

# Extreme value theory towards non-stationarity

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Extreme value theory provides the background for extrapolating beyond the sample maxima. After a brief overview of the basic concept of ‘maximum domain of attraction’, tail expansions e.g. of the empirical tail quantile function will be revisited. These powerful tools for statistics of extremes have been recently extended in the context of a marginal tail distribution equivalence property and existence of scedasis [1]. The results provide a new framework for non-stationary scenarios accounting for spatial dependence, and from which theoretical properties of estimators can be extended. The results will be illustrated with an application to extreme precipitation.

## References

- [1] EINMAHL J.H.J., FERREIRA A., DE HAAN L., NEVES C. AND ZHOU C., *Spatial dependence and space-time trend in extreme events*, *Annals of Statistics* (2021).

**The title**

**Authors names<sup>1</sup>,**

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## References

- [1] SURNAME, NAME, *title* , name of journal, no. , first page - last page (year).

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