

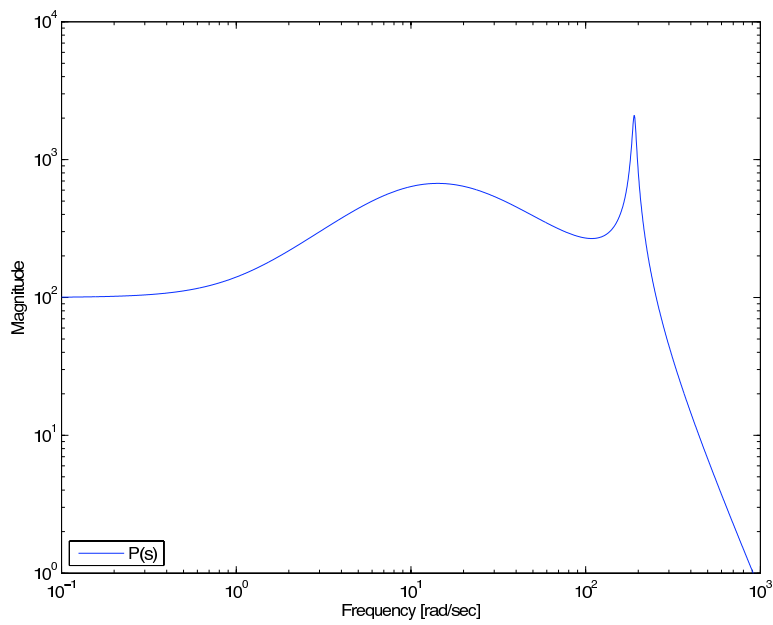
Sample rate selection

Approximating continuous-time designs

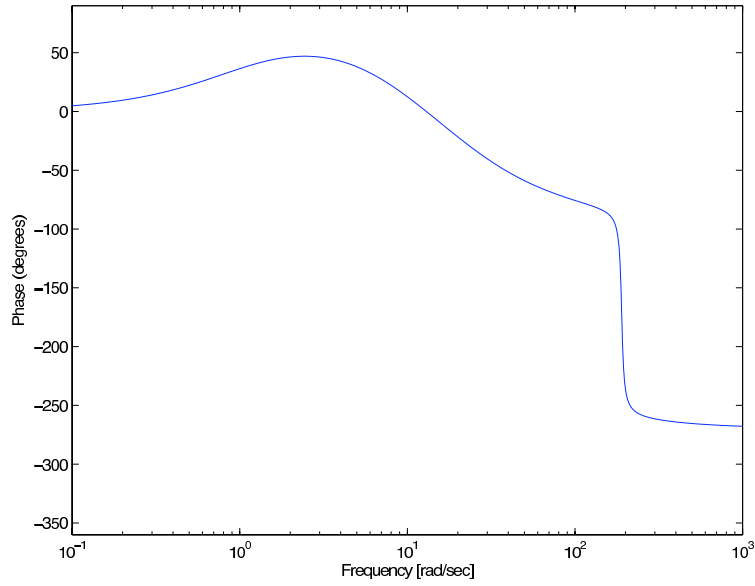
Aliased disturbances and noise

High frequency plant poles

High frequency plant poles

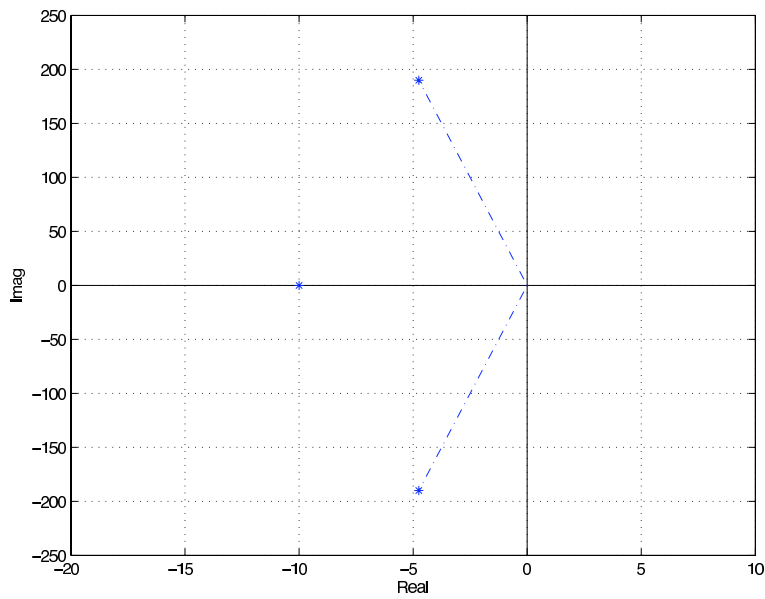


High frequency plant poles



