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Comparison of swarm intelligence algorithms for high dimensional optimization problems (Article)

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Abstract

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High dimensional optimization considers being one of the most challenges that face the algorithms for finding an optimal solution for real-world problems. These problems have been appeared in diverse practical fields including business and industries. Within a huge number of algorithms, selecting one algorithm among others for solving the high dimensional optimization problem is not an easily accomplished task. This paper presents a comprehensive study of two swarm intelligence based algorithms: 1-particle swarm optimization (PSO), 2-cuckoo search (CS). The two algorithms are analyzed and compared for problems consisting of high dimensions in respect of solution accuracy, and runtime performance by various classes of benchmark functions. © 2018 Institute of Advanced Engineering and Science. All rights reserved.

Author keywords

Cuckoo search High dimensional problem Swarm intelligence algorithms Particle swarm optimization

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