An Introduction to Heavy-Tailed and Subexponential Distributions: 38 (Springer Series in Operations Research and Financial Engineering)

Sergey Foss, Dmitry Korshunov, Stan Zachary
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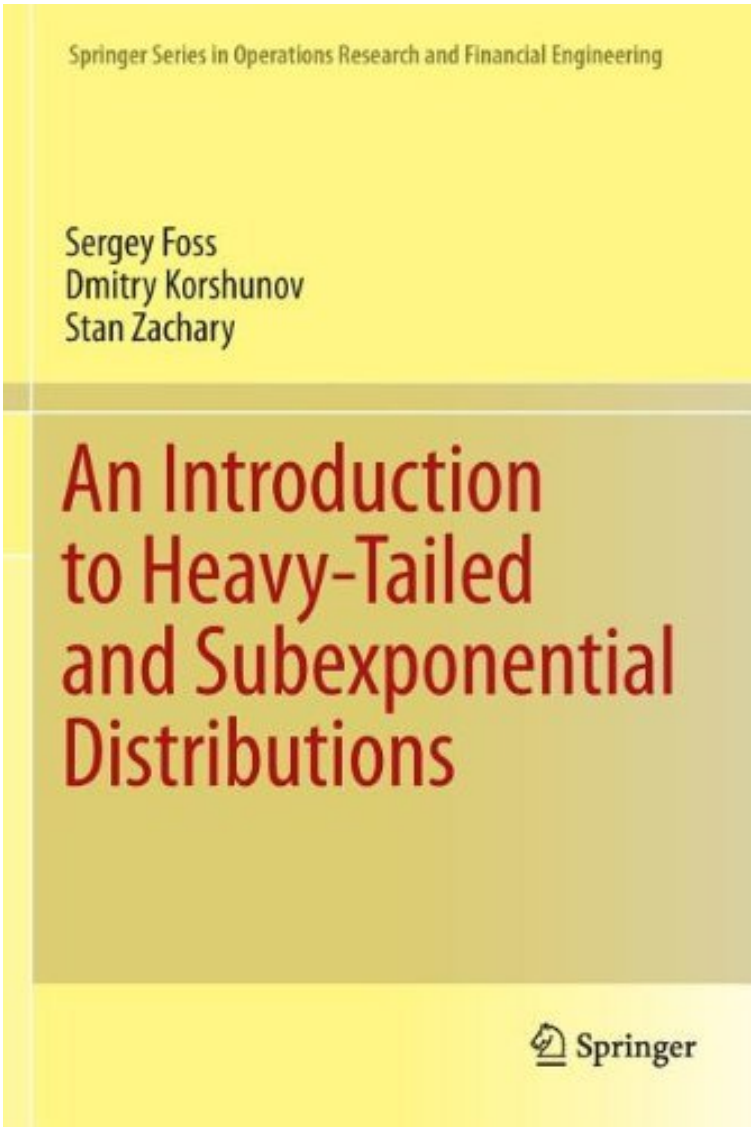

2011-05-25 2011-05-25File Name: B008B48M3Y | File size: 70.Mb

Sergey Foss, Dmitry Korshunov, Stan Zachary : An Introduction to Heavy-Tailed and Subexponential Distributions: 38 (Springer Series in Operations Research and Financial Engineering) before purchasing it in order to gage whether or not it would be worth my time, and all praised An Introduction to Heavy-Tailed and

Subexponential Distributions: 38 (Springer Series in Operations Research and Financial Engineering):

This monograph provides a complete and comprehensive introduction to the theory of long-tailed and subexponential distributions in one dimension. New results are presented in a simple, coherent and systematic way. All the standard properties of such convolutions are then obtained as easy consequences of these results. The book focuses on more theoretical aspects. A discussion of where the areas of applications currently stand in included as is some preliminary mathematical material. Mathematical modelers (for e.g. in finance and environmental science) and statisticians will find this book useful.

From the reviews: The book An Introduction to Heavy-Tailed and Subexponential Distributions presents numerous ideas of heaviness for probability distribution tails. It gives precise definitions to common terms such as heavy-tailed and long-tailed, as well as more esoteric terms such as subexponential or h-insensitive. This book is small, self-contained monograph. There are some examples and applications, but the emphasis is on basic properties and classification. (John D. Cook, The Mathematical Association of America, August, 2011) This monograph provides a comprehensive introduction to the theory of long-tailed and sub-exponential distributions. Every chapter ends with historical comments on the topics that it covers, and the book ends with a list of references. Most of the material covered is appearing for the first time in book form, and the book will serve as a valuable reference for researchers interested in tail properties of sums and maxima of independent random variables having long-tailed/sub-exponential distributions. (Sreenivasan Ravi, Mathematical s, Issue 2012 f)From the Back CoverHeavy-tailed probability distributions are an important component in the modeling of many stochastic systems. They are frequently used to accurately model inputs and outputs of computer and data networks and service facilities such as call centers. They are an essential for describing risk processes in finance and also for insurance premia pricing, and such distributions occur naturally in models of epidemiological spread. The class includes distributions with power law tails such as the Pareto, as well as the lognormal and certain Weibull distributions.nbsp;One of the highlights of this new edition is that it includes problems at the end of each chapter. Chapter 5 is also updated to include interesting applications to queueing theory, risk, and branching processes. New results are presented in a simple, coherent and systematic way.Graduate students as well as modelers in the fields of finance, insurance, network science and environmental studies will find this book to be an essential reference.About the AuthorSergey Foss is a professor at Heriot-Watt University, Edinburgh, UK. Dmitry Korshunov is a professor at the Sobolev Institute of Mathematics of the Russian Academy of Sciences, Novosibirsk, Russia. Stan Zachary is a professor at Heriot-Watt University, Edinburgh, UK.