Random Graphs February 20, 2022

Additional simulation plots

Project work by: *Somak Laha*

1 Degree of fixed vertex

The plots of mean, variance and standard deviation of $D_i(t)$ obtained from the simulations are given here. The value $i = 10$ is taken and t is run up to 2000. The first section contains the results for hard-core taboo-ing, while the next section has the results for soft-core taboo-ing.

1.1 Hard-core taboo-ing

p=0.01

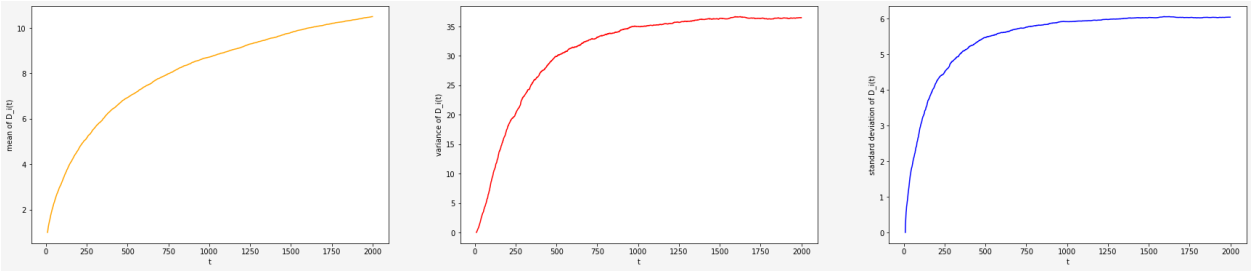

Figure 1: Mean, variance and standard deviation of $D_i(t)$ as function of t

p=0.25

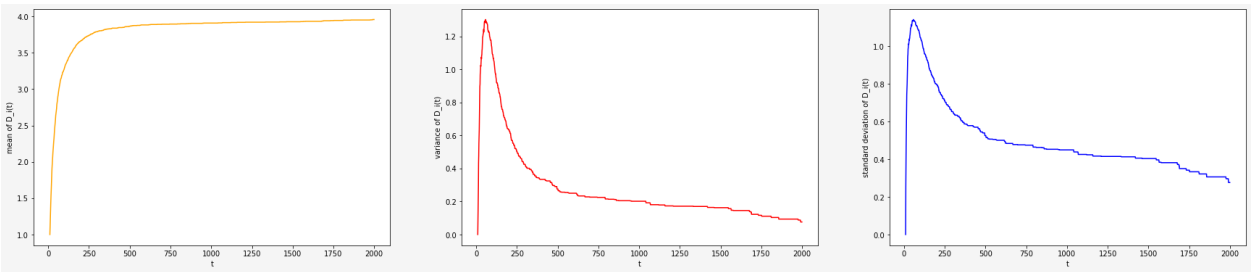

Figure 2: Mean, variance and standard deviation of $D_i(t)$ as function of t

1.2 Soft-core taboo-ing

p=0.01

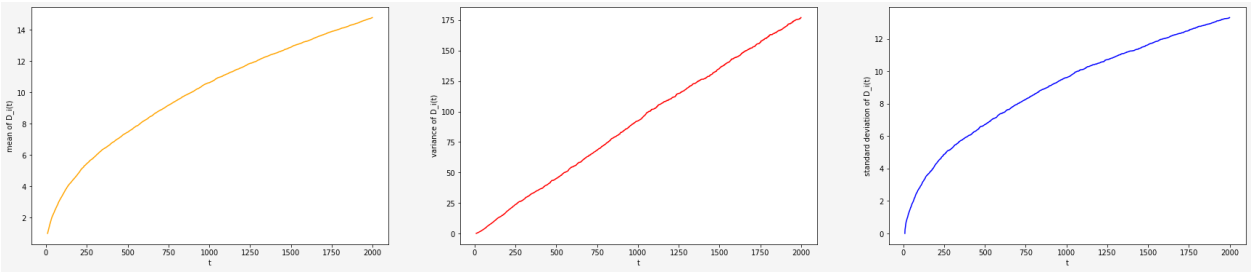

Figure 3: Mean, variance and standard deviation of $D_i(t)$ as function of t

p=0.25

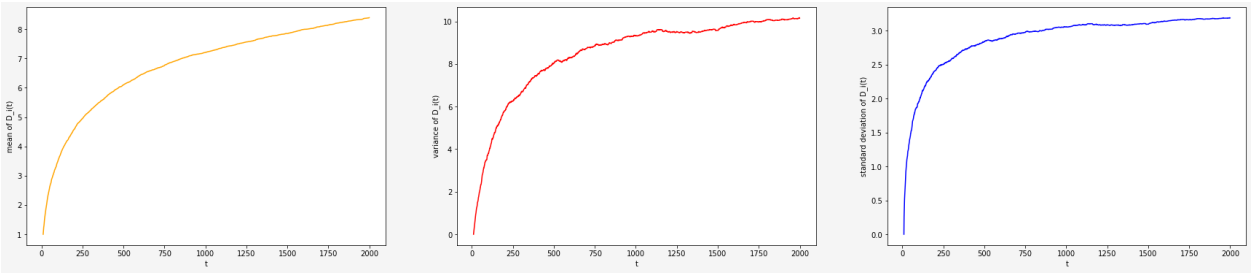

Figure 4: Mean, variance and standard deviation of $D_i(t)$ as function of t

2 Degree distribution

The plots of mean, variance and standard deviation of $P_k(t)$ as a function of k obtained from the simulations are given here. The size of the graph is taken to be 2000 in each of the cases. The two sections correspond to hard-core taboo-ing and soft-core taboo-ing respectively.

