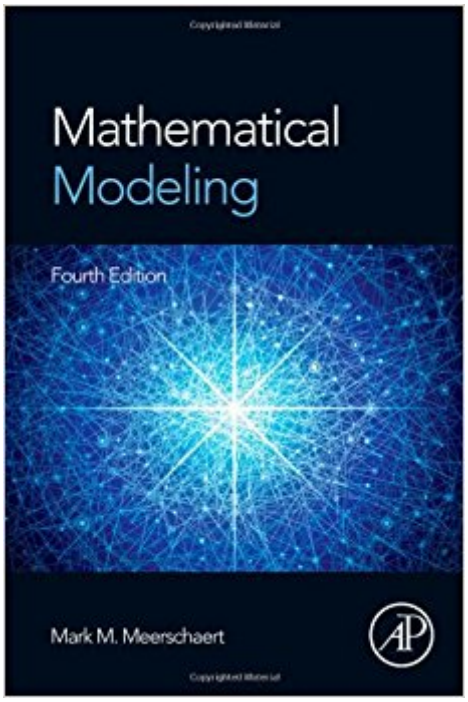
Mathematical Modeling, Fourth Edition



Synopsis

The new edition of Mathematical Modeling, the survey text of choice for mathematical modeling courses, adds ample instructor support and online delivery for solutions manuals and software ancillaries. From genetic engineering to hurricane prediction, mathematical models guide much of the decision making in our society. If the assumptions and methods underlying the modeling are flawed, the outcome can be disastrously poor. With mathematical modeling growing rapidly in so many scientific and technical disciplines, Mathematical Modeling, Fourth Edition provides a rigorous treatment of the subject. The book explores a range of approaches including optimization models, dynamic models and probability models.Offers increased support for instructors, including MATLAB material as well as other on-line resourcesFeatures new sections on time series analysis and diffusion modelsProvides additional problems with international focus such as whale and dolphin populations, plus updated optimization problems

Book Information

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Customer Reviews

"This book distinguishes itself from comparable texts by its broad treatment of the field. It offers an extensive survey of mathematical modeling problems and techniques that is organized into three big sections corresponding to optimization, dynamics and probability models."--MAA Reviews, March 19, 2014

Mark M. Meerschaert is Chairperson of the Department of Statistics and Probability at Michigan

State University and an Adjunct Professor in the Department of Physics at the University of Nevada. Professor Meerschaert has professional experience in the areas of probability, statistics, statistical physics, mathematical modeling, operations research, partial differential equations, ground water and surface water hydrology. He started his professional career in 1979 as a systems analyst at Vector Research, Inc. of Ann Arbor and Washington D.C., where he worked on a wide variety of modeling projects for government and industry. Meerschaert earned his doctorate in Mathematics from the University of Michigan in 1984. He has taught at the University of Michigan, Albion College, Michigan State University, the University of Nevada in Reno, and the University of Otago in Dunedin, New Zealand. His current research interests include limit theorems and parameter estimation for infinite variance probability models, heavy tail models in finance, modeling river flows with heavy tails and periodic covariance structure, anomalous diffusion, continuous time random walks, fractional derivatives and fractional partial differential equations, and ground water flow and transport. For more details, see his personal web page http://www.stt.msu.edu/~mcubed

Had to buy this book for school but I love it! Definitely plan to keep it even after graduation for reference!

This is an alright book for perhaps an introduction to Mathematical modeling, however it would have been nicer to have it go into some deeper topics, or some more relevant topics. Sooo many problems about optimizing the whaling industry.....

good condition.

Great book, but if students can find the answer of every exercises it will be better

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