Heuristic Algorithms
Achieved Results for Artificial Bee Colony

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FES	5×10^3	5×10^4	5×10^5
Best	9.3288	9.3288	9.3288
Median	54.3864	61.7903	57.5325
Worst	39.3288	38.8640	38.8640
v	7033.8300	15053.9439	21975.6239
Mean	56.7170	60.7041	58.9360
std	22.3501	24.1174	23.6155

Table 1: Error Values Problem pg01 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	0.6194	0.6194	0.6134
Median	0.6675	0.6679	0.6666
Worst	0.9230	0.9162	0.9162
v	0.0000	0.0000	0.0000
Mean	0.6657	0.6648	0.6631
std	0.0126	0.0146	0.0148

Table 2: Error Values Problem pg02 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	0.9990	0.9990	0.9990
Median	0.9423	0.9423	0.9562
Worst	1.0010	1.0010	1.0008
v	28.3102	58.2341	88.9584
Mean	1.2673	1.7638	1.7211
std	1.3327	3.0301	2.7774

Table 3: Error Values Problem pg03 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	1123.2516	1123.2516	1123.2516
Median	3800.8877	3505.4880	3451.7319
Worst	54217.4933	54217.4933	54217.4933
v	2.3338	6.1456	9.1743
Mean	3761.3050	3603.4226	3517.5161
std	1611.9461	1595.3662	1461.6370

Table 4: Error Values Problem pg04 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	910.2826	693.9263	693.9263
Median	1171.6317	1325.2983	1245.8227
Worst	12794.5541	12794.5541	12794.5541
v	16835.4469	32896.9161	48640.8906
Mean	1469.6424	1502.5043	1437.5349
std	1105.8115	1034.9336	1000.3395

Table 5: Error Values Problem pg05 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	6807.7572	4273.2968	4273.2968
Median	39278.3399	50115.8225	44224.0216
Worst	267573.4460	389200.7458	429602.8274
v	65542.9310	142001.8310	209501.4304
Mean	70515.6446	78699.3554	82039.7938
std	72248.8111	84608.3932	97634.8400

Table 6: Error Values Problem pg06 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	3001.8444	3001.8444	3001.8444
Median	2005.2727	1664.4265	1497.3442
Worst	3678.2204	3778.3078	3778.3078
v	15837.5350	31757.9404	45973.5766
Mean	2063.2729	1782.0971	1737.1726
std	969.3470	1024.6420	1038.4244

Table 7: Error Values Problem pg07 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	0.0824	0.0824	0.0824
Median	0.0958	0.0958	0.0958
Worst	1.0000	1.0000	14.5300
v	356.5110	836.0884	1168.0070
Mean	1.4449	1.4410	1.5193
std	7.0928	6.1549	5.6544

Table 8: Error Values Problem pg08 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	7027.8776	7027.8776	7027.8776
Median	1099377.3446	335572.1643	289517.3377
Worst	9777590.2376	9966856.0553	9966856.0553
v	17091.1739	26999.2394	41384.0859
Mean	2622317.7843	2184838.8536	1948341.6483
std	3462392.0614	3202306.6965	2994905.0186

Table 9: Error Values Problem pg09 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	6987.7495	8023.4593	8023.4593
Median	10174.0930	10020.5502	9199.5737
Worst	34992.9900	34992.9900	34992.9900
v	154264.3273	480005.6183	1625371.4016
Mean	10389.0597	9880.8338	9288.7150
std	4258.4245	3868.2935	4069.4428

Table 10: Error Values Problem pg10 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	0.0668	0.0668	0.0668
Median	0.3518	0.2397	0.2300
Worst	2.7978	3.0302	3.0902
v	8.0040	12.8518	18.2749
Mean	0.3832	0.3197	0.3119
std	0.2749	0.2951	0.3046

Table 11: Error Values Problem pg11 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	0.0812	0.0202	0.0202
Median	0.2155	0.2032	0.1997
Worst	1.6005	1.6005	1.5272
v	2.6606	5.0196	8.4839
Mean	0.2113	0.1951	0.1974
std	0.0970	0.1063	0.1139

Table 12: Error Values Problem pg12 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	0.9354	0.9354	0.9354
Median	1.0301	0.9950	0.9587
Worst	52.6773	52.6773	52.6773
v	87.4477	182.4014	266.9224
Mean	4.0677	3.3419	2.7469
std	11.1226	9.1261	7.6031

