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**Elements of Stochastic Modelling Second Edition** World Scientific Publishing Company **This is the expanded second edition of a successful textbook that provides a broad introduction to important areas of stochastic modelling. The original text was developed from lecture notes for a one-semester course for third-year science and actuarial students at the University of Melbourne. It reviewed the basics of probability theory and then covered the following topics: Markov chains, Markov decision processes, jump Markov processes, elements of queueing theory, basic renewal theory, elements of time series and simulation. The present edition adds new chapters on elements of stochastic calculus and introductory mathematical finance that logically complement the topics chosen for the first edition. This makes the book suitable for a larger variety of university courses presenting the fundamentals of modern stochastic modelling. Instead of rigorous proofs we often give only sketches of the arguments, with indications as to why a particular result holds and also how it is related to other results, and illustrate them by examples. Wherever possible, the book includes references to more specialised texts on respective topics that contain both proofs and more advanced material. Request Inspection Copy Elements of Stochastic Modelling Elements of Stochastic Modelling** World Scientific Publishing Company **This is the expanded second edition of a successful textbook that provides a broad introduction to the important area of stochastic modelling. The original text had been developed from lecture notes for a one-semester course on the topic for third-year science and actuarial students at the University of Melbourne. It reviews the basics of probability theory, and then covers the following topics: Markov chains, Markov decision processes, jump Markov processes, elements of queueing theory, basic renewal theory, elements of time series and simulation.The present edition adds new chapters on elements of stochastic calculus and introductory mathematical finance that logically complement the topics chosen for the first edition. This makes the book suitable for a larger variety of university courses presenting the fundamentals of modern stochastic modelling. Rigorous proofs are often replaced with sketches of arguments — with indications as to why a particular result holds, and also how it is connected to other results — and illustrated by well-selected examples. Wherever possible, the book includes references to more specialised texts containing both proofs and more advanced material related to the topics covered. Mathematical Reviews Recent Developments in Stochastic Methods and Applications ICSM-5, Moscow, Russia, November 23–27, 2020, Selected Contributions** Springer Nature **Highlighting the latest advances in stochastic analysis and its applications, this volume collects carefully selected and peer-reviewed papers from the 5th International Conference on Stochastic Methods (ICSM-5), held in Moscow, Russia, November 23-27, 2020. The contributions deal with diverse topics such as stochastic analysis, stochastic methods in computer science, analytical modeling, asymptotic methods and limit theorems, Markov processes, martingales, insurance and financial mathematics, queueing theory and stochastic networks, reliability theory, risk analysis, statistical methods and applications, machine learning and data analysis. The 29 articles in this volume are a representative sample of the 87 high-quality papers accepted and presented during the conference. The aim of the ICSM-5 conference is to promote the collaboration of researchers from Russia and all over the world, and to contribute to the development of the field of stochastic analysis and applications of stochastic models. Teletraffic Engineering in the Internet Era** North Holland **This book presents recent developments on teletraffic science and engineering, specially on traffic modelling and control of the Internet (TCP/IP), Wireless and Multimedia Networks. Moreover, it presents new queueing and optimisation methods applied to the planning and control of the telecommunications networks. Current Index to Statistics, Applications, Methods and Theory The Current Index to Statistics (CIS) is a bibliographic index of publications in statistics, probability, and related fields. Computational Methods for Reliability and Risk Analysis** World Scientific **This book illustrates a number of modelling and computational techniques for addressing relevant issues in reliability and risk analysis. In particular, it provides: i) a basic illustration of some methods used in reliability and risk analysis for modelling the stochastic failure and repair behaviour of systems, e.g. the Markov and Monte Carlo simulation methods; ii) an introduction to Genetic Algorithms, tailored to their application for RAMS (Reliability, Availability, Maintainability and Safety) optimization; iii) an introduction to key issues of system reliability and risk analysis, like dependent failures and importance measures; and iv) a presentation of the issue of uncertainty and of the techniques of sensitivity and uncertainty analysis used in support of reliability and risk analysis.The book provides a technical basis for senior undergraduate or graduate courses and a reference for researchers and practitioners in the field of reliability and risk analysis. Several practical examples are included to demonstrate the application of the concepts and techniques in practice. Change of Time and Change of Measure Second Edition** World Scientific Publishing Company **Change of Time and Change of Measure provides a comprehensive account of two topics that are