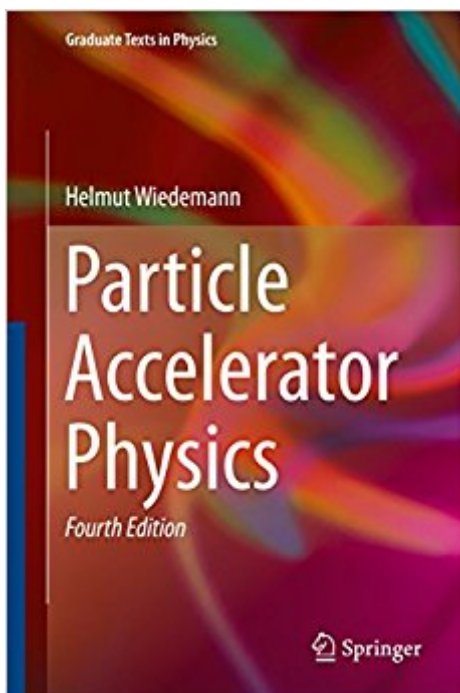


The book was found

# Particle Accelerator Physics (Graduate Texts In Physics)



## Synopsis

This book by Helmut Wiedemann is a well-established, classic text, providing an in-depth and comprehensive introduction to the field of high-energy particle acceleration and beam dynamics. The present 4th edition has been significantly revised, updated and expanded. The newly conceived Part I is an elementary introduction to the subject matter for undergraduate students. Part II gathers the basic tools in preparation of a more advanced treatment, summarizing the essentials of electrostatics and electrodynamics as well as of particle dynamics in electromagnetic fields. Part III is an extensive primer in beam dynamics, followed, in Part IV, by an introduction and description of the main beam parameters and including a new chapter on beam emittance and lattice design. Part V is devoted to the treatment of perturbations in beam dynamics. Part VI then discusses the details of charged particle acceleration. Parts VII and VIII introduce the more advanced topics of coupled beam dynamics and describe very intense beams – a number of additional beam instabilities are introduced and reviewed in this new edition. Part IX is an exhaustive treatment of radiation from accelerated charges and introduces important sources of coherent radiation such as synchrotrons and free-electron lasers. The appendices at the end of the book gather useful mathematical and physical formulae, parameters and units. Solutions to many end-of-chapter problems are given. This textbook is suitable for an intensive two-semester course starting at the senior undergraduate level.

## Book Information

File Size: 11760 KB

Print Length: 1021 pages

Publisher: Springer; 4 edition (July 24, 2015)

Publication Date: July 24, 2015

Sold by: Digital Services LLC

Language: English

ASIN: B012I0SBM8

Text-to-Speech: Enabled

X-Ray: Not Enabled

Word Wise: Enabled

Lending: Not Enabled

Enhanced Typesetting: Not Enabled

Best Sellers Rank: #433,833 Paid in Kindle Store (See Top 100 Paid in Kindle Store) #15

in Kindle Store > Kindle eBooks > Nonfiction > Science > Experiments, Instruments &

Measurement > Weights & Measures #24 in Kindle Store > Kindle eBooks > Nonfiction > Science > Experiments, Instruments & Measurement > Measurement #33 in Kindle Store > Kindle eBooks > Engineering & Transportation > Engineering > Electrical & Electronics > Optics

## Customer Reviews

Good as an introduction to basic concepts!

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

Particle Accelerator Physics (Graduate Texts in Physics) Gauge Theories in Particle Physics, Second Edition (Graduate Student Series in Physics) Finite Element Methods for Particle Transport: Applications to Reactor and Radiation Physics (Research Studies in Particle and Nuclear Technology) Accelerator Physics (Third Edition) Accelerator Physics: Example Problems With Solutions Quantum Electrodynamics: Gribov Lectures on Theoretical Physics (Cambridge Monographs on Particle Physics, Nuclear Physics and Cosmology) Atoms, Molecules and Optical Physics 2: Molecules and Photons - Spectroscopy and Collisions (Graduate Texts in Physics) Atoms, Molecules and Optical Physics 1: Atoms and Spectroscopy (Graduate Texts in Physics) Physics of Atoms and Ions (Graduate Texts in Contemporary Physics) A Certain Scientific Accelerator Vol. 6 Books of Breathing and Related Texts -Late Egyptian Religious Texts in the British Museum Vol.1 (Catalogue of the Books of the Dead and Other Religious Texts in the British Museum) Statistical Methods for Data Analysis in Particle Physics (Lecture Notes in Physics) Lie Algebras In Particle Physics: from Isospin To Unified Theories (Frontiers in Physics) From Special Relativity to Feynman Diagrams: A Course in Theoretical Particle Physics for Beginners (UNITEXT for Physics) Transmission Electron Microscopy and Diffractometry of Materials (Graduate Texts in Physics) Laser Cooling and Trapping (Graduate Texts in Contemporary Physics) Particles and Nuclei: An Introduction to the Physical Concepts (Graduate Texts in Physics) Conformal Field Theory (Graduate Texts in Contemporary Physics) Geometry, Particles, and Fields (Graduate Texts in Contemporary Physics) Biophotonics: Concepts to Applications (Graduate Texts in Physics)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)