最佳化理論 (EECN30124) Optimization Theory

MATLAB Homework II due by 2023/12/8

Please submit the report and the program to E3

1. Given the Rosenbrock function

$$f(\boldsymbol{x}) = 100(x_2 - x_1^2)^2 + (1 - x_1)^2$$

whose minimizer is at $[1,1]^{\mathrm{T}}$.

(a) Implement the Genetic Algorithm to find the minimizer.

(b) Implement the Particle Swarm Optimization to find the minimizer.

(c) Implement the Cuckoo Algorithm to find the minimizer.

(d) Compare the results obtained from (a)-(c).