of particular significance in both theoretical and applied stochastics: random change of time and change of probability law. Random change of time is key to understanding the nature of various stochastic processes, and gives rise to interesting mathematical results and insights of importance for the modeling and interpretation of empirically observed dynamic processes. Change of probability law is a technique for solving central questions in mathematical finance, and also has a considerable role in insurance mathematics, large deviation theory, and other fields. The book comprehensively collects and integrates results from a number of scattered sources in the literature and discusses the importance of the results relative to the existing literature, particularly with regard to mathematical finance. In this Second Edition a Chapter 13 entitled 'A Wider View' has been added. This outlines some of the developments that have taken place in the area of Change of Time and Change of Measure since the publication of the First Edition. Most of these developments have their root in the study of the Statistical Theory of Turbulence rather than in Financial Mathematics and Econometrics, and they form part of the new research area termed 'Ambit Stochastics'. Elements of Queueing Theory Palm Martingale Calculus and Stochastic Recurrences** Springer Science & Business Media **This fundamental exposition of queueing theory, written by leading researchers, answers the need for a mathematically sound reference work on the subject and has become the standard reference. The thoroughly revised second edition contains a substantial number of exercises and their solutions, which makes the book suitable as a textbook. Numerical Solution of Time-Dependent Advection-Diffusion-Reaction Equations** Springer Science & Business Media **Unique book on Reaction-Advection-Diffusion problems Epidemic Modelling An Introduction** Cambridge University Press **This is a general introduction to the mathematical modelling of diseases. Physical and Chemical Properties of Carbon Nanotubes** BoD – Books on Demand **Carbon nanotubes are rolled up graphene sheets with a quasi-one-dimensional structure of nanometer-scale diameter. In these last twenty years, carbon nanotubes have attracted much attention from physicists, chemists, material scientists, and electronic device engineers because of their excellent structural, electronic, optical, chemical and mechanical properties. Carbon nanotube research, especially that aiming at industrial applications, is becoming more important. This book covers recent research topics regarding the physical, structural, chemical and electric properties on carbon nanotubes. All chapters were written by researchers who are active on the front lines. The chapters in this book will be helpful to many students, engineers and researchers working in the field of carbon nanotubes. Extreme Value Theory and Applications Proceedings of the Conference on Extreme Value Theory and Applications, Volume 1 Gaithersburg Maryland 1993** Springer Science & Business Media **It appears that we live in an age of disasters: the mighty Missis sippi and Missouri flood millions of acres, earthquakes hit Tokyo and California, airplanes crash due to mechanical failure and the seemingly ever increasing wind speeds make the storms more and more frightening. While all these may seem to be unexpected phenomena to the man on the street, they are actually happening according to well defined rules of science known as extreme value theory. We know that records must be broken in the future, so if a flood design is based on the worst case of the past then we are not really prepared against floods. Materials will fail due to fatigue, so if the body of an aircraft looks fine to the naked eye, it might still suddenly fail if the aircraft has been in operation over an extended period of time. Our theory has by now penetrated the so cial sciences, the medical profession, economics and even astronomy. We believe that our field has come of age. In or~er to fully utilize the great progress in the theory of extremes and its ever increasing acceptance in practice, an international conference was organized in which equal weight was given to theory and practice. This book is Volume I of the Proceedings of this conference. In selecting the papers for Volume lour guide was to have authoritative works with a large variety of coverage of both theory and practice. The Casino Gambler's Guide Stochastic Processes for Physicists Understanding Noisy Systems** Cambridge University Press **Stochastic processes are an essential part of numerous branches of physics, as well as in biology, chemistry, and finance. This textbook provides a solid understanding of stochastic processes and stochastic calculus in physics, without the need for measure theory. In avoiding measure theory, this textbook gives readers the tools necessary to use stochastic methods in research with a minimum of mathematical background. Coverage of the more exotic Levy processes is included, as is a concise account of numerical methods for simulating stochastic systems driven by Gaussian noise. The book concludes with a non-technical introduction to the concepts and jargon of measure-theoretic probability theory. With over 70 exercises, this textbook is an easily accessible introduction to stochastic processes and their applications, as well as methods for numerical simulation, for graduate students and researchers in physics. Stochastic Simulation and Monte Carlo Methods Mathematical Foundations of Stochastic Simulation** Springer Science & Business Media **In various scientific and industrial fields, stochastic simulations are taking on a new importance. This is due to the increasing power of