



## CPS Paper

### A wavelet regression approach for dependence calibration in conditional copula model

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#### Presentation File

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#### Brief Description

Presentation session

#### Abstract

In presence of covariates, modeling dependence structure of random variables can be done using conditional copula function. If this latter belongs to a parametric copula family, an important question is how the dependence parameter, say  $\theta$ , is related to the covariates. In this paper, we propose a wavelet regression approach to estimate the relationship between  $\theta$  and some real covariate. This relation is described by the so-called calibration function. We discuss asymptotic minimax properties for the linear and non-linear wavelet regression estimators and show their performance via a simulation study. An application to meteorological data reveals that the temperature influences the dependence structure between the maximum and the minimum relative humidity variables, when it takes either higher values or smaller values.