

Exercise 1

Make examples in Matlab/Simulink of 4 order systems (dimension of state is 4) with one control, in order to track different signals (sinusoid, constants etc...) at minimum cost.

- Make examples also where the system is time variant (which A, B, C, D, Q, and R matrices varies in time).
- Make examples also where the system is subject to noise both in measure and in model in order to apply LQG
- Make examples where the system is not controllable