Evolutionary Computation Theory and Application Assessment II - Graph Coloring

Minh H. Nguyen

BRS University of Applied Sciences
minh.nguyen@smail.inf.h-brs.de

Thursday, 27 April 2017

1 Hyper parameters

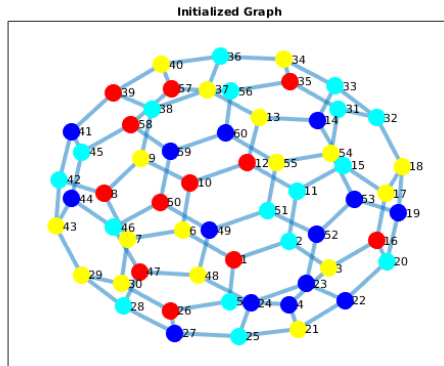|	
Population size	100
Generation	60
Crossover rate	0.8
Mutation rate	0.01

2 Solution

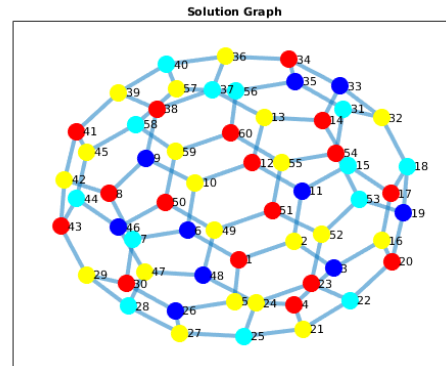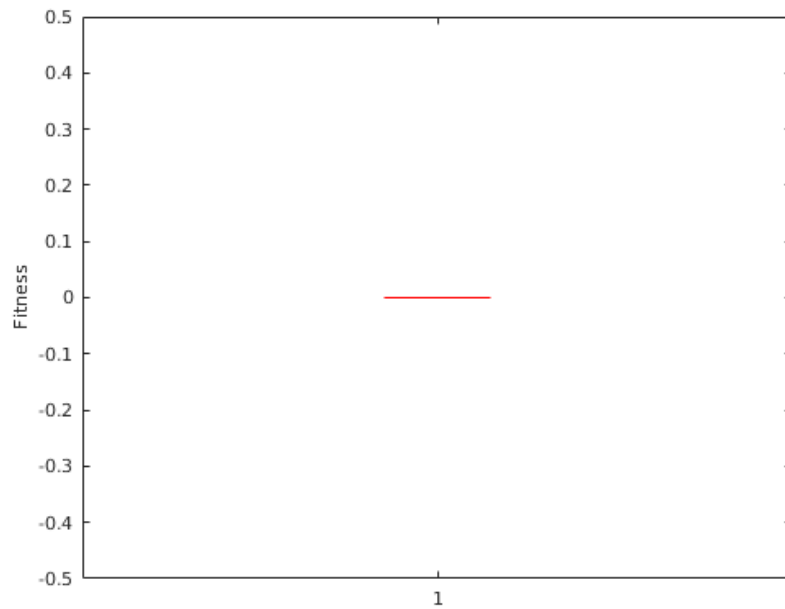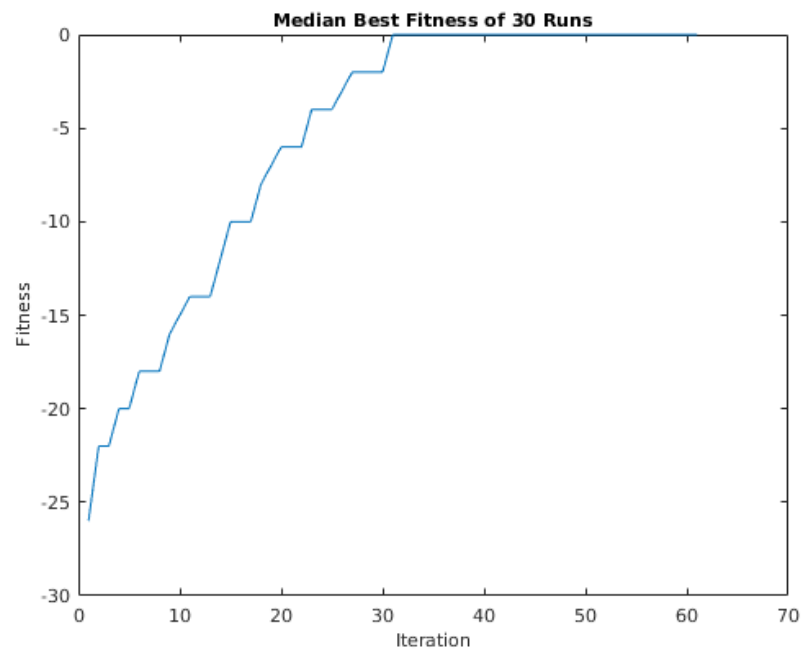**Figure 1:** *Initialized colors*

Figure 2: *A solution for the graph coloring problem*

3 Statistical Evaluation

The following box plot shows the fitness distribution of the best children after 30 runs of 60 generations each. Since all solutions converged to fitness 0, the box plot is just a red line.

Figure 3: *Box plot for the distribution of fitness of the best children over 30 runs*

Figure 4: *Median fitness progression over 60 generations of 30 runs*