Functional Integrals and Collective Excitations in Boson–Fermion Model*

YAN Jun

Department of Physics, Sichuan Normal University, Chengdu 610066, China

Abstract In this paper, collective excitations in the boson–fermion model are investigated by means of functional integration method. The equations of energy gap and excitation spectrum are derived. Moreover, the Bose energy spectrum of zero wave vector Fermi fields is also calculated.

PACS numbers: 02.30.-f
Key words: functional integrals, excitation spectrum, boson–fermion model

1 Introduction

In recent years functional integration method has been widely applied in quantum statistical physics, especially in superfluidity and superconductivity.[1−6] Functional integrals are very useful for the description of collective excitations in high-temperature superconductivity (HTSC). A 2-D functional integrals method of d-pairing model was developed by Brusov and Brusova.[7−8] In this model, they calculated the entire collective excitation spectrum for all superconductive states of CuO_2 planes. The complete excitation spectrum for superconductive states arising in symmetry classification of HTSC under triplet p-pairing was also investigated in 2-D model. Moreover, the functional integration and temperature Green function methods were used to discuss the nonphonon superconductive mechanism in two-band model.[9]

Based on the fact that all high-temperature supercon-

ductors have very small coherent lengths, therefore, a pair state of electrons is localized in the coordinate space and it can be represented phenomenologically by a local boson field ϕ. A possible mechanism for HTSC is assumed through s-channel reaction $2e \longrightarrow \phi \longrightarrow 2e$, which leads to a mixed boson–fermion $(b–f)$ model. In Refs. [10] and [11], Friedberg and Lee examined the long-range order, gap energy, and Meissner effect in such a model. Moreover, Dicke model describes the one-model Bose field interacting with Fermi field of atoms, the equations for the phase transition temperature and collective excitations have been derived by means of functional integration method.[12,13] The common feature of boson–fermion model and Dicke model is the existing of boson–fermion interacting term, thus two models have similar structure and it is possible to calculate excitation energy spectrum of $b–f$ model by using functional integration method.

2 Functional Integrals and Excitation Energy Spectrum

The Hamiltonian of the boson–fermion model is[10]

$$H = \int d^3x \left[\bar{\phi}(x,\tau)\left(2\gamma_0 - \frac{\nabla^2}{2M}\right)\phi(x,\tau) + \sum_\sigma \bar{\psi}_\sigma(x,\tau)\left(-\frac{\nabla^2}{2m}\right)\psi_\sigma(x,\tau) \right] \\ + g \int d^3x [\bar{\phi}(x,\tau)\psi_1(x,\tau)\psi_2(x,\tau) + \bar{\psi}_2(x,\tau)\bar{\psi}_1(x,\tau)\phi(x,\tau)], \tag{1}$$

where ϕ is a spin-0 boson field, ψ is a spin-1/2 fermion of helicity $\sigma = 1, 2$ in a three-dimensional volume V. g is a coupling constant, $2\gamma_0$ is the bare excitation energy of ϕ. $M = 2m$ is boson mass, m is fermion mass. The total particle number is defined to be

$$N = \int d^3x \left[2\bar{\phi}(x,\tau)\phi(x,\tau) + \sum_\sigma \bar{\psi}_\sigma(x,\tau)\psi_\sigma(x,\tau) \right]. \tag{2}$$

We can rewrite the Hamiltonian (1) as

$$\bar{H}(\tau) = H - \mu N = \int d^3x \left[\bar{\phi}(x,\tau)\left(2\gamma_0 - \frac{\nabla^2}{2M} - 2\mu\right)\phi(x,\tau) + \sum_\sigma \bar{\psi}_\sigma(x,\tau)\left(-\frac{\nabla^2}{2m} - \mu\right)\psi_\sigma(x,\tau) \right] \\ + g \int d^3x [\bar{\phi}(x,\tau)\psi_1(x,\tau)\psi_2(x,\tau) + \bar{\psi}_2(x,\tau)\bar{\psi}_1(x,\tau)\phi(x,\tau)], \tag{3}$$

where μ is the chemical potential.

