

Power Apparatus and System Design Lab

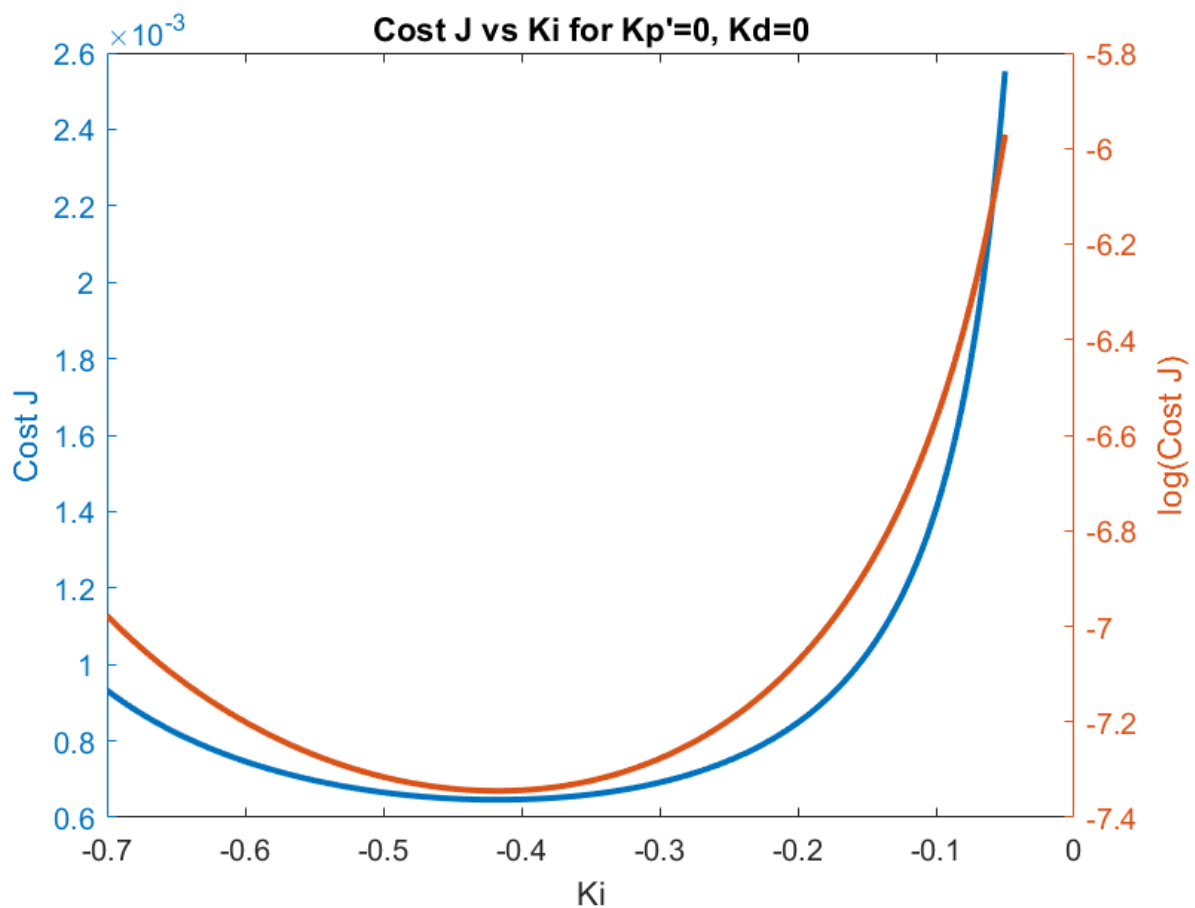
Assignment-3

Submitted By:

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18EE35014

Cost function vs Ki:

