

During development, cells and tissues undergo dynamic changes in pattern and form that employ a wider range of physical mechanisms than at any other time during an organism's life. *Biological Physics of the Developing Embryo* presents a framework within which physics can be used to analyze these biological phenomena.

Written to be accessible both to biologists and physicists, major stages and components of biological development are introduced and then analyzed from the viewpoint of physics. The presentation of physical models requires no mathematics beyond basic calculus. Physical concepts introduced include diffusion, viscosity and elasticity, adhesion, dynamical systems, electrical potential, percolation, fractals, reaction-diffusion systems, and cellular automata.

With full-color figures throughout, this comprehensive textbook teaches biophysics by application to developmental biology, and is suitable for undergraduate and graduate courses in physics and biology.

Cover illustration: typical evolution of the cellular pattern in a computer simulation of the Drasdo-Forgacs model with specific, experimentally determined values of the model parameters (see Fig. 2.15). Illustration © Sue Seif 2005, Seif & Associates, Inc., www.seifmedgraphics.com.

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