2.1 Hard-core taboo-ing

p=0.01

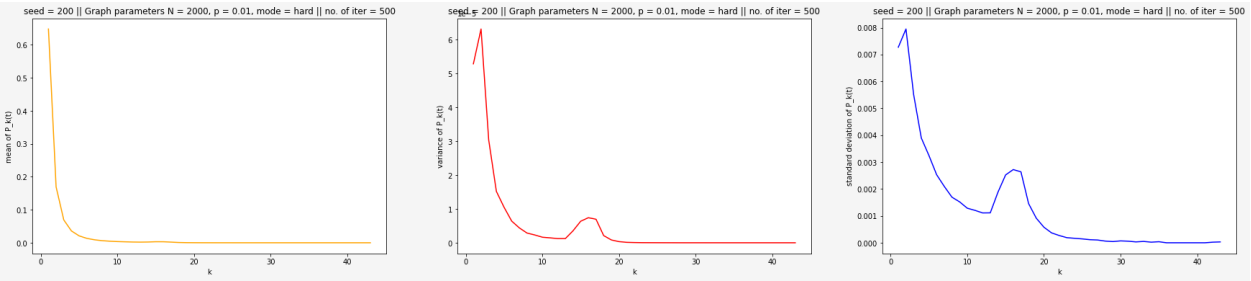

Figure 5: Mean, variance and standard deviation of $P_k(2000)$ as function of k

p=0.05

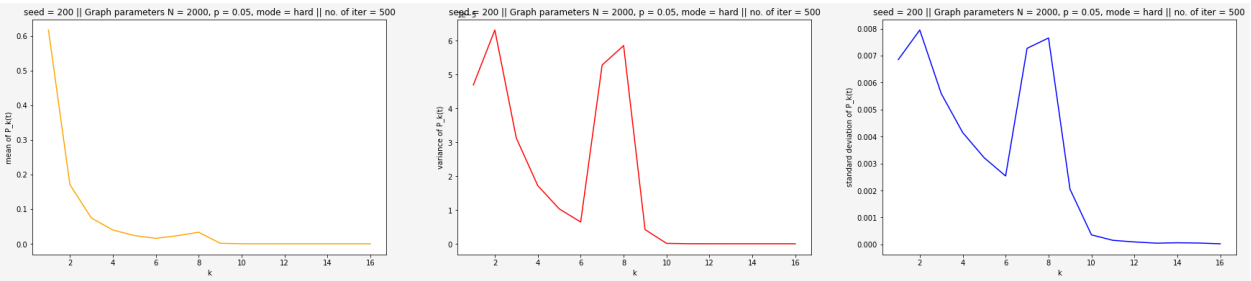

Figure 6: Mean, variance and standard deviation of $P_k(2000)$ as function of k

p=0.25

Figure 7: Mean, variance and standard deviation of $P_k(2000)$ as function of k

2.2 Soft-core taboo-ing

