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Seminaires du LPTM , Universite de Cergy Pontoise

Mardi 12 Novembre 2019, 14 :00
LPTM, 4.13 St Martin II
Domaines : math.PR

Titre : *Non stationary models and applications*

Orateur : **Paul Doukhan (AGM, Université Cergy Pontoise)**

Résumé : *The notion of stationarity has more a mathematical origin that a tight relationship to real data sets. Namely the underlying idea of this assumption is the use of the ergodic theorem (the law of large numbers). The aim of the talk is to try to provide mathematical models adapted to several issues of real data. We aim also at precisely setting some technical ideas for fitting such models. We will describe some models for astronomical data sets, and some models devoted to online retail, in order to exhibit precise features of interest for real models, and we will try to avoid the standard mathematical traps to pass from stationary models to non stationary ones. Namely local stationarity, periods, exogenous data and isotonic assumptions are clearly seen to be reasonable. Weak dependence conditions are also quite valuable in such settings.*