A New Fuzzy based Evolutionary Optimization for Job Scheduling with TLBO

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Abstract

Grid computing is a framework that shares data, storage, computing across heterogeneous and distributed locations to meet the current and growing computational demands. This paper proposes a novel evolutionary optimization approach using fuzzy Teaching Learning Based Optimization (TLBO) for resource scheduling in computational grids. The fuzzy TLBO generates an efficient schedule to complete the jobs within a minimum period of time. The performance of the proposed fuzzy based TLBO algorithm evaluated with various other nature heuristic algorithms, Genetic Algorithm (GA), Simulated Annealing (SA), Differential Evolution, and fuzzy PSO. Experimental results have shown the efficiency and prominence of the proposed algorithm in producing optimal solutions for the selected benchmark job scheduling problems compared to other algorithms.

References

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Index Terms

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Keywords

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