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MAXIMUM LIKELIHOOD ESTIMATORS FOR DISCRETE EXPONENTIAL FAMILIES AND RANDOM GRAPHS

We approach the problem of the existence of maximum likelihood estimators (MLE) for discrete exponential families. Using the notion of sets of uniqueness, we give new criterion for the existence of MLE. We show how this criterion can be applied in various settings, most notably of exponential models of random graphs and for linear spaces spanned by Rademacher functions.

Additionally, we give a few remarks concerning the existence of MLE for spaces spanned by products of Rademacher functions.

This is joint work with Krzysztof Bogdan, Michał Bosy, and Tomasz Stroiński.