

1. Record Nr.	UNINA9910139813803321
Titolo	Quantum Field Theory : Proceedings of the Ringberg Workshop Held at Tegernsee, Germany, 21–24 June 1998 On the Occasion of Wolfhart Zimmermann's 70th Birthday // edited by Peter Breitenlohner, Dieter Maison
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2000
ISBN	3-540-44482-3
Edizione	[1st ed. 2000.]
Descrizione fisica	1 online resource (VIII, 323 p.)
Collana	Lecture Notes in Physics, , 0075-8450 ; ; 558
Disciplina	530.14/3
Soggetti	Elementary particles (Physics) Quantum field theory String theory Elementary Particles, Quantum Field Theory Quantum Field Theories, String Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Talks -- Anomalies -- The Algebraic Method in Renormalization Theory -- Modular Groups in Quantum Field Theory -- Current Trends in Axiomatic Quantum Field Theory -- Operator Product Expansion, Renormalization Group and Weak Decays -- The Quantum Noether Condition in Terms of Interacting Fields -- Applications of the Reduction of Couplings -- The Rigorous Analyticity-Unitarity Program and Its Success -- Reduction of Coupling Parameters and Duality -- The Bogoliubov Renormalization Group in Theoretical and Mathematical Physics -- Algebraic Renormalization, from Supersymmetry to the Standard Model -- Semi Classical Aspects of Gauge Theories -- Reprints -- On the Bound State Problem in Quantum Field Theory -- Convergence of Bogoliubov's Method of Renormalization in Momentum Space -- Composite Operators in the Perturbation Theory of Renormalizable Interactions -- Normal Products and the Short Distance Expansion in the Perturbation Theory of Renormalizable Interactions -- The Power Counting Theorem for Feynman Integrals with Massless Propagators.

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## Sommario/riassunto

On the occasion of W. Zimmermann's 70th birthday some eminent scientists gave review talks in honor of one of the great masters of quantum field theory. It was decided to write them up and publish them in this book, together with reprints of some seminal papers of the laureate. Thus, this volume deepens our understanding of anomalies, algebraic renormalization theory, axiomatic field theory and of much more while illuminating the past and present state of affairs and pointing to interesting problems for future research.

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