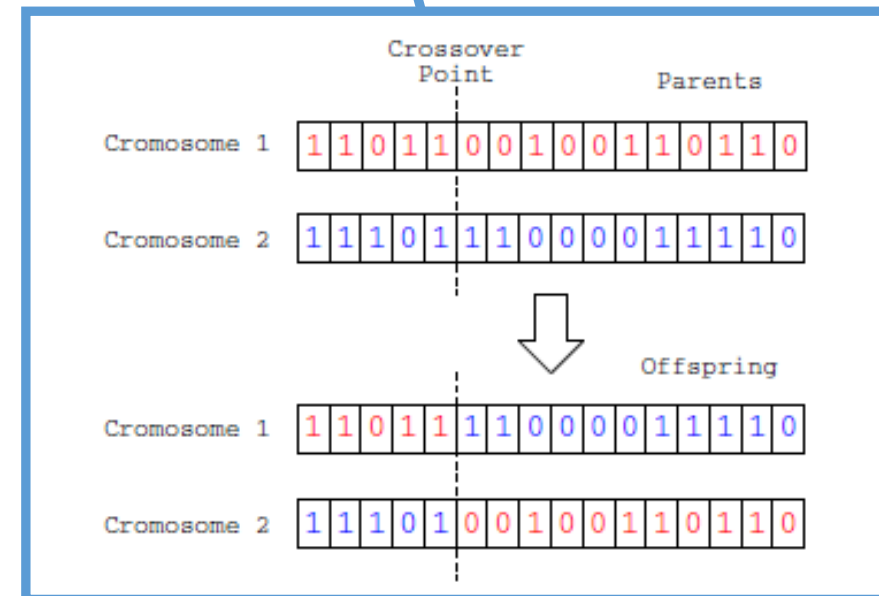
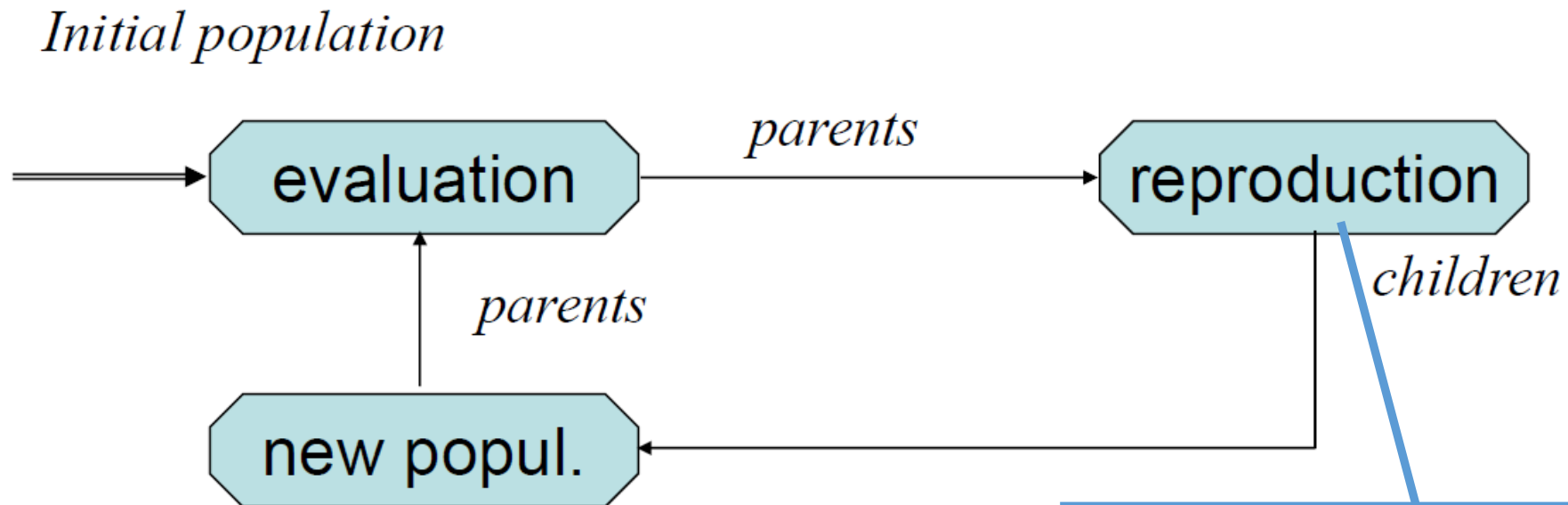
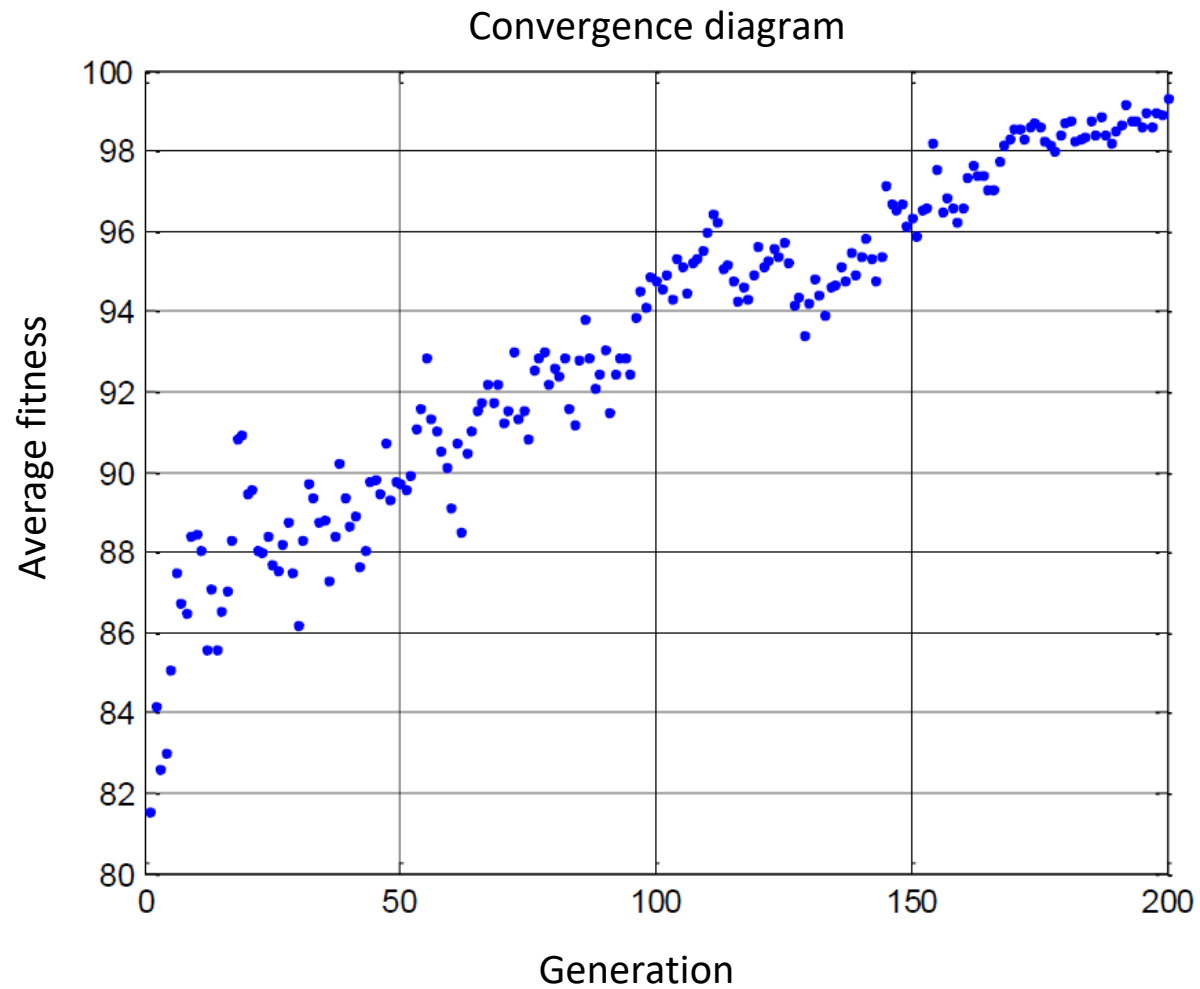


GA Matlab Algorithm

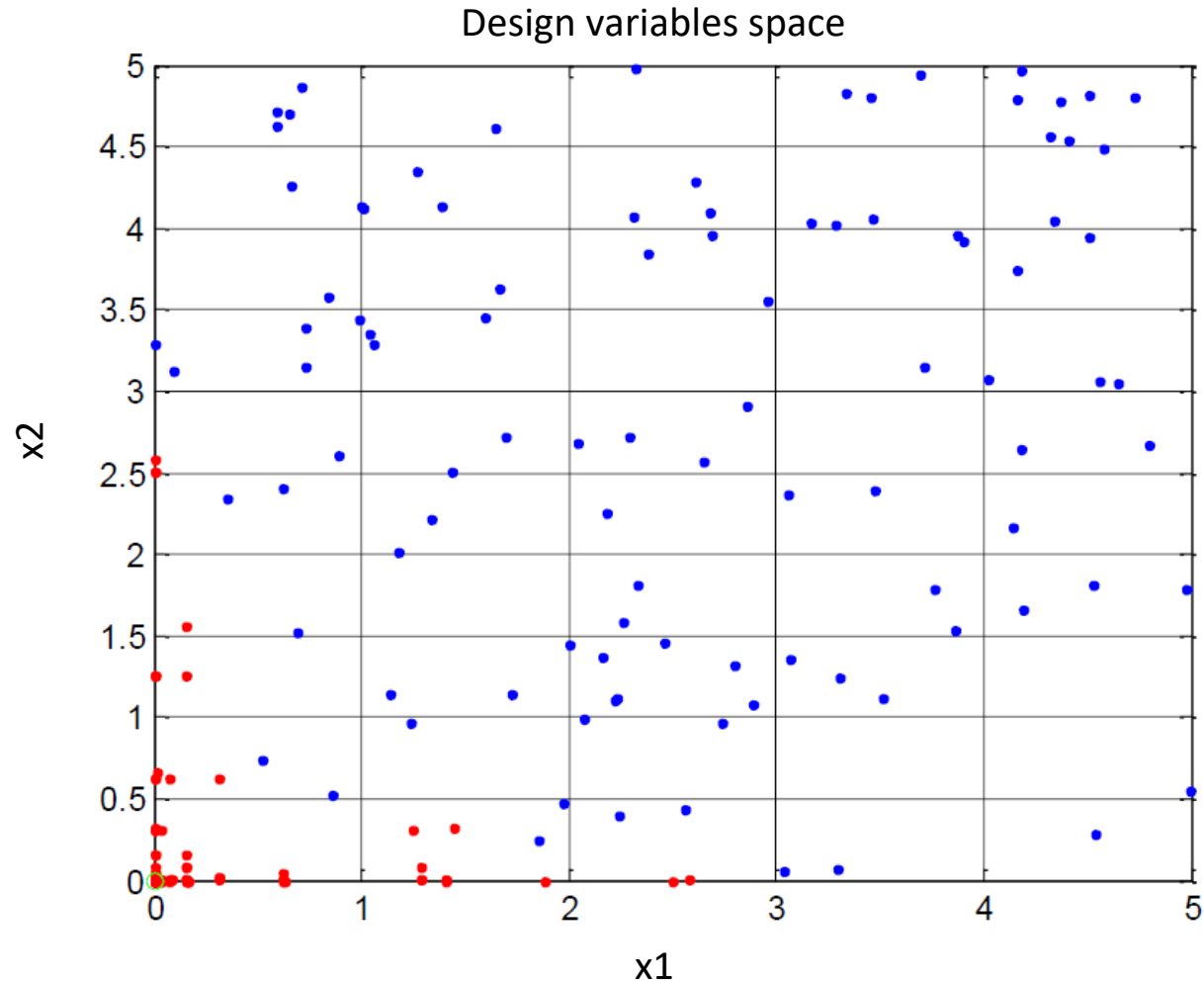
