

## A social network Peer-to-Peer model for peer clustering

### ABSTRACT

Peer clustering is a way for managing the structure of Peer-to-Peer (P2P) networks. It can be done on physical structure of the network like physical proximity of peers or semantic relationship among them. Our proposed model uses social network concepts as the main physical structure for clustering peers. Nodes in the model are grouped into several communities and sub communities with similar interests. The order and relation among communities are defined and controlled by a shared ontology. This structure provides lower distance and better locality in search. A simulation of the model shows lower path and better clustering than a random network.

**Keyword:** Peer-to-peer networks; Peer clustering; Social networks