# SEMINÁRIOS

## SÉRIES TEMPORAIS, ONDALETAS E DADOS FUNCIONAIS

LOCAL: **IME-USP, Bloco B - Sala B04**

DATA: **13 de novembro de 2014**

HORÁRIO: **15h00**

### COPULA ESTIMATION THROUGH WAVELETS
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Copulas are important tools for describing the dependence structure between random variables and stochastic processes. Recently some nonparametric estimation procedures have appeared, using kernels and wavelets. In this context, knowing that a copula function can be expanded in a wavelet basis, we have proposed a nonparametric copula estimation procedure through wavelets for independent data and times series under $\alpha$-mixing condition.The main feature of this estimator is the copula function estimation without assumptions about the data distribution and without ARMA - GARCH modeling, like in parametric copula estimation. Convergence rates for the estimator were computed. Some simulation studies were made, as well as analysis of real data sets.

Keywords: Copula, Nonparametric estimation, Wavelets, ?-mixing processes.