SGA Cycle



$y = 100 - (x_1^2 + x_2^2)$; $x_1, x_2 = [0 \ 5]$ 16 bits
Population of 100 individuals
Crossover, probability 100%
NO mutation

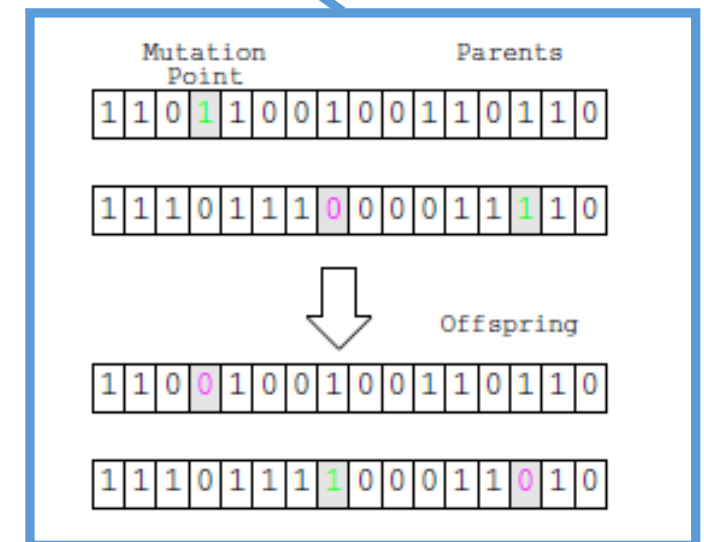
