

Evolution Strategies

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Max. generations: 1000 Epsilon: 1e-05 Sigma: 10 Mu: 10 Lambda: 10

Func	1+1	u+1	u+h	u,h
1	Vars: [72.22644682876168] Fitness: -0.000102213781646 Generations: 2	Vars: [-0.49399838737648477] Fitness: -0.309926896216 Generations: 368	Vars: [0.48086451917036876] Fitness: -0.310020501955 Generations: 80	Vars: [0.4808552016224256] Fitness: -0.310020501907 Generations: 69
2	Vars: [3.2580792747039227] Fitness: -181.622902062 Generations: 138	Vars: [3.2583137706866383] Fitness: -181.62290284 Generations: 402	Vars: [3.2582588640310783] Fitness: -181.62290292 Generations: 101	Vars: [3.2582711812251666] Fitness: -181.622902916 Generations: 69
3	Vars: [-7.723530649628285e-39] Fitness: -2.60455554156e+115 Generations: 1000	Vars: [-1.5308239745048856e-11] Fitness: -3.34507208085e+33 Generations: 1000	Vars: [-3.1955047950104277e-07] Fitness: -3.67758589753e+20 Generations: 99	Vars: [3.971932592490933e-06] Fitness: 1.91503024584e+17 Generations: 69
4	Vars: [0.4510546746998895] Fitness: 0.425517067767 Generations: 123	Vars: [0.45094156367741334] Fitness: 0.425516752334 Generations: 407	Vars: [0.4506992886000376] Fitness: 0.425516477897 Generations: 98	Vars: [0.45071013755250294] Fitness: 0.425516478492 Generations: 71
5	Vars: [-37.59725161212264] Fitness: -inf Generations: 1000	Vars: [-96.2423244750125] Fitness: -inf Generations: 1000	Vars: [-131.22239075322318] Fitness: -inf Generations: 69	Vars: [2.8235411596661133e+87] Fitness: 2.25103562856e+262 Generations: 1000

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6	Vars: [-250.3399696660735] Fitness: -inf Generations: 1000	Vars: [-227.25814653129086] Fitness: -inf Generations: 1000	Vars: [-224.06813701948465] Fitness: -inf Generations: 108	Vars: [-1.2526646926063156e+83] Fitness: -inf Generations: 1000
7	Vars: [-0.9072852654281288] Fitness: 1.06257859611e-06 Generations: 107	Vars: [-0.9079905421720907] Fitness: 0.000157721429347 Generations: 432	Vars: [-0.9073389845882459] Fitness: 1.1684233533e-11 Generations: 97	Vars: [-0.9073193960345312] Fitness: 1.39672832512e-07 Generations: 69
9	Vars: [1.2359666163211204e+89] Fitness: -1.88807925979e+267 Generations: 1000	Vars: [1.413928278453019e+89] Fitness: -2.8267157665e+267 Generations: 1000	Vars: [4.7858248374679655e+89] Fitness: -1.09615103385e+269 Generations: 1000	Vars: [261.90109685202685] Fitness: -17964368.3645 Generations: 69
10	Vars: [-5.775045598495231] Fitness: -41165.6144025 Generations: 99	Vars: [-5.775079321704207] Fitness: -41165.6144057 Generations: 505	Vars: [-5.775067762276801] Fitness: -41165.6144071 Generations: 88	Vars: [-5.775074331752011] Fitness: -41165.6144066 Generations: 69
11	Vars: [3.2585412158577114] Fitness: -181.6229008 Generations: 72	Vars: [3.2598148985337483] Fitness: -181.622838487 Generations: 405	Vars: [3.2582583390186732] Fitness: -181.62290292 Generations: 109	Vars: [3.2582555849180332] Fitness: -181.62290292 Generations: 69
12	Vars: [3.214316263698818e-05, -1.0007580623518728] Fitness: 2.3045128212e-06 Generations: 121	Vars: [-0.0007709219331458886, 0.9949853774118513] Fitness: 0.000102447383108 Generations: 648	Vars: [1.6442056572508216e-06, -0.9999999412360486] Fitness: 1.0827461145e-11 Generations: 216	Vars: [-1.7117440027602377e-05, -0.99999992243629] Fitness: 1.17205098609e-09 Generations: 138
13	Vars: [-0.11901454963352379, 0.007418394988563525] Fitness: 0.000100542018151 Generations: 171	Vars: [0.014393926394644652, 0.00022620165831753112] Fitness: 5.15288190672e-08 Generations: 571	Vars: [-0.001701009419084816, 1.6323798283785457e-06] Fitness: 4.25491911626e-12 Generations: 176	Vars: [-0.0019901742633079396, 8.01733530433059e-06] Fitness: 8.07331959946e-11 Generations: 138
14	Vars: [1.7685343775626892, 3.126674343383687] Fitness: 0.0536303625114 Generations: 135	Vars: [-6.210771771610025, 38.587424770243004] Fitness: 67.4262107772 Generations: 1000	Vars: [13.217284080242262, 174.72303383682112] Fitness: 125.8624036 Generations: 1000	Vars: [5.719569669317373, 32.720041650418054] Fitness: 13.8373531239 Generations: 142

