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## **Robust extreme value analysis: the bulk matching method**

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Traditional extreme value analysis based on the generalised extreme value (GEV) or generalised Pareto distribution (GPD) suffers from two drawbacks: (i) Both methods are wasteful of data as only block maxima or exceedances over a high threshold are taken into account and the bulk of the data is disregarded. (ii) Moreover, in the GPD approach, there is no systematic way to determine the threshold parameter. Here, all the data are fitted simultaneously using a generalised exponential family model for the bulk and a GPD model for the tail. At the threshold, the two distributions are linked together with appropriate matching conditions. The model parameters are estimated from the likelihood function of all the data. Also the threshold parameter can be determined via maximum likelihood in an outer loop. The method is exemplified on wind speed data from an atmospheric model.