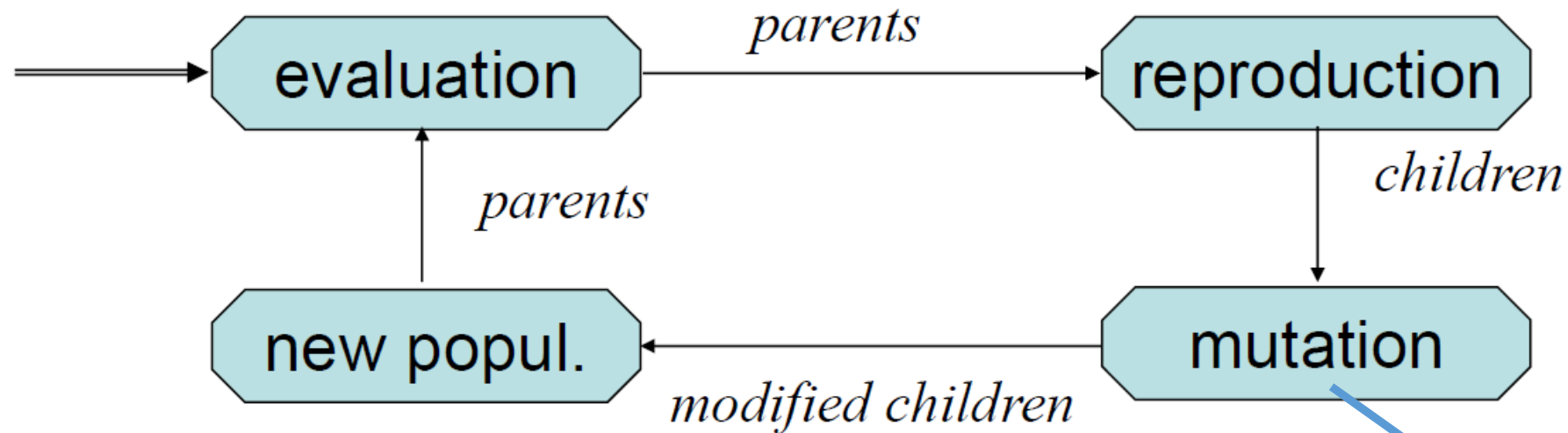


$y = 100 - (x1.^2 + x2.^2);$ $x1, x2 = [0 \ 5]$ 16 bits
Population of 100 individuals
Crossover, probability 100%
NO mutation

