Asymptotic Results for Multinomial Models

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Let $n_1, ..., n_m$, be the number of times we obtain the pairwise incompatible results in n independent realizations of an experiment. Thus we have for the estimation of probabilities the asymptotic normal distributions with null mean vector and covariance matrix $D(\underline{p}) - \underline{p}\,\underline{p}^\top$. We show how to obtain confidence ellipsoids for the vector $\underline{p}$ of probabilities of the results and how to test hypotheses. We apply our results to discriminant analysis giving a numerical simulation.

References

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