

Comparative Study of Five Metaheuristic Algorithms for Team Formation Problem

Md. Abdul Kader^a and Kamal Z. Zamli^b

Faculty of Computing, College of Computing and Applied Sciences, Universiti Malaysia Pahang,
26600 Pekan, Pahang, Malaysia

a kdr2k10@gmail.com b kamalz@ump.edu.my

ABSTRACT:

This paper presents a comparative study of five metaheuristic algorithms, namely, salp swarm algorithm (SSA), owl search algorithm (OSA), sooty tern optimization algorithm (STOA), squirrel search algorithm (SqSA), and crow search algorithm (CSA) adopted in the Covid19 team formation (CTF) problem. The performance comparison of these algorithms is conducted by executing each algorithm twenty times to ensure the statistical significance. The study considers the minimum number of experts and the minimum team formation cost in defining the objective function. The CSA was found to be the more effective metaheuristic algorithm for the Covid19 team formation problem from the optimal results in terms of overall solution quality and runtime efficiency.

KEYWORDS:

Metaheuristic Algorithms; Crow Search Algorithm; Covid19 Team Formation

ACKNOWLEDGEMENTS

This work is funded by RDU Grant No. RDU192211: An automatic researcher profiling system for UMP employing UMPIR data from Universiti Malaysia Pahang. We thank Ministry of Higher Education (MOHE), Malaysia for the contribution and support.