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From Classics to Punk: Almost 50 Years of Extreme Value Analysis

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The statistical theory for extremes was initiated by J. Pickands III (1975). Since then, a plethora of frequentist methods (based or not on likelihood functions) have been proposed to estimate tail probabilities. In this field, Bayesian methods were first developed in the 1990s, however they have gained popularity only recently. On the one hand, this is due to the availability of machines with increasing computing power, allowing to speed up the calculation routines required for inference. On the other hand, this is due to the increasing focus on prediction, naturally incorporated in a Bayesian setting, which offers convenient tools for probabilistic forecasting. This talk illustrates the developments in statics of extremes, spanning from estimation techniques based on empirical processes to Bayesian inferential procedures. It concludes skimming over some more recently proposed hybrid methods (empirical Bayes).

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