

## عنوان مقاله:

Chaotic Genetic Algorithm based on Explicit Memory with a new Strategy for Updating and Retrieval of Memory in Dynamic Environments

## محل انتشار:

مجله هوش مصنوعی و داده کاوی، دوره 6، شماره 1 (سال: 1397)

تعداد صفحات اصل مقاله: 15

## نویسندگان:

M. Mohammadpour - *Young Researchers and Elite Club, Yasooj Branch, Islamic Azad University, Yasooj, Iran*

H. Parvin - *Department of Computer Engineering, Nourabad Mamasani Branch, Islamic Azad University, Nourabad Mamasani, Iran*

M. Sina - *Young Researchers and Elite Club, Nourabad Mamasani Branch, Islamic Azad University, Nourabad Mamasani, Iran*

## خلاصه مقاله:

Many of the problems considered in optimization and learning assume that solutions exist in a dynamic. Hence, algorithms are required that dynamically adapt with the problem's conditions and search new conditions. Mostly, utilization of information from the past allows to quickly adapting changes after. This is the idea underlining the use of memory in this field, what involves key design issues concerning the memory content, the process of update, and the process of retrieval. In this article, we used chaotic genetic algorithm (GA) with memory for solving dynamic optimization problems. A chaotic system has much more accurate prediction of the future rather than random system. The proposed method used a new memory with diversity maximization. Here we proposed a new strategy for updating memory and retrieval memory. Experimental study is conducted based on the Moving Peaks Benchmark to test the performance of the proposed method in comparison with several state-of-the-art algorithms from the literature. Experimental results show superiority and more effectiveness of the proposed algorithm in dynamic environments

## کلمات کلیدی:

dynamic environments, explicit memory, moving peaks benchmark, offline error, chaos theory

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