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Tesi di dottorato in

INFERENZA NON PARAMETRICA NEL CONTESTO DI DATI DIPENDENTI:
POLINOMI LOCALI E VEROSIMIGLIANZA EMPIRICA

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ABSTRACT

Our analysis combine the employing of Local Polynomial estimator with the Empirical Likelihood tool, for dependent data.

We treat the *alpha-mixing* processes and try to combine the accuracy of Local Polynomial estimator with the peculiarity that are in the Owen definition of Empirical Likelihood (1988).

The advantages are easily to appreciate for the immediacy and practical use of this study.

The analysis of the results are made with a theoretical approach and an empirical one, with a particular attention to the most important parameter for the Local Polynomial estimator: the *bandwidth*.

We present, first of all, the context in which we operate, then, in the second chapter, we clarify the features and properties of Local Polynomial estimator.

In the third chapter we explain in detail the Empirical Likelihood and the main properties, afterwards, in chapter four we present personal theorical results, starting from properties earlier specified.

Last chapter include a simulation study, to verify theoretical properties expressed in the preceding chapter.

In the end, we comment the results of the simulation study, that confirm our original theoretical results and give a base for a new analysis, for all the presented tests, with respect to the *smoothing* parameter.