

DIMENSION 10

Function	Algorithm	Mean	Standard Deviation	Best Value	Worst Value	Best Solution	Fitness Value
f1	PSO	18.47969228	12.7126512	1.43	44.303	1.43	[2.22304434e-01 4.74413477e-02 1.17432411e+00 3.33695024e-07
f1	DE	669.290181	3150.67658	2.10E-27	157768.4057	2.10E-27	[-2.08317121e-14 -4.63501630e-15 1.63458208e-14 -1.27529295e-17]
f2	PSO	5423382.19	5944353.86	56559.12094	22578993.37	56559.12094	[0.00599621 0.23762487 0.00623424 0.00432703]
f2	DE	15175160.4	69796832.6	2.65E-23	349018816	2.65E-23	[-1.06518823e-15 3.59876446e-16 -5.16523089e-16 2.12233078e-15]
f3	PSO	21.2017	17.8380871	0.405175201	65.91	0.405175201	[0. 0.26473844 0.02582527 0.57829215]
f3	DE	1444.5194	6903.7	4.01E-27	34552.42472	4.01E-27	[2.52294054e-15 6.09174139e-16 5.64638122e-15 -1.07089356e-14]
f4	PSO	83.97	193.467	0.894184664	862.74	0.894184664	[1.07863975 1.10151977 1.26326255 1.55393791]
f4	DE	96509.06	457698.293	1.04E-11	2290729.07	1.04E-11	[1.00000004 1.00000009 1.00000014 1.00000031]
f5	PSO	6.3107	3.4764	1.296262503	14.20200006	1.296262503	[0.00496108 0.08205496 1.05273048 0.08188966]
f5	DE	20.281246	0.07701878	2.02E+01	20.4471145	2.02E+01	1284.90196702 5070.01318411 -371.96449959 841.02109309]
f6	PSO	25.198	0.7577	23.99997711	26.465	23.99997711	[10. 10. 10. 10.]
f6	DE	188.532339	0.87189877	1.87E+02	190.081457	1.87E+02	4382.32399732 920.99204542 2485.99044825 1902.97614334
f7	PSO	0.202235112	0.1038851	0.039976498	0.45066128	0.039976498	[6.51099447 0. 0.14762712 0.]
f7	DE	0.4114126	0.06153538	3.62E-01	1.15174073	3.62E-01	8.13166511 -7.85363944 9.18551891 8.71288816 -0.59189011
f8	PSO	12.17	4.1165	5.473110427	0.45066	5.473110427	[1.03281198 0.02378559 1.97135049 0.01324928]
f8	DE	58.9396773	25.500695	1.25E+01	775.130626	1.25E+01	[-1.06482548 0.04957824 0.02088603 -0.02529081]
f9	PSO	7.20024	4.5691	6.030094826	7.5722	6.030094826	[2.95284483 4.48838962 4.51223345 10.]

DIMENSION 30

Function	Algorithm	Mean	Standard Deviation	Best Value	Worst Value	Best Solution	Fitness Value
f1	PSO	5837678.72	3637722.61	98312.7481	12026623.4	98312.7481 10648.9703	[0.31772693 0.21603886 0. 0.43526619]
f1	DE	135810.1828	154768.9338	10648.97034	456823.1117	4	[-1.42011038e+01 4.25800510e-01 1.19916602e+01 -2.50307809e+01]
f2	PSO	20.3714474	14.3931204	1.76500932	68.6483699	1.76500932	[1.04310441e-16 2.03558031e-01 7.94805326e-01 1.04492007e+01]
f2	DE	16156874077	17399416660	1008238584	55525182781	1008238584	[14.80774449 5.811829 -5.05645087 -3.61893471 4.31295447]
f3	PSO	176.236933	498.419119	0.00010053	2469.99158	0.00010053 2797.04760	[1.0021641 1.0043457 1.00874427 1.01762596]
f3	DE	72393.50911	69585.82076	2797.047604	197400.9095	4	[-9.21135862e-01 5.19681580e+00 -6.64943337e+00 8.44204505e+00]
f4	PSO	71.7719711	135.100898	0.86158415	429.471678	0.86158415 20449143.4	[1.02279138 1.11720308 1.21003737 1.42514212]
f4	DE	3013231524	4879371577	20449143.48	15339156161	8	[-4.63435744e+00 3.11026965e+00 1.31371838e+01 1.17209034e+01]
f5	PSO	6.06123697	3.56894338	0.61682315	16.0974236	0.61682315 20.8364517	[0.06508761 0. 0.12516617 0.17698568]
f5	DE	20.87396498	0.076573554	20.83645177	21.02418589	7	[400.03941785 -52.20203135 1415.90927105 -693.88005137]
f6	PSO	46.801637	133.526496	0.90942429	576.6922105	0.90942429 1784.27832	[1.11797244 1.20138689 1.50099024 2.27207842]
f6	DE	1780.11996	1.317784953	1784.278327	1778.443851	7	[2450.94708641 312.93254199 -148.08908381 -2646.20544362]
f7	PSO	0.05678821	0.03844273	0	0.14530282	0 1.09725982	[0. 0. 0. 0.]
f7	DE	4.751589058	4.686582237	1.097259821	17.19762807	1	[-2.72267493 5.57045055 -0.50709748 -0.15482845]
f8	PSO	15.0956827	7.83787028	3.00923484	30.8482851	3.00923484 966.441170	[0.99279254 0.99005337 0.99872935 0.00893607]
f8	DE	15118.8739	17704.78242	966.4411706	54766.05776	6	[0.14668588 -5.4294287 2.2943706 -1.02880543]
f9	PSO						
f9	DE						