Functional Integrals And Collective Excitations

M. Shifman,A. Yung

Functional Integrals And Collective Excitations:

Functional Integrals and Collective Excitations Victor Nikolaevich Popov,1987 This book describes the theory and selected applications of one of the most important mathematical tools used in the theoretical investigation of collective excitations in statistical physics such as occur in superfluidity superconductivity plasma dynamics superradiation and in phase transitions **Functional Integrals in Quantum Field Theory and Statistical Physics** V.N. Popov,2001-11-30 Functional integration is one of the most powerful methods of contempo rary theoretical physics enabling us to simplify accelerate and make clearer the process of the theoretician s analytical work Interest in this method and the endeavour to master it creatively grows incessantly This book presents a study of the application of functional integration methods to a wide range of contemporary theoretical physics problems The concept of a functional integral is introduced as a method of quantizing finite dimensional mechanical systems as an alternative to ordinary quantum mechanics The problems of systems quantization with constraints and the manifolds quantization are presented here for the first time in a monograph The application of the functional integration methods to systems with an infinite number of degrees of freedom allows one to uniquely introduce and formulate the diagram perturbation theory in quantum field theory and statistical physics This approach is significantly simpler than the widely accepted method using an operator approach *Functional Integrals and Collective Excitations* Victor Nikolaevich Popov,1987 This book describes the theory and selected applications of one of the most important mathematical tools used in the theoretical investigation of collective excitations in statistical physics such as occur in superfluidity superconductivity plasma dynamics superradiation and in phase transitions **Path Integrals From Pev To Tev: 50 Years After Feynman's Paper - Proceedings Of The Sixth International Conference** Valerio Tognetti,Roberto Casalbuoni,Riccardo Giachetti,Ruggero Vaia,Paola Verrucchi,1999-04-01 This book contains the invited contributions to the 6th International Conference on Path Integrals from peV to TeV held in Florence in 1998 The conference devoted to functional integration brought together many physicists with interests ranging from elementary particles to nuclear solid state liquid state polymer and complex systems physics The variety of topics is reflected in the book which is a unique collection of papers on manifold applications of functional methods in several areas of physics **Critical Dynamics** Uwe C. Täuber,2014-03-06 A comprehensive and unified introduction to describing and understanding complex interacting systems **Recent Progress In Many-body Theories - Proceedings Of The 9th International Conference** David Neilson,Raymond F Bishop,1998-10-20 The Lake Louise Winter Institute is held annually to explore recent trends in physics The proceedings contain pedagogical and review lectures by invited experts and contributed presentations by participants **Statistical Mechanics** James H. Luscombe,2021-01-09 This textbook provides a comprehensive yet accessible introduction to statistical mechanics Crafted and class tested over many years of teaching it carefully guides advanced undergraduate and graduate students who are encountering statistical mechanics for the first time through this sometimes

intimidating subject The book provides a strong foundation in thermodynamics and the ensemble formalism of statistical mechanics An introductory chapter on probability theory is included Applications include degenerate Fermi systems Bose Einstein condensation cavity radiation phase transitions and critical phenomena The book concludes with a treatment of scaling theories and the renormalization group In addition it provides clear descriptions of how to understand the foundational mathematics and physics involved and includes exciting case studies of modern applications of the subject in physics and wider interdisciplinary areas Key Features Presents the subject in a clear and entertaining style which enables the author to take a sophisticated approach whilst remaining accessible Contains contents that have been carefully reviewed with a substantial panel to ensure that coverage is appropriate for a wide range of courses worldwide Accompanied by volumes on thermodynamics and non equilibrium statistical mechanics which can be used in conjunction with this book on courses which cover both thermodynamics and statistical mechanics **Universal Themes of Bose-Einstein Condensation** Nick P. Proukakis,David W. Snoke,Peter B. Littlewood,2017-04-27 Following an explosion of research on Bose Einstein condensation BEC ignited by demonstration of the effect by 2001 Nobel prize winners Cornell Wieman and Ketterle this book surveys the field of BEC studies Written by experts in the field it focuses on Bose Einstein condensation as a universal phenomenon covering topics such as cold atoms magnetic and optical condensates in solids liquid helium and field theory Summarising general theoretical concepts and the research to date including novel experimental realisations in previously inaccessible systems and their theoretical interpretation it is an excellent resource for researchers and students in theoretical and experimental physics who wish to learn of the general themes of BEC in different subfields *Bose-Einstein Condensation* A. Griffin,D. W. Snoke,S. Stringari,1996-07-13 The first book devoted to Bose Einstein condensation BEC as an interdisciplinary subject **Condensazione Di Bose-Einstein Nei Gas Atomici** M. Inguscio,S. Stringari,Carl Edwin Wieman,1999 Although first proposed by Einstein in 1924 Bose Einstein condensation BEC in a gas was not achieved until 1995 when using a combination of laser cooling and trapping and magnetic trapping and evaporation it was first observed in rubidium and then in lithium and sodium cooled down to extremely low temperatures This book brought together many leaders in both theory and experiment on Bose Einstein condensation in gases Their lectures provided a detailed coverage of the experimental techniques for the creation and study of BEC as well as the theoretical foundation for understanding the properties of this novel system This volume provides the first systematic review of the field and the many developments that have taken place in the past three years **Supersymmetric Solitons** M. Shifman,A. Yung,2023-07-27 This book summarizes major advances in critical solitons in supersymmetric theories and their implications for understanding basic dynamical regularities of non supersymmetric theories First published in 2009 this title has been reissued as an Open Access publication on Cambridge Core **Causality, Measurement Theory and the Differentiable Structure of Space-Time** R. N. Sen,2010-02-11 Introducing graduate students and researchers to mathematical physics this book discusses two recent

