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% gda05_08
%
% example of probability distribution p(m1,m2)
% implements inequality constraint m1<m2
% supports Figure 5.8

clear all;

% m1 variable
Nm1 = 51;
m1min = 0;
m1max = 5.0;
Dm1 = (m1max-m1min)/(Nm1-1);
m1 = m1min + Dm1*[0:Nm1-1]';

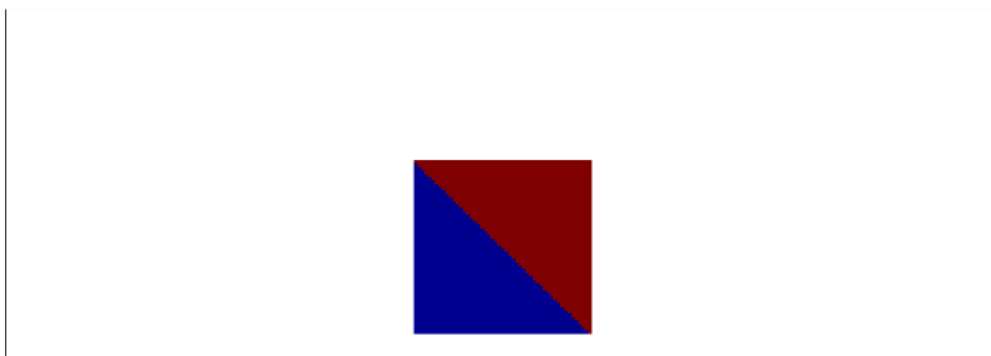
% m2 variable
Nm2 = 51;
m2min = 0;
m2max = 5.0;
Dm2 = (m2max-m2min)/(Nm2-1);
m2 = m2min + Dm2*[0:Nm2-1]';

% compute distribution 1
P1=zeros(Nm1,Nm2);
for i=[1:Nm1]
for j=[1:Nm2]
    P1(i,j) = (m1(i)<=m2(j));
end
end

% for test purposes
% A1 = Dd1*Dd2*sum(sum(P1));

% plot distribution
gda_draw(' ', P1 );

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% Figure 5.8 [AU Note: was "a priori"] Prior information about model parameters m1 and m2 repr
% probability density function p(m1,m2). The value of the model parameters are unknown, but th
%  $m1 \leq m2$  is believed to hold exactly. This is a non-Gaussian probability density function. Ma

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