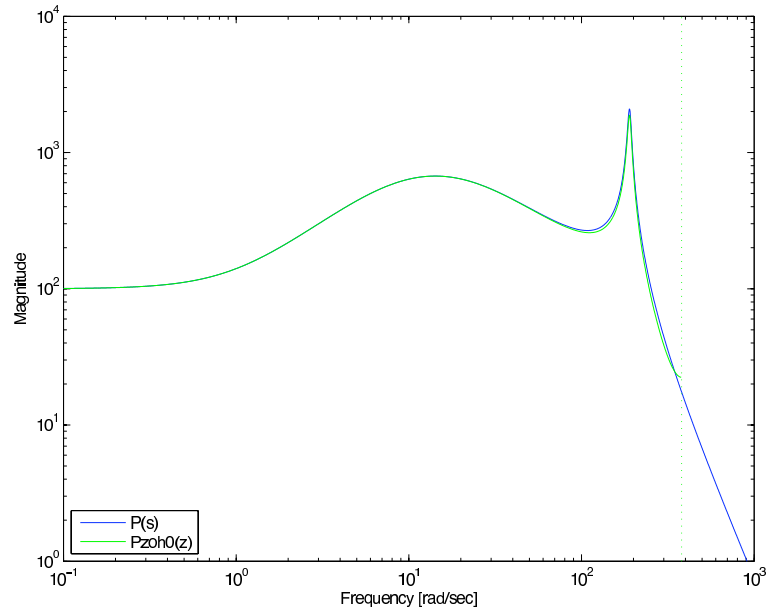
Roy Smith, ECE 147b, 17:3

High frequency plant poles

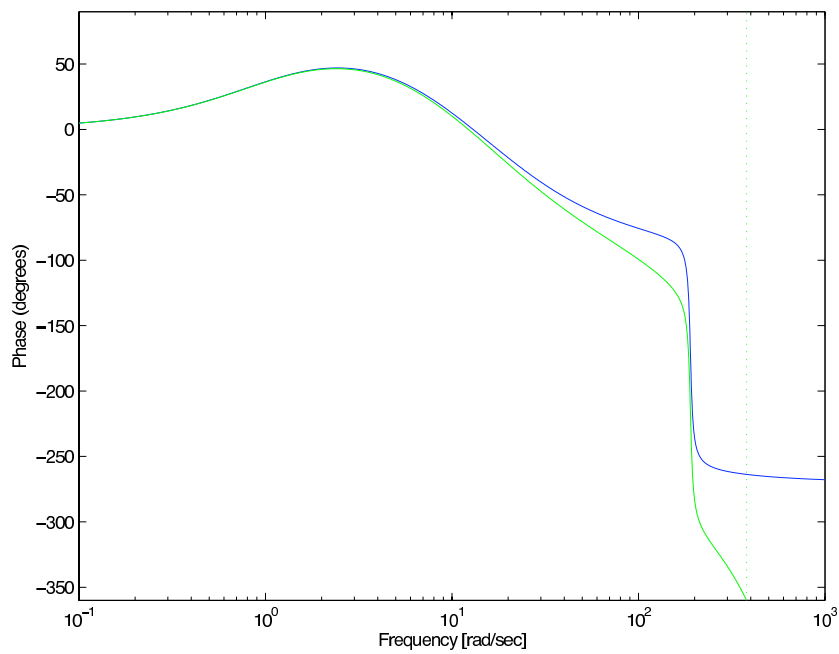


Roy Smith, ECE 147b, 17:4

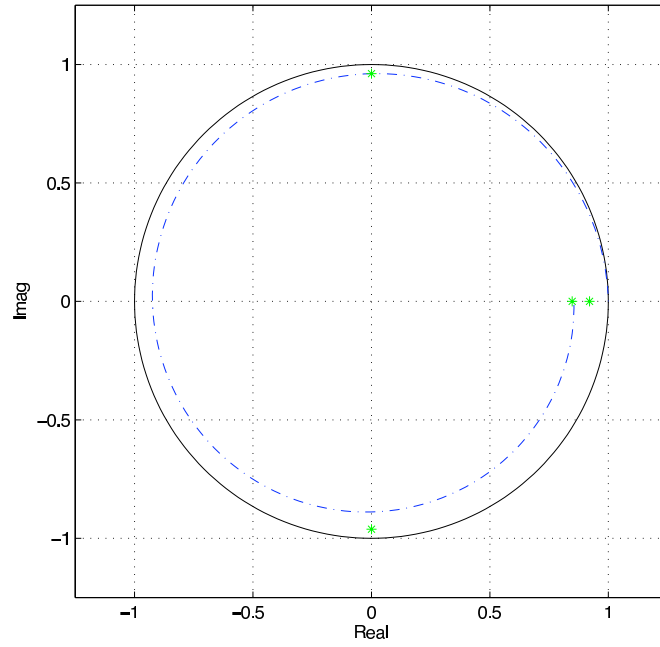
Sample period T_0



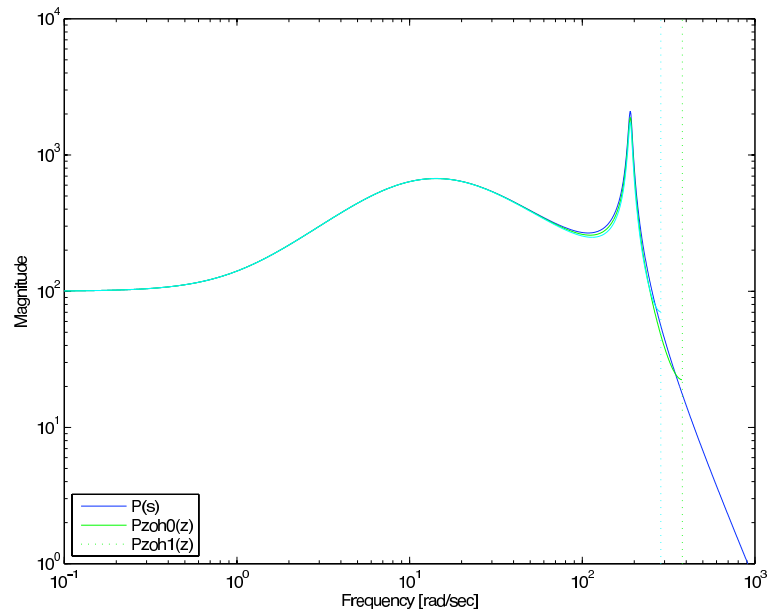
Sample period T_0



