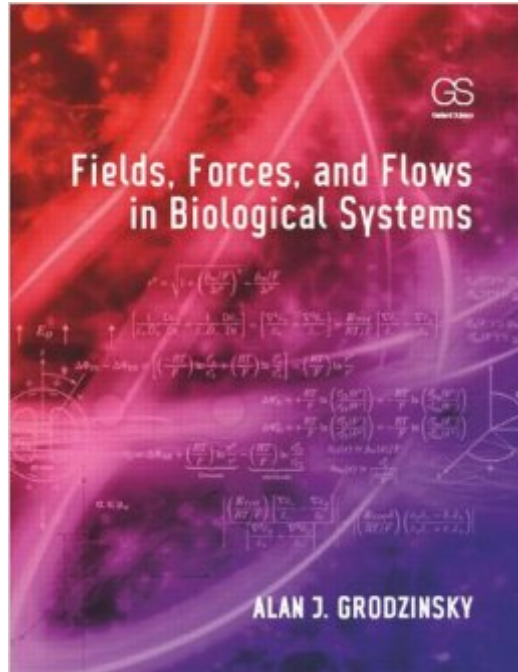


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# Fields, Forces, And Flows In Biological Systems



## Synopsis

Fields, Forces, and Flows in Biological Systems describes the fundamental driving forces for mass transport, electric current, and fluid flow as they apply to the biology and biophysics of molecules, cells, tissues, and organs. Basic mathematical and engineering tools are presented in the context of biology and physiology. The chapters are structured in a framework that moves across length scales from molecules to membranes to tissues. Examples throughout the text deal with applications involving specific biological tissues, cells, and macromolecules. In addition, a variety of applications focus on sensors, actuators, diagnostics, and microphysical measurement devices (e.g., bioMEMs/NEMs microfluidic devices) in which transport and electrokinetic interactions are critical. This textbook is written for advanced undergraduate and graduate students in biological and biomedical engineering and will be a valuable resource for interdisciplinary researchers including biophysicists, physical chemists, materials scientists, and chemical, electrical, and mechanical engineers seeking a common language on the subject.

## Book Information

Hardcover: 308 pages

Publisher: Garland Science; 1 edition (March 8, 2011)

Language: English

ISBN-10: 0815342128

ISBN-13: 978-0815342120

Product Dimensions: 8.4 x 0.6 x 11.2 inches

Shipping Weight: 2 pounds (View shipping rates and policies)

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Great book with a lousy title. Good for biophysics of electrolytes.

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