

Metaheuristic to Align Multiple Sequences

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Abstract : In this study, a new method for solving sequence alignment problem is proposed, which is named ITS (Improved Tabu Search). This algorithm is based on the classical Tabu Search (TS). ITS is implemented in order to obtain results of multiple sequence alignment. Several ideas concerning neighbourhood generation, move selection mechanisms and intensification/diversification strategies for our proposed ITS is investigated. ITS have generated high-quality results in terms of measure of scores in comparison with the classical TS and simple iterative search algorithm.

Keywords : multiple sequence alignment, tabu search, improved tabu search, neighbourhood generation, selection mechanisms

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