

Nonparametric conditional copula estimation and applications

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A convenient way to model dependency is through a copula function, that couples the (conditional) joint distribution with the (conditional) marginal distributions. In recent years a lot of attention has been devoted to statistical inference for conditional copulas and resulting conditional association measures. See, for example, [1] and [2]. In dependence modelling using conditional copulas, one often imposes the working assumption that the covariate(s) influences the conditional copula solely through the marginal distributions. This so-called (pairwise) simplifying assumption is almost standardly made in vine copula constructions. When such a simplifying assumption holds, this knowledge should lead to a more efficient estimation of the dependence structure. In this talk we briefly discuss nonparametric estimation of a conditional copula in a general setting and in the simplifying assumption (cf. [3]). As exemplified in the literature, such an assumption might not be justified (see e.g. [4]). We briefly discuss how one could proceed to test whether this assumption holds or not.

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References

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