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Book

Title

Quantum field theory and critical phenomena

Edition

3rd ed.

Author(s)

[Zinn-Justin, Jean](#)

Publication

Oxford : Clarendon Press, 1996. - 1008 p.

Series

([International series of monographs on physics](#) ; 92)

Subject code

[530.145.2](#)

Subject category

General Theoretical Physics

Abstract

Over the last twenty years quantum field theory has become not only the framework for the discussion of all fundamental interactions except gravity, but also for the understanding of second-order phase transitions in statistical mechanics. This advanced text is based on graduate courses and summer schools given by the author over a number of years. It approaches the subject in terms of path and functional integrals, adopting a Euclidean metric and using the language of partition and correlation functions. Renormalization and the renormalization group are examined, as are critical phenomena and the role of instantons. Changes for this edition 1. Extensive revision to eliminate a few bugs that had survived the second edition and (mainly) to improve the pedagogical presentation, as a result of experience gathered by lecturing. 2. Additional new topics; holomorphic or coherent state path integral; functional integral and representation of the field theory S-matrix in the holomorphic formalis; non-relativistic limit of massive quantization and brief discussion of non-renormalization of quantum gravity based on

	Einstein action. 3. This book is intended for theoretical particle physicists and statistical physicists at graduate level and above.
ISBN	019851882X (This book at Amazon) (print version, hardback) 9780198518822 (This book at Amazon) (print version, hardback)
Other editions	4th ed. (2002)
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