

Welcome seminar for new faculty

Bayesian modeling of multivariate discrete data

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Friday 16 Jun 2023 | 12:30 p.m.
Room Benvenuti and live Zoom
Department of Statistical Sciences

Multivariate categorical data are recurrent in many areas, such as medical sciences, social research and business applications.

In these settings, variables are measured on discrete scales and represent levels of agreement, personal opinions or relationships among individuals.

When the number of variables is large, the number of parameters required to characterize the joint probability mass function increases exponentially, and some form of shrinkage toward a lower-dimensional structure becomes necessary.

In this seminar I will provide an overview of some recent contributions in this research area, focusing on different applications that involve cross-sectional data, multivariate contingency tables, network data and multivariate counts. I will illustrate the main benefits of these approaches from a modeling perspective, balancing accuracy and interpretability with computational tractability.



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