developments the demonstration that causality can be defined on discrete space times and Sewell s measurement theory in which the wave packet is reduced without recourse to the observer s conscious ego nonlinearities or interaction with the rest of the universe The definition of causality on a discrete space time assumes that space time is made up of geometrical points Using Sewell s measurement theory the author concludes that the notion of geometrical points is as meaningful in quantum mechanics as it is in classical mechanics and that it is impossible to tell whether the differential calculus is a discovery or an invention Providing a mathematical discourse on the relation between theoretical and experimental physics the book gives detailed accounts of the mathematically difficult measurement theories of von Neumann and Sewell   *Quantum Fields on a Lattice* Istvan Montvay,Gernot Münster,1994 Presents a comprehensive and coherent account of the theory of quantum fields on a lattice   *Inflation and String Theory* Daniel Baumann,Liam McAllister,2015-04-23 This accessible volume provides a modern treatment of the cosmological and string theoretic background necessary to understand inflation in string theory

Loops, Knots, Gauge Theories and Quantum Gravity Rodolfo Gambini,Jorge Pullin,2000-07-03 Now in paperback this text provides a self contained introduction to applications of loop representations and knot theory in particle physics and quantum gravity Loop representations and the related topic of knot theory are of considerable current interest because they provide a unified arena for the study of the gauge invariant quantization of Yang Mills theories and gravity and suggest a promising approach to the eventual unification of the four fundamental forces This text begins with a detailed review of loop representation theory It then goes on to describe loop representations in Maxwell theory Yang Mills theories as well as lattice techniques Applications in quantum gravity are then discussed in detail Following chapters move on to consider knot theories braid theories and extended loop representations in quantum gravity A final chapter assesses the current status of the theory and points out possible directions for future research   **Particle Physics of Brane Worlds and Extra Dimensions** Sreerup Raychaudhuri,K. Sridhar,2016-04-25 The possibility that we live in a higher dimensional world with spatial dimensions greater than three started with the early work of Kaluza and Klein However in addressing experimental constraints early model builders were forced to compactify these extra dimensions to very tiny scales With the development of brane world scenarios it became possible to consider novel compactifications which allow the extra dimensions to be large or to provide observable effects of these dimensions at experimentally accessible energy scales This book provides a comprehensive account of these recent developments keeping the high energy physics implications in focus After an historical survey of the idea of extra dimensions the book deals in detail with models of large extra dimensions warped extra dimensions and other models such as universal extra dimensions The theoretical and phenomenological implications are discussed in a pedagogical manner for both researchers and graduate students   *Quantum Geometry* Jan Ambjørn,Bergfinnur Durhuus,Þórður Jónsson,1997-06-19 Describes random geometry and applications to strings quantum gravity topological field theory and membrane physics   Twistor Geometry and Field Theory R. S. Ward,Raymond O'Neil

Wells (Jr.),1990 Deals with the twistor treatment of certain linear and non linear partial differential equations The description in terms of twistors involves algebraic and differential geometry and several complex variables   **Advanced General Relativity** John Stewart,John M. Stewart,1993-11-26 A self contained introduction to advanced general relativity
    Conformal Methods in General Relativity Juan A. Valiente Kroon,2016-07-21 A systematic and self contained account which adopts a geometric approach to study the solutions of Einstein s theory of gravity

