1093 , -0.01065] | 0.95024 |
| Zeta | [-0.10285 , -0.0193] | 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 | 653.0 | 127.0 | 1.201E-4 | 0.000236 |
| Ameva | 310.5 | 509.5 | $\geq 0.2$ | 1 |
| Bayesian | 628.0 | 192.0 | 0.00277 | 0.003315 |
| CACC | 490.0 | 330.0 | $\geq 0.2$ | 0.551394 |
| CADD | 801.0 | 19.0 | 5.584E-10 | 0 |
| CAIM | 251.0 | 529.0 | $\geq 0.2$ | 1 |
| Chi2 | 398.0 | 422.0 | $\geq 0.2$ | 1 |
| ChiMerge | 273.0 | 547.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 488.0 | 332.0 | $\geq 0.2$ | 0.29136 |
| DIBD | 643.0 | 177.0 | 0.0012976 | 0.001638 |
| EqualFrequency | 348.5 | 471.5 | $\geq 0.2$ | 1 |
| EqualWidth | 370.0 | 450.0 | $\geq 0.2$ | 1 |
| Extended Chi2 | 543.0 | 277.0 | 0.07472 | 0.072747 |
| FFD | 293.5 | 526.5 | $\geq 0.2$ | 1 |
| FUSINTER | 263.0 | 557.0 | $\geq 0.2$ | 1 |
| HDD | 423.0 | 357.0 | $\geq 0.2$ | 0.640148 |
| HellingerBD | 471.0 | 349.0 | $\geq 0.2$ | 0.408441 |
| Heter-Disc | 786.0 | 34.0 | 6.776E-9 | 0 |
| ID3 | 464.0 | 356.0 | $\geq 0.2$ | 0.463833 |
| IDD | 565.0 | 255.0 | 0.03684 | 0.036607 |
| Khiops | 374.0 | 446.0 | $\geq 0.2$ | 1 |
| MDLP | 340.0 | 443.0 | $\geq 0.2$ | 1 |
| Modified Chi2 | 349.0 | 471.0 | $\geq 0.2$ | 1 |
| MODL | 301.0 | 479.0 | $\geq 0.2$ | 1 |
| MVD | 603.0 | 217.0 | 0.008622 | 0.009298 |
| PKID | 328.0 | 492.0 | $\geq 0.2$ | 1 |
| UCPD | 542.0 | 278.0 | 0.077 | 0.074917 |
| USD | 433.0 | 347.0 | $\geq 0.2$ | 0.543823 |
| Zeta | 348.0 | 432.0 | $\geq 0.2$ | 1 |

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

## 11.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.0313 , 0.1662] | 0.90276 |
| Ameva | [-0.02105 , 0.00165] | 0.90276 |
| Bayesian | [0.0247 , 0.0962] | 0.90276 |
| CACC | [-0.0032 , 0.02185] | 0.90276 |
| CADD | [0.2787 , 0.44495] | 0.90276 |
| CAIM | [-0.0178 , -0.0026] | 0.90276 |
| Chi2 | [-0.01755 , 0.0125] | 0.90276 |
| ChiMerge | [-0.0263 , -0.0011] | 0.90276 |
| ClusterAnalysis | [-0.00965 , 0.04165] | 0.90276 |
| DIBD | [0.02335 , 0.0938] | 0.90276 |
| EqualFrequency | [-0.0177 , 0.0064] | 0.90276 |
| EqualWidth | [-0.0161 , 0.00935] | 0.90276 |
| Extended Chi2 | [0.00225 , 0.0638] | 0.90276 |
| FFD | [-0.0283 , 0.00065] | 0.90276 |
| FUSINTER | [-0.02725 , -0.00205] | 0.90276 |
| HDD | [-0.01695 , 0.0295] | 0.90276 |
| HellingerBD | [-0.0077 , 0.0304] | 0.90276 |
| Heter-Disc | [0.19095 , 0.3451] | 0.90276 |
| ID3 | [-0.0135 , 0.03615] | 0.90276 |
| IDD | [0.0063 , 0.0818] | 0.90276 |
| Khiops | [-0.01675 , 0.011] | 0.90276 |
| MDLP | [-0.00845 , 0.0032] | 0.90276 |
| Modified Chi2 | [-0.01835 , 0.0056] | 0.90276 |
| MODL | [-0.0297 , 0.00385] | 0.90276 |
| MVD | [0.0246 , 0.19625] | 0.90276 |
| PKID | [-0.0254 , 0.00355] | 0.90276 |
| UCPD | [0.0011 , 0.05325] | 0.90276 |
| USD | [-0.01195 , 0.0292] | 0.90276 |
| Zeta | [-0.0189 , 0.0113] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.02695 , 0.17525] | 0.95024 |
| Ameva | [-0.02475 , 0.0048] | 0.95024 |
| Bayesian | [0.0192 , 0.1023] | 0.95024 |
| CACC | [-0.00475 , 0.02445] | 0.95024 |
| CADD | [0.26585 , 0.46145] | 0.95024 |
| CAIM | [-0.02035 , -0.0003] | 0.95024 |
| Chi2 | [-0.0203 , 0.01595] | 0.95024 |
| ChiMerge | [-0.02905 , 0.00055] | 0.95024 |
| ClusterAnalysis | [-0.01505 , 0.04705] | 0.95024 |
| DIBD | [0.01955 , 0.0989] | 0.95024 |
| EqualFrequency | [-0.0205 , 0.00855] | 0.95024 |
| EqualWidth | [-0.01815 , 0.01215] | 0.95024 |
| Extended Chi2 | [-0.00295 , 0.0747] | 0.95024 |
| FFD | [-0.0355 , 0.0035] | 0.95024 |
| FUSINTER | [-0.03165 , -0.00005] | 0.95024 |
| HDD | [-0.022 , 0.03485] | 0.95024 |
| HellingerBD | [-0.01085 , 0.0354] | 0.95024 |
| Heter-Disc | [0.1818 , 0.3581] | 0.95024 |
| ID3 | [-0.0182 , 0.04295] | 0.95024 |
| IDD | [0.00285 , 0.0951] | 0.95024 |
| Khiops | [-0.0211 , 0.01385] | 0.95024 |
| MDLP | [-0.00915 , 0.0047] | 0.95024 |
| Modified Chi2 | [-0.0222 , 0.00665] | 0.95024 |
| MODL | [-0.03285 , 0.00885] | 0.95024 |
| MVD | [0.0163 , 0.21155] | 0.95024 |
| PKID | [-0.03155 , 0.0053] | 0.95024 |
| UCPD | [-0.00285 , 0.0567] | 0.95024 |
| USD | [-0.0166 , 0.0341] | 0.95024 |
| Zeta | [-0.0222 , 0.01415] | 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 | 660.0 | 160.0 | 5.08E-4 | 0.00076 |
| Ameva | 403.0 | 417.0 | $\geq 0.2$ | 1 |
| Bayesian | 651.0 | 169.0 | 8.436E-4 | 0.00117 |
| CACC | 508.0 | 312.0 | 0.1922 | 0.185514 |
| CADD | 770.0 | 10.0 | 1.5644E-10 | 0 |
| CAIM | 389.0 | 431.0 | $\geq 0.2$ | 1 |
| Chi2 | 373.5 | 406.5 | $\geq 0.2$ | 1 |
| ChiMerge | 305.0 | 475.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 543.5 | 276.5 | 0.17715 | 0.170542 |
| DIBD | 709.0 | 111.0 | 1.95E-5 | 0.000057 |
| Distance | 471.5 | 348.5 | $\geq 0.2$ | 0.403851 |
| EqualWidth | 407.5 | 412.5 | $\geq 0.2$ | 1 |
| Extended Chi2 | 589.0 | 231.0 | 0.015266 | 0.015834 |
| FFD | 310.0 | 470.0 | $\geq 0.2$ | 1 |
| FUSINTER | 288.0 | 492.0 | $\geq 0.2$ | 1 |
| HDD | 468.0 | 312.0 | $\geq 0.2$ | 0.273312 |
| HellingerBD | 559.0 | 221.0 | 0.0175 | 0.017812 |
| Heter-Disc | 757.0 | 23.0 | 2.328E-9 | 0 |
| ID3 | 466.0 | 314.0 | $\geq 0.2$ | 0.284879 |
| IDD | 567.0 | 253.0 | 0.0344 | 0.034259 |
| Khiops | 408.5 | 371.5 | $\geq 0.2$ | 0.790183 |
| MDLP | 450.5 | 369.5 | $\geq 0.2$ | 0.982645 |
| Modified Chi2 | 352.0 | 428.0 | $\geq 0.2$ | 1 |
| MODL | 355.0 | 425.0 | $\geq 0.2$ | 1 |
| MVD | 631.0 | 149.0 | 4.954E-4 | 0.000751 |
| PKID | 368.5 | 451.5 | $\geq 0.2$ | 1 |
| UCPD | 645.0 | 175.0 | 0.0011672 | 0.001549 |
| USD | 446.0 | 334.0 | $\geq 0.2$ | 0.430429 |
| Zeta | 448.0 | 332.0 | $\geq 0.2$ | 0.41429 |

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

## 12.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.03295 , 0.18155] | 0.90276 |
| Ameva | [-0.0161 , 0.0121] | 0.90276 |
| Bayesian | [0.0363 , 0.11435] | 0.90276 |
| CACC | [-0.004 , 0.03525] | 0.90276 |
| CADD | [0.2951 , 0.46655] | 0.90276 |
| CAIM | [-0.0118 , 0.00665] | 0.90276 |
| Chi2 | [-0.01835 , 0.01285] | 0.90276 |
| ChiMerge | [-0.0174 , 0.00305] | 0.90276 |
| ClusterAnalysis | [0.00235 , 0.0414] | 0.90276 |
| DIBD | [0.04125 , 0.1082] | 0.90276 |
| Distance | [-0.0064 , 0.0177] | 0.90276 |
| EqualWidth | [-0.00815 , 0.00675] | 0.90276 |
| Extended Chi2 | [0.0066 , 0.06925] | 0.90276 |
| FFD | [-0.0211 , 0.0021] | 0.90276 |
| FUSINTER | [-0.02065 , 0.001] | 0.90276 |
| HDD | [-0.00575 , 0.0377] | 0.90276 |
| HellingerBD | [0.0052 , 0.0306] | 0.90276 |
| Heter-Disc | [0.2175 , 0.3676] | 0.90276 |
| ID3 | [-0.008 , 0.0415] | 0.90276 |
| IDD | [0.00645 , 0.09805] | 0.90276 |
| Khiops | [-0.00735 , 0.01] | 0.90276 |
| MDLP | [-0.0076 , 0.01775] | 0.90276 |
| Modified Chi2 | [-0.02155 , 0.0071] | 0.90276 |
| MODL | [-0.02275 , 0.01555] | 0.90276 |
| MVD | [0.03665 , 0.205] | 0.90276 |
| PKID | [-0.0273 , 0.00245] | 0.90276 |
| UCPD | [0.01955 , 0.0612] | 0.90276 |
| USD | [-0.01185 , 0.0342] | 0.90276 |
| Zeta | [-0.00845 , 0.0267] | 0.90276 |

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

| α=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.0296 , 0.19565] | 0.95024 |
| Ameva | [-0.0196 , 0.01445] | 0.95024 |
| Bayesian | [0.0288 , 0.1213] | 0.95024 |
| CACC | [-0.0069 , 0.0388] | 0.95024 |
| CADD | [0.28015 , 0.4817] | 0.95024 |
| CAIM | [-0.01435 , 0.0082] | 0.95024 |
| Chi2 | [-0.0222 , 0.0157] | 0.95024 |
| ChiMerge | [-0.01925 , 0.00545] | 0.95024 |
| ClusterAnalysis | [-0.0035 , 0.04575] | 0.95024 |
| DIBD | [0.03655 , 0.116] | 0.95024 |
| Distance | [-0.00855 , 0.0205] | 0.95024 |
| EqualWidth | [-0.00935 , 0.009] | 0.95024 |
| Extended Chi2 | [0.0043 , 0.07665] | 0.95024 |
| FFD | [-0.0239 , 0.0031] | 0.95024 |
| FUSINTER | [-0.02305 , 0.0021] | 0.95024 |
| HDD | [-0.01 , 0.04475] | 0.95024 |
| HellingerBD | [0.0033 , 0.0339] | 0.95024 |
| Heter-Disc | [0.20345 , 0.3803] | 0.95024 |
| ID3 | [-0.01355 , 0.04565] | 0.95024 |
| IDD | [0.00275 , 0.1118] | 0.95024 |
| Khiops | [-0.01125 , 0.0135] | 0.95024 |
| MDLP | [-0.0103 , 0.0225] | 0.95024 |
| Modified Chi2 | [-0.0245 , 0.0088] | 0.95024 |
| MODL | [-0.02675 , 0.0202] | 0.95024 |
| MVD | [0.02705 , 0.21675] | 0.95024 |
| PKID | [-0.0296 , 0.00335] | 0.95024 |
| UCPD | [0.0164 , 0.06475] | 0.95024 |
| USD | [-0.0182 , 0.0394] | 0.95024 |
| Zeta | [-0.01 , 0.0288] | 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 | 640.0 | 180.0 | 0.0015176 | 0.001947 |
| Ameva | 394.0 | 426.0 | $\geq 0.2$ | 1 |
| Bayesian | 639.0 | 181.0 | 0.001598 | 0.002037 |
| CACC | 454.0 | 366.0 | $\geq 0.2$ | 0.549748 |
| CADD | 820.0 | 0.0 | 1.819E-12 | 0 |
| CAIM | 346.0 | 434.0 | $\geq 0.2$ | 1 |
| Chi2 | 391.0 | 429.0 | $\geq 0.2$ | 1 |
| ChiMerge | 266.0 | 554.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 481.0 | 299.0 | $\geq 0.2$ | 0.201644 |
| DIBD | 669.0 | 151.0 | 2.982E-4 | 0.000487 |
| Distance | 450.0 | 370.0 | $\geq 0.2$ | 0.585555 |
| EqualFrequency | 412.5 | 407.5 | $\geq 0.2$ | 0.967727 |
| Extended Chi2 | 623.0 | 197.0 | 0.00352 | 0.004108 |
| FFD | 294.0 | 486.0 | $\geq 0.2$ | 1 |
| FUSINTER | 264.0 | 556.0 | $\geq 0.2$ | 1 |
| HDD | 427.0 | 353.0 | $\geq 0.2$ | 0.600757 |
| HellingerBD | 506.0 | 274.0 | 0.10756 | 0.104001 |
| Heter-Disc | 800.0 | 20.0 | 6.748E-10 | 0 |
| ID3 | 432.0 | 351.0 | $\geq 0.2$ | 0.987963 |
| IDD | 548.0 | 272.0 | 0.06414 | 0.062657 |
| Khiops | 395.0 | 425.0 | $\geq 0.2$ | 1 |
| MDLP | 400.0 | 420.0 | $\geq 0.2$ | 1 |
| Modified Chi2 | 322.5 | 497.5 | $\geq 0.2$ | 1 |
| MODL | 343.0 | 477.0 | $\geq 0.2$ | 1 |
| MVD | 679.0 | 141.0 | 1.5974E-4 | 0.000292 |
| PKID | 312.5 | 507.5 | $\geq 0.2$ | 1 |
| UCPD | 592.0 | 228.0 | 0.013558 | 0.014166 |
| USD | 450.0 | 330.0 | $\geq 0.2$ | 0.397691 |
| Zeta | 442.0 | 338.0 | $\geq 0.2$ | 0.462999 |

