Título:

Autor:

Precio: $1698.80

Editorial:

Año: 2011

Tema:

Edición: 1ª

Sinopsis

ISBN: 9780817681166

With the goal of establishing a version for partial differential equations (PDEs) of the Aubry-Mather theory of monotone twist maps, Moser and then Bangert studied solutions of their model equations that possessed certain minimality and monotonicity properties. This monograph presents extensions of the Moser-Bangert approach that include solutions of a family of nonlinear elliptic PDEs on Rn and an Allen-Cahn PDE model of phase transitions.

After recalling the relevant Moser-Bangert results, Extensions of Moser-Bangert Theory pursues the rich structure of the set of solutions of a simpler model case, expanding upon the studies of Moser and Bangert to include solutions that merely have local minimality properties. Subsequent chapters build upon the introductory results, making the monograph self contained.

Part I introduces a variational approach involving a renormalized functional to characterize the basic heteroclinic solutions obtained by Bangert. Following that, Parts II and III employ these basic solutions together with constrained minimization methods to construct multitransition heteroclinic and homoclinic solutions on R×Tn-1 and R2×Tn-2, respectively, as local minima of the renormalized functional. The work is intended for mathematicians who specialize in partial differential equations and may also be used as a text for a graduate topics course in PDEs