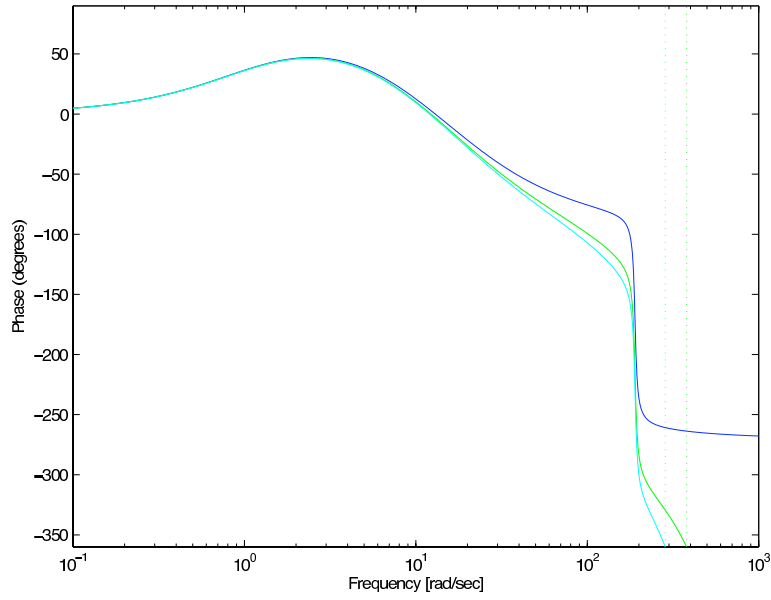
Sample period T_0



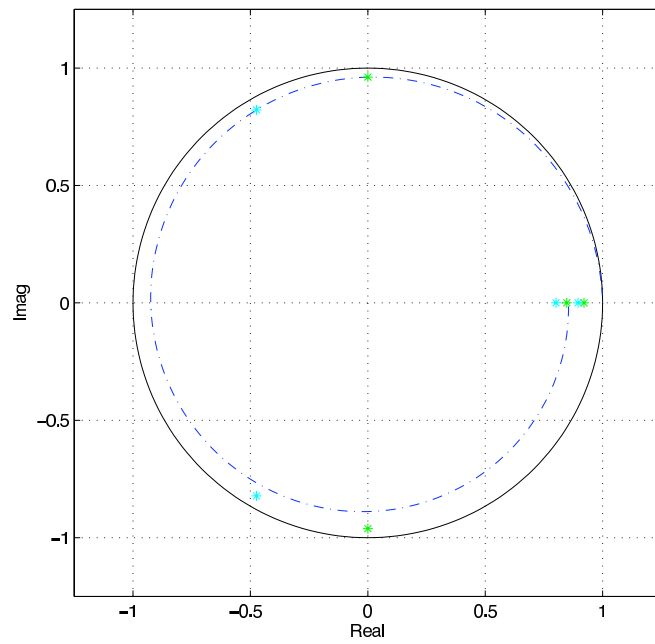
Sample period T_1



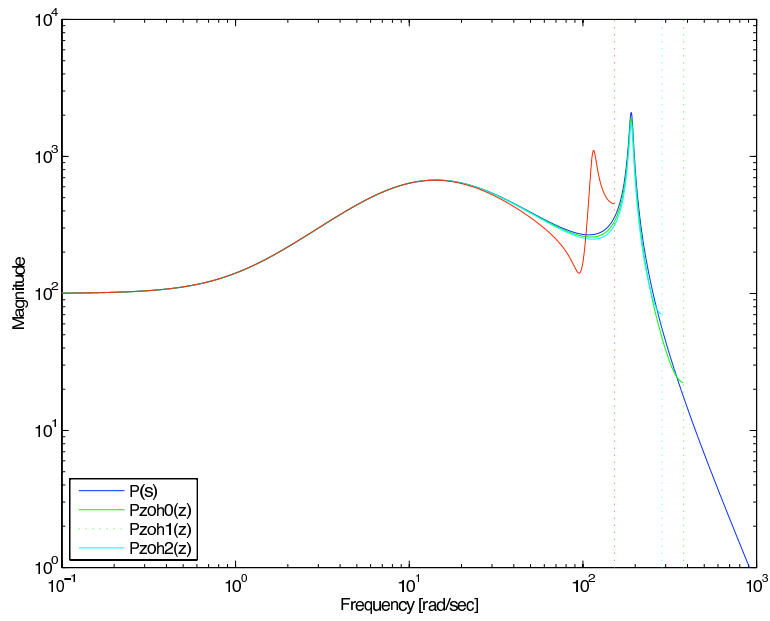
Sample period T1



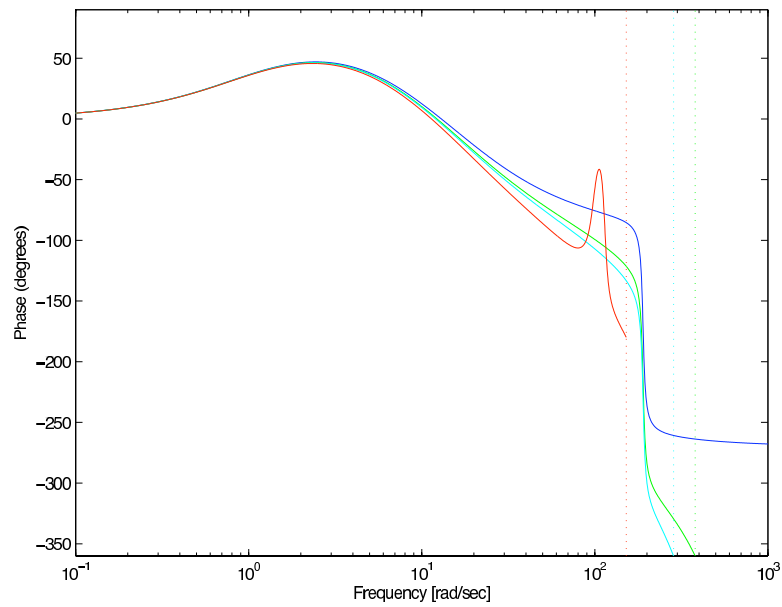
Sample period T1



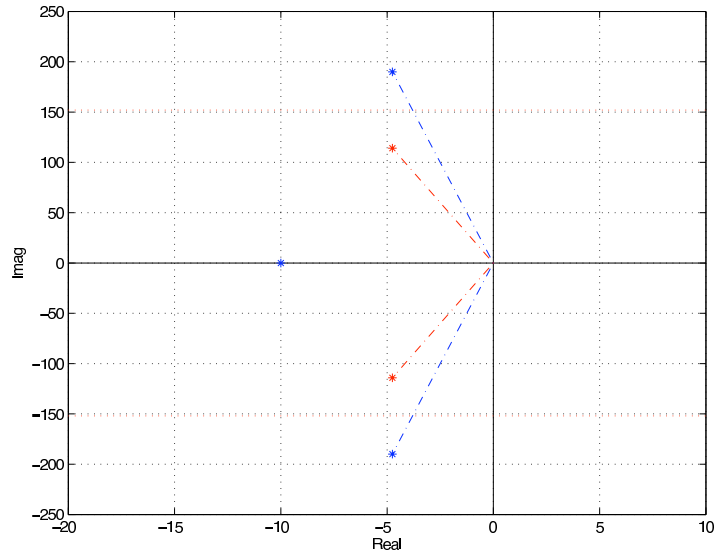
