L = getMatrix(4, 1000);

L(:,1:10)

ans =  
  
 0.4271 0.5403 0.9269 0.9971 0.1053 0.1043 0.3203 0.1883 0.5669 0.1454  
 0.9554 0.7054 0.0083 0.2277 0.2682 0.4698 0.8575 0.7592 0.3764 0.4891  
 0.7242 0.0050 0.8246 0.9195 0.7638 0.2191 0.2598 0.0317 0.2125 0.0128  
 0.5809 0.7825 0.7673 0.6420 0.8055 0.9227 0.8781 0.6423 0.7922 0.1866

[A, B, C] = getABC(L, 0.5, 0.7, 0.2, 0.6, 0.6, 0.9);

A(:,1:10)

ans =  
  
 0 1 0 0 0 0 0 0 1 0

B(:,1:10)

ans =  
  
 0 0 0 1 1 1 0 0 1 1

C(:,1:10)

ans =  
  
 1 0 1 0 1 0 0 0 0 0