

Prof. Derek Abbott

Editor-in-Chief

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Dear Dr. Abbott

I am pleased to submit our manuscript entitled, “*A Novel Multi-Objective Forest Optimization Algorithm for Wrapper Feature Selection*” by Babak Nouri-Moghaddam, Mehdi Ghazanfari, and Mohammad Fathian, for consideration as *IEEE Access* original research article.

In this manuscript, we propose a multi-objective feature selection algorithm based on forest optimization algorithm (FOA) using the archive, grid, and region-based selection concepts. For this purpose, two versions of the proposed algorithm are developed using continuous and binary representations. The performance of the proposed algorithms is investigated on nine UCI datasets and two microarray datasets. In comparison to five traditional single-objective algorithms, Continuous-MOFOA (CMOFOA) and Binary-MOFOA (BMOFOA) have managed to reduce the number of features and improve the classification performance. Therefore, CMOFOA and BMOFOA can be efficiently used to solve the multi-objective feature selection problem. Furthermore, the results of the proposed algorithms were compared with the results of four conventional multi-objective algorithms. Moreover, CMOFOA outperformed the five other methods on both the test and train sets in most cases, in terms of both dimension reduction and classification error. Besides, following the study of computational time, we observed that both CMOFOA and BMOFOA algorithms had spent less computational time due to the use of simple operators to generate new solutions and use the archive structure to maintain non-dominated solutions.

Each of the authors confirms that this manuscript has not been previously published and is not currently under consideration by any other journal. Additionally, all of the authors have approved the contents of this paper and have agreed to the *IEEE Access*'s submission policies. Each named author has substantially contributed to conducting the underlying research and drafting this manuscript. Additionally, to the best of our knowledge, the named authors have no conflict of interest, financial or otherwise.

Thank you for your consideration

Sincerely,

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