computers and practitioners' aim to simulate more and more complex systems, and thus use random parameters as well as random noises to model the parametric uncertainties and the lack of knowledge on the physics of these systems. The error analysis of these computations is a highly complex mathematical undertaking. Approaching these issues, the authors present stochastic numerical methods and prove accurate convergence rate estimates in terms of their numerical parameters (number of simulations, time discretization steps). As a result, the book is a self-contained and rigorous study of the numerical methods within a theoretical framework. After briefly reviewing the basics, the authors first introduce fundamental notions in stochastic calculus and continuous-time martingale theory, then develop the analysis of pure-jump Markov processes, Poisson processes, and stochastic differential equations. In particular, they review the essential properties of Itô integrals and prove fundamental results on the probabilistic analysis of parabolic partial differential equations. These results in turn provide the basis for developing stochastic numerical methods, both from an algorithmic and theoretical point of view. The book combines advanced mathematical tools, theoretical analysis of stochastic numerical methods, and practical issues at a high level, so as to provide optimal results on the accuracy of Monte Carlo simulations of stochastic processes. It is intended for master and Ph.D. students in the field of stochastic processes and their numerical applications, as well as for physicists, biologists, economists and other professionals working with stochastic simulations, who will benefit from the ability to reliably estimate and control the accuracy of their simulations. Distributed Computer and Communication Networks 22nd International Conference, DCCN 2019, Moscow, Russia, September 23–27, 2019, Revised Selected Papers** Springer Nature **This book constitutes the refereed proceedings of the 22nd International Conference on Distributed and Computer and Communication Networks, DCCN 2019, held in Moscow, Russia, in September 2019. The 44 full papers and 2 short papers were carefully reviewed and selected from 174 submissions. The papers cover the following topics: Computer and Communication Networks, Analytical Modeling of Distributed Systems, and Distributed Systems Applications. Polya Urn Models** CRC Press **Incorporating a collection of recent results, Pólya Urn Models deals with discrete probability through the modern and evolving urn theory and its numerous applications. The book first substantiates the realization of distributions with urn arguments and introduces several modern tools, including exchangeability and stochastic processes via urns. It reviews classical probability problems and presents dichromatic Pólya urns as a basic discrete structure growing in discrete time. The author then embeds the discrete Pólya urn scheme in Poisson processes to achieve an equivalent view in continuous time, provides heuristical arguments to**

connect the Pólya process to the discrete urn scheme, and explores extensions and generalizations. He also discusses how functional equations for moment generating functions can be obtained and solved. The final chapters cover applications of urns to computer science and bioscience. Examining how urns can help conceptualize discrete probability principles, this book provides information pertinent to the modeling of dynamically evolving systems where particles come and go according to governing rules. **Stochastic Models In The Life Sciences And Their Methods Of Analysis** World Scientific Biological processes are evolutionary in nature and often evolve in a noisy environment or in the presence of uncertainty. Such evolving phenomena are necessarily modeled mathematically by stochastic differential/difference equations (SDE), which have been recognized as essential for a true understanding of many biological phenomena. Yet, there is a dearth of teaching material in this area for interested students and researchers, notwithstanding the addition of some recent texts on stochastic modelling in the life sciences. The reason may well be the demanding mathematical pre-requisites needed to 'solve' SDE.A principal goal of this volume is to provide a working knowledge of SDE based on the premise that familiarity with the basic elements of a stochastic calculus for random processes is unavoidable. Through some SDE models of familiar biological phenomena, we show how stochastic methods developed for other areas of science and engineering are also useful in the life sciences. In the process, the volume introduces to biologists a collection of analytical and computational methods for research and applications in this emerging area of life science. The additions broaden the available tools for SDE models for biologists that have been limited by and large to stochastic simulations. **A First Look At Stochastic Processes** World Scientific This textbook introduces the theory of stochastic processes, that is, randomness which proceeds in time. Using concrete examples like repeated gambling and jumping frogs, it presents fundamental mathematical results through simple, clear, logical theorems and examples. It covers in detail such essential material as Markov chain recurrence criteria, the Markov chain convergence theorem, and optional stopping theorems for martingales. The final chapter provides a brief introduction to Brownian motion, Markov processes in continuous time and space, Poisson processes, and renewal theory.Interspersed throughout are applications to such topics as gambler's ruin probabilities, random walks on graphs, sequence waiting times, branching processes, stock option