Math 168, Networks, UCLA, Spring 2018
Problem Sheet 1

(submit to CCLE by Monday 9 April 2018 at 5:00 pm)

1. *Reading.*

    (a) Read Chapters 1–5 of Newman's book.

    (b) Write down a sentence or two about the most interesting thing you read in these chapters. Indicate an example of a social network, a biological network, and a physical network from a source other than lectures or Newman's book. Cite these sources using the citation format in the back of Newman's book.

2. *Networks are Everywhere.* Take a picture of something on campus or in Westwood that is a network. (Include the picture in your submission.)

    Explain briefly why it's a network. What are the nodes? What are the edges? Does it have any other features that you can discern (e.g., time-dependence, multiplexity, etc.)

3. *Starting to think about group projects.*

    (a) Indicate, in a few sentences, an application or data set that you may be interested in working on for your group project.

    (b) Indicate, in a sentence or two, what type of methodological or theoretical topic (or model) might you be interested in. To answer this question, you should browse through Newman's book and perhaps also take a look with some Google searches at what topics people study.

    (c) (Optional) If there are particular people with whom you may want to work, please indicate that here. I will take that into account for group formation, though be forewarned that a directed network may result from the answers to this question.