

# Erratum to: Transfer Learning for Gaussian Process Assisted Evolutionary Bi-objective Optimization for Objectives with Different Evaluation Times\*

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## CCS CONCEPTS

- **Theory of computation** → **Evolutionary algorithms**;
- **Computing methodologies** → *Genetic algorithms*;

## ACM Reference Format:

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There were errors in Tables. 1-2 in the original version of this article. When we conducted experiments to compare the performance of algorithms, we forgot to change the population size in the source code of HK-RVEA [1], resulting in the incorrect results obtained by HK-RVEA. The corrected Tables. 1-2 are shown below.

The authors would like to apologize for this oversight and for any confusion that it has caused.

## REFERENCES

- [1] Tinkle Chugh, Richard Allmendinger, Vesa Ojalehto, and Kaisa Miettinen. 2018. Surrogate-assisted evolutionary biobjective optimization for objectives with non-uniform latencies. In *Proceedings of the Genetic and Evolutionary Computation Conference*. ACM, 609–616.

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**Table 1: Statistical results of the IGD values obtained by Waiting, Fastfirst, Speculative interleaving, HK-RVEA, NT-SAEA, NS-SAEA and T-SAEA with  $MaxFE^{ex} = 200$  and  $\tau = 5$** 

Test problem	Waiting		Fastfirst		Interleaving		HK-RVEA		NT-SAEA		NS-SAEA		T-SAEA	
	mean	std	mean	std	mean	std	mean	std	mean	std	mean	std	mean	std
DTLZ1	30.21 + 14.26	69.68 + 24.14	48.06 + 14.79	42.16 + 10.5	46.26 + 12.90	60.79 + 14.76	<b>21.67</b>	11.92						
DTLZ1a	14.24 + 8.484	60.5 + 31.52	32.59 + 13.98	0.523 - 0.185	<b>0.875</b> $\approx$ 0.138	0.678 - 0.723	1.062	0.998						
DTLZ2	0.240 + 0.049	0.803 + 0.075	0.380 + 0.033	0.101 + 0.029	0.052 $\approx$ 0.010	0.049 $\approx$ 0.028	<b>0.046</b>	0.027						
DTLZ3	309.2 + 83.4	549.1 + 141.8	462.3 + 67.45	354.8 + 72.86	321.5 + 140.4	371.4 + 208.4	<b>202.5</b>	100.4						
DTLZ3a	227.2 + 75.41	545.9 + 86.86	406.3 + 96.6	14.95 + 5.276	10.08 + 14.99	8.65 + 33.9	<b>5.340</b>	37.54						
DTLZ4	0.509 - 0.324	0.776 + 0.114	0.652 + 0.104	0.234 - 0.119	<b>0.285</b> - 0.516	0.581 $\approx$ 0.254	0.600	0.133						
DTLZ5	0.270 + 0.064	0.855 + 0.101	0.391 + 0.029	0.093 + 0.026	0.240 + 0.004	<b>0.036</b> - 0.028	0.049	0.017						
DTLZ6	7.306 + 0.524	8.793 + 0.11	8.258 + 0.126	4.101 + 0.544	6.597 + 7.177	6.439 + 0.807	<b>2.558</b>	1.207						
DTLZ7	4.413 + 0.623	7.532 + 0.391	5.565 + 0.681	0.064 - 0.056	1.288 + 0.401	4.676 + 0.574	<b>1.147</b>	0.912						
UF1	1.011 + 0.135	0.494 + 0.036	0.424 + 0.045	0.231 + 0.027	1.351 + 0.026	0.676 + 0.539	<b>0.189</b>	0.016						
UF2	0.500 + 0.073	0.582 + 0.085	0.506 + 0.026	0.153 + 0.027	0.615 + 0.052	0.302 + 0.084	<b>0.140</b>	0.016						
UF3	0.967 + 0.078	1.224 + 0.061	1.083 + 0.067	0.542 + 0.057	0.552 + 0.012	0.595 + 0.158	<b>0.189</b>	0.077						
UF4	0.209 - 0.007	0.241 + 0.018	0.232 + 0.005	0.221 $\approx$ 0.003	<b>0.189</b> - 0.007	0.196 $\approx$ 0.019	0.225	0.006						
UF5	4.747 + 0.417	3.529 + 0.257	3.254 + 0.158	2.461 + 0.436	4.324 + 1.069	4.664 + 1.312	<b>2.494</b>	0.438						
UF6	4.358 + 0.629	2.277 + 0.238	1.993 + 0.167	1.341 + 0.130	4.134 + 3.061	2.084 + 0.591	<b>1.009</b>	0.251						
UF7	1.113 + 0.176	0.580 + 0.064	0.472 + 0.053	<b>0.251</b> - 0.047	0.500 + 0.091	0.455 + 0.142	0.365	0.063						