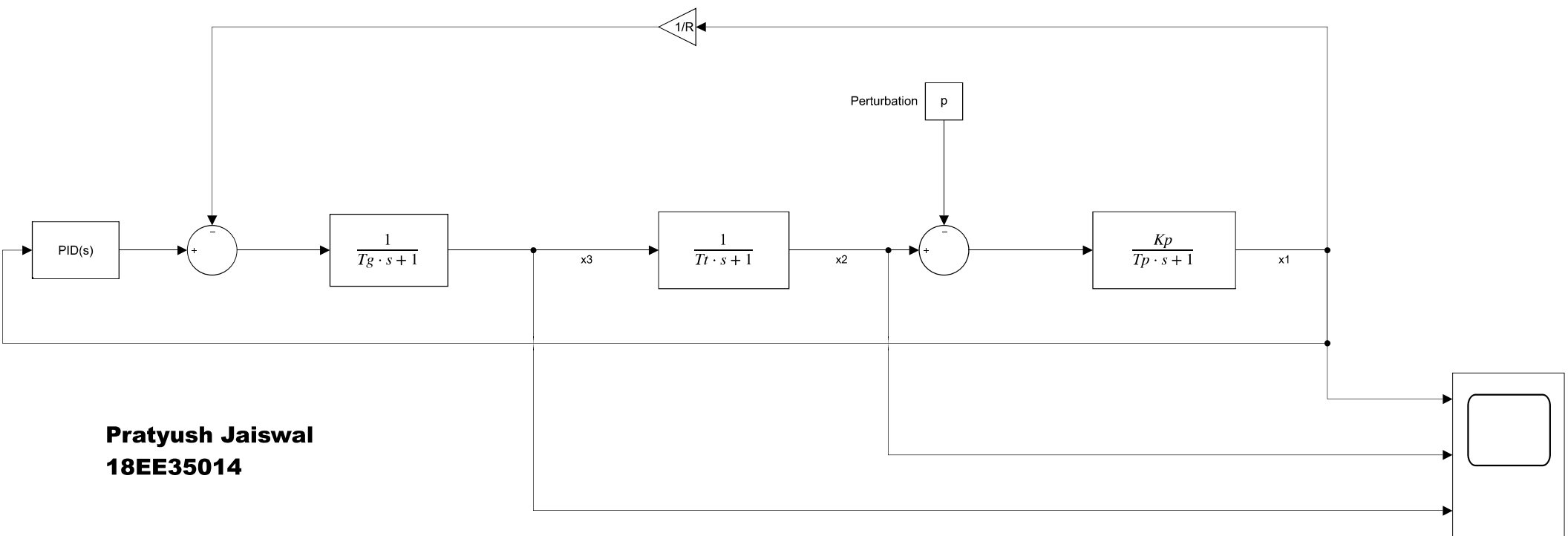


Minimum J value = **6.4604×10^{-4} (0.00064604)**

Optimum Ki by minimizing cost J for $K_p'=0$, $K_d=0$ we get:

