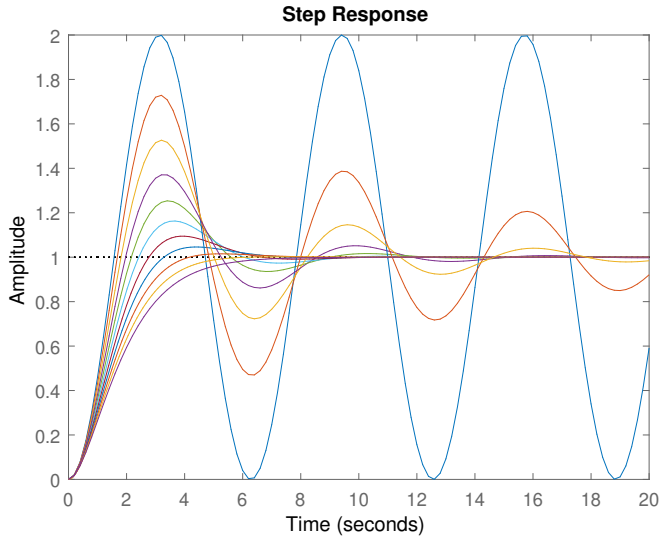
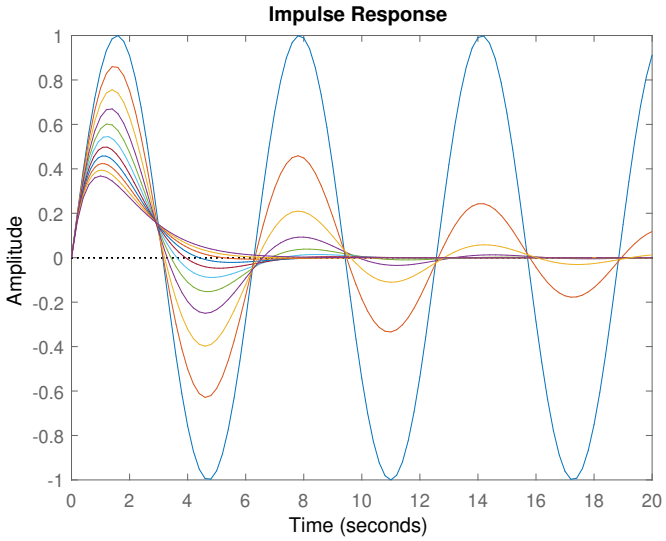
EE363 Automatic Control: Homework #6

1) *MATLAB exercises.* Submit your codes and plots.

   a) The following two plots display the step responses and the impulse responses of the standard second order systems $G(s)$ with $\zeta = 0, 0.1, 0.2, \ldots, 1.0$ and $\omega = 1$, for $0 \leq t \leq 20$. Reproduce the plots by using MATLAB® `step()` and `impulse()` functions.

$$G(s) = \frac{\omega^2}{s^2 + 2\zeta\omega s + \omega^2}$$





   b) Repeat HW#2-2 and HW#4-1 by using MATLAB® `step()` or `rlocus()` functions, and check if those correspond to your hand-drawn results.