pricing, and Markov Chain Monte Carlo (MCMC) algorithms.The focus is always on making the theory as well-motivated and accessible as possible, to allow students and readers to learn this fascinating subject as easily and painlessly as possible. **Physical Properties of Carbon Nanotubes** This is an introductory textbook for graduate students and researchers from various fields of science who wish to learn about carbon nanotubes. The field is still at an early stage, and progress continues at a rapid rate. This book focuses on the basic principles behind the physical properties and gives the background necessary to understand the recent developments. Some useful computational source codes which generate coordinates for carbon nanotubes are also included in the appendix. **An Introduction to Stein's Method** World Scientific A common theme in probability theory is the approximation of complicated probability distributions by simpler ones, the central limit theorem being a classical example. Stein's method is a tool which makes this possible in a wide variety of situations. Traditional approaches, for example using Fourier analysis, become awkward to carry through in situations in which dependence plays an important part, whereas Stein's method can often still be applied to great effect. In addition, the method delivers estimates for the error in the approximation, and not just a proof of convergence. Nor is there in principle any restriction on the distribution to be approximated; it can equally well be normal, or Poisson, or that of the whole path of a random process, though the techniques have so far been worked out in much more detail for the classical approximation theorems.This volume of lecture notes provides a detailed introduction to the theory and application of Stein's method, in a form suitable for graduate students who want to acquaint themselves with the method. It includes chapters treating normal, Poisson and compound Poisson approximation, approximation by Poisson processes, and approximation by an arbitrary distribution, written by experts in the different fields. The lectures take the reader from the very basics of Stein's method to the limits of current knowledge. **Markov-Modulated Processes and Semiregenerative Phenomena Stochastic versus Deterministic Systems of Differential Equations** CRC Press This peerless reference/text unfurls a unified and systematic study of the two types of mathematical models of dynamic processes-stochastic and deterministic-as placed in the context of systems of stochastic differential equations. Using the tools of variational comparison, generalized variation of constants, and probability distribution as its met **Random Trees An Interplay between Combinatorics and Probability** Springer Science & Business Media The aim of this book is to provide a thorough introduction to various aspects of trees in random settings and a systematic treatment of the mathematical analysis techniques involved. It should serve as a reference book as well as a basis for future research. **Limits Of Mathematical Modeling In The Social Sciences, The: The Significance Of Godel's Incompleteness Phenomenon** World Scientific Current mathematical models are notoriously unreliable in describing the time evolution of unexpected social phenomena, from financial crashes to revolution. Can such events be forecast? Can we compute probabilities about them? Can we model them? This book investigates and attempts to answer these questions through Gödel's two incompleteness theorems, and in doing so demonstrates how influential Gödel is in modern logical and mathematical thinking. Many mathematical models are applied to economics and social theory, while Gödel's theorems are able to predict their limitations for more accurate analysis and understanding of national and international events. This unique discussion is written for graduate level mathematicians applying their research to the social sciences, including economics, social studies and philosophy, and also for formal logicians and philosophers of science. **Signals Evolution, Learning, and Information** Oxford University Press Brian Skyrms offers a fascinating demonstration of how fundamental signals are to our world. He uses various scientific tools to investigate how meaning and communication develop. Signals operate in networks of senders and receivers at all levels of life, transmitting and processing information. That is how humans and animals think and interact. **Stochastic Calculus for Fractional Brownian Motion and Applications** Springer Science & Business Media The purpose of this book is to present a comprehensive account of the different definitions of stochastic integration for fBm, and to give applications of the resulting theory. Particular emphasis is placed on studying the relations between the different approaches. Readers are assumed to be familiar with probability theory and stochastic analysis, although the mathematical techniques used in the book are thoroughly exposed and some of the necessary prerequisites, such as classical white noise theory and fractional calculus, are recalled in the appendices. This book will be a valuable reference for graduate students and researchers in mathematics, biology, meteorology, physics, engineering and finance. **Probabilistic Lattices With Applications to Psychology** World Scientific There are many books on lattice theory in the field, but none interfaces with the foundations of probability. This book does. It also develops new probability theories with rigorous foundations for decision theory and applies them to specific well-known problematic examples. There is only one other book that attempts this. It uses quantum probability theory from physics. The new probability