Computer assignment 2

Complex Networks 2

1. Write a code to generate the Erdős-Rényi graph with a given average degree. Using the code, generate the ER graphs of sizes $N = 5000$ for $c = 0.5$, $c = 1$, $c = 2$, $c = 4$. Plot the degree distribution of the generated graph, and plot the theoretical curve on top of it.

2. Write a code to plot the size of the giant component in ER graph as a function of the average degree. The generated plot should show the variation of S for c from 0 to 3.