عنوان مقاله:

A New Multi-Agent Bat Approach for Detecting Community Structure in Social Networks

محل انتشار:

دوفصلنامه مجله کامپیوتر و رباتیک, دوره 12, شماره 1 (سال: 1398)

تعداد صفحات اصل مقاله: 10

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خلاصه مقاله:

The complex networks are widely used to demonstrate effective systems in the fields of biology and sociology. One of the most significant kinds of complex networks is social networks. With the growing use of such networks in our daily habits, the discovery of the hidden social structures in these networks is extremely valuable because of the perception and exploitation of their secret knowledge. The community structure is a great topological property of social networks, and the process to detect this structure is a challenging problem. In this paper, a new approach is proposed to detect non-overlapping community structure. The approach is based on multi-agents and the bat algorithm. The objective is to optimize the amount of modularity, which is one of the primary criteria for determining the quality of the detected communities. The results of the experiments show the proposed approach performs better than existing methods in terms of modularity.

کلمات کلیدی:

Social networks, Multi-agent systems, Swarm intelligence, Bat algorithm, Community Detection, Modularity