| | bb | bba | gbest | gbestgc | lbest | lbestgc | spso | vn | vngc | mean | sd |
|----------------|----------|----------|----------|----------|----------|----------|---------|----------|----------|---------|---------|
| ackley | 0.48670 | 0.56015 | 0.24538 | 0.41440 | 0.40758 | 0.18603 | 0.85492 | 0.62307 | 0.63709 | 0.49059 | 0.20682 |
| alpine | -0.01576 | -0.19237 | -0.00527 | 0.49902 | 0.20492 | 0.12368 | 0.74216 | 0.05835 | -0.28060 | 0.12602 | 0.32280 |
| eggholder | -0.30103 | -0.09276 | -0.22869 | -0.00274 | 0.20038 | -0.11913 | 0.07932 | 0.53990 | 0.59209 | 0.07415 | 0.31716 |
| elliptic | 0.64326 | 0.55005 | 0.57984 | 0.46662 | 0.02615 | 0.41176 | 0.52751 | 0.44587 | 0.70999 | 0.48456 | 0.19636 |
| goldsteinprice | 0.61803 | -0.08340 | 0.62439 | 0.62352 | 0.44097 | 0.40229 | 0.75762 | 0.66165 | 0.50245 | 0.50528 | 0.24756 |
| griewank | 0.57536 | 0.61179 | 0.76468 | 0.63806 | 0.25806 | 0.26737 | 0.54976 | 0.44390 | 0.46727 | 0.50847 | 0.16807 |
| levy | 0.33433 | 0.58281 | 0.59083 | 0.55499 | 0.77175 | 0.82698 | 0.21613 | 0.77209 | 0.86079 | 0.61230 | 0.22294 |
| michalewicz | -0.05967 | 0.20428 | -0.25211 | 0.26353 | 0.35757 | 0.30763 | 0.30591 | -0.17521 | 0.33107 | 0.14256 | 0.23764 |
| quadric | 0.09128 | 0.33025 | 0.46707 | 0.61488 | 0.58096 | 0.50560 | 0.40271 | 0.36077 | 0.42528 | 0.41987 | 0.15548 |
| quartic | 0.59923 | 0.51032 | 0.69886 | 0.76671 | 0.32145 | 0.74891 | 0.27072 | 0.62766 | 0.59265 | 0.57072 | 0.17568 |
| rastrigin | 0.11484 | 0.15493 | 0.27005 | 0.42228 | 0.31705 | 0.47901 | 0.51045 | -0.24959 | 0.01108 | 0.22557 | 0.24583 |
| rosenbrock | 0.46765 | 0.12137 | 0.15560 | 0.37022 | 0.01957 | 0.42114 | 0.42253 | -0.12480 | 0.42051 | 0.25264 | 0.21475 |
| salomon | 0.50651 | 0.43767 | 0.45838 | 0.55614 | 0.34998 | 0.26112 | 0.65020 | -0.10353 | 0.15397 | 0.36338 | 0.23102 |
| schwefel1_2 | 0.40695 | 0.36448 | 0.28099 | 0.61536 | 0.65639 | 0.44829 | 0.45576 | 0.51172 | 0.00475 | 0.41608 | 0.19346 |
| schwefel2_22 | 0.69975 | 0.42737 | 0.59003 | 0.62760 | 0.71450 | 0.60149 | 0.68066 | 0.63620 | 0.59909 | 0.61963 | 0.08520 |
| schwefel2_26 | 0.15512 | -0.21509 | 0.53891 | 0.53174 | -0.05489 | -0.16369 | 0.70168 | -0.12427 | -0.31417 | 0.11726 | 0.38014 |
| sixhump | -0.28545 | -0.17001 | -0.07261 | 0.09834 | 0.33956 | -0.35844 | 0.74833 | 0.19215 | -0.05825 | 0.04818 | 0.34433 |
| spherical | 0.38639 | 0.34146 | 0.58157 | 0.55265 | 0.46191 | 0.35711 | 0.46616 | 0.64975 | 0.56065 | 0.48418 | 0.10859 |
| step | 0.40833 | 0.33345 | 0.44724 | 0.25216 | 0.47614 | 0.54686 | 0.65579 | 0.62592 | 0.35079 | 0.45519 | 0.13576 |
| zakharov | 0.60261 | 0.65581 | 0.73230 | 0.43723 | 0.23240 | 0.29553 | 0.71119 | 0.34293 | 0.76572 | 0.53063 | 0.20541 |
| | | | | | | | | | | | |
| mean | 0.32172 | 0.27163 | 0.37337 | 0.46514 | 0.35412 | 0.32748 | 0.53548 | 0.33573 | 0.36661 | | |
| sd | 0.30742 | 0.28994 | 0.31279 | 0.19202 | 0.22283 | 0.29237 | 0.20799 | 0.33659 | 0.33951 | | |

Over all values:

mean 0.37236 sd 0.28674