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15	Vars: [1.0003445579320636, 2.998976249463936] Fitness: 3.01199570196e-06 Generations: 127	Vars: [1.0010373297519117, 3.000200532906925] Fitness: 7.24548230953e-06 Generations: 768	Vars: [1.0000003378470117, 2.999997743179615] Fitness: 1.99372140791e-11 Generations: 176	Vars: [0.9999968185597873, 3.0000017314897462] Fitness: 2.15290439873e-11 Generations: 138
16	Vars: [7.8224850392732375, 0.8555530052825476] Fitness: 0.249704811364 Generations: 115	Vars: [269.73383144648255, 0.9963134049110249] Fitness: 0.446344045144 Generations: 698	Vars: [2.9999898450204356, 0.4999981560598992] Fitness: 2.69883048117e-11 Generations: 156	Vars: [-105.11831629424266, 1.0093444316963809] Fitness: 0.466478399049 Generations: 138
17	Vars: [8.290424093477244, 70.54095837672726, -0.14249764064973416, -3.1808221374711385] Fitness: 44031.098811 Generations: 1000	Vars: [0.19917263522360845, -1.5504819351505659, 3.9705400178251598, 16.658714211193242] Fitness: 2050.61529421 Generations: 1000	Vars: [1.0782052867970349, 1.1609017840792113, 0.9186169050623096, 0.8430626625195189] Fitness: 0.045001161475 Generations: 1000	Vars: [8.45223748217946, 71.44903087016066, 0.02477352238953147, -7.359901273919778] Fitness: 43490.9218318 Generations: 276
18	Vars: [-0.09012233924011522, 0.7127753763451397] Fitness: -1.03162806456 Generations: 191	Vars: [0.08811660364558628, -0.712360095517055] Fitness: -1.03161663587 Generations: 823	Vars: [0.08984215892905903, -0.7126563844185659] Fitness: -1.03162845349 Generations: 226	Vars: [0.08983803838455878, -0.7126513561939652] Fitness: -1.03162845324 Generations: 138
19	Vars: [-42.47491536681358, 4.427633308540345, 3.8790293330573036, -41.54641363871483] Fitness: 10451.0584247 Generations: 1000	Vars: [-3.3766768147503017, 1.431791112407138, 1.2566845063715426, -2.838612961045805] Fitness: 205.774548242 Generations: 1000	Vars: [-0.022988263627379813, 0.002297373531400376, -0.010782729026456767, -0.010793295458550806] Fitness: 5.46193432873e-07 Generations: 932	Vars: [0.0055008902866420135, -0.0005345580051293342, 0.03364892644194175, 0.03371456686088699] Fitness: 2.75533808274e-05 Generations: 276

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Func	1+1	u+1	u+h	u,h
20	Vars: [-0.00019073539180541259, 0.0031656165304624825, 0.0026593158548237437] Fitness: 1.71294688233e-05 Generations: 150	Vars: [0.01763504155909256, 0.00016973422254906983, 0.0010220828202692628] Fitness: 0.000312068153789 Generations: 1000	Vars: [-6.788417706593354e-07, -5.260570909568537e-06, 2.5558377554929647e-06] Fitness: 3.46667390766e-11 Generations: 255	Vars: [-4.3281873436699555e-08, -8.084074837175403e-06, 3.1611741840045272e-06] Fitness: 7.53471615152e-11 Generations: 207
21	Vars: [0.6719182500856794, 0.4509727792706598] Fitness: 0.107662770363 Generations: 187	Vars: [11.853837142370836, 140.51796199998884] Fitness: 117.80781202 Generations: 621	Vars: [0.999984045963345, 0.9999691493951987] Fitness: 3.66301424982e-10 Generations: 216	Vars: [1.1116448587261767, 1.2361968970995791] Fitness: 0.0124841644134 Generations: 138
22	Vars: [-5.564620892352784e+18, -1.2394281312077621e+19, -1.6706763128831191e+19, -1.6536249079862118e+19, -4.1153161864355354e+18] Fitness: -5.53172305996e+19 Generations: 1000	Vars: [-2.2784664075128898e+19, -2.848660743947879e+18, 1.3775464391909642e+19, -9.830953728312504e+18, 1.6618658574487902e+19] Fitness: -6.58584015138e+19 Generations: 1000	Vars: [-4.816889783559554e+19, -6.213923681037469e+19, -5.856817650074953e+19, -4.508328994903353e+19, -5.510610422974291e+19] Fitness: -2.69065705325e+20 Generations: 1000	Vars: [-279.0285665357741, -157.48746742004275, 109.43043291776407, 260.08856906129927, 401.1297051484414] Fitness: -1211.0 Generations: 345