Table 13: Error Values Problem pg13 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	452.2039	374.3514	339.0608
Median	721.7870	722.2452	718.6004
Worst	547.7337	469.8812	432.3397
v	612.1001	1211.6966	1798.6677
Mean	711.1212	699.9404	688.4076
std	108.7422	122.8338	131.5747

Table 14: Error Values Problem pg14 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	3.4184	3.4184	3.4184
Median	26.1585	35.3326	35.6224
Worst	1958.5665	1958.5665	1958.5665

v	775.0177	1993.9042	3090.6819
Mean	34.6629	47.7898	50.8837
std	28.6373	41.1362	47.2362

Table 15:   Error Values Problem pg15 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	0.6193	0.5617	0.5617
Median	0.9300	0.9187	0.8839
Worst	3.4482	3.4482	3.4482
v	154151.7506	328290.6527	493612.5414
Mean	1.3171	1.2170	1.1636
std	1.4029	1.2104	1.0882

Table 16:   Error Values Problem pg16 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	7168.5796	5471.9119	2178.4635
Median	9910.4874	9717.6914	9277.0879
Worst	45338.0789	45338.0789	49848.7400
v	7468.5987	14746.7197	22627.9204
Mean	10044.5605	9925.4545	9931.7290
std	7073.0507	6819.1952	7307.8914

Table 17:   Error Values Problem pg17 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	18.7175	10.5897	10.5897
Median	16.1529	16.9018	18.8826
Worst	64.7251	64.7251	64.7251
v	19146.3476	36603.8580	53724.3489
Mean	17.6349	20.1417	20.7646
std	13.7245	16.0358	15.6081

Table 18:   Error Values Problem pg18 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	2113.2080	2113.2080	2113.2080
Median	9066.9135	8931.8583	9151.3034
Worst	22346.7994	37184.8232	37184.8232
v	0.0000	0.0000	0.0000
Mean	9591.5953	10129.9977	10217.0837
std	4496.7660	5888.5684	5554.2149

Table 19:   Error Values Problem pg19 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	13.3557	16.7028	16.7028
Median	14.8693	14.9876	14.7471
Worst	21.0692	21.7818	21.7818
v	386.0297	775.6095	1148.7214
Mean	15.4155	15.4177	14.9099
std	2.2019	2.4712	2.4538

Table 20: Error Values Problem pg20 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	287.6782	287.6782	287.6782
Median	387.9992	401.1021	387.5572
Worst	1173.2348	1173.2348	1173.2348
v	7644.4372	12508.1437	20249.7909
Mean	378.8271	413.4351	383.6857
std	249.6671	233.6618	237.0400

Table 21: Error Values Problem pg21 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	14163.8408	14163.8408	6242.3978
Median	9152.0621	8396.8973	8725.1790
Worst	18371.1185	18617.4756	19584.6764
v	9310009601.1069	19325527540.6517	28281337577.5864
Mean	9018.7228	8958.0035	9374.6267
std	5031.2935	5264.2225	5255.1650

Table 22: Error Values Problem pg22 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	1003.9803	16.6242	770.3761
Median	1652.4263	1787.3712	1669.4908
Worst	3465.4009	3903.7840	3903.7840
v	1662.7412	3334.1847	4862.5154
Mean	1836.1517	1980.7276	1858.9981
std	1065.8268	1162.5388	1156.1812

Table 23: Error Values Problem pg23 using Artificial Bee Colony

FES	5×10^3	5×10^4	5×10^5
Best	0.2145	0.2145	0.2145
Median	1.9894	2.0017	2.0017
Worst	6.4401	5.8957	5.6851
v	1.4131	5.0436	7.1995
Mean	2.0102	2.0630	2.1261
std	1.0559	1.0422	1.1094

Table 24: Error Values Problem pg24 using Artificial Bee Colony

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg01	9.3288	54.3864	39.3288	56.7170	22.3501	0.0000	0.0000	-1.0000
50000	pg01	8.8640	61.7903	38.8640	60.7041	24.1174	0.0000	0.0000	-1.0000
500000	pg01	8.8640	57.5325	38.8640	58.9360	23.6155	0.0000	0.0000	-1.0000

Table 25: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg02	0.6194	0.6675	0.9230	0.6657	0.0126	1.0000	0.0000	-1.0000
50000	pg02	0.6194	0.6679	0.9162	0.6648	0.0146	1.0000	0.0000	-1.0000
500000	pg02	0.6134	0.6666	0.9162	0.6631	0.0148	1.0000	0.0000	-1.0000

