

1. Record Nr.	UNINA9910457295103321
Autore	Shifman Mikhail A.
Titolo	Advanced topics in quantum field theory : a lecture course / / M. Shifman [[electronic resource]]
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2012
ISBN	1-316-08662-3 1-280-56854-2 1-139-22171-X 9786613598141 1-139-01335-1 1-139-22341-0 1-139-21689-9 1-139-21382-2 1-139-21998-7
Descrizione fisica	1 online resource (xvii 622 pages) : digital, PDF file(s)
Disciplina	530.14/3
Soggetti	Quantum field theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Machine generated contents note: Part I. Before Supersymmetry: 1. Phases of gauge theories; 2. Kinks and domain walls; 3. Vortices and flux tubes (strings); 4. Monopoles and skyrmions; 5. Instantons; 6. Isotropic ferromagnet: O(3) sigma model and extensions; 7. False vacuum decay and related topics; 8. Chiral anomaly; 9. Confinement in 4D gauge theories and models in lower dimensions; Part II. Introduction to Supersymmetry: 10. Basics of supersymmetry with emphasis on gauge theories; 11. Supersymmetric solitons; References; Index.
Sommario/riassunto	Since the advent of Yang-Mills theories and supersymmetry in the 1970s, quantum field theory - the basis of the modern description of physical phenomena at the fundamental level - has undergone revolutionary developments. This is the first systematic and comprehensive text devoted specifically to modern field theory, bringing readers to the cutting edge of current research. The book

emphasizes nonperturbative phenomena and supersymmetry. It includes a thorough discussion of various phases of gauge theories, extended objects and their quantization, and global supersymmetry from a modern perspective. Featuring extensive cross-referencing from traditional topics to recent breakthroughs in the field, it prepares students for independent research. The side boxes summarizing the main results and over 70 exercises make this an indispensable book for graduate students and researchers in theoretical physics.