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

## 13.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.0319 , 0.17815] | 0.90276 |
| Ameva | [-0.0224 , 0.0123] | 0.90276 |
| Bayesian | [0.0293 , 0.1128] | 0.90276 |
| CACC | [-0.0113 , 0.02525] | 0.90276 |
| CADD | [0.29625 , 0.4641] | 0.90276 |
| CAIM | [-0.0228 , 0.00555] | 0.90276 |
| Chi2 | [-0.02335 , 0.01135] | 0.90276 |
| ChiMerge | [-0.02275 , -0.00165] | 0.90276 |
| ClusterAnalysis | [-0.005 , 0.04515] | 0.90276 |
| DIBD | [0.0328 , 0.1111] | 0.90276 |
| Distance | [-0.00935 , 0.0161] | 0.90276 |
| EqualFrequency | [-0.00675 , 0.00815] | 0.90276 |
| Extended Chi2 | [0.0139 , 0.06455] | 0.90276 |
| FFD | [-0.0301 , 0.00205] | 0.90276 |
| FUSINTER | [-0.0242 , -0.00185] | 0.90276 |
| HDD | [-0.01515 , 0.0324] | 0.90276 |
| HellingerBD | [-0.0002 , 0.0194] | 0.90276 |
| Heter-Disc | [0.216 , 0.37235] | 0.90276 |
| ID3 | [-0.00765 , 0.0302] | 0.90276 |
| IDD | [0.00425 , 0.0981] | 0.90276 |
| Khiops | [-0.01895 , 0.0098] | 0.90276 |
| MDLP | [-0.01155 , 0.0156] | 0.90276 |
| Modified Chi2 | [-0.02505 , 0.0035] | 0.90276 |
| MODL | [-0.02985 , 0.01285] | 0.90276 |
| MVD | [0.0492 , 0.2051] | 0.90276 |
| PKID | [-0.03285 , 0.00195] | 0.90276 |
| UCPD | [0.00995 , 0.0555] | 0.90276 |
| USD | [-0.01095 , 0.02765] | 0.90276 |
| Zeta | [-0.0054 , 0.0222] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.02625 , 0.19515] | 0.95024 |
| Ameva | [-0.02665 , 0.01475] | 0.95024 |
| Bayesian | [0.02435 , 0.1259] | 0.95024 |
| CACC | [-0.01475 , 0.0316] | 0.95024 |
| CADD | [0.2819 , 0.47845] | 0.95024 |
| CAIM | [-0.0266 , 0.00715] | 0.95024 |
| Chi2 | [-0.0268 , 0.0143] | 0.95024 |
| ChiMerge | [-0.02425 , 0.00025] | 0.95024 |
| ClusterAnalysis | [-0.00855 , 0.0497] | 0.95024 |
| DIBD | [0.0272 , 0.1158] | 0.95024 |
| Distance | [-0.01215 , 0.01815] | 0.95024 |
| EqualFrequency | [-0.009 , 0.00935] | 0.95024 |
| Extended Chi2 | [0.01095 , 0.0748] | 0.95024 |
| FFD | [-0.03445 , 0.00435] | 0.95024 |
| FUSINTER | [-0.0266 , -0] | 0.95024 |
| HDD | [-0.0206 , 0.03755] | 0.95024 |
| HellingerBD | [-0.00165 , 0.02275] | 0.95024 |
| Heter-Disc | [0.203 , 0.38465] | 0.95024 |
| ID3 | [-0.01185 , 0.0337] | 0.95024 |
| IDD | [-0.0024 , 0.1108] | 0.95024 |
| Khiops | [-0.0243 , 0.0108] | 0.95024 |
| MDLP | [-0.01355 , 0.01815] | 0.95024 |
| Modified Chi2 | [-0.0293 , 0.00585] | 0.95024 |
| MODL | [-0.0342 , 0.0165] | 0.95024 |
| MVD | [0.0364 , 0.2258] | 0.95024 |
| PKID | [-0.03555 , 0.00365] | 0.95024 |
| UCPD | [0.007 , 0.0607] | 0.95024 |
| USD | [-0.0147 , 0.0305] | 0.95024 |
| Zeta | [-0.00775 , 0.0244] | 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 | 492.0 | 288.0 | 0.15828 | 0.152606 |
| Ameva | 230.0 | 590.0 | $\geq 0.2$ | 1 |
| Bayesian | 504.0 | 276.0 | 0.11392 | 0.110077 |
| CACC | 297.0 | 483.0 | $\geq 0.2$ | 1 |
| CADD | 775.5 | 44.5 | 1.1494E-7 | 0.000002 |
| CAIM | 213.5 | 566.5 | $\geq 0.2$ | 1 |
| Chi2 | 150.5 | 669.5 | $\geq 0.2$ | 1 |
| ChiMerge | 192.0 | 588.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 371.0 | 449.0 | $\geq 0.2$ | 1 |
| DIBD | 536.5 | 283.5 | 0.09051000000000001 | 0.087281 |
| Distance | 277.0 | 543.0 | $\geq 0.2$ | 1 |
| EqualFrequency | 231.0 | 589.0 | $\geq 0.2$ | 1 |
| EqualWidth | 197.0 | 623.0 | $\geq 0.2$ | 1 |
| FFD | 210.0 | 610.0 | $\geq 0.2$ | 1 |
| FUSINTER | 169.0 | 651.0 | $\geq 0.2$ | 1 |
| HDD | 336.5 | 483.5 | $\geq 0.2$ | 1 |
| HellingerBD | 258.0 | 562.0 | $\geq 0.2$ | 1 |
| Heter-Disc | 693.0 | 87.0 | 5.268E-6 | 0.000023 |
| ID3 | 327.0 | 453.0 | $\geq 0.2$ | 1 |
| IDD | 416.0 | 404.0 | $\geq 0.2$ | 0.930379 |
| Khiops | 226.0 | 594.0 | $\geq 0.2$ | 1 |
| MDLP | 277.0 | 543.0 | $\geq 0.2$ | 1 |
| Modified Chi2 | 132.0 | 688.0 | $\geq 0.2$ | 1 |
| MODL | 191.0 | 629.0 | $\geq 0.2$ | 1 |
| MVD | 557.0 | 223.0 | 0.01895 | 0.019415 |
| PKID | 143.0 | 677.0 | $\geq 0.2$ | 1 |
| UCPD | 416.5 | 403.5 | $\geq 0.2$ | 0.924913 |
| USD | 276.0 | 504.0 | $\geq 0.2$ | 1 |
| Zeta | 327.5 | 492.5 | $\geq 0.2$ | 1 |

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

## 14.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [-0.0111 , 0.1396] | 0.90276 |
| Ameva | [-0.0833 , -0.00845] | 0.90276 |
| Bayesian | [-0.00065 , 0.0691] | 0.90276 |
| CACC | [-0.0651 , 0.0035] | 0.90276 |
| CADD | [0.21135 , 0.40355] | 0.90276 |
| CAIM | [-0.0661 , -0.0061] | 0.90276 |
| Chi2 | [-0.07365 , -0.0185] | 0.90276 |
| ChiMerge | [-0.07025 , -0.0112] | 0.90276 |
| ClusterAnalysis | [-0.0525 , 0.01455] | 0.90276 |
| DIBD | [0.0017 , 0.07395] | 0.90276 |
| Distance | [-0.0638 , -0.00225] | 0.90276 |
| EqualFrequency | [-0.06925 , -0.0066] | 0.90276 |
| EqualWidth | [-0.06455 , -0.0139] | 0.90276 |
| FFD | [-0.08745 , -0.01225] | 0.90276 |
| FUSINTER | [-0.09985 , -0.01725] | 0.90276 |
| HDD | [-0.06345 , 0.0055] | 0.90276 |
| HellingerBD | [-0.0416 , -0.003] | 0.90276 |
| Heter-Disc | [0.16045 , 0.31745] | 0.90276 |
| ID3 | [-0.05655 , 0.00625] | 0.90276 |
| IDD | [-0.0389 , 0.0575] | 0.90276 |
| Khiops | [-0.07245 , -0.0061] | 0.90276 |
| MDLP | [-0.05665 , -0.0014] | 0.90276 |
| Modified Chi2 | [-0.0842 , -0.01345] | 0.90276 |
| MODL | [-0.06075 , -0.00995] | 0.90276 |
| MVD | [0.01775 , 0.1541] | 0.90276 |
| PKID | [-0.08705 , -0.01955] | 0.90276 |
| UCPD | [-0.02755 , 0.02695] | 0.90276 |
| USD | [-0.0583 , 0.00035] | 0.90276 |
| Zeta | [-0.05005 , 0.0048] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [-0.0176 , 0.15785] | 0.95024 |
| Ameva | [-0.08995 , -0.00405] | 0.95024 |
| Bayesian | [-0.0077 , 0.0775] | 0.95024 |
| CACC | [-0.0726 , 0.0063] | 0.95024 |
| CADD | [0.19855 , 0.4192] | 0.95024 |
| CAIM | [-0.0774 , -0.00425] | 0.95024 |
| Chi2 | [-0.0797 , -0.0153] | 0.95024 |
| ChiMerge | [-0.0833 , -0.00835] | 0.95024 |
| ClusterAnalysis | [-0.0612 , 0.0195] | 0.95024 |
| DIBD | [-0.0074 , 0.08245] | 0.95024 |
| Distance | [-0.0747 , 0.00295] | 0.95024 |
| EqualFrequency | [-0.07665 , -0.0043] | 0.95024 |
| EqualWidth | [-0.0748 , -0.01095] | 0.95024 |
| FFD | [-0.09525 , -0.00845] | 0.95024 |
| FUSINTER | [-0.1085 , -0.0133] | 0.95024 |
| HDD | [-0.0751 , 0.00695] | 0.95024 |
| HellingerBD | [-0.04785 , -0.00095] | 0.95024 |
| Heter-Disc | [0.1462 , 0.3357] | 0.95024 |
| ID3 | [-0.0752 , 0.00775] | 0.95024 |
| IDD | [-0.0469 , 0.0704] | 0.95024 |
| Khiops | [-0.0814 , -0.00465] | 0.95024 |
| MDLP | [-0.07045 , 0.0017] | 0.95024 |
| Modified Chi2 | [-0.09285 , -0.011] | 0.95024 |
| MODL | [-0.07635 , -0.0082] | 0.95024 |
| MVD | [0.0091 , 0.16375] | 0.95024 |
| PKID | [-0.09355 , -0.0163] | 0.95024 |
| UCPD | [-0.03215 , 0.03005] | 0.95024 |
| USD | [-0.07715 , 0.003] | 0.95024 |
| Zeta | [-0.08125 , 0.00865] | 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 | 703.0 | 117.0 | 3.062E-5 | 0.00008 |
| Ameva | 416.0 | 404.0 | $\geq 0.2$ | 0.930379 |
| Bayesian | 724.0 | 96.0 | 5.846E-6 | 0.000024 |
| CACC | 534.0 | 286.0 | 0.09724 | 0.093688 |
| CADD | 819.0 | 1.0 | 3.638E-12 | 0 |
| CAIM | 429.0 | 391.0 | $\geq 0.2$ | 0.79324 |
| Chi2 | 414.5 | 365.5 | $\geq 0.2$ | 0.726726 |
| ChiMerge | 444.5 | 375.5 | $\geq 0.2$ | 0.637471 |
| ClusterAnalysis | 610.0 | 170.0 | 0.0016352 | 0.002053 |
| DIBD | 714.0 | 66.0 | 6.94E-7 | 0.000006 |
| Distance | 526.5 | 293.5 | 0.11976999999999999 | 0.115192 |
| EqualFrequency | 470.0 | 310.0 | $\geq 0.2$ | 0.261277 |
| EqualWidth | 486.0 | 294.0 | 0.18474 | 0.178091 |
| Extended Chi2 | 610.0 | 210.0 | 0.006372 | 0.007039 |
| FUSINTER | 311.5 | 468.5 | $\geq 0.2$ | 1 |
| HDD | 537.0 | 243.0 | 0.03996 | 0.039212 |
| HellingerBD | 593.0 | 190.0 | 0.013896 | 0.014526 |
| Heter-Disc | 811.0 | 9.0 | 6.002E-11 | 0 |
| ID3 | 545.0 | 238.0 | 0.08838 | 0.085462 |
| IDD | 636.0 | 184.0 | 0.0018628 | 0.002331 |
| Khiops | 466.5 | 353.5 | $\geq 0.2$ | 0.798945 |
| MDLP | 483.0 | 297.0 | 0.1991 | 0.191964 |
| Modified Chi2 | 385.0 | 395.0 | $\geq 0.2$ | 1 |
| MODL | 423.0 | 357.0 | $\geq 0.2$ | 0.639563 |
| MVD | 711.0 | 109.0 | 1.6716E-5 | 0.000051 |
| PKID | 306.5 | 513.5 | $\geq 0.2$ | 1 |
| UCPD | 671.0 | 149.0 | 2.64E-4 | 0.00044 |
| USD | 555.0 | 265.0 | 0.0514 | 0.050113 |
| Zeta | 488.0 | 292.0 | 0.17558 | 0.169266 |

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

## 15.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.0418 , 0.20015] | 0.90276 |
| Ameva | [-0.0114 , 0.01025] | 0.90276 |
| Bayesian | [0.0416 , 0.1207] | 0.90276 |
| CACC | [0.00005 , 0.0332] | 0.90276 |
| CADD | [0.31335 , 0.4735] | 0.90276 |
| CAIM | [-0.0077 , 0.00915] | 0.90276 |
| Chi2 | [-0.0089 , 0.0137] | 0.90276 |
| ChiMerge | [-0.00935 , 0.0144] | 0.90276 |
| ClusterAnalysis | [0.01405 , 0.04525] | 0.90276 |
| DIBD | [0.04915 , 0.11875] | 0.90276 |
| Distance | [-0.00065 , 0.0283] | 0.90276 |
| EqualFrequency | [-0.0021 , 0.0211] | 0.90276 |
| EqualWidth | [-0.00205 , 0.0301] | 0.90276 |
| Extended Chi2 | [0.01225 , 0.08745] | 0.90276 |
| FUSINTER | [-0.01035 , 0.0022] | 0.90276 |
| HDD | [0.0022 , 0.04045] | 0.90276 |
| HellingerBD | [0.0064 , 0.04795] | 0.90276 |
| Heter-Disc | [0.2253 , 0.37565] | 0.90276 |
| ID3 | [0.0034 , 0.04265] | 0.90276 |
| IDD | [0.01205 , 0.1189] | 0.90276 |
| Khiops | [-0.00425 , 0.0165] | 0.90276 |
| MDLP | [-0.00165 , 0.0285] | 0.90276 |
| Modified Chi2 | [-0.01 , 0.0092] | 0.90276 |
| MODL | [-0.0089 , 0.02335] | 0.90276 |
| MVD | [0.0522 , 0.21295] | 0.90276 |
| PKID | [-0.00805 , 0.00015] | 0.90276 |
| UCPD | [0.0308 , 0.07375] | 0.90276 |
| USD | [0.00235 , 0.03705] | 0.90276 |
| Zeta | [-0.0022 , 0.03225] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.0361 , 0.21675] | 0.95024 |
| Ameva | [-0.01395 , 0.0128] | 0.95024 |
| Bayesian | [0.03525 , 0.13515] | 0.95024 |
| CACC | [-0.0018 , 0.03755] | 0.95024 |
| CADD | [0.3 , 0.4852] | 0.95024 |
| CAIM | [-0.00985 , 0.01115] | 0.95024 |
| Chi2 | [-0.0112 , 0.01785] | 0.95024 |
| ChiMerge | [-0.0125 , 0.01615] | 0.95024 |
| ClusterAnalysis | [0.0111 , 0.0504] | 0.95024 |
| DIBD | [0.0452 , 0.12435] | 0.95024 |
| Distance | [-0.0035 , 0.0355] | 0.95024 |
| EqualFrequency | [-0.0031 , 0.0239] | 0.95024 |
| EqualWidth | [-0.00435 , 0.03445] | 0.95024 |
| Extended Chi2 | [0.00845 , 0.09525] | 0.95024 |
| FUSINTER | [-0.01215 , 0.00375] | 0.95024 |
| HDD | [0.001 , 0.0468] | 0.95024 |
| HellingerBD | [0.0035 , 0.05105] | 0.95024 |
| Heter-Disc | [0.21405 , 0.38805] | 0.95024 |
| ID3 | [0.001 , 0.05105] | 0.95024 |
| IDD | [0.00915 , 0.13245] | 0.95024 |
| Khiops | [-0.00565 , 0.0188] | 0.95024 |
| MDLP | [-0.0038 , 0.03505] | 0.95024 |
| Modified Chi2 | [-0.01185 , 0.0108] | 0.95024 |
| MODL | [-0.0113 , 0.02835] | 0.95024 |
| MVD | [0.0415 , 0.22485] | 0.95024 |
| PKID | [-0.0107 , 0.0016] | 0.95024 |
| UCPD | [0.02595 , 0.07755] | 0.95024 |
| USD | [-0.0003 , 0.04085] | 0.95024 |
| Zeta | [-0.0054 , 0.0348] | 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 | 730.0 | 90.0 | 3.488E-6 | 0.000016 |
| Ameva | 441.0 | 379.0 | $\geq 0.2$ | 0.672003 |
| Bayesian | 742.0 | 78.0 | 1.1622E-6 | 0.000008 |
| CACC | 617.0 | 203.0 | 0.004654 | 0.004913 |
| CADD | 819.0 | 1.0 | 3.638E-12 | 0 |
| CAIM | 495.0 | 325.0 | $\geq 0.2$ | 0.248867 |
| Chi2 | 474.5 | 345.5 | $\geq 0.2$ | 0.711526 |
| ChiMerge | 485.0 | 335.0 | $\geq 0.2$ | 0.309379 |
| ClusterAnalysis | 619.0 | 201.0 | 0.004244 | 0.004863 |
| DIBD | 742.0 | 78.0 | 1.1622E-6 | 0.000008 |
| Distance | 557.0 | 263.0 | 0.04816 | 0.046301 |
| EqualFrequency | 492.0 | 288.0 | 0.15828 | 0.15189 |
| EqualWidth | 556.0 | 264.0 | 0.04976 | 0.048936 |
| Extended Chi2 | 651.0 | 169.0 | 8.436E-4 | 0.00117 |
| FFD | 468.5 | 311.5 | $\geq 0.2$ | 0.267756 |
| HDD | 568.0 | 212.0 | 0.012092 | 0.01274 |
| HellingerBD | 589.0 | 191.0 | 0.00472 | 0.005369 |
| Heter-Disc | 804.0 | 16.0 | 3.074E-10 | 0 |
| ID3 | 582.0 | 198.0 | 0.00654 | 0.007224 |
| IDD | 668.0 | 152.0 | 3.168E-4 | 0.000512 |
| Khiops | 516.5 | 303.5 | $\geq 0.2$ | 0.32675 |
| MDLP | 551.0 | 269.0 | 0.0584 | 0.057179 |
| Modified Chi2 | 447.0 | 333.0 | $\geq 0.2$ | 0.422314 |
| MODL | 475.0 | 305.0 | $\geq 0.2$ | 0.23281 |
| MVD | 726.0 | 94.0 | 4.932E-6 | 0.000021 |
| PKID | 430.0 | 390.0 | $\geq 0.2$ | 1 |
| UCPD | 676.0 | 144.0 | 1.9334E-4 | 0.000325 |
| USD | 591.0 | 229.0 | 0.014108 | 0.014372 |
| Zeta | 582.0 | 238.0 | 0.019988 | 0.020415 |

