Evolutionary Computations

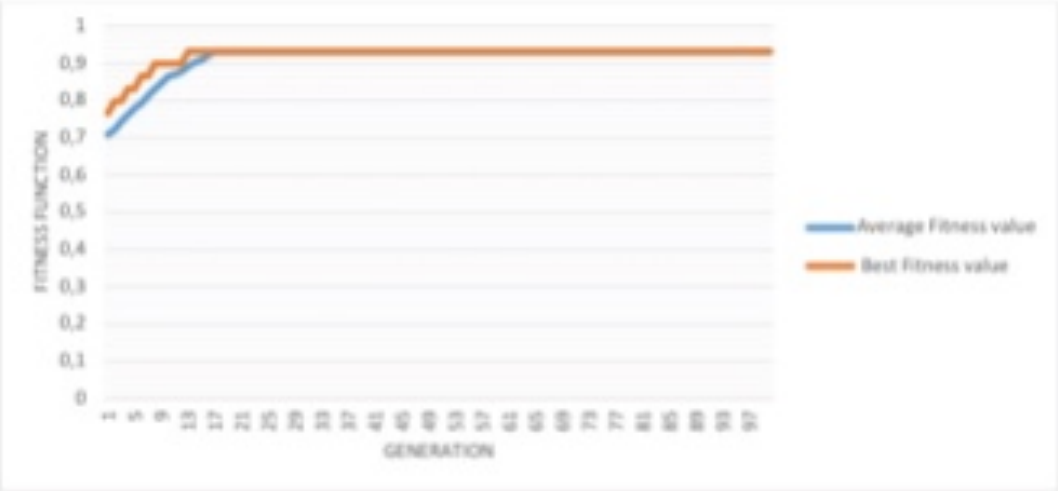
Student Works from Previous Semester

Lecture CIIT by Professor Akira Imada at Brest State Technical University

All One Problem

First scenario:

50%/50%, 100 Chromosomes, 30 Genes, One Point Crossover, without mutation, Random Parent Selection:



Fitness Function(FF) of best chromosome:

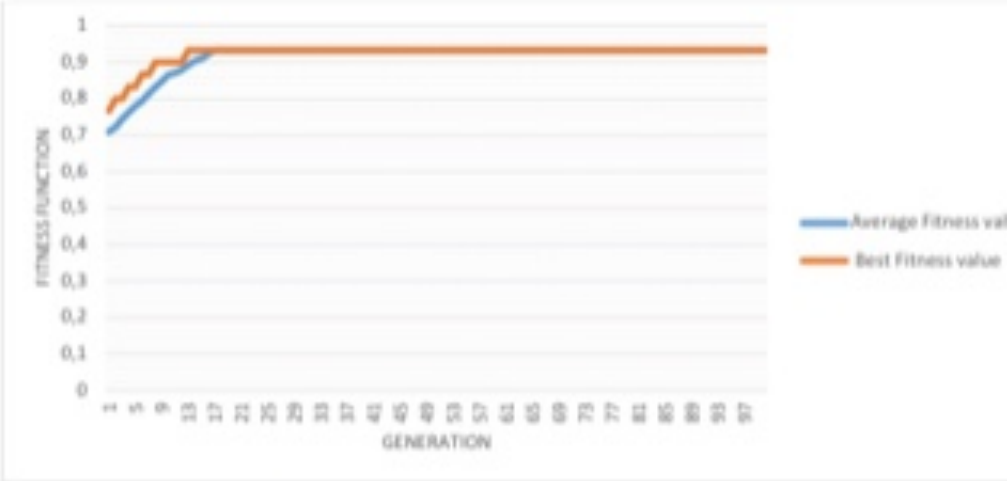
1st generation FF = [1; 1; 0; 1; 1; 0; 0; 0; 0; 0; 1; 1; 1; 1; 0; 1; 1; 1; 1; 1; 0; 1; 1; 1; 1; 0; 0; 1; 0; 0] = 0,6