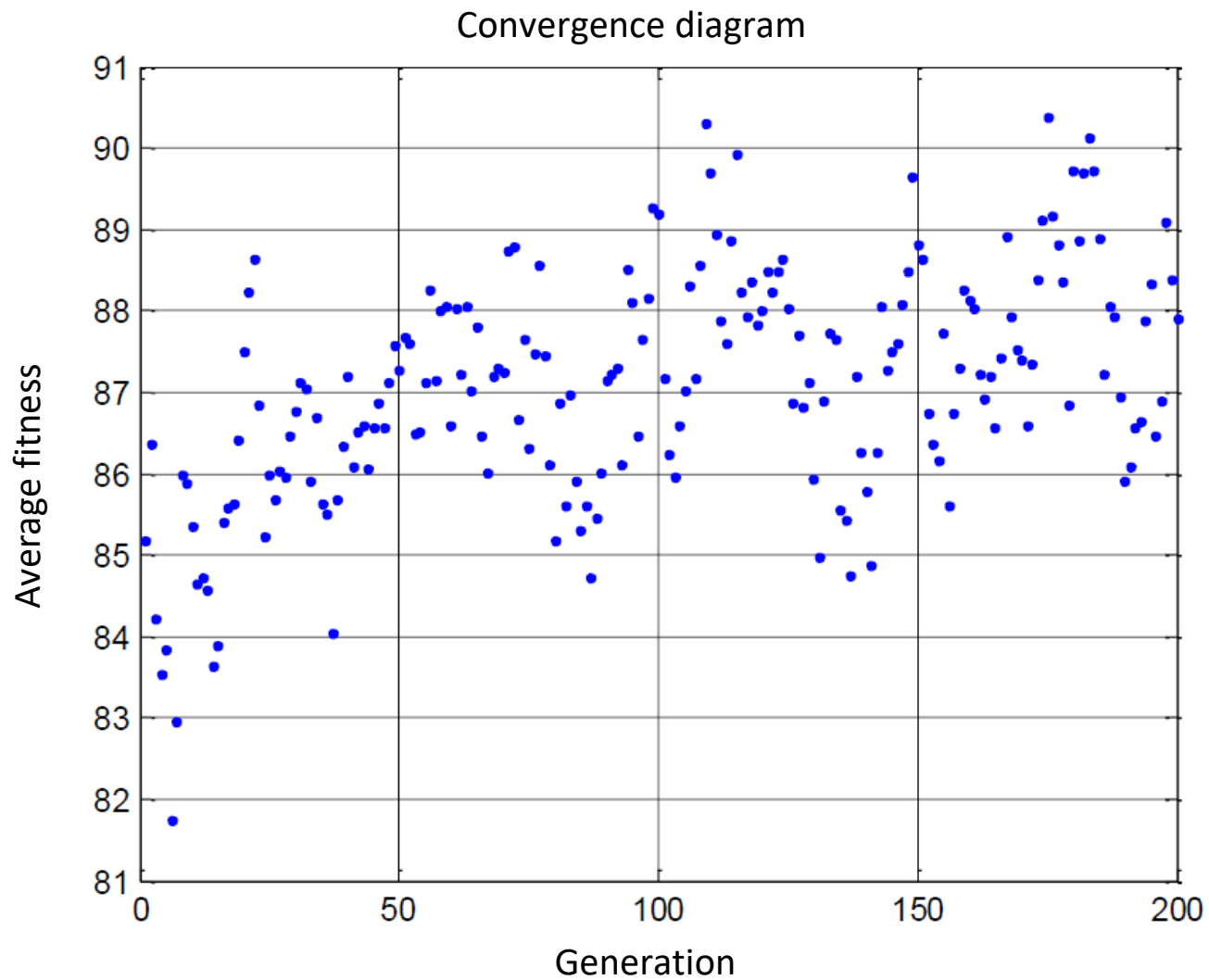


SGA Cycle

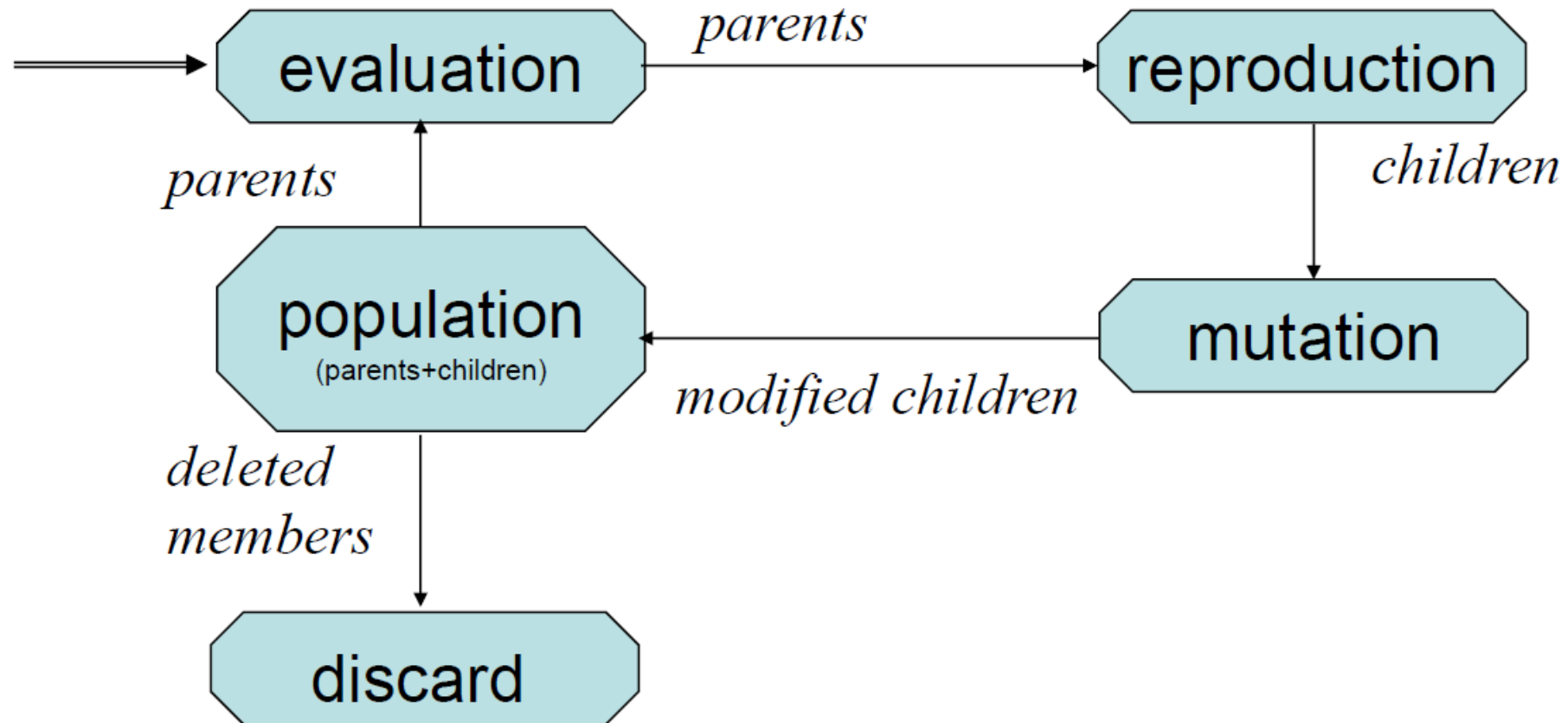
Initial population



```
y = 100-(x1.^2+x2.^2); x1,x2 = [0 5] 16 bits  
Population of 100 individuals  
