

## The title of the Parallel Session/Título da Sessão

### Statistical modeling and inference in extreme value analysis using R environment

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Extreme value theory is dedicated to characterize the behavior of rare and extreme events. Assessing this behavior, extrapolating beyond the sample, has been considered one of major statistical challenge, and requires properly characterize the tail of the distribution underlying the data. Accurately modeling extreme events and the analysis requires tools that must be simple to use but also should consider complex statistical models in order to produce valid inferences. To deal with accurate, friendly, free and open-source software is of great value for practitioners and researchers. This paper presents, in R environment, a review of the main steps for performing a data analysis of extreme values and also some different parameter estimation methods. Some well documented packages are briefly described and some data sets will be considered for illustrating the use of some functions. Recent estimators will be included in the study, through the construction of new functions.

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## References

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