

عنوان مقاله:

AOACO : Aquila Optimizer Based on Ant Colony Optimization

محل انتشار:

نهمین کنفرانس بین المللی مهندسی صنایع و سیستم ها (سال: 1402)

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خلاصه مقاله:

Over the past two decades, Metaheuristic (MH) algorithms have played a crucial role in solving intractable optimization problems. Although meta-heuristic algorithms have proven to be highly effective in providing efficient solutions to a broad spectrum of complex problems, there are instances where hybrid algorithms have demonstrated their potential in further enhancing problem-solving capabilities and augmenting the performance of meta-heuristic algorithms. In this study we proposed a novel hybrid method based on two metaheuristic algorithms, The Aquila Optimizer (AO) algorithm and Ant Colony Optimization for continuous domains (ACOR) for solving global optimization. Since the Aquila algorithm is a population-based method and has a continuous nature, it can be very effective in improving the continuous domains of Ant Colony Optimization. In order to verify the effectiveness of the algorithm, the algorithm was benchmarked on some well-known test functions and compared with other popular meta-heuristic algorithms. The results show that this hybrid algorithm performs significantly better than other algorithms

کلمات کلیدی:

Hybrid Algorithm, Ant Colony Optimization, Aquila Optimizer, Global Optimization

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