Software Module Clustering Based on the Fuzzy Adaptive Teaching Learning Based Optimization Algorithm

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Abstract:
Although showing competitive performances in many real-world optimization problems, Teaching Learning based Optimization Algorithm (TLBO) has been criticized for having poor control on exploration and exploitation. Addressing these issues, a new variant of TLBO called Adaptive Fuzzy Teaching Learning based Optimization (ATLBO) has been developed in the literature. This paper describes the adoption of Fuzzy Adaptive Fuzzy Teaching Learning based Optimization (ATLBO) for softwaremodule clustering problem.Comparative studies with the originalTeaching Learning based Optimization (TLBO) and other Fuzzy TLBO variant demonstrate that ATLBO gives superior performance owing to its adaptive selection of search operators based on the need of the current search.

Keywords: : Search-Based Software Engineering; Software Module Clustering; Adaptive Teaching Learning Based Optimization; Mamdani Fuzzy

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