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

## 16.2  Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.0474 , 0.19515] | 0.90276 |
| Ameva | [-0.0081 , 0.0148] | 0.90276 |
| Bayesian | [0.05125 , 0.12155] | 0.90276 |
| CACC | [0.0063 , 0.0313] | 0.90276 |
| CADD | [0.32075 , 0.4756] | 0.90276 |
| CAIM | [-0.00245 , 0.0143] | 0.90276 |
| Chi2 | [-0.0045 , 0.0179] | 0.90276 |
| ChiMerge | [-0.0035 , 0.01495] | 0.90276 |
| ClusterAnalysis | [0.01235 , 0.0532] | 0.90276 |
| DIBD | [0.05495 , 0.12185] | 0.90276 |
| Distance | [0.00205 , 0.02725] | 0.90276 |
| EqualFrequency | [-0.001 , 0.02065] | 0.90276 |
| EqualWidth | [0.00185 , 0.0242] | 0.90276 |
| Extended Chi2 | [0.01725 , 0.09985] | 0.90276 |
| FFD | [-0.0022 , 0.01035] | 0.90276 |
| HDD | [0.0058 , 0.0427] | 0.90276 |
| HellingerBD | [0.00835 , 0.0469] | 0.90276 |
| Heter-Disc | [0.2328 , 0.3803] | 0.90276 |
| ID3 | [0.008 , 0.0461] | 0.90276 |
| IDD | [0.0171 , 0.1059] | 0.90276 |
| Khiops | [-0.00095 , 0.02] | 0.90276 |
| MDLP | [0.00235 , 0.0283] | 0.90276 |
| Modified Chi2 | [-0.00745 , 0.01215] | 0.90276 |
| MODL | [-0.00235 , 0.02005] | 0.90276 |
| MVD | [0.0623 , 0.2158] | 0.90276 |
| PKID | [-0.00635 , 0.0066] | 0.90276 |
| UCPD | [0.03075 , 0.0749] | 0.90276 |
| USD | [0.00535 , 0.03925] | 0.90276 |
| Zeta | [0.00525 , 0.03375] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.0408 , 0.2113] | 0.95024 |
| Ameva | [-0.01005 , 0.0161] | 0.95024 |
| Bayesian | [0.0483 , 0.1355] | 0.95024 |
| CACC | [0.00445 , 0.0357] | 0.95024 |
| CADD | [0.3032 , 0.4849] | 0.95024 |
| CAIM | [-0.0043 , 0.01675] | 0.95024 |
| Chi2 | [-0.00845 , 0.0206] | 0.95024 |
| ChiMerge | [-0.00575 , 0.0163] | 0.95024 |
| ClusterAnalysis | [0.00915 , 0.0572] | 0.95024 |
| DIBD | [0.05 , 0.1285] | 0.95024 |
| Distance | [0.00005 , 0.03165] | 0.95024 |
| EqualFrequency | [-0.0021 , 0.02305] | 0.95024 |
| EqualWidth | [0 , 0.0266] | 0.95024 |
| Extended Chi2 | [0.0133 , 0.1085] | 0.95024 |
| FFD | [-0.00375 , 0.01215] | 0.95024 |
| HDD | [0.00425 , 0.046] | 0.95024 |
| HellingerBD | [0.00635 , 0.0503] | 0.95024 |
| Heter-Disc | [0.2204 , 0.3934] | 0.95024 |
| ID3 | [0.0061 , 0.0497] | 0.95024 |
| IDD | [0.0141 , 0.1343] | 0.95024 |
| Khiops | [-0.0035 , 0.0212] | 0.95024 |
| MDLP | [-0.00055 , 0.0319] | 0.95024 |
| Modified Chi2 | [-0.0108 , 0.0138] | 0.95024 |
| MODL | [-0.00335 , 0.02305] | 0.95024 |
| MVD | [0.05095 , 0.2323] | 0.95024 |
| PKID | [-0.00815 , 0.0075] | 0.95024 |
| UCPD | [0.0274 , 0.0788] | 0.95024 |
| USD | [0.0036 , 0.0423] | 0.95024 |
| Zeta | [0.00285 , 0.0377] | 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 | 567.0 | 213.0 | 0.01261 | 0.013249 |
| Ameva | 294.0 | 486.0 | $\geq 0.2$ | 1 |
| Bayesian | 584.0 | 196.0 | 0.005966 | 0.006643 |
| CACC | 382.5 | 437.5 | $\geq 0.2$ | 1 |
| CADD | 817.0 | 3.0 | 9.094E-12 | 0 |
| CAIM | 316.0 | 504.0 | $\geq 0.2$ | 1 |
| Chi2 | 321.0 | 459.0 | $\geq 0.2$ | 1 |
| ChiMerge | 303.0 | 477.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 434.0 | 386.0 | $\geq 0.2$ | 0.74192 |
| DIBD | 593.0 | 227.0 | 0.013026 | 0.013645 |
| Distance | 357.0 | 423.0 | $\geq 0.2$ | 1 |
| EqualFrequency | 312.0 | 468.0 | $\geq 0.2$ | 1 |
| EqualWidth | 353.0 | 427.0 | $\geq 0.2$ | 1 |
| Extended Chi2 | 483.5 | 336.5 | $\geq 0.2$ | 0.616204 |
| FFD | 243.0 | 537.0 | $\geq 0.2$ | 1 |
| FUSINTER | 212.0 | 568.0 | $\geq 0.2$ | 1 |
| HellingerBD | 382.0 | 401.0 | $\geq 0.2$ | 1 |
| Heter-Disc | 766.0 | 54.0 | 9.226E-8 | 0.000002 |
| ID3 | 363.5 | 421.5 | $\geq 0.2$ | 1 |
| IDD | 511.0 | 309.0 | 0.1787 | 0.172476 |
| Khiops | 286.0 | 494.0 | $\geq 0.2$ | 1 |
| MDLP | 366.0 | 454.0 | $\geq 0.2$ | 1 |
| Modified Chi2 | 267.5 | 512.5 | $\geq 0.2$ | 1 |
| MODL | 248.0 | 532.0 | $\geq 0.2$ | 1 |
| MVD | 642.0 | 138.0 | 2.496E-4 | 0.000416 |
| PKID | 239.0 | 541.0 | $\geq 0.2$ | 1 |
| UCPD | 492.0 | 328.0 | $\geq 0.2$ | 0.26747 |
| USD | 337.0 | 443.0 | $\geq 0.2$ | 1 |
| Zeta | 406.0 | 414.0 | $\geq 0.2$ | 1 |

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

## 17.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.02645 , 0.1781] | 0.90276 |
| Ameva | [-0.0381 , 0.00265] | 0.90276 |
| Bayesian | [0.0117 , 0.0881] | 0.90276 |
| CACC | [-0.02835 , 0.01575] | 0.90276 |
| CADD | [0.2769 , 0.43365] | 0.90276 |
| CAIM | [-0.02755 , 0.00065] | 0.90276 |
| Chi2 | [-0.03485 , 0.004] | 0.90276 |
| ChiMerge | [-0.0292 , 0.00415] | 0.90276 |
| ClusterAnalysis | [-0.0154 , 0.0242] | 0.90276 |
| DIBD | [0.02005 , 0.09745] | 0.90276 |
| Distance | [-0.0295 , 0.01695] | 0.90276 |
| EqualFrequency | [-0.0377 , 0.00575] | 0.90276 |
| EqualWidth | [-0.0324 , 0.01515] | 0.90276 |
| Extended Chi2 | [-0.0055 , 0.06345] | 0.90276 |
| FFD | [-0.04045 , -0.0022] | 0.90276 |
| FUSINTER | [-0.0427 , -0.0058] | 0.90276 |
| HellingerBD | [-0.02345 , 0.02425] | 0.90276 |
| Heter-Disc | [0.19485 , 0.3504] | 0.90276 |
| ID3 | [-0.00995 , 0.00545] | 0.90276 |
| IDD | [-0.0034 , 0.07835] | 0.90276 |
| Khiops | [-0.03705 , 0.0012] | 0.90276 |
| MDLP | [-0.0304 , 0.01245] | 0.90276 |
| Modified Chi2 | [-0.0367 , -0.00005] | 0.90276 |
| MODL | [-0.0336 , -0.0023] | 0.90276 |
| MVD | [0.05985 , 0.17425] | 0.90276 |
| PKID | [-0.04485 , -0.00425] | 0.90276 |
| UCPD | [-0.009 , 0.04435] | 0.90276 |
| USD | [-0.01705 , 0.00605] | 0.90276 |
| Zeta | [-0.01765 , 0.0182] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.01515 , 0.19705] | 0.95024 |
| Ameva | [-0.04235 , 0.0062] | 0.95024 |
| Bayesian | [0.00735 , 0.098] | 0.95024 |
| CACC | [-0.03165 , 0.0212] | 0.95024 |
| CADD | [0.26085 , 0.44915] | 0.95024 |
| CAIM | [-0.0319 , 0.0015] | 0.95024 |
| Chi2 | [-0.03895 , 0.00605] | 0.95024 |
| ChiMerge | [-0.03275 , 0.00945] | 0.95024 |
| ClusterAnalysis | [-0.01895 , 0.0267] | 0.95024 |
| DIBD | [0.01265 , 0.1046] | 0.95024 |
| Distance | [-0.03485 , 0.022] | 0.95024 |
| EqualFrequency | [-0.04475 , 0.01] | 0.95024 |
| EqualWidth | [-0.03755 , 0.0206] | 0.95024 |
| Extended Chi2 | [-0.00695 , 0.0751] | 0.95024 |
| FFD | [-0.0468 , -0.001] | 0.95024 |
| FUSINTER | [-0.046 , -0.00425] | 0.95024 |
| HellingerBD | [-0.0292 , 0.0308] | 0.95024 |
| Heter-Disc | [0.17905 , 0.3627] | 0.95024 |
| ID3 | [-0.0128 , 0.0079] | 0.95024 |
| IDD | [-0.0064 , 0.0935] | 0.95024 |
| Khiops | [-0.0419 , 0.0052] | 0.95024 |
| MDLP | [-0.0349 , 0.0169] | 0.95024 |
| Modified Chi2 | [-0.04045 , 0.0012] | 0.95024 |
| MODL | [-0.0369 , -0.0001] | 0.95024 |
| MVD | [0.04825 , 0.18545] | 0.95024 |
| PKID | [-0.04965 , -0.00225] | 0.95024 |
| UCPD | [-0.01365 , 0.0506] | 0.95024 |
| USD | [-0.01945 , 0.00875] | 0.95024 |
| Zeta | [-0.0214 , 0.02225] | 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 | 611.0 | 209.0 | 0.006096 | 0.00676 |
| Ameva | 308.0 | 512.0 | $\geq 0.2$ | 1 |
| Bayesian | 600.0 | 220.0 | 0.009782 | 0.01045 |
| CACC | 391.0 | 429.0 | $\geq 0.2$ | 1 |
| CADD | 819.0 | 1.0 | 3.638E-12 | 0 |
| CAIM | 262.0 | 558.0 | $\geq 0.2$ | 1 |
| Chi2 | 292.5 | 487.5 | $\geq 0.2$ | 1 |
| ChiMerge | 250.0 | 570.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 418.0 | 362.0 | $\geq 0.2$ | 0.690838 |
| DIBD | 641.0 | 139.0 | 2.66E-4 | 0.000449 |
| Distance | 349.0 | 471.0 | $\geq 0.2$ | 1 |
| EqualFrequency | 221.0 | 559.0 | $\geq 0.2$ | 1 |
| EqualWidth | 274.0 | 506.0 | $\geq 0.2$ | 1 |
| Extended Chi2 | 562.0 | 258.0 | 0.0408 | 0.040384 |
| FFD | 190.0 | 593.0 | $\geq 0.2$ | 1 |
| FUSINTER | 191.0 | 589.0 | $\geq 0.2$ | 1 |
| HDD | 401.0 | 382.0 | $\geq 0.2$ | 1 |
| Heter-Disc | 786.0 | 34.0 | 6.776E-9 | 0 |
| ID3 | 411.5 | 371.5 | $\geq 0.2$ | 1 |
| IDD | 534.0 | 286.0 | 0.09724 | 0.09424 |
| Khiops | 235.0 | 545.0 | $\geq 0.2$ | 1 |
| MDLP | 325.0 | 495.0 | $\geq 0.2$ | 1 |
| Modified Chi2 | 232.5 | 547.5 | $\geq 0.2$ | 1 |
| MODL | 263.0 | 517.0 | $\geq 0.2$ | 1 |
| MVD | 629.0 | 191.0 | 0.002638 | 0.003123 |
| PKID | 197.0 | 586.0 | $\geq 0.2$ | 1 |
| UCPD | 486.0 | 334.0 | $\geq 0.2$ | 0.303828 |
| USD | 424.0 | 396.0 | $\geq 0.2$ | 0.845472 |
| Zeta | 400.0 | 420.0 | $\geq 0.2$ | 1 |

