World Wide Web, blogging platforms, instant messaging and Facebook can be characterized by the interplay between rich information content, the millions of individuals and organizations who create and use it, and the technology that supports it. This thesis will cover recent research on the structure and analysis of large social and transaction networks and on models and algorithms that abstract their basic properties. Unusual ways have been explored how to practically analyze large scale network data and how to reason about it through models for network structure. Topics include methods for network community detection, their connection with transactional graphs.