Detecting communities in social networks based on cliques

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Description
Social network analysis is an important tool that can be used in many domains. Among the social network analysis algorithms and tools we find the community structure detection. Many community structure detection algorithms have been developed over years, but most of them have a high computational complexity. In this paper we propose a new approach to find a community structure in networks. Our approach is more stable, accurate and effective to find the community structure in networks with high inter-community links. Our method operates in two phases. In the first phase, our method finds all the circuits in order to split the network into small elementary groups. Then (in the second phase)the community structure will be found by merging iteratively the different sub graphs resulting from the first phase by a fusion principle used in clique-based methods. Our method was evaluated on different types of networks …