## Networks and Community Detection

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#### Abstract

Networks are a great model for analysing and understanding real world complex systems. A very important feature of these network models is community detection. Community detection allows us to identify clusters in the network that are well connected amongst eachother. If a network is being used to model a real world system then, finding this structure has many implications about the behaviour of the system. This essay will discuss multiple methods for community detection in networks and their applications to the analysis of real world complex systems. [Gre93]

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## 1 Introduction to Networks

Models of
Networks

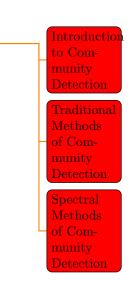
Definition
of a Network

Different
Types of
Network

# 2 Properties of Networks

Interesting Properties of Networks

## 3 Community Detection



# 4 Applications of Community Detection

Applications of Community Detection

Figure out an interesting thing to write some of my own code for

## References

[Gre93] George D. Greenwade. The Comprehensive Tex Archive Network (CTAN).  $TUGBoat,\ 14(3),\ 1993.$