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Editor - /home/gill/Desktop/AK-318/ms-thesis/Cooperative_sensing/Results/USRP/Mat-files/rocsoftcombining.m

harddecision_combining.m

rocsoftcombining.m

This file can be opened as a Live Script. For more information, see [Creating Live Scripts](#).

33

%Pd for MNE

34 -

pdpracmne = 1-(1-pdprac(1,:)).*(1-pdprac(2,:)).*(1-pdprac(3,:)).*(1-pdprac(4,:));

35 -

pdpracor = mean(pdprac).^4;

36 -

pdpracm = mean(pdprac);

37 -

tmp1 = (1-pdpracm).^(k-2);

38 -

tmp2 = (1-pdpracm);

39 -

pdpracmjr = (6*pdpracm.^(k-2)).*tmp1+(4*pdpracm.^(k-1)).*tmp2+pdpracm.^k;

40

%Pf for MNE

41 -

pfamne = 1-(1-pfa(1,:)).*(1-pfa(2,:)).*(1-pfa(3,:)).*(1-pfa(4,:));

42 -

figure(1)

43 -

hold on;

44 -

grid on;

45 -

plot(pfamne,pdpracmne,'-<','LineWidth',2,'MarkerFaceColor','auto');

46

% axis([-20 10 0 1])

47

%% EGC based CS..

48

% snrlinearmean = 10.^(snravg/10);

49 -

threshold = linspace(0.9,1.2,10);

50 -

snrlinear = 10.^(snrpractical/10);

51 -

snrlinearmean = mean(snrlinear);

52 -

numpd = threshold-snrlinearmean;

53 -

den = (1/16)*((1+2*snrlinear(1))/N(1)+variance(1)+(1+2*snrlinear(2))/N(2)+variance(2)+(1+2*snrlinear(3))/N(3)+variance(3)+(1+2*snrlinear(4))/N(4)+variance(4));

54 -

pdegc = qfunc(numpd./sqrt(den));

55

56 -

numpf = threshold-1;

57 -

denpf = (1/16)*(1/N(1)+variance(1)+1/N(2)+variance(2)+1/N(3)+variance(3)+1/N(4)+variance(4));

58 -

pfaegc = qfunc(numpf./sqrt(denpf));

59