

## The Latent Block Model: a useful model for high dimensional data

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The Latent Block Model (LBM) designs in a same exercise a clustering of the rows and the columns of a data array. Typically the LBM is expected to be useful to analyze huge data sets with many observations and many variables. But it encounters several numerical issues with big data set: maximum likelihood is jeopardized by spurious maxima and selecting a proper model is challenging since there are a lot of models in competition. In this talk, we analyze these issues. In particular, we make use of Bayesian inference to avoid spurious solutions and propose an efficient way to scan the model set. Moreover, we advocate the exact Integrated Completed Likelihood (ICL) criterion to select a proper and consistent LBM. The methods and algorithms will be illustrated with pharmacovigilance data involving large arrays of data.

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