Sample period T2



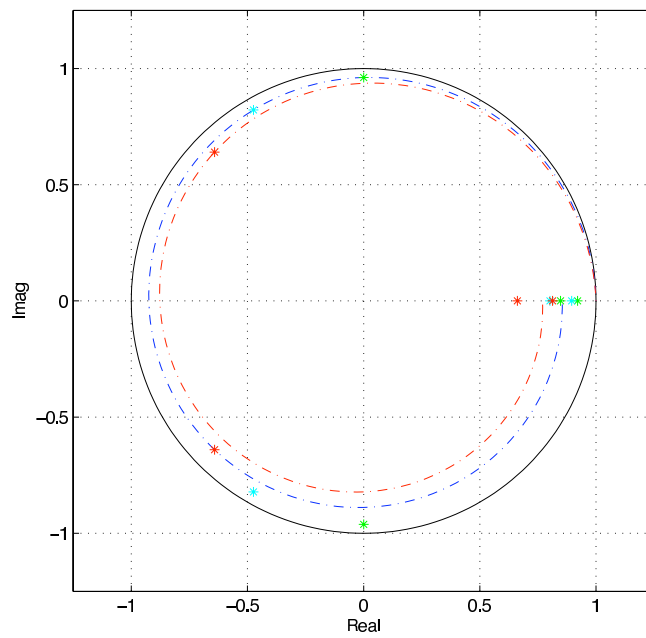
Sample period T2



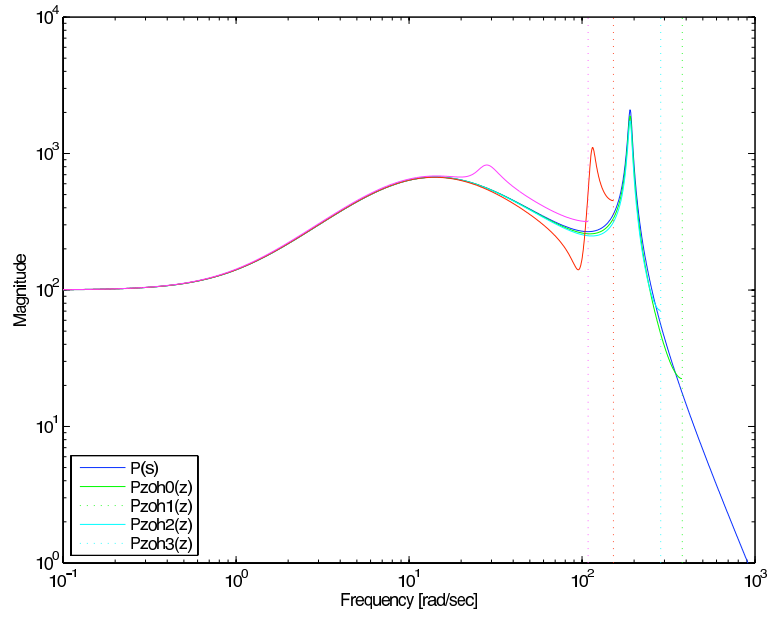
Sample period T2



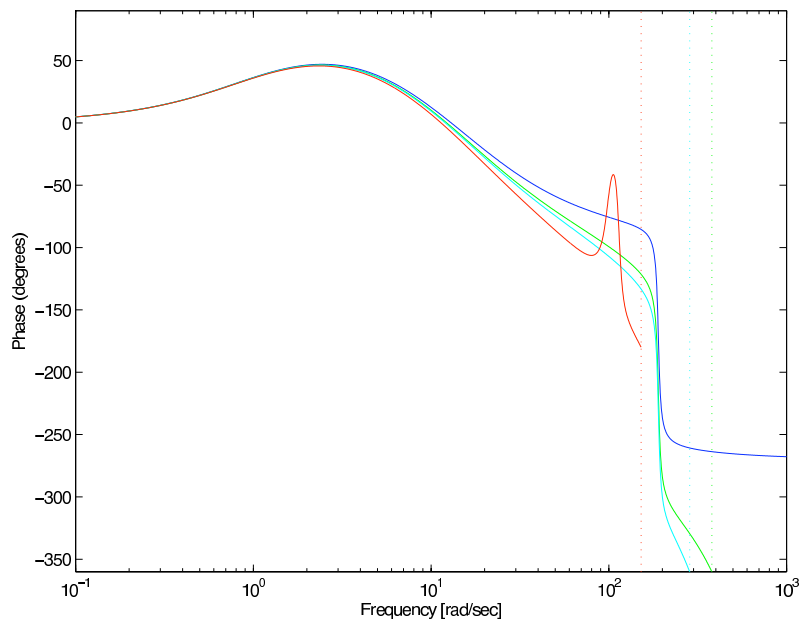
Sample period T2



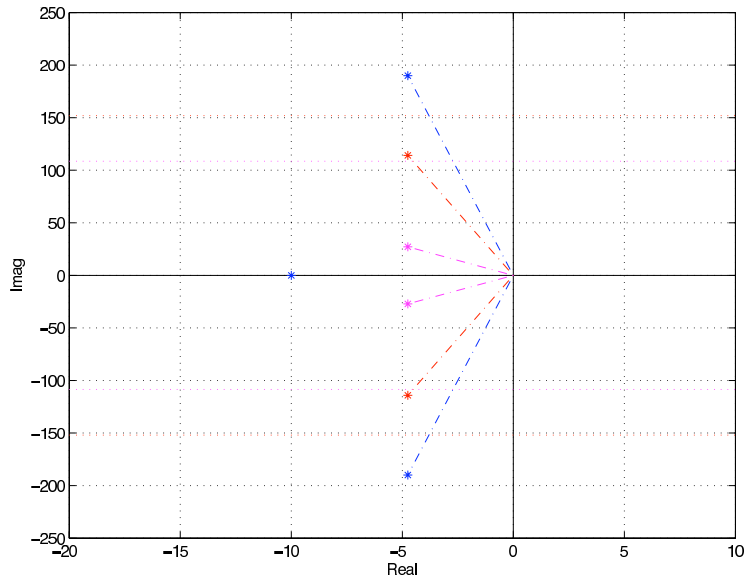
Sample period T3



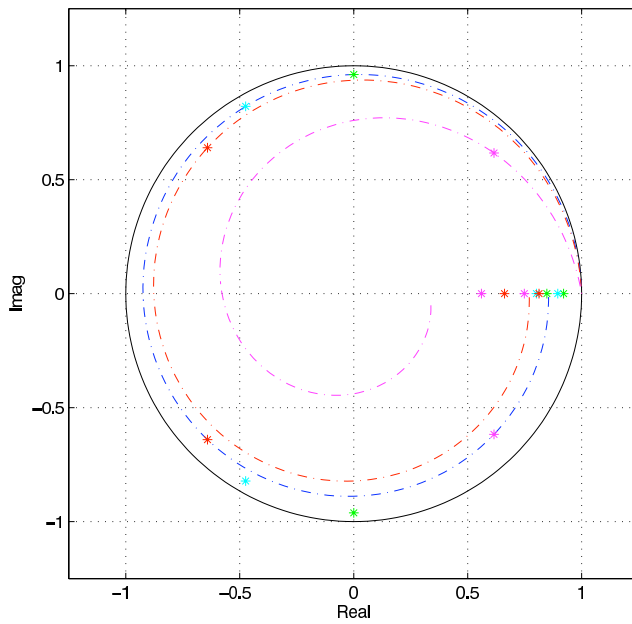
