

# [PSZT-P] Tabelaryczne zestawienie wyników

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## 1 Objaśnienia

**k value** - liczba  $K$  kolejnych iteracji w kryterium  $K$ -iteracji

**sd eps** - wartość  $\epsilon$  dla kryterium Odchylenia Standardowego

**best worst eps** - wartość  $\epsilon$  dla kryterium Najlepszy-Najgorszy

**variance eps** - wartość  $\epsilon$  dla kryterium Wariancji Dopasowania

**best fit** - najlepsze znalezione optimum

**best fit mean** - średnia najlepszych znalezionych optimów

**best fit std. deviation** - odchylenie standardowe najlepszych znalezionych optimów

**number of evals mean** - średnia liczba ewaluacji funkcji celu

## 2 Kryterium $K$ -iteracji

k value	best fit	best fit mean	best fit std. deviation	number of evals mean
3	118.55	4933.93	3448.81	5659.2
7	0.49	2.69	1.95	36291.2
15	0.38	0.92	0.54	44248.8
25	0.18	0.54	0.35	50649.6
35	0.09	0.43	0.23	60707.2
100	0.05	0.24	0.14	79993.6
200	0.04	0.25	0.15	96967.2
budget/lambda	0.03	0.21	0.14	99980.0

Tablica 1:  $F_4$  - Shifted Schwefel's Problem 1.2 with Noise in Fitness

k value	best fit	best fit mean	best fit std. deviation	number of evals mean
2	17.68	2705.28	4676.42	17122.4
10	6.33	15.91	7.9	27896.8
15	4.29	13.8	7.06	30405.6
60	3.02	6.04	2.64	58075.2
150	1.75	3.48	1.31	89922.4
200	1.36	3.74	1.51	97784.8
300	1.08	3.2	1.73	97768.0
budget/lambda	0.62	3.34	1.52	99980.0

Tablica 2:  $F_5$  - Schwefel's Problem 2.6 with Global Optimum on Bounds

k value	best fit	best fit mean	best fit std. deviation	number of evals mean
13	11.12	1800.55	2873.54	16786.4
15	15.02	1137.12	2296.94	17878.4
25	9.43	1830.85	2912.94	27611.2
50	8.99	725.6	2129.17	45738.4
75	7.77	445.8	1355.54	52710.4
100	7.97	1514.57	2576.56	64722.4
250	8.42	458.53	1007.54	90107.2
budget/lambda	6.87	988.1	2394.77	99980.0

Tablica 3:  $F_6$  - Shifted Rosenbrock's Function

### 3 Kryterium Odchylenia Standardowego

std eps	best fit	best fit mean	best fit std. deviation	number of evals mean
0.9	28.08	178.69	253.4	24828.0
0.5	0.92	3.6	2.29	38559.2
0.4	0.72	2.0	1.04	37545.6
0.2	0.12	0.35	0.17	60068.8
0.18	0.09	0.26	0.17	70977.6
0.15	0.07	0.21	0.08	82799.2
0.12	0.05	0.21	0.12	97852.0
0.1	0.06	0.21	0.17	99980.0

Tablica 4:  $F_4$  - Shifted Schwefel's Problem 1.2 with Noise in Fitness

std eps	best fit	best fit mean	best fit std. deviation	number of evals mean
0.7	89.94	1889.38	1705.42	15476.0
0.2	13.17	36.44	9.97	24279.2
0.1	8.41	19.43	6.71	28787.2
0.05	3.25	9.34	3.47	36660.8
0.03	1.89	6.44	3.29	45458.4
0.02	0.66	3.74	1.31	75267.2
0.015	1.86	3.65	1.55	90000.8
0.01	0.44	3.78	1.75	99980.0

Tablica 5:  $F_5$  - Schwefel's Problem 2.6 with Global Optimum on Bounds

std eps	best fit	best fit mean	best fit std. deviation	number of evals mean
0.7	145.8	2286.01	2451.85	7770.4
0.6	77.11	1174.04	1267.63	8000.0
0.5	25.44	1117.8	2185.39	9590.4
0.3	9.99	334.33	662.91	37607.2
0.2	8.73	737.96	1450.67	69908.0
0.1	7.55	560.81	1765.06	99005.6
0.05	7.59	1196.65	2326.35	99980.0
0.01	7.28	1359.99	2416.09	99980.0

