Stochastic Processes and Calculus: An Elementary Introduction with Applications (Springer Texts in Business and Economics)

Uwe Hassler
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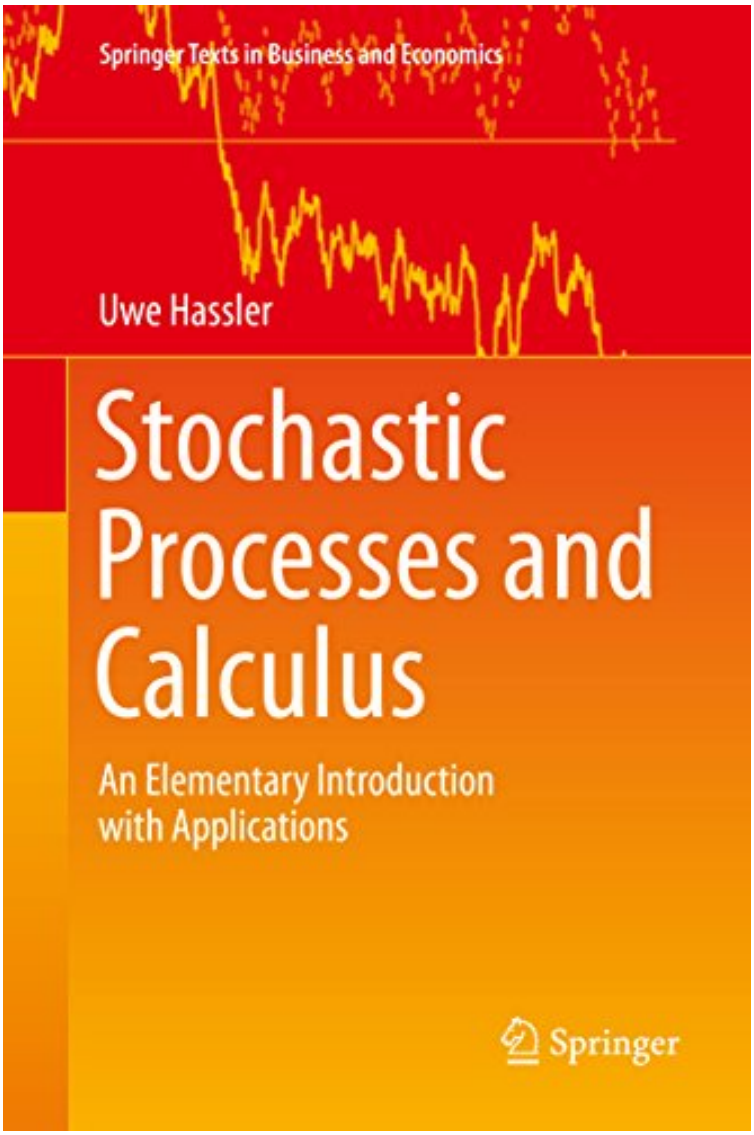

#1285583 in eBooks 2015-12-12 2015-12-12File Name: B019AXBRHM | File size: 67.Mb

Uwe Hassler : Stochastic Processes and Calculus: An Elementary Introduction with Applications (Springer Texts in Business and Economics) before purchasing it in order to gage whether or not it would be worth my time, and all praised Stochastic Processes and Calculus: An Elementary Introduction with Applications (Springer Texts in Business and Economics):

This textbook gives a comprehensive introduction to stochastic processes and calculus in the fields of finance and economics, more specifically mathematical finance and time series econometrics. Over the past decades stochastic calculus and processes have gained great importance, because they play a decisive role in the modeling of financial markets and as a basis for modern time series econometrics. Mathematical theory is applied to solve stochastic differential equations and to derive limiting results for statistical inference on nonstationary processes.This introduction is elementary and rigorous at the same time. On the one hand it gives a basic and illustrative presentation of the relevant topics without using many technical derivations. On the other hand many of the procedures are presented at a technically advanced level: for a thorough understanding, they are to be proven. In order to meet both requirements jointly, the present book is equipped with a lot of challenging problems at the end of each chapter as well as with the corresponding detailed solutions. Thus the virtual text - augmented with more than 60 basic examples and 40 illustrative figures - is rather easy to read while a part of the technical arguments is transferred to the exercise problems and their solutions.

ldquo;The book is quite readable and can be used as a textbook for the application of mathematical theory in the area of econometrics. Also, a mathematician might benefit from an intuitive exposition of some different and specific types of integration appearing in the theory of stochastic processes. The book might then serve as starting point for a more detailed study of the mathematical foundation of the topics presented.rdquo; (Ludger Overback, Mathematical s, October, 2016)ldquo;The book covers both discrete and continuous time stochastic processes, and it is of course in the second area where mathematical intricacies abound. hellip; All this is very much up to date and provides a most useful introduction to modern time series methods for anybody wishing to understand the mechanics without having to dig too deep into the mathematical foundations.rdquo; (Walter Krauml;mer, Statistics Papers, Vol. 57, 2016)ldquo;The construction of this book is based on the author experience of 15 years of teaching stochastic processes and calculus. hellip; book is therefore a very successful work on the task of providing the largest number of readers an introduction to stochastic processes and calculus simultaneously accessible and rigorous, with a wide exemplification of applications in various fields. Very important for readers in the fields of mathematics, finance and econometrics and also in biology, engineering or physics, but not only.rdquo; (Prof. Dr. Manuel Alberto M. Ferreira, Acta Scientiae et Intellectus, Vol. 2 (2), 2016)From the Back CoverThis textbook gives a comprehensive introduction to stochastic processes and calculus in the fields of finance and economics, more specifically mathematical finance and time series econometrics. Over the past decades stochastic calculus and processes have gained great importance, because they play a decisive role in the modeling of financial markets and as a basis for modern time series econometrics. Mathematical theory is applied to solve stochastic differential equations and to derive limiting results for statistical inference on nonstationary processes. This introduction is elementary and rigorous at the same time. On the one hand it gives a basic and illustrative presentation of the relevant topics without using many technical derivations. On the other hand many of the procedures are presented at a technically advanced level: for a thorough understanding, they are to be proven. In order to meet both requirements jointly, the present book is equipped with a lot of challenging problems at the end of each chapter as well as with the corresponding detailed solutions. Thus the virtual text - augmented with more than 60 basic examples and 40 illustrative figures - is rather easy to read while a part of the technical arguments is transferred to the exercise problems and their solutions.About the AuthorUwe Hassler studied mathematics and economics at Freie Universitauml;t Berlin and specialized in statistics and econometrics at the London School of Economics. He completed his doctoral studies in 1993 at Freie Universitauml;t. Hassler published in leading field journals such as Econometric Theory, Journal of Econometrics and Journal of Time Series Analysis. His main research interests are within the field of time series analysis. Since 2003 he is Professor of Statistics and Econometric Methods at Goethe University Frankfurt, Germany. Prior to joining Goethe University he held permanent or visiting positions at leading universities in Darmstadt, Munich and Muenster (Germany), and in Madrid (Spain). He has been teaching stochastic processes and calculus for 15 years.