**Table 2: Statistical results of the IGD values obtained by Waiting, Fastfirst, Speculative interleaving, HK-RVEA, NT-SAEA, NS-SAEA and T-SAEA with  $MaxFE^{ex} = 200$  and  $\tau = 10$** 

Test problem	Waiting		Fastfirst		Interleaving		HK-RVEA		NT-SAEA		NS-SAEA		T-SAEA	
	mean	std	mean	std	mean	std	mean	std	mean	std	mean	std	mean	std
DTLZ1	30.2 + 14.26	102.7 + 37.52	44.22 + 15.49	41.46 + 11.81	50.66 + 20.35	35.62 + 23.76	<b>11.23</b>	14.73						
DTLZ1a	14.24 + 8.484	68.43 + 36.66	36.10 + 12.65	1.039 $\approx$ 0.471	<b>0.751</b> - 0.097	1.247 + 2.509	1.616	4.057						
DTLZ2	0.240 + 0.049	0.966 + 0.107	0.079 + 0.017	0.239 + 0.006	<b>0.026</b> - 0.003	0.048 $\approx$ 0.523	0.041	0.020						
DTLZ3	309.2 + 83.4	655.9 + 122.2	414.7 + 82.84	379.3 + 30.54	381.62 + 136.6	400.1 + 99.45	<b>136.8</b>	99.33						
DTLZ3a	227.2 + 75.41	597.8 + 139.3	429.8 + 86.94	19.76 + 8.496	11.563 + 12.55	9.186 + 19.98	<b>0.499</b>	6.401						
DTLZ4	0.509 $\approx$ 0.324	0.748 + 0.133	0.663 + 0.121	<b>0.174</b> - 0.105	0.671 + 0.302	0.426 - 0.169	0.544	0.208						
DTLZ5	0.270 + 0.064	0.968 + 0.099	0.410 + 0.031	0.097 $\approx$ 0.012	<b>0.033</b> - 0.006	0.046 - 0.051	0.116	0.013						
DTLZ6	7.306 + 0.524	8.972 + 0.177	8.261 + 0.156	4.226 + 0.351	6.462 + 1.177	6.539 + 0.767	<b>3.993</b>	1.407						
DTLZ7	4.413 + 0.623	7.763 + 0.701	5.757 + 0.574	<b>0.036</b> - 0.026	0.129 + 0.101	3.471 + 0.474	1.657	1.053						
UF1	1.011 $\approx$ 0.135	0.541 + 0.065	0.408 + 0.038	0.258 + 0.038	0.439 + 0.258	0.568 + 0.319	<b>0.193</b>	0.012						
UF2	0.500 + 0.073	0.760 + 0.099	0.523 + 0.035	0.152 $\approx$ 0.010	0.270 + 0.012	0.316 + 0.067	<b>0.151</b>	0.008						
UF3	0.967 + 0.078	1.214 + 0.071	1.091 + 0.075	<b>0.531</b> - 0.033	0.590 + 0.082	0.595 $\approx$ 0.158	0.602	0.068						
UF4	0.209 $\approx$ 0.007	0.585 + 0.015	0.233 + 0.005	0.233 + 0.005	<b>0.188</b> - 0.005	0.189 - 0.004	0.212	0.003						
UF5	4.747 + 0.417	3.456 + 0.276	3.236 + 0.189	<b>2.471</b> - 0.323	3.783 + 0.864	4.949 + 0.712	2.949	0.332						
UF6	4.358 + 0.629	2.201 + 0.251	2.012 + 0.181	0.998 $\approx$ 0.228	2.311 + 0.065	1.258 $\approx$ 0.191	<b>0.995</b>	0.157						
UF7	1.113 + 0.176	0.536 + 0.056	0.460 + 0.051	<b>0.256</b> - 0.628	0.636 + 0.128	0.497 + 0.142	0.317	0.037						