

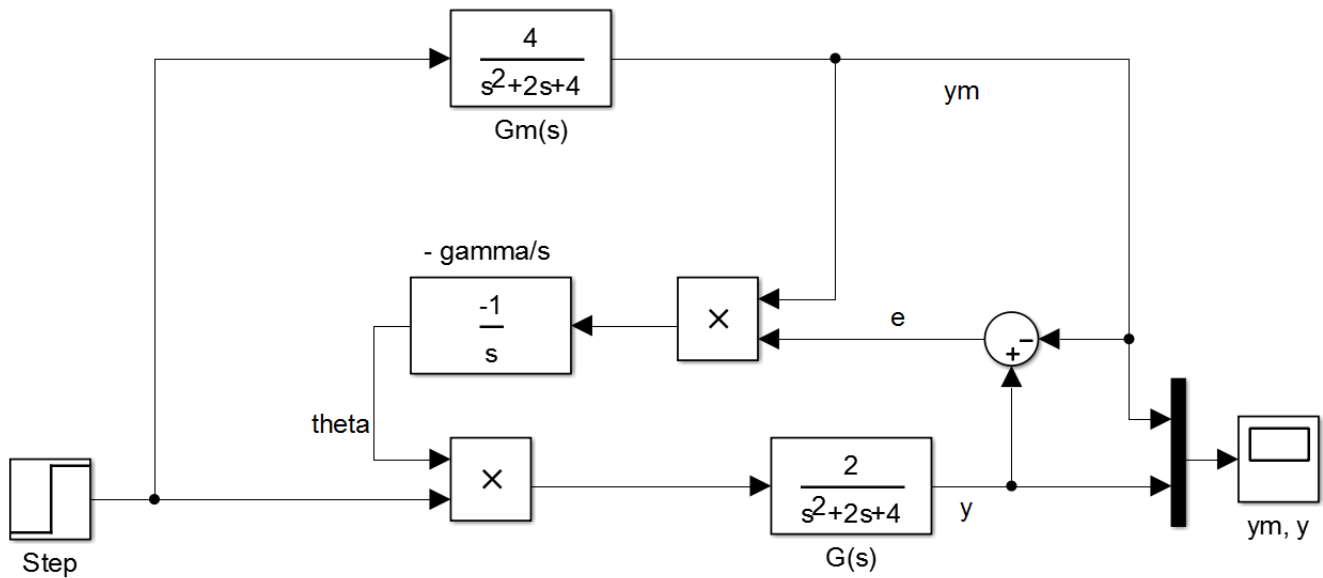
Gain Adjustment:

$$G_p(s) = \theta G(s) = \theta \frac{2}{s^2+2s+4}$$

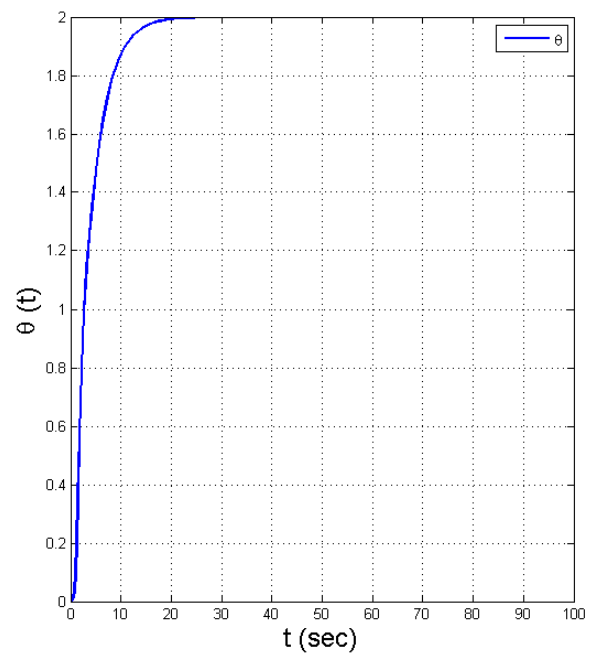
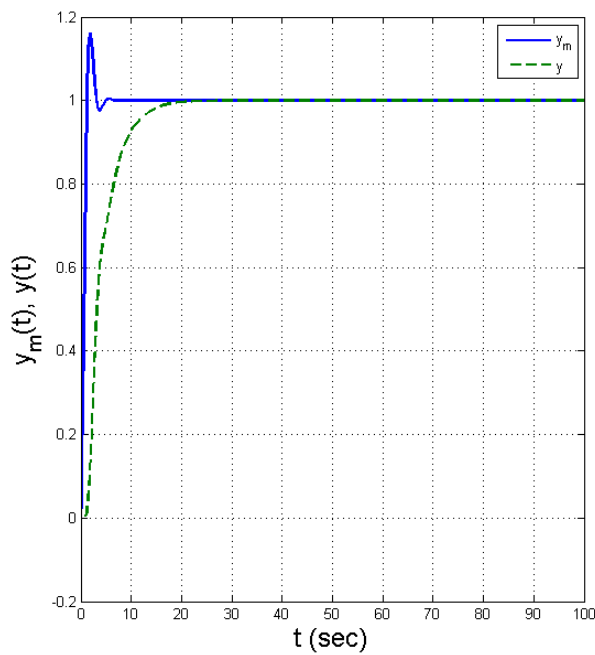
$$G_m(s) = \theta_o G(s) = \theta_o \frac{2}{s^2+2s+4}; \quad \theta_o = 2$$

