

PhD course

Course topics:

1. Graph Theory
2. Random Networks
3. The Scale-Free Property
4. The Barabási-Albert Model
5. Evolving Networks
6. Degree Correlations
7. Network Robustness
8. Communities
9. Spreading Phenomena
10. Guest Speaker
11. Hands-on class: Network Analysis and Visualization Softwares

Grading:

1 homework, to be submitted electronically.

Project task : Each student choose a network, analyze to the according learned aspects and report on it on the exam.

The grade is calculated as follows: the homework 40%, the project task 60%

Readings: <http://barabasi.com/networksciencebook/>