Britton, N.F.: **Essential Mathematical Biology.** – Springer-Verlag, London – Berlin – Heidelberg 2003. ISBN 1-85233-536-X. Softcover, 335 pp., GBP 18.95.

The author of this SUMS (The Springer Undergraduate Mathematics Series) book is the director of the Centre for Mathematical Biology, which was set up in 1994 to improve collaboration between mathematicians and biologists at the University of Bath. The textbook is written for students with a mathematical background and includes areas of Mathematical Biology where the principal tools are difference equations, ordinary differential equations, and partial differential equations.

The book consists of eight chapters devoted to number of deterministic mathematical descriptions (models) of biological or biochemical processes and four appendices dealing with an overview of some calculating techniques commonly used. Each chapter is accompanied by many exercises serving as a material for further training giving thus better insight into mechanisms of processes under consideration. There is also a brief list of literature from the touching area between mathematics and biological sciences in the book.

Chapters 1 and 2 deal with population dynamics of single and interacting species from various points of view. Chapter 3 deals with mathematical models of infectious diseases based again on systems of differential equations. In the fourth chapter population genetics and evolution are explored and game theory is mentioned.

Models of biological motion (namely diffusion) are treated in chapter 5, including reaction-diffusion equation which takes the interaction between motion and kinetics into account. Biochemical kinetics itself is considered in the sixth chapter. Of course, the well-known Michaelis-Menten rate equation is not absent. Partial differential equations as a main mathematical apparatus are then used in the last two chapters: pattern formation and tumour modelling.

The book is accompanied by the website at www.springer.co.uk/britton with additional material for some chapters.

Being a textbook for students of mathematics and its applications, pure biologists will probably have difficulties with its reading.

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