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Composer : Dongbin Kim

mb = 0.004; %mass of the ball yello : 0.002
rb = 0.024; %radius of the ball
Jb = (2*mb*rb^2)/3; %MOI of the ball
g=9.81; %Gravitational Acceleration.

MatrixA = [0 1;0 0];
MatrixB = [0;mb*g/(Jb/(rb^2)+mb)]
MatrixC = [1 0];

syms s;
tf1 = (s*eye(2)-MatrixA)
tf2 = inv(tf1)
tf3 = MatrixC*tf2*MatrixB
figure
tf4 = tf([5.8860],[1 0 0])
rlocus(tf4)

zero = 0.01;
pole = 5;
C = tf([1 zero],[1 pole]);
figure
rlocus(C*tf4)
sgrid(0.69, 1.932)

[K,Poles] = rlocfind(C*tf4)

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