1041-62-89   **Mathias Drton*** (`drton@uchicago.edu`), Department of Statistics, University of Chicago, 5734 S. University Ave, Chicago, IL 60637. *Covariance graphs and hidden variables.* Preliminary report.

A covariance graph model is a statistical model for a set of jointly multivariate normal random variables. Each such model corresponds to a set of positive definite matrices with a prescribed pattern of zeros. We study when certain polynomial parametrization maps fill all of a considered set of zero-constrained positive definite matrices. The parametrizations are obtained by creating acyclic digraphs whose vertices include the considered random variables but also additional random variables referred to as hidden variables in statistics. (Received August 05, 2008)

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