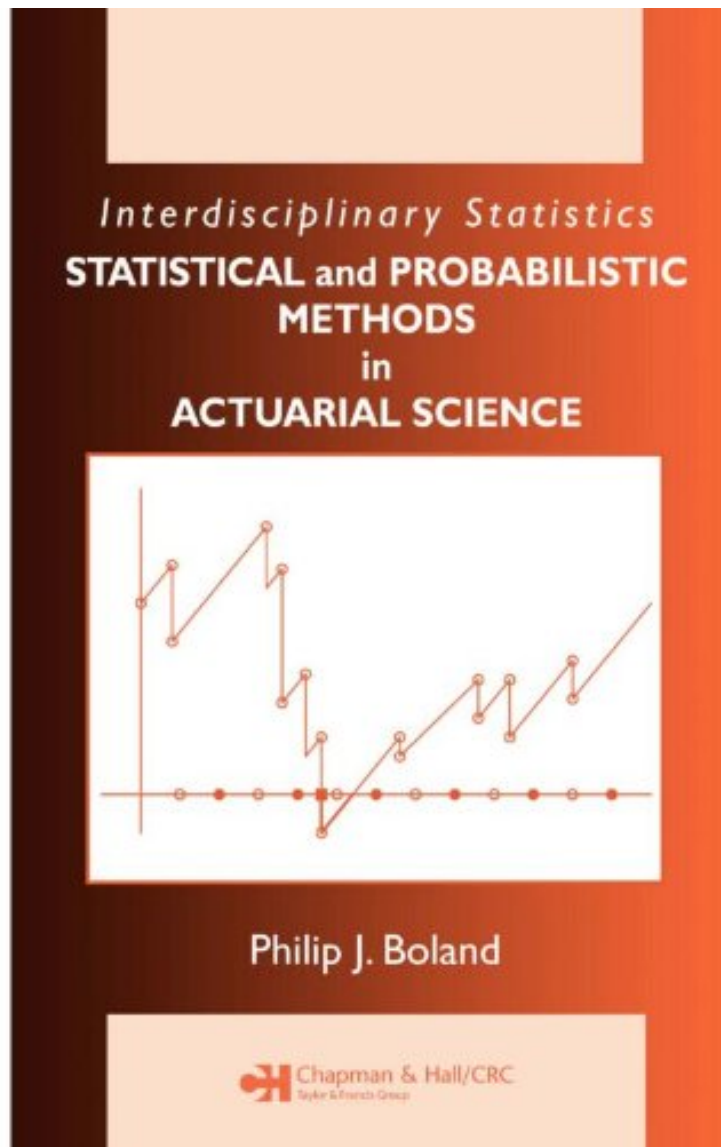


(Download) Statistical and Probabilistic Methods in Actuarial Science (Chapman Hall/CRC Interdisciplinary Statistics)

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Philip J. Boland

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Philip J. Boland : Statistical and Probabilistic Methods in Actuarial Science (Chapman Hall/CRC Interdisciplinary Statistics) before purchasing it in order to gage whether or not it would be worth my time, and all praised Statistical and Probabilistic Methods in Actuarial Science (Chapman Hall/CRC Interdisciplinary Statistics):

5 of 5 people found the following review helpful. nice coverage of new and old statistical methods in actuarial

scienceBy Michael R. ChernickI was particularly interested in this book because my son is planning on studying actuarial science at Ohio State. Also as a statistician who has in the past worked on statistical methods for loss reserving in workers compensation insurance, I was curious to see if any of the techniques that we developed are included and to find out what the state of the art is in actuarial science including methods applicable to workers compensation that we overlooked. Boland's text provides a wealth of information on statistical and probabilist techniques used in the insurance industries. The first chapter deals with claim or loss reserving and pricing. The method that we called loss triangles are covered here and are called run-off triangles. Three particular methods are covered. Chapter 2 is a detailed account of loss distributions. There are text books on that topic alone. Probability theory comes up in chapters 3 and 4 on risk theory and ruin theory respectively. Chapter 5 covers credibility theory (a topic I was not familiar with) and give the Bayesian approach to it. The specialized topic of no claim discounting in auto insurance is the subject of chapter 6. Generalized linear models a technique introduced by John Nelder is the subject of chapter 7. The classical multiple linear regression for normally distributed variables is covered as a special case. Statistical decision theory and game theory are treated in chapter 8. Appendices A-D provide basic probability, commonly used tools from probability and statistics and introductory Bayesian statistics are the topics of appendices A-C and Appendix D provides solutions to selected exercises from the main text.

Statistical and Probabilistic Methods in Actuarial Science covers many of the diverse methods in applied probability and statistics for students aspiring to careers in insurance, actuarial science, and finance. The book builds on students's existing knowledge of probability and statistics by establishing a solid and thorough understanding of these methods. It also emphasizes the wide variety of practical situations in insurance and actuarial science where these techniques may be used. Although some chapters are linked, several can be studied independently from the others. The first chapter introduces claims reserving via the deterministic chain ladder technique. The next few chapters survey loss distributions, risk models in a fixed period of time, and surplus processes, followed by an examination of credibility theory in which collateral and sample information are brought together to provide reasonable methods of estimation. In the subsequent chapter, experience rating via no claim discount schemes for motor insurance provides an interesting application of Markov chain methods. The final chapters discuss generalized linear models and decision and game theory. Developed by an author with many years of teaching experience, this text presents an accessible, sound foundation in both the theory and applications of actuarial science. It encourages students to use the statistical software package R to check examples and solve problems.

This book is meant to serve as a textbook for students seeking careers in insurance, actuarial science, or finance. The author provides a variety of worked examples in each chapter to illustrate the main ideas, with an emphasis on those of more numerical and practical nature. Although good references for further reading are provided, basic knowledge in probability and statistics is required. This book will also serve as a nice reference for an insurance analyst. Technometrics, February 2009, Vol. 51, No. 1 There are not many other books that cover actuarial topics based on statistical methods in so complete a way as this one. This book is quite adequate as a companion book for anyone involved with the mathematical concepts of statistics and probability models in actuarial science, and it is essential in a university library where these topics are taught. Journal of Applied Statistics, 2007 This book is aimed both at students of actuarial science and related subjects and at insurance and actuarial practitioners. The treatment is clear throughout, with an ample supply of problems and worked examples. The book would be useful both for teachers of actuarial science and for self-study. N.H. Bingham, Imperial College, International Statistical , 2007 The book has grown out of lecture notes and gives an overview on mathematical techniques used in actuarial practice. The main focus of the book is general insurance (property and casualty insurance, nonlife insurance). Besides theory, the book gives many exercises and presents R code. Mario V. Wueml;thrich, ETH Zurich, The American Statistician, November 2008 This is a very nice book. Tonglin Zhang, Mathematical s, 2009a About the Author University College Dublin, Ireland