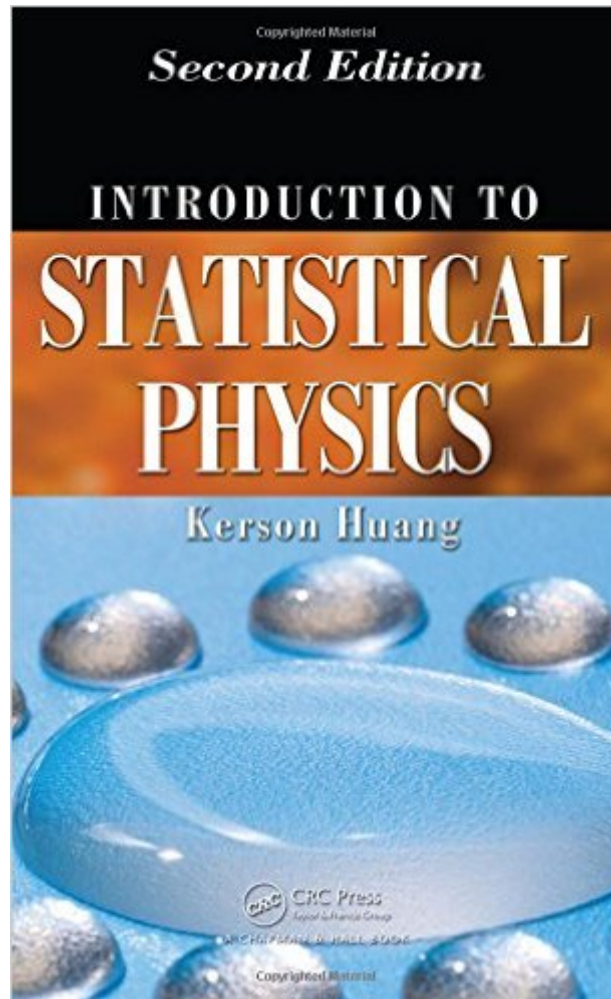


The book was found

Introduction To Statistical Physics, Second Edition



Synopsis

Written by a world-renowned theoretical physicist, *Introduction to Statistical Physics, Second Edition* clarifies the properties of matter collectively in terms of the physical laws governing atomic motion. This second edition expands upon the original to include many additional exercises and more pedagogically oriented discussions that fully explain the concepts and applications. The book first covers the classical ensembles of statistical mechanics and stochastic processes, including Brownian motion, probability theory, and the Fokker-Planck and Langevin equations. To illustrate the use of statistical methods beyond the theory of matter, the author discusses entropy in information theory, Brownian motion in the stock market, and the Monte Carlo method in computer simulations. The next several chapters emphasize the difference between quantum mechanics and classical mechanics—the quantum phase. Applications covered include Fermi statistics and semiconductors and Bose statistics and Bose-Einstein condensation. The book concludes with advanced topics, focusing on the Ginsburg-Landau theory of the order parameter and the special kind of quantum order found in superfluidity and superconductivity. Assuming some background knowledge of classical and quantum physics, this textbook thoroughly familiarizes advanced undergraduate students with the different aspects of statistical physics. This updated edition continues to provide the tools needed to understand and work with random processes.

Book Information

Hardcover: 334 pages

Publisher: Chapman and Hall/CRC; 2 edition (September 21, 2009)

Language: English

ISBN-10: 1420079026

ISBN-13: 978-1420079029

Product Dimensions: 6.1 x 0.8 x 9.2 inches

Shipping Weight: 1.4 pounds (View shipping rates and policies)

Average Customer Review: 2.8 out of 5 stars — See all reviews (6 customer reviews)

Best Sellers Rank: #1,089,997 in Books (See Top 100 in Books) #313 in Books > Science & Math > Chemistry > Physical & Theoretical > Physical Chemistry #472 in Books > Science & Math > Physics > Dynamics > Thermodynamics #771 in Books > Science & Math > Physics > Mathematical Physics

Customer Reviews

— suitable for advanced engineering study in an engineering or physics curriculum. — | The

problems at the end of each chapter and the discussion of applications will help students grasp many difficult concepts. It is very readable and should be considered for an undergraduate program or by people wanting to learn about statistical physics. IEEE Electrical Insulation Magazine, Vol. 27, No. 3, May/June 2011

Kerson Huang is Professor of Physics, Emeritus at MIT. Since retiring from active teaching, Dr. Huang has been engaged in biophysics research.

[Download to continue reading...](#)

Thermodynamics With Quantum Statistical Illustrations. Monographs in Statistical Physics and Thermodynamics, Volume 2 Introduction to Statistical Physics, Second Edition Statistical Physics, Third Edition, Part 1: Volume 5 (Course of Theoretical Physics, Volume 5) The Solid State: An Introduction to the Physics of Crystals for Students of Physics, Materials Science, and Engineering (Oxford Physics Series) Molecular Driving Forces: Statistical Thermodynamics in Biology, Chemistry, Physics, and Nanoscience, Second Edition Elementary Stochastic Calculus With Finance in View (Advanced Series on Statistical Science & Applied Probability, Vol 6) (Advanced Series on Statistical Science and Applied Probability) An Introduction to Statistical Thermodynamics (Dover Books on Physics) Statistical Physics: An Introduction An Introduction to Probability and Statistical Inference, Second Edition Stochastic Processes: An Introduction, Second Edition (Chapman & Hall/CRC Texts in Statistical Science) Molecular Driving Forces: Statistical Thermodynamics in Biology, Chemistry, Physics, and Nanoscience, 2nd Edition Geometry, Topology and Physics, Second Edition (Graduate Student Series in Physics) Gauge Theories in Particle Physics, Second Edition (Graduate Student Series in Physics) LES and DNS of Ignition Process and Complex Structure Flames with Local Extinction (AIP Conference Proceedings / Mathematical and Statistical Physics) Statistical Physics of Macromolecules (Polymers and Complex Materials) Statistical Mechanics: Entropy, Order Parameters and Complexity (Oxford Master Series in Physics) Quantum Transport in Mesoscopic Systems: Complexity and Statistical Fluctuations (Mesoscopic Physics and Nanotechnology) Quantum Transport in Mesoscopic Systems: Complexity and Statistical Fluctuations. A Maximum Entropy Viewpoint (Mesoscopic Physics and Nanotechnology) The Principles of Statistical Mechanics (Dover Books on Physics) Statistical Analysis Techniques in Particle Physics: Fits, Density Estimation and Supervised Learning

[Dmca](#)