$$e = y - y_m = \theta G(s)u_c - \theta_o G(s)u_c$$

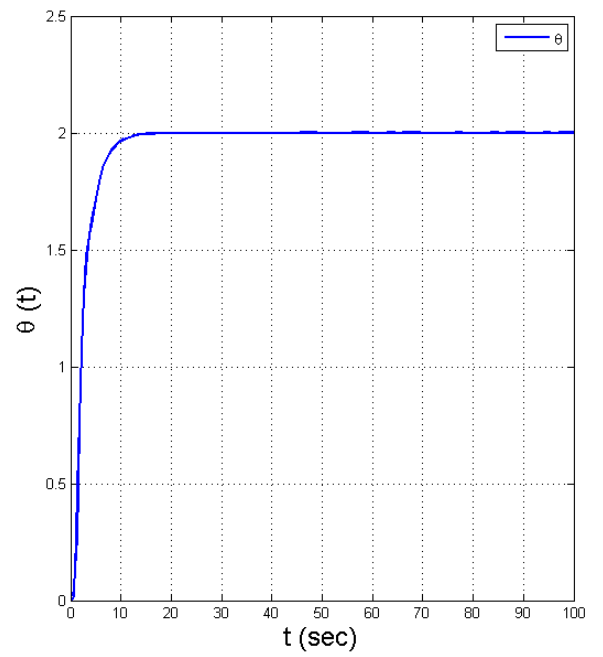
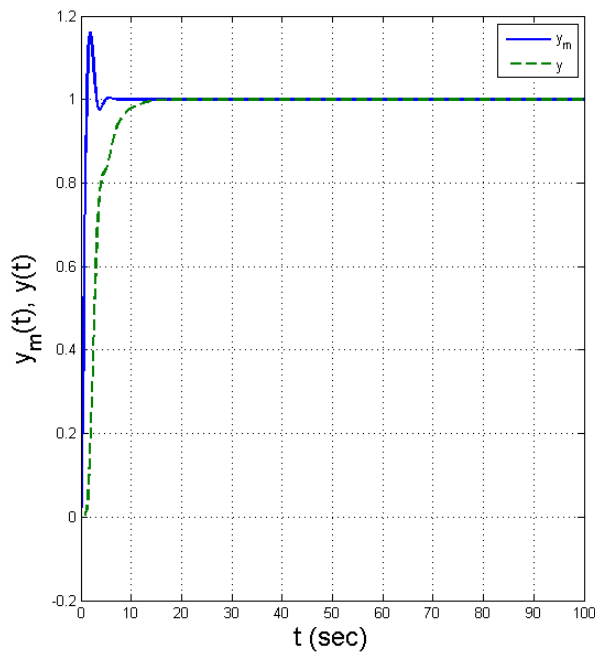
$$\frac{d\theta}{dt} = -\gamma e \frac{\partial e}{\partial \theta} = -\gamma G(s)u_c e = -\gamma \frac{y_m}{\theta_o} e$$



