

## 5. Community detection

Introduction to Social Network Analysis in R

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# Community Detection

# Introduction to Social Network Analysis(SNA) in R

1. Introduction to basic concepts in SNA
2. Visualization of networks
3. Descriptive Network Statistics (*Metrics - Individual and Whole Network*)
4. **Community detection algorithms.**

# Community Detection

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# Community Detection

## **Goal: find cohesive groups**

- Different ways of doing this
- Modularity: a metric of how well we can break up our network into communities(chunks) with more connections within the chunk than across chunks
- Algorithms try to maximize modularity
- Most of these procedures are done with undirected & unweighted data

**Always check substantively for characteristics that hold communities together.**

Let's try these!

WA\_CommunityDetection.Rmd

## Summary:

Today we looked at

### 5. Community Detection

- Understanding Classrooms through Social Network Analysis: A Primer for Social Network Analysis in Education Research; Daniel Z. Grunspan et al 2014
- Males under-estimate academic performance of their female peers in undergraduate biology classrooms. Daniel Z. Grunspan et al 2016