```
using ControlSystems
h = 1
z = tf("z",h)
A = (z-1)*(z-0.7)
B = 0.9z+1
C = z*(z-0.7)
P = B/A
Pw = C/A
sys = ss(P) # State-space system from control to output
sysw = ss(Pw) # State-space system from noise to output
# The two systems will share the same A-matrix

T = 100
t = 0:h:T-1
N = length(t)
n = 5 # Number of control penalties to try
ρvec = logspace(2, -3, n)
```