rzmap() = pole-zero map (i.e. argand diagram) of a system variable

rlocus() = root locus plot of a system variable

zpk() = makes a system from zeros, poles, and a gain. Can also convert a tf or ss system to a zpk

tf() = makes a system from a numerator and denominator. Can also convert a zpk or an ss to a tf. Property “Input Delay”, X to add an e^-xs term.

ss() = makes a systems from the state space matrices A, B,C, D. Can also convert a tf or zpk to an ss.

damp() = finds the damping ratio and the natural frequency of a system

sgrid() = plots constant angle (i.e. arcsin(zeta)) lines on current plot. Use with zeta and wn parameters to find where root locus intersects a particular zeta

series() = returns the equivalent system of two systems in series (equivalent to multiplying)

parallel() = returns the equivalent system of two systems in parallel (equivalent to adding)

feedback() = returns the equivalent system of two systems in negative feedback, with the plant being the first and the feedback being the second. To use positive feedback, add a 3rd parameter +1.

Step() – plots the step response of a system

Doc control – brings of documentation for control systems functions

Pole() – finds poles of system

Stepinfo() – finds the rise time, settling time, overshoot, peak, peakTime of a system (2nd order)

Impulse() –

Ltiview({‘step’,’pzmap’},….} – opens LTI system viewer, can change the plot types

Bode() – creates a bode plot

Stepinfo() – get’s system performance parameters

Getfield() – gets a specific field from a structure (i.e. the return of stepinfo())

Residue(a,b) – gives partial fraction expansion

Pole(system) – gets a system’s poles