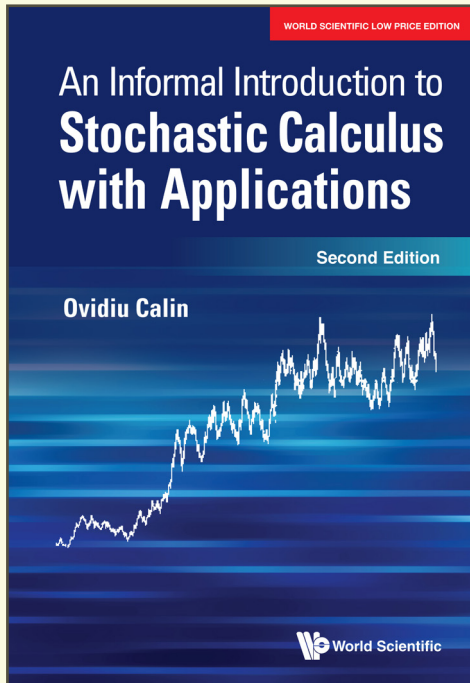


AN INFORMAL INTRODUCTION TO STOCHASTIC CALCULUS WITH APPLICATIONS, 2nd Edition



By **Ovidiu Calin**
(*Eastern Michigan University, USA*)

ISBN	9781944660277
Extent	512pp
Binding	Paperback
Year	2022
Price	Rs. 2195

ABOUT THE BOOK

Most branches of science involving random fluctuations can be approached by Stochastic Calculus. These include, but are not limited to, signal processing, noise filtering, stochastic control, optimal stopping, electrical circuits, financial markets, molecular chemistry, population dynamics, etc. All these applications assume a strong mathematical background, which in general takes a long time to develop. Stochastic Calculus is not an easy to grasp theory, and in general, requires acquaintance with the probability, analysis and measure theory.

The goal of this book is to present Stochastic Calculus at an introductory level and not at its maximum mathematical detail. The author's goal was to capture as much as possible the spirit of elementary deterministic Calculus, at which students have been already exposed. This assumes a presentation that mimics similar properties of deterministic Calculus, which facilitates understanding of more complicated topics of Stochastic Calculus.

The second edition contains several new features that improved the first edition both qualitatively and quantitatively. First, two more chapters have been added, Chapter 12 and Chapter 13, dealing with applications of stochastic processes in Electrochemistry and global optimization methods.

This edition contains also a final chapter material containing fully solved review problems and provides solutions, or at least valuable hints, to all proposed problems. The present edition contains a total of about 250 exercises.

This edition has also improved presentation from the first edition in several chapters, including new material.

READERSHIP

Advanced undergraduate and graduate level students in Science, Economics, and Business. It can be used by researchers and practitioners in both academia and industry.

CONTENTS

- Preface to the Second Edition
- Preface
- List of Notations and Symbols
- **Basics of Stochastic Calculus:**
 - A Few Introductory Problems
 - Basic Notions
 - Useful Stochastic Processes
 - Properties of Stochastic Processes
 - Stochastic Integration
 - Stochastic Differentiation
 - Stochastic Integration Techniques
 - Stochastic Differential Equations
- **Applications of Stochastic Calculus:**
 - Applications of Brownian Motion
 - Girsanov's Theorem and Brownian Motion
 - Miscellaneous Applications
 - Applications to Electrochemistry
 - Methods of Global Optimization
 - Review Problems
 - Hints and Solutions
- Bibliography
- Index

For orders and enquiries, please contact us:



FEELBOOKS PVT. LTD.

DELHI	4381/4 Ansari Road, Daryaganj, New Delhi 110002 Pushpendra Kumar Mobile: +91 9015043442	Tel: +91-11-47472630 Email: orders@feelbooks.in
BENGALURU	C-22, Brigade MM, KR Road, Jayanagar 7th Block, Bengaluru 560070 Shekar Reddy Mobile: +91 9945234476	Tel: +91-80-26762129 Email: bangalore@feelbooks.in
MUMBAI	Vijay Kumar Mobile: +91 9871176434	Email: vkumar@feelbooks.in
CHENNAI	G Srinivasan Mobile: +91 9003047502	Email: gsrinivasan@feelbooks.in
KOLKATA	Dhrubajyoti Bhattacharjee Mobile: +91 9836160013	Email: dbhattacharjee@feelbooks.in
HYDERABAD	K.S.Vishwanath Mobile: +91 9871745850	Email: kvishwanath@feelbooks.in

For Catalogues & title lists: marketing@feelbooks.in



www.feelbooks.in



For any queries, please email us at marketing@feelbooks.in