Table 26: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg03	0.2644	0.9423	1.0010	1.2673	1.3327	0.0000	0.0000	-1.0000
50000	pg03	0.2644	0.9423	1.0010	1.7638	3.0301	0.0000	0.0000	-1.0000
500000	pg03	0.2086	0.9562	1.0008	1.7211	2.7774	0.0000	0.0000	-1.0000

Table 27: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg04	937.4701	3800.8877	54217.4933	3761.3050	1611.9461	0.8000	0.0000	-1.0000
50000	pg04	805.3871	3505.4880	54217.4933	3603.4226	1595.3662	0.8000	0.0000	-1.0000
500000	pg04	805.3871	3451.7319	54217.4933	3517.5161	1461.6370	0.8667	0.0000	-1.0000

Table 28: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg05	14.6740	1171.6317	12794.5541	1469.6424	1105.8115	0.0000	0.0000	-1.0000
50000	pg05	14.6740	1325.2983	12794.5541	1502.5043	1034.9336	0.0000	0.0000	-1.0000
500000	pg05	14.6740	1245.8227	12794.5541	1437.5349	1000.3395	0.0000	0.0000	-1.0000

Table 29: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg06	6807.7572	39278.3399	267573.4460	70515.6446	72248.8111	0.0000	0.0000	-1.0000
50000	pg06	4273.2968	50115.8225	389200.7458	78699.3554	84608.3932	0.0000	0.0000	-1.0000
500000	pg06	443.4805	44224.0216	429602.8274	82039.7938	97634.8400	0.0000	0.0000	-1.0000

Table 30: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg07	455.9099	2005.2727	3678.2204	2063.2729	969.3470	0.0000	0.0000	-1.0000
50000	pg07	430.4320	1664.4265	3778.3078	1782.0971	1024.6420	0.0000	0.0000	-1.0000
500000	pg07	403.9806	1497.3442	3778.3078	1737.1726	1038.4244	0.0000	0.0000	-1.0000

Table 31: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg08	0.0199	0.0958	1.0000	1.4449	7.0928	0.0333	0.0000	-1.0000
50000	pg08	0.0199	0.0958	1.0000	1.4410	6.1549	0.0333	0.0000	-1.0000
500000	pg08	0.0199	0.0958	14.5300	1.5193	5.6544	0.0000	0.0000	-1.0000

Table 32: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg09	355.7303	1099377.3446	9777590.2376	2622317.7843	3462392.0614	0.0667	0.0000	-1.000
50000	pg09	355.7303	335572.1643	9966856.0553	2184838.8536	3202306.6965	0.0333	0.0000	-1.000
500000	pg09	355.7303	289517.3377	9966856.0553	1948341.6483	2994905.0186	0.0333	0.0000	-1.000

Table 33: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg10	3034.3130	10174.0930	34992.9900	10389.0597	4258.4245	0.0000	0.0000	-1.0000
50000	pg10	311.7008	10020.5502	34992.9900	9880.8338	3868.2935	0.0000	0.0000	-1.0000
500000	pg10	311.7008	9199.5737	34992.9900	9288.7150	4069.4428	0.0000	0.0000	-1.0000

Table 34: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg11	0.0425	0.3518	2.7978	0.3832	0.2749	0.0000	0.0000	-1.0000
50000	pg11	0.0023	0.2397	3.0302	0.3197	0.2951	0.0000	0.0000	-1.0000

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
500000	pg11	0.0023	0.2300	3.0902	0.3119	0.3046	0.0000	0.0000	-1.0000

Table 35: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg12	0.0105	0.2155	1.6005	0.2113	0.0970	0.1667	0.0000	-1.0000
50000	pg12	0.0060	0.2032	1.6005	0.1951	0.1063	0.3000	0.0000	-1.0000
500000	pg12	0.0016	0.1997	1.5272	0.1974	0.1139	0.1333	0.0000	-1.0000

Table 36: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg13	0.0293	1.0301	52.6773	4.0677	11.1226	0.0000	0.0000	-1.0000
50000	pg13	0.0023	0.9950	52.6773	3.3419	9.1261	0.0000	0.0000	-1.0000
500000	pg13	0.0023	0.9587	52.6773	2.7469	7.6031	0.0000	0.0000	-1.0000

