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Luis David Garcia-Puente* (lgarcia@shsu.edu), Department of Mathematics and Statistics, Sam Houston State University, Huntsville, TX 77341-2206, Sarah Spielvogel (SXS013@SHSU.EDU), Department of Mathematics and Statistics, Sam Houston State University, Huntsville, TX 77341-2206, and Seth Sullivant (smsulli2@ncsu.edu), Department of Mathematics, North Carolina State University, Raleigh, NC 27695. Identifiability of Gaussian graphical models. Preliminary report.

A graphical model is a representation method based on combinatorial graphs and probability theory used to formalize a variety of causal queries as certain types of probability distributions. A central problem in graphical models is the analysis of identification. A model is identified if it only admits a unique parametrization to be compatible with a given set of observed data. In this talk, I will present a computer algebra software to test model identifiability. I will also discuss data concerning all graphical models on at most five random variables. (Received January 24, 2010)