ICM 1998, Berlin, Aug. 18–27

Abstracts of Short Communications and Posters

Section:

12. Probability and Statistics

1991 MS Classification: 60F05; 60F17
Samir Ben Hariz, Université de Paris Sud, France

Uniform CLT for empirical process indexed by classes of functions

Empirical processes indexed by classes of functions based on dependent observations are considered. Sufficient conditions in order to satisfy stochastic equicontinuity are given. Conditions are in term of bracketing numbers with respect to a norm arising from Rosenthal type moment inequality satisfied by the process. Several applications to functional central limit theorem (CLT) involving mixing sequences, functions of Gaussian sequences are discussed. The results improve on those of Massart 87, Andrews and Pollard 94 and Csörgő and Mielniczuk 96.

References: Andrews and Pollard. Int. Stat. Rev. 62, No.1, 119-132 (1994).
Csörgő Mielniczuk. Probab. Theory Relat. Fields 104, No.1, 15-25, (1996).
Massart. Chapter 1B of Ph. D. dissertation. University of Paris South. (1987)