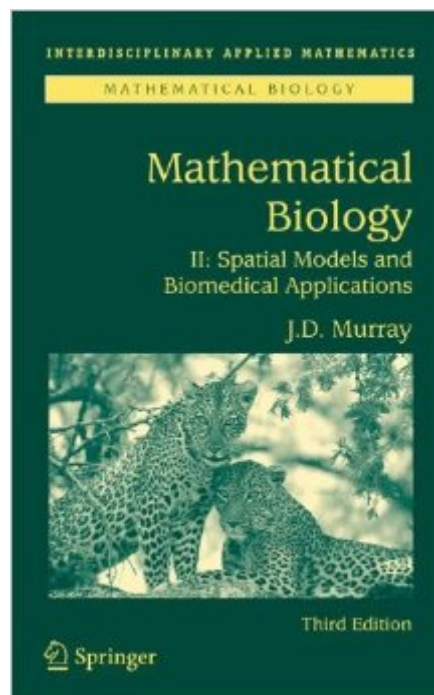


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Mathematical Biology II: Spatial Models And Biomedical Applications (Interdisciplinary Applied Mathematics) (v. 2)



Synopsis

This richly illustrated third edition provides a thorough training in practical mathematical biology and shows how exciting mathematical challenges can arise from a genuinely interdisciplinary involvement with the biosciences. It has been extensively updated and extended to cover much of the growth of mathematical biology. From the reviews: ""This book, a classical text in mathematical biology, cleverly combines mathematical tools with subject area sciences."--SHORT BOOK REVIEWS

Book Information

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Customer Reviews

Many reviews here are about the old edition of Mathematical Biology (the softcover one volume, 2nd ed). Recently J.D. Murray split the second edition in two hardcover volumes. Volume 1 discusses mainly models that use Ordinary Differential Equation, while slightly more complicated Math is required for Volume 2. These new books have added topics (modelling of marital interaction, temperature-dependent sex determination, wolf territoriality, etc). While sometimes the model is still very simple and in its initial stages (e.g. marital interaction model), the books show how much biology and applied mathematics intersect, and they make very interesting read. There is a certain lack of analysis of the nonlinear cases, so for those who need examples of amplitude equations, different ways of perturbing a linear model, these books are not so good. These books might be too complicated for a bio person with not much mathematical background, but it is very accessible to

those with some math background, and are certainly easy for Math or Physics people who want to know more applications to biology.

I bought part I a few years ago. I am an economist interested in using examples from biology to explain and model commercial markets, more as a hobby than as a professional. I recently worked on Lotka-Volterra predator prey models and competitive models (a grey squirrel competing a brown squirrel out of business). I hope to find patterns in time series that are similar to patterns in economic time series. Book I covers this but most of the subject is in book II. With help of the Mathematica package I played with the examples in the book and it worked fine. It is a high level mathematical book and although the approach is pragmatic and well written, this book is primarily written for specialized mathematicians which I am not. However I like these two books very much just because of the mathematical depth. Normally the author decides how deep I will dig into matters, here I can decide myself.

So useful for theoretician biologists ! No need to say more !

As Expected.

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