

PHYS 597A: Graphs and networks in systems biology

Homework assignment 4, due Tuesday Feb. 10

1. Read the chapter “Networks in Biology” given out on Jan. 30. Do exercises 1, 5, 7 and 9 at the end of the chapter.

2. The Feb. 3 lecture surveyed a number of graph processing and visualization tools. Install and run one of these. For example: Create a graph, draw it on the screen and compute certain properties of it.

Provide a screenshot of your work and a brief overview (two-three paragraphs) of what the program can do, what you did with it, and your assessment of the process of accomplishing the desired outcome.

URLs to the tools discussed in the lecture:

GraphViz: <http://www.research.att.com/sw/tools/graphviz/>

Pajek: <http://vlado.fmf.uni-lj.si/pub/networks/pajek/>

Yed: http://www.yworks.com/en/products_yed_about.htm

NetworkX: <https://networkx.lanl.gov/>

Cytoscape: <http://www.cytoscape.org/>