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

## 18.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.0178 , 0.14685] | 0.90276 |
| Ameva | [-0.04735 , 0.0026] | 0.90276 |
| Bayesian | [0.0217 , 0.0873] | 0.90276 |
| CACC | [-0.02705 , 0.0137] | 0.90276 |
| CADD | [0.2728 , 0.43625] | 0.90276 |
| CAIM | [-0.0418 , -0.0021] | 0.90276 |
| Chi2 | [-0.03525 , 0.0033] | 0.90276 |
| ChiMerge | [-0.0371 , -0.0046] | 0.90276 |
| ClusterAnalysis | [-0.0215 , 0.0256] | 0.90276 |
| DIBD | [0.0265 , 0.09] | 0.90276 |
| Distance | [-0.0304 , 0.0077] | 0.90276 |
| EqualFrequency | [-0.0306 , -0.0052] | 0.90276 |
| EqualWidth | [-0.0194 , 0.0002] | 0.90276 |
| Extended Chi2 | [0.003 , 0.0416] | 0.90276 |
| FFD | [-0.04795 , -0.0064] | 0.90276 |
| FUSINTER | [-0.0469 , -0.00835] | 0.90276 |
| HDD | [-0.02425 , 0.02345] | 0.90276 |
| Heter-Disc | [0.1859 , 0.33905] | 0.90276 |
| ID3 | [-0.01665 , 0.02535] | 0.90276 |
| IDD | [0 , 0.0601] | 0.90276 |
| Khiops | [-0.0387 , -0.00355] | 0.90276 |
| MDLP | [-0.03295 , 0.00515] | 0.90276 |
| Modified Chi2 | [-0.0436 , -0.0052] | 0.90276 |
| MODL | [-0.03845 , -0.00085] | 0.90276 |
| MVD | [0.0375 , 0.1925] | 0.90276 |
| PKID | [-0.0507 , -0.0062] | 0.90276 |
| UCPD | [-0.0067 , 0.0374] | 0.90276 |
| USD | [-0.01715 , 0.0229] | 0.90276 |
| Zeta | [-0.01935 , 0.01495] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.0113 , 0.1597] | 0.95024 |
| Ameva | [-0.04985 , 0.00545] | 0.95024 |
| Bayesian | [0.0148 , 0.0965] | 0.95024 |
| CACC | [-0.0305 , 0.0166] | 0.95024 |
| CADD | [0.253 , 0.4572] | 0.95024 |
| CAIM | [-0.04525 , -0.0002] | 0.95024 |
| Chi2 | [-0.0383 , 0.0068] | 0.95024 |
| ChiMerge | [-0.04245 , -0.00255] | 0.95024 |
| ClusterAnalysis | [-0.0271 , 0.0294] | 0.95024 |
| DIBD | [0.02295 , 0.09705] | 0.95024 |
| Distance | [-0.0354 , 0.01085] | 0.95024 |
| EqualFrequency | [-0.0339 , -0.0033] | 0.95024 |
| EqualWidth | [-0.02275 , 0.00165] | 0.95024 |
| Extended Chi2 | [0.00095 , 0.04785] | 0.95024 |
| FFD | [-0.05105 , -0.0035] | 0.95024 |
| FUSINTER | [-0.0503 , -0.00635] | 0.95024 |
| HDD | [-0.0308 , 0.0292] | 0.95024 |
| Heter-Disc | [0.1729 , 0.3595] | 0.95024 |
| ID3 | [-0.0278 , 0.0294] | 0.95024 |
| IDD | [-0.00405 , 0.07185] | 0.95024 |
| Khiops | [-0.0412 , -0.0016] | 0.95024 |
| MDLP | [-0.03735 , 0.00815] | 0.95024 |
| Modified Chi2 | [-0.04925 , -0.0012] | 0.95024 |
| MODL | [-0.04375 , 0.0014] | 0.95024 |
| MVD | [0.02965 , 0.20505] | 0.95024 |
| PKID | [-0.05345 , -0.00395] | 0.95024 |
| UCPD | [-0.0095 , 0.03915] | 0.95024 |
| USD | [-0.0234 , 0.0252] | 0.95024 |
| Zeta | [-0.02765 , 0.0177] | 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 | 191.0 | 629.0 | $\geq 0.2$ | 1 |
| Ameva | 8.0 | 812.0 | $\geq 0.2$ | 1 |
| Bayesian | 79.0 | 701.0 | $\geq 0.2$ | 1 |
| CACC | 21.5 | 798.5 | $\geq 0.2$ | 1 |
| CADD | 442.5 | 377.5 | $\geq 0.2$ | 1 |
| CAIM | 5.0 | 815.0 | $\geq 0.2$ | 1 |
| Chi2 | 38.0 | 782.0 | $\geq 0.2$ | 1 |
| ChiMerge | 9.0 | 811.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 37.0 | 743.0 | $\geq 0.2$ | 1 |
| DIBD | 74.0 | 746.0 | $\geq 0.2$ | 1 |
| Distance | 34.0 | 786.0 | $\geq 0.2$ | 1 |
| EqualFrequency | 23.0 | 757.0 | $\geq 0.2$ | 1 |
| EqualWidth | 20.0 | 800.0 | $\geq 0.2$ | 1 |
| Extended Chi2 | 87.0 | 693.0 | $\geq 0.2$ | 1 |
| FFD | 9.0 | 811.0 | $\geq 0.2$ | 1 |
| FUSINTER | 16.0 | 804.0 | $\geq 0.2$ | 1 |
| HDD | 54.0 | 766.0 | $\geq 0.2$ | 1 |
| HellingerBD | 34.0 | 786.0 | $\geq 0.2$ | 1 |
| ID3 | 43.0 | 777.0 | $\geq 0.2$ | 1 |
| IDD | 110.0 | 673.0 | $\geq 0.2$ | 1 |
| Khiops | 9.0 | 811.0 | $\geq 0.2$ | 1 |
| MDLP | 26.0 | 794.0 | $\geq 0.2$ | 1 |
| Modified Chi2 | 8.0 | 812.0 | $\geq 0.2$ | 1 |
| MODL | 18.0 | 802.0 | $\geq 0.2$ | 1 |
| MVD | 186.0 | 601.0 | $\geq 0.2$ | 1 |
| PKID | 12.0 | 808.0 | $\geq 0.2$ | 1 |
| UCPD | 20.0 | 800.0 | $\geq 0.2$ | 1 |
| USD | 36.0 | 784.0 | $\geq 0.2$ | 1 |
| Zeta | 11.0 | 809.0 | $\geq 0.2$ | 1 |

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

## 19.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [-0.2317 , -0.05845] | 0.90276 |
| Ameva | [-0.33865 , -0.21225] | 0.90276 |
| Bayesian | [-0.27565 , -0.12845] | 0.90276 |
| CACC | [-0.30465 , -0.17785] | 0.90276 |
| CADD | [-0.01885 , 0.1742] | 0.90276 |
| CAIM | [-0.36475 , -0.21965] | 0.90276 |
| Chi2 | [-0.3761 , -0.22405] | 0.90276 |
| ChiMerge | [-0.36615 , -0.21875] | 0.90276 |
| ClusterAnalysis | [-0.32505 , -0.17715] | 0.90276 |
| DIBD | [-0.2726 , -0.1136] | 0.90276 |
| Distance | [-0.3451 , -0.19095] | 0.90276 |
| EqualFrequency | [-0.3676 , -0.2175] | 0.90276 |
| EqualWidth | [-0.37235 , -0.216] | 0.90276 |
| Extended Chi2 | [-0.31745 , -0.16045] | 0.90276 |
| FFD | [-0.37565 , -0.2253] | 0.90276 |
| FUSINTER | [-0.3803 , -0.2328] | 0.90276 |
| HDD | [-0.3504 , -0.19485] | 0.90276 |
| HellingerBD | [-0.33905 , -0.1859] | 0.90276 |
| ID3 | [-0.34545 , -0.1923] | 0.90276 |
| IDD | [-0.2745 , -0.103] | 0.90276 |
| Khiops | [-0.35795 , -0.2113] | 0.90276 |
| MDLP | [-0.3436 , -0.19125] | 0.90276 |
| Modified Chi2 | [-0.3779 , -0.22985] | 0.90276 |
| MODL | [-0.36165 , -0.2066] | 0.90276 |
| MVD | [-0.225 , -0.0447] | 0.90276 |
| PKID | [-0.3768 , -0.2328] | 0.90276 |
| UCPD | [-0.31855 , -0.1822] | 0.90276 |
| USD | [-0.3538 , -0.1997] | 0.90276 |
| Zeta | [-0.34125 , -0.199] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [-0.24875 , -0.0431] | 0.95024 |
| Ameva | [-0.35785 , -0.20355] | 0.95024 |
| Bayesian | [-0.2922 , -0.1192] | 0.95024 |
| CACC | [-0.31895 , -0.1638] | 0.95024 |
| CADD | [-0.02445 , 0.23225] | 0.95024 |
| CAIM | [-0.3773 , -0.20355] | 0.95024 |
| Chi2 | [-0.38675 , -0.20325] | 0.95024 |
| ChiMerge | [-0.38215 , -0.2116] | 0.95024 |
| ClusterAnalysis | [-0.34185 , -0.16375] | 0.95024 |
| DIBD | [-0.28135 , -0.10435] | 0.95024 |
| Distance | [-0.3581 , -0.1818] | 0.95024 |
| EqualFrequency | [-0.3803 , -0.20345] | 0.95024 |
| EqualWidth | [-0.38465 , -0.203] | 0.95024 |
| Extended Chi2 | [-0.3357 , -0.1462] | 0.95024 |
| FFD | [-0.38805 , -0.21405] | 0.95024 |
| FUSINTER | [-0.3934 , -0.2204] | 0.95024 |
| HDD | [-0.3627 , -0.17905] | 0.95024 |
| HellingerBD | [-0.3595 , -0.1729] | 0.95024 |
| ID3 | [-0.36115 , -0.1793] | 0.95024 |
| IDD | [-0.288 , -0.0936] | 0.95024 |
| Khiops | [-0.3758 , -0.2003] | 0.95024 |
| MDLP | [-0.3558 , -0.1786] | 0.95024 |
| Modified Chi2 | [-0.3952 , -0.21375] | 0.95024 |
| MODL | [-0.3751 , -0.19295] | 0.95024 |
| MVD | [-0.24015 , -0.0334] | 0.95024 |
| PKID | [-0.39455 , -0.2188] | 0.95024 |
| UCPD | [-0.32865 , -0.17135] | 0.95024 |
| USD | [-0.3688 , -0.1879] | 0.95024 |
| Zeta | [-0.3542 , -0.18875] | 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 | 557.0 | 223.0 | 0.01895 | 0.019415 |
| Ameva | 297.0 | 523.0 | $\geq 0.2$ | 1 |
| Bayesian | 632.5 | 187.5 | 0.0070849999999999999 | 0.007787 |
| CACC | 345.0 | 435.0 | $\geq 0.2$ | 1 |
| CADD | 817.0 | 3.0 | 9.094E-12 | 0 |
| CAIM | 291.0 | 489.0 | $\geq 0.2$ | 1 |
| Chi2 | 287.5 | 492.5 | $\geq 0.2$ | 1 |
| ChiMerge | 296.0 | 484.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 381.5 | 438.5 | $\geq 0.2$ | 1 |
| DIBD | 555.0 | 225.0 | 0.0205 | 0.020913 |
| Distance | 356.0 | 464.0 | $\geq 0.2$ | 1 |
| EqualFrequency | 314.0 | 466.0 | $\geq 0.2$ | 1 |
| EqualWidth | 351.0 | 432.0 | $\geq 0.2$ | 1 |
| Extended Chi2 | 453.0 | 327.0 | $\geq 0.2$ | 0.374707 |
| FFD | 238.0 | 545.0 | $\geq 0.2$ | 1 |
| FUSINTER | 198.0 | 582.0 | $\geq 0.2$ | 1 |
| HDD | 421.5 | 363.5 | $\geq 0.2$ | 1 |
| HellingerBD | 371.5 | 411.5 | $\geq 0.2$ | 1 |
| Heter-Disc | 777.0 | 43.0 | 2.362E-8 | 0.000001 |
| IDD | 492.0 | 328.0 | $\geq 0.2$ | 0.26747 |
| Khiops | 254.0 | 526.0 | $\geq 0.2$ | 1 |
| MDLP | 346.0 | 474.0 | $\geq 0.2$ | 1 |
| Modified Chi2 | 179.0 | 601.0 | $\geq 0.2$ | 1 |
| MODL | 217.0 | 563.0 | $\geq 0.2$ | 1 |
| MVD | 637.0 | 143.0 | 3.426E-4 | 0.000553 |
| PKID | 219.0 | 601.0 | $\geq 0.2$ | 1 |
| UCPD | 456.0 | 364.0 | $\geq 0.2$ | 0.531958 |
| USD | 312.5 | 507.5 | $\geq 0.2$ | 1 |
| Zeta | 409.5 | 410.5 | $\geq 0.2$ | 1 |

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

## 20.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.0277 , 0.16925] | 0.90276 |
| Ameva | [-0.0413 , 0.00185] | 0.90276 |
| Bayesian | [0.00955 , 0.07555] | 0.90276 |
| CACC | [-0.02505 , 0.0125] | 0.90276 |
| CADD | [0.27 , 0.4424] | 0.90276 |
| CAIM | [-0.0353 , 0.0028] | 0.90276 |
| Chi2 | [-0.0359 , 0.0019] | 0.90276 |
| ChiMerge | [-0.0326 , 0.0026] | 0.90276 |
| ClusterAnalysis | [-0.0154 , 0.0157] | 0.90276 |
| DIBD | [0.01465 , 0.09715] | 0.90276 |
| Distance | [-0.03615 , 0.0135] | 0.90276 |
| EqualFrequency | [-0.0415 , 0.008] | 0.90276 |
| EqualWidth | [-0.0302 , 0.00765] | 0.90276 |
| Extended Chi2 | [-0.00625 , 0.05655] | 0.90276 |
| FFD | [-0.04265 , -0.0034] | 0.90276 |
| FUSINTER | [-0.0461 , -0.008] | 0.90276 |
| HDD | [-0.00545 , 0.00995] | 0.90276 |
| HellingerBD | [-0.02535 , 0.01665] | 0.90276 |
| Heter-Disc | [0.1923 , 0.34545] | 0.90276 |
| IDD | [-0.0096 , 0.0753] | 0.90276 |
| Khiops | [-0.0354 , -0.00185] | 0.90276 |
| MDLP | [-0.0384 , 0.0067] | 0.90276 |
| Modified Chi2 | [-0.0331 , -0.00515] | 0.90276 |
| MODL | [-0.0353 , -0.0069] | 0.90276 |
| MVD | [0.0619 , 0.18135] | 0.90276 |
| PKID | [-0.04355 , -0.00585] | 0.90276 |
| UCPD | [-0.01205 , 0.04205] | 0.90276 |
| USD | [-0.0105 , 0.00135] | 0.90276 |
| Zeta | [-0.02085 , 0.02175] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.01545 , 0.1926] | 0.95024 |
| Ameva | [-0.04605 , 0.0074] | 0.95024 |
| Bayesian | [0.0077 , 0.0835] | 0.95024 |
| CACC | [-0.02895 , 0.01755] | 0.95024 |
| CADD | [0.25325 , 0.45225] | 0.95024 |
| CAIM | [-0.0393 , 0.00515] | 0.95024 |
| Chi2 | [-0.0411 , 0.00425] | 0.95024 |
| ChiMerge | [-0.0365 , 0.00495] | 0.95024 |
| ClusterAnalysis | [-0.0204 , 0.01975] | 0.95024 |
| DIBD | [0.00845 , 0.1074] | 0.95024 |
| Distance | [-0.04295 , 0.0182] | 0.95024 |
| EqualFrequency | [-0.04565 , 0.01355] | 0.95024 |
| EqualWidth | [-0.0337 , 0.01185] | 0.95024 |
| Extended Chi2 | [-0.00775 , 0.0752] | 0.95024 |
| FFD | [-0.05105 , -0.001] | 0.95024 |
| FUSINTER | [-0.0497 , -0.0061] | 0.95024 |
| HDD | [-0.0079 , 0.0128] | 0.95024 |
| HellingerBD | [-0.0294 , 0.0278] | 0.95024 |
| Heter-Disc | [0.1793 , 0.36115] | 0.95024 |
| IDD | [-0.0158 , 0.09475] | 0.95024 |
| Khiops | [-0.04025 , 0.0005] | 0.95024 |
| MDLP | [-0.0428 , 0.0103] | 0.95024 |
| Modified Chi2 | [-0.0361 , -0.0039] | 0.95024 |
| MODL | [-0.03875 , -0.0047] | 0.95024 |
| MVD | [0.05495 , 0.19305] | 0.95024 |
| PKID | [-0.049 , -0.004] | 0.95024 |
| UCPD | [-0.0157 , 0.05075] | 0.95024 |
| USD | [-0.0117 , 0.00275] | 0.95024 |
| Zeta | [-0.0246 , 0.02695] | 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 | 548.5 | 236.5 | $\geq 0.2$ | 0.195682 |
| Ameva | 171.5 | 648.5 | $\geq 0.2$ | 1 |
| Bayesian | 486.0 | 294.0 | 0.18474 | 0.178091 |
| CACC | 249.0 | 571.0 | $\geq 0.2$ | 1 |
| CADD | 777.0 | 6.0 | 2.038E-10 | 0 |
| CAIM | 159.0 | 621.0 | $\geq 0.2$ | 1 |
| Chi2 | 216.0 | 604.0 | $\geq 0.2$ | 1 |
| ChiMerge | 189.0 | 591.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 302.0 | 478.0 | $\geq 0.2$ | 1 |
| DIBD | 518.0 | 302.0 | 0.1499 | 0.144736 |
| Distance | 255.0 | 565.0 | $\geq 0.2$ | 1 |
| EqualFrequency | 253.0 | 567.0 | $\geq 0.2$ | 1 |
| EqualWidth | 272.0 | 548.0 | $\geq 0.2$ | 1 |
| Extended Chi2 | 404.0 | 416.0 | $\geq 0.2$ | 1 |
| FFD | 184.0 | 636.0 | $\geq 0.2$ | 1 |
| FUSINTER | 152.0 | 668.0 | $\geq 0.2$ | 1 |
| HDD | 309.0 | 511.0 | $\geq 0.2$ | 1 |
| HellingerBD | 286.0 | 534.0 | $\geq 0.2$ | 1 |
| Heter-Disc | 673.0 | 110.0 | 1.3066E-4 | 0.000261 |
| ID3 | 328.0 | 492.0 | $\geq 0.2$ | 1 |
| Khiops | 192.0 | 628.0 | $\geq 0.2$ | 1 |
| MDLP | 223.5 | 596.5 | $\geq 0.2$ | 1 |
| Modified Chi2 | 187.0 | 593.0 | $\geq 0.2$ | 1 |
| MODL | 207.0 | 613.0 | $\geq 0.2$ | 1 |
| MVD | 546.0 | 237.0 | 0.08552 | 0.082754 |
| PKID | 127.0 | 693.0 | $\geq 0.2$ | 1 |
| UCPD | 379.5 | 440.5 | $\geq 0.2$ | 1 |
| USD | 316.0 | 504.0 | $\geq 0.2$ | 1 |
| Zeta | 291.0 | 529.0 | $\geq 0.2$ | 1 |

