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COGS 104

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Assignment 9: Phase Transitions with Erdös and Renyi

clear

AllMaxNet=zeros(10,50);

for run=1:10

x=0;

cells=100;

for edges=5:5:250

x=x+1;

m=zeros(cells,cells);

while sum(sum(m))<edges

i=randi([1,cells-1]);

j=randi([i+1,cells]);

m(i,j)=1;

end

bim=m+m';

for n=1:cells

CellActs=zeros(1,cells);

CellActs(n)=1;

for t=1:cells

CellActs=(CellActs\*bim)+CellActs;

end

NetSize(n)=nnz(CellActs);

end

MaxNet(x)=max(NetSize);

end

AllMaxNet(run,:)=MaxNet;

end

plot([0.05:0.05:2.5],mean(AllMaxNet));

