

# Phase Transitions: A Brief Account With Modern Applications #World Scientific Publishing Company, 2004 #9789813106352 #2004 #Moshe Gitterman, Vivian (Haim) Halpern #144 pages

Description: This book presents a short, fairly simple course on the basic theory of phase transitions and its modern applications. In physics, these applications include such modern developments as Bose-Einstein condensation of atoms, high temperature superconductivity, and vortices in superconductors, while in other fields they include small world phenomena and scale-free systems (such as stock markets and the Internet). The advantage of treating all these topics together lies in showing their connection with one another and with the general theory of phase transitions. Categories: Physics The PHASETRANSITIONS A Brief Account with Modern Applications. This page intentionally left blank.

PHASETRANSITIONS A Brief Account with Modern Applications Moshe Gitterman Vivian (Haim) Halpern Bar-Ilan University, Israel. r pWorld Scientific N E W JERSEY. LONDON. In spite of this, new books on phase transitions appear each year, and each of them starts with the justification of the need for an additional book. Following this tradition we would like to underline two main features that distinguish this book from its predecessors. The modern theory of the critical phenomena based on the concepts of scaling and renormalization, on a very elementary level, is introduced. Discover the world's research. 20+ million members. Beginning with a brief review of phase transitions in simple systems and of mean field theory, the text then goes on to introduce the core ideas of the renormalization group. Following chapters cover phase diagrams, fixed points, cross-over behavior, finite-size scaling, perturbative renormalization methods, low-dimensional systems, surface critical behavior, random systems, percolation, polymer statistics, critical dynamics and conformal symmetry. The book closes with an appendix on Gaussian integration, a selected bibliography, and a detailed index. Many problems are included. The book outlines traditional board tasks and describes new "cultural frontier" responsibilities. In their new book, *Noise: A Flaw in Human Judgment* (Hachette Book Group, May 2021), strategy experts Daniel Kahneman and Olivier Sibony examine the unwanted variability in professional judgments and explain how to practice "decision hygiene." McKinsey proposes ten ways to reignite Indonesia's economy, including by investing in its healthcare system, adopting modern agricultural technologies, and promoting domestic tourism. Here are some other key findings from our sector research this week: How can companies succeed in their green initiatives? *Phase Transitions: Modern Applications* (2nd Edition) \$24.25 Only 1 left in stock. Read more Read less. click to open popover. "The Gittermans in their short book achieve the goals of simplicity, brevity, and the treatment of a wide variety of modern systems surprisingly well. Based on lectures given for an advanced graduate course, this book would be a good supplementary resource in a graduate statistical mechanics class, or it could be used as a text and reference in a seminar course." Choice "Despite the brevity of the chapters, many topics are discussed in them The authors have tried to avoid formalism as much as possible but have succeeded in presenting the basic ideas in an illuminating way."