INFERENCE VIA SPIKE-AND-SLAB POSTERIOR DISTRIBUTIONS

ISMAËL CASTILLO
Sorbonne Université, Paris, France
Laboratoire Probabilités, Statistique et Modélisation (LPSM Paris)
e-mail: ismael.castillo@upmc.fr

This talk will discuss several aspects of inference using so-called spike-and-slab prior distributions on unknown sparse vectors, where the proportion of non-zero coefficients is chosen using marginal maximum likelihood Empirical Bayes. We will consider convergence of the full posterior distribution in terms of rates, its ability to provide asymptotically valid confidence sets that cover the true sparse parameter, as well as the possibility to use such a posterior for testing multiple hypotheses. The talk is based on joint works with Romain Mismer [1], Botond Szabó [2] and Étienne Roquain [3].

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References