PLENARY LECTURE
COPULAS AND DEPENDENCE
with application to survival analysis

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ABSTRACT

Copula functions are becoming more and more popular for investigating and understanding dependence between several random variables. They provide a method for deriving joint distributions from given marginal distributions. Copulas have applications in many fields, for example finance, engineering, survival anlysis,...

In this talk we start with an elementary introduction to copulas and the related dependence measures and their statistical inference.

In the second part we deal with more recent concepts of conditional and partial copulas, describing dependence in the presence of covariates.

In the final part we give an introductory sketch of the classical model for the analysis of survival data and show how copulas can broaden this framework to allow for dependent censoring.