Sample period T3



Sample period T3

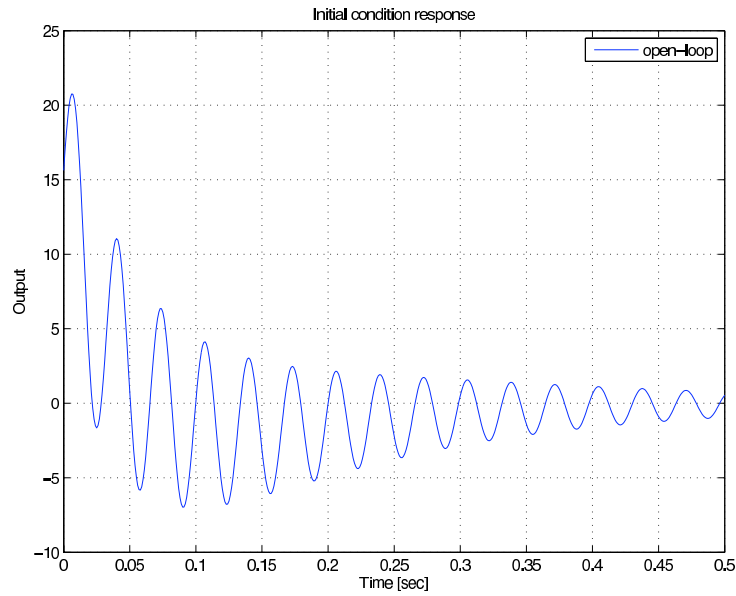


Sample period T3

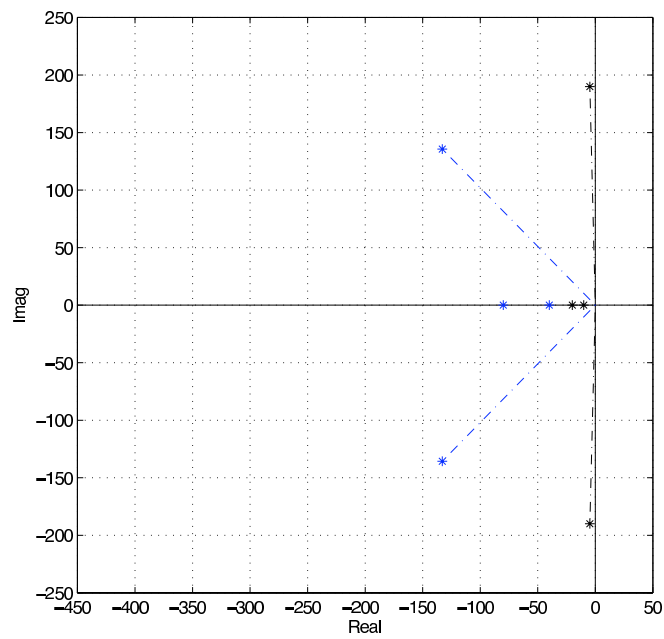


State feedback design

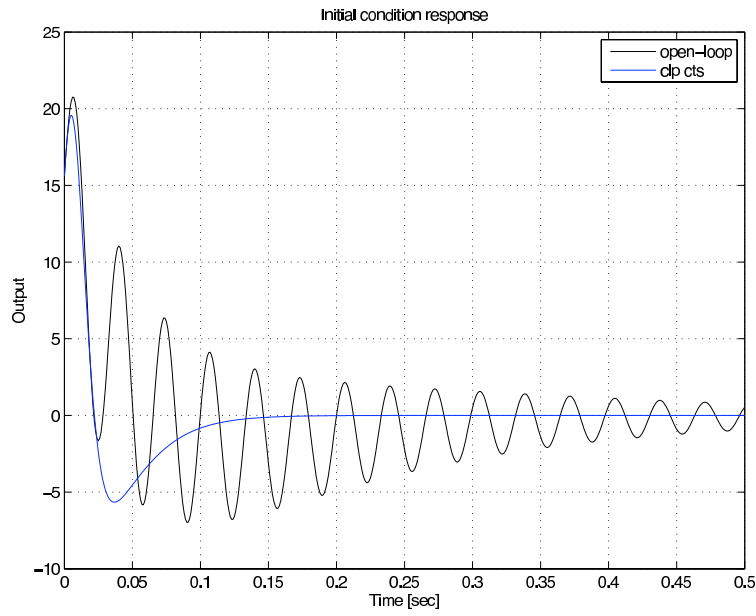
Open-loop response



Continuous-time state feedback design (pole placement)

