

## عنوان مقاله:

ABC+PAS: ABC Enhancement by Parallel Auto Select Local Search

## محل انتشار:

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## خلاصه مقاله:

The Artificial Bee Colony (ABC) algorithm is a relatively new member of swarm intelligence based algorithms, which had shown better performance than other populationbased algorithms or the same performance; however this algorithm has deficiency in deal with some functions. Thispaper presents two appropriate local search heuristics as complementary of the ABC algorithm. In addition to present these local search heuristics, a parallel approach is proposed toselect best values achieved by local searches. This approach improves robustness of ABC with local search, andconsequently makes it more generally applicable than ABC or ABC with specific local search. The proposed algorithm is tested on nine benchmark functions which are hard for ABC.Numerical results show that these local searches obtain highquality results in some problems, also according to problemproperties, one local search may operate more successful than the others, and with parallel auto select method higher quality of solution can be achieved compare to use of specific local search

## کلمات کلیدی:

Numerical Optimization, Swarm Intelligence, Artificial Bee Colony Algorithm, Local Search, and Parallel Algorithm

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