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

## 21.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.00445 , 0.05455] | 0.90276 |
| Ameva | [-0.09585 , -0.01595] | 0.90276 |
| Bayesian | [-0.005 , 0.0456] | 0.90276 |
| CACC | [-0.07165 , -0.00685] | 0.90276 |
| CADD | [0.1997 , 0.3437] | 0.90276 |
| CAIM | [-0.1007 , -0.0106] | 0.90276 |
| Chi2 | [-0.0973 , -0.0117] | 0.90276 |
| ChiMerge | [-0.1024 , -0.01035] | 0.90276 |
| ClusterAnalysis | [-0.0596 , 0.0057] | 0.90276 |
| DIBD | [-0.00235 , 0.04045] | 0.90276 |
| Distance | [-0.0818 , -0.0063] | 0.90276 |
| EqualFrequency | [-0.09805 , -0.00645] | 0.90276 |
| EqualWidth | [-0.0981 , -0.00425] | 0.90276 |
| Extended Chi2 | [-0.0575 , 0.0389] | 0.90276 |
| FFD | [-0.1189 , -0.01205] | 0.90276 |
| FUSINTER | [-0.1059 , -0.0171] | 0.90276 |
| HDD | [-0.07835 , 0.0034] | 0.90276 |
| HellingerBD | [-0.0601 , -0] | 0.90276 |
| Heter-Disc | [0.103 , 0.2745] | 0.90276 |
| ID3 | [-0.0753 , 0.0096] | 0.90276 |
| Khiops | [-0.08805 , -0.01585] | 0.90276 |
| MDLP | [-0.077 , -0.0079] | 0.90276 |
| Modified Chi2 | [-0.0973 , -0.01565] | 0.90276 |
| MODL | [-0.09825 , -0.01545] | 0.90276 |
| MVD | [0.01165 , 0.105] | 0.90276 |
| PKID | [-0.09275 , -0.0222] | 0.90276 |
| UCPD | [-0.07555 , 0.0299] | 0.90276 |
| USD | [-0.0796 , 0.0065] | 0.90276 |
| Zeta | [-0.09155 , 0.00035] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.0007 , 0.0607] | 0.95024 |
| Ameva | [-0.1165 , -0.0128] | 0.95024 |
| Bayesian | [-0.0125 , 0.0497] | 0.95024 |
| CACC | [-0.0855 , -0.00245] | 0.95024 |
| CADD | [0.18815 , 0.36215] | 0.95024 |
| CAIM | [-0.1168 , -0.0086] | 0.95024 |
| Chi2 | [-0.1148 , -0.00735] | 0.95024 |
| ChiMerge | [-0.12325 , -0.007] | 0.95024 |
| ClusterAnalysis | [-0.0708 , 0.01245] | 0.95024 |
| DIBD | [-0.00515 , 0.0452] | 0.95024 |
| Distance | [-0.0951 , -0.00285] | 0.95024 |
| EqualFrequency | [-0.1118 , -0.00275] | 0.95024 |
| EqualWidth | [-0.1108 , 0.0024] | 0.95024 |
| Extended Chi2 | [-0.0704 , 0.0469] | 0.95024 |
| FFD | [-0.13245 , -0.00915] | 0.95024 |
| FUSINTER | [-0.1343 , -0.0141] | 0.95024 |
| HDD | [-0.0935 , 0.0064] | 0.95024 |
| HellingerBD | [-0.07185 , 0.00405] | 0.95024 |
| Heter-Disc | [0.0936 , 0.288] | 0.95024 |
| ID3 | [-0.09475 , 0.0158] | 0.95024 |
| Khiops | [-0.09765 , -0.01275] | 0.95024 |
| MDLP | [-0.0959 , -0.00515] | 0.95024 |
| Modified Chi2 | [-0.1234 , -0.0105] | 0.95024 |
| MODL | [-0.1122 , -0.0114] | 0.95024 |
| MVD | [0.00555 , 0.11865] | 0.95024 |
| PKID | [-0.11985 , -0.0193] | 0.95024 |
| UCPD | [-0.09645 , 0.03355] | 0.95024 |
| USD | [-0.09915 , 0.0121] | 0.95024 |
| Zeta | [-0.11275 , 0.00605] | 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 | 694.0 | 126.0 | 5.846E-5 | 0.000131 |
| Ameva | 395.0 | 425.0 | $\geq 0.2$ | 1 |
| Bayesian | 663.0 | 157.0 | 4.266E-4 | 0.000642 |
| CACC | 527.0 | 293.0 | 0.11814 | 0.114255 |
| CADD | 814.0 | 6.0 | 2.546E-11 | 0 |
| CAIM | 436.5 | 383.5 | $\geq 0.2$ | 0.715295 |
| Chi2 | 379.5 | 400.5 | $\geq 0.2$ | 1 |
| ChiMerge | 389.0 | 431.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 536.0 | 284.0 | 0.09182 | 0.08907 |
| DIBD | 744.0 | 76.0 | 9.584E-7 | 0.000007 |
| Distance | 446.0 | 374.0 | $\geq 0.2$ | 0.623704 |
| EqualFrequency | 371.5 | 408.5 | $\geq 0.2$ | 1 |
| EqualWidth | 425.0 | 395.0 | $\geq 0.2$ | 0.83469 |
| Extended Chi2 | 594.0 | 226.0 | 0.012512 | 0.013141 |
| FFD | 353.5 | 466.5 | $\geq 0.2$ | 1 |
| FUSINTER | 303.5 | 516.5 | $\geq 0.2$ | 1 |
| HDD | 494.0 | 286.0 | 0.15012 | 0.144759 |
| HellingerBD | 545.0 | 235.0 | 0.02996 | 0.029436 |
| Heter-Disc | 811.0 | 9.0 | 6.002E-11 | 0 |
| ID3 | 526.0 | 254.0 | 0.05806 | 0.056799 |
| IDD | 628.0 | 192.0 | 0.00277 | 0.003315 |
| MDLP | 447.0 | 373.0 | $\geq 0.2$ | 0.614227 |
| Modified Chi2 | 350.0 | 430.0 | $\geq 0.2$ | 1 |
| MODL | 383.0 | 397.0 | $\geq 0.2$ | 1 |
| MVD | 686.0 | 134.0 | 1.01E-4 | 0.000202 |
| PKID | 367.0 | 416.0 | $\geq 0.2$ | 1 |
| UCPD | 652.0 | 168.0 | 7.984E-4 | 0.001116 |
| USD | 521.0 | 299.0 | 0.13868 | 0.13395 |
| Zeta | 503.0 | 317.0 | $\geq 0.2$ | 0.208075 |

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

## 22.2 Confidence intervals for Median of diferences

| α=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.04055 , 0.17255] | 0.90276 |
| Ameva | [-0.0147 , 0.0112] | 0.90276 |
| Bayesian | [0.0265 , 0.10845] | 0.90276 |
| CACC | [-0.00105 , 0.0264] | 0.90276 |
| CADD | [0.29575 , 0.4611] | 0.90276 |
| CAIM | [-0.0093 , 0.01095] | 0.90276 |
| Chi2 | [-0.0132 , 0.0094] | 0.90276 |
| ChiMerge | [-0.01425 , 0.01115] | 0.90276 |
| ClusterAnalysis | [0.001 , 0.0326] | 0.90276 |
| DIBD | [0.04655 , 0.1072] | 0.90276 |
| Distance | [-0.011 , 0.01675] | 0.90276 |
| EqualFrequency | [-0.01 , 0.00735] | 0.90276 |
| EqualWidth | [-0.0098 , 0.01895] | 0.90276 |
| Extended Chi2 | [0.0061 , 0.07245] | 0.90276 |
| FFD | [-0.0165 , 0.00425] | 0.90276 |
| FUSINTER | [-0.02 , 0.00095] | 0.90276 |
| HDD | [-0.0012 , 0.03705] | 0.90276 |
| HellingerBD | [0.00355 , 0.0387] | 0.90276 |
| Heter-Disc | [0.2113 , 0.35795] | 0.90276 |
| ID3 | [0.00185 , 0.0354] | 0.90276 |
| IDD | [0.01585 , 0.08805] | 0.90276 |
| MDLP | [-0.0078 , 0.0148] | 0.90276 |
| Modified Chi2 | [-0.0145 , 0.00595] | 0.90276 |
| MODL | [-0.01455 , 0.01425] | 0.90276 |
| MVD | [0.05535 , 0.19955] | 0.90276 |
| PKID | [-0.0081 , 0.00455] | 0.90276 |
| UCPD | [0.02015 , 0.05405] | 0.90276 |
| USD | [-0.00195 , 0.02885] | 0.90276 |
| Zeta | [-0.0032 , 0.0278] | 0.90276 |

Table 65: Confidence intervals for algorithm Khiops (α=0.90)

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.03385 , 0.18745] | 0.95024 |
| Ameva | [-0.01835 , 0.0136] | 0.95024 |
| Bayesian | [0.0212 , 0.1142] | 0.95024 |
| CACC | [-0.00325 , 0.02935] | 0.95024 |
| CADD | [0.28175 , 0.471] | 0.95024 |
| CAIM | [-0.011 , 0.0125] | 0.95024 |
| Chi2 | [-0.01525 , 0.01135] | 0.95024 |
| ChiMerge | [-0.0168 , 0.0135] | 0.95024 |
| ClusterAnalysis | [-0.0033 , 0.036] | 0.95024 |
| DIBD | [0.04215 , 0.11205] | 0.95024 |
| Distance | [-0.01385 , 0.0211] | 0.95024 |
| EqualFrequency | [-0.0135 , 0.01125] | 0.95024 |
| EqualWidth | [-0.0108 , 0.0243] | 0.95024 |
| Extended Chi2 | [0.00465 , 0.0814] | 0.95024 |
| FFD | [-0.0188 , 0.00565] | 0.95024 |
| FUSINTER | [-0.0212 , 0.0035] | 0.95024 |
| HDD | [-0.0052 , 0.0419] | 0.95024 |
| HellingerBD | [0.0016 , 0.0412] | 0.95024 |
| Heter-Disc | [0.2003 , 0.3758] | 0.95024 |
| ID3 | [-0.0005 , 0.04025] | 0.95024 |
| IDD | [0.01275 , 0.09765] | 0.95024 |
| MDLP | [-0.0108 , 0.01785] | 0.95024 |
| Modified Chi2 | [-0.0168 , 0.0074] | 0.95024 |
| MODL | [-0.019 , 0.0171] | 0.95024 |
| MVD | [0.04765 , 0.2195] | 0.95024 |
| PKID | [-0.0104 , 0.00555] | 0.95024 |
| UCPD | [0.01715 , 0.05745] | 0.95024 |
| USD | [-0.00445 , 0.03345] | 0.95024 |
| Zeta | [-0.00625 , 0.0314] | 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 | 665.0 | 155.0 | 3.79E-4 | 0.000594 |
| Ameva | 352.0 | 468.0 | $\geq 0.2$ | 1 |
| Bayesian | 662.0 | 158.0 | 4.524E-4 | 0.000689 |
| CACC | 530.0 | 290.0 | 0.1088 | 0.105302 |
| CADD | 807.0 | 13.0 | 1.6008E-10 | 0 |
| CAIM | 272.0 | 508.0 | $\geq 0.2$ | 1 |
| Chi2 | 380.0 | 440.0 | $\geq 0.2$ | 1 |
| ChiMerge | 286.0 | 494.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 486.0 | 334.0 | $\geq 0.2$ | 0.303828 |
| DIBD | 662.0 | 158.0 | 4.524E-4 | 0.000689 |
| Distance | 443.0 | 340.0 | $\geq 0.2$ | 0.85634 |
| EqualFrequency | 369.5 | 450.5 | $\geq 0.2$ | 1 |
| EqualWidth | 420.0 | 400.0 | $\geq 0.2$ | 0.887764 |
| Extended Chi2 | 543.0 | 277.0 | 0.07472 | 0.072747 |
| FFD | 297.0 | 483.0 | $\geq 0.2$ | 1 |
| FUSINTER | 269.0 | 551.0 | $\geq 0.2$ | 1 |
| HDD | 454.0 | 366.0 | $\geq 0.2$ | 0.549748 |
| HellingerBD | 495.0 | 325.0 | $\geq 0.2$ | 0.250461 |
| Heter-Disc | 794.0 | 26.0 | 1.9444E-9 | 0 |
| ID3 | 474.0 | 346.0 | $\geq 0.2$ | 0.385962 |
| IDD | 596.5 | 223.5 | 0.0113049999999999 | 0.011669 |
| Khiops | 373.0 | 447.0 | $\geq 0.2$ | 1 |
| Modified Chi2 | 325.5 | 494.5 | $\geq 0.2$ | 1 |
| MODL | 347.0 | 473.0 | $\geq 0.2$ | 1 |
| MVD | 607.0 | 213.0 | 0.007264 | 0.007939 |
| PKID | 292.0 | 488.0 | $\geq 0.2$ | 1 |
| UCPD | 574.0 | 246.0 | 0.02686 | 0.027029 |
| USD | 483.0 | 337.0 | $\geq 0.2$ | 0.323184 |
| Zeta | 377.5 | 442.5 | $\geq 0.2$ | 1 |