Functional Integrals And Collective Excitations Book Review: Unveiling the Power of Words

In some sort of driven by information and connectivity, the energy of words has become more evident than ever. They have the ability to inspire, provoke, and ignite change. Such may be the essence of the book **Functional Integrals And Collective Excitations**, a literary masterpiece that delves deep in to the significance of words and their affect our lives. Compiled by a renowned author, this captivating work takes readers on a transformative journey, unraveling the secrets and potential behind every word. In this review, we shall explore the book is key themes, examine its writing style, and analyze its overall affect readers.

http://www.pet-memorial-markers.com/data/Resources/default.aspx/Elementary_Science_Teachers_Edition.pdf

Table of Contents Functional Integrals And Collective Excitations

1. Understanding the eBook Functional Integrals And Collective Excitations
    - The Rise of Digital Reading Functional Integrals And Collective Excitations
    - Advantages of eBooks Over Traditional Books
2. Identifying Functional Integrals And Collective Excitations
    - Exploring Different Genres
    - Considering Fiction vs. Non-Fiction
    - Determining Your Reading Goals
3. Choosing the Right eBook Platform
    - Popular eBook Platforms
    - Features to Look for in an Functional Integrals And Collective Excitations
    - User-Friendly Interface
4. Exploring eBook Recommendations from Functional Integrals And Collective Excitations
    - Personalized Recommendations
    - Functional Integrals And Collective Excitations User Reviews and Ratings
    - Functional Integrals And Collective Excitations and Bestseller Lists

Functional Integrals And Collective Excitations Introduction

Free PDF Books and Manuals for Download: Unlocking Knowledge at Your Fingertips In todays fast-paced digital age, obtaining valuable knowledge has become easier than ever. Thanks to the internet, a vast array of books and manuals are now available for free download in PDF format. Whether you are a student, professional, or simply an avid reader, this treasure trove of downloadable resources offers a wealth of information, conveniently accessible anytime, anywhere. The advent of online libraries and platforms dedicated to sharing knowledge has revolutionized the way we consume information. No longer confined to physical libraries or bookstores, readers can now access an extensive collection of digital books and manuals with just a few clicks. These resources, available in PDF, Microsoft Word, and PowerPoint formats, cater to a wide range of interests, including literature, technology, science, history, and much more. One notable platform where you can explore and download free Functional Integrals And Collective Excitations PDF books and manuals is the internets largest free library. Hosted online, this catalog compiles a vast assortment of documents, making it a veritable goldmine of knowledge. With its easy-to-use website interface and customizable PDF generator, this platform offers a user-friendly experience, allowing individuals to effortlessly navigate and access the information they seek. The availability of free PDF books and manuals on this platform demonstrates its commitment to democratizing education and empowering individuals with the tools needed to succeed in their chosen fields. It allows anyone, regardless of their background or financial limitations, to expand their horizons and gain insights from experts in various disciplines. One of the most significant advantages of downloading PDF books and manuals lies in their portability. Unlike physical copies, digital books can be stored and carried on a single device, such as a tablet or smartphone, saving valuable space and weight. This convenience makes it possible for readers to have their entire library at their fingertips, whether they are commuting, traveling, or simply enjoying a lazy afternoon at home. Additionally, digital files are easily searchable, enabling readers to locate specific information within seconds. With a few keystrokes, users can search for keywords, topics, or phrases, making research and finding relevant information a breeze. This efficiency saves time and effort, streamlining the learning process and allowing individuals to focus on extracting the information they need. Furthermore, the availability of free PDF books and manuals fosters a culture of continuous learning. By removing financial barriers, more people can access educational resources and

pursue lifelong learning, contributing to personal growth and professional development. This democratization of knowledge promotes intellectual curiosity and empowers individuals to become lifelong learners, promoting progress and innovation in various fields. It is worth noting that while accessing free Functional Integrals And Collective Excitations PDF books and manuals is convenient and cost-effective, it is vital to respect copyright laws and intellectual property rights. Platforms offering free downloads often operate within legal boundaries, ensuring that the materials they provide are either in the public domain or authorized for distribution. By adhering to copyright laws, users can enjoy the benefits of free access to knowledge while supporting the authors and publishers who make these resources available. In conclusion, the availability of Functional Integrals And Collective Excitations free PDF books and manuals for download has revolutionized the way we access and consume knowledge. With just a few clicks, individuals can explore a vast collection of resources across different disciplines, all free of charge. This accessibility empowers individuals to become lifelong learners, contributing to personal growth, professional development, and the advancement of society as a whole. So why not unlock a world of knowledge today? Start exploring the vast sea of free PDF books and manuals waiting to be discovered right at your fingertips.