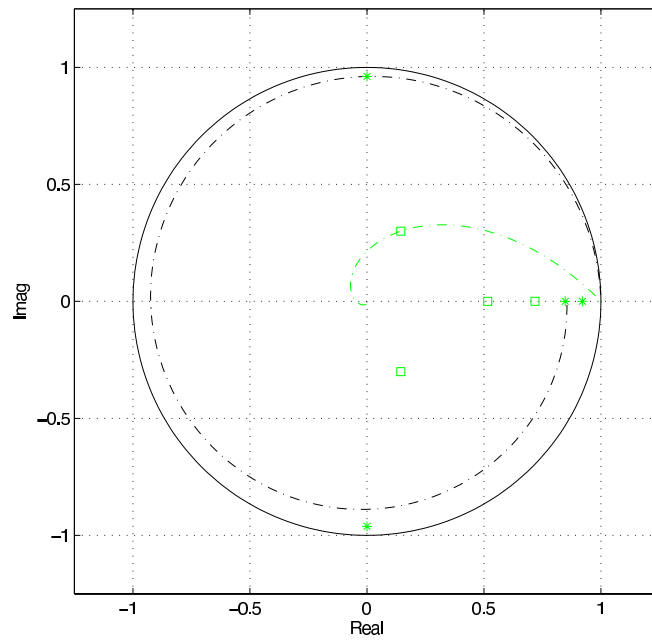


Continuous-time state feedback design (pole placement)



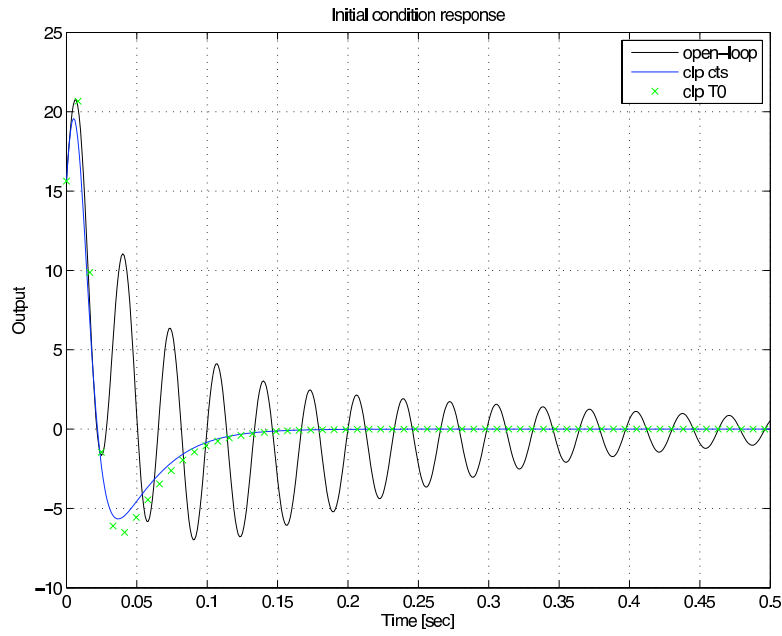
Discrete-time state feedback design (pole placement)

Sample period T_0



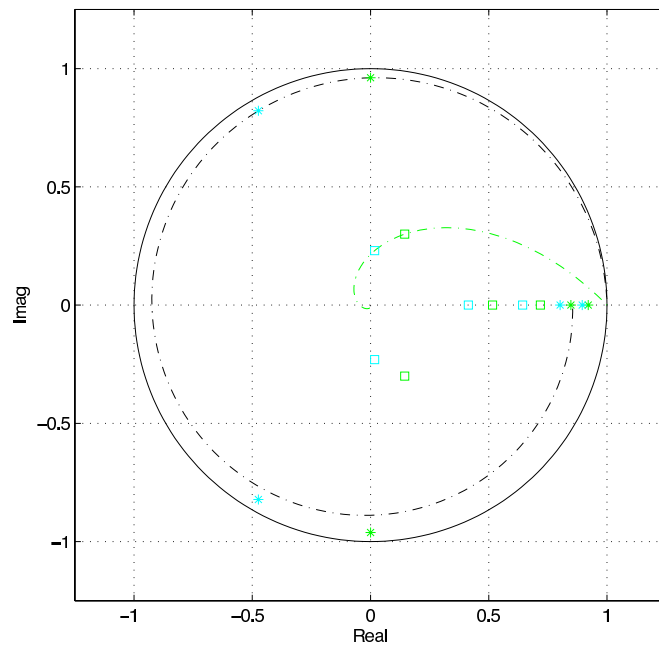
Discrete-time state feedback design (pole placement)

Sample period T_0



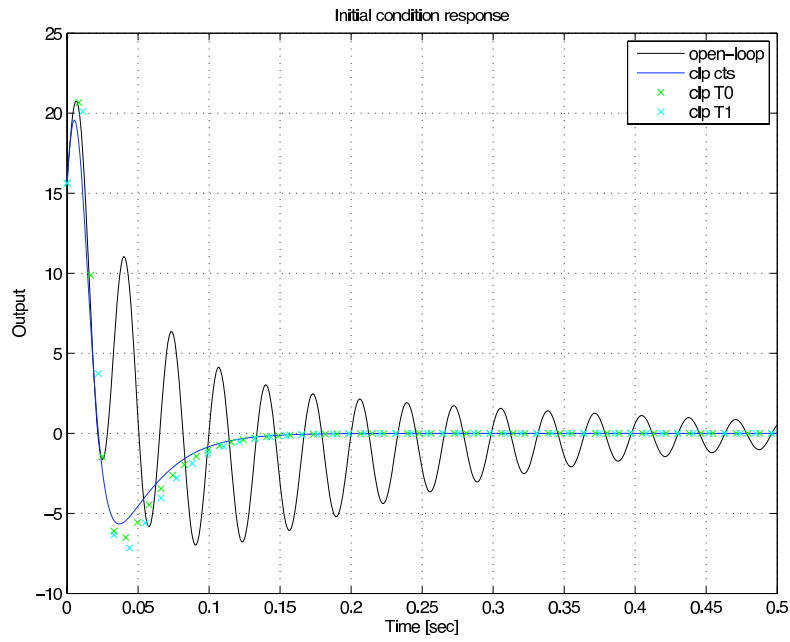
Discrete-time state feedback design (pole placement)

