

## Abstract

Cuckoo Search or CS categorized as Nature-Inspired Algorithms has an impressive performance on optimization problems for the case of real numbers. CS also promises good performance for the case of discrete problems such as combinatorial problem the Cutting Stock Problem due to Levy Flights operation that become a powerful operator in searching process.

This Final Assignment introduces CS to complete the one-dimensional CSP problems with classification 1/V/I/R and 1/V/I/M. CS major development for this CSP lies in Levy Flights, which is modified with swap mutation and Stock Remove & Insert (SRI) mutation.

The test results indicate that CS also performs well for the CSP. From the three cases examined, CS managed to find a solution that results the global minimum trim loss for each case.

**Keywords:** cuckoo search, cutting stock problem, lévy flights, swap mutation, stock remove & insert mutation.