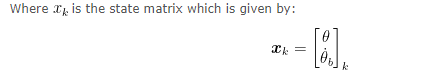
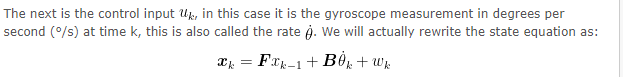
GYROSCOPE KALMAN FILTER

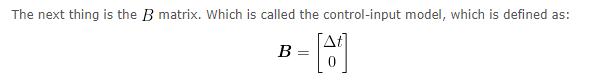


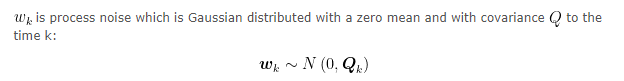


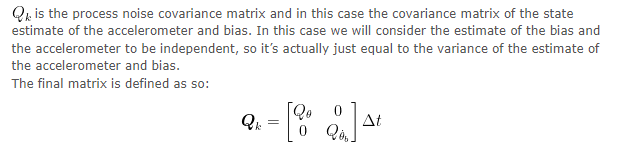


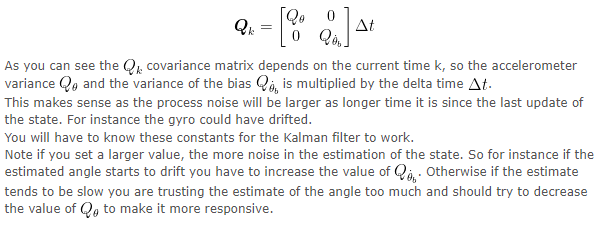


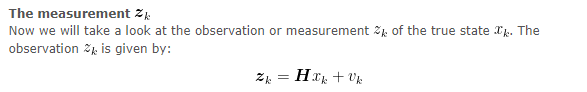






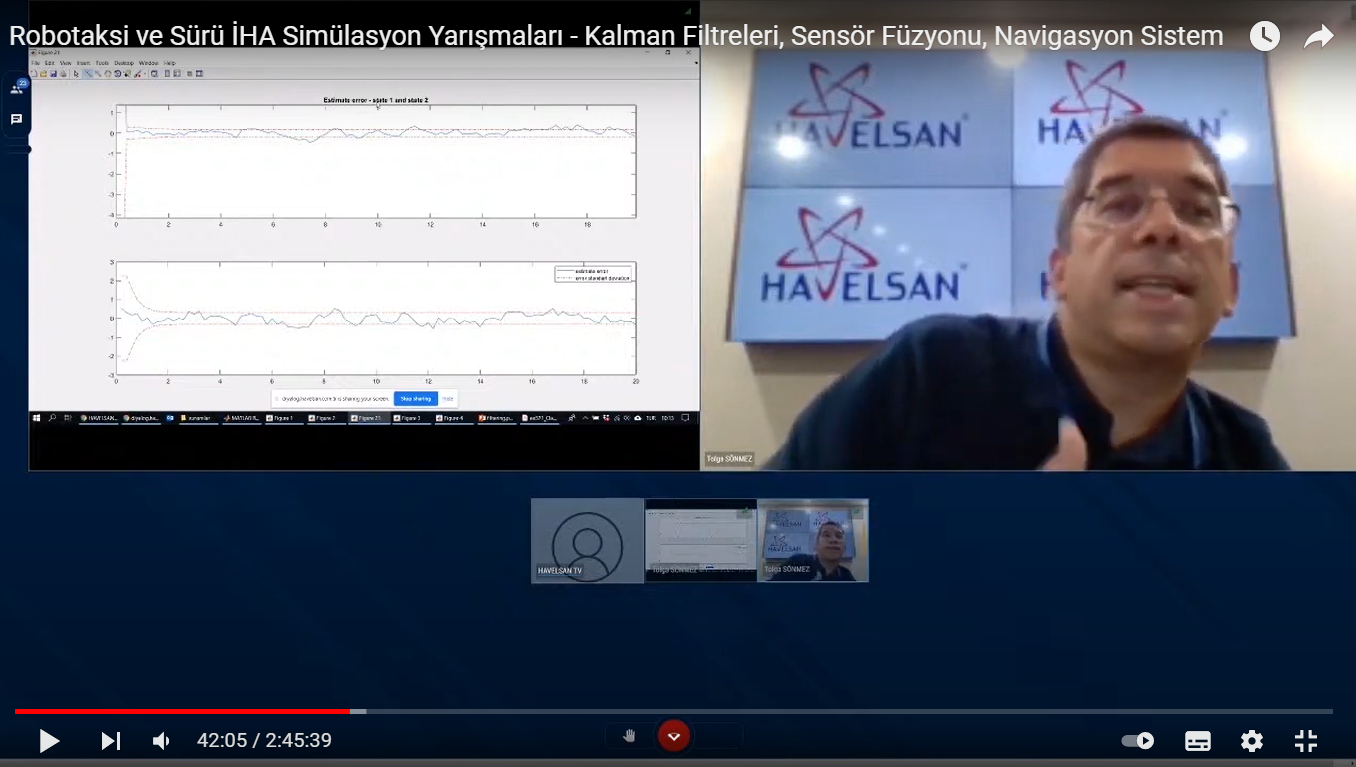


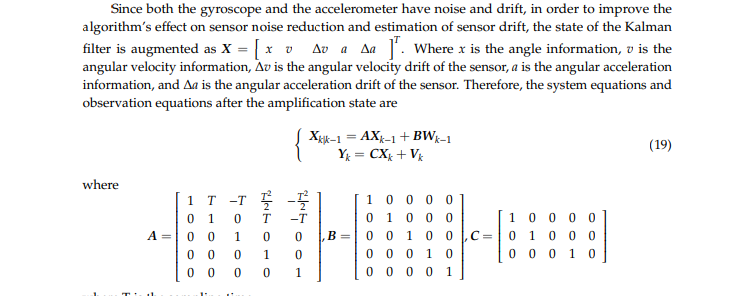












clc

clear

clear all

clf

real\_value1=load("x.txt");

real\_value2=load("y.txt");

real\_value3=load("z.txt");

real\_value=[real\_value1 real\_value2 real\_value3];

filtered\_valx=zeros(length(real\_value),1);

filtered\_valy=zeros(length(real\_value),1);

filtered\_valz=zeros(length(real\_value),1);

for i=1:length(real\_value)

z=real\_value(i,1:3);

[y,klm\_gain] = muhammet(z);

filtered\_valx(i)=y(1,1);

filtered\_valy(i)=y(1,2);

filtered\_valz(i)=y(1,3);

gain(i)=klm\_gain(1);

end

plot(real\_value1,'r');

hold on

plot(filtered\_valx,'b');

legend('real value(red)','filtered value(blue)')

title('for x')

figure

plot(real\_value2,'r');

hold on

plot(filtered\_valy,'b');

legend('real value(red)','filtered value(blue)')

title('for y')

figure

plot(real\_value3,'r');

hold on

plot(filtered\_valz,'b');

legend('real value(red)','filtered value(blue)')

title('for z')

figure

plot(gain);

title('kalman gain');

clc

clear

clear all

real\_value=load("x.txt");

filtered\_val=zeros(length(real\_value),1);

for i=1:length(real\_value)

z=real\_value(i);

[y,klm\_gain] = muhammet(z);

filtered\_val(i)=y(1);

gain(i)=klm\_gain(1);

end

plot(real\_value,'r');

hold on

plot(filtered\_val,'b');

legend('real value(red)','filtered value(blue)')

figure

plot(gain)