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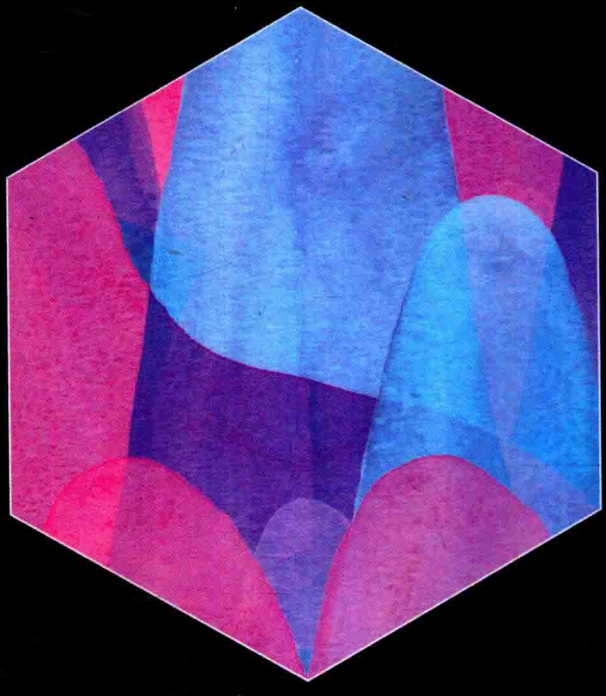

Alan M. Moses

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Chapman & Hall/CRC Mathematical and Computational Biology Series

Statistical Modeling and Machine Learning for Molecular Biology

Alan M. Moses
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Statistical Modeling and Machine Learning for Molecular Biology

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For my parents

Acknowledgments

First, I'd like to acknowledge the people who taught me statistics and computers. As with most of the people that will read this book, I took the required semester of statistics as an undergraduate. Little of what I learned proved useful for my scientific career. I came to statistics and computers late, although I learned some html during a high-school job at PCI Geomatics and tried (and failed) to write my first computer program as an undergraduate hoping to volunteer in John Reinitz's lab (then at Mount Sinai in New York). I finally did manage to write some programs as an undergraduate summer student, thanks to Tim Gardner (then a grad student in Marcelo Magnasco's lab), who first showed me PERL codes.

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Contents

I

Overview

The first four chapters give necessary background. The first chapter is background to the book: what it covers and why I wrote it. The next three chapters are background material needed for the statistical modeling and machine learning methods covered in the later chapters. However, although I've presented that material as background, I believe that the review of modeling and statistics (in Chapters 2, 3 and 4) might be valuable to readers, whether or not they intend to go on to the later chapters.