

Digestion Optimization Algorithm: A Novel Bio-Inspired Intelligence for Global Optimization Problems

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Abstract : The digestion optimization algorithm is a novel biological-inspired metaheuristic method for solving complex optimization problems. The algorithm development was inspired by studying the human digestive system. The algorithm mimics the process of food ingestion, breakdown, absorption, and elimination to effectively and efficiently search for optimal solutions. This algorithm was tested for optimal solutions on seven different types of optimization benchmark functions. The algorithm produced optimal solutions with standard errors, which were compared with the exact solution of the test functions.

Keywords : bio-inspired algorithm, benchmark optimization functions, digestive system in human, algorithm development

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