World Academy of Science, Engineering and Technology
International Journal of Computer and Information Engineering
Vol:15, No:01, 2021

A Hybrid Multi-Objective Firefly-Sine Cosine Algorithm for Multi-Objective Optimization Problem

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Abstract : Firefly algorithm (FA) and Sine Cosine algorithm (SCA) are two very popular and advanced metaheuristic algorithms. However, these algorithms applied to multi-objective optimization problems have some shortcomings, respectively, such as premature convergence and limited exploration capability. Combining the privileges of FA and SCA while avoiding their deficiencies may improve the accuracy and efficiency of the algorithm. This paper proposes a hybridization of FA and SCA algorithms, named multi-objective firefly-sine cosine algorithm (MFA-SCA), to develop a more efficient meta-heuristic algorithm than FA and SCA.

Keywords : firefly algorithm, hybrid algorithm, multi-objective optimization, sine cosine algorithm
Conference Title : ICACSE 2021 : International Conference on Applied Computer Science and Engineering
Conference Location : Tokyo, Japan
Conference Dates : January 07-08, 2021