DIMENSION 50

Function	Algorithm	Mean	Standard Deviation	Best Value	Worst Value	Best Solution	Fitness Value
f1	PSO	18.5670916	19.3373931	1.073818647	70.25371977	1.073818647	[1.82251821e-02 1.48281517e-01 1.02542222e+00 2.89137286e-01]
f1	DE	158000.8346	128993.9054	25370.2486	379652.4177	25370.2486	[-3.18271695e+01 -1.56574601e+01 4.05877691e+00 4.55379857e-01]
f2	PSO	6205202.76	5490142.58	926274.2659	24727825.4	926274.2659	[0.05395631 0.06788106 0.17629802 0.94216461]
f2	DE	5.24E+10	38468728747	8296073888	1.12E+11	8296073888	3.10430772e+00 -2.33311482e+00 1.80386952e+01 2.35983919e+00]
f3	PSO	19.5541932	14.1275355	2.5122615	53.1798251	2.5122615	[1.49120505e-06 4.96844097e-01 9.54291872e-01 1.16392966e+01]
f3	DE	238660.7039	113061.3696	63408.52846	394158.8473	63408.52846	[9.43993130e+00 3.81158544e+01 6.81999548e+01 -1.22394088e+00]
f4	PSO	72.7741087	265.77655	0.008582018	1308.966684	0.008582018	[0.97953047 0.95923258 0.91972649 0.84530499]
f4	DE	46122476728	11553645276	7480063714	50490152704	7480063714	[13.05118619 -21.69954911 -42.85447875 91.57622573]
f5	PSO	5.65870088	2.93039622	0.632724204	13.37488471	0.632724204	[0.2153185 0.04765693 0.08093524 0.00563713]
f5	DE	21.13735604	0.026288979	21.12842547	21.23776124	21.12842547	[-23.41928588 1841.23217462 1653.65183883 -602.9335003]
f6	PSO	25.3599655	0.63489528	24.42525105	26.44006847	24.42525105	[8. 3.01107554 9. 7.99588666]
f6	DE	4973.341334	2.121453127	4969.667854	4976.603905	4969.667854	[-4071.33056711 -27241.0333532 -18588.99601837 297.93988745]
f7	PSO	0.07691397	0.07289617	0.002981627	0.249298457	0.002981627	[0.07714381 0.00189334 0.00406764 0.00436824]
f7	DE	13.36214009	8.526759933	3.442159886	28.60755745	3.442159886	[-41.07037073 -12.60350651 -11.14758249 -6.18107315]
f8	PSO	13.2224188	6.01519303	3.052765966	28.5445664	3.052765966	[0.99479911 0.99420574 0.01846618 0.99595065]
f8	DE	48898.36312	39816.95884	8882.455199	117561.6039	8882.455199	[-2.04954374e+01 -9.64066723e+00 -1.77278164e+01 1.90220813e-01]
f9	PSO	5.95467816	3.81328131	0	14.62488529	0	[0,0,0,0]
f9	DE						