# NONPARAMETRIC ESTIMATION OF THE CONDITIONAL TAIL INDEX AND EXTREME QUANTILES ESTIMATION UNDER RANDOM CENSORING

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**Abstract.**

In this paper, we consider the problem of estimating the conditional extreme value index and extreme conditional quantiles in the presence of censorship. Einmahl et al. (2008) proposed estimators of the extreme value index and quantile extremes in the case of censored data without covariate. In this work, we propose adaptations of these estimators in the case of censored randomly to the right and the presence of covariates. Then a theoretical study of asymptotic properties of these new estimators will be proposed. Finally, their behavior is illustrated on the basis of simulations.

**Keywords:** random censoring, conditional tail index, conditional quantiles, Kaplan-Meier estimator.