Statistical Physics of Particles
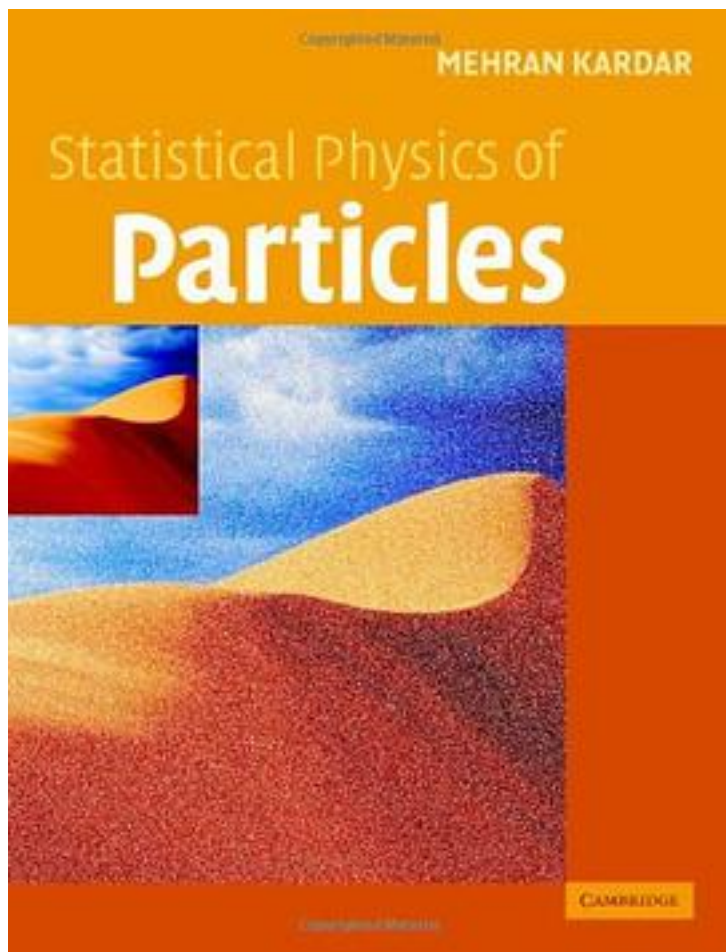

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出版者:Cambridge University Press

出版时间:2007-6-25

装帧:Hardcover

isbn:9780521873420

Statistical physics has its origins in attempts to describe the thermal properties of matter in terms of its constituent particles, and has played a fundamental role in the development of quantum mechanics. Based on lectures taught by Professor Kardar at

MIT, this textbook introduces the central concepts and tools of statistical physics. It contains a chapter on probability and related issues such as the central limit theorem and information theory, and covers interacting particles, with an extensive description of the van der Waals equation and its derivation by mean field approximation. It also contains an integrated set of problems, with solutions to selected problems at the end of the book and a complete set of solutions is available to lecturers on a password protected website at www.cambridge.org/9780521873420. A companion volume, Statistical Physics of Fields, discusses non-mean field aspects of scaling and critical phenomena, through the perspective of renormalization group.

作者介绍:

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标签

统计物理

物理

统计力学

物理-统计物理

physics

教材

Stat.Mech

Kardar

评论

Kardar的学生确实幸福。这本粒子的统计和下册场的统计的确是学习有效场论和重整化的捷径。

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kardar open course
http://ocw.mit.edu/courses/physics/8-333-statistical-mechanics-i-statistical-mechanics-of-particles-fall-2013/

虽然没什么联系，我老觉得cambridge出版的书我都看不懂里面的英语，估计是因为第一本看的是Dirac

第一本基本就是系综和各种分布

这破书 我看了太久第一章 实在是看不下去

Ones of Course books for Thermodynamics and Statistical Physics.
就读了一点点。。。。。

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it's over concise when it comes to derivation. otherwise it's a nice thin stat book with a nice summary of thermodynamics in the first several chapters.

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concise and insightful

大二买的，那时还看不惯英文，内容也需要一点基础，总而言之很痛苦。

快速把热统最核心的东西过了一遍，习题还有答案，良心作品。

非常适合自学！从一些不同的视角去看统计物理

麻省理工学院资深教授Kardar已教授Statistical Mechanics I&II
二十余载，将所用讲义著成两部书。此为其中上部。内容涵盖物理专业四大力学之统计力学。

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书评

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