15th generation FF = [1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 0; 1; 1; 1; 1; 1; 0; 1; 1; 1; 1; 1; 0; 1; 0; 0] = 0,833

30th generation FF = [1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 0; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 0; 0] = 0,9

Second scenario:

10%/90%, 100 Chromosomes, 30 Genes, Two Point Crossover, without mutation, Random Parent Selection:



Fitness Function(FF) of best chromosome:

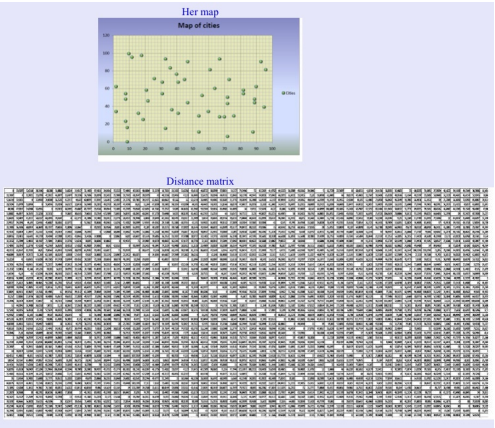
1st generation FF = [1; 1; 1; 1; 1; 1; 1; 1; 0; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 0; 1; 1; 1; 0; 0; 0; 0; 1; 0] = 0,76

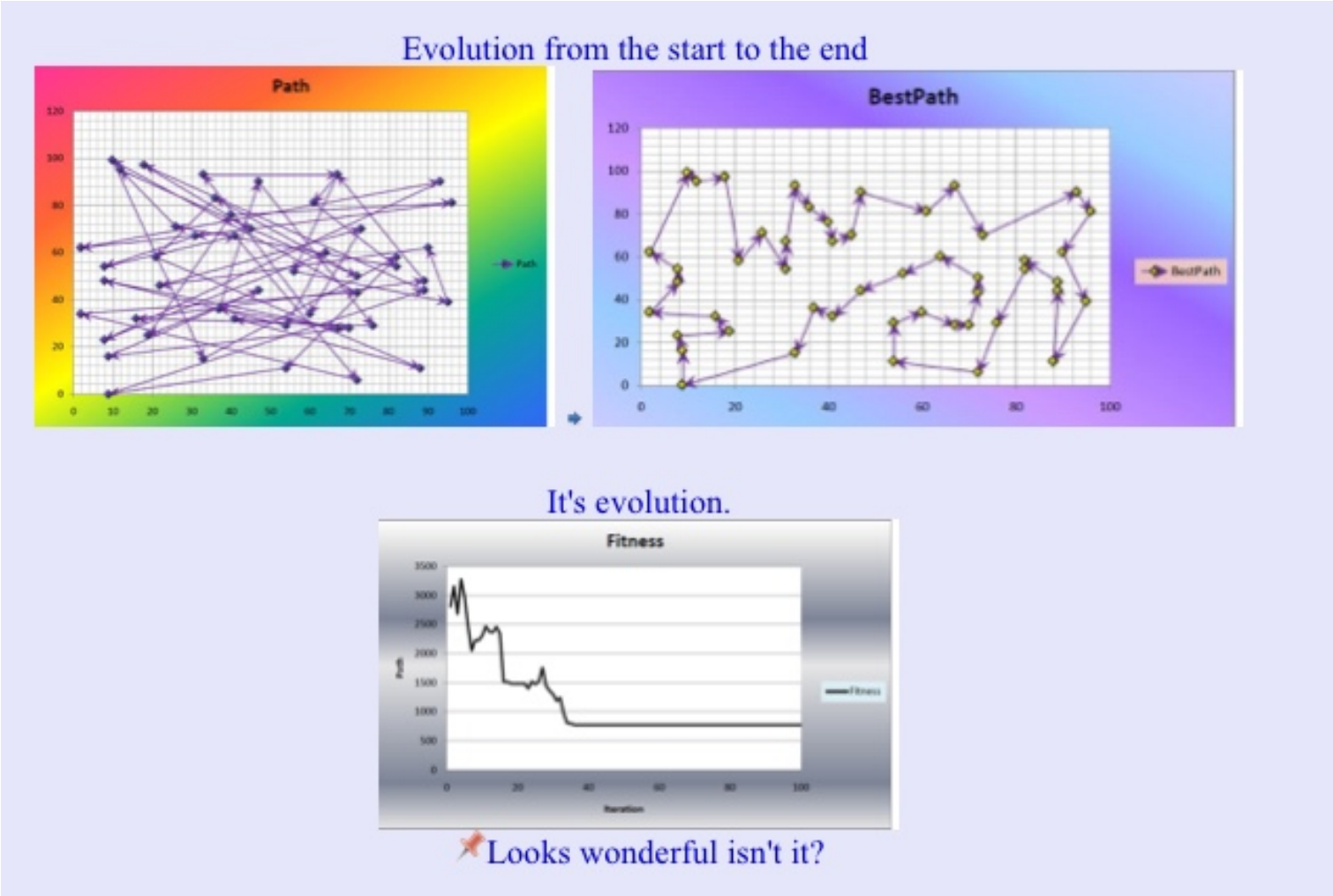
5th generation FF = [1; 1; 1; 1; 1; 1; 1; 1; 0; 1; 1; 1; 1; 1; 1; 0; 1; 0; 1; 1; 1; 1; 1; 1; 1; 0; 1; 1; 1; 0] = 0,83

