

1. Record Nr.	UNINA9910299711103321
Titolo	Recent advances in the theory and application of fitness landscapes // Hendrik Richter, Andries P. Engelbrecht, editors
Pubbl/distr/stampa	Heidelberg, Germany : , : Springer, , 2014
ISBN	3-642-41888-0
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (xxxviii, 553 pages) : illustrations (some color)
Collana	Emergence, Complexity and Computation, , 2194-7287 ; ; 6
Disciplina	006.3
Soggetti	Computer algorithms Computational intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"ISSN: 2194-7287."
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Part I Principles and Perspectives -- Part II Topology, Measures and Problem Hardness -- Part III Coevolution and Dynamics -- Part IV Visualization and Characterization -- Part V Outlook and Afterthoughts.
Sommario/riassunto	This book is concerned with recent advances in fitness landscapes. The concept of fitness landscapes originates from theoretical biology and refers to a framework for analysing and visualizing the relationships between genotypes, phenotypes and fitness. These relationships lay at the centre of attempts to mathematically describe evolutionary processes and evolutionary dynamics. The book addresses recent advances in the understanding of fitness landscapes in evolutionary biology and evolutionary computation. In the volume, experts in the field of fitness landscapes present these findings in an integrated way to make it accessible to a number of audiences: senior undergraduate and graduate students in computer science, theoretical biology, physics, applied mathematics and engineering, but also researcher looking for a reference or/and entry point into using fitness landscapes for analysing algorithms. Also practitioners wanting to employ fitness landscape techniques for evaluating bio- and nature-inspired computing algorithms can find valuable material in the book. For teaching proposes, the book could also be used as a reference handbook. .