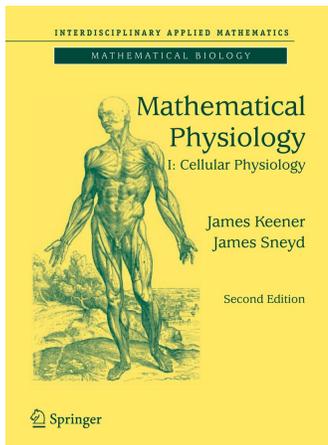


J. Keener, University of Utah; J. Sneyd, University of Auckland



Mathematical Physiology

I: Cellular Physiology

There has been a long history of interaction between mathematics and physiology. This book looks in detail at a wide selection of mathematical models in physiology, showing how physiological problems can be formulated and studied mathematically, and how such models give rise to interesting and challenging mathematical questions. With its coverage of many recent models it gives an overview of the field, while many older models are also discussed, to put the modern work in context. In this second edition the coverage of basic principles has been expanded to include such topics as stochastic differential equations, Markov models and Gibbs free energy, and the selection of models has also been expanded to include some of the basic models of fluid transport, respiration/perfusion, blood diseases, molecular motors, smooth muscle, neuroendocrine cells, the baroreceptor loop, turboglomerular oscillations, blood clotting and the retina. Owing to this extensive coverage, the second edition is published in two volumes. This first volume deals with the fundamental principles of cell physiology and the second with the physiology of systems. The book includes detailed illustrations and numerous exercises with selected solutions. The emphasis... [more on http://springer.com/978-0-387-75846-6](http://springer.com/978-0-387-75846-6)

2009. Approx. 660 p. 130 illus.
(Interdisciplinary Applied Mathematics, Vol. 8/1) Hardcover

- ▶ **46,95 €**
- ▶ **\$69.95**
- ▶ **SFr. 78.00**
- ▶ **£35.50**

ISBN 978-0-387-75846-6

- ▶ Contains a variety of physiological problems and the current and new mathematical techniques used in this area
- ▶ Numerous exercises and models are included
- ▶ Of interest both to applied mathematicians and quantitative physiologists

Order Now!

Yes, please send me _____ copies

"Mathematical Physiology"
ISBN 978-0-387-75846-6

Methods of Payment Check/Money Order enclosed AmEx MasterCard VISA

Card No.

Exp. Date

Please send orders to:

Outside the Americas:

Springer
Order Department
PO Box 2485
Secaucus, NJ 07096-2485
USA

Springer
Customer Service Center GmbH
Haberstrasse 7
69126 Heidelberg
Germany

- ▶ **Call toll-free** 1-800-SPRINGER
8:30 am – 5:30 pm ET
- ▶ **Fax your order to** (201) 348-4505
- ▶ **Web** springer.com
- ▶ **Email** orders-ny@springer.com

- ▶ **Call:** + 49 (0) 6221-345-4301
- ▶ **Fax:** +49 (0) 6221-345-4229
- ▶ **Web:** springer.com
- ▶ **Email:** orders-hd-individuals@springer.com

Name
Address
Street Address
(Sorry, we cannot deliver to P.O. boxes)
City / State / ZIP-Code
Country
Telephone / Email
Date ✕
Signature ✕

CA, MA, NJ, NY, and PA residents, please add sales tax. Canadian residents, please add 5% GST. Please add \$5.00 for shipping one book and \$1.00 for each additional book. Outside the US and Canada add \$10.00 for first book, \$5.00 for each additional book. All orders are processed upon receipt. If an order cannot be fulfilled within 90 days, payment will be refunded upon request. Prices are payable in US currency or its equivalent. Remember, your 30-day return privilege is always guaranteed. Pre-publication pricing: Unless otherwise stated, pre-pub prices are valid through the end of the third month following publication, and therefore are subject to change.

All € and £ prices are net prices subject to local VAT, e.g. in Germany 7% VAT for books and 19% VAT for electronic products. Pre-publication pricing: Unless otherwise stated, pre-pub prices are valid through the end of the third month following publication, and therefore are subject to change. All prices exclusive of carriage charges. Prices and other details are subject to change without notice. All errors and omissions excepted. Please consult springer.com for information on postage.