Sample period T_1



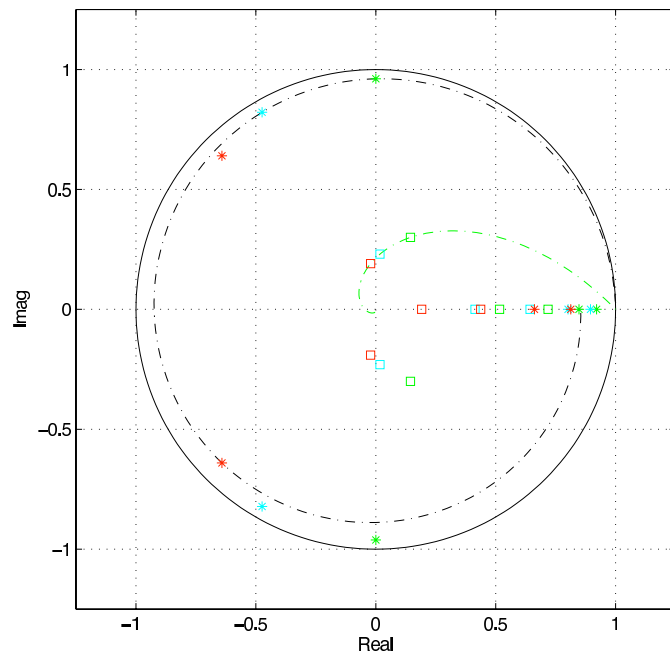
Discrete-time state feedback design (pole placement)

Sample period T1



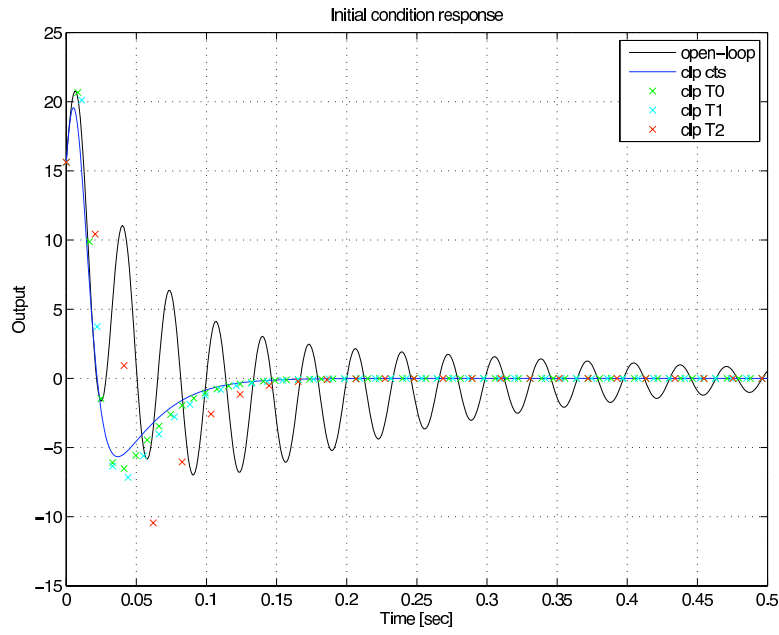
Discrete-time state feedback design (pole placement)

Sample period T2



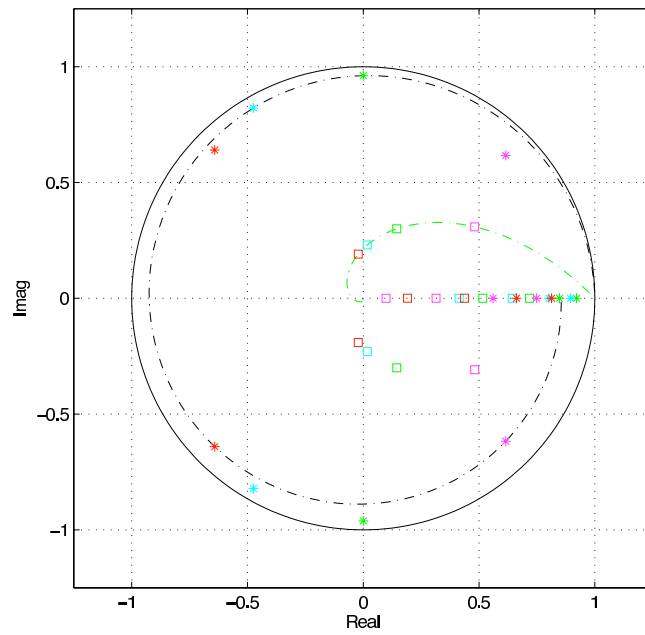
Discrete-time state feedback design (pole placement)

Sample period T2



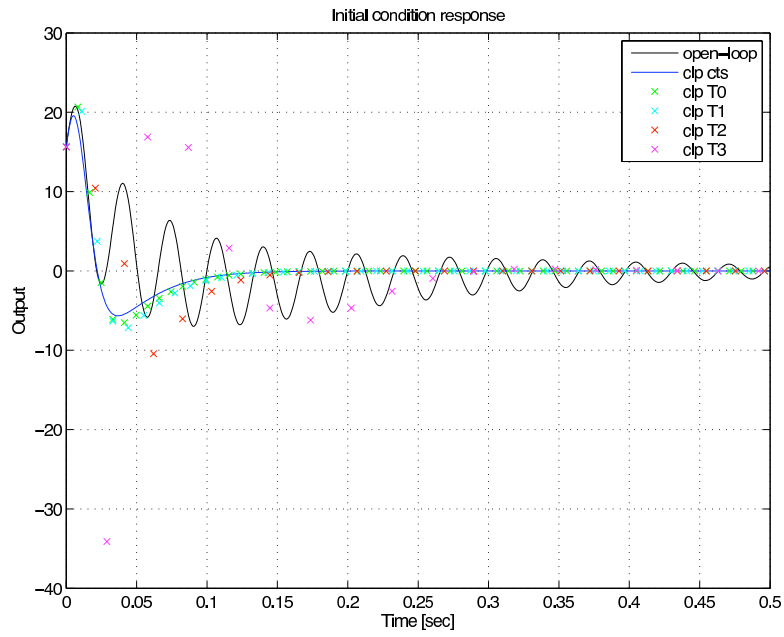
Discrete-time state feedback design (pole placement)