p=0.01

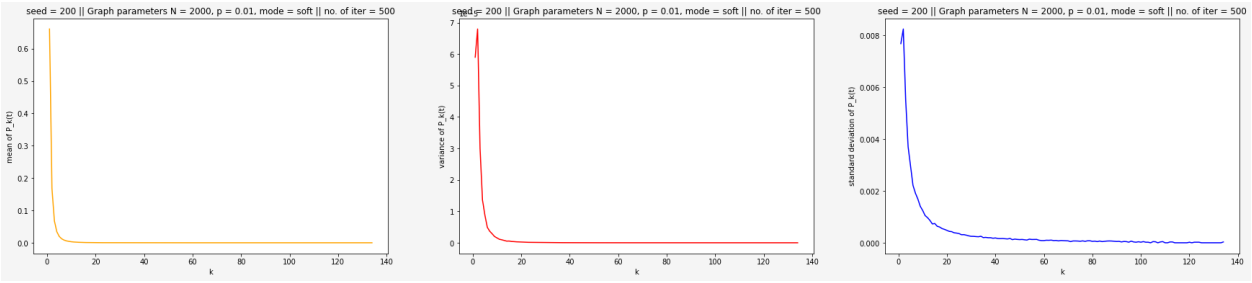

Figure 8: Mean, variance and standard deviation of $P_k(2000)$ as function of k

p=0.05

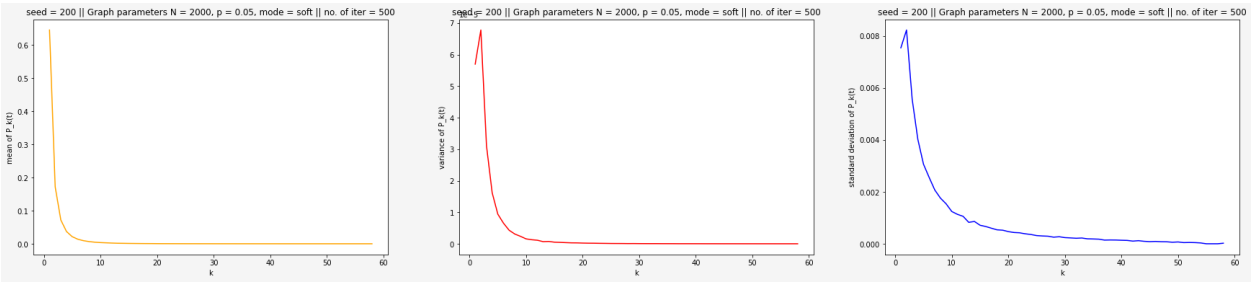

Figure 9: Mean, variance and standard deviation of $P_k(2000)$ as function of k

p=0.25

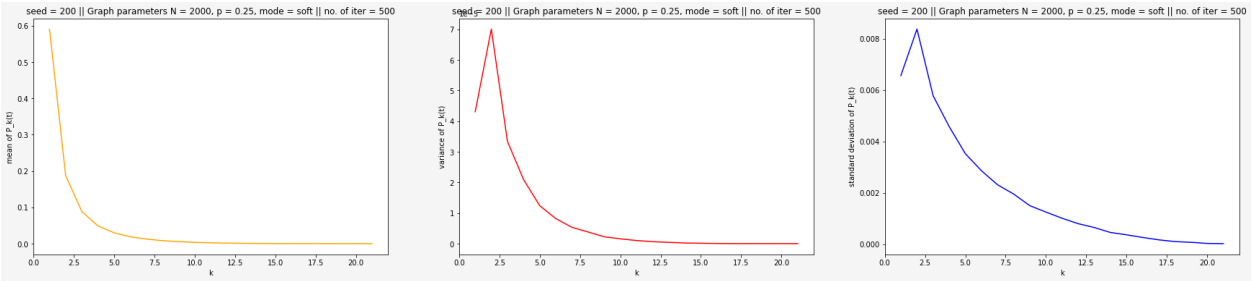

Figure 10: Mean, variance and standard deviation of $P_k(2000)$ as function of k