

Tools developed by statistical physicists are of increasing importance in the analysis of complex biological systems. *Physics in Molecular Biology* discusses how physics can be used in modeling life. It begins by summarizing important biological concepts, emphasizing how they differ from the systems normally studied in physics. A variety of topics, ranging from the properties of single molecules to the dynamics of macro-evolution, are studied in terms of simple mathematical models. The main focus of the book is on genes and proteins and how together they build systems that compute and respond. The discussion develops from simple to complex systems, and from small-scale to large-scale phenomena.

This book will inspire advanced undergraduates and graduate students in physics to approach biological subjects from a physicist's point of view. The discussion is self-contained, requiring no background knowledge of biology, and only a familiarity with basic concepts from physics, such as forces, energy, and entropy.

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Cover illustration: Subset of protein interactions in yeast, based on two hybrid experiments by Ito *et al.*

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