

Preface

This monograph attempts to describe in an organized manner the central ideas and results of probabilistic extreme-value theory and related models stemming from the pioneering contributions of E. J. Gumbel in the early forties of this century. The exposition is unencumbered by excessive mathematical details and almost no proofs are provided. It is a book *about* extreme-value distributions — both univariate and multivariate — and their applications, supplemented by an up-to-date extensive bibliography, aimed mainly at a novice in the field; hopefully a specialist may find therein some useful information as well.

By laying bare the main structure of the theory of extreme value distributions and its applications, including the assumptions and conclusions, deficiencies and advantages, it is our intention that the volume will serve as a useful, balanced and critical introduction and simultaneously a guide to the literature. We have tried to keep the language and notation sufficiently familiar and simple to make it accessible for scientists with a modest probabilistic background. As always, as it is the case for books on probability, statistics and in particular on distribution theory, the ill-defined quality of “mathematical sophistication” and the ability to connect empirical statements with rigorous mathematical deductions are desirable prerequisites. In our opinion, the extreme value theory — as described in this book — is a most important and successful example of applicability of mathematics to modern engineering, empirical and environmental problems of great significance, and it is our hope that we also were somewhat successful in conveying the message.

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