%% test\_independence

%% SPEARMAN or KENDALL test for independence

% null hypothesis: uncorrelation

% if p<alpha, reject -> presence of correlation

% input: X row column

% tipo: 'Spearman', 'Kendall'

function [pM,rho,contarigett,stringout,stringflag]=test\_independence(X,tipo,alpha);

M=size(X,1); % n. of signals

N=size(X,2); % length of signals

[rho,pM] = corr(X','type',tipo);

contarigett=0;

for i=1:M

for j=i+1:M

if pM(i,j)<alpha

contarigett=contarigett+1;

end

end

end

if contarigett == 0

stringout='non-rejection: all signals are INDEPENDENT';

stringflag=0;

else

stringout='rejection: at least two signals are NOT INDEPENDENT';

stringflag=1;

end