FAQs About Functional Integrals And Collective Excitations Books

1. Where can I buy Functional Integrals And Collective Excitations books? Bookstores: Physical bookstores like Barnes & Noble, Waterstones, and independent local stores. Online Retailers: Amazon, Book Depository, and various online bookstores offer a wide range of books in physical and digital formats.
2. What are the different book formats available? Hardcover: Sturdy and durable, usually more expensive. Paperback: Cheaper, lighter, and more portable than hardcovers. E-books: Digital books available for e-readers like Kindle or software like Apple Books, Kindle, and Google Play Books.
3. How do I choose a Functional Integrals And Collective Excitations book to read? Genres: Consider the genre you enjoy (fiction, non-fiction, mystery, sci-fi, etc.). Recommendations: Ask friends, join book clubs, or explore online reviews and recommendations. Author: If you like a particular author, you might enjoy more of their work.
4. How do I take care of Functional Integrals And Collective Excitations books? Storage: Keep them away from direct sunlight and in a dry environment. Handling: Avoid folding pages, use bookmarks, and handle them with clean hands. Cleaning: Gently dust the covers and pages occasionally.
5. Can I borrow books without buying them? Public Libraries: Local libraries offer a wide range of books for borrowing. Book Swaps: Community book exchanges or online platforms where people exchange books.

6. How can I track my reading progress or manage my book collection? Book Tracking Apps: Goodreads, LibraryThing, and Book Catalogue are popular apps for tracking your reading progress and managing book collections. Spreadsheets: You can create your own spreadsheet to track books read, ratings, and other details.

7. What are Functional Integrals And Collective Excitations audiobooks, and where can I find them? Audiobooks: Audio recordings of books, perfect for listening while commuting or multitasking. Platforms: Audible, LibriVox, and Google Play Books offer a wide selection of audiobooks.

8. How do I support authors or the book industry? Buy Books: Purchase books from authors or independent bookstores. Reviews: Leave reviews on platforms like Goodreads or Amazon. Promotion: Share your favorite books on social media or recommend them to friends.

9. Are there book clubs or reading communities I can join? Local Clubs: Check for local book clubs in libraries or community centers. Online Communities: Platforms like Goodreads have virtual book clubs and discussion groups.

10. Can I read Functional Integrals And Collective Excitations books for free? Public Domain Books: Many classic books are available for free as theyre in the public domain. Free E-books: Some websites offer free e-books legally, like Project Gutenberg or Open Library.

Find Functional Integrals And Collective Excitations :

elementary science teachers edition
electronic government progress in promoting adoption of smart card
elements of the random walk an introduction for advanced students and researchers
elementary mathematics 1 - patterns and structure
electronic media ratings
elementary and intermediate algebra discovery and visualization instructors...
elementare neutronenphysik
elements of moral philosophy with dictionary
elements of skill a conscious approach to learning
elementary quantitative analysis 3ed
elements of literature second course grade 8 - reading skills and strategies active readers practice
elementary statistics with cd-rom
elements of literature second course grammar and language links

elements of literature fifth course audiovisual resources
elements of organic chemistry

Functional Integrals And Collective Excitations :