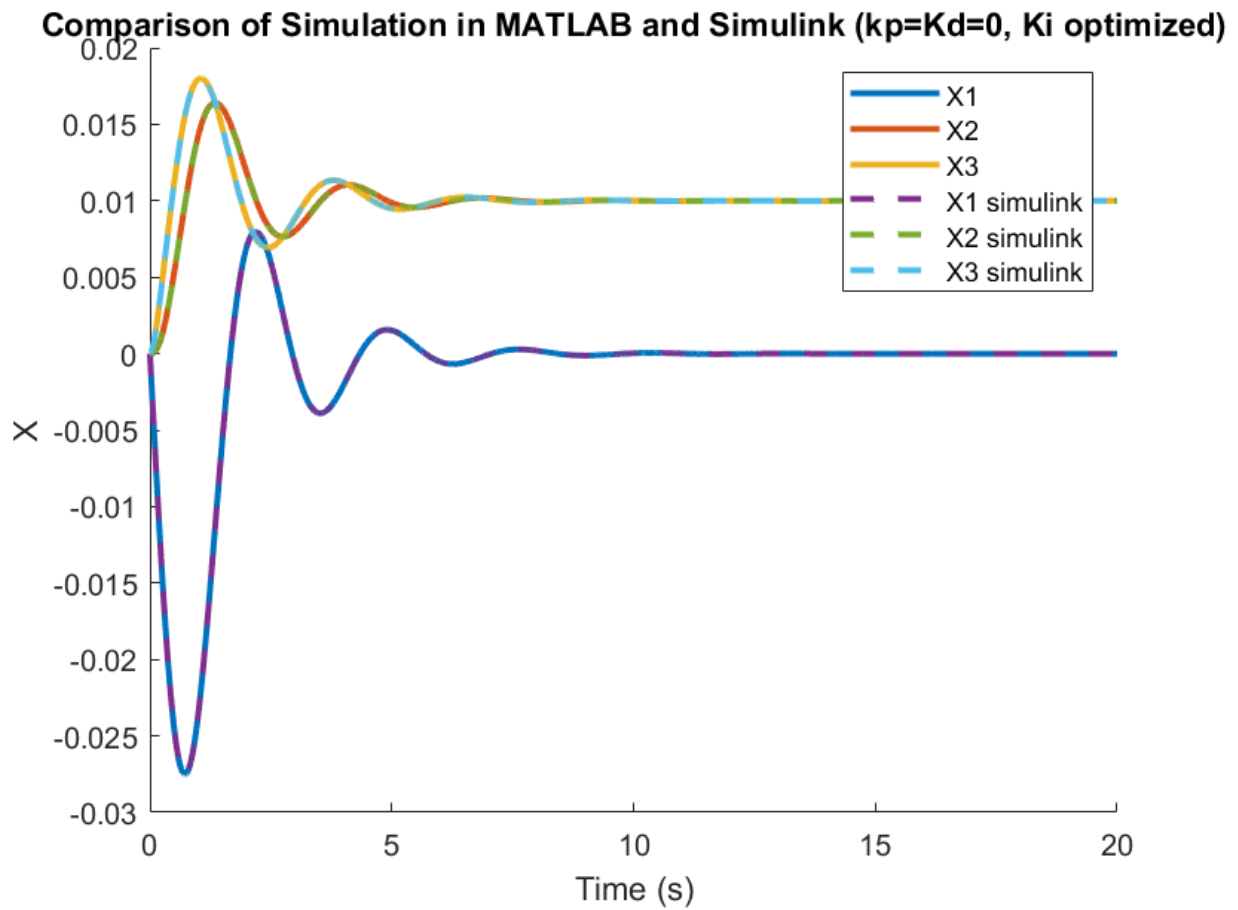
Ki = -0.4170

Simulink model:

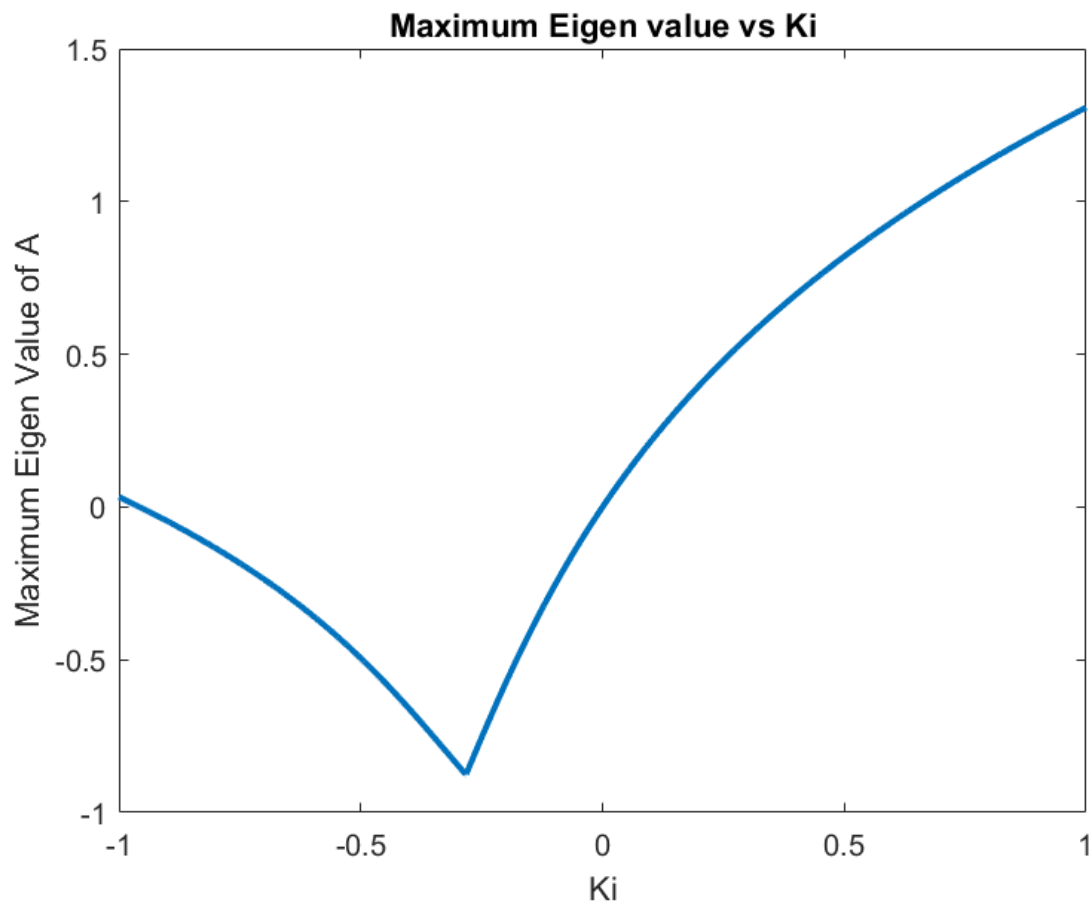


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Comparison of Simulation In Matlab and Simulink ($K_p'=0$, $K_d=0$, K_i optimized):



Eigen value method:



Optimum Ki obtained via minimization of maximum Eigen Value of A:

Ki = -0.2830

Comparison of Simulation In Matlab and Simulink (Kp'=0, Kd=0, Ki optimized using Eigen value method)

