COMP3201 **Fall 2018**

Assignment 6

Published: 2018-11-20 Due: 2018-11-30

Analyze and compare the combinations of parent selection and survivor selection methods for eight-queen puzzle using your A3 code.

1. Parent selection methods include multi-pointer selection and tournament selection (size 4); survivor selection methods include (μ+λ) and replacement selection. Test all four combinations.
2. The parameter setting is as follows:
   popsize = 20
   mating_pool_size = int(popsize*0.5)
   tournament_size = 4
   mut_rate = 0.2
   xover_rate = 0.9
   gen_limit = 50
3. For each combination of the selection methods, run the algorithm 20 times, collect the results, and compute the mean, SD, and 95% confidence interval of the best fitness. Compare the results of the four combinations.
4. In addition, compute the measures of SR (a successful run is one that solves the puzzle) and AES. For the calculation of AES, exclude the unsuccessful runs.
5. Use figures and/or tables to present your results and comparison.
6. Discuss your results.