Crossover, probability 100%  
Mutation, YES, probability 2% (par=0.5)
```

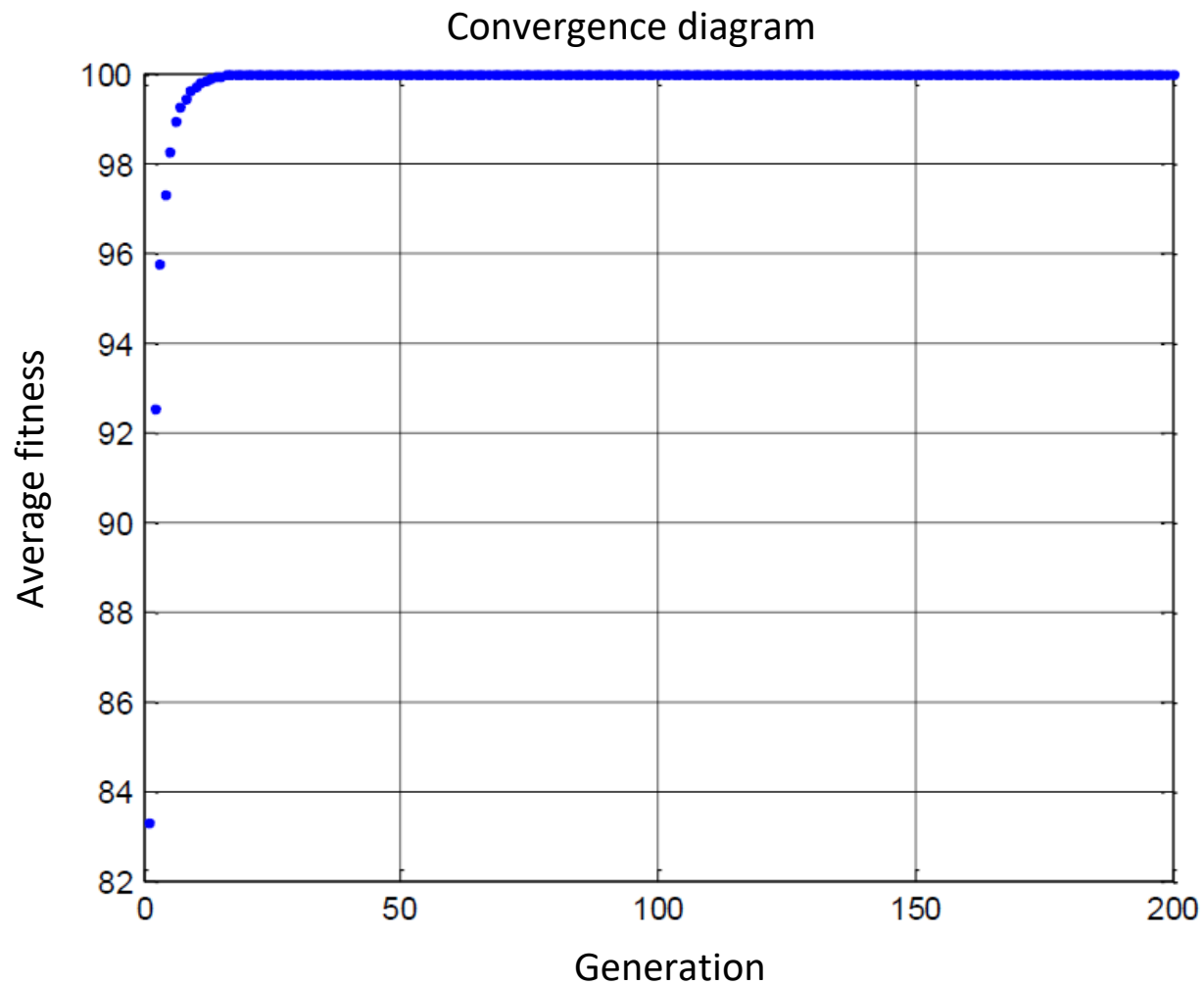


Standard GA Cycle



$y = 100 - (x_1^2 + x_2^2)$; $x_1, x_2 = [0 \ 5]$ 16 bits
Population of 100 individuals
Crossover, probability 100%
Mutation, YES, probability 2% (par=0.5)
Selection of best individuals

**Convergence in 10
generations**




```
y = 100-(x1.^2+x2.^2); x1,x2 = [0 5] 16 bits  
Population of 100 individuals  
Crossover, probability 100%  
Mutation, YES, probability 2% (par=0.5)  
Selection of best individuals
```

