Assignment 3 - Multiple Access

EE597 Fall 2020

Assigned: Oct. 14, 2020
Due: 11:59pm PDT, Oct. 20, 2020, via blackboard

Problem 1. For slotted Aloha with 3 backlogged users, plot the boundary surface of the normalized saturation throughput region using a 3D plot.

Problem 2. Plot the 2-user normalized saturation throughput region for p_i-persistent CSMA for different values of $T_s/\delta = 10, 100, 1000$, assuming $T_s = T_c$. On the same figure, also plot the 2-user throughput region for slotted Aloha.

Problem 3. Number the nodes on and show a coloring of the following graph using greedy vertex degree ordering. Also present lower and upper bounds on the Chromatic number of the following graph. Can you figure out the Chromatic number of the graph? If so, what is it?
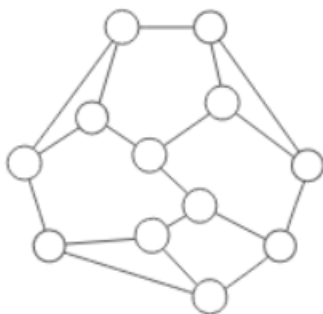

Figure 1: Caption