Table 37: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg14	452.2039	721.7870	547.7337	711.1212	108.7422	0.0000	0.0000	-1.0000
50000	pg14	374.3514	722.2452	469.8812	699.9404	122.8338	0.0000	0.0000	-1.0000
500000	pg14	336.8099	718.6004	432.3397	688.4076	131.5747	0.0000	0.0000	-1.0000

Table 38: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg15	3.4184	26.1585	1958.5665	34.6629	28.6373	0.0000	0.0000	-1.0000
50000	pg15	0.5575	35.3326	1958.5665	47.7898	41.1362	0.0000	0.0000	-1.0000
500000	pg15	0.5575	35.6224	1958.5665	50.8837	47.2362	0.0000	0.0000	-1.0000

Table 39: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg16	0.0538	0.9300	3.4482	1.3171	1.4029	0.0000	0.0000	-1.0000
50000	pg16	0.0017	0.9187	3.4482	1.2170	1.2104	0.0333	0.0000	-1.0000
500000	pg16	0.0017	0.8839	3.4482	1.1636	1.0882	0.0000	0.0000	-1.0000

Table 40: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg17	325.2379	9910.4874	45338.0789	10044.5605	7073.0507	0.0000	0.0000	-1.0000
50000	pg17	325.2379	9717.6914	45338.0789	9925.4545	6819.1952	0.0000	0.0000	-1.0000
500000	pg17	325.2379	9277.0879	49848.7400	9931.7290	7307.8914	0.0000	0.0000	-1.0000

Table 41: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg18	0.2943	16.1529	64.7251	17.6349	13.7245	0.0000	0.0000	-1.0000
50000	pg18	0.2943	16.9018	64.7251	20.1417	16.0358	0.0000	0.0000	-1.0000
500000	pg18	0.2943	18.8826	64.7251	20.7646	15.6081	0.0000	0.0000	-1.0000

Table 42: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg19	2113.2080	9066.9135	22346.7994	9591.5953	4496.7660	1.0000	0.0000	-1.0000
50000	pg19	2113.2080	8931.8583	37184.8232	10129.9977	5888.5684	1.0000	0.0000	-1.0000
500000	pg19	2113.2080	9151.3034	37184.8232	10217.0837	5554.2149	1.0000	0.0000	-1.0000

Table 43: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg20	11.7913	14.8693	21.0692	15.4155	2.2019	0.0000	0.0000	-1.0000
50000	pg20	9.5443	14.9876	21.7818	15.4177	2.4712	0.0000	0.0000	-1.0000
500000	pg20	9.5443	14.7471	21.7818	14.9099	2.4538	0.0000	0.0000	-1.0000

Table 44: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg21	17.2642	387.9992	1173.2348	378.8271	249.6671	0.0000	0.0000	-1.0000
50000	pg21	17.2642	401.1021	1173.2348	413.4351	233.6618	0.0000	0.0000	-1.0000
500000	pg21	8.2903	387.5572	1173.2348	383.6857	237.0400	0.0000	0.0000	-1.0000

Table 45: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level $(f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001)$, Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg22	88.3459	9152.0621	18371.1185	9018.7228	5031.2935	0.0000	0.0000	-1.0000
50000	pg22	88.3459	8396.8973	18617.4756	8958.0035	5264.2225	0.0000	0.0000	-1.0000
500000	pg22	51.7310	8725.1790	19584.6764	9374.6267	5255.1650	0.0000	0.0000	-1.0000

Table 46: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level ($f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001$), Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg23	489.1820	1652.4263	3465.4009	1836.1517	1065.8268	0.0000	0.0000	-1.0000
50000	pg23	16.6242	1787.3712	3903.7840	1980.7276	1162.5388	0.0000	0.0000	-1.0000
500000	pg23	16.6242	1669.4908	3903.7840	1858.9981	1156.1812	0.0000	0.0000	-1.0000

Table 47: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level ($f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001$), Success Rate, Feasible Rate and Success Performance

Max FES	Prob.	Best	Median	Worst	Mean	Std	FR	SR	SP
5000	pg24	0.2145	1.9894	6.4401	2.0102	1.0559	0.8333	0.0000	-1.0000
50000	pg24	0.2145	2.0017	5.8957	2.0630	1.0422	0.8000	0.0000	-1.0000
500000	pg24	0.2145	2.0017	5.6851	2.1261	1.1094	0.8667	0.0000	-1.0000

Table 48: Artificial Bee Colony. Number of FES to achieve the fixed accuracy level ($f(\mathbf{x}) - f(\mathbf{x}^*) \leq 0.0001$), Success Rate, Feasible Rate and Success Performance