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

## 23.2  Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.03195 , 0.1665] | 0.90276 |
| Ameva | [-0.01935 , 0.00575] | 0.90276 |
| Bayesian | [0.0275 , 0.0922] | 0.90276 |
| CACC | [-0.00045 , 0.01965] | 0.90276 |
| CADD | [0.27905 , 0.4448] | 0.90276 |
| CAIM | [-0.02215 , 0.0003] | 0.90276 |
| Chi2 | [-0.0139 , 0.0101] | 0.90276 |
| ChiMerge | [-0.02815 , 0.0013] | 0.90276 |
| ClusterAnalysis | [-0.0054 , 0.0371] | 0.90276 |
| DIBD | [0.0283 , 0.0874] | 0.90276 |
| Distance | [-0.0032 , 0.00845] | 0.90276 |
| EqualFrequency | [-0.01775 , 0.0076] | 0.90276 |
| EqualWidth | [-0.0156 , 0.01155] | 0.90276 |
| Extended Chi2 | [0.0014 , 0.05665] | 0.90276 |
| FFD | [-0.0285 , 0.00165] | 0.90276 |
| FUSINTER | [-0.0283 , -0.00235] | 0.90276 |
| HDD | [-0.01245 , 0.0304] | 0.90276 |
| HellingerBD | [-0.00515 , 0.03295] | 0.90276 |
| Heter-Disc | [0.19125 , 0.3436] | 0.90276 |
| ID3 | [-0.0067 , 0.0384] | 0.90276 |
| IDD | [0.0079 , 0.077] | 0.90276 |
| Khiops | [-0.0148 , 0.0078] | 0.90276 |
| Modified Chi2 | [-0.01555 , 0.0029] | 0.90276 |
| MODL | [-0.0234 , 0.00825] | 0.90276 |
| MVD | [0.027 , 0.19805] | 0.90276 |
| PKID | [-0.02715 , 0.0024] | 0.90276 |
| UCPD | [0.00855 , 0.0512] | 0.90276 |
| USD | [-0.0104 , 0.0307] | 0.90276 |
| Zeta | [-0.01875 , 0.0138] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.0246 , 0.17625] | 0.95024 |
| Ameva | [-0.02355 , 0.00725] | 0.95024 |
| Bayesian | [0.0223 , 0.09875] | 0.95024 |
| CACC | [-0.00165 , 0.0217] | 0.95024 |
| CADD | [0.26825 , 0.4631] | 0.95024 |
| CAIM | [-0.0253 , 0.0021] | 0.95024 |
| Chi2 | [-0.018 , 0.0142] | 0.95024 |
| ChiMerge | [-0.0316 , 0.00255] | 0.95024 |
| ClusterAnalysis | [-0.01045 , 0.04205] | 0.95024 |
| DIBD | [0.02285 , 0.0946] | 0.95024 |
| Distance | [-0.0047 , 0.00915] | 0.95024 |
| EqualFrequency | [-0.0225 , 0.0103] | 0.95024 |
| EqualWidth | [-0.01815 , 0.01355] | 0.95024 |
| Extended Chi2 | [-0.0017 , 0.07045] | 0.95024 |
| FFD | [-0.03505 , 0.0038] | 0.95024 |
| FUSINTER | [-0.0319 , 0.00055] | 0.95024 |
| HDD | [-0.0169 , 0.0349] | 0.95024 |
| HellingerBD | [-0.00815 , 0.03735] | 0.95024 |
| Heter-Disc | [0.1786 , 0.3558] | 0.95024 |
| ID3 | [-0.0103 , 0.0428] | 0.95024 |
| IDD | [0.00515 , 0.0959] | 0.95024 |
| Khiops | [-0.01785 , 0.0108] | 0.95024 |
| Modified Chi2 | [-0.0177 , 0.00505] | 0.95024 |
| MODL | [-0.027 , 0.01185] | 0.95024 |
| MVD | [0.0169 , 0.21025] | 0.95024 |
| PKID | [-0.0302 , 0.00425] | 0.95024 |
| UCPD | [0.0039 , 0.0566] | 0.95024 |
| USD | [-0.015 , 0.03555] | 0.95024 |
| Zeta | [-0.0236 , 0.01815] | 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 | 694.0 | 126.0 | 5.846E-5 | 0.000131 |
| Ameva | 402.0 | 378.0 | $\geq 0.2$ | 0.861522 |
| Bayesian | 741.5 | 78.5 | 1.2203E-6 | 0.000008 |
| CACC | 560.5 | 259.5 | 0.042910000000000004 | 0.042047 |
| CADD | 817.0 | 3.0 | 9.094E-12 | 0 |
| CAIM | 451.0 | 369.0 | $\geq 0.2$ | 0.576972 |
| Chi2 | 450.5 | 332.5 | $\geq 0.2$ | 0.767768 |
| ChiMerge | 458.5 | 361.5 | $\geq 0.2$ | 0.509426 |
| ClusterAnalysis | 629.0 | 191.0 | 0.002638 | 0.003174 |
| DIBD | 739.0 | 81.0 | 1.5436E-6 | 0.000009 |
| Distance | 471.0 | 349.0 | $\geq 0.2$ | 0.408441 |
| EqualFrequency | 428.0 | 352.0 | $\geq 0.2$ | 0.591083 |
| EqualWidth | 497.5 | 322.5 | $\geq 0.2$ | 0.236087 |
| Extended Chi2 | 688.0 | 132.0 | 8.832E-5 | 0.000182 |
| FFD | 395.0 | 385.0 | $\geq 0.2$ | 0.93882 |
| FUSINTER | 333.0 | 447.0 | $\geq 0.2$ | 1 |
| HDD | 512.5 | 267.5 | 0.08879999999999999 | 0.08553 |
| HellingerBD | 547.5 | 232.5 | 0.02731 | 0.027193 |
| Heter-Disc | 812.0 | 8.0 | 4.548E-11 | 0 |
| ID3 | 601.0 | 179.0 | 0.002616 | 0.003163 |
| IDD | 593.0 | 187.0 | 0.003894 | 0.004514 |
| Khiops | 430.0 | 350.0 | $\geq 0.2$ | 0.571953 |
| MDLP | 494.5 | 325.5 | $\geq 0.2$ | 0.252444 |
| MODL | 399.5 | 420.5 | $\geq 0.2$ | 1 |
| MVD | 712.0 | 108.0 | 1.5466E-5 | 0.000048 |
| PKID | 335.5 | 444.5 | $\geq 0.2$ | 1 |
| UCPD | 646.0 | 134.0 | 1.9234E-4 | 0.000344 |
| USD | 608.0 | 212.0 | 0.006956 | 0.007628 |
| Zeta | 553.0 | 267.0 | 0.05482 | 0.053752 |

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

## 24.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.04995 , 0.1828] | 0.90276 |
| Ameva | [-0.0093 , 0.01335] | 0.90276 |
| Bayesian | [0.04425 , 0.11985] | 0.90276 |
| CACC | [0.00325 , 0.03085] | 0.90276 |
| CADD | [0.31635 , 0.47565] | 0.90276 |
| CAIM | [-0.0061 , 0.0148] | 0.90276 |
| Chi2 | [-0.0047 , 0.0137] | 0.90276 |
| ChiMerge | [-0.00615 , 0.01715] | 0.90276 |
| ClusterAnalysis | [0.0082 , 0.0415] | 0.90276 |
| DIBD | [0.04795 , 0.1186] | 0.90276 |
| Distance | [-0.0056 , 0.01835] | 0.90276 |
| EqualFrequency | [-0.0071 , 0.02155] | 0.90276 |
| EqualWidth | [-0.0035 , 0.02505] | 0.90276 |
| Extended Chi2 | [0.01345 , 0.0842] | 0.90276 |
| FFD | [-0.0092 , 0.01] | 0.90276 |
| FUSINTER | [-0.01215 , 0.00745] | 0.90276 |
| HDD | [0.00005 , 0.0367] | 0.90276 |
| HellingerBD | [0.0052 , 0.0436] | 0.90276 |
| Heter-Disc | [0.22985 , 0.3779] | 0.90276 |
| ID3 | [0.00515 , 0.0331] | 0.90276 |
| IDD | [0.01565 , 0.0973] | 0.90276 |
| Khiops | [-0.00595 , 0.0145] | 0.90276 |
| MDLP | [-0.0029 , 0.01555] | 0.90276 |
| MODL | [-0.011 , 0.01775] | 0.90276 |
| MVD | [0.07735 , 0.2079] | 0.90276 |
| PKID | [-0.0105 , 0.0048] | 0.90276 |
| UCPD | [0.02405 , 0.0682] | 0.90276 |
| USD | [0.006 , 0.02785] | 0.90276 |
| Zeta | [0.00235 , 0.0389] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.04155 , 0.2074] | 0.95024 |
| Ameva | [-0.01125 , 0.01635] | 0.95024 |
| Bayesian | [0.0378 , 0.1293] | 0.95024 |
| CACC | [0.00055 , 0.0354] | 0.95024 |
| CADD | [0.2985 , 0.4928] | 0.95024 |
| CAIM | [-0.0077 , 0.01755] | 0.95024 |
| Chi2 | [-0.006 , 0.0158] | 0.95024 |
| ChiMerge | [-0.00795 , 0.02] | 0.95024 |
| ClusterAnalysis | [0.0068 , 0.0459] | 0.95024 |
| DIBD | [0.04435 , 0.1245] | 0.95024 |
| Distance | [-0.00665 , 0.0222] | 0.95024 |
| EqualFrequency | [-0.0088 , 0.0245] | 0.95024 |
| EqualWidth | [-0.00585 , 0.0293] | 0.95024 |
| Extended Chi2 | [0.011 , 0.09285] | 0.95024 |
| FFD | [-0.0108 , 0.01185] | 0.95024 |
| FUSINTER | [-0.0138 , 0.0108] | 0.95024 |
| HDD | [-0.0012 , 0.04045] | 0.95024 |
| HellingerBD | [0.0012 , 0.04925] | 0.95024 |
| Heter-Disc | [0.21375 , 0.3952] | 0.95024 |
| ID3 | [0.0039 , 0.0361] | 0.95024 |
| IDD | [0.0105 , 0.1234] | 0.95024 |
| Khiops | [-0.0074 , 0.0168] | 0.95024 |
| MDLP | [-0.00505 , 0.0177] | 0.95024 |
| MODL | [-0.0143 , 0.0226] | 0.95024 |
| MVD | [0.06675 , 0.22505] | 0.95024 |
| PKID | [-0.0121 , 0.00645] | 0.95024 |
| UCPD | [0.02 , 0.07255] | 0.95024 |
| USD | [0.00425 , 0.0309] | 0.95024 |
| Zeta | [-0.0003 , 0.04345] | 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 | 680.5 | 139.5 | 1.4509E-4 | 0.000264 |
| Ameva | 392.0 | 428.0 | $\geq 0.2$ | 1 |
| Bayesian | 728.0 | 92.0 | 4.154E-6 | 0.000018 |
| CACC | 540.5 | 279.5 | 0.08052000000000001 | 0.07777 |
| CADD | 818.0 | 2.0 | 5.456E-12 | 0 |
| CAIM | 468.0 | 352.0 | $\geq 0.2$ | 0.431682 |
| Chi2 | 370.0 | 410.0 | $\geq 0.2$ | 1 |
| ChiMerge | 455.5 | 364.5 | $\geq 0.2$ | 0.535692 |
| ClusterAnalysis | 504.5 | 315.5 | $\geq 0.2$ | 0.200872 |
| DIBD | 725.0 | 95.0 | 5.372E-6 | 0.000022 |
| Distance | 479.0 | 301.0 | $\geq 0.2$ | 0.210878 |
| EqualFrequency | 425.0 | 355.0 | $\geq 0.2$ | 0.620316 |
| EqualWidth | 477.0 | 343.0 | $\geq 0.2$ | 0.364255 |
| Extended Chi2 | 629.0 | 191.0 | 0.002638 | 0.003174 |
| FFD | 357.0 | 423.0 | $\geq 0.2$ | 1 |
| FUSINTER | 305.0 | 475.0 | $\geq 0.2$ | 1 |
| HDD | 532.0 | 248.0 | 0.0475 | 0.046747 |
| HellingerBD | 517.0 | 263.0 | 0.07738 | 0.075197 |
| Heter-Disc | 802.0 | 18.0 | 4.602E-10 | 0 |
| ID3 | 563.0 | 217.0 | 0.014884 | 0.01547 |
| IDD | 613.0 | 207.0 | 0.005576 | 0.006146 |
| Khiops | 397.0 | 383.0 | $\geq 0.2$ | 0.916644 |
| MDLP | 473.0 | 347.0 | $\geq 0.2$ | 0.39337 |
| Modified Chi2 | 420.5 | 399.5 | $\geq 0.2$ | 1 |
| MVD | 669.0 | 151.0 | 2.982E-4 | 0.000487 |
| PKID | 341.0 | 439.0 | $\geq 0.2$ | 1 |
| UCPD | 607.0 | 213.0 | 0.007264 | 0.007939 |
| USD | 572.0 | 248.0 | 0.02884 | 0.028947 |
| Zeta | 535.0 | 285.0 | 0.0945 | 0.091626 |

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

## 25.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.04815 , 0.1777] | 0.90276 |
| Ameva | [-0.0206 , 0.01385] | 0.90276 |
| Bayesian | [0.0315 , 0.1048] | 0.90276 |
| CACC | [0.00045 , 0.0235] | 0.90276 |
| CADD | [0.29425 , 0.4548] | 0.90276 |
| CAIM | [-0.00825 , 0.0177] | 0.90276 |
| Chi2 | [-0.02175 , 0.0143] | 0.90276 |
| ChiMerge | [-0.00825 , 0.01625] | 0.90276 |
| ClusterAnalysis | [-0.00555 , 0.04435] | 0.90276 |
| DIBD | [0.04645 , 0.10525] | 0.90276 |
| Distance | [-0.00385 , 0.0297] | 0.90276 |
| EqualFrequency | [-0.01555 , 0.02275] | 0.90276 |
| EqualWidth | [-0.01285 , 0.02985] | 0.90276 |
| Extended Chi2 | [0.00995 , 0.06075] | 0.90276 |
| FFD | [-0.02335 , 0.0089] | 0.90276 |
| FUSINTER | [-0.02005 , 0.00235] | 0.90276 |
| HDD | [0.0023 , 0.0336] | 0.90276 |
| HellingerBD | [0.00085 , 0.03845] | 0.90276 |
| Heter-Disc | [0.2066 , 0.36165] | 0.90276 |
| ID3 | [0.0069 , 0.0353] | 0.90276 |
| IDD | [0.01545 , 0.09825] | 0.90276 |
| Khiops | [-0.01425 , 0.01455] | 0.90276 |
| MDLP | [-0.00825 , 0.0234] | 0.90276 |
| Modified Chi2 | [-0.01775 , 0.011] | 0.90276 |
| MVD | [0.0515 , 0.1968] | 0.90276 |
| PKID | [-0.0202 , 0.0056] | 0.90276 |
| UCPD | [0.01195 , 0.05765] | 0.90276 |
| USD | [0.0037 , 0.0267] | 0.90276 |
| Zeta | [0.00015 , 0.03635] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.03855 , 0.1899] | 0.95024 |
| Ameva | [-0.02435 , 0.0166] | 0.95024 |
| Bayesian | [0.02815 , 0.1104] | 0.95024 |
| CACC | [-0.0017 , 0.02725] | 0.95024 |
| CADD | [0.27915 , 0.47315] | 0.95024 |
| CAIM | [-0.0124 , 0.02055] | 0.95024 |
| Chi2 | [-0.02605 , 0.0183] | 0.95024 |
| ChiMerge | [-0.01195 , 0.01785] | 0.95024 |
| ClusterAnalysis | [-0.0089 , 0.04835] | 0.95024 |
| DIBD | [0.0417 , 0.11115] | 0.95024 |
| Distance | [-0.00885 , 0.03285] | 0.95024 |
| EqualFrequency | [-0.0202 , 0.02675] | 0.95024 |
| EqualWidth | [-0.0165 , 0.0342] | 0.95024 |
| Extended Chi2 | [0.0082 , 0.07635] | 0.95024 |
| FFD | [-0.02835 , 0.0113] | 0.95024 |
| FUSINTER | [-0.02305 , 0.00335] | 0.95024 |
| HDD | [0.0001 , 0.0369] | 0.95024 |
| HellingerBD | [-0.0014 , 0.04375] | 0.95024 |
| Heter-Disc | [0.19295 , 0.3751] | 0.95024 |
| ID3 | [0.0047 , 0.03875] | 0.95024 |
| IDD | [0.0114 , 0.1122] | 0.95024 |
| Khiops | [-0.0171 , 0.019] | 0.95024 |
| MDLP | [-0.01185 , 0.027] | 0.95024 |
| Modified Chi2 | [-0.0226 , 0.0143] | 0.95024 |
| MVD | [0.04405 , 0.2131] | 0.95024 |
| PKID | [-0.02375 , 0.0071] | 0.95024 |
| UCPD | [0.0081 , 0.06195] | 0.95024 |
| USD | [0.0015 , 0.0292] | 0.95024 |
| Zeta | [-0.0029 , 0.04055] | 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 | 385.5 | 434.5 | $\geq 0.2$ | 1 |
| Ameva | 121.0 | 699.0 | $\geq 0.2$ | 1 |
| Bayesian | 299.5 | 520.5 | $\geq 0.2$ | 1 |
| CACC | 174.0 | 609.0 | $\geq 0.2$ | 1 |
| CADD | 709.0 | 111.0 | 2.694E-4 | 0.000473 |
| CAIM | 107.5 | 712.5 | $\geq 0.2$ | 1 |
| Chi2 | 112.0 | 708.0 | $\geq 0.2$ | 1 |
| ChiMerge | 91.0 | 689.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 174.0 | 606.0 | $\geq 0.2$ | 1 |
| DIBD | 306.0 | 514.0 | $\geq 0.2$ | 1 |
| Distance | 217.0 | 603.0 | $\geq 0.2$ | 1 |
| EqualFrequency | 149.0 | 631.0 | $\geq 0.2$ | 1 |
| EqualWidth | 141.0 | 679.0 | $\geq 0.2$ | 1 |
| Extended Chi2 | 223.0 | 557.0 | $\geq 0.2$ | 1 |
| FFD | 109.0 | 711.0 | $\geq 0.2$ | 1 |
| FUSINTER | 94.0 | 726.0 | $\geq 0.2$ | 1 |
| HDD | 138.0 | 642.0 | $\geq 0.2$ | 1 |
| HellingerBD | 191.0 | 629.0 | $\geq 0.2$ | 1 |
| Heter-Disc | 601.0 | 186.0 | 0.09332 | 0.089613 |
| ID3 | 143.0 | 637.0 | $\geq 0.2$ | 1 |
| IDD | 237.0 | 546.0 | $\geq 0.2$ | 1 |
| Khiops | 134.0 | 686.0 | $\geq 0.2$ | 1 |
| MDLP | 213.0 | 607.0 | $\geq 0.2$ | 1 |
| Modified Chi2 | 108.0 | 712.0 | $\geq 0.2$ | 1 |
| MODL | 151.0 | 669.0 | $\geq 0.2$ | 1 |
| PKID | 78.0 | 742.0 | $\geq 0.2$ | 1 |
| UCPD | 248.0 | 572.0 | $\geq 0.2$ | 1 |
| USD | 135.0 | 645.0 | $\geq 0.2$ | 1 |
| Zeta | 156.0 | 664.0 | $\geq 0.2$ | 1 |

