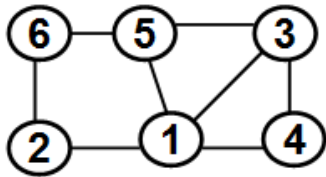


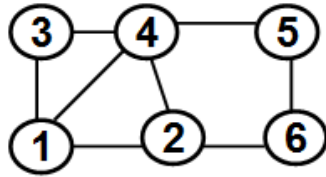
CSC 641 Network Science
Fall 2016
Instructor: Dr. Natarajan Meghanathan
Exam 2 (Take Home)

Due: November 3, 2016 (6 PM, in class). Submit a printed hardcopy in class (with this quiz sheet as a cover page and your name and J# on the top of the sheet).

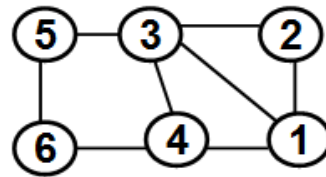
1) (30 pts) Given a graph, run the power-iteration algorithm to determine the EVC of the vertices. Run for three iterations and stop. Also, calculate the spectral radius ratio for node degree based on the principal eigenvalue that you obtain at the end of your third iteration.



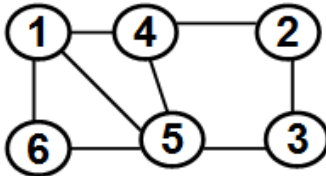
Li-Jing Chang



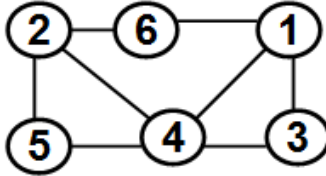
Carlos Martinez



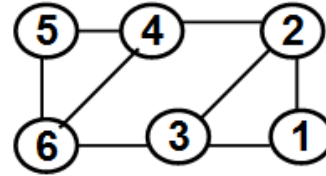
Di Wu



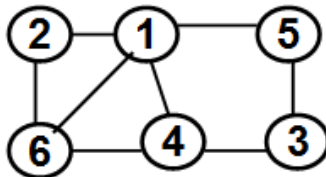
Alnazer Elbedairy



Fei Yang



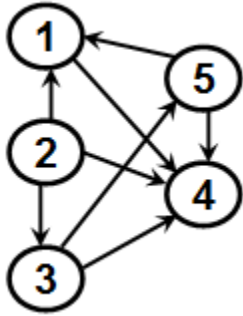
Osho Oyeyemi



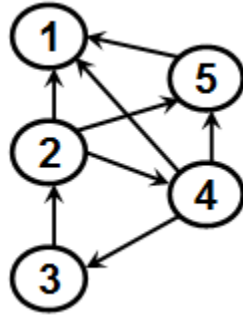
Chen Fang

2) (70 pts) Given a directed graph, run the HITS and Page Rank algorithms to rank the vertices in the graph. Run four iterations for HITS and run the iterations until the values converge to the first decimal value in the case of Page Rank.

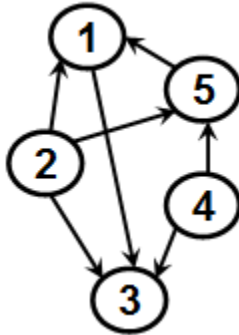
Compute the concordance-based correlation coefficient of the final HITS and Page Rank values of the vertices.



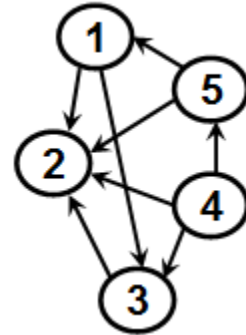
Li-Jing Chang



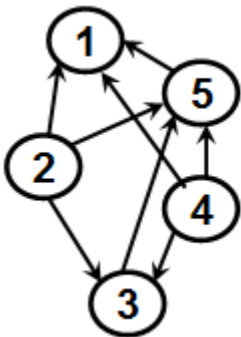
Carlos Martinez



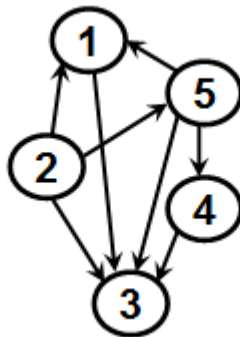
Di Wu



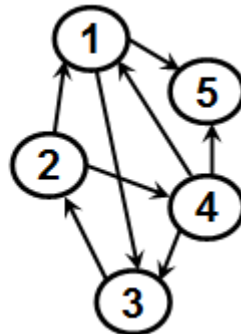
Chen Fang



Alnazer Elbedairy



Fei Yang



Osho Oyeyemi