Tablica 6:  $F_6$  - Shifted Rosenbrock's Function

## 4 Kryterium Najlepsy-Najgorszy

best-worst eps	best fit	best fit mean	best fit std. deviation	number of evals mean
20.0	57.92	137.5	50.45	30041.6
5.0	4.29	12.58	7.09	32388.0
1.0	0.57	2.32	1.13	35932.8
0.3	0.2	0.67	0.46	44013.6
0.1	0.08	0.22	0.13	86596.0
0.05	0.07	0.2	0.1	98932.8
0.01	0.03	0.2	0.13	99980.0
0.005	0.08	0.25	0.13	99980.0

Tablica 7:  $F_4$  - Shifted Schwefel's Problem 1.2 with Noise in Fitness

best-worst eps	best fit	best fit mean	best fit std. deviation	number of evals mean
50.0	51.03	1999.79	1620.64	16416.8
20.0	18.73	95.11	133.18	24077.6
5.0	3.93	12.63	5.09	32668.0
2.5	3.0	7.48	3.18	43397.6
1.5	0.99	4.53	2.3	61592.0
1.0	1.37	3.29	1.82	93747.2
0.75	1.01	3.65	1.89	98316.8
0.5	1.35	3.82	1.44	99935.2

Tablica 8:  $F_5$  - Schwefel's Problem 2.6 with Global Optimum on Bounds

best-worst eps	best fit	best fit mean	best fit std. deviation	number of evals mean
50.0	41.63	797.23	1762.49	10324.0
10.0	11.02	1480.29	2450.17	15291.2
5.0	11.92	1520.78	2519.34	20544.0
3.0	9.8	1070.59	2380.22	44965.6
2.0	8.57	857.09	2019.39	63792.8
1.75	8.11	830.87	1983.39	77613.6
1.5	8.42	823.83	1944.33	85162.4
1.0	7.15	737.4	1644.79	99980.0

Tablica 9:  $F_6$  - Shifted Rosenbrock's Function

## 5 Kryterium Wariancji Dopasowania

variance eps	best fit	best fit mean	best fit std. deviation	number of evals mean
0.1	0.7	1.95	0.86	38128.0
0.01	0.19	0.66	0.34	49708.8
0.008	0.14	0.56	0.25	46528.0
0.005	0.22	0.54	0.23	49860.0
0.003	0.12	0.37	0.18	55432.0
0.002	0.11	0.3	0.16	68228.0
0.001	0.05	0.28	0.17	74292.8
0.0005	0.05	0.21	0.11	93120.0

Tablica 10:  $F_4$  - Shifted Schwefel's Problem 1.2 with Noise in Fitness

variance eps	best fit	best fit mean	best fit std. deviation	number of evals mean
100.0	43.04	733.76	1057.37	19849.6
1.0	1.73	9.36	6.25	35154.4
0.5	1.73	8.02	4.37	39466.4
0.3	2.18	5.43	1.87	54183.2
0.2	1.32	4.99	3.45	66385.6
0.1	0.92	3.76	1.84	84406.4
0.075	1.01	3.64	2.0	91188.0
0.05	1.39	3.59	1.55	98361.6

Tablica 11:  $F_5$  - Schwefel's Problem 2.6 with Global Optimum on Bounds

variance eps	best fit	best fit mean	best fit std. deviation	number of evals mean
1.0	10.8	919.54	2344.79	30876.0
0.8	9.82	1312.52	2300.66	38850.4
0.5	9.12	518.56	1462.51	47911.2
0.2	6.32	173.72	280.49	84972.0
0.175	8.65	1434.31	2411.36	81869.6
0.15	7.83	1637.96	3039.98	87150.4
0.125	8.26	186.83	258.04	96026.4
0.1	7.11	552.41	1451.71	97555.2

Tablica 12:  $F_6$  - Shifted Rosenbrock's Function