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

## 26.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [-0.05355 , 0.04515] | 0.90276 |
| Ameva | [-0.17985 , -0.0566] | 0.90276 |
| Bayesian | [-0.0949 , 0.0039] | 0.90276 |
| CACC | [-0.16475 , -0.02795] | 0.90276 |
| CADD | [0.13005 , 0.29365] | 0.90276 |
| CAIM | [-0.20035 , -0.0534] | 0.90276 |
| Chi2 | [-0.2042 , -0.07345] | 0.90276 |
| ChiMerge | [-0.2007 , -0.05825] | 0.90276 |
| ClusterAnalysis | [-0.1472 , -0.0422] | 0.90276 |
| DIBD | [-0.0936 , 0.00685] | 0.90276 |
| Distance | [-0.19625 , -0.0246] | 0.90276 |
| EqualFrequency | [-0.205 , -0.03665] | 0.90276 |
| EqualWidth | [-0.2051 , -0.0492] | 0.90276 |
| Extended Chi2 | [-0.1541 , -0.01775] | 0.90276 |
| FFD | [-0.21295 , -0.0522] | 0.90276 |
| FUSINTER | [-0.2158 , -0.0623] | 0.90276 |
| HDD | [-0.17425 , -0.05985] | 0.90276 |
| HellingerBD | [-0.1925 , -0.0375] | 0.90276 |
| Heter-Disc | [0.0447 , 0.225] | 0.90276 |
| ID3 | [-0.18135 , -0.0619] | 0.90276 |
| IDD | [-0.105 , -0.01165] | 0.90276 |
| Khiops | [-0.19955 , -0.05535] | 0.90276 |
| MDLP | [-0.19805 , -0.027] | 0.90276 |
| Modified Chi2 | [-0.2079 , -0.07735] | 0.90276 |
| MODL | [-0.1968 , -0.0515] | 0.90276 |
| PKID | [-0.2174 , -0.0716] | 0.90276 |
| UCPD | [-0.1724 , -0.01555] | 0.90276 |
| USD | [-0.18275 , -0.0655] | 0.90276 |
| Zeta | [-0.1868 , -0.0427] | 0.90276 |

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

| α=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [-0.06865 , 0.05925] | 0.95024 |
| Ameva | [-0.1957 , -0.0473] | 0.95024 |
| Bayesian | [-0.1078 , 0.00865] | 0.95024 |
| CACC | [-0.1757 , -0.02365] | 0.95024 |
| CADD | [0.10395 , 0.305] | 0.95024 |
| CAIM | [-0.21435 , -0.0453] | 0.95024 |
| Chi2 | [-0.2203 , -0.063] | 0.95024 |
| ChiMerge | [-0.2182 , -0.04925] | 0.95024 |
| ClusterAnalysis | [-0.15895 , -0.03395] | 0.95024 |
| DIBD | [-0.1081 , 0.0137] | 0.95024 |
| Distance | [-0.21155 , -0.0163] | 0.95024 |
| EqualFrequency | [-0.21675 , -0.02705] | 0.95024 |
| EqualWidth | [-0.2258 , -0.0364] | 0.95024 |
| Extended Chi2 | [-0.16375 , -0.0091] | 0.95024 |
| FFD | [-0.22485 , -0.0415] | 0.95024 |
| FUSINTER | [-0.2323 , -0.05095] | 0.95024 |
| HDD | [-0.18545 , -0.04825] | 0.95024 |
| HellingerBD | [-0.20505 , -0.02965] | 0.95024 |
| Heter-Disc | [0.0334 , 0.24015] | 0.95024 |
| ID3 | [-0.19305 , -0.05495] | 0.95024 |
| IDD | [-0.11865 , -0.00555] | 0.95024 |
| Khiops | [-0.2195 , -0.04765] | 0.95024 |
| MDLP | [-0.21025 , -0.0169] | 0.95024 |
| Modified Chi2 | [-0.22505 , -0.06675] | 0.95024 |
| MODL | [-0.2131 , -0.04405] | 0.95024 |
| PKID | [-0.23305 , -0.06395] | 0.95024 |
| UCPD | [-0.182 , -0.00735] | 0.95024 |
| USD | [-0.19645 , -0.0533] | 0.95024 |
| Zeta | [-0.2025 , -0.0351] | 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 | 734.0 | 86.0 | 2.444E-6 | 0.000013 |
| Ameva | 431.0 | 389.0 | $\geq 0.2$ | 0.772591 |
| Bayesian | 730.0 | 90.0 | 3.488E-6 | 0.000016 |
| CACC | 560.0 | 260.0 | 0.04362 | 0.043082 |
| CADD | 819.0 | 1.0 | 3.638E-12 | 0 |
| CAIM | 477.5 | 342.5 | $\geq 0.2$ | 0.359096 |
| Chi2 | 425.0 | 355.0 | $\geq 0.2$ | 0.620316 |
| ChiMerge | 478.0 | 342.0 | $\geq 0.2$ | 0.357192 |
| ClusterAnalysis | 606.0 | 174.0 | 0.00202 | 0.002517 |
| DIBD | 727.0 | 53.0 | 1.6374E-7 | 0.000002 |
| Distance | 492.0 | 328.0 | $\geq 0.2$ | 0.26747 |
| EqualFrequency | 451.5 | 368.5 | $\geq 0.2$ | 0.971078 |
| EqualWidth | 507.5 | 312.5 | $\geq 0.2$ | 0.395367 |
| Extended Chi2 | 677.0 | 143.0 | 1.8148E-4 | 0.000324 |
| FFD | 513.5 | 306.5 | $\geq 0.2$ | 1 |
| FUSINTER | 390.0 | 430.0 | $\geq 0.2$ | 1 |
| HDD | 541.0 | 239.0 | 0.03466 | 0.0345 |
| HellingerBD | 586.0 | 197.0 | 0.018894 | 0.019368 |
| Heter-Disc | 808.0 | 12.0 | 1.2732E-10 | 0 |
| ID3 | 601.0 | 219.0 | 0.07434 | 0.072041 |
| IDD | 693.0 | 127.0 | 6.268E-5 | 0.000139 |
| Khiops | 416.0 | 367.0 | $\geq 0.2$ | 1 |
| MDLP | 488.0 | 292.0 | 0.17558 | 0.169266 |
| Modified Chi2 | 444.5 | 335.5 | $\geq 0.2$ | 0.441174 |
| MODL | 439.0 | 341.0 | $\geq 0.2$ | 0.48895 |
| MVD | 742.0 | 78.0 | 1.1622E-6 | 0.000008 |
| UCPD | 674.0 | 146.0 | 2.192E-4 | 0.000378 |
| USD | 596.0 | 224.0 | 0.011536 | 0.012183 |
| Zeta | 527.0 | 253.0 | 0.05618 | 0.055008 |

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

## 27.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.0512 , 0.19175] | 0.90276 |
| Ameva | [-0.0097 , 0.0142] | 0.90276 |
| Bayesian | [0.0507 , 0.1259] | 0.90276 |
| CACC | [0.0021 , 0.02775] | 0.90276 |
| CADD | [0.314 , 0.47715] | 0.90276 |
| CAIM | [-0.0044 , 0.01345] | 0.90276 |
| Chi2 | [-0.00785 , 0.01535] | 0.90276 |
| ChiMerge | [-0.00715 , 0.0197] | 0.90276 |
| ClusterAnalysis | [0.0124 , 0.05] | 0.90276 |
| DIBD | [0.057 , 0.1166] | 0.90276 |
| Distance | [-0.00355 , 0.0254] | 0.90276 |
| EqualFrequency | [-0.00245 , 0.0273] | 0.90276 |
| EqualWidth | [-0.00195 , 0.03285] | 0.90276 |
| Extended Chi2 | [0.01955 , 0.08705] | 0.90276 |
| FFD | [-0.00015 , 0.00805] | 0.90276 |
| FUSINTER | [-0.0066 , 0.00635] | 0.90276 |
| HDD | [0.00425 , 0.04485] | 0.90276 |
| HellingerBD | [0.0062 , 0.0507] | 0.90276 |
| Heter-Disc | [0.2328 , 0.3768] | 0.90276 |
| ID3 | [0.00585 , 0.04355] | 0.90276 |
| IDD | [0.0222 , 0.09275] | 0.90276 |
| Khiops | [-0.00455 , 0.0081] | 0.90276 |
| MDLP | [-0.0024 , 0.02715] | 0.90276 |
| Modified Chi2 | [-0.0048 , 0.0105] | 0.90276 |
| MODL | [-0.0056 , 0.0202] | 0.90276 |
| MVD | [0.0716 , 0.2174] | 0.90276 |
| UCPD | [0.03015 , 0.0717] | 0.90276 |
| USD | [0.00655 , 0.03775] | 0.90276 |
| Zeta | [0.00245 , 0.03815] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.04135 , 0.2056] | 0.95024 |
| Ameva | [-0.012 , 0.017] | 0.95024 |
| Bayesian | [0.0425 , 0.138] | 0.95024 |
| CACC | [0.0004 , 0.03055] | 0.95024 |
| CADD | [0.30215 , 0.48735] | 0.95024 |
| CAIM | [-0.00655 , 0.01695] | 0.95024 |
| Chi2 | [-0.01035 , 0.0175] | 0.95024 |
| ChiMerge | [-0.00905 , 0.0218] | 0.95024 |
| ClusterAnalysis | [0.01055 , 0.05395] | 0.95024 |
| DIBD | [0.05205 , 0.12285] | 0.95024 |
| Distance | [-0.0053 , 0.03155] | 0.95024 |
| EqualFrequency | [-0.00335 , 0.0296] | 0.95024 |
| EqualWidth | [-0.00365 , 0.03555] | 0.95024 |
| Extended Chi2 | [0.0163 , 0.09355] | 0.95024 |
| FFD | [-0.0016 , 0.0107] | 0.95024 |
| FUSINTER | [-0.0075 , 0.00815] | 0.95024 |
| HDD | [0.00225 , 0.04965] | 0.95024 |
| HellingerBD | [0.00395 , 0.05345] | 0.95024 |
| Heter-Disc | [0.2188 , 0.39455] | 0.95024 |
| ID3 | [0.004 , 0.049] | 0.95024 |
| IDD | [0.0193 , 0.11985] | 0.95024 |
| Khiops | [-0.00555 , 0.0104] | 0.95024 |
| MDLP | [-0.00425 , 0.0302] | 0.95024 |
| Modified Chi2 | [-0.00645 , 0.0121] | 0.95024 |
| MODL | [-0.0071 , 0.02375] | 0.95024 |
| MVD | [0.06395 , 0.23305] | 0.95024 |
| UCPD | [0.02795 , 0.07575] | 0.95024 |
| USD | [0.0045 , 0.0414] | 0.95024 |
| Zeta | [-0.0002 , 0.0434] | 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 | 536.0 | 284.0 | 0.09182 | 0.08907 |
| Ameva | 228.5 | 591.5 | $\geq 0.2$ | 1 |
| Bayesian | 543.0 | 277.0 | 0.07472 | 0.072747 |
| CACC | 332.0 | 488.0 | $\geq 0.2$ | 1 |
| CADD | 793.0 | 27.0 | 2.294E-9 | 0 |
| CAIM | 188.5 | 631.5 | $\geq 0.2$ | 1 |
| Chi2 | 183.0 | 637.0 | $\geq 0.2$ | 1 |
| ChiMerge | 187.0 | 633.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 340.0 | 480.0 | $\geq 0.2$ | 1 |
| DIBD | 570.0 | 250.0 | 0.03098 | 0.03098 |
| Distance | 278.0 | 542.0 | $\geq 0.2$ | 1 |
| EqualFrequency | 175.0 | 645.0 | $\geq 0.2$ | 1 |
| EqualWidth | 228.0 | 592.0 | $\geq 0.2$ | 1 |
| Extended Chi2 | 403.5 | 416.5 | $\geq 0.2$ | 1 |
| FFD | 149.0 | 671.0 | $\geq 0.2$ | 1 |
| FUSINTER | 144.0 | 676.0 | $\geq 0.2$ | 1 |
| HDD | 328.0 | 492.0 | $\geq 0.2$ | 1 |
| HellingerBD | 334.0 | 486.0 | $\geq 0.2$ | 1 |
| Heter-Disc | 800.0 | 20.0 | 6.748E-10 | 0 |
| ID3 | 364.0 | 456.0 | $\geq 0.2$ | 1 |
| IDD | 440.5 | 379.5 | $\geq 0.2$ | 0.676399 |
| Khiops | 168.0 | 652.0 | $\geq 0.2$ | 1 |
| MDLP | 246.0 | 574.0 | $\geq 0.2$ | 1 |
| Modified Chi2 | 134.0 | 646.0 | $\geq 0.2$ | 1 |
| MODL | 213.0 | 607.0 | $\geq 0.2$ | 1 |
| MVD | 572.0 | 248.0 | 0.02884 | 0.028947 |
| PKID | 146.0 | 674.0 | $\geq 0.2$ | 1 |
| USD | 330.5 | 489.5 | $\geq 0.2$ | 1 |
| Zeta | 282.0 | 538.0 | $\geq 0.2$ | 1 |

