



The University of Chicago

Department of Statistics

Seminar Series

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**“Two New Families of Conjugate Priors
for Graphical Gaussian Models”**

November 7, 2005 at 4:00 PM
133 Eckhart Hall, 5734 S. University Avenue
Refreshments following the seminar in Eckhart 110.

ABSTRACT

We construct two new families of conjugate prior distributions for the covariance parameter of some graphical Gaussian models. For the model Markov with respect to an undirected decomposable graph, the Diaconis-Ylvisaker conjugate prior which is the hyper inverse Wishart as given by Dawid and Lauritzen (1993) is a particular case of our new family. In this case, our family has the advantage of flexibility since its shape parameter is of dimension at least equal to the number of cliques of the graph plus one. It also has good hyper Markov properties since it is directed strong hyper Markov for all perfect orders of the cliques.

Please send email to Mathias Drton (drton@galton.uchicago.edu) for further information. Information about building access for persons with disabilities may be obtained in advance by calling the department office at (773) 702-8333.