Func	l+1	u+1	u+h	u,h
23	Vars: [-2.3057489778277156, -0.34590738121219816, 0.8679369205036844, 0.3806579236750601, 0.43247168145012976, 0.785743553872622, 0.11009881882896533, 0.5110447920935908, 0.6458436202014743, 0.8209475541924435, 0.7332984823580001, 0.4571118477107591, 0.7731988399934799, 0.6952648133992961, 1.0736055633146084, 0.3281249389663692, 0.12051572649550335, 0.5590093470342984, 0.772261928409488, 0.6706297437870672, 0.36521735832163993, 0.4219901604683919, 0.2467491732192971, 0.6614738757196036, 0.5947372271296598, 0.456221524556351, 0.16672592558807076, 0.5244929707826077, 0.21273427447021084, 68.63375481394105] Fitness: 97.0862786875 Generations: 1000	Vars: [55.19905936813646, -27.733179681388506, 85.74731877435929, 66.01498091180386, 8.621858451048936, 55.01006403723404, 40.42298982297919, 37.16285076094757, 27.68110484817906, 32.28449896713999, 56.572541017118745, 80.88274809203526, 91.22036079330914, 90.3009972925655, 40.74083827053488, 6.007125413005934, 13.554321275300847, 83.02324569766438, 31.309455228720537, 8.843007173909697, 30.448663261795645, 21.193361839040723, 57.50344194412518, 46.03566657464063, 24.165290423274527, -24.0257172371139, 17.402620119423858, 11.958103207701024, 18.98468655404102, 32.6718218006027] Fitness: 4132237265.11 Generations: 1000	Vars: [-0.7776607616232661, 0.519853070986049, 0.4289549300481655, 0.36866659530650586, 0.3121082853542854, 0.052855996984293746, -0.49821805367566663, 0.3528886164072104, 0.291047837400418, 0.019803303457093288, 0.010034489582492367, 0.3156972843620191, 0.3087681693959457, 0.07317095744403442, 0.37857047126171917, 0.2401995023656869, 0.2984434122663152, 0.37696323008030536, 0.2089474566748618, 0.13440986251491346, 0.11553741713410715, 0.059830395908075484, -0.4061367819379149, 0.10866097343816719, 0.15106255695573917, 0.22192132293885977, 0.26409851379712235, 0.08482199421755844, 0.1552320392955106, 21.26495887528205] Fitness: 1.72356732904 Generations: 1000	Vars: [0.7453055626413735, -0.05781092738302249, 0.016274178865848005, 0.08294065490585678, 0.2901686241835993, 0.21596340577106696, 0.0883821101761827, 0.158186483361386, 0.28143389028594457, 0.2903608558791809, 0.28091485878317046, 0.11543862427159066, 0.019301260328647648, 0.13768963155956968, 0.44088633285617773, 0.05305617957298915, 0.15208589473737635, 0.13277462834692944, 0.21870895013654065, 0.048698137910971884, 0.3495274483238802, 0.257814314332153, 0.28062724192126354, 0.19776208020931701, 0.06278670177128044, 0.23364553344879183, 0.29018237208238945, 0.22777974656392003, 0.2579679399642314, 129.4077556655293] Fitness: 1.20717532548 Generations: 1000

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24	Vars: [-31.93681413356409, 0.03590622810068028] Fitness: 9.9999753109 Generations: 171	Vars: [15.969392478778278, 0.0042447266679432605] Fitness: 12.9999379435 Generations: 377	Vars: [-15.979276482158971, -31.977535086917825] Fitness: 0.999999814401 Generations: 188	Vars: [-31.957171695025128, -15.96044727116067] Fitness: 4.9999953364 Generations: 138