theories developed in this book are different; they are not borrowed from physics but are explicitly designed for decision theory. Contents:IntroductionBasic Lattice TheoryPseudo Complemented Distributive LatticesProbability and CoherenceRationality, Heuristics, and Human Judgments of ProbabilityOrthomodular Modeling of Psychological Paradigms Readership: Researchers in probability theory, logic and mathematical psychology. Key Features:Systematic, foundational development of probability theories based on Boolean and non-Boolean algebrasNew theoretical foundations for theories of belief that emphasize the logical structure of event spacesNew methods for modeling the Kahnemann and Tversky heuristics and other psychological paradigms based on intuitionistic logic and a generalization of quantum logicKeywords:Probability on Lattices;Decision Theory;Intuitionistic Logic;Lattice Theory **Geometric Sums: Bounds for Rare Events with Applications Risk Analysis, Reliability, Queueing** Springer Science & Business Media This book reviews problems associated with rare events arising in a wide range of circumstances, treating such topics as how to evaluate the probability an insurance company will be bankrupted, the lifetime of a redundant system, and the waiting time in a queue. Well-grounded, unique mathematical evaluation methods of basic probability characteristics concerned with rare events are presented, which can be employed in real applications, as the volume also contains relevant numerical and Monte Carlo methods. The various examples, tables, figures and algorithms will also be appreciated. Audience: This work will be useful to graduate students, researchers and specialists interested in applied probability, simulation and operations research. **Grammar Of Complexity: From Mathematics To A Sustainable World** World Scientific The book is an introduction, for both graduate students and newcomers to the field, of the modern theory of mesoscopic complex systems, time series, hypergraphs and graphs, scaled random walks, and modern information theory. As these are applied for the exploration and characterization of complex systems. Our self-consistent review provides the necessary basis for consistency. We discuss a number of applications such diverse as urban structures and musical compositions. Contents: Perplexity of ComplexityPreliminaries: Permutations, Partitions, Probabilities and InformationTheory of Extreme EventsStatistical Basis of Inequality and Discounting the Future and InequalityElements of Graph Theory. Adjacency, Walks, and EntropiesExploring Graph Structures by Random WalksWe Shape Our Buildings: Thereafter They Shape UsComplexity of Musical Harmony Readership: Graduate student in information theory, complex systems and mathematical modeling. Keywords: Complex Systems and Processes;Extreme Events;Discounting the Future and Inequality;Urban Environments;Complexity of Musical HarmonyReview: Key Features: The book provides the unique treatment of the modern theory of mesoscopic complex systems, time series, hypergraphs and graphs, scaled random walks, and modern information theory as applied for exploration and characterization of complex systemsThe book shows how the concepts of complexity theory is applicable to the problem fo survival, urban studies, income inequality, musical harmonyThe book might be used as recommended reading for a course **Organic Photovoltaics Mechanisms, Materials, and Devices** CRC Press Recently developed organic photovoltaics (OPVs) show distinct advantages over their inorganic counterparts due to their lighter weight, flexible shape, versatile materials synthesis and device fabrication schemes, and low cost in large-scale industrial production. Although many books currently exist on general concepts of PV and inorganic PV materials and devices, few are available that offer a comprehensive overview of recently fast developing organic and polymeric PV materials and devices. Organic Photovoltaics: Mechanisms, Materials, and Devices fills this gap. The book provides an international perspective on the latest research in this rapidly expanding field with contributions from top experts around the world. It presents a unified approach comprising three sections: General Overviews; Mechanisms and Modeling; and Materials and Devices. Discussions include sunlight capture, exciton diffusion and dissociation, interface properties, charge recombination and migration, and a variety of currently developing OPV materials/devices. The book also includes two forewords: one by Nobel Laureate Dr. Alan J. Heeger, and the other by Drs. Aloysius Hepp and Sheila Bailey of NASA Glenn Research Center. Organic Photovoltaics equips students, researchers, and engineers with knowledge of the mechanisms, materials, devices, and applications of OPVs necessary to develop cheaper, lighter, and cleaner renewable energy throughout the coming decades. **Mathematics Of Planet Earth: A Primer** World Scientific Mathematics of Planet Earth (MPE) was started and continues to be consolidated as a collaboration of mathematical science organisations around the world. These organisations work together to tackle global environmental, social and economic problems using mathematics.This textbook introduces the fundamental topics of MPE to advanced undergraduate and graduate students in mathematics, physics and engineering while explaining their modern usages and operational connections. In particular, it discusses the links between partial differential equations, data assimilation, dynamical systems, mathematical modelling and numerical simulations and applies them to insightful examples.The text also complements advanced courses in geophysical fluid dynamics (GFD) for meteorology, atmospheric science