

Estimation of the functional Weibull tail-coefficient

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We present a nonparametric family of estimators for the tail coefficient of a Weibull tail-distribution when a functional covariate is available. Our estimators are based on a kernel estimator of extreme conditional quantiles, extending a previous work of Daouia, et al. (2013) [On kernel smoothing for extremal quantile regression. *Bernoulli*, **19**, 2557-2589] to the infinite dimensional case. Asymptotic normality of the estimators is proved under mild regularity conditions. Their finite sample performances are illustrated both on simulated and real data. We refer to Gardes and Girard (2016) [On the estimation of the functional Weibull tail-coefficient. *Journal of Multivariate Analysis* **146**, 24-45] for further details.

Key Words: Conditional Weibull tail-coefficient; Extreme quantiles; Nonparametric estimation.