30th generation FF = [1; 1; 1; 1; 1; 1; 1; 1; 0; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 0] = 0,9

Anastasia Khistolubova (10 Sept2018)

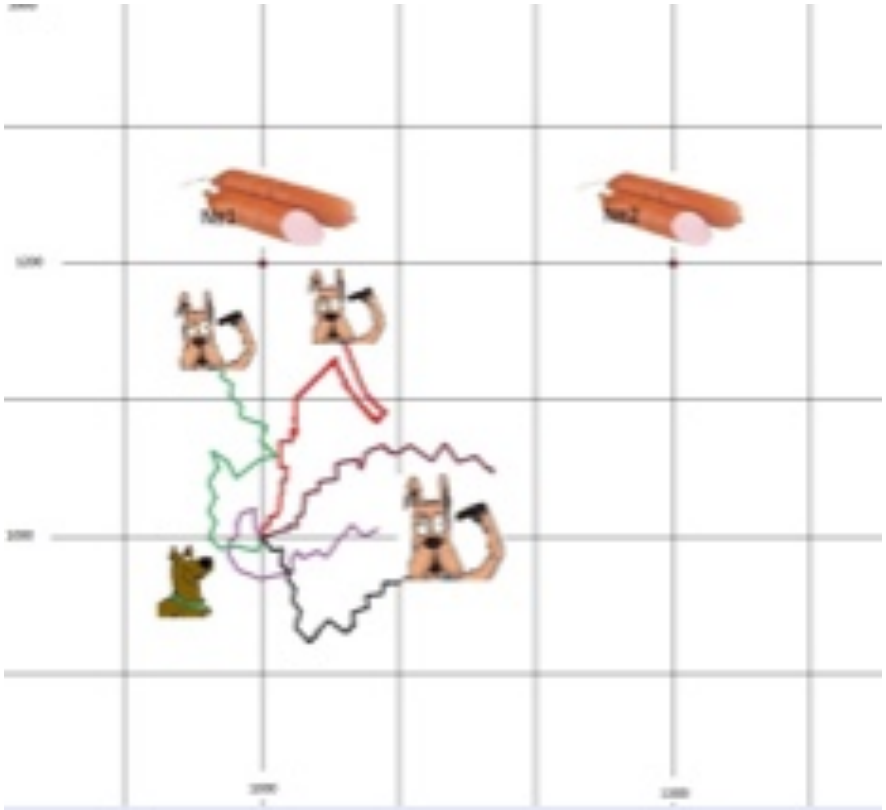
TSP with 30 cities





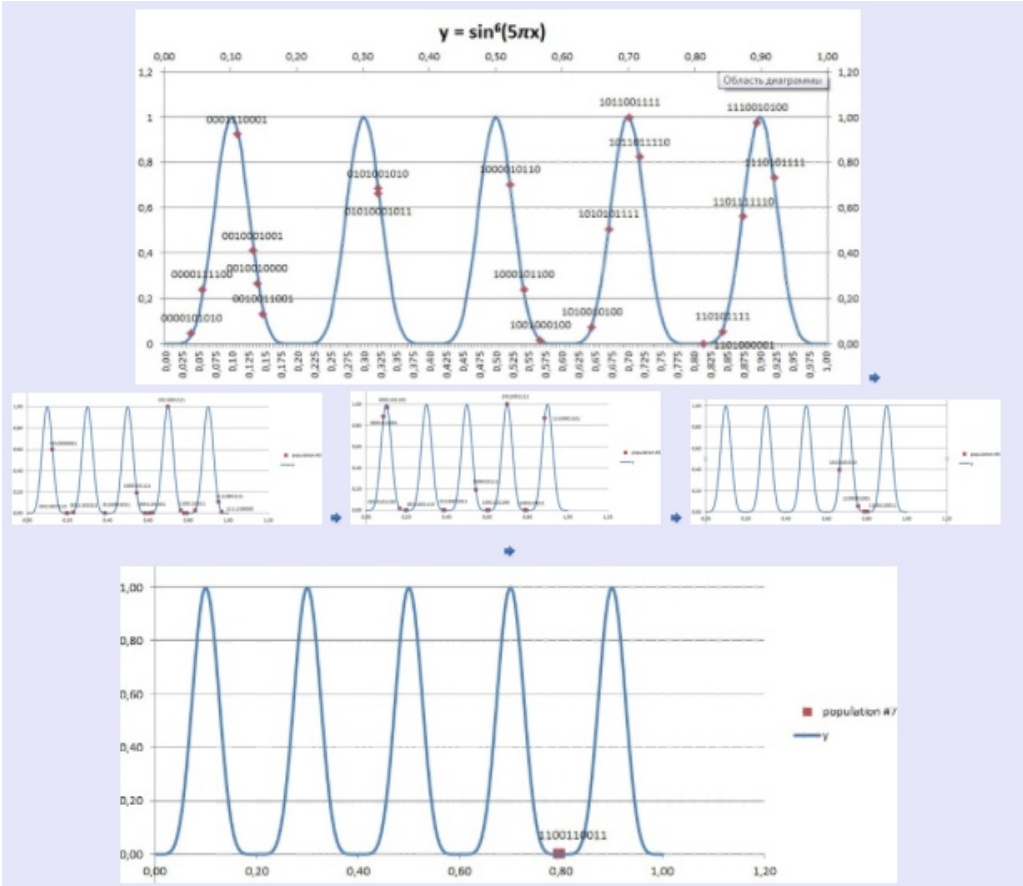
Yulia Lishko (2014)