and oceanography. It links the fundamental scientific topics of GFD with their potential usage in applications of climate change and weather variability. The immediacy of examples provides an excellent introduction for experienced researchers interested in learning the scope and primary concepts of MPE. **An Introduction to Nonlinear Chemical Dynamics Oscillations, Waves, Patterns, and Chaos** Oxford University Press Just a few decades ago, chemical oscillations were thought to be exotic reactions of only theoretical interest. Now known to govern an array of physical and biological processes, including the regulation of the heart, these oscillations are being studied by a diverse group across the sciences. This book is the first introduction to nonlinear chemical dynamics written specifically for chemists. It covers oscillating reactions, chaos, and chemical pattern formation, and includes numerous practical suggestions on reactor design, data analysis, and computer simulations. Assuming only an undergraduate knowledge of chemistry, the book is an ideal starting point for research in the field. The book begins with a brief history of nonlinear chemical dynamics and a review of the basic mathematics and chemistry. The authors then provide an extensive overview of nonlinear dynamics, starting with the flow reactor and moving on to a detailed discussion of chemical oscillators. Throughout the authors emphasize the chemical mechanistic basis for self-organization. The overview is followed by a series of chapters on more advanced topics, including complex oscillations, biological systems, polymers, interactions between fields and waves, and Turing patterns. Underscoring the hands-on nature of the material, the book concludes with a series of classroom-tested demonstrations and experiments appropriate for an undergraduate laboratory. **Fluctuations of Lévy Processes with**

**Applications Introductory Lectures** Springer Science & Business Media **Lévy processes are the natural continuous-time analogue of random walks and form a rich class of stochastic processes around which a robust mathematical theory exists. Their application appears in the theory of many areas of classical and modern stochastic processes including storage models, renewal processes, insurance risk models, optimal stopping problems, mathematical finance, continuous-state branching processes and positive self-similar Markov processes. This textbook is based on a series of graduate courses concerning the theory and application of Lévy processes from the perspective of their path fluctuations. Central to the presentation is the decomposition of paths in terms of excursions from the running maximum as well as an understanding of short- and long-term behaviour. The book aims to be mathematically rigorous while still providing an intuitive feel for underlying principles. The results and applications often focus on the case of Lévy processes with jumps in only one direction, for which recent theoretical advances have yielded a higher degree of mathematical tractability. The second edition additionally addresses recent developments in the potential analysis of subordinators, Wiener-Hopf theory, the theory of scale functions and their application to ruin theory, as well as including an extensive overview of the classical and modern theory of positive self-similar Markov processes. Each chapter has a comprehensive set of exercises. Selected Aspects of Fractional Brownian Motion** Springer Science & Business Media **Fractional Brownian motion (fBm) is a stochastic process which deviates significantly from Brownian motion and semimartingales, and others classically used in probability theory. As a centered Gaussian process, it is characterized by the stationarity of its increments and a medium- or long-memory property which is in sharp contrast with martingales and Markov processes. FBm has become a popular choice for applications where classical processes cannot model these non-trivial properties; for instance long memory, which is also known as persistence, is of fundamental importance for financial data and in internet traffic. The mathematical theory of fBm is currently being developed vigorously by a number of stochastic analysts, in various directions, using complementary and sometimes competing tools. This book is concerned with several aspects of fBm, including the stochastic integration with respect to it, the study of its supremum and its appearance as limit of partial sums involving stationary sequences, to name but a few. The book is addressed to researchers and graduate students in probability and mathematical statistics. With very few exceptions (where precise references are given), every stated result is proved. Homogenization Methods for Multiscale Mechanics An Ethnic At Large A Memoir of America in the Thirties and Forties** Syracuse University Press **This work begins with a boy named Geraldo growing up Sicilian in Rochester, New York, and ends with the author breakfasting with Eleanor Roosevelt in the White House. It is a portrait of what it was like to come of age in the 1930s and 1940s. PT Symmetry In Quantum and Classical Physics** World Scientific Publishing **Originated by the author in 1998, the field of PT (parity-time) symmetry has become an extremely active and exciting area of research. PT-symmetric quantum and classical systems have theoretical, experimental, and commercial applications, and have been the subject of many journal articles, PhD theses, conferences, and symposia. Carl Bender's work has influenced major advances in physics and generations of students. This book is an accessible entry point to PT symmetry, ideal for students and scientists looking to begin their own research projects in this field.**