UNIVERSITY OF CALIFORNIA, DAVIS
Department of Electrical and Computer Engineering
Principles of Digital Communications

PROJECT

In this project you will simulate the performance of 64-QAM scheme for Eb/N0 ranging from 0 to 15dB. Provide performance curves (on the same graph) of the simulations and the theoretical result from Table 7.9 for coherent MQAM for $M = 64$. The bit error probability should be in log-scale, see Figure 7.29 for example. Use the constellation in

`https://www.researchgate.net/figure/Example-of-64-QAM-constellation_fig1_328399893`

You have to write a MATLAB program to do that and comment using % on all the steps as grading will also be based on the clarity of the program. Submit the figure in pdf and the matlab code in txt or doc as I may have to run it. The matlab code should be basic and written from scratch without any specialized matlab communication tools.

You may find the following youtube videos for 16-QAM useful:

https://www.youtube.com/watch?v=NVUU8FDuTP4

https://www.youtube.com/watch?v=SCbiNnF08Oc

https://www.youtube.com/watch?v=qpds-icijEc