Lucky Dog



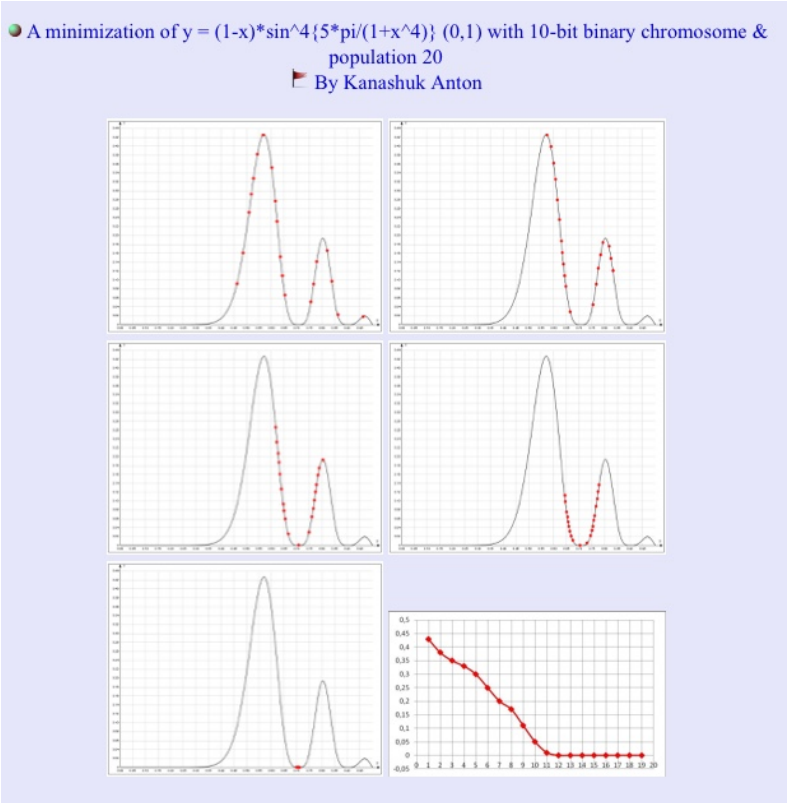
(Natalia Vyshinskaya 2013)

2D Function Optimization



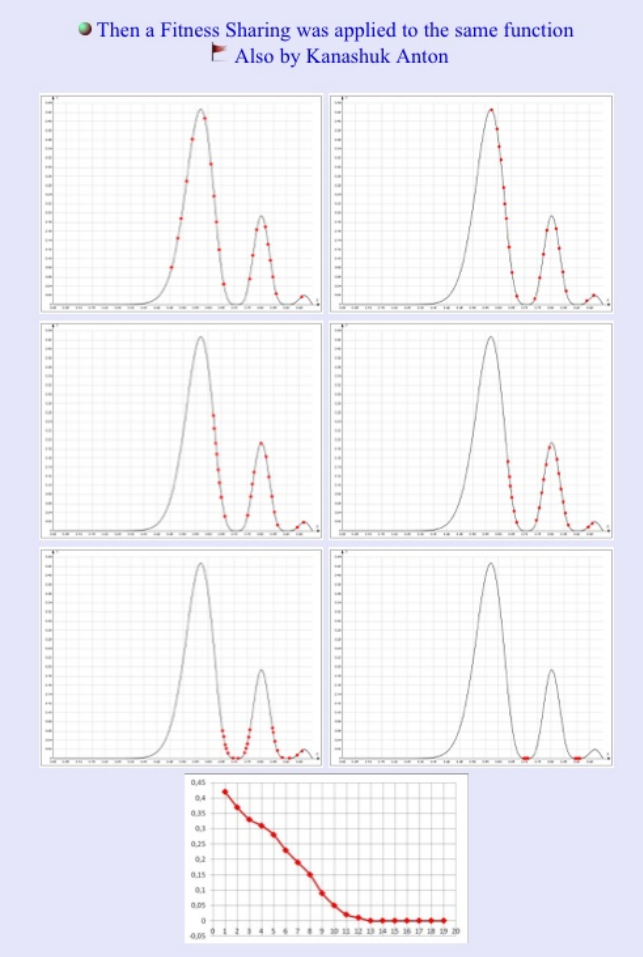
(Natalia Vyshinskaya 2013)

2D Function Optimization (2)



(Anton Kanashuk 2014)

2D Function Optimization (3)



(Anton Kanashuk 2014)