

# **Generalized Hyper Markov Laws For Directed Markov Random Fields**

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In the recent past, classes of flexible hyper Markov laws have been proposed (and subsequently analyzed) for the purposes of high dimensional Bayesian inference in important classes of Gaussian graphical models. A shortcoming of many of these theoretical endeavors is that they are often restricted to special class of graphs (such as decomposable graphs etc...), and are therefore not always readily applicable – though they have led to rich probability and statistical theory. In this talk we propose a novel approach that aims to move beyond this restriction for the class of directed Markov Random fields.

This is joint work with Emanuel Ben-David.