

## Springer

6th  
edition

6th ed. 2019, XVII, 258 p.  
155 illus., 5 illus. in color.

### Printed book

Hardcover

### Printed book

Hardcover

ISBN 978-3-030-10757-4

\$ 84,99

Available

### Discount group

Professional Books (2)

### Product category

Graduate/advanced undergraduate textbook

### Series

Graduate Texts in Physics

## Physics : Complex Systems

Binder, Kurt, Heermann, Dieter W., Johannes Gutenberg Universität, Mainz, Germany

# Monte Carlo Simulation in Statistical Physics

## An Introduction

- Features exercises and a modular structure, making it highly suitable for university courses
- Updates the widely used and cited previous editions with chapters on powerful special algorithms and finite scaling tools for the study of interfacial phenomena
- Serves as authoritative introduction by leading experts in the field

The sixth edition of this highly successful textbook provides a detailed introduction to Monte Carlo simulation in statistical physics, which deals with the computer simulation of many-body systems in condensed matter physics and related fields of physics and beyond (traffic flows, stock market fluctuations, etc.). Using random numbers generated by a computer, these powerful simulation methods calculate probability distributions, making it possible to estimate the thermodynamic properties of various systems. The book describes the theoretical background of these methods, enabling newcomers to perform such simulations and to analyse their results. It features a modular structure, with two chapters providing a basic pedagogic introduction plus exercises suitable for university courses; the remaining chapters cover major recent developments in the field. This edition has been updated with two new chapters dealing with recently developed powerful special algorithms and with finite size scaling tools for the study of interfacial phenomena, which are important for nanoscience. Previous editions have been highly praised and widely used by both students and advanced researchers.

### Order online at [springer.com/booksellers](https://www.springer.com/booksellers)

Springer Nature Customer Service Center LLC

233 Spring Street

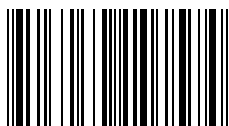
New York, NY 10013

USA

T: +1-800-SPRINGER NATURE

(777-4643) or 212-460-1500

[customerservice@springernature.com](mailto:customerservice@springernature.com)



ISBN 978-3-030-10757-4 / BIC: PHS / SPRINGER NATURE: SCP33000

Prices and other details are subject to change without notice. All errors and omissions excepted. Americas: Tax will be added where applicable. Canadian residents please add PST, QST or GST. Please add \$5.00 for shipping one book and \$ 1.00 for each additional book. Outside the US and Canada add \$ 10.00 for first book, \$5.00 for each additional book. If an order cannot be fulfilled within 90 days, payment will be refunded upon request. Prices are payable in US currency or its equivalent.