State of the Art Applications of Social Network Analysis
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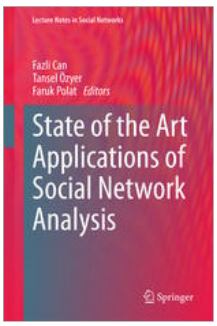
An Ant Based Particle Swarm Optimization Algorithm for Maximum Clique Problem in Social Networks

Abstract

In recent years, social network services provide a suitable platform for analyzing the activity of users in social networks. In online social networks, interaction between users plays a key role in social network analysis. One of the important types of social structure is a full connected relation between some users, which known as clique structure. Therefore finding a maximum clique is essential for analysis of certain groups and communities in social networks. This paper proposed a new hybrid method using ant colony optimization algorithm and particle swarm optimization algorithm for finding a maximum clique in social networks. In the proposed method, it is improved process of pheromone update by particle swarm optimization in order to attain better results. Simulation results on popular standard social network benchmarks in comparison standard ant colony optimization algorithm are shown a relative enhancement of proposed algorithm.



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