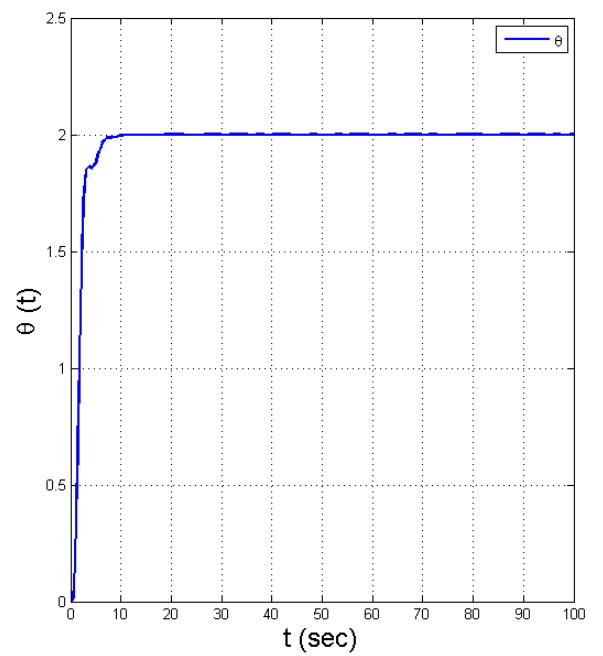
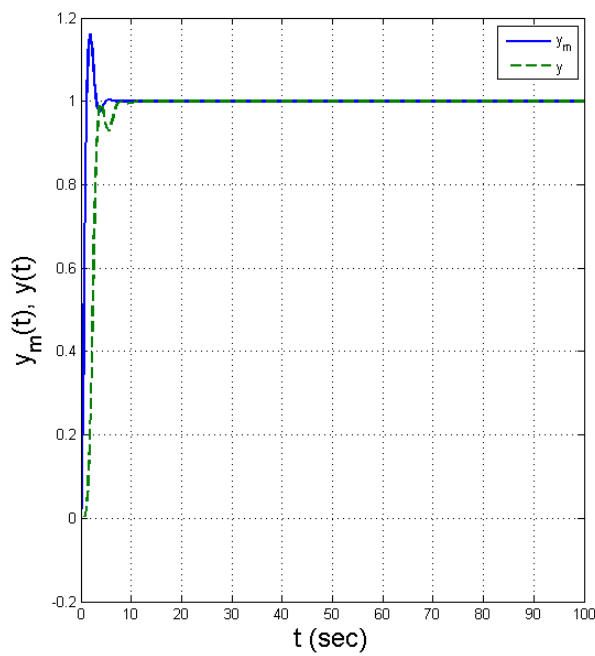
At $\gamma = 0.5$



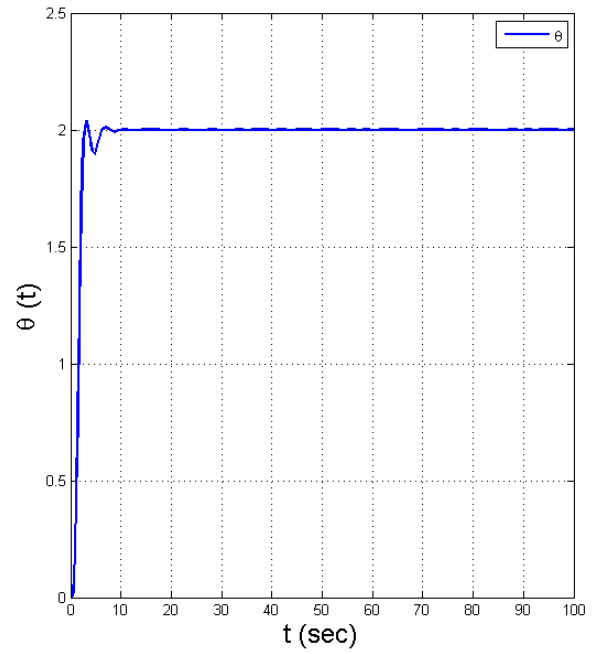
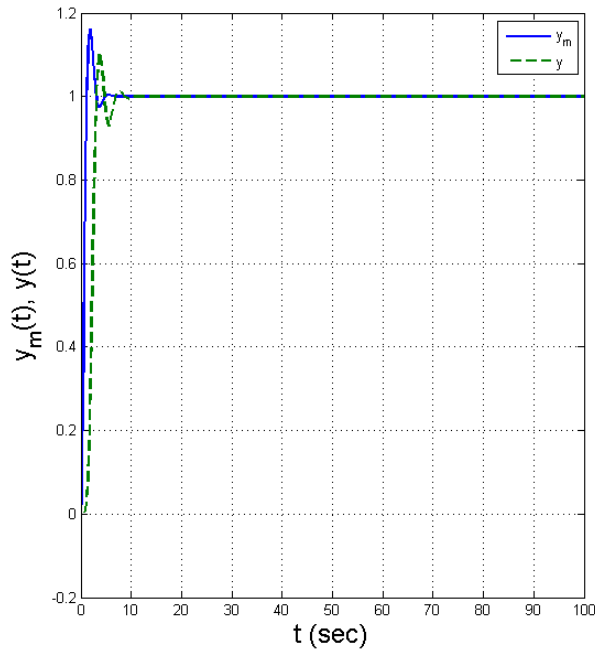
At $\gamma = 0.7$



At $\gamma = 1$



At $\gamma = 1.2$



At $\gamma = 1.5$

