

## Preface to the Second Edition

During the five years that have passed since the first edition of this book was published, we have received numerous helpful suggestions from friends and colleagues both at our own institutions and at others. As well, the field of statistical mechanics had continued to evolve. In composing this second edition we have attempted to take all of this into account. The purpose of the book remains the same: to provide an introduction to state-of-the-art techniques in statistical physics for graduate students in physics, chemistry and materials science.

While the general structure of the second edition is very similar to that of the first edition, there are a number of important additions. The rather abbreviated treatment of computer simulations has been expanded considerably and now forms a separate Chapter 7. We have included an introduction to density-functional methods in the chapter on classical liquids. We have added an entirely new Chapter 8 on polymers and membranes. In the discussion of critical phenomena, we have corrected an important omission of the first edition and have added sections on finite-size scaling and phenomenological renormalization group. Finally, we have considerably expanded the discussion of spin-glasses and have also added a number of new problems. We have also compiled a solution manual which is available from the publisher.

It goes without saying that we have corrected those errors of the first edition that we are aware of. In this task we have been greatly helped by a number of individuals. In particular, we are grateful to Vinay Ambegaokar, Leslie Ballentine, David Boal, Bill Dalby, Zoltán Rácz, Byron Southern and Philip Stamp.

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