

Name: Vadim Parafenuk (Вадим Парафенюк)

Size of chromosome: 1000

Capacity of population: 20

Epoch (generations): 50

With mutation

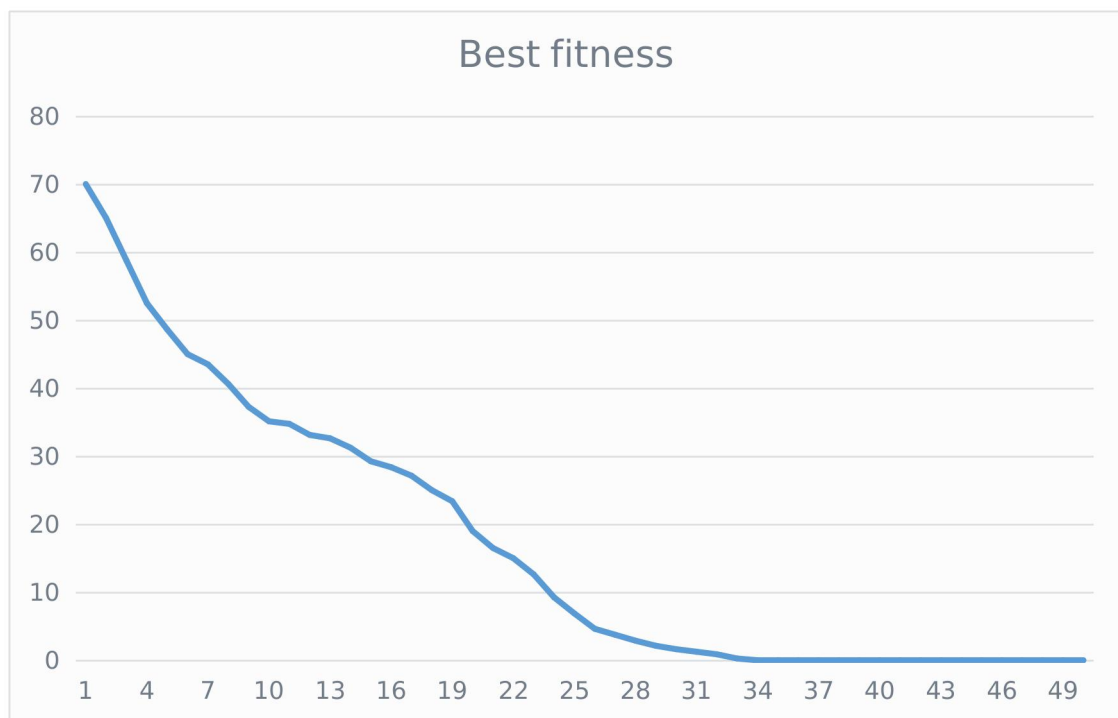
Onepoint crossover

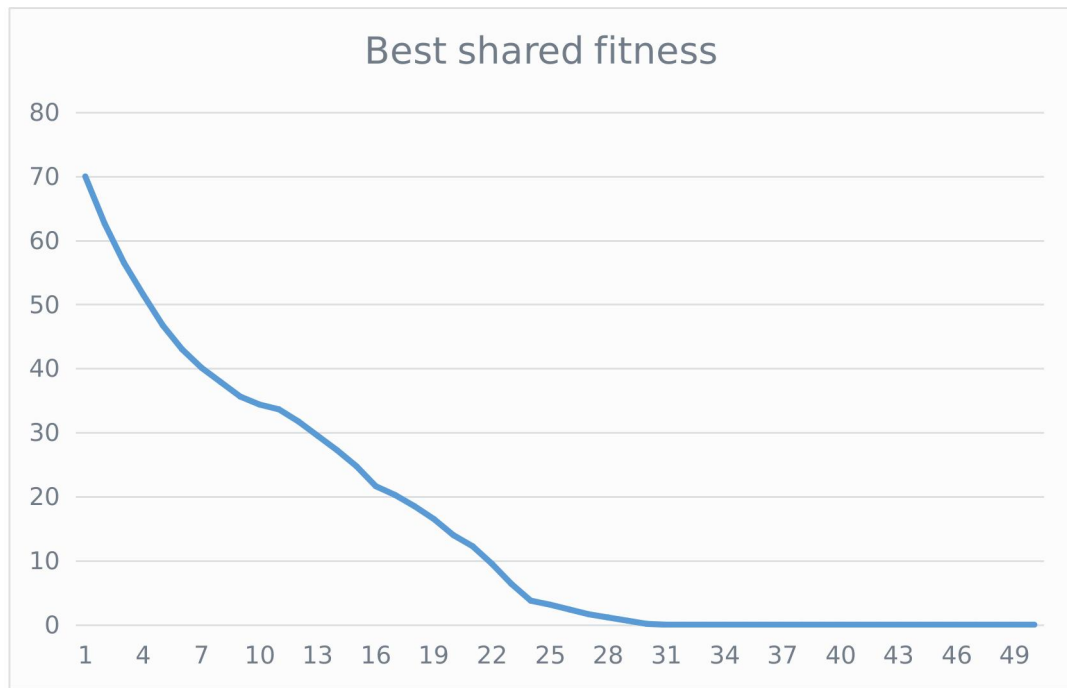
Truncate selection

Evolution:

X - generations

Y - Fitness (less - better)





Start:

Population	Location	Original fitness	Shared fitness
1	21, 444	423	423
2	167, 766	599	599
3	897, 65	832	832
4	671, 68	603	603
5	240, 11	229	229
6	663, 878	215	215
7	246, 44	287	287
8	2, 197	201	201

Medium:

Population	Location	Original fitness	Shared fitness
1	181, 149	423	540
2	68, 343	599	712
3	606, 824	218	904
4	68, 265	603	664
5	346, 34	229	265
6	955, 816	171	243
7	918, 855	173	305
8	215, 185	30	64

Finish:

Population	Location	Original fitness	Shared fitness
1	835, 763	72	84
2	793, 784	23	50
3	226, 201	27	43
4	200, 200	0	0
5	837, 811	48	82
6	175, 173	52	93
7	800, 800	0	0
8	195, 191	14	43

Best road:

34313411442133444231432423243411132412221232132431232311434232232
22212142432433121212414413111441411142234213233231321132321214123
13311121342134233143141423431231334431224113223423211323414232133
11231113244421442231241113322221112133442211332212223334231222413
31241411112211444132134424414224124331434123432321143243213414131
11243343411423221314414144341231311423122414411311121311311234243
22423414234321423311144443311311234323123224313314231443112233221
13431423333343143411133223434221323323232143443324123441331141342
42222222424111322132231412413312233211443341442213233334242132423
44413143231432414142414211333234232412132321331341333144224222441
13322441233334332323231242444341233224211424424144211243121442421
22243434121133223141424311331243411222432322332122123213244421342
1434121314411113134141112332324342431231422142242242242411443324
44413134441134313132221411224413133133123333223213442133431231331
13214343143414142112221131224121344421321342133131424421212211244
4223332413222241122143232

Conclusion: fitness sharing can help us to achieve multiple aims using genetic algorithm.