Departamento de Estadística e Investigación Operativa

Instituto de Matemática Interdisciplinar

SEMINARIO

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A Minimum Distance Weighted Likelihood Method of Estimation

Over the last several decades, minimum distance (or minimum divergence, minimum disparity, minimum discrepancy) estimation methods have been studied in different statistical settings as an alternative to the method of maximum likelihood. The initial motivation was probably to exhibit that there exists other estimators apart from the maximum likelihood estimator (MLE) which has full asymptotic efficiency at the model. As the scope of and interest in the area of robust inference grew, many of these estimators were found to be particularly useful in that respect and performed better than the MLE under contamination. Later, a weighted likelihood variant of the method was developed in the same spirit, which was substantially simpler to implement. In the statistics literature the method of minimum disparity estimation and the corresponding weighted likelihood estimation methods have distinct identities. Despite their similarities, they have some basic differences. In this paper we propose a method of estimation which is simultaneously a minimum disparity method and a weighted likelihood method, and may be viewed as combining the positive aspects of both. We explore the properties of the corresponding minimum disparity weighted likelihood (MDWL) estimators, and illustrate their properties.

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