Sample period T3



Discrete-time state feedback design (pole placement)

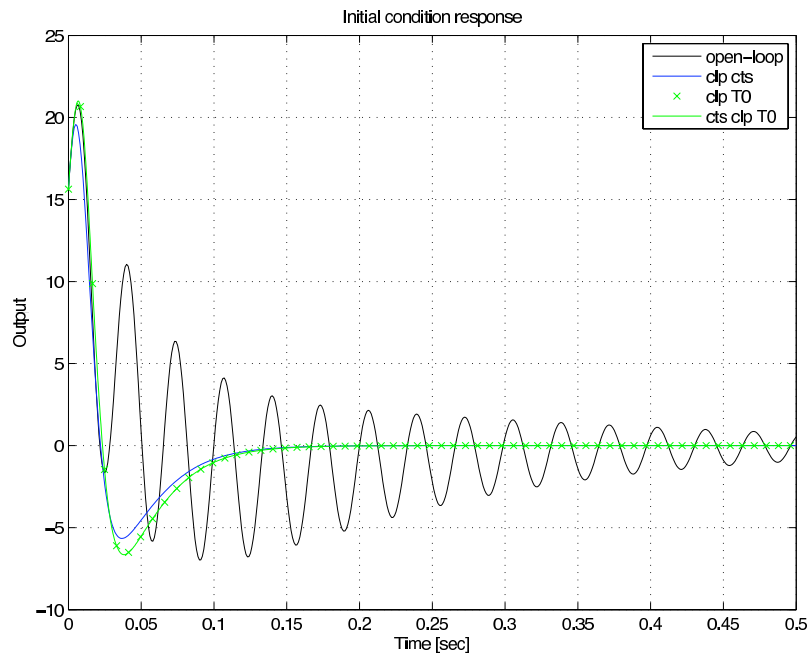
Sample period T3



Roy Smith, ECE 147b, 17:29

Intersample behavior

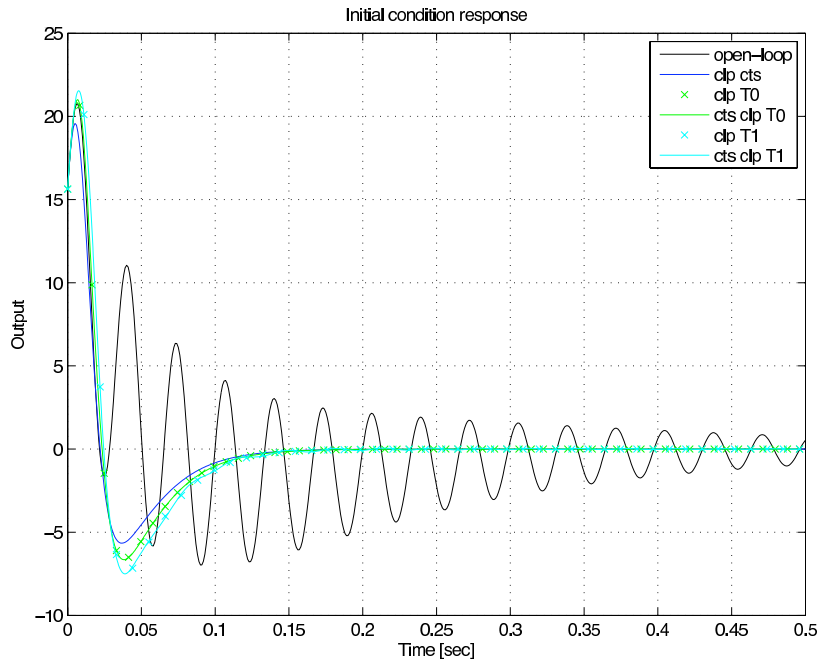
Sample period T0



Roy Smith, ECE 147b, 17:30

Intersample behavior

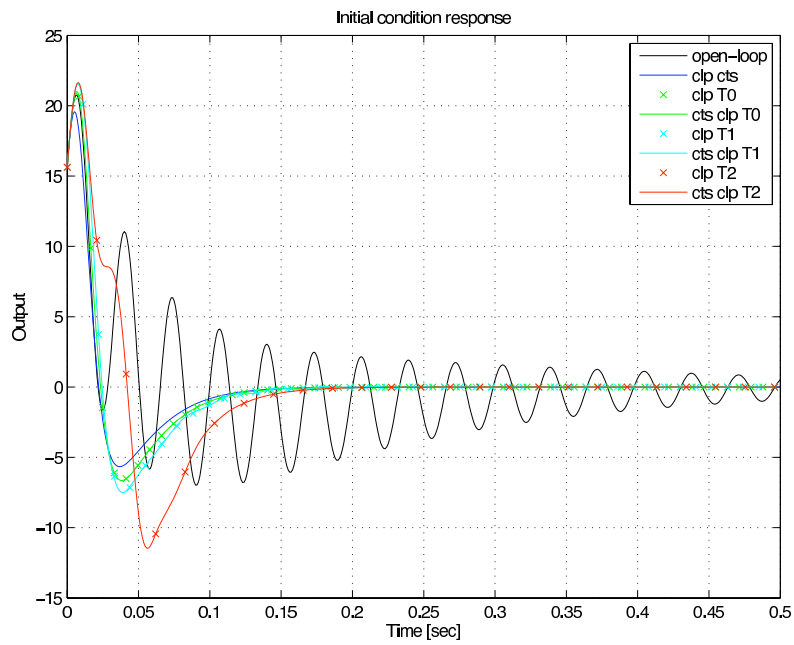
Sample period T1



Roy Smith, ECE 147b, 17:31

Intersample behavior

Sample period T2



Roy Smith, ECE 147b, 17:32

Intersample behavior

Sample period T3