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

## 28.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.0018 , 0.1444] | 0.90276 |
| Ameva | [-0.06525 , -0.0123] | 0.90276 |
| Bayesian | [0.0036 , 0.0766] | 0.90276 |
| CACC | [-0.04405 , 0.00885] | 0.90276 |
| CADD | [0.26015 , 0.4216] | 0.90276 |
| CAIM | [-0.05685 , -0.0178] | 0.90276 |
| Chi2 | [-0.06215 , -0.01745] | 0.90276 |
| ChiMerge | [-0.0601 , -0.01925] | 0.90276 |
| ClusterAnalysis | [-0.03515 , 0.01015] | 0.90276 |
| DIBD | [0.0075 , 0.0598] | 0.90276 |
| Distance | [-0.05325 , -0.0011] | 0.90276 |
| EqualFrequency | [-0.0612 , -0.01955] | 0.90276 |
| EqualWidth | [-0.0555 , -0.00995] | 0.90276 |
| Extended Chi2 | [-0.02695 , 0.02755] | 0.90276 |
| FFD | [-0.07375 , -0.0308] | 0.90276 |
| FUSINTER | [-0.0749 , -0.03075] | 0.90276 |
| HDD | [-0.04435 , 0.009] | 0.90276 |
| HellingerBD | [-0.0374 , 0.0067] | 0.90276 |
| Heter-Disc | [0.1822 , 0.31855] | 0.90276 |
| ID3 | [-0.04205 , 0.01205] | 0.90276 |
| IDD | [-0.0299 , 0.07555] | 0.90276 |
| Khiops | [-0.05405 , -0.02015] | 0.90276 |
| MDLP | [-0.0512 , -0.00855] | 0.90276 |
| Modified Chi2 | [-0.0682 , -0.02405] | 0.90276 |
| MODL | [-0.05765 , -0.01195] | 0.90276 |
| MVD | [0.01555 , 0.1724] | 0.90276 |
| PKID | [-0.0717 , -0.03015] | 0.90276 |
| USD | [-0.0478 , 0.00695] | 0.90276 |
| Zeta | [-0.05005 , -0.00125] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [-0.0056 , 0.16085] | 0.95024 |
| Ameva | [-0.0693 , -0.00785] | 0.95024 |
| Bayesian | [-0.00215 , 0.0858] | 0.95024 |
| CACC | [-0.04765 , 0.0128] | 0.95024 |
| CADD | [0.24195 , 0.43875] | 0.95024 |
| CAIM | [-0.0601 , -0.0096] | 0.95024 |
| Chi2 | [-0.066 , -0.0129] | 0.95024 |
| ChiMerge | [-0.06655 , -0.0159] | 0.95024 |
| ClusterAnalysis | [-0.0405 , 0.01255] | 0.95024 |
| DIBD | [0.00345 , 0.067] | 0.95024 |
| Distance | [-0.0567 , 0.00285] | 0.95024 |
| EqualFrequency | [-0.06475 , -0.0164] | 0.95024 |
| EqualWidth | [-0.0607 , -0.007] | 0.95024 |
| Extended Chi2 | [-0.03005 , 0.03215] | 0.95024 |
| FFD | [-0.07755 , -0.02595] | 0.95024 |
| FUSINTER | [-0.0788 , -0.0274] | 0.95024 |
| HDD | [-0.0506 , 0.01365] | 0.95024 |
| HellingerBD | [-0.03915 , 0.0095] | 0.95024 |
| Heter-Disc | [0.17135 , 0.32865] | 0.95024 |
| ID3 | [-0.05075 , 0.0157] | 0.95024 |
| IDD | [-0.03355 , 0.09645] | 0.95024 |
| Khiops | [-0.05745 , -0.01715] | 0.95024 |
| MDLP | [-0.0566 , -0.0039] | 0.95024 |
| Modified Chi2 | [-0.07255 , -0.02] | 0.95024 |
| MODL | [-0.06195 , -0.0081] | 0.95024 |
| MVD | [0.00735 , 0.182] | 0.95024 |
| PKID | [-0.07575 , -0.02795] | 0.95024 |
| USD | [-0.0534 , 0.0106] | 0.95024 |
| Zeta | [-0.0541 , 0.00335] | 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 | 563.0 | 217.0 | 0.014884 | 0.015291 |
| Ameva | 311.0 | 509.0 | $\geq 0.2$ | 1 |
| Bayesian | 688.0 | 92.0 | 8.162E-6 | 0.000031 |
| CACC | 349.0 | 431.0 | $\geq 0.2$ | 1 |
| CADD | 817.0 | 3.0 | 9.094E-12 | 0 |
| CAIM | 318.0 | 502.0 | $\geq 0.2$ | 1 |
| Chi2 | 293.5 | 526.5 | $\geq 0.2$ | 1 |
| ChiMerge | 296.0 | 487.0 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 420.0 | 360.0 | $\geq 0.2$ | 0.670379 |
| DIBD | 595.5 | 224.5 | 0.011776 | 0.01227 |
| Distance | 347.0 | 433.0 | $\geq 0.2$ | 1 |
| EqualFrequency | 334.0 | 446.0 | $\geq 0.2$ | 1 |
| EqualWidth | 330.0 | 450.0 | $\geq 0.2$ | 1 |
| Extended Chi2 | 504.0 | 276.0 | 0.11392 | 0.109457 |
| FFD | 265.0 | 555.0 | $\geq 0.2$ | 1 |
| FUSINTER | 229.0 | 591.0 | $\geq 0.2$ | 1 |
| HDD | 443.0 | 337.0 | $\geq 0.2$ | 0.454522 |
| HellingerBD | 396.0 | 424.0 | $\geq 0.2$ | 1 |
| Heter-Disc | 784.0 | 36.0 | 9.054E-9 | 0 |
| ID3 | 507.5 | 312.5 | $\geq 0.2$ | 0.396225 |
| IDD | 504.0 | 316.0 | $\geq 0.2$ | 0.204012 |
| Khiops | 299.0 | 521.0 | $\geq 0.2$ | 1 |
| MDLP | 337.0 | 483.0 | $\geq 0.2$ | 1 |
| Modified Chi2 | 212.0 | 608.0 | $\geq 0.2$ | 1 |
| MODL | 248.0 | 572.0 | $\geq 0.2$ | 1 |
| MVD | 645.0 | 135.0 | 2.054E-4 | 0.000363 |
| PKID | 224.0 | 596.0 | $\geq 0.2$ | 1 |
| UCPD | 489.5 | 330.5 | $\geq 0.2$ | 0.28143 |
| Zeta | 408.5 | 371.5 | $\geq 0.2$ | 0.790541 |

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

## 29.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.02575 , 0.1682] | 0.90276 |
| Ameva | [-0.0347 , 0.0042] | 0.90276 |
| Bayesian | [0.01745 , 0.0812] | 0.90276 |
| CACC | [-0.02135 , 0.0116] | 0.90276 |
| CADD | [0.27545 , 0.4451] | 0.90276 |
| CAIM | [-0.02765 , 0.0024] | 0.90276 |
| Chi2 | [-0.03185 , 0.0013] | 0.90276 |
| ChiMerge | [-0.0275 , 0.0028] | 0.90276 |
| ClusterAnalysis | [-0.01 , 0.0208] | 0.90276 |
| DIBD | [0.01905 , 0.1041] | 0.90276 |
| Distance | [-0.0292 , 0.01195] | 0.90276 |
| EqualFrequency | [-0.0342 , 0.01185] | 0.90276 |
| EqualWidth | [-0.02765 , 0.01095] | 0.90276 |
| Extended Chi2 | [-0.00035 , 0.0583] | 0.90276 |
| FFD | [-0.03705 , -0.00235] | 0.90276 |
| FUSINTER | [-0.03925 , -0.00535] | 0.90276 |
| HDD | [-0.00605 , 0.01705] | 0.90276 |
| HellingerBD | [-0.0229 , 0.01715] | 0.90276 |
| Heter-Disc | [0.1997 , 0.3538] | 0.90276 |
| ID3 | [-0.00135 , 0.0105] | 0.90276 |
| IDD | [-0.0065 , 0.0796] | 0.90276 |
| Khiops | [-0.02885 , 0.00195] | 0.90276 |
| MDLP | [-0.0307 , 0.0104] | 0.90276 |
| Modified Chi2 | [-0.02785 , -0.006] | 0.90276 |
| MODL | [-0.0267 , -0.0037] | 0.90276 |
| MVD | [0.0655 , 0.18275] | 0.90276 |
| PKID | [-0.03775 , -0.00655] | 0.90276 |
| UCPD | [-0.00695 , 0.0478] | 0.90276 |
| Zeta | [-0.01755 , 0.0202] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.015 , 0.19035] | 0.95024 |
| Ameva | [-0.03985 , 0.0077] | 0.95024 |
| Bayesian | [0.0141 , 0.08535] | 0.95024 |
| CACC | [-0.0242 , 0.01625] | 0.95024 |
| CADD | [0.2629 , 0.4589] | 0.95024 |
| CAIM | [-0.032 , 0.0061] | 0.95024 |
| Chi2 | [-0.0354 , 0.0048] | 0.95024 |
| ChiMerge | [-0.0298 , 0.00515] | 0.95024 |
| ClusterAnalysis | [-0.0121 , 0.0244] | 0.95024 |
| DIBD | [0.01065 , 0.1093] | 0.95024 |
| Distance | [-0.0341 , 0.0166] | 0.95024 |
| EqualFrequency | [-0.0394 , 0.0182] | 0.95024 |
| EqualWidth | [-0.0305 , 0.0147] | 0.95024 |
| Extended Chi2 | [-0.003 , 0.07715] | 0.95024 |
| FFD | [-0.04085 , 0.0003] | 0.95024 |
| FUSINTER | [-0.0423 , -0.0036] | 0.95024 |
| HDD | [-0.00875 , 0.01945] | 0.95024 |
| HellingerBD | [-0.0252 , 0.0234] | 0.95024 |
| Heter-Disc | [0.1879 , 0.3688] | 0.95024 |
| ID3 | [-0.00275 , 0.0117] | 0.95024 |
| IDD | [-0.0121 , 0.09915] | 0.95024 |
| Khiops | [-0.03345 , 0.00445] | 0.95024 |
| MDLP | [-0.03555 , 0.015] | 0.95024 |
| Modified Chi2 | [-0.0309 , -0.00425] | 0.95024 |
| MODL | [-0.0292 , -0.0015] | 0.95024 |
| MVD | [0.0533 , 0.19645] | 0.95024 |
| PKID | [-0.0414 , -0.0045] | 0.95024 |
| UCPD | [-0.0106 , 0.0534] | 0.95024 |
| Zeta | [-0.02025 , 0.025] | 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 | 635.0 | 185.0 | 0.0019596 | 0.002437 |
| Ameva | 349.0 | 471.0 | $\geq 0.2$ | 1 |
| Bayesian | 585.0 | 235.0 | 0.017832 | 0.018327 |
| CACC | 463.0 | 357.0 | $\geq 0.2$ | 0.472074 |
| CADD | 819.0 | 1.0 | 3.638E-12 | 0 |
| CAIM | 306.5 | 513.5 | $\geq 0.2$ | 1 |
| Chi2 | 340.0 | 480.0 | $\geq 0.2$ | 1 |
| ChiMerge | 216.5 | 603.5 | $\geq 0.2$ | 1 |
| ClusterAnalysis | 493.0 | 327.0 | $\geq 0.2$ | 0.261714 |
| DIBD | 633.0 | 187.0 | 0.002166 | 0.002663 |
| Distance | 432.0 | 348.0 | $\geq 0.2$ | 0.553123 |
| EqualFrequency | 332.0 | 448.0 | $\geq 0.2$ | 1 |
| EqualWidth | 338.0 | 442.0 | $\geq 0.2$ | 1 |
| Extended Chi2 | 492.5 | 327.5 | $\geq 0.2$ | 0.263778 |
| FFD | 292.0 | 488.0 | $\geq 0.2$ | 1 |
| FUSINTER | 238.0 | 582.0 | $\geq 0.2$ | 1 |
| HDD | 414.0 | 406.0 | $\geq 0.2$ | 0.951769 |
| HellingerBD | 420.0 | 400.0 | $\geq 0.2$ | 0.887764 |
| Heter-Disc | 809.0 | 11.0 | 1.0004E-10 | 0 |
| ID3 | 410.5 | 409.5 | $\geq 0.2$ | 0.989258 |
| IDD | 529.0 | 291.0 | 0.11186 | 0.108222 |
| Khiops | 317.0 | 503.0 | $\geq 0.2$ | 1 |
| MDLP | 442.5 | 377.5 | $\geq 0.2$ | 1 |
| Modified Chi2 | 267.0 | 553.0 | $\geq 0.2$ | 1 |
| MODL | 285.0 | 535.0 | $\geq 0.2$ | 1 |
| MVD | 664.0 | 156.0 | 4.022E-4 | 0.000624 |
| PKID | 253.0 | 527.0 | $\geq 0.2$ | 1 |
| UCPD | 538.0 | 282.0 | 0.08666 | 0.08361 |
| USD | 371.5 | 408.5 | $\geq 0.2$ | 1 |

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

## 30.2 Confidence intervals for Median of diferences

| $\alpha$=0.90 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.02975 , 0.1743] | 0.90276 |
| Ameva | [-0.0238 , 0.0068] | 0.90276 |
| Bayesian | [0.01535 , 0.1032] | 0.90276 |
| CACC | [-0.01295 , 0.02945] | 0.90276 |
| CADD | [0.29105 , 0.442] | 0.90276 |
| CAIM | [-0.01825 , 0.0012] | 0.90276 |
| Chi2 | [-0.0349 , 0.00825] | 0.90276 |
| ChiMerge | [-0.0267 , -0.00565] | 0.90276 |
| ClusterAnalysis | [-0.0108 , 0.04125] | 0.90276 |
| DIBD | [0.0255 , 0.0956] | 0.90276 |
| Distance | [-0.0113 , 0.0189] | 0.90276 |
| EqualFrequency | [-0.0267 , 0.00845] | 0.90276 |
| EqualWidth | [-0.0222 , 0.0054] | 0.90276 |
| Extended Chi2 | [-0.0048 , 0.05005] | 0.90276 |
| FFD | [-0.03225 , 0.0022] | 0.90276 |
| FUSINTER | [-0.03375 , -0.00525] | 0.90276 |
| HDD | [-0.0182 , 0.01765] | 0.90276 |
| HellingerBD | [-0.01495 , 0.01935] | 0.90276 |
| Heter-Disc | [0.199 , 0.34125] | 0.90276 |
| ID3 | [-0.02175 , 0.02085] | 0.90276 |
| IDD | [-0.00035 , 0.09155] | 0.90276 |
| Khiops | [-0.0278 , 0.0032] | 0.90276 |
| MDLP | [-0.0138 , 0.01875] | 0.90276 |
| Modified Chi2 | [-0.0389 , -0.00235] | 0.90276 |
| MODL | [-0.03635 , -0.00015] | 0.90276 |
| MVD | [0.0427 , 0.1868] | 0.90276 |
| PKID | [-0.03815 , -0.00245] | 0.90276 |
| UCPD | [0.00125 , 0.05005] | 0.90276 |
| USD | [-0.0202 , 0.01755] | 0.90276 |

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

| $\alpha$=0.95 | Confidence interval | Exact confidence |
|---|---|---|
| 1R | [0.0213 , 0.19] | 0.95024 |
| Ameva | [-0.0271 , 0.0087] | 0.95024 |
| Bayesian | [0.0087 , 0.1129] | 0.95024 |
| CACC | [-0.01605 , 0.03595] | 0.95024 |
| CADD | [0.27455 , 0.4572] | 0.95024 |
| CAIM | [-0.0212 , 0.00235] | 0.95024 |
| Chi2 | [-0.04015 , 0.01205] | 0.95024 |
| ChiMerge | [-0.02905 , -0.00385] | 0.95024 |
| ClusterAnalysis | [-0.0153 , 0.0456] | 0.95024 |
| DIBD | [0.0193 , 0.10285] | 0.95024 |
| Distance | [-0.01415 , 0.0222] | 0.95024 |
| EqualFrequency | [-0.0288 , 0.01] | 0.95024 |
| EqualWidth | [-0.0244 , 0.00775] | 0.95024 |
| Extended Chi2 | [-0.00865 , 0.08125] | 0.95024 |
| FFD | [-0.0348 , 0.0054] | 0.95024 |
| FUSINTER | [-0.0377 , -0.00285] | 0.95024 |
| HDD | [-0.02225 , 0.0214] | 0.95024 |
| HellingerBD | [-0.0177 , 0.02765] | 0.95024 |
| Heter-Disc | [0.18875 , 0.3542] | 0.95024 |
| ID3 | [-0.02695 , 0.0246] | 0.95024 |
| IDD | [-0.00605 , 0.11275] | 0.95024 |
| Khiops | [-0.0314 , 0.00625] | 0.95024 |
| MDLP | [-0.01815 , 0.0236] | 0.95024 |
| Modified Chi2 | [-0.04345 , 0.0003] | 0.95024 |
| MODL | [-0.04055 , 0.0029] | 0.95024 |
| MVD | [0.0351 , 0.2025] | 0.95024 |
| PKID | [-0.0434 , 0.0002] | 0.95024 |
| UCPD | [-0.00335 , 0.0541] | 0.95024 |
| USD | [-0.025 , 0.02025] | 0.95024 |

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