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Titolo	A Dynamical Perspective on the ϕ^4 Model : Past, Present and Future // edited by Panayotis G. Kevrekidis, Jesús Cuevas-Maraver
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Descrizione fisica	1 online resource (328 pages)
Collana	Nonlinear Systems and Complexity, , 2195-9994 ; ; 26
Disciplina	531.113301515355
Soggetti	Physics Mathematical physics Solid state physics Engineering mathematics Statistical physics Mathematical Methods in Physics Mathematical Applications in the Physical Sciences Solid State Physics Engineering Mathematics Statistical Physics and Dynamical Systems
Lingua di pubblicazione	Inglese
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Nota di contenuto	Historical Perspectives of ϕ^4 Model -- Some Recent Developments on Kink Collisions -- Statistical Mechanics and Stochastic Aspects of ϕ^4 Models -- Discrete Variants of ϕ^4 Model -- Discrete Breathers in ϕ^4 and Related Models -- ϕ^4 Breathers: History and Recent Developments -- Decay of Bions in ϕ^4 Models -- ϕ^4 Model with a Potential -- ϕ^4 Model in Higher Dimensions -- Beyond the ϕ^4 Model: ϕ^6 , ϕ^8 , etc. .
Sommario/riassunto	This book presents a careful selection of the most important developments of the ϕ^4 model, offering a judicious summary of this model with a view to future prospects and the challenges ahead. Over the past four decades, the ϕ^4 model has been the basis for a broad array of developments in the physics and mathematics of nonlinear waves. From kinks to breathers, from continuum media to discrete

lattices, from collisions of solitary waves to spectral properties, and from deterministic to stochastic models of 4 (and 6, 8, 12 variants more recently), this dynamical model has served as an excellent test bed for formulating and testing the ideas of nonlinear science and solitary waves. .
