# Graphical Models 2004/2005 - problem set 7

## January 13, 2005

Submition date : Thursday, 20/1/04

In class we saw an algorithm for finding the maximum likelihood parameters $\theta_{ML}$ in undirected graphical models. Similarly, for a 4 cycle graph A-B-C-D-A define a guess for the ML parameters by

- Psi(A,B)=P(A,B)/P(A)

- Psi(B,C)=P(B,C)/P(B)

- Psi(C,D)=P(C,D)/P(C)

- Psi(A,D)=P(D,A)/P(D)

where $P()$ in this case is the empirical distribution.
    Show that these parameters are NOT the ML parameters.