

1047-62-24

Helene M Massam* (massamh@yorku.ca), Department of Mathematics and Statistics, York University, 4700 Keele Street, Toronto, Ontario M3J 1P3. *Alternative parametrizations and reference priors for decomposable discrete graphical models.*

For a given discrete decomposable graphical model, we identify several alternative parametrizations, and construct the corresponding reference priors for suitable groupings of the parameters. Specifically, assuming that the cliques of the graph are arranged in a perfect order, the parameters we consider are conditional probabilities of clique-residuals given separators, as well as generalized log-odds-ratios.

We also consider a parametrization associated to a collection of variables representing a cut for the statistical model. The reference priors we obtain do not depend on the order of the groupings, belong to a conjugate family, and are proper. (Received November 25, 2008)