Johnson, Norman L.; **Kotz, Samuel**; **Balakrishnan, N.**
Continuous univariate distributions. Vol. 1. 2nd ed. (English) ⟨Zbl 0811.62001⟩
Chichester: Wiley,. xix, 756 p. (1994).

A comparison with the well-known first edition shows an impressive rise of the size: from 300 to 756 pages. Nevertheless, the structure is almost the same as that of the first edition. The first chapter deals with continuous distributions in general (order statistics, systems of distributions, Cornish-Fisher expansion and other topics). Each of the normal, lognormal, inverse Gaussian, and Cauchy distributions are presented in one chapter as in the first edition. The gamma and the chi square distribution are now covered in separate chapters. Chapters on the exponential, Pareto and the Weibull distributions come then in the same order as usual. Extreme value distributions are excluded from this volume.

The increase in size is due to the fact, that all chapters are expanded. But this is not equally done. The chapters on the chi square and gamma distributions, and the Weibull distribution increased most (+117/+70 pages). The latter is the model used most widely in survival analysis, so this increase is due to the recent interest in that area of research.

All chapters are more or less organised according to genesis, moments, estimation of parameters, and relations to other distributions. Additionally, simulation is considered for some distributions, characterisation is dealt with for others. At the ends of the chapters more than 2250 references are given.

Undoubtedly, this second edition of distributions in statistics will serve as the primary source for statistical distributions for a long time.

Reviewer: R.Schlittgen (Hamburg)

MSC:

62-00	General reference works (handbooks, dictionaries, bibliographies, etc.) pertaining to statistics
62E15	Exact distribution theory in statistics
62E10	Characterization and structure theory of statistical distributions

Cited in **3** Reviews
Cited in **750** Documents

Keywords:

order statistics; systems of distributions; Cornish-Fisher expansion; normal; lognormal; inverse Gaussian; Cauchy distribution; chi square distribution; exponential; Pareto; Weibull distribution; gamma distribution; moments; estimation; simulation; characterisation