

## Preface to the Second Edition

I have been very gratified by the positive responses to the first edition of this book since it appeared about 10 years ago. Although its original conception was primarily as a textbook, it has come to be used more widely as a reference than I had initially anticipated. The entire book has been updated for this second edition, but much of the new material is oriented toward its use as a reference work. Most prominently, the single chapter on multivariate statistics in the first edition has been expanded to the final six chapters of the current edition. It is still very suitable as a textbook, but course instructors may wish to be more selective about which sections to assign. In my own teaching, I use most of [Chapters 1 through 7](#) as the basis for an undergraduate course on the statistics of weather and climate data; [Chapters 9 through 14](#) are taught in a graduate-level multivariate statistics course.

I have not included large digital data sets for use with particular statistical or other mathematical software, and for the most part I have avoided references to specific URLs (Web addresses). Even though larger data sets would allow examination of more realistic examples, especially for the multivariate statistical methods, inevitable software changes would eventually render these obsolete to a degree. Similarly, Web sites can be ephemeral, although a wealth of additional information complementing the material in this book can be found on the Web through simple searches. In addition, working small examples by hand, even if they are artificial, carries the advantage of requiring that the mechanics of a procedure must be learned firsthand, so that subsequent analysis of a real data set using software is not a black-box exercise.

Many, many people have contributed to the revisions in this edition by generously pointing out errors and suggesting additional topics for inclusion. I would like to thank particularly Matt Briggs, Tom Hamill, Ian Jolliffe, Rick Katz, Bob Livezey, and Jerry Stedinger for providing detailed comments on the first edition and for reviewing earlier drafts of new material for the second edition. This book has been materially improved by all these contributions.