

STANFORD UNIVERSITY
DEPARTMENT OF STATISTICS
DEPARTMENT SEMINAR

4:15 p.m., Tuesday, February 5, 2002
Sequoia Hall Room 200
(Cookies at 3:45 in 1st Floor Lounge)

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Matrix - Generalized Inverse Gaussian Laws and Their Wishart Connections.

The matrix version of the generalized inverse Gaussian distribution introduced by Barndorff-Nielsen et al (and studied by Bernadac, Butler, Letac and Wesolowski) is defined on the cone of real symmetric positive definite matrices. This distribution is shown to share several properties with generalized inverse Gaussian distributions. Some known properties are first catalogued and some new properties are examined which show the Wishart connection to matrix generalized inverse Gaussian laws. This family when regarded as marginals for the variance matrix gives rise to a new conjugate family for the multivariate normal laws.