The Botany of Desire: A Plant's-Eye View of the World It is the story of four plants: apples, tulips, cannabis and potatoes. Reflecting the theme of the title, there are four human desires that are associated with ... The Botany of Desire He masterfully links four fundamental human desires—sweetness, beauty, intoxication, and control—with the plants that satisfy them: the apple, the tulip, ... The Botany of Desire The Botany of Desire: A Plant's-Eye View of the World is a 2001 nonfiction book by journalist Michael Pollan. Pollan presents case studies mirroring four ... The Botany of Desire: A Plant's-Eye View of the World In The Botany of Desire, Michael Pollan ingeniously demonstrates how people and domesticated plants have formed a similarly reciprocal relationship. He ... The Botany of Desire (TV Movie 2009) Michael Pollan, a professor of journalism and a student of food, presents the history of four plants, each of which found a way to make itself essential to ... The Botany of Desire In The Botany of Desire, Michael Pollan ingeniously demonstrates how people and domesticated plants have formed a similarly reciprocal relationship. He ... The Botany of Desire (2009) Watch The Botany of Desire (2009) online. Documentary based on the book of the same name by Michael Pollan, looking at ways in which plants have found a way ... The Botany of Desire by Michael Pollan In The Botany of Desire, Michael Pollan ingeniously demonstrates how people and domesticated plants have formed a similarly reciprocal relationship. He ... The Botany of Desire: A Plant's-Eye View of the World A fascinating and disturbing account of man's strange relationship with plants and plant science. Michael Pollan inspires one to rethink basic attitudes. Botany of Desire A Plants Eye View of the World In The Botany of Desire, Michael Pollan argues that the answer lies at the heart of the intimately reciprocal relationship between people and plants. In telling ... Rikki tikki tavi graphic organizers Browse rikki tikki tavi graphic organizers resources on Teachers Pay Teachers, a marketplace trusted by millions of teachers for ... "Rikki-tikki-tavi" BY RUDYARD KIPLING Directions: Select the letter of the response that best answers the ... Analyze and evaluate each component of the Informational Text Graphic Organizer. Text Dependent Questions Rikki Tikki Tavi/ Ruyard Kipiling/ Created by SAP District. Unit 1 Part 2 ... Complete a Know, Want to Learn, Learned (KWL) graphic organizer about the text. Graphic Organizers for Active Reading - ThinkCentral Looking For Graphic Organizers for Active Reading - ThinkCentral? Read Graphic Organizers for Active Reading - ThinkCentral from here. "Rikki-tikki-tavi" by R Kipling · 2007 · Cited by 40 — Answer the following questions about the excerpt from "Rikki-tikki-tavi." animal similarity. Name. Date ... Rikki-Tikki-Tavi | Character Descriptions Worksheet In this activity, students read about two characters in the story and answer questions. Click to view! Rikki-tikki-tavi RUDYARD KIPLING Rikki-tikki-tavi RUDYARD KIPLING. Read each of the following questions. Answer each question in a complete sentence. 1. What kind of animal is

Rikki-tikki-tavi? Analyzing Character Confrontations in "Rikki-Tikki-Tavi" Students will analyze the confrontations that drive the story's plot, noting what happens and who is involved, how Rikki's character is developed through each ... Unit 1 Part 2/Week 8 Title: Rikki-tikki-tavi Suggested Time Students complete an evidence chart as a pre-writing activity. Teachers should ... Answer: Tasks and answers available in the anthology on page 137. • After ... Financial and Managerial Accounting The Wild Financial and Managerial Accounting text has quickly become the market-leading text that provides a corporate perspective with balanced coverage in ... Financial and Managerial Accounting by Wild, John The Wild Financial and Managerial Accounting text has quickly become the market-leading text that provides a corporate perspective with balanced coverage in ... Financial and Managerial Accounting by Wild, John Building on the success of the best-selling Fundamental Accounting Principles text, authors John Wild, Ken W. Shaw, and Barbara Chiappetta created Financial ... Financial and Managerial Accounting 9th edition ... Rent Financial and Managerial Accounting 9th edition (978-1260728774) today, or search our site for other textbooks by John Wild. Financial Managerial Accounting by John Wild Financial and Managerial Accounting: Information for Decisions by John J. Wild and a great selection of related books, art and collectibles available now at ... Financial and Managerial Accounting - John J. Wild Financial and Managerial Accounting by John J. Wild; Ken Shaw; Barbara Chiappetta ... 9781259334962: Financial and Managerial Accounting 5th Edition (Paperback). Financial and Managerial Accounting John... Financial Accounting: Information for Decisions With PowerWeb and NetTutor, Second Edition. John J. Wild. from: $7.09 · College Accounting. Financial And Managerial Accounting [John Wild] Buy Financial And Managerial Accounting [John Wild] ISBN 9780078025761 0078025761 6th edition ... Financial And Managerial Accounting - by Wild $49.99 ... Financial and managerial accounting - WorldCat Financial and managerial accounting : information for decisions. Authors: John J. Wild, Barbara Chiappetta, Ken W. Shaw. Front cover image for Financial and ...