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1 /Users/meijiaojiao/opt/anaconda3/envs/RunToEnd/bin/python /Users/meijiaojiao/Desktop/Evolution_algorithm/stuck in local minima/SSGA/SSGA.py
2 [['iterations', 'mutation_rate', 'num_individuals', 'crossover_probability', 'Mutation_type', 'Crossover_type', 'R']]
3 2022-11-20 20:02:10
4 Parameter Combination is [[1000000, 2.0, 100, 0.5, 'Normal', 'Probabilistic_crossover', 0.1]]
5 Now testing Function21
6 Times is 0
7 Iter at 1998, best solution is -1.01197E+01, optima is -10.1532, similarity is 1.04098E+01, phenotype is [3.9934655941088812, 3.991558329597955, 3.9853822956580474, 4.0022740487778234]
8 Iter at 3998, best solution is -1.01232E+01, optima is -10.1532, similarity is 1.22120E+00, phenotype is [3.9934655941088812, 3.993942658778217, 3.9853822956580474, 4.0022740487778234]
9 Iter at 5998, best solution is -1.01448E+01, optima is -10.1532, similarity is 2.12150E+00, phenotype is [4.006450549267286, 3.993942658778217, 3.999968076351048, 4.0022740487778234]
10 Iter at 7998, best solution is -1.01489E+01, optima is -10.1532, similarity is 2.32955E+00, phenotype is [4.000550474411456, 3.993942658778217, 3.999968076351048, 4.0022740487778234]
11 Iter at 9998, best solution is -1.01489E+01, optima is -10.1532, similarity is 1.94456E+00, phenotype is [4.000550474411456, 3.993942658778217, 3.999968076351048, 4.0022740487778234]
12 Iter at 11998, best solution is -1.01520E+01, optima is -10.1532, similarity is 7.34396E-01, phenotype is [4.000550474411456, 4.002898705341794, 3.999968076351048, 4.0022740487778234]
13 Iter at 13998, best solution is -1.01527E+01, optima is -10.1532, similarity is 3.75735E-01, phenotype is [4.000550474411456, 3.99967909824638, 3.999968076351048, 4.0022740487778234]
14 Iter at 15998, best solution is -1.01527E+01, optima is -10.1532, similarity is 6.26738E-01, phenotype is [4.000550474411456, 4.000114517483902, 3.999968076351048, 4.0022740487778234]
15 Iter at 17998, best solution is -1.01527E+01, optima is -10.1532, similarity is 4.64770E-03, phenotype is [4.000550474411456, 4.000114517483902, 4.000071018256484, 4.0022740487778234]
16 Iter at 19998, best solution is -1.01527E+01, optima is -10.1532, similarity is 4.98183E-01, phenotype is [4.000550474411456, 4.000114517483902, 4.000071018256484, 4.0022740487778234]
17 Iter at 21998, best solution is -1.01527E+01, optima is -10.1532, similarity is 7.35943E-01, phenotype is [4.000550474411456, 4.000114517483902, 4.000071018256484, 4.0022740487778234]
18 Iter at 23998, best solution is -1.01530E+01, optima is -10.1532, similarity is 2.14581E+00, phenotype is [4.000550474411456, 4.000114517483902, 4.000071018256484, 4.00140335944627]
19 Iter at 25998, best solution is -1.01530E+01, optima is -10.1532, similarity is 1.22292E+00, phenotype is [4.000550474411456, 4.000114517483902, 4.000071018256484, 4.00140335944627]
20 Iter at 27998, best solution is -1.01530E+01, optima is -10.1532, similarity is 9.54398E-01, phenotype is [4.000550474411456, 4.000114517483902, 4.000071018256484, 4.00140335944627]
21 Iter at 29998, best solution is -1.01530E+01, optima is -10.1532, similarity is 1.11916E+00, phenotype is [4.000550474411456, 4.000114517483902, 4.000071018256484, 4.00140335944627]
22 Iter at 31998, best solution is -1.01530E+01, optima is -10.1532, similarity is 1.54256E+00, phenotype is [4.000550474411456, 4.000114517483902, 4.000071018256484, 4.00140335944627]
23 Iter at 33998, best solution is -1.01530E+01, optima is -10.1532, similarity is 1.95319E+00, phenotype is [4.000550474411456, 4.000114517483902, 4.000071018256484, 4.00140335944627]
24 Iter at 35998, best solution is -1.01530E+01, optima is -10.1532, similarity is 7.48607E-01, phenotype is [4.000550474411456, 4.000114517483902, 4.000071018256484, 4.00140335944627]
25 Iter at 37998, best solution is -1.01531E+01, optima is -10.1532, similarity is 5.44855E-01, phenotype is [4.000550474411456, 4.000114517483902, 4.000071018256484, 3.9994756883984484]
26 Iter at 39998, best solution is -1.01531E+01, optima is -10.1532, similarity is 2.44391E+00, phenotype is [4.000550474411456, 4.000114517483902, 4.000071018256484, 3.9994756883984484]
27 Iter at 41998, best solution is -1.01531E+01, optima is -10.1532, similarity is 1.07310E+00, phenotype is [4.000550474411456, 4.000114517483902, 4.000071018256484, 3.9994756883984484]
28 Iter at 43998, best solution is -1.01531E+01, optima is -10.1532, similarity is 2.48124E-02, phenotype is [4.000550474411456, 4.000114517483902, 4.000071018256484, 3.9994756883984484]
29 Iter at 45998, best solution is -1.01531E+01, optima is -10.1532, similarity is 7.17427E-01, phenotype is [4.000550474411456, 4.000114517483902, 4.000071018256484, 3.9994756883984484]
30 Iter at 47998, best solution is -1.01531E+01, optima is -10.1532, similarity is 8.47270E-01, phenotype is [4.000550474411456, 4.000114517483902, 4.000071018256484, 3.9994756883984484]
31 Iter at 49998, best solution is -1.01531E+01, optima is -10.1532, similarity is 1.74314E+00, phenotype is [4.000550474411456, 4.000114517483902, 4.000071018256484, 3.9994756883984484]
32 current optimal is -10.1532,global minima is -10.1532,similarity is 0.09717115654554442
33
34 Process finished with exit code 0
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