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Some properties of weighted multivariate empirical processes. (English) Zbl 0548.60023
Stat. Decis. 2, 199-223 (1984).

The authors prove an exponential bound for the multivariate empirical process indexed by rectangles. This bound is applied to study the local behaviour of weighted empirical processes and the corresponding weak and strong convergence results of these processes. The proof of the exponential inequality is based on the relation of empirical processes to Poisson processes; the considered weight functions are of the form $q \circ F$, where F is the underlying distribution function.

Reviewer: L.Rüschendorf

MSC:

60F05 Central limit and other weak theorems
60G17 Sample path properties
62E20 Asymptotic distribution theory in statistics

Cited in 7 Documents

Keywords:

multivariate empirical process; weak and strong convergence; exponential inequality