



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

### Printed book

Hardcover

69,99 € | £59.99 | \$84.99

<sup>[1]</sup>74,89 € (D) | 76,99 € (A) | CHF

82,50

### eBook

58,84 € | £47.99 | \$64.99

<sup>[2]</sup>58,84 € (D) | 58,84 € (A) | CHF

66,00

Available from your library or

[springer.com/shop](http://springer.com/shop)

### MyCopy <sup>[3]</sup>

Printed eBook for just

€ | \$ 24.99

[springer.com/mycopy](http://springer.com/mycopy)

[Error\[en\\_EN | Export.Bookseller. MediumType | SE\]](#)

Kurt Binder, Dieter W. Heermann

# Monte Carlo Simulation in Statistical Physics

An Introduction

Series: Graduate Texts in Physics

- 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](http://springer.com) / or for the Americas call (toll free) 1-800-SPRINGER / or email us at: [customerservice@springernature.com](mailto:customerservice@springernature.com). / For outside the Americas call +49 (0) 6221-345-4301 / or email us at: [customerservice@springernature.com](mailto:customerservice@springernature.com).

The first € price and the £ and \$ price are net prices, subject to local VAT. Prices indicated with [1] include VAT for books; the €(D) includes 7% for Germany, the €(A) includes 10% for Austria. Prices indicated with [2] include VAT for electronic products; 19% for Germany, 20% for Austria. All prices exclusive of carriage charges. Prices and other details